Department of Management and Production Engineering

Master of Science in Engineering and Management

Academic Session 2023/2024

Graduate Session December 2024

Private equity and luxury industry: what impact of PE acquisitions on Italian companies' performance?

Supervisor:
Prof. Enrico LUCIANO

Candidate:
Alessandro BOBÒ

Abstract

Private equity activity involves investment funds that acquire and manage privately held companies, aiming to improve their value through strategies such as operational upgrades, strategic guidance, and financial restructuring in the medium and long term. The final goal of these operations aims to achieve a profitable exit within a medium-term timeframe. PE impact on target companies' performance has been hugely debated by existing literature, trying to find a potential correlation between potential performance improvements and PE acquisition. This thesis aims to shed a light on PE acquisitions impact on Italian companies strictly operating in the luxury market, trying to find significant insights that merge PE world and the luxury sector, a niche that assumes a unique position within the global economy, where the balance between exclusivity and growth is crucial. The study is based on the monitoring of PE-backed firms' performance in terms of average trends, followed by a comparison of PE-backed items with the group of peers, and a final multi-linear regression analysis in which interesting results emerge. The number count analysis and the following statistical study are based on the monitoring of four financial indicators: (I) equity value, (II) total asset value, (III) EBITDA and (IV) Net debt / EBITDA, whose observation allows to offer insights from different standpoints of a company's financial status. Results from the number count analysis have been commented and described among the two samples, for each of the indicator listed. Finally, these results have been deepened through a regression analysis based on a DiD (Difference-in-Difference) approach, that allows to confer a statistical validity to the research, in order to understand if the trends found related to the financial parameters analyzed could be directly attributed to the PE acquisition or may have derived from other external factors.

Index

Introduction

According to (AIFI & PwC, AIFI - Associazione Italiana del Private Equity, Venture Capital e Private Debt, 2024)[1] from 2014 to 2023 private equity operators have invested a total of about 40 billion euros in Italy. Over the past two decades, the private equity (PE) sector in Italy, initially characterized by a smaller volume of transactions, has evolved until becoming an important component of the national economy and financial landscape. This transformation has facilitated the crucial linkage between traditional Italian family-owned businesses and international financial markets, fostering growth and integration on a global scale (Ionescu, Charizona, & Cavallaro, 2024)[2]. Private equity refers to investment funds that buy and reshape not publicly traded companies, with the goal of increasing their value through various strategies as operational improvements, strategic guidance, or financial restructuring. The final PE objective is the realization of a profitable exit strategy in the medium timespan. In the context of the luxury market, private equity presents both opportunities and challenges. Luxury brands often require substantial investment to maintain their high standards of quality and exclusivity, which potentially could be aligned with the capital and expertise provided by private equity firms. Indeed, the world of luxury, represents a unique sector within the global economy.

The research purpose is twofold: one the one hand, the thesis aims to clarify, quantify, and compare the performance of luxury companies backed by private equity funds versus those without such backing in the luxury sector within the Italian framework. On the other hand, it investigates which impact PE acquisitions generate on target companies. Through the quantitative analysis performed, the study provides empirical research regarding the impact of private equity firms on the performance luxury and high-end Italian firms, by addressing the following three research questions:

1. Performance comparison: *Do Italian firms operating in the luxury industry under the control of private equity (PE) funds perform better or worse than firms in the same industry that are not under the control of PE funds?*

[1] AIFI - Associazione Italiana del Private Equity, Venture Capital e Private Debt, 2024. “Pubblicati i dati sui rendimenti dei Private Equity nel mercato italiano”.
[2] BSPEC – Bocconi Student private Equity Club, 2024. “Tracing the Evolution of Italy’s Private Equity Landscape and Its Impact on the Fashion and Luxury Industries”.

2. Determinants of potential performance deviations: *If a deviation in terms of performance exists between the two cases, what elements determine this deviation?*
3. Correlation between performance improvement and PE acquisition: *Is there a correlation between the performance improvement of the target firm and the acquisition by the PE fund?*

To try and answer these questions, the research has been structured as follows:

Chapter 1 provides a comprehensive overview of the private equity (PE) sector. It presents purposes, objectives, and an historical brief of this financial entity. Along with it follows a detailed description of the PE legal structure, the most relevant types of private equity investments, and the major steps involved in the screening and investment process. Finally, an overview of the Italian PE landscape operating in the luxury industry has been reported.

Chapter 2 deepens the concept of luxury, exploring its general definition and how it has been perceived over the years through various literary sources. Moreover, it highlights which features an item must have to be perceived as a luxury one, with a specific focus on Italian luxury goods in international markets, and how this perception influences investment decisions by private equity firms. Finally, a general view of the recent trends related to the luxury market is highlighted.

Chapter 3 undertakes a comprehensive literature review focusing on private equity performance. Thus, it reviews past literature by examining the concept of private equity value creation, emphasizing how private equity firms enhance the performance of target companies and discussing the main general outcomes coming from past articles. Finally, a table reporting the summary of the literature sources mentioned and the main outcomes coming from each research has been reported.

Chapter 4 concerns the presentation of the methodology serving as solid base to conduct the empirical analysis. First, the construction of the samples analyzed and the ratio behind the time-periods considered for the analysis have been explained. Subsequently, the main variables chosen to measure the companies' financial performance have been described, and the steps performed to conduct the number

count and the regression analysis have been reported, aimed at providing a clear overview of the way in which the empirical research has been structured.

In *Chapter 5* results of the quantitative analysis conducted on such a topic have been outlined. In particular, the first section presents the results found from the number count analysis, depicting general trends of the financial parameters chosen and offering a comparison of the two samples. The second part of the chapter contains the outcomes of the regression analysis performed, aimed at statistically strengthen the results found in the number count & general trends analysis.

Finally, in *Chapter 6,* conclusions summarizing the main results found from the analysis are reported. Moreover, limitations of the thesis and possible future developments take place.

1. PRIVATE EQUITY

1.1. Private Equity: what is, how it works and objectives

Private equity activity has been described in various ways over the years. (Ljungqvist, 2024)[1] defines private equity firm as the entity that encompasses the acquisition of publicly traded or privately held companies, typically facilitated by funds managed by specialized firms. The primary goal is to increase the value of companies over a period of years, and then sell it to generate returns for investors. (Fenn, Liang, & Prowse, 1997)[2] define it as "professionally managed equity investments in the unregistered securities of private and public companies", attributing to the entity a crucial role as a funding source for a variety of entities including start-up firms, private middle-market firms, financially distressed firms, and even public firms seeking buyout financing. The Board of Directors of AIFI depicts private equity as "the activity of investing in the venture capital of unlisted companies, with the objective of enhancing the value of the company being invested in for the purpose of its disposal within a medium-to long-term period" (AIFI - Associazione Italiana del Private Equity, 2024)[3]. According to (E.V.C.A., 2007)[4] instead, the core activity of these entities consists in providing equity capital to privately held companies with significant growth potential over the medium to long term to offer financial support, strategic guidance, and essential information during their development. The capital invested by private equity funds in private companies is typically committed for specific reasons and purposes, aiming to assist potential businesses in reaching their growth, financial and strategic goal. Therefore, the primary objective of private equity firms consists in identifying companies with high growth potential and provide the necessary capital, talent, and strategy to enhance the company and increase its value through strategic, operational, and financial improvements.

Throughout the years, private equity activity has generically been described as investments in non-publicly traded assets. The emergence of the junk bond market

[1] Ljungqvist, A. (2024). The economics of private equity: A critical review. *Available at SSRN 4723171*.
[2] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overveiw. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.
[3] AIFI - Associazione Italiana del Private Equity, Venture Capital e Private Debt.
[4] An, E. V. C. A. (2007). Guide on private equity and venture capital for entrepreneurs.

during the 1970s and 1980s facilitated highly leveraged buyouts, even if many buyouts during this period were hostile takeovers, conducted against the resistance of target management (Ljungqvist, 2024)[1]. Private equity industry experienced a significant surge in activity during the 1980s, with a large wave of takeovers across the United States, showing buyouts into the spotlight (Fenn, Liang, & Prowse, 1997). [2]Between 80's and 90's PE market faced a remarkable growth, significantly outperforming other financial markets such as public equity, bond markets, and private placement debt markets in terms of expansion. However, as the takeover wave subsided, interest rates climbed in the late 1980s and the economy entered a recession, causing financial difficulties that decreased the number of leveraged buyouts (Ljungqvist, 2024). This phase highlighted the cyclical nature of buyout nature within the private equity sector, showing how PE activity reflects broader economic and market trends over time (Norbäck, Persson, & Tåg, 2010).[3] At the end of 90's, private equity market had the dimension of approximately one-quarter the size of both the commercial and industrial bank loans market in terms of outstanding amounts, becoming more structured and institutionalized. Additionally, strategies shifted towards enhancing operational efficiencies rather than hostile takeovers (Ljungqvist, 2024). Moreover, in the same period, the amount of capital raised through private equity partnerships was almost equal or even greater than the funds raised through initial public offerings (IPOs) and the gross issuance of public high yield corporate bonds. This aspect underscored the increased prominence of private equity as a preferred avenue for capital raising and corporate finance activities, reflecting its substantial growth and importance within the broader financial landscape (Fenn, Liang, & Prowse, 1997). As reported by (Badunenko, Baum, & Schäfer, 2010)[4] the first ten years of the new millennium have seen European private equity activity experiencing a substantial growth. Despite deal sizes and leverage ratios decrease between 2000 and 2003 due to the TMT (Technology, Media and Telecommunications) bubble, the PE market "first recovered and then boomed" (Ljungqvist, 2024). The 2008 financial crisis significantly paused this

[1] Ljungqvist, A. (2024). The economics of private equity: A critical review. *Available at SSRN 4723171*.
[2] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overveiw. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.
[3] Norbäck, P. J., Persson, L., & Tåg, J. (2010). *Ownership efficiency and tax advantages: The case of private equity buyouts* (No. 841). IFN Working Paper.
[4] Badunenko, O., Baum, C. F., & Schäfer, D. (2010). Does the tenure of Private Equity investment improve the performance of European firms?

cycle of activity due to tightened financing conditions. However, actual normative at the time debated in Europe regarding the benefits and drawbacks of private equity investment remained unsettled despite these fluctuations (Fenn, Liang, & Prowse, 1997)[1].

(Kaplan & Strömberg, 2009)[2] depicts private equity activity following cyclical patterns of booms and busts. Considering the boom from 2005 to 2007, they anticipated the decline in private equity investment and fundraising in the forthcoming years, even if with a less pronounced severity than 1980s crisis due to more robust capital structures and the increased sophistication of private equity firms. Only seven years after the 2008-2009 recession PE fundraising reached pre-crisis levels fundraising. During the past decade, roughly up until 2020, it has been characterized by historically low interest rates, fostering a significant surge in both fundraising and dealmaking within the private equity sector. However, the landscape shifted dramatically in early 2022 as central banks worldwide increased interest rates to curb inflation. Consequently, a notable deceleration in deal activity, exits, and fundraising has been experienced (Ljungqvist, 2024)[3].

Why should Private Equity activity be an advantage for both the parties involved, namely investor and investee? The relationship between private equity funds and target companies is often described as mutually beneficial, as both parties gain significant advantages. When signing the deal, the PE firm acquires shares in the target company in exchange for an influx of capital, while the target company obtains various benefits based on the partnership's objectives. Indeed, the partnership between PE funds and target companies should facilitate mutual growth and success, leveraging the strengths of both parties to achieve their strategic goals.

As (E.V.C.A., 2007)[4] reports, the first private equity backing advantage stands in the availability of long-term capital to invest for the firm needs. Indeed, the so-called financial benefit is remarkable, giving the firm the possibility to exploit financial

[1] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overveiw. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.
[2] Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *Journal of economic perspectives*, *23*(1), 121-146.
[3] Ljungqvist, A. (2024). The economics of private equity: A critical review. *Available at SSRN 4723171*.
[4] An, E. V. C. A. (2007). Guide on private equity and venture capital for entrepreneurs.

resources to contribute to its growth. Another important benefit created by private equity investment activity consists in the increased visibility with bankers, suppliers, and clients due to the investor's network of contacts. Moreover, the target company benefits from a huge network of the PE investor's extensive industry contacts, which can open doors to new business opportunities, partnerships, and markets. Moreover, the partnership with a PE fund provides a know-how benefit, as the PE firm offers valuable expertise and strategic guidance, leading the company in navigating complex business challenges and improving operations. Finally, the acquired company can gain advantage from the so-called certification benefit from the deal, consisting in its association with a reputable PE backing firm. This association enhances the company's credibility and market perception.

Private equity funds in their screening process perform detailed research aimed at selecting the company with the highest growth potential. (Kaplan & Strömberg, 2009)[1] described private equity funds as entities using their industry and operating knowledge to identify attractive investments, to develop and implement value creation plans for these investments. In the evaluation activity, PE funds try to select high growth, competitive products, or services, and in the case of disposal or transfer, a loan capacity, and recurring profits (E.V.C.A., 2007)[2]. General characteristics that PE funds search when selecting the investee firm are represented by quality and stable management team, solid management procedure and a transparent legal structure. Advocates of leveraged buyouts claimed that private equity firms enhance their portfolio companies by implementing financial, governance, and operational engineering. Through these interventions, private equity firms can significantly improve company operations and generate substantial economic value. (Badunenko, Baum, & Schäfer, 2010)[3] state: “On the one hand, PE investors claim to implement a superior business model which involves better alignment of managers’ and owners’ interests. On the other hand, private equity is viewed as operators with an increasingly shorter investment horizon aiming at stripping the firm’s assets and bailing out”.

[1] Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *Journal of economic perspectives*, *23*(1), 121-146.
[2] An, E. V. C. A. (2007). Guide on private equity and venture capital for entrepreneurs.
[3] Badunenko, O., Baum, C. F., & Schäfer, D. (2010). Does the tenure of Private Equity investment improve the performance of European firms?

1.2. Private Equity market and structure

(Fenn, Liang, & Prowse, 1997)[1] introduce four major actors involved in PE market interacting each other: issuers, agents and advisors, intermediaries and investors.

- Issuers – beneficiaries of the private equity investment, that can be listed in:
    - Venture Capital - typically young firms developing innovative technologies that are projected to exhibit very high growth rates in the future.
    - Middle-market companies - companies with stable, profitable businesses seeking expansion and changes in the capital structure and ownership.
    - Public companies – firms that go private often issuing a combination of debt and private equity to finance their management or leveraged buyout or to navigate periods of financial distress.
- Investors – actors that invest in the PE market can be represented by public and corporate pension funds, foundations, bank holding companies, and wealthy families and individuals, as well as insurance companies, investment banks, and nonfinancial corporations. Strategic reasons of investment could be different: if most institutional investors engage in private equity investments for strictly financial reasons, higher returns and potential benefits of diversification, other entities may invest in the private equity market to exploit economies of scope.
- Agents & Advisors – defined as "information producers", these entities play a crucial role in the private equity ecosystem. They raise funds for private equity partnerships and evaluate these partnerships on behalf of potential investors. By mitigating the costs associated with information asymmetry inherent in private equity investing, they facilitate the search for equity capital by private companies and for institutional investors by limited partnerships. Additionally, they provide advice on the structure, timing, and pricing of private equity issues and assist in negotiations.
- Intermediaries - constituted primarily by limited partnerships, under this type of arrangement institutional investors act as limited partners, while a team of

[1] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overveiw. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.

professional private equity managers serves as general partners. Limited partnerships typically have a ten-year lifespan. During this period, investors relinquish virtually all control over the management of the partnership, which can create potential conflicts between investors and the partnership managers, mitigated by a scheme of compensation that is tied to shares of the partnership's profits. Partnership managers are actively involved in the companies in which the partnership invests.

According to (Kaplan & Strömberg, 2009)[1], the typical private equity firm is structured as a limited partnership or a limited liability corporation (LLC). This funds secure equity stakes in high-potential companies based on a clearly defined investment strategy, which may focus on the target companies' size, sector, stage of development, and/or geographical location (E.V.C.A., 2007)[2]. The name "limited liability" refers to the limited liability of the capital providers, namely limited partners, whose liability is restricted to the extent of their investment in the fund. Under the UK framework, private equity investment can be depicted as a business activity rather than a financial one, which contrasts with the European approach where equity investment is typically classified as a financial activity, as stated by (Caselli, Gigante, & Tortoroglio, 2021)[3]. The private equity fund structure involves two principal actors: General Partners (GPs), also known as managerial investors, who establish investment funds to gather capital from investors, namely Limited Partners (LPs), usually represented by huge institutional investors. General Partners seek institutional investors and individuals with substantial assets to invest in a fund for a defined period, typically around ten years. General and Limited partners' objective consists in facilitating value creation, thereby achieving capital gains shared with the owners upon exit (E.V.C.A., 2007). General partners (contributing at least 1 percent of the total capital) manage the fund and limited partners provide the major fraction of the capital (Kaplan & Strömberg, 2009). As (E.V.C.A., 2007) reports, the legal structures of private equity funds can be characterized by limited lifespan, in general ten years, extendable by up to three additional years (Kaplan & Strömberg, 2009) or unlimited lifespan, based around a partnership

[1] Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *Journal of economic perspectives*, *23*(1), 121-146.
[2] An, E. V. C. A. (2007). Guide on private equity and venture capital for entrepreneurs.
[3] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.

agreement between the institutional investors and the investment fund management team. The private equity firm typically has up to five years to invest the committed capital into companies, followed by an additional five to eight years to return the capital to investors. The private equity firm raises capital through a private equity fund. (Caselli, Gigante, & Tortoroglio, 2021)[1] offer a classification of private equity funds concerning open-end funds, closed-end funds, and hedge funds.

- In Open-end Funds investors can enter and exit without specific time limits. They are characterized by medium-high level of liquidity and impossibility to invest in private equity and to use leverage.
- Hedge Funds allow to use leverage and can be structured as either open-end or closed-end funds. They are characterized by a high level of risk involved.
- In Closed-end Fund investors can only invest at the initial phase and can exit only at the end of the pre-established fund's life. This structure is particularly suitable for private equity investments due to secure availability of resources and liquidity over time. Closed-end funds operate as separate entities that pool money from a group of investors that commit their capital trusting the managers' ability to effectively manage these funds. Closed-end funds are prohibited from using leverage: if they intend to do so, the creation of an external Special Purpose Vehicle (SPV) to bear it is deemed necessary.

According to (E.V.C.A., 2007)[2], most private equity funds are "closed-end" vehicles where investors commit a specified amount of money to finance investments in companies and to cover management fees for the private equity firm. In exchange for their capital, investors receive a pre-negotiated equity stake in the investment fund, becoming shareholders and sharing the associated risks of the private equity firm. After ten years, or occasionally with an extension up to twelve years, all investments in the portfolio must be divested, and the investment fund must be closed.

Private equity dynamics are managed by two distinct groups: General Partners (GPs) and Limited Partners (LPs). As mentioned before, the fund managers (GPs) are responsible for the management activity of the investments of the fund's portfolio,

[1] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.
[2] An, E. V. C. A. (2007). Guide on private equity and venture capital for entrepreneurs.

bearing full liability for the investment and business debts. They control the company and oversee its investments, typically committing about 1% of the total invested funds (Caselli, Gigante, & Tortoroglio, 2021)[1]. According to (Prowse, 1998)[2], general partners focus on identifying, structuring, and managing equity investments in privately held companies, having the power to influence companies to prioritize shareholders' interests. They seek a risk-adjusted returns on private equity investments higher than potential returns from other investments, valuing the potential benefits of diversification. On the other hand, limited partners are represented by institutional investors (LPs), liable only for capital they have provided and not playing an active role in the management of the investments (E.V.C.A., 2007)[3]. They hold a significant portion of the company's equity, typically representing 99% of the total stake (Caselli, Gigante, & Tortoroglio, 2021). Limited partnerships use organizational and contractual strategies to ensure that the interests of both general and limited partners are aligned (Prowse, 1998).

Remuneration scheme in private equity funds follows a precise pattern. As (Kaplan & Strömberg, 2009)[4] report, general partners' compensation is twofold: first they earn the so-called "management fee" as a percentage of the committed capital, and subsequently a percentage of the invested capital as investments are realized. The management fee represents a percentage of the net asset value (NAV) of the closed end fund, and it is negotiated between Limited Partners (LPs) and General Partners (GPs). LPs prefer lower fixed costs to maximize investment returns, while GPs benefit from higher fees. It's crucial for the fee to be sufficient to cover all operational expenses incurred by the Asset Management Company (AMC), including operating costs, payments to the Advisory Company and Technical Committee, and compensation for the AMC directors (Caselli, Gigante, & Tortoroglio, 2021). Management fees amount to 1.5% - 2% of the capital raised to be deducted in advance from investors' commitments (E.V.C.A., 2007). Secondly, general partners receive a share of the fund's profits,

[1] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.
[2] Prowse, S. D. (1998). The economics of the private equity market. *Economic Review-Federal Reserve Bank of Dallas*, 21-34.
[3] An, E. V. C. A. (2007). Guide on private equity and venture capital for entrepreneurs.
[4] Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *Journal of economic perspectives*, *23*(1), 121-146.

known as "carried interest," which typically amounts to 20 percent (Kaplan & Strömberg, 2009)[1] and calculated as a percentage of the difference between the Fund's Internal Rate of Return (IRR) and a predetermined interest rate known as the "hurdle rate". Limited partners (LPs) receive the remaining 80%. This component represents the percentage of investment profits that the Asset Management Company receives from investors in the form of capital gains, which is then distributed to the fund managers (Caselli, Gigante, & Tortoroglio, 2021)[2]. In the divestment stage, the recovered amount is generally not reinvested but rather redistributed to the capital providers. Institutional investors receive the initial portion of the profit and an agreed-upon target rate of return, known as the "hurdle rate," as compensation for tying up their capital over the investment period. Any surplus profit above the hurdle rate is shared between the fund managers and the other investors.

1.3. Private Equity investments classification

Types of PE investment can vary according to the stage of development of the target company involved, since they are not linked unambiguously to a specific stage of a company's maturity. (Wright, Amess, Weir, & Girma, 2009)[3] describe private equity as a “non-homogeneous concept”, as it can refers to several stages of a company development. As underlined by (E.V.C.A., 2007)[4] one possible differentiation can be related to venture capital and maturity investment. The first pertains to equity investments in the startup, early development, or growth phases of a business, focused on entrepreneurial ventures. (Cressy, Munari, & Malipiero, 2007)[5] describes venture capital as a form of investment related to the early investment stage, including seed, startup and expansion. Conversely, buyout represents a financing source during the later development stages of its lifecycle. (Kaplan & Strömberg, 2009) identify the main difference between VC (Venture Capital) and Buyout in the intrinsic nature of buyout

[1] Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *Journal of economic perspectives*, *23*(1), 121-146.
[2] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.
[3] Wright, M., Amess, K., Weir, C., & Girma, S. (2009). Private equity and corporate governance: Retrospect and prospect. *Corporate Governance: An International Review*, *17*(3), 353-375.
[4] An, E. V. C. A. (2007). Guide on private equity and venture capital for entrepreneurs.
[5] *Cressy, R., Malipiero, A., Munari, F.(2007),“Playing to their strengths. Evidence that specialization in the Private Equity industry confers competitive advantage”, Journal of Corporate Finance, Special Issue on “Private equity, Legeraged Buyout and Corporate Governance*, *13*(4), 647-669.

transactions, characterized by the acquisition of a majority stake in the target firm. In contrast, venture capital investments typically refer to a minority stake acquisition in the target firm. Buyout can be classified in different ways, depending on the characteristics and type of the acquisition. (Wright, Amess, Weir, & Girma, 2009)[1] describes the heterogeneity of buyout types as crucial for comprehending the impact of governance aspects typical of these operations, classifying them as follows:

- Leveraged Buyouts (LBO) – which includes the acquisition of a company using a small portion of equity, combined with a substantial amount of external debt financing. A typical leveraged buyout deal requires 60 to 90 percent level of debt (Kaplan & Strömberg, 2009)[2].

- Management Buy-out (MBO) – that typically involves the acquisition of a divested division, a subsidiary, or a private family-owned firm by a new entity in which the existing management team takes a substantial equity stake (Bruining, Verwaal, & Wright, 2013)[3].
- Management Buy-in (MBI) – representing an investors' led buyout, when a group of external investors buys a company and replaces or supplements the existing management team.

Other types of buyouts described by (Wright, Amess, Weir, & Girma, 2009) include:

- Public-to-private transactions (PTPs) – when a public firm is privately acquired. This type of buyout might serve as a defensive measure against hostile takeover bids, since it has significant implications for the governance structures of firms, suggesting that the threat of a takeover can act as a substitute for ineffective boards.

[1] Wright, M., Amess, K., Weir, C., & Girma, S. (2009). Private equity and corporate governance: Retrospect and prospect. *Corporate Governance: An International Review*, *17*(3), 353-375.
[2] Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *Journal of economic perspectives*, *23*(1), 121-146.
[3] Bruining, H., Verwaal, E., & Wright, M. (2013). Private equity and entrepreneurial management in management buy-outs. *Small Business Economics*, *40*, 591-605.

- Buyout of division – concerning the acquisition by a private equity firm of a specific division or business unit of a company, rather than the entire company itself.
- Secondary buyout – consisting in the transfer of the majority ownership stake from one institutional investor to another.
- Buyout of firms in bankruptcy – to implement a turnaround strategy.

Literature offers several classification solutions for private equity investment types. (Fenn, Liang, & Prowse, 1997)[1]propose a classification in five different investment stages of a company's development: venture capital, middle-market private firms, firms in financial distress, public buyouts, and public buyouts with special financing needs. However, buyout refers strictly to the maturity stage of the target. (Caselli, Gigante, & Tortoroglio, 2021)[2] differentiate types of investments in four main categories:

- Seed and startup financing - Seed financing refers to the early stages of a new firm's development that has not yet a tangible product or revenue stream and aims to transform research and development (R&D) projects into viable start-ups. The risk-return profile in seed financing is challenging to define due to its high-risk nature, coupled with uncertain expected returns. Investors in seed financing typically do not assume managerial roles, but they actively support research activities and acquire a minority stake in the company as part of their investment.
- Venture Capital – VC includes startup and early growth financing. According to (Caselli, Gigante, & Tortoroglio, 2021), start-up financing aims to turn business ideas into a fully operational company capable of production for project setup. However, early-stage ventures' main risk consists in the failure primarily because the technology underlying their production methods and strategies are yet to be validated. (Fenn, Liang, & Prowse, 1997) classify venture financing in earlystage and later-stage ventures, both sharing a common objective: to achieve rapid growth that will enable them to go public

[1] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overview. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.
[2] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.

or be sold to another company. Later-stage new ventures having already demonstrated the viability of their technology, face risks about uncertainties that all small businesses encounter (Caselli, Gigante, & Tortoroglio, 2021)[1]. From investors' standpoint, this phase is characterized by a high risk-return profile, with uncertainties primarily regarding market dynamics (Fenn, Liang, & Prowse, 1997)[2]. Consequently, this phase attracts investors who are willing to participate due to growth potential providing support in strategic decisionmaking and acquiring a minority stake in the company as part of their investment.

- Expansion and Replacement financing - in the maturity phase of a company the typical investment purpose stands in expanding business activities. As (Fenn, Liang, & Prowse, 1997) outline, these firms are characterized by stable cash flows and much lower growth rates than firms seeking venture finance. Moreover, they are typically profitable. From an investor's perspective, expansion financing involves moderate risk because the objectives of this phase consist in enhancing projects within established fields with a minimal uncertainty, so expected returns are generally lower. The percentage of shares acquired in terms of ownership is typically the minority. (Fenn, Liang, & Prowse, 1997) claims that this investment category is usually composed by family owned enterprises that pursue private equity to achieve two objectives: financing an expansion, which may involve M&A activities or the purchase of additional plant and equipment or effecting a change in ownership and capital structure (Caselli, Gigante, & Tortoroglio, 2021).

Sometimes, when entrepreneurs want to pursue better strategic governance and corporate finance decisions, replacement financing could be desirable. It allows to address governance-related strategic decisions such as spin-off projects, equity restructuring, shareholder substitutions, initial public offerings (IPOs), family buy-ins or buyouts. For investors, the risk profile of replacement

[1] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.
[2] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overview. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.

financing deals is moderate because the firm's business model has proven successful and governance structures are established. Moreover, private equity operators often acquire a substantial number of shares in this case, sometimes becoming the controlling shareholder even if they typically do not involve themselves in day-to-day management (Caselli, Gigante, & Tortoroglio, 2021)[1].

- Vulture financing – related to the crisis and decline stage. This type of financing aims to restructure companies trying to enhance their financial performance and regain credibility. (Fenn, Liang, & Prowse, 1997) [2] underlines that this type of financing consists in a “turnaround” investment. In return for their injection of new capital, typically investors receive a controlling interest in the firm, with the current owners and management retaining a minority interest. In extreme cases, restructuring can be the decisive factor between a company's survival and bankruptcy. For investors, vulture financing is highly risky due to the lack of assurance that the company's survival plan will succeed: they bear this risk in exchange for a high return. Vulture investors often gain control by purchasing senior securities and frequently assume roles as board members or managers of the distressed company. The primary role of the private equity operator is to support managerial strategic decisions and oversee the implementation of the entire restructuring plan (Caselli, Gigante, & Tortoroglio, 2021).

1.4. The investment process

Private equity investment activity typically follows a precise path of stages to complete the investment, from the origination of the deal until the exit phase, with an exit plan of 4 to 7 years (Caselli, Gigante, & Tortoroglio, 2021). (Fenn, Liang, & Prowse, 1997)classify the investment path in four stages, namely selecting investment,

[1] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.
[2] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overview. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.

structuring, managing and exiting. An exhaustive classification of 4 steps value chain has been developed by (Caselli, Gigante, & Tortoroglio, 2021)[1]:

- Fundraising – according to (Fenn, Liang, & Prowse, 1997)[2] "Access to information about high-quality investment opportunities is crucial to a private equity partnership". Fundraising involves promoting a new equity investment vehicle with the primary aim of securing capital and fostering commitment (Caselli, Gigante, & Tortoroglio, 2021). In this phase general partners (GPs) typically initiate a fundraising campaign, which can extend from a few months to over a year and a half. This stage involves evaluating potential opportunities through gaining exhaustive information and sorting and assessing this data, ending with the selection of roughly 1% of the proposals (Fenn, Liang, & Prowse, 1997). These actions are performed through a due diligence, an appraisal of a target company's characteristics aimed to verify the information provided and to determine its value, helping investors to make informed decisions and negotiate favorable terms ensuring firm's strategic and financial objectives alignment. The main driver for investors when selecting funds is the potential to achieve returns higher than those in the broader financial market: typically, they seek a market premium of approximately 5%. This rate justifies the higher risks associated with the fund's low liquidity and the increased risks typical of private companies (Caselli, Gigante, & Tortoroglio, 2021).
- Investing - in which the parties negotiate an investment agreement outlining financial and governance aspects of the deal, and the terms of the investment and control rights of each party involved (Fenn, Liang, & Prowse, 1997). The selection process is based on the industry and the target firm's position, the validity and reliability of the business plan, the entry price, the quality and skills of the management team, and the exit strategy, using appropriate professional resources and information (Caselli, Gigante, & Tortoroglio, 2021).
- Managing and Monitoring – after the investment is made, general partners are actively involved in monitoring and governing their portfolio companies by

[1] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.
[2] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overview. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.

providing a range of consulting services such as strategic guidance, operational improvements, financial restructuring, and market expansion strategies aimed at enhancing the company's performance and value (Fenn, Liang, & Prowse, 1997)[1]. To assure an effective governance and management of the backed company, rules designed to minimize conflicts and mitigate agency problems between the investor and management are put in place. This strategy is implemented through covenants, that regulate the relationship between investors and managers delineating duties and rights to minimize opportunism, moral hazard, and conflicts of interest, and ratchets, formalized in contractual arrangements (Caselli, Gigante, & Tortoroglio, 2021)[2]. Common covenants include limits on the amount of capital that can be invested in a single company, the types of securities in which the fund can invest, and debt at the fund level (Kaplan & Strömberg, 2009)[3] and can be either positive or negative. While positive covenants are agreements on actions the company commits to undertake, such as regular board meetings or paying taxes on time, negative covenants are restrictions that prohibit certain actions. The main negative covenants, as reported by (Caselli, Gigante, & Tortoroglio, 2021), include:

- Lock-up - an agreement among investors, existing shareholders and management that restricts them from exiting by selling their stakes to third parties.
- Tag-along right - that allows the minority private equity firm to join a sale initiated by the majority entrepreneur, enabling them to sell their stake under the same terms and conditions.
- Drag-along rights or anti-dilution clause - that permits the private equity firm, when it wants to sell its stocks, to compel other shareholders to sell their stakes under the same conditions to the same buyer.

[1] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overview. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.
[2] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.
[3] Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *Journal of economic perspectives*, *23*(1), 121-146.

- Right of first refusal - granting the private equity firm the right to purchase stakes from the entrepreneur under the same conditions offered by a potential buyer, thereby preventing undesired new shareholders.

- Exit – consisting in the contractual agreement that states the dissolution of the partnership at the end of PE activity, and the repayment of limited partners within a specified timeframe. (Fenn, Liang, & Prowse, 1997)[1] outline three possible exit strategies: public offering, private sale and share repurchase by the company. (Caselli, Gigante, & Tortoroglio, 2021)[2] classify typical exit strategies in detail as follows:
    - Trade Sale - consisting in the sale of the stake by private equity investor to a corporation or an industrial shareholder. This agreement relies on industrial relationships between the parties. According to (Kaplan & Strömberg, 2009)[3] and (E.V.C.A., 2007)[4] trade sale is the most common and preferred exit route because strategic buyers often seek to acquire companies that complement their existing operations, offer synergies, and enhance value creation.
    - Buyback - concerning the sale of the stake to existing management representatives. This strategy results attractive if the company can guarantee regular cash-flow (E.V.C.A., 2007). Moreover, this option is beneficial for shareholders who want to continue developing the business without leaving the company and it is likely to occur when shareholders have initiated a venture capital operation to raise funds for business development or business expansion (Caselli, Gigante, & Tortoroglio, 2021).
    - Secondary Buy-Out (SBO) – consisting in the transfer of the majority or total control of the company from one institutional investor to another. (Kaplan & Strömberg, 2009) classify this exit strategy as second in terms

[1] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overview. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.
[2] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.
[3] Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *Journal of economic perspectives*, *23*(1), 121-146.
[4] An, E. V. C. A. (2007). Guide on private equity and venture capital for entrepreneurs.

of frequency of adoption, specifying that it has increased consideration over time. This divestment is like a trade sale, except the buyer is a financial investor rather than an industrial partner. It is usually employed when the target company is mature and debt burden is not so heavy. The main drawback is the inherent conflict of interest, as the buyer seeks the lowest possible price to maximize capital gains, while the seller aims for the highest price expansion (Caselli, Gigante, & Tortoroglio, 2021)[1].

- Write-off or Liquidation - that involve the total or partial devaluation of the stake, due to a loss of money unrelated to property transfer. In the case devaluation does not imply a total loss, a liquidation exit takes place (E.V.C.A., 2007)[2]. This exit strategy is adopted when the stake and the company can no longer produce future value and no economic return is expected to be generated anymore from the stake (Caselli, Gigante, & Tortoroglio, 2021).
- IPO - occurring when the private equity investor sells the stake through the stock exchange. (Fenn, Liang, & Prowse, 1997)[3] describe it as the preferred exit strategy because it results in the highest evaluation of the company and guarantees a liquid market for the firm's assets. Nevertheless, (E.V.C.A., 2007) describes that this strategy as "far from being the most widely use", mainly because the equity stake placed on the market must be huge enough to ensure liquidity and requires the target firm to be mature enough (Caselli, Gigante, & Tortoroglio, 2021). According to (Kaplan & Strömberg, 2009)[4], this exit route has decreased its importance over time: advantages of an IPO consist in the opportunity to sell the stake at a higher price, and increase potential gains for institutional investors, bringing a reputational benefit to the firm (Caselli, Gigante, & Tortoroglio, 2021).

[1] Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach*. Bocconi University Press.
[2] An, E. V. C. A. (2007). Guide on private equity and venture capital for entrepreneurs.
[3] Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overview. *Financial Markets, Institutions & Instruments*, *6*(4), 1-106.
[4] Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *Journal of economic perspectives*, *23*(1), 121-146.

1.5. Italian PE Market overview and relevant players in the luxury context

The luxury mid-market segment is characterized by high level of competitive advantage and specialization, resulting in the presence of many private equity opportunities. Being these firms typically family owned and small-size business struggling to achieve the changing needs private equity market can fill this gap adopting the so-called “buy and build” strategy, not only improving business structures, but also ensuring target firm reshaping in terms of innovation and sustainability aspects (Anzolin & Za, 2023)[1]. According to AIFI (Associazione Italiana del Private Equity, Venture Capital e Private Debt) periodic report, in 2023 private equity market in Italy achieved a gross internal rate of return (IRR) of 18.2%, consistently with the trend of previous years. (Koinos, 2023)[2] describes 2023 as moderately eventful for the Italian private equity industry, particularly within the small and medium-sized enterprises (SMEs) sector, outlining a trend of consolidation across various industries. As (AIFI & PwC, I Semestre 2023 - Il mercato italiano del private equity e venture capital, 2023)[3] states, the first half of 2023 showed substantial stability in the number of investments compared to the same period in 2022. However, a slight decrease in buy-out, infrastructure, turnaround, and replacement transactions has been noted. According to AIFI, the most significant difference lies in the overall value of deals. Since number of large deals (over €150 million) has become less than a half compared to 2022, mainly because of geopolitical uncertainties, inflation and the subsequent rise in interest rates implemented by global central banks (Koinos, 2023) the total invested value fell from €10.8 billion to €3.1 billion, outlining a 71% decrease. Moreover, (AIFI & PwC, I Semestre 2023 - Il mercato italiano del private equity e venture capital, 2023) states that during the year, a total of 52 divestment operations were recorded, compared to 54 transactions observed in 2022, with a total amount collected by private equity funds of approximately to 2 billion euros, in slight decrease with respect to the previous year. Data collected are consistent with the market trend and historical sector analysis, and the recorded IRR of 18.2% demonstrates a solid performance of private equity funds in 2023, consistent

[1] Reuters, 2023. “Focus: Private equity persuades Italian luxury suppliers that bigger is better”.
[2] Koinos Capital, 2023. “The 2023 of the Italian private equity market”.
[3] AIFI, 2023. “il mercato Italiano del private equity e venture capital”.

with the results of the previous year. As (Ionescu, Charizona, & Cavallaro, 2024)[1] outlines, at the end of 2022 PE players owned an amount of about 2,000 Italian companies in their portfolios, collectively valued at approximately 70 billion euros. Indeed, 2022 represented a significant milestone for the Italian private equity market, which reached unprecedented levels with 848 transactions involving 624 companies and a total deal value of approximately 23.66 billion euros. Specifically, venture capital and early-stage sector saw an underscoring growing interest in 2022 in supporting emerging industries. On the other hand, the buyout and infrastructure dominated in terms of deal value, highlighting the strategic importance of established industries within the Italian economy. Private equity trends related to the last decade have been reported by (PwC, 2021)[2] through the analysis of historical private equity market trend in Italy, compared to the Italian market trend, measured by GDP. Results show that revenues growth faced a gradual reduction in the period 2015-2017, finding a growth stability between 5 and 5.5% over 2018, 2019 and 2020, at a higher rate with respect to Italian GDP level in the same period. Therefore, in this period private equity owned companies show a stable trend in terms of average CAGR % of revenues and an increasing trend in terms of employment growth rate, maintaining a higher performance compared to the Italian market. Over the period 2009-2019 revenues and EBITDA of PE backed companies continues to show a higher CAGR % compared to the benchmark. Leverage ratio, measured as Net Financial Position/EBITDA, revealed a gradual decrease from 2015 to 2019, showing a diminishing trend of financial debt in PE backed companies. According to (LIUC, 2016)[3], 2015 and 2016 represented a remarkable period characterized by a huge investment activity, where pre-crisis levels were reached again. Closed investments number amounted to 100 after the 63 of 2013, with buyout operations constituting the most frequent investment type. Going back to the first decade of the millennium, according to (Fidanza, 2010)[4], from 2001 to 2004, a notable contraction in PE and VC investments has been observed: reduction of growth rates was mostly attributed to the bursting of the speculative bubble concerning an overvaluation of assets relative to their intrinsic value, in 2000. Subsequently, in 2004,

[1] BSPEC – Bocconi Student private Equity Club, 2024. “Tracing the Evolution of Italy’s Private Equity Landscape and Its Impact on the Fashion and Luxury Industries”.
[2] PwC, 2021. “The economic impact of Private Equity and Venture Capital”.
[3] LIUC – Università Cattaneo, 2016. “Private Equity Monitor, 2016”.
[4] Fidanza, B. (2010). Private Equity in Italia: caratteristiche del mercato e ruolo per le imprese. In *Evoluzione e discontinuità nel sistema finanziario internazionale* (pp. 149-175). McGrawHill.

the market seemed to suffer from the absence of mega deals: expansion operations were the major part along these years. Nevertheless, by 2007 buyouts represented 79% of the invested capital, and in 2008 sharply decreased to 53%. Replacement investments then surpassed expansion investments and almost reached the levels of buyouts, due to the need of many distressed firms to response to difficulties in sustaining the debt burden during the 2008 crisis. This data indicates that despite the global financial crisis, confidence in the private equity (PE) sector remained strong. As (Deloitte, Global Fashion & Luxury Private Equity and Investors Survey, 2023)[1], Fashion and Luxury (F&L) industry worldwide experienced a rebound in 2021 and the first half of 2022, with a modest increase in merger and acquisition (M&A) activities. In the years 2015-2021 both the Personal Luxury Goods (PLG) and Other Luxury segments experienced growth in sales and profit margins outlining a superior performance. According to (Deloitte, Global Fashion & Luxury Private Equity and Investors Survey, 2021)[2], at the time 100 per cent of funds were considering an investment in the Fashion & Luxury sector with considerable interest in Apparel & Accessories-manufacturing, Apparel & Accessories-retail, Cosmetics & Fragrances and Furniture, and despite the pandemic, the luxury market grew in 2020 with 277 completed M&A deals According to (Anzolin & Za, 2023)[3], private equity transactions in the past decade have reached 40% of the total number of deals. As (Ionescu, Charizona, & Cavallaro, 2024)[4] underlines, F&L (Fashion & Luxury) sector in Italy is one of the most representative in terms of volume, employment, and revenue. Italian luxury landscape made of many small manufacturing operators account for 50-55% of the global production of luxury, against 20-25% for the rest of Europe, as reported by (Anzolin & Za, 2023).

Private equity funds can invest in different industry firms to achieve a differentiation strategy in terms of sector or can be specialized in specific industries to exploit a potential industry expertise. Literature regarding PE specialization strategy is mixed and several research has been conducted on this topic, resulting in a divergence of

[1] Deloitte, 2023. “Global Fashion & Luxury Private Equity and Investors Survey”.
[2] Deloitte, 2021. “Global Fashion & Luxury Private Equity and Investors Survey”.
[3] Reuters, 2023. “Focus: Private equity persuades Italian luxury suppliers that bigger is better”.
[4] BSPEC – Bocconi Student private Equity Club, 2024. “Tracing the Evolution of Italy’s Private Equity Landscape and Its Impact on the Fashion and Luxury Industries”.

opinion. (Cressy, R., Munari, F., & Malipiero, A., 2007) [1] state that PE firms characterized by an industry specialization gain an advantage with respect to the competitors having the ability to "select potentially superior performers and to provide more effective monitoring and advice once an investment has been made". (Le Nadant, Perdreau, & Bruining, 2018)[2] claim a profit increase relatively to backed companies and company growth, specifying that the magnitude depends on different contingencies. On the other hand, (Gottschalg & Wright, 2011)[3] observed a non-improved performance both in terms of growth and profitability of the industry specialized PE firms. For what concern Italian private equity market, it is possible to focus the attention on some specific funds that are active in the sector, partially or fully specialized in luxury industry:

- (Quadrivio, 2024)[4] is one of the main PE players operating in the fashion-luxury industry, and it is structured in four funds, where each entity is characterized by specialized investment activities. *Made in Italy Fund* and *Made in Italy Fund II* focus on fashion, design, beauty, food & wine and apparel & accessories, with particular attention to SMEs (Small-Medium Enterprises) representing Italian excellence. The fund is currently managing several investments in this specific industry, having already realized 2 exit operations. Companies currently in the fund's portfolio have been reported below, with the specifics of the sector in which they operate:

    - Rebeya *(Cosmetics);*
    - PT Torino *(Apparel);*
    - Dondup *(Apparel);*
    - GCDS *(Apparel);*

[1] Cressy, R., Munari, F., & Malipiero, A. (2007). Playing to their strengths? Evidence that specialization in the private equity industry confers competitive advantage. *Journal of Corporate Finance*, *13*(4), 647-669.
[2] Le Nadant, A. L., Perdreau, F., & Bruining, H. (2018). Industry specialization of private equity firms: a source of buy-out performance heterogeneity. *Venture Capital*, *20*(3), 237-259.
[3] Gottschalg, O., & Wright, M. (2011, January). Understanding the buyers' role in private equity returns-The influence of skills, strategy and experience. In *Conference, New York City*.
[4] Quadrivio Group website. "https://www.quadriviogroup.com/it".

- Rosantica *(Bags & Accessories, Jewels)*;
- Rougj *(Cosmetics);*
- Mohd *(Design & Furniture);*
- 120%Lino *(Apparel);*
- Sessùn *(Apparel);*
- Filippo de Laurentiis *(Apparel).*

On the other hand, the following companies have been object of exit by the fund.

- Autry *(Shoes);*
- Ghoud *(Shoes).*

Even if not all the companies, in producing and selling their products, reach the same luxury status in terms of prestige and exclusivity, thus they share a common aspect: the belonging to the Italian excellence concept, and the positioning in high-end or luxury niche.

- (21Invest, 2024) [1] is particularly active in buyout operations. Average investments dimension stands between 10 and 50 million euros, and the total value of the fund amounts to about 1 billion euros (Pecunya, 2024)[2]*.* The fund has a differentiated investment strategy including Fashion & Luxury sector, and presents 2 industry specific companies in its portfolio:
  - Gianni Chiarini *(Bags & Accessories);*
  - Philippe Model *(Shoes);*
- (Clessidra, 2024)[3] invests mainly in Italian industry-leader companies, with high growth potential and an enterprise value between 100 and 500 million euros (Pecunya, 2024)*.* The fund operates through three sub-funds and in 2023 it reached an AUM (Assets Under Management) of 1 billion, 20 years after its

[1] 21 Invest website “https://www.21invest.com/it/”.
[2] Pecunya website. “https://www.pecunya.com/it/blog/i-piu-grandi-fondi-di-private-equity-italiani/”.
[3] Clessidra SGR website. “https://www.clessidragroup.it/”.

foundation (Il Giornale d'Italia, 2024)[1]. The main deals of the fund's activity related to companies of high-end and luxury niche and that have been object of exit in recent years follow:

- Harmont & Blaine *(Apparel);*
- Roberto Cavalli *(Apparel).*

Moreover, one firm is currently in the fund's portfolio:

- Viabizzuno *(Design & Furniture).*

After the overview of the main Italian private equity funds investing in the luxury and high-end sector, it is remarkable to mention some foreign players that are very active in Italian private equity landscape focusing their activity in the same niche:

- (Permira, 2024)[2] adopts a long-term value creation strategy with the aim of making an ambitious business an industry leader**.** From its foundation, the fund has committed a total capital amount of 80 billion euros operating in technology, consumer, healthcare, and services fields**.** The most relevant Permira operations strictly related to the high-end and luxury niche are:
  - Dr Martens *(Shoes);*
  - Hugo Boss *(Apparel);*
  - Golden Goose *(Apparel and Shoes);*
  - Gruppo Florence *(Apparel, B2B);*
  - Valentino *(Apparel).*
- (Carlyle, 2024)[3] represents one of the hugest private equity players worldwide, with an amount of AUM of $159 billion and about 300 portfolio companies. It operates in many industries including retail sector and the main invested companies operating in high-end and luxury sector are:

[1] Il Giornale d'Italia, 2024. "Clessidra, superato €1 mld di interventi a vent'anni dalla fondazione. Obiettivo 2023: espansione all'estero".
[2] Permira website. "https://www.permira.com/".
[3] Carlyle webiste. "https://www.carlyle.com".

- Flos B&B Italia Group (*Design & Furniture);*
- Golden Goose *(Apparel and Shoes);*
- Supreme *(Apparel);*
- Twinset Milano *(Apparel).*

2. THE LUXURY MARKET

2.1. What does luxury mean?

The concept of luxury has been described in various ways over the years. The term *'luxus'* derives from Latin, though etymologists debate its root: does it mean excess or a distinct standing? (Brun & Castelli, 2013)[1] identify the origin of luxury in the Latin root "*lux"*, meaning *"light",* referring to precious objects associated with potential moral decay and excess. This approach holds an ambiguous connotation associated with wealth, exclusivity and power, as well as the satisfaction of non-essential desires. Contrarily, (Kapferer J. N., The future of luxury: Challenges and opportunities. , 2014)[2] states that *"luxury"* does not derive from *"lux"* (light, enlightenment), but rather from *"luxatio",* meaning *"a disruption"* or *"an excess of something"*. The modern connotation of luxury as *"something enjoyable or comfortable beyond the necessities of life"* emerged at the end of the nineteenth century. Entrepreneurs began to create exceptional products for the elite, shifting from hand-crafted items to products designed for broader markets. In the twentieth century, the expansion of business and the growth of distribution networks broadened the customer base, increasing the reputation of established brands. Several trends from the 1970s shaped the luxury industry, including the increase in travel, the expansion of luxury product ranges, and growth in distribution networks. By the 1980s, luxury brands gained increased public exposure (Brun & Castelli, 2013).

According to (Growthgate, 2019)[3] the luxury industry is structured in two main categories: personal luxury goods and experiential luxury goods. Therefore, luxury market can refer to products such as watches, clothing, jewelry, accessories, fragrances, and beauty products, but also to adventurous experiences, including activities like traveling to destinations, space tourism, haute cuisine, spa retreats, and attending extraordinary events like opera, concerts, and sports games (Chevalier &

[1] Brun, A., & Castelli, C. (2013). The nature of luxury: a consumer perspective. *International Journal of Retail & Distribution Management*, *41*(11/12), 823-847.
[2] Kapferer, J. N. (2014). The future of luxury: Challenges and opportunities. *Journal of Brand Management*, *21*(9), 716-726.
[3] Growthgate Capital, 2019. "Brand Equity meets private Equity".

Mazzalovo, 2021)[1]. While personal luxury goods are designed for mid to long-term enjoyment, on the other side experiential luxury goods are typically created for immediate pleasure (Growthgate, 2019)[2]. As (Chevalier & Mazzalovo, 2021) underline, luxury initially emerged as an elitist and rewarding practice, but under the influence of brands, it has evolved into a market subject to increasing segmentation. Today, luxury is no longer a singular concept, rather multiple forms of luxury exist, each tailored to a specific demographic group distinguished by a peculiar purchasing power, social group norms, and unique aspirations. (Brun & Castelli, 2013)[3] present various perspectives on the concept of luxury, examining how it is perceived across different schools of thought. Their research state that while some define luxury in terms of products containing precious materials, others associate it with the lifestyle of a privileged elite. Moreover, some others may associate it with positive feelings, while those who view it as unnecessary might perceive it negatively. (Kapferer, Klippert, & Leproux, 2014)[4] denotes luxury market as objects and experiences that go beyond the necessities of life, being accessible to individuals with surplus wealth. Typical luxury items or experiences are characterized by high-quality products, brand heritage, unique knowledge, exclusivity, personalized service, bespoke communications, and long-term relationships with a select clientele*.* Despite manufactured products typically earned their status of luxury goods due to their superior quality, durability, performance, and design, today brand image has become a critical element in luxury market positioning, with emotional factors playing a significant role (Brun & Castelli, 2013). (Antoni, Burgelman, & Meza, 2004)[5] identify three crucial elements that luxury products must present:

- Excellence – in terms of association with superior quality in both the product and related services, that are key elements to justify the prices paid by consumers.

[1] Chevalier, M., & Mazzalovo, G. (2021). *Luxury brand management in digital and sustainable times*. John Wiley & Sons.
[2] Growthgate Capital, 2019. “Brand Equity meets private Equity”.
[3] Brun, A., & Castelli, C. (2013). The nature of luxury: a consumer perspective. *International Journal of Retail & Distribution Management*, *41*(11/12), 823-847.
[4] Kapferer, J. N., Klippert, C., & Leproux, L. (2014). Does luxury have a minimum price? An exploratory study into consumers’ psychology of luxury prices. *Journal of Revenue and Pricing Management*, *13*, 2-11.
[5] Antoni, Burgelman, Meza, 2004. “LVMH in 2004: The Challenges of Strategic Integration”.

- Brand Aura – consisting in a persistent excellence over time, allowing a brand to maintain a strong reputation and market positioning.

- Desirability – that involves an affirmed aesthetic appeal that links modernity with traditional values, where rarity and uniqueness further increase attractiveness.

The presented features are recognized as general accepted criteria to identify luxury items or experiences. Nevertheless, (D'Arpizio, Levato, Steiner, & de Montgolfier, 2024)[1] provide a three-level classification of luxury brands based on their degree of exclusivity, from the less affordable type to the most accessible one:

- Absolute Luxury Brands - characterized by elitism, timelessness, and uniqueness, traditionally dominating luxury markets due to their historical association with luxury and their production of precious items.
- Aspirational Luxury Brands - recognizable and distinctive brands that have shown significant growth and that do not dominate but takes part to the luxury category.
- Accessible Luxury Brands – characterized by a higher affordability than aspirational brands, they serve as status symbols for middle-class consumers and have faced a strong demand for entry-level luxury goods in the emerging markets.

According to many scholars, the features that typically identified luxury items and experiences in the past and that characterized the sector as a niche with limited access, have recently been object of discussion. As (Growthgate, 2019)[2] reports in, luxury sector is not tailored to mass consumption, differently from many other industries. It is restricted to a precise part of the population, which has a relevant purchasing power and that exists in every demographic of the world. Nevertheless, according to (Brun & Castelli, 2013)[3] recent trends have shown a *"massification"* of luxury concept, a phenomenon characterized by growing demand, expansion into emerging markets, and the introduction of more accessible luxury items. Some

[1] Bain & Company, 2024. "Long Live Luxury: Converge to Expand through Turbulence".
[2] Growthgate Capital, 2019. "Brand Equity meets private Equity".
[3] Brun, A., & Castelli, C. (2013). The nature of luxury: a consumer perspective. *International Journal of Retail & Distribution Management*, *41*(11/12), 823-847.

scholars describe this trend as *"democratization of luxury",* highlighting new consumer categories and characterizing perceptions of luxury as both a means of personal satisfaction and a marker of social status (Brun & Castelli, 2013)[1]. By studying the relationship between luxury and price threshold, (Kapferer, Klippert, & Leproux, 2014)[2] describe this trend as characterized by an increasing accessibility of the luxury industry in terms of price decrease that contribute to the sector's growth by widening the range of consumers, even if being expensive has always been a peculiar aspect of luxury sector. This phenomenon has allowed low income and middle-class buyers to seek for luxury-labelled products as a status symbol, leading them to purchase luxury brands that were previously considered not affordable, while maintaining the prestigious and desirability associated with luxury (Brun & Castelli, 2013). Nevertheless, (Kapferer, Klippert, & Leproux, 2014) outline that if this trend makes luxury products accessible to a broader audience, on the one hand profitability increases, on the other hand the prestige associated with luxury brands could potentially diminish. The highlighted phenomenon has brought many scholars to define *"New Luxury"* a new emergent trend that allows specific items or experiences to be more accessible. (Silverstein & Fiske, 2003)[3] classify items and products of the *"New Luxury"* based on their level of exclusivity in three main types:

- Accessible Super-Premium Goods - products priced near the top of their category but still affordable for middle-market consumers.
- Old Luxury Brand Extensions - concerning lower-priced versions of products traditionally only affordable to the wealthy.
- Masstige Products – consisting in mass-market and prestige premium products that are positioned below the highest-priced goods in their category, but still offer a sense of exclusivity.

[1] Brun, A., & Castelli, C. (2013). The nature of luxury: a consumer perspective. *International Journal of Retail & Distribution Management*, *41*(11/12), 823-847.
[2] Kapferer, J. N., Klippert, C., & Leproux, L. (2014). Does luxury have a minimum price? An exploratory study into consumers' psychology of luxury prices. *Journal of Revenue and Pricing Management*, *13*, 2-11.
[3] Silverstein, Michael J.; Fiske, Neil (2003). Luxury for the masses. *Harvard Business Review*.

After the overview of the luxury concept, in *section 2.2* the critical success factors typical of luxury items are presented and described.

2.2. Luxury critical success factors

To be classified as luxurious, an item or experience requires to own specific peculiarities. By combining common elements belonging to the luxury niche, various authors have identified a list of critical success factors *(CSFs)* that generally identify luxury products. (Kapferer, Klippert, & Leproux, 2014)[1] expand this view by explaining that if the price of premium goods must be justified by objective facts regarding their quality, for luxury items price does not need to be rationally explained because quality is presumed: it reflects the value of intangible aspects. According to many scholars, luxury products must present a set of critical success factors *(CSFs)* as crucial elements to be identified as such:

1. Consistent delivery of premium quality – while (Brun & Castelli, 2013)[2] characterize quality with superior material prestigious and conformity to product specifications, (De Barnier, Falcy, & Valette-Florence, 2012)[3] describe high-quality typical of luxury products asa "*hedonistic experience"*. (Kapferer, Klippert, & Leproux, 2014), state that the concept of quality can be declined in the following dimensions:

    - Ingredients - including their selection process, country of origin, and inherent 'nobility', also concerning experiential aspects (Kapferer, Klippert, & Leproux, 2014). (Growthgate, 2019)[4] attribute to ingredients the main driver of the quality of a product, together with the handcraft production by skilled artisans that give shape to the finest materials used.

[1] Kapferer, J. N., Klippert, C., & Leproux, L. (2014). Does luxury have a minimum price? An exploratory study into consumers' psychology of luxury prices. *Journal of Revenue and Pricing Management*, *13*, 2-11.
[2] Brun, A., & Castelli, C. (2013). The nature of luxury: a consumer perspective. *International Journal of Retail & Distribution Management*, *41*(11/12), 823-847.
[3] De Barnier, V., Falcy, S., & Valette-Florence, P. (2012). Do consumers perceive three levels of luxury? A comparison of accessible, intermediate and inaccessible luxury brands. *Journal of Brand Management*, *19*(7), 623-636.
[4] Growthgate Capital, 2019. "Brand Equity meets private Equity".

- Craftsmanship - concerning the expertise involved, the handmade nature of the product, and the time invested in creating a single item (Brun & Castelli, 2013)[1].
- Production process – *"performed by talents, not merely workforces"* (Kapferer, Klippert, & Leproux, 2014)[2]. Everyone in a luxury house is highly qualified (Brun & Castelli, 2013). One of the main aspect stands in the brand connection to heritage, expertise, and culture (De Barnier, Falcy, & Valette-Florence, 2012)[3].

- Service quality – concerning the provision of superior highly personalized services before, during, and after the purchase experience (De Barnier, Falcy, & Valette-Florence, 2012).

2. Exclusivity - achieved through naturally scarce materials, limited editions, selective distribution, the creation of waiting lists (Brun & Castelli, 2013), and a price exceeding what functional values would dictate (De Barnier, Falcy, & Valette-Florence, 2012). Exclusivity also concerns an iconic communication involving a distinct visual universe of a brand built on desire, dreams, and fantasies (Growthgate, 2019)[4].

3. Uniqueness and Timelessness – uniqueness, strictly correlated to exclusivity, refers to the rarity and desirability of a product due to its scarcity. It can be achieved through various means, such as the perception of irreplaceability, limited production, or special handcrafting skills (Growthgate, 2019), which also concerns handcrafted authenticity (Brun & Castelli, 2013). On the other hand, timelessness regards the durability and enduring appeal of a product. Luxury items are perceived as lasting a long time, even transcending

[1] Brun, A., & Castelli, C. (2013). The nature of luxury: a consumer perspective. *International Journal of Retail & Distribution Management*, *41*(11/12), 823-847.
[2] Kapferer, J. N., Klippert, C., & Leproux, L. (2014). Does luxury have a minimum price? An exploratory study into consumers' psychology of luxury prices. *Journal of Revenue and Pricing Management*, *13*, 2-11.
[3] De Barnier, V., Falcy, S., & Valette-Florence, P. (2012). Do consumers perceive three levels of luxury? A comparison of accessible, intermediate and inaccessible luxury brands. *Journal of Brand Management*, *19*(7), 623-636.
[4] Growthgate Capital, 2019. "Brand Equity meets private Equity".

generations, and never going out of style (Kapferer, Klippert, & Leproux, 2014)[1].

4. Emotional Appeal and Sensual Aesthetic - combining product excellence with an emotional appeal, including an atmosphere at the point of sale that reflects the brand's values (Brun & Castelli, 2013)[2]. This aspect concerns the appeal of a product or brand to the five human senses, conveying sensuality and indulgence through its communication, materials, craftsmanship, and history (Growthgate, 2019)[3]. According to (Kapferer, Klippert, & Leproux, 2014), it reflects in the good taste that the brand guarantees. In return, the brand remunerates the client with added elegance and self-confidence.

5. Recognizable Style and Design representing a Lifestyle – this element consists in shaping a distinctive style and design that consumers can identify even without seeing the label, allowing customers to share a unique lifestyle that can be recreated in everyday life by owning the luxury product (Growthgate, 2019).

(Kapferer J.-N. , 2014)[4] trying to investigate the impact of a luxury item purchase directly from a craftsman, state that purchasing directly from a craftsman or buying from a luxury brand store represent superior and distinct experiences. Therefore, to countermeasure the effects of the *democratization of luxury* previously described, many luxury fashion labels have emphasized craftsmanship in their production processes, providing history and additional value to their products. Specifically, it is interesting to investigate its link with the concept of “Made in Italy”. Italian brands, historically characterized by an excellent homemade production, claim a strong national identity and *“Italianicity”* to confirm their strength and market positioning in the

[1] Kapferer, J. N., Klippert, C., & Leproux, L. (2014). Does luxury have a minimum price? An exploratory study into consumers’ psychology of luxury prices. *Journal of Revenue and Pricing Management*, *13*, 2-11.
[2] Brun, A., & Castelli, C. (2013). The nature of luxury: a consumer perspective. *International Journal of Retail & Distribution Management*, *41*(11/12), 823-847.
[3] Growthgate Capital, 2019. “Brand Equity meets private Equity”.
[4] Kapferer, J. N. (2014). The artification of luxury: From artisans to artists. *Business horizons*, *57*(3), 371-380.

customers' perception (Dallabona, 2014)[1]. The term 'Italianicity,' coined by Barthes in 1977, refers to an abstract entity open to new additions, linking to Italy and its lifestyle. *"Italianicity"* or Italian national identity is not a fixed entity, but a conglomeration of different traits, allowing brands to select characteristics that best serve their purposes (Giusti, 2013)[2], and it is not synonymous with Italy itself. Rather, it is the condensed essence of all that could be considered Italian, from spaghetti to painting (Dallabona, 2014). As observed by (Chevalier & Mazzalovo, 2021)[3], luxury goods are typically associated with specialists working by hand on individual pieces, making these products more unique and expensive compared to mass-manufactured items. These aspects are usually emphasized by Italian luxury fashion labels in their communications. Moreover, the power of narratives of Italian craftsmanship is not limited to Italian brands. Indeed, several foreign luxury brands like Chanel, Louis Vuitton, and Marc Jacobs that present some Italian craftmanship manufacturing elements, emphasize these aspects. Italian craftsmanship is closely linked with quality and prestige, providing additional value to products, and increasing the reputation of any luxury brand (Dallabona, 2014). According to (Giusti, 2013), the essence of *"Made in Italy"* is not defined by a static organizational model. Instead, it embodies a dynamic approach that fosters close cooperation among a variety of enterprises, including fashion and luxury houses, manufacturers, subcontractors, and independent points of sale. The Italian model is based on the interconnection of different levels and organizations through extensive networks. Many Italian brands selectively emphasize certain national traits to reinforce positive brand images, contributing to reshaping perceptions of national identity by focusing on desirable characteristics that improve brand reputation (Giusti, 2013).

The section just presented highlights some intrinsic features that typically cannot miss when dealing with a luxury item or experience. While luxury items must generally satisfy the most part, or even all these characteristics, conversely premium brands possess some but not necessarily all these criteria. (Kapferer & Bastien, The specificity

[1] Dallabona, A. (2014). Narratives of Italian craftsmanship and the luxury fashion industry: Representations of Italianicity in discourses of production.
[2] Giusti, N. (2013). Diffuse entrepreneurship and the very heart of «made in Italy», for fashion and luxury goods. *Современная конкуренция*, (1 (37)), 58-64.
[3] Chevalier, M., & Mazzalovo, G. (2021). *Luxury brand management in digital and sustainable times*. John Wiley & Sons.

of luxury management: Turning marketing upside down, 2017)[1] stated that luxury is not merely an elevated form of premium. Indeed, while the price of premium goods must be justified by objective quality facts, luxury assumes inherent quality, with its price often reflecting intangibles such as history, legend, and brand prestige rather than rational explanation. (Growthgate, 2019)[2] trying to investigate the critical peculiarities that distinguish a luxury brand from a premium one. Results of the research show that premium brands are less ostentatious, more accessible, and more rational than luxury ones, yet they remain modern, elegant in design, and precise in fabrication. Moreover, premium brands are not generally seen as inferior to luxury brands, rather they may be perceived differently in mature and developed markets that place a greater emphasis on brand soul and logo recognition. Premium brands typically lack the time or capital to fully meet all the luxury criteria. Consequently, they occupy a position between the higher end of the mass/retail market and the lower end of the luxury market.

2.3. Luxury market trends

As (Growthgate, 2019) reports, luxury industry results suitable for private equity (PE) investments, despite its capital-intensive nature, requiring substantial investment in both human talent and physical resources. According to this research, the luxury industry generally delivers significant margins and demonstrate robustness and high profitability, elements that make it an attractive option for PE investors. Moreover, luxury niche presents specific peculiarities that distinguish it from other sectors, particularly in times of economic downturns. Historical evidence suggests that even in periods of crisis, where mass-market brands have lost market share, wealthy consumers continued to allocate funds to luxury items, although at a reduced rate. As (Brun & Castelli, 2013)[3] reports, during the global financial crisis of 2008, which saw a 25% decline in global consumption, the luxury industry experienced a more moderate downturn of 10%. This figure clearly describes this peculiarity defined as the '*anti-fragile'* nature of the luxury sector, that demonstrate resilience or even growth during

[1] Kapferer, J. N., & Bastien, V. (2017). The specificity of luxury management: Turning marketing upside down. *Advances in luxury brand management*, 65-84.
[2] Growthgate Capital, 2019. "Brand Equity meets private Equity".
[3] Brun, A., & Castelli, C. (2013). The nature of luxury: a consumer perspective. *International Journal of Retail & Distribution Management*, *41*(11/12), 823-847.

periods of economic volatility. Another recent case that confirms the stability of luxury market is represented by the remarkable results achieved in 2023, with €1.5 trillion of total value reached under geopolitical and economic turbulences of the recent years (D'Arpizio & Levato, 2024)[1]. (Brun & Castelli, 2013)[2] associate the resilience of luxury industry to its ability in entering the subconscious physiological needs of consumers, that makes it less susceptible to rational factors like price fluctuations or economic downturns. However, there are inherent risks associated with investing in the luxury sector. First, the scarcity of personnel whose talent can appeal across various consumer segments, that creates a dependency on human capital, particularly creative talent, posing challenges in managing and retaining key individuals. Additionally, the luxury industry's value chain is expensive, in terms of high costs for materials, manufacturing, branding, and logistics, which requires strict financial and corporate discipline (Growthgate, 2019)[3].

As underlined by (D'Arpizio & Levato, 2024) in the annual report of luxury industry of the first quarter of 2024, the luxury goods market is currently facing an important challenge in finding a balance between the necessity to satisfy its top clientele, and at the same time reaching new market segments. This dilemma regards three main aspects: first, the increase in luxury experiences has allowed stable growth, however brands must reshape their value propositions to face market competition. Secondly, macroeconomic pressures are affecting luxury brands, causing a decline in consumer demand. Additionally, the increased disparity in top and bottom-line performance should opt for an evaluation of the industry's business models. Research of (Ferraro, 2024)[4] claims the surge of a clear polarization, concerning a clear division between two sides of the market: on one side, ultra-exclusive luxury brands that continue to improve their performance, and on the other, brands targeting aspirational consumers that are struggling to maintain their success. Industry's growth is stabilizing at pre-Covid levels, returning to more sustainable rates, amounting to a 5% increase in 2024.

[1] Bain & Company, 2024. "Following a record year, the stalled luxury goods market faces a dilemma between catering to top clientele and reaching new audiences amid ongoing complexities".
[2] Brun, A., & Castelli, C. (2013). The nature of luxury: a consumer perspective. *International Journal of Retail & Distribution Management*, *41*(11/12), 823-847.
[3] Growthgate Capital, 2019. "Brand Equity meets private Equity".
[4] Milano Finanza, 2024. "The luxury industry slowdown".

According to (D'Arpizio & Levato, 2024)[1], the experiential luxury products have been preferred over tangible goods in the first quarter 2024, in line with the results of 2023, driven by a resurgence in social interactions and travel (Deloitte, Global Fashion & Luxury Private Equity and Investors Survey, 2023) [2] , after the detrimental consequences caused by Covid-19. According to (Ferraro, 2024)[3] the luxury market is facing two distinct speeds. On the one hand, huge groups as *Kering* and *LVMH* have faced difficulties, showing negative quarterly results. On the other hand, brands like *Prada* and *Brunello Cucinelli* are keeping on showing a robust growth. Specifically, brands targeting high-end selective consumers like *Hermès, Chanel, Louis Vuitton, Moncler, and Prada*, reveal to be more resilient compared to those that attract aspirational buyers, such as *Gucci, Burberry, Salvatore Ferragamo*, and *Tod's*. As Madjo (Head of European Luxury Goods Research at Barclays) and Bonelli (Retail, Fashion & Luxury Leader at EY Europe West) report in the article by (Ferraro, 2024), the biggest worldwide companies are struggling with this slowdown because, despite their market dominance, they are not immune to current challenges, among which:

- Macroeconomic Pressures and Market Saturation - due to economic uncertainties and fluctuations that can impact consumer spending patterns. Moreover, high recent growth rates have set challenging benchmarks, making it difficult for companies to sustain such levels.

- Changing Consumer Aesthetic Preferences – from the one hand due to the growing trend towards experiential luxury over tangible goods. On the other hand, it is caused by the transition during the Covid-19 era to iconic and timeless items rather than seasonal trends luxury goods.

- Increased Competition - the luxury market is becoming increasingly competitive, with new entrants and evolving consumer expectations.

- Price Sensitivity and Pricing Strategy – price sensitivity is due to rising prices caused by inflation, causing consumers to be more selective about their luxury purchases. Pricing strategy regards the shift from a strategy based on

[1] Bain & Company, 2024. "Following a record year, the stalled luxury goods market faces a dilemma between catering to top clientele and reaching new audiences amid ongoing complexities".
[2] Deloitte, 2023. "Global Fashion & Luxury Private Equity and Investors Survey".
[3] Milano Finanza, 2024. "The luxury industry slowdown".

exclusivity and product scarcity through the extensive use of price lever, to the adoption of a ceiling, limiting further price increases.

Despite the outlined market trends that have led luxury industry to face new challenges, this sector confirms to be resilient in terms of volume of activities and performance, as highlighted by recent results. Indeed, according to (D'Arpizio, Levato, Steiner, & de Montgolfier, 2024)[1], despite challenging macroeconomic conditions, the global luxury market reached an estimated €1.5 trillion in 2023, marking an 8% to 10% growth over 2022 at current exchange rates. The leading segments, made by luxury cars, luxury hospitality, and personal luxury goods account for over 80% of the total market. Focusing on personal luxury goods, the market likely reached €362 billion in 2023, showing a 4% increase from 2022 at current exchange rates. Despite these results, a progressive slowdown in 2023 has been noted: indeed, the luxury market began the year with revenues increase of 12% in the first quarter. However, increasing rate faced a reduction to 8% in the second quarter, followed by a 3% rate in the third quarter, remarking an evident downward trend (Danziger, 2024)[2]. In the first quarter of 2024, among luxury categories, jewelry has revealed a standout performer, having surpassed watches in growth. Moreover, apparel has outpaced accessories through an elevation strategy aimed at attracting top-tier customers, while shoes have experienced a slowdown among aspirational shoppers. Moreover, in 2023, all categories of personal luxury goods experienced growth, driven primarily by continued price elevation. Jewelry, viewed increasingly as an investment, was projected to reach a market value of €30 billion, with fine jewelry standing out as a reliable investment during uncertain times. Ready-to-wear apparel and beauty sector saw a positive trend, especially makeup and fragrances. However, growth in leather goods and shoes, which had overperformed in recent years, began to slow down (D'Arpizio, Levato, Steiner, & de Montgolfier, 2024). As reported by (Deloitte, Global Fashion & Luxury Private Equity and Investors Survey, 2023)[3] that presents the world's top 100 luxury leading companies, in 2023, 23 Italian luxury goods companies (more than one fifth of the total) are present, contributing to 7.8% of global luxury goods sales. Despite their

[1] Bain & Company, 2024. "Long Live Luxury: Converge to Expand through Turbulence".
[2] Forbes, 2024. "Innovation needed as luxury goods market stalls in 2024".
[3] Deloitte, 2023. "Global Fashion & Luxury Private Equity and Investors Survey".

smaller average sales compared to the top 100 luxury goods companies of US$1.2 billion versus average of US$3.5 billion, these Italian firms have shown remarkable performance. Most of these companies were still family-owned, primarily by their founding families. The Italian luxury sector is predominantly composed of fashion houses, with 15 of the 23 companies falling into this cate. According to (D'Arpizio, Levato, Steiner, & de Montgolfier, 2024)[1], regarding the performance, globally, in 2023, approximately two-thirds of brands experienced growth, compared to 95% in 2022. Profitability is a strong point for nearly all these companies, with several reporting double-digit net profit margins. Among the 23 Italian fashion houses, the top three companies in terms of sales were *Prada* (16%), *Moncler SpA* (10%) and *Giorgio Armani SpA* (9%). This profitability underscores the resilience and robust performance of the Italian luxury sector, even subject to significant economic fluctuations. Moreover, (Deloitte, Global Fashion & Luxury Private Equity and Investors Survey, 2023)[2] reports the first 20 companies in terms of speed of growth measured thorugh CAGR between 2019 and 2022, among which 5 Italian took place. *Golden Goose SpA* covered the fifth position worldwide, but also *Morellato group*, *Moncler SpA*, *Euroitalia S.r.l.* and *Brunello Cucinelli SpA* were present.

Recent performance results of luxury market reveal to be coherent with the ones of the last ten years. Indeed, from 2015 to 2021 both the Personal Luxury Goods (PLG) and Other Luxury segments have shown a remarkable growth in both sales and profitability, with PLG outperforming other segments. PLG recorded a compound annual growth rate *(CAGR)* of +6.1% in this period, and an increase of 7.2% in EBITDA margin. After the impact of Covid-19, in the subsequent years the overall luxury industry faced a recovery phase, with PLG reporting a year-over-year *(YoY)* sales increase of +22.8% from 2020 to 2021, and the Other Luxury segment seeing a +20.1% rise in the same period (Deloitte, Global Fashion & Luxury Private Equity and Investors Survey, 2023). Despite the general positive trend characterizing the luxury sector, the onset of Covid-19 in 2020 had a significant negative impact on the entire luxury industry due to government-imposed restrictions that led to the closure of physical retailers and significant travel limitations. Additionally, the economic downturn resulted in a decrease in consumer purchasing power and a reduced willingness to buy luxury goods,

[1] Bain & Company, 2024. "Long Live Luxury: Converge to Expand through Turbulence".
[2] Deloitte, 2023. "Global Fashion & Luxury Private Equity and Investors Survey".

particularly within the affordable-luxury segment (Deloitte, Global Fashion & Luxury Private Equity and Investors Survey, 2021)[1]. Indeed, in 2020, The Personal Luxury Goods sector faced a general decline: the average EBITDA margin across luxury sectors was 15.9%, reflecting a decrease of -1.5 percentage points compared to 2019. Nevertheless, Personal Luxury Goods outperformed the broader industry with an EBITDA margin of 22.3%, demonstrating its resilience in the middle of uncertain times through a reliance on digital sales channels, with the cosmetics and fragrances segment leading this shift. Experiential luxury sectors, such as Hotels & Restaurants and Luxury Cruises were the hardest hit, experiencing a market value decline of up to 70% compared to 2019. The yachting industry emerged as the most resilient to the Covid-19 downturn, driven by an increased consumer focus on safety and a preference for intimate travel experiences (Deloitte, Global Fashion & Luxury Private Equity and Investors Survey, 2022)[2].

[1] Deloitte, 2021. “Global Fashion & Luxury Private Equity and Investors Survey”.
[2] Deloitte, 2022. “Global Fashion & Luxury Private Equity and Investors Survey”.

3. LITERATURE REVIEW

3.1. Private Equity performance

After an overview of private equity world and a briefing on the luxury market, Chapter 3 concerns an extensive literature review on PE-backed target companies' performance focused on value creation. Over the years, numerous studies have tried to investigate the impact of PE ownership on the operational and financial outcomes of the controlled target companies. Specifically, previous literature tried to understand whether PE-backed companies could have benefited from an advantage in terms of growth and performance improvement, with respect to non-PE-backed companies, and the potential underlying reasons behind these performance differences. Throughout the time, results of these investigations have been contradictory, and different results have emerged from the research. On the one hand, several scholars argue that PE-backed firms benefit from superior governance structures, improved managerial incentives and strategic guidance, mainly due to PE-backing firms' expertise, leading to improved operational efficiency and superior financial performance. On the other hand, some research studies suggest that the aggressive cost-cutting measures and short-term profit orientation commonly associated with PE activity could be detrimental for long-term growth and sustainability of the target company. This chapter aims to shed a light on how existing literature has perceived the impact of private equity backing activity on the performance of target companies, by examining the influence of selected independent variables on specific performance indicators of the target firms.

(Wilson, Wright, Siegel, & Scholes, 2012)[1], analyzing the impact of the global recessions on highly leveraged companies, evaluate the economic and financial performance of almost the population of U.K. PE-backed companies from 1995 to 2010 in terms of growth, efficiency, and profitability, both before and during the recession period of 2008-2010. Research shows that private equity firms often excel in monitoring their portfolio companies, leveraging their expertise to improve performance by identifying opportunities for cost efficiencies and growth, contrarily from non-PE-

[1] Wilson, N., Wright, M., Siegel, D. S., & Scholes, L. (2012). Private equity portfolio company performance during the global recession. *Journal of Corporate Finance*, *18*(1), 193-205.

backed firms. Focusing their research on the severe global recession incurred from 2008 to 2010, they showed that PE-backed buyouts exhibit higher growth, productivity, and improved working capital management compared to similar firms that did not undergo such transactions, demonstrating that PE backing provides a positive approach in taking timely actions to improve target's performance. Moreover, the research state that despite PE-backed buyouts, on average, experienced higher growth in turnover, employment, and value added, positive results are not experienced in terms of profits. Also, (Battistin, Bortoluzzi, Buttignon, & Vedovato, 2017)[1]went deep in this topic, stating that despite private equity investors promote growth leading to significant increases in sales, EBITDA, employment levels, and capital expenditures, no relevant effect on the EBITDA margin has been detected. This aspect suggests that while overall financial performance improves, there is no significant impact on profitability margins, demonstrating that PE investments improve the value of portfolio companies by fostering growth rather than focusing on restructuring or efficiency-seeking measures. Specifically, analyzing the mean Return on Assets (ROA), profit margin, and interest coverage ratio for PE-backed buyouts during the recession period of 2007–2010, (Wilson, Wright, Siegel, & Scholes, 2012)[2] found higher results for these indicators with respect to the pre-recession period. They attribute the reason of this event to the fact that PE investors typically target profitable companies in lower-risk sectors with potential for efficiency and profit improvements exhibiting greater resilience to economic downturns, thereby achieving superior relative performance. Even if ROA results to be higher during the underlined recession period, in the same timespan the mean debt-to-total assets ratio turns out to be lower. Finally, findings of the research support the hypothesis that growth tends to be less volatile in PE-backed buyouts than in non-buyouts. (Guo, Hotchkiss, & Song, 2011)[3] focused their research specifically in leveraged buyouts (LBOs) completed between 1990 and 2006 in U.S., trying to understand the related value generation. Results primarily show that, on average, the sample firms exhibit significant growth in total value from the time of the

[1] Battistin, E., Bortoluzzi, P., Buttignon, F., & Vedovato, M. (2017). Minority and majority private equity investments: firm performance and governance. *Journal of Management & Governance*, *21*, 659-684.
[2] Wilson, N., Wright, M., Siegel, D. S., & Scholes, L. (2012). Private equity portfolio company performance during the global recession. *Journal of Corporate Finance*, *18*(1), 193-205.
[3] Guo, S., Hotchkiss, E. S., & Song, W. (2011). Do buyouts (still) create value?. *The Journal of Finance*, *66*(2), 479-517.

buyout to their eventual exit, resulting insubstantial returns on both the invested debt and equity capital. Moreover, the research reveals that leveraged buyout returns are consistently positive across most outcome categories, except those involving distressed restructuring: in this case, improvements in operational performance generally match or slightly exceed those of benchmark firms matched by industry. (Meles, Monferrà, & Verdoliva, 2014) [1] investigate the impact of private equity investments over time following the exit of PE investors, by considering the most common exit routes, trade sales, secondary buyouts, and buybacks. The research confirms that PE-backed firms outperform their non-PE-backed counterparts during and after PE fund exit. However, results reveal that the continued benefits of PE investments to portfolio firms are contingent on several factors such as the type of PE investment, the duration of the investment, the nature of the PE investor and the chosen exit strategy. (Meuleman, Amess, Wright, & Scholes, 2009)[2] investigate private buyout performance by focusing on divisional buyouts, concerning the acquisition of a part or a division of a firm rather than the entire company, focusing on how the performance of divisional buyouts differ from other private buyouts. Using a dataset comprising 238 private equity-backed buyouts in the UK between 1993 and 2003, the research shows that divisional buyouts do not exhibit significant changes in profitability when compared to other types of buyouts. However, divisional buyouts are associated with improvements in efficiency, as measured by sales per employee, growth, and employee growth. The described research underscores the importance of the resources and capabilities that buyout specialists bring in terms of monitoring and advisory to their portfolio companies, demonstrating that private equity firms play a crucial role in improving growth in later-stage buyouts, as well as in initial-stage buyouts. (Meles, Monferrà, & Verdoliva, 2014) also show that firms backed by bank-based PE investors are more likely to outperform their matched firms in the post-exit period, due to the differing incentives between bank-based and non-bank-based PE investors. Whereas non-bank-based investors typically prioritize early exits and high returns, bank-based investors may focus on the long-term growth of their portfolio

[1] Meles, A., Monferrà, S., & Verdoliva, V. (2014). Do the effects of private equity investments on firm performance persist over time?. *Applied Financial Economics*, *24*(3), 203-218.
[2] Meuleman, M., Amess, K., Wright, M., & Scholes, L. (2009). Agency, strategic entrepreneurship, and the performance of private equity–backed buyouts. *Entrepreneurship Theory and Practice*, *33*(1), 213-239.

firms, aiming to create synergies with their core banking business. (Cressy, R., Munari, F., & Malipiero, A., 2007)[1], trying to test the *"Jensen Hypothesis",* attribute the main reason of PE-backed buyouts higher operating performance with respect to non-PE-backed companies to their superior governance structures, and due to specialization by industry or investment stage. Also, (Le Nadant, Perdreau, & Bruining, 2018)[2], in their research, describe industry-specific expertise as a crucial factor in buyout deals. Based on a sample of 217 PE-backed buyouts completed in France between 2001 and 2007, they analyze the post-LBO performance impact of PE firms with and without industry-specific expertise. (Cressy, R., Munari, F., & Malipiero, A., 2007), in their research, attribute to industry-specialized private equity firms the possibility to benefit of a deeper understanding of the competitive environment with respect to their competitors. This factor enables PE funds to select potentially superior performers and it is associated with superior post-buyout performance of the companies they invest in. Moreover, the research underlines that investment selection skills and financial engineering techniques play a more critical role in terms of performance improvement, contradicting the *Jensen Hypothesis* which attributes such potential improvement strictly to superior governance structures. (Le Nadant, Perdreau, & Bruining, 2018) offer a two-sides perspective on the topic: first, their study shows that non-specialized PE firms are less able to maintain the initial profitability levels of their portfolio companies compared to industry-specialized firms. Second, the study reveals significant differences in the effectiveness of resource and capability leveraging among industry-specialized PE firms, underscoring the strategic importance of industry expertise, that usually led to post-LBO increase in operating profitability. On the one hand, (Cressy, R., Munari, F., & Malipiero, A., 2007), basing their analysis on a sample of 122 UK buyouts from 1995 to 2002, revealed that over the first three years post-buyout, operating profitability of PE-backed companies was 4.5% higher than the one of comparable non-buyout companies, supporting the Jensen Hypothesis. Moreover, Industry specialization further increased this differential by an additional 8.5%. On the

[1] Cressy, R., Munari, F., & Malipiero, A. (2007). Playing to their strengths? Evidence that specialization in the private equity industry confers competitive advantage. *Journal of Corporate Finance*, *13*(4), 647-669.

[2] Le Nadant, A. L., Perdreau, F., & Bruining, H. (2018). Industry specialization of private equity firms: a source of buy-out performance heterogeneity. *Venture Capital*, *20*(3), 237-259.

one hand, according to (Le Nadant, Perdreau, & Bruining, 2018)[1], PE industry-specialization leads to profit increase of 7.5% greater than those seen in buyouts backed by non-specialized PE firms. Results of the research also underline that specialized firms that exhibit significantly higher post-LBO profitability improvements, even face slightly stronger post-LBO revenue growth. However, the positive effects of industry specialization on growth vary across firms, revealing stronger for companies that were underperforming prior to the buyout. According to the research, industry-specialized PE firms are particularly suitable at supporting high-performing targets while also improving the operating efficiency of low-performing targets before the buyout, in contrast to nonspecialized PE firms. (Verbouw, Meuleman, & Manigart, 2021)[2] review the empirical literature on the real effects of private equity ownership on portfolio companies, with a particular focus on post-buyout operating performance and employment. The results show a consistent medium-to-long-term positive effect of PE on operating performance but do not find significant effects on employment, suggesting that PE investors primarily focus on fostering company growth rather than extracting value at the expense of employees. Contrarily to agency theory predictions, PE's positive impact on operating performance is more pronounced in private-to-private buyouts than in public-to-private transactions, both in the short and medium term. (Badunenko, Baum, & Schäfer, 2010)[3] investigate the topic focusing on the concept of *"time-to-build",* showing that the effects of PE active shareholders' restructuring decisions may take time to manifest in relevant performance indicators. Their analysis regards the relationship between tenure in terms of time and outcomes achieved, indicating that in the short term, the presence of private equity investors among the firm's shareholders generally has a negative impact on firm performance, as measured by its return on assets (ROA). Moreover, this negative impact increases with the average duration of PE involvement. However, if PE involvement last almost 6 years, in the longer term a notable positive effect on the company's performance emerged. Additionally, the analysis reveals that larger firms consistently outperform smaller ones:

[1] Le Nadant, A. L., Perdreau, F., & Bruining, H. (2018). Industry specialization of private equity firms: a source of buy-out performance heterogeneity. *Venture Capital*, *20*(3), 237-259.
[2] Verbouw, J., Meuleman, M. L., & Manigart, S. (2021). The real effects of private equity buyouts: a meta-analysis. In *Academy of Management Proceedings* (Vol. 2021, No. 1, p. 14309). Briarcliff Manor, NY 10510: Academy of Management.
[3] Badunenko, O., Baum, C. F., & Schäfer, D. (2010). Does the tenure of Private Equity investment improve the performance of European firms?.

firms with higher cash flows show significantly higher ROAs compared to those with lower cash flows. Finally, according to the research, firms with a higher probability of default tend to significantly underperform with respect to their less risky peers. Results found by (Meles, Monferrà, & Verdoliva, 2014)[1] do not align with the described results found by Badunenko, Baum and Schafer: indeed, they strongly support the existence of an inverted U-shaped relationship between the length of PE investment and post-exit firm performance. While this confirms that the duration of PE investment serves as a proxy for investment intensity, it also supports the *"hold-up"* hypothesis, which suggests that excessively long PE investments may indicate lower firm quality. (Gigante, Di Cesare, & Cerri, 2024)[2] and (Heinrich, 2023)***[3]*** both focused their research on European PE deals. (Gigante, Di Cesare, & Cerri, 2024) analyzed a sample of European private equity-backed companies between 2005 and 2017 by studying the performance of medium-sized enterprises. They depict private equity as an effective alternative source of financing, with a positive impact on operational performance and profitability of the target firm. However, (Heinrich, 2023)***,*** using a dataset of European PE transactions, explores the value creation strategies employed by private equity firms with a particular focus on operational engineering. The research, concerning a comparison of PE-backed versus non-PE-backed deals, show that PE firms exhibit a distinct selection pattern, targeting firms with relatively low sales volumes and poor profitability, as measured by EBITDA margins. (Gigante, Di Cesare, & Cerri, 2024)***,*** in their research, underline the existing divergences between non-SMEs and SMEs backed by private equity: in some cases, SMEs demonstrate lower operational performance compared to non-SMEs, while in other cases, the opposite result is experienced. Moreover, in the case the company is family-owned, results suggest that the presence of family shareholders negatively affects the ability of these companies to improve operational performance due to the unwillingness to leave control to external investors, having a detrimental impact on performance indicators. According to the research, leverage results to be particularly relevant in determining the

[1] Meles, A., Monferrà, S., & Verdoliva, V. (2014). Do the effects of private equity investments on firm performance persist over time?. *Applied Financial Economics*, *24*(3), 203-218.
[2] Gigante, G., Di Cesare, N., & Cerri, A. (2024). Determinants of the performance of private equity backed SMEs: an empirical analysis at the European level. *Economic research-Ekonomska istraživanja*, *37*(1).
[3] Heinrich, V. (2023). Private Equity Transactions: Value Creation through Operational Engineering–Evidence from Europe. *Junior Management Science (JUMS)*, *8*(3), 634-657.

operational performance of companies receiving private equity investment during the Global Financial Crisis. While private equity investors typically increase both operational and financial risk in target firms, and such an increase in risk could increase the likelihood of illiquidity or bankruptcy, the analysis reveals that, during the years of private equity involvement, higher leverage was positively correlated with enhanced operational performance, outweighing the associated costs of greater financial and operational risks. However, (Heinrich, 2023)[1] noted that leverage levels do not significantly influence the likelihood of a buyout. PE-backed firms demonstrate a substantial and persistent improvement in profitability, measured by EBITDA margin, with the margin increases being significantly stronger and sustained over time compared to non-PE transactions. The underlined EBITDA margin improvement is primarily attributable to operational engineering, confirming its role as a critical driver of value creation in PE transactions. Contrarily to claims that depict PE firms as a mean that merely transfer wealth through complex compensation schemes and high fees, this study provides strong evidence that PE firms actively create value through operational improvements. (Gigante, Di Cesare, & Cerri, 2024)[2] also attribute a crucial role to the experience of private equity investors for PE-backed deals success. It revealed to be associated with improved operational performance of the target firm during the holding period and tends to increase its weight especially when the investment is made during a period of economic crisis. Contrarily to Gigante, Di Cesare, Cerri, (Meuleman, Amess, Wright, & Scholes, 2009)[3], in their research, found that private equity firm experience is not significantly related to higher levels of profitability or efficiency. By evaluating how variations in private equity firm experience and the intensity of post-buyout involvement affect the performance of firms undergoing a buyout, they found that a greater private equity firm experience is still associated with higher growth rates in the buyout firms, also economically significant. However, the same results are not achieved in terms of profitability, even if private

[1] Heinrich, V. (2023). Private Equity Transactions: Value Creation through Operational Engineering–Evidence from Europe. *Junior Management Science (JUMS)*, *8*(3), 634-657.
[2] Gigante, G., Di Cesare, N., & Cerri, A. (2024). Determinants of the performance of private equity backed SMEs: an empirical analysis at the European level. *Economic research-Ekonomska istraživanja*, *37*(1).
[3] Meuleman, M., Amess, K., Wright, M., & Scholes, L. (2009). Agency, strategic entrepreneurship, and the performance of private equity–backed buyouts. *Entrepreneurship Theory and Practice*, *33*(1), 213-239.

equity firm experience plays a crucial role for driving growth in divisional buyouts, more so than in other types of buyouts. (Battistin, Bortoluzzi, Buttignon, & Vedovato, 2017)[1], furtherly restrict the research field, by examining 191 private equity (PE) investments made in Italy between 1995 and 2004. They focused on the comparison between the impact of PE minority investments (MINs) versus majority investments (MAJs) on firm's ownership structure and governance of target firms. The analysis firstly reveals that target firms systematically outperform over the three years after the deal, remarking that PE investments have persistent positive effects on performance, showing positive causal effects on key performance indicators such as profitability, sales growth, and employment levels. Secondly, the study outlines that in the post-investment period, MAJs and MINs exhibit significantly divergent performance, particularly among family-owned firms, underscoring the effectiveness of MINs in stimulating firm growth in target firms, in terms profitability and growth. (Bruining, Verwaal, & Wright, 2013)[2] investigate a similar topic: they focused on the effects of majority private equity PE-backed buyouts compared to other types of buyouts on entrepreneurial activity. According to their research, four among six dimensions of entrepreneurial management, namely strategic orientation, reward philosophy, resource orientation, and growth orientation, shift towards a more entrepreneurial management mode. The most remarkable increase verifies in strategic orientation and reward philosophy, confirming that post-buyout firms are increasingly driven by the pursuit of valuable opportunities, independently of the resources they own or control. However, two dimensions, management structure and entrepreneurial culture, show different behaviors. While the management structure remains largely unchanged after the buyout, the entrepreneurial culture moves in the opposite direction, gravitating towards an administrative management focus. These aspects suggest that buyout firms increasingly emphasize controlled resources as a starting point for considering new opportunities, which contrasts with the other four dimensions that prioritize entrepreneurial management in areas such as resource allocation, value creation, and growth. (Battistin, Bortoluzzi, Buttignon, & Vedovato,

[1] Battistin, E., Bortoluzzi, P., Buttignon, F., & Vedovato, M. (2017). Minority and majority private equity investments: firm performance and governance. *Journal of Management & Governance*, *21*, 659-684.
[2] Bruining, H., Verwaal, E., & Wright, M. (2013). Private equity and entrepreneurial management in management buy-outs. *Small Business Economics*, *40*, 591-605.

2017)[1] depict PE firms as a crucial mean useful to drive top-line growth and operational expansion within their invested firms, to stimulate revenue growth, expand operations, and invest in capital projects. According to their research, by facilitating expansion and strategic investments, PE investors contribute to the long-term growth and competitiveness of their portfolio companies, maximizing the total enterprise value. Research reveals that, particularly in majority investments, private equity investors exert significant influence on board composition within target companies, primarily through altering the roles of existing directors and appointing new representatives. Eventually, research shows that, for minority stakes, PE acquisition characterized by a family ownership result in fostering growth. In contrast, for non-family-owned targets, significant growth of acquired companies occurs in the case the PE investor acquires a majority interest. (Hotchkiss, Smith, & Strömberg, 2021)[2] investigate the role of private equity (PE) firms in addressing financial distress, analyzing a sample of firms that participated in the leveraged loan market between 1997 and 2010. The research explores two different perspectives on the topic: on the one hand, the *"dark side"* perspective supports the hypothesis that PE firms' focus on short-term gains and excessive risk-taking measures, increasing both the likelihood and the costs of financial distress. On the other hand, the "bright side" view suggests that PE funds are better arranged to manage financial distress compared to other non-PE owners. Results clearly support the *"bright side"* view. (Belyakov, 2020)[3]**,** through an empirical analysis of a sample of UK companies with private equity ownership, demonstrates that PE firms results particularly adept in providing financial support to their portfolio companies when these firms encounter financial distress. In contrast, companies without PE backing face significantly higher costs when seeking external financing during times of distress: a key conclusion from this analysis is that the abnormal returns observed in PE-backed firms cannot be easily replicated by other investors. (Hotchkiss, Smith, & Strömberg, 2021) demonstrate that PE-backed firms do not exhibit a higher likelihood of default compared to firms with similar leverage characteristics. When PE-

[1] Battistin, E., Bortoluzzi, P., Buttignon, F., & Vedovato, M. (2017). Minority and majority private equity investments: firm performance and governance. *Journal of Management & Governance*, *21*, 659-684.
[2] Hotchkiss, E. S., Smith, D. C., & Strömberg, P. (2021). Private equity and the resolution of financial distress. *The Review of Corporate Finance Studies*, *10*(4), 694-747.
[3] Belyakov, A. (2020). Economics of leveraged buyouts: Theory and evidence from the UK private equity industry. *Jacobs Levy Equity Management Center for Quantitative Financial Research Paper*.

backed firms face financial difficulties, they tend to complete the restructuring process rapidly and efficiently and result more likely to survive as independent entities compared to non-PE-backed distressed firms. Furthermore, the improved outcomes for PE-backed firms are largely driven by the ability of PE owners to inject capital as financial distress approaches. (Belyakov, 2020)[1], going deep into the role of financial distress in shaping the behavior of PE-backed versus non-PE-backed companies, shows that leverage levels of PE-backed companies are significantly lower than traditionally assumed, with many buyouts involving minimal or no debt. Moreover, there is no evidence that PE owners incur in excessive extraction of value from their portfolio companies, as demonstrated by the fact that an equal number of PE-backed firms distribute dividends and receive follow-on equity injections from their PE owners. Indeed, PE firms often reduce leverage pressures, allowing portfolio companies to continue investing even when internal cash flows are limited. The outlined financial flexibility is particularly important for companies in distress, as it allows PE-backed firms to maintain their investment levels during periods of financial difficulty. On the other side, for non-PE-backed firms, securing external financing during distress results to be costly. (Hotchkiss, Smith, & Strömberg, 2021)[2]finally suggest that PE ownership does not increase the risk of financial distress, and when defaults occur, portfolio companies under PE ownership solve the distressed issue more efficiently than their non-PE-backed counterparts. This highlights that PE ownership reduces the expected costs of financial distress and thereby improves firms' debt capacity. Additionally, observations show that PE investors frequently retain control of their portfolio companies following restructuring, a phenomenon that is less common among non-PE-backed firms.

By presenting the main results of literature review in a compact format, *table 3.1.1.* offers a structured overview of the key articles mentioned in the literature review. The section concerns, for each article, research essential findings and related authors, to gain a clear understanding of the major conclusions in the field.

[1] Belyakov, A. (2020). Economics of leveraged buyouts: Theory and evidence from the UK private equity industry. *Jacobs Levy Equity Management Center for Quantitative Financial Research Paper*.
[2] Hotchkiss, E. S., Smith, D. C., & Strömberg, P. (2021). Private equity and the resolution of financial distress. *The Review of Corporate Finance Studies*, *10*(4), 694-747.

Table 3.1.1. – Summary overview of literature review sources

Article	***Author(s), year***	***Results of the research***
Private equity portfolio company performance during the global recession	*Wilson, Wright, Siegel, Scholes (2011)*	*Object*: impact of the **global recessions on highly leveraged companies.** *Results***: PE funds leverage their expertise to improve target performance** in terms of growth, productivity and profitability, compared to non PE-backed firms.
Playing to their strengths? Evidence that specialization in the private equity industry confers competitive advantage	*Cressy, Munari, Malipiero (2007)*	*Object*: **PE specialization** influence in PE-backed buyouts. *Results*: PE-backed buyouts **show higher operating performance than comparable companies due to their superior governance structures and due to specialization by industry** or investment stage relative to competitors.
Does the tenure of private equity investment improve the performance of European firms?	*Badunenko, Baum, Schäfer (2010)*	*Object*: the concept of **"time-to-build"** in PE-acquisitions. *Results*: **in the short term, the presence of private equity (PE) investors has a negative impact on firm performance.** If PE involvement last almost 6 years, a notable positive effect on the company's performance emerged.
Do Buyouts (Still) Create Value?	*Guo, Hotchkiss, Song (2009)*	*Object*: **leveraged buyouts** deal performance. *Results*: **LBOs returns are consistently robust and positive across most outcome categories**, except those involving distressed restructuring.
Minority and Majority Private Equity Investments: Firm Performance and Governance	*Battistin, Bortoluzzi, Buttignon, Vedovato (2017)*	*Object:* comparison of the impacts of **PE minority investments (MINs) versus majority investments (MAJs).** *Results:* **over the three years after the deal PE investments have persistent positive effects on performance**, and that PE investment effects are larger for MINs.
Determinants of the performance of private equity backed SMEs: an empirical analysis at the European level	*Gigante, Di Cesare, Cerri (2024)*	*Object*: **divergences between non-SMEs and SMEs**, family-ownership impact, and leverage magnitude, especially in periods of economic crisis. *Results:* **private equity as an effective alternative source of financing shows a positive impact** on operational performance and profitability of the target firm.
Agency, strategic entrepreneurship, and the performance of private equity backed buyouts	*Meuleman, Amess, Wright, Scholes (2024)*	*Object:* **divisional buyouts** performance. *Results*: **acquisition activity is significantly related to profitability, though not to growth.** PE firms play a crucial role in improving growth in later-stage buyouts, as well as in initial-stage buyouts.

Private equity and entrepreneurial management in management buyouts	*Bruining, Verwaal, Wright (2011)*	*Object:* **effects of majority private equity PE-backed buyouts** compared to other types of buyouts on entrepreneurial activity. *Results:* **four among six dimensions of entrepreneurial management**, namely strategic orientation, reward philosophy, resource orientation, and growth orientation, **shift towards a more entrepreneurial management mode.**
Do the effects of Private Equity investments on firms' performance persist over time?	*Meres, Monferrà, Verdoliva (2014)*	*Object:* **persistence of PE acquisition effect** along the time. *Results:* **PE-backed firms outperform their non-PE-backed counterparts during and after PE fund exit.** However, excessively long PE investments may indicate lower firm quality.
Private equity Transactions: Value creation through Operational Engineering – Evidence from Europe	*Heinrich (2023)*	*Object:* **value creation strategies employed by private equity firms** with a particular focus on operational engineering. *Results:* **PE-backed firms demonstrate a substantial and persistent improvement in profitability**, measured by EBITDA margin that can be attributed to operational engineering.
Private Equity and the Resolution of Financial Distress	*Hotchkiss, Smith, Stromberg (2020)*	*Object:* **two different perspectives** on the PE activity observation. *Results:* the **"dark side" perspective supports the hypothesis that PE firms' focus on short-term gains** and excessive risk-taking measures, on the other hand, the **"bright side" view suggests that PE funds are better arranged to manage financial distress** compared to other non-PE owners.
Economics of Leveraged Buyouts: Theory and Evidence from the UK Private Equity Industry	*Belyakov (2020)*	*Object:* **leveraged buyouts analysis** in the UK *Results:* PE firms result particularly **suitable in providing financial support to their portfolio companies** when these firms encounter financial distress.
The Real Effects of Private Equity Buyouts: A Meta-Analysis	*Verbouw, Meuleman, Manigart (2020)*	*Object:* **post-buyout operating performance** and employment. *Results*: **consistent medium-to-long-term positive effect of PE on operating performance** but do not find significant average effects on employment.
Industry specialization of private equity firms: a source of buy-out performance heterogeneity	*Le Nadant, Perdreau, Bruining (2018)*	*Object:* the **impact of industry specialization** of private equity firms *Results:* **non-specialized PE firms are less able to maintain the initial profitability levels of their portfolio companies** compared to industry- specialized firms.

As mentioned in the introduction section, PE acquisition impact on target companies' performance represents a largely diffused topic among existing literature. After having reported a compact list of the sources used to perform the literature review, it can be useful to present the main articles that have contributed to structure the thesis. In particular, given the specific detailed topics analyzed and commented in these specific articles, they have served as main inspiration to the empirical research performed. One of the most important sources used in the literature review is the one of (Badunenko, Baum, & Schäfer, 2010)[1]. Specifically, by focusing on the so-called "time-to-build" aspect related to PE activity, the article states that while in the short-term target companies do not benefit from private equity investments, positive results emerge on average after 6 years. In this thesis, having considered a time span of five years for the analysis, it will be possible to state if, relatively to the field considered, the same results are experienced. Secondly, another important source to rely on is constituted by (Heinrich, 2023)[2]. Indeed, by focusing on value creation strategies employed by private equity firms with a particular focus on operational engineering, the article attributes to PE acquisition and retention a substantial improvement in target companies' performance, and specifically to operating profitability. Since one of the four parameters investigated in this thesis concerns EBITDA, it has been possible to find some linkages between the empirical research performed and the article mentioned. Finally, (Meles, Monferrà, & Verdoliva, 2014)[3] states that PE-backed firms outperform their non-PE-backed counterparts during and after PE fund exit. By focusing on this concept, it has been possible to analyze the same dynamics related to the comparison between PE-backed and non-PE-backed companies, strictly related to the luxury niche.

[1] Badunenko, O., Baum, C. F., & Schäfer, D. (2010). Does the tenure of Private Equity investment improve the performance of European firms?.
[2] Heinrich, V. (2023). Private Equity Transactions: Value Creation through Operational Engineering–Evidence from Europe. *Junior Management Science (JUMS)*, *8*(3), 634-657.
[3] Meles, A., Monferrà, S., & Verdoliva, V. (2014). Do the effects of private equity investments on firm performance persist over time?. *Applied Financial Economics*, *24*(3), 203-218.

4. METHODOLOGY

4.1. Introduction and research hypothesis

Previous chapters offered a huge overview concerning the private equity world, going deep into its structure and the role it plays in financial markets. Moreover, the main features that characterize the luxury industry have been presented, including its unique characteristics, market dynamics, and growth potential. Finally, a specific focus on literature review related to the performance of target companies acquired by private equity funds has been outlined, by assessing how PE investments impact various operational and financial outcomes of the led company. Chapter 4 aims to present the methodology adopted to perform the quantitative analysis based on performance measurement of PE-backed VS non-PE-backed companies, including the two samples selection process, a description of the variables analyzed, and the mathematical models assumed to perform the empirical analysis.

The empirical research has been structured in two parallel directions. On the one hand, the impact of PE backing in the target company performance has been measured, to try and catch potential benefit coming from PE acquisition. On the other hand, the comparison between PE-backed companies and non-PE-backed companies' performance has been investigated, trying to understand the reasons behind potential performance divergences. First, a number count analysis based on key performance indicators of selected companies has allowed to identify general performance trends relatively to the impact of PE acquisition. Subsequently, selected financial indicators of PE-backed companies and non-PE-backed companies have been compared in the timespan considered, to try and catch potential differences between the two samples in terms of performance. Finally, a multiple linear regression model has been applied for each financial indicator considered, to understand how dependent variables have changed with respect to independent variables, concerning specific characteristics of target companies. The empirical research performed aims to shed a light on the following three specific hypothesis.

HP 1: Is there a correlation between target company performance improvement and PE-firm relative acquisition?

The first research question investigates whether there is a significant correlation between the potential performance improvement of the target companies analyzed and the acquisition deal by a Private Equity firm. Specifically, the first objective of the thesis seeks to understand if the involvement of a PE firm as an acquirer contributes to the financial improvement of target companies after the acquisition. Historical literature has hugely debated on this theme, whether PE funds really provide additional resources, expertise, and strategic guidance that may positively impact the growth trajectory and efficiency of the acquired company, or rather if they merely bring their expertise in selecting the best performers. The aim stands in trying to reveal whether, relatively to luxury and high-end sector and in the timespan considered, PE ownership clearly shows better performance outcomes among selected target companies in the value creation process, or if they just select good performers and limit their function in maintaining this good financial trend.

The second research question addresses the issue of the comparison between Italian PE-backed target companies and non-PE backed companies belonging to the luxury niche in terms of performance, as follows.

HP2: Do firms in the luxury sector in Italy under the control of PE funds perform better or worse than firms in the same sector not under the control of PE funds?

The second research question is focused on the comparison between the two selected sample, the PE-backed and the non-PE-backed one. In particular, it aims at testing whether Italian luxury and high-end sector companies under PE funds control show better or worse performance compared to their counterparts not under PE ownership. After having selected the PE-backed sample and the control sample (non-PE-backed) as explained in the next section, financial performance indicators relative to growth and profitability have been measured and compared, to gain an understanding on potential performance differences between the firms belonging to the two samples. The described method seeks to determine if PE involvement significantly gives a competitive advantage that determine a superior performance with respect to companies of the same sector, not under the control of PE funds.

HP 3: If a deviation in performance is present, what elements account for this deviation?

The third hypothesis, tightly linked to the second one, aims to find the reasons behind potential performance differences between the two samples, if any. It goes deep in searching for the causes of potential divergences based on the performance measurement analysis performed, trying to understand if PE-backing for Italian companies belonging to the luxury sector represents an advantage, a neutral element, or a detrimental one. This last question tries to enrich existing literature by adding some elements regarding the impact of PE ownership on Italian target companies belonging to the luxury and high-end sector. In particular, its aim consists in finding which elements are crucial for justifying the potential performance differences between the two samples.

4.2. Data collection and sample definition

The construction of the two samples object of research has been performed by extracting data from three sources: PEM observatory annual reports, the AIDA database provided by *Bureau Van Dijk*, and private equity firms websites.

4.2.1. PE-backed sample construction

PEM (Private Equity Monitoring) Observatory annual reports contain all the PE deals yearly occurred concerning Italian companies and international PE funds. Specifically, the PEM observatory reports the details of the transaction occurred concerning the acquired stake, the investment stage, and the sector in which the target company operates. From PEM databases, a series of filters aimed at selecting the sample object of the research have been applied.

First, all the deals occurred in the period 2014 – 2021 have been selected. In the choice of the years in-scope, some relevant aspects have been considered. First, by analyzing data in this timespan, it has been possible to focus the research regarding PE acquisition strictly related to the luxury market, in recent times, avoiding considering too old data. Additionally, it has been monitored target companies' performance up to two years pre-deal (T-2), until two years post-deal (T+2). By considering this aspect, the bottom-limit is represented by 2012 financial data, that allows to limit as much as possible the consequences of the 2008 financial crisis. On the other side, the top-limit is given by 2023 financial data, that represent a recent description of the financial situation of target companies. The number of deals occurred in the selected timespan is 2367.

The second filter applied in the sample selection process is related to the *Sector First Level* belonging to the target company object of acquisition. This filter refers to the primary classification of a company based on its main economic activity, representing the broad industry category in which the company operates, concerning the most general level in a hierarchical sector classification system. By selecting *Consumer Goods* in the mentioned classification, it has been possible to refer to firms that produce goods for personal use by individuals, typically purchased for consumption rather than for production or resale. Moreover, the column *SIC Code (Specific Industrial Classification)* allowed to have some more information related to sector, and

in particular some additional details about the branch of the sector in which the target company operates. The number of deals falling into consumer goods category amounts to 412 units.

The third applied filter concerns the column *Detailed Activity Description*, through which it has been possible to gain a clear comprehension of the core activity of the firm. Starting from this information, two more details have been considered. First, only companies strictly operating in the luxury or high-end segment have been selected. To consider this aspect, each company's website has been analyzed to have a clear overview that the company's products would have positioned in the luxury or high-end niche. By applying the described filter, an amount of 95 companies results. Secondly, only B2C *(Business-to-Consumer)* companies have been selected, namely commercial activities where companies sell products or services directly to individual consumers, rather than to secondary businesses. By applying this filter, all the firms operating in the luxury sector but specialized in manufacturing of goods for third parties have been excluded. The final output concerns 65 firms.

Finally, by excluding from the sample companies for which no complete financial data was available, a 51 elements sample made of B2C target companies belonging to the luxury niche that have been object of acquisition from 2014 to 2021 has been analyzed. In particular, the selected companies fall in the following specific categories of the luxury market, namely *apparel, bags & accessories, shoes, cosmetics,* and *design & furniture*. Following Deloitte's classification of luxury market (Deloitte, Global Fashion & Luxury Private Equity and Investors Survey, 2023)[1], the reported categories belong to the so-called *PLG (Personal Luxury Goods)* for the main part. The only category that does not fall into this niche is *Design & Furniture* that includes also *Lighting.* Additional Deloitte's classification categories for which no target companies have been found in the PEM Observatory databases or no financial data were available are *Luxury Cars, Luxury Hotels, Private Jets, Luxury Cruises,* and *Yachts.*

[1] Deloitte, 2023. "Global Fashion & Luxury Private Equity and Investors Survey".

*Note that, throughout the selection process, some companies have been object of acquisition by different PE funds twice. In this case, only the deal occurred in the year in which the major amount of financial data was available has been considered.

Although the constructed PE-backed sample is not particularly large to perform a quantitative empirical analysis, it is deemed to be descriptive of the situation as it focuses precisely on Italian firms belonging to a specific market niche. In particular, the nature of the sample allows to specifically capture the relevant characteristics and dynamics of the specific context of Italian firms operating in the luxury sector, by reflecting the peculiar trends and conditions of the niche under investigation.

Descriptive statistics of the PE-backed selected samples follow.

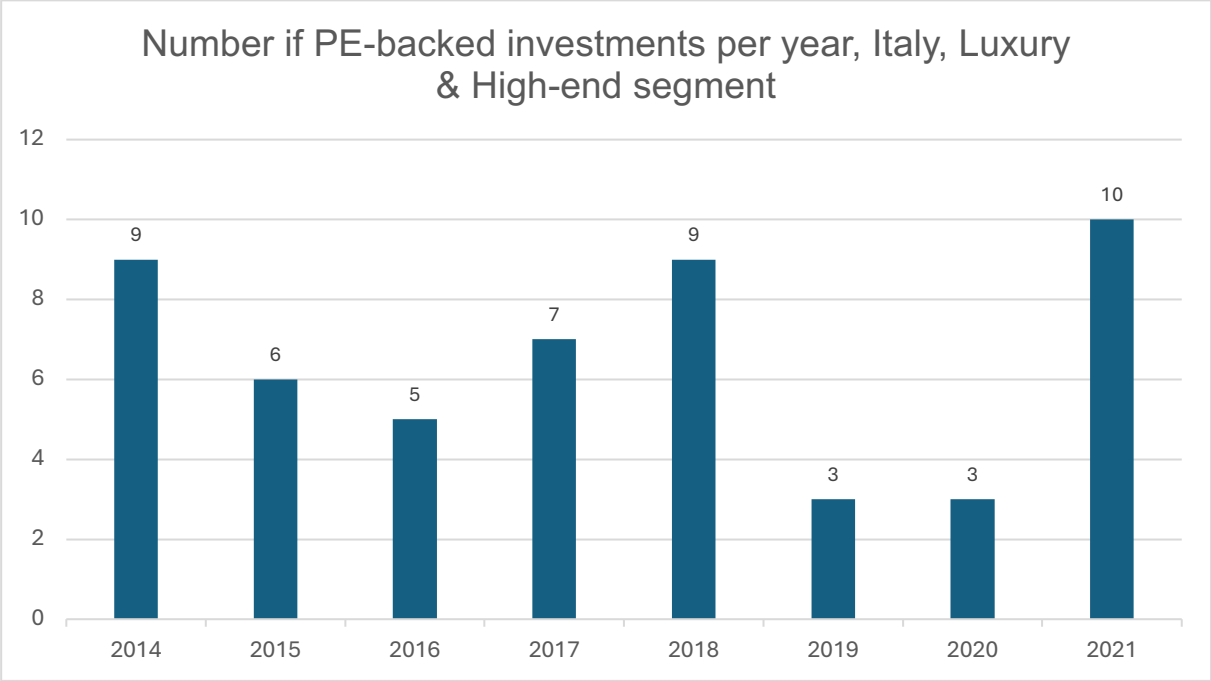

Chart 4.2.1.1. – Number if PE-backed investments per year, Italy, Luxury & High-end segment

As it can be outlined in *chart 4.2.1.1*., each observed year from 2014 to 2021 presents some PE investments. In particular, year 2021 show the maximum number of deals performed with ten PE deals. Following, 2014 and 2018 exhibit nine PE acquisition each, and 2017 follows with an amount of seven investments. 2015 and 2016 respectively totalize six and five investments, while 2019 and 2020 face the minimum number of PE deals, totalizing three investments each.

Chart 4.2.1.2. shows PE-backed sample descriptive statistics based on the category classification of luxury niches analyzed.

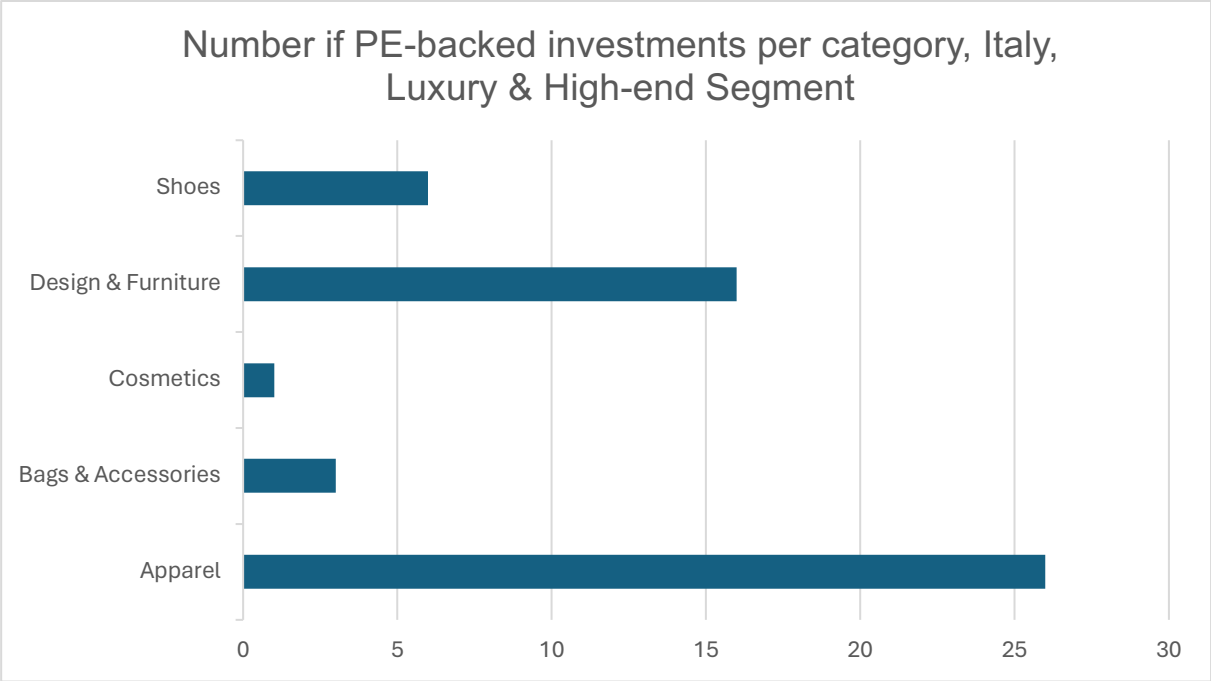

Chart 4.2.1.2. – Number if PE-backed investments per category, Italy, Luxury & High-end segment

As it can be noted from *Chart 4.2.1.2*., apparel is the category presenting the major fraction of companies inside the PE-backed sample. Indeed, 26 items out of 51, more than a half of the sample, belongs to this category. It is important to note that even if some companies in their business activities rely on the selling of a different set of products, this classification considers the information about business activities basing on the ATECO code extracted from each firm. Moreover, design & furniture is the second category in our classification, with 16 items analyzed. In the *design & furniture* category it has been considered all the companies in the sub-niches of interior design, luxury lighting and high-end and luxury furniture. It follows *shoes* category with six items, *bags & accessories* with three companies and *cosmetics* with one item selected. These last mentioned three categories show a number of companies that is significantly lower than the previous two. Taking into consideration that the object of our analysis is the luxury and high-end sector, it can be outlined that *apparel* and *design & furniture* are most diffused products when referring to these specific categories with respect to others.

Chart 4.2.1.3. shows some descriptive statistics of the sample in terms of type of investment performed.

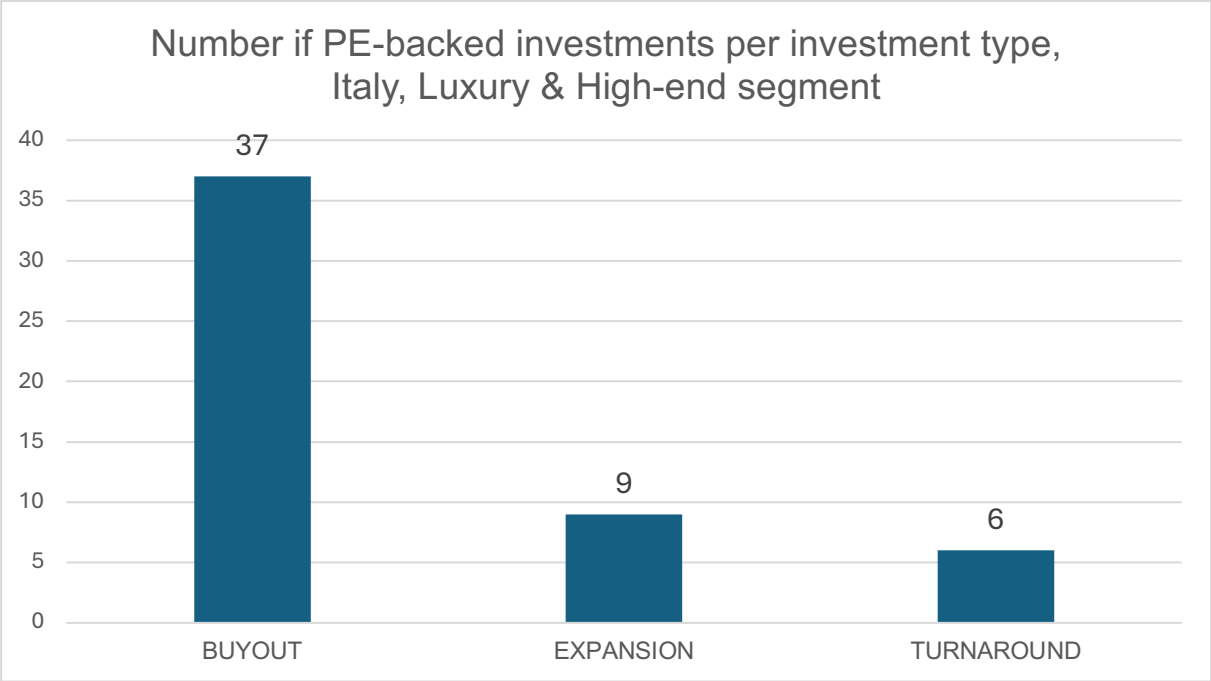

Chart 4.2.1.3. - Number if PE-backed investments per investment type, Italy, Luxury & High-end segment

Specifically, the sample presents 37 *buyouts*, 9 *expansion* investments and 6 *turnaround* deals. As outlined by the graphic representation, buyout are the most diffused PE investment types, accounting for the 72,5% of the sample. First, in this sector, buyout are the most diffused PE-deals. Secondly, while buyout for the seek of our analysis are considered to be the most representative type of investments, since we are studying the performance of target companies managed or control by PE firms, it is considered to be interesting including in the sample also the two other types of investment for different reasons. Indeed, considering all the investment categories allows to have a clear overview of the industry analyzed, by taking into consideration all the deals performed, independently from the type of investment. Secondly, by also considering expansion and turnaround would offer some insights and information about the impact of all type of investments seen as an aggregate.

Finally, the last information about descriptive statistics of the sample is given by *chart 4.2.1.4.*, showing the shares of majority and minority shares acquired.

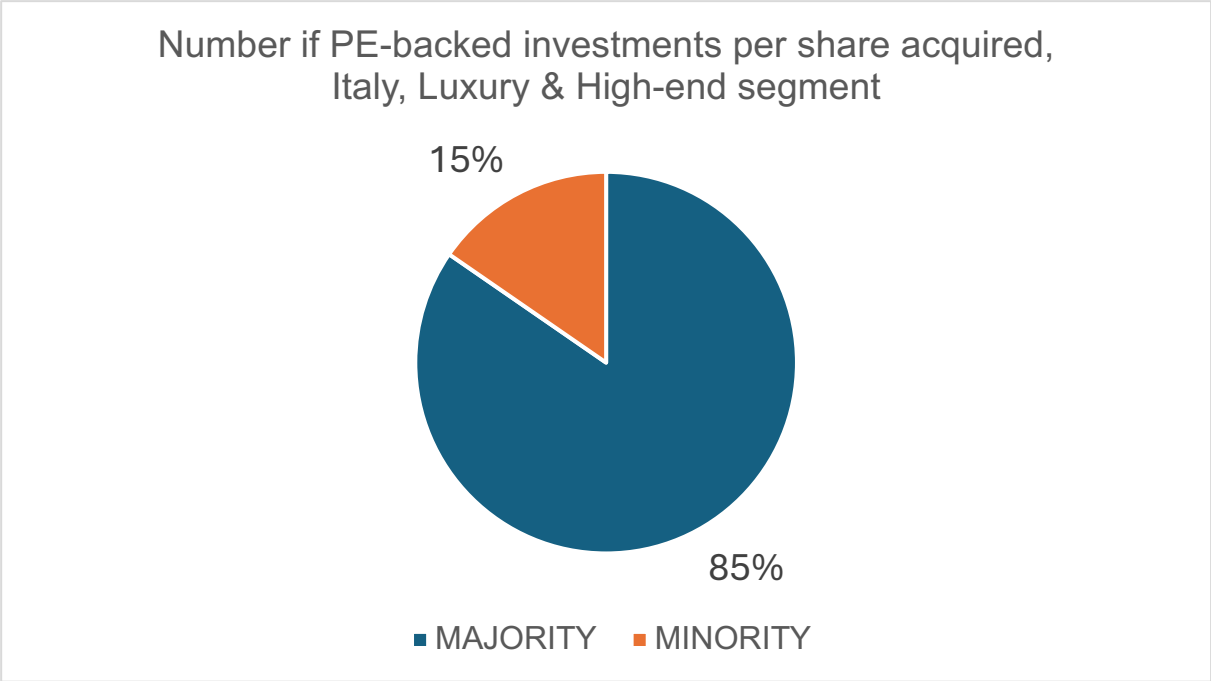

Chart 4.2.1.4. – Number if PE-backed investments per share acquired, Italy, Luxury & High-end segment

As shown in *chart 4.2.1.4.,* by considering that turnarounds are often characterized by a 100% acquisition stake, and that buyout investments are concerned with the acquisition of the majority stake, expansion investments account for the share of minority investments represented in the chart. Also in this case, even if majority stake are the core items for our analysis, by also considering expansion investments could offer a clearer overview of the PE-deals situation by taking into consideration this type of investment's aspect.

4.2.2. Control sample construction

With the aim to observe whether PE-backing has effectively brought and advantage to target companies in terms of performance improvement, a matched sample of non-PE-backed companies operating in the same sector has been selected. Specifically, the control sample has allowed to construct a comparison analysis through which it has been possible to investigate non-PE-backed companies' performance and to compare it with PE-backed one, to try and analyze PE-backing value creation in the timespan selected, relatively to the specific market niche analyzed. Specifically, items of the control sample have been selected starting from the PE-backed database previously described. The method adopted to coherently construct the control sample is described as follows.

For each PE-backed company of the sample, the ATECO 2007 code has been extracted and assigned to each firm. The ATECO 2007 code is the official classification system used in Italy to categorize economic activities, where each 6-digits code corresponds to a specific industry or sector, allowing for the standardized identification of business activities. Since on AIDA database it is possible to select the ATECO code made of a maximum of 4 digits, the first 4 numbers from each ATECO code have been extracted. Note that a 4-digit ATECO code accurately describe a firm's economic activity, specifying the business' detailed category. Subsequently, based on the 4-digits ATECO code just described, for each company of the PE-backed sample a non-PE-backed company with the same ATECO code has been selected on the AIDA database. The selection method just presented has allowed to coherently choose the non-PE-backed companies sample relying on the specific business activity of the PE-backed company, weighing the group of peers by matching it with the PE-backed sample. Moreover, other specific filters have been applied in the selection of the group of peers from the AIDA database. Specifically, it has been considered all the firms with an active legal status, "Corporation" as legal form, companies with available financial and optical statements. Following, to check that companies belonging to the group of peers would have really been operating in the luxury niche, each company's website has been analyzed, to understand the market positioning of its products. Additionally, coherently with the PE-backed sample construction, it has been checked that all the selected peers would have been operating as B2C business entities, selling their products directly to third parties. Another filter that has furtherly allowed to shrink the research consisted in the exclusion of the companies having an Italian legal entity, but with a foreign main legal headquarter (e.g. Louis Vuitton Italia). It has not been applied a specific filter that allowed to match the companies' dimensions for two specific reasons. First, the research is focused on a specific niche of the market, so the crucial component is given by the companies' similar peculiarities in products offered and specific market dynamics rather that company sizes. Moreover, in the comparison analysis, all the variables used to describe similarities and differences have been measured in terms of CAGR or percentual growth, thus no absolute value has been considered. Eventually, note that almost all the companies among the entire sample are *own brands,* except for two items that operate as reseller of several own brands, even into the luxury niche category.

Coherently with the PE-backed sample previously presented, the final non-PE-backed control sample includes 51 B2C firms, falling into the luxury sector.

4.3. Methodology

4.3.1. Number count and general comparison methodology

In order to answer the research questions described in section 4.1, related to the impact of PE firms on selected target companies, and their performance comparison with the group of peers, the following methodology has been adopted. First, for each target company involved, financial data in the years T-2, T-1, T, T+1 and T+2 (considering T as the acquisition year) from the single financial statements has been considered, to gain a clear overview of the company's financial situation both before and after the PE acquisition. Considering that private equity investments have an average duration from 5 to 10 years, it is assumed that the two years pre- and post-investment can be considered sufficient to gain an understanding of the PE's investment impact. To answer the first research question, involving the impact of PE firms on the sample of PE-backed companies, the mean for each indicator has been separately computed for the periods before and after the reference point (namely, the acquisition year "T", yielding two distinct averages for each variable per company: Mean T- and Mean T+. For instance, concerning EBITDA, Mean T+ represents the average EBITDA for each company during years T1 and T2, while Mean T- denotes the average EBITDA for years T-1 and T-2. Subsequently, with the aim to assess the statistical significance of the difference between the two means before and after the year of the deal, a Wilcoxon signed-ranks test has been performed. The Wilcoxon signed-ranks test is a non-parametric test useful to determine whether the median difference between two correlated samples is statistically significant. Wilcoxon signed-ranks test has been chosen due to the small sample size and the non-normal distribution of the data available. Following, a number count approach has been adopted, trying to catch how many companies throughout the sample have really benefited from the PE-backing, focusing on key performance metrics such as revenue growth, profitability, and operational efficiency. This initial step allowed to identify and quantify potential performance variations across different acquired firms, both before and after the acquisition deal, trying to catch PE impact on target companies.

Subsequently, a comparison in terms of performance between the companies belonging to the two samples has been performed. For each selected financial parameter, it has been measured the relative trend in the specific period for each single

company, from T-2 (two years preceding the deal), until T+2 (two years after the deal), by considering data available in the periods T-2, T-1, T, T+1 and T+2. Then, the average sample trend has been computed, and potential existing outliers have been identified, until achieving an average value for each financial variable that correctly described data coming from the two samples. Additionally, through the ATECO 2007 code, for each company of the PE-backed sample a non-PE-backed company with the same ATECO code has been selected on the AIDA database, in order to weigh the group of peers by matching it with the PE-backed sample relying on the specific business activity of the PE-backed company. After the pairing of each company, the same financial parameters have been computed for the non-PE-backed sample companies in the same time window (from T-2 to T+2), by considering the year of the deal of each PE-backed company as the T of the paired non-PE-backed firm. Following this method, some relevant conclusions about the general trends of the two samples have been described and commented. In order to adopt a measure allowing a coherent comparison between the samples, the *CAGR (Compounded Annual growth Rate)* has been computed for equity and total asset measurements. Specifically, CAGR measures the average growth rate of a financial parameter over a time period, assuming a constant and continuous growth. It represents an accurate indicator by considering the initial and final value of the variable, ignoring variations occurring in intermediate periods. CAGR can be mathematically represented as follows.

$$CAGR = (\frac{Final\ Value}{Initial\ Value})^{\frac{1}{n}} - 1$$

Equation 4.3.1.1. – CAGR Formula

Where the parameter *"n"* represents the number of periods considered. Equity and total asset values in the number count analysis have been measured in the described way. However, when many negative values are present among the data object of measurement, interpreting CAGR with the explained formula can be misleading, as it does not apply directly to values that change sign from negative to positive and vice versa. For this reason, different considerations have been made for EBITDA and NetDebt/EBITDA parameters, being variables that can typically change sign along a selected time periods. In particular, the growth rate for the two mentioned parameters has been computed by using an annualized arithmetic average growth rate, that takes into account the initial and final time periods and dividing for the number of periods

considered. The only difference stands in the fact that the last method used to compute the growth rate does not consider cumulative growth. The formula used in this case follows.

$$GROWTH\ RATE = \frac{Final\ Value - Initial\ Value}{|Initial\ Value| \times n}$$

Equation 4.3.1.2. – Average growth rate Formula

Where the parameter *"n"* represents the number of periods considered. EBITDA and NetDebt/EBITDA in the number count analysis have been measured in the described way. It is notable to specify that, since measurements of the mentioned variables have been crossly compared between the samples, and being the financial parameters computed with the same methodology in both the samples, the different approach to perform the calculations does not impact results, since the comparison has been made by measuring variables on the same scale.

After the number count analysis based on analyzing the general trends followed by the samples, a linear regression model has been applied. Through the choice of relevant dependent and independent variables presented and described in the next section, the regression analysis allowed to identify any statistically significant correlations between the involvement of the PE firm and the observed performance improvements of the target companies over time, trying to explain potential benefits or detrimental effects coming from the acquisition.

4.3.2. Difference-in-difference multi-linear regression methodology

This section of the thesis aims to present the methodology on which the empirical research is based, to try and give statistical significance to analyzed data and finally draw meaningful conclusions. Moreover, the models applied to implement the research are presented and described, concerning a multi-linear regression model and a *DiD (Difference-in-Difference)* analysis. Specifically, multi-linear regression analysis focuses on examining the relationship between a single variable, namely the dependent variable, and one or more additional variables, known as explanatory or independent variables. The aim of the research involving the implementation of the

regression analysis is to estimate or predict the average or mean value of the dependent variable based on known or fixed values of the independent variables, which would remain consistent across repeated sampling. In this context, the dependent variable is the main outcome that the model seeks to explain or predict using the information from the independent variables. In the following sections, dependent and independent variables used in the regression analysis have been presented and described and further details on the implementation of the DiD approach have been outlined.

4.3.3. Dependent variables definition

Before going deep in the detailed description of each variable, it is deemed necessary to specify that the financial indicators object of measurement in the number count analysis and the dependent variables of the multi-linear regression analysis are the same. This aspect allows to observe the companies' financial trends from different standpoints, in order to achieve a final result that try to merge the outcomes obtained.

In this research, one fundamental dependent variable that has been object of analysis because useful to explain the impact of PE acquisition on target companies' performance is deemed to be *Equity.* Indeed, by monitoring Equity it is possible to establish whether PE acquisition has generated value for shareholders, aspect that represents one of the main goals of a value creation deal in the PE world. Moreover, equity parameter can describe the long-term performance of a company in terms of stability and sustainability in value creation. When evaluating the equity parameter, it is fundamental to underline its strong linkage to dividends distribution: indeed, a potential dividend distribution would bring to an equity value decrease that is not linked to a value loss. Unfortunately, not being possible to find dividend distribution data for all the companies of the sample, dividend distribution has not been considered in the analysis of Equity's trend among the two samples, so consideration about this parameter does not consider this aspect.

Another dependent variable considered in the regression analysis performed regards *Total Asset Value*. The Total Asset Value represents the sum of all assets owned by a company, including both tangible and intangible ones, that typically involve cash, accounts receivable, inventory, property, equipment, intellectual property, and other

resources that contribute to the firm's operational capacity and financial health. Total asset value reflects the resources available to support business operations and future growth, indeed its evaluation is crucial for assessing a company's financial performance, as it provides insights into the scale and structure of the company's resources. By analyzing changes in total asset value over time, it is possible to monitor and evaluate trends in asset growth or depletion, which may signal effective resource management or potential issues in asset allocation.

The third dependent variable considered in the empirical research as a proxy of value creation and profitability in PE deals regarding the acquisition of target companies is *EBITDA*. The EBITDA is frequently used as a describer of cash flow generation as it emphasizes a company's operating performance by measuring earnings before non-operating expenses, such as interest, taxes, depreciation, and amortization. By evaluating the EBITDA margin effect, it is possible to outline how a company generates profits from its core operations, offering insights into its operational efficiency and profitability. EBITDA, taking into account operating profitability before accounting for financial expenses as interest, tax, amortization and depreciation, is considered one of the most important parameters to perform comparisons between companies' performance, especially when they belong to different businesses and sectors and their asset's structure is very different each other.

The last dependent variable analyzed in this study is the *NetFinancialPosition/EBITDA*, or *Net Debt/EBITDA ratio*. The numerator, namely Net Debt, is defined as the difference between financial debt and cash or cash equivalents. This ratio measures, in terms of financial strength, how many years it would take for a company to repay its debt if both net debt and EBITDA remained constant, reflecting a company's capacity to reduce its debt solely through its operating activities. The Net Debt/EBITDA ratio is valuable for monitoring financial performance because it reflects the company's leverage and financial stability. A lower ratio suggests that the company has a strong capacity to manage and service its debt, potentially improving its financial flexibility and appeal to investors. Conversely, a higher ratio may indicate increased financial risk and challenges in covering debt obligations, which can limit access to additional financing for growth. This metric is useful to assess both short and long-term

companies' financial health: ratios exceeding 4 or 5 typically raise concerns, as they suggest that the company may face challenges in managing its debt burden.

4.3.4. Independent variables definition

Since the aim of the research is to examine the impact of PE acquisitions on target companies' performance, and in particular to monitor how the four dependent variables mentioned earlier have changed, a set of independent or explanatory variables to complete the model have been defined, described and measured. The first explanatory variables introduced are structured as dummy variables, created to differentiate between PE-backed companies and non-PE-backed companies, and to separate pre-acquisition periods from post-acquisition periods. Indeed, since the thesis aims to investigate the impact of PE acquisition on target companies, the first dummy variable explains the belonging to the PE-backed sample, while the second dummy variable is useful to differentiate between time periods, respectively before acquisition and after the acquisition.

- *PE* **-** is a dummy variable that assumes a value of 1 for PE-backed sample companies and 0 for companies within the control group. This variable enables the differentiation between the belonging to one of the two groups, which is essential for the construction of the comparative analysis implemented.
- *Time* **-** is a dummy variable that takes a value of 1 in the two years following the PE-deal, namely T+1 and T+2, to isolate the post-deal period. However, it remains 0 for the years preceding the deal. This variable allows to differentiate pre- and post-period performance measurement, allowing to estimate through coefficients the impact of PE-acquisition.

The two variables are used together in the empirical analysis, and their combined function inside the regression equation explained below is deemed to be crucial to our research. Indeed, an *interaction variable* that considers the combined effect of *PE* and *TIME* has been structured as follows.

- *PE X Time* **-** is a dummy variable that takes a value of 1 if two conditions are verified at the same time: if we are in the two years following the PE-deal, namely T+1 and T+2, and in the case the correspondent item belongs to the

PE-backed sample. In this way, it is deemed possible to isolate only the specific category of treated companies, in the years following the acquisition. Contrarily, it remains 0 in all the cases we are considering the pre-deal time window, namely T-2 and T-1, and for the companies belonging to the non-PE-backed sample.

After the introduction of independent dummy variables, some independent quantitative variables have been selected and included in the regression model as control variables. This structure is aimed to reduce the risk of neglecting critical factors that could affect the relationship between the independent and dependent variables. Control variables enhance the precision and accuracy of the estimated coefficients for the independent variables of interest by accounting for additional sources of variation in the dependent variable. Even if the main purpose consists in monitoring how the variables *PE* and *Time* have changed, by observing coefficients of control variables and their statistical significance it is deemed possible to understand their impact on dependent variables.

- *Revenues* – are a crucial indicator of a company's market presence and operational success, especially in terms of dimension. As one of the main drivers of profitability, revenue trends reflect demand for a company's products or services, providing insights into growth potential and competitive positioning.
- *N. Employees* – represents an essential operational metric describing a company's scale and workforce investment. It is helpful to take into consideration the company's resource allocation, productivity potential, and operational complexity. Additionally, this metric provides insights into a firm's capacity for production, service delivery, and its potential to generate revenue, giving information on the scale of operation of a company from a dimensional standpoint.
- *Debt / Equity* - as financial metric, it allows to evaluate a company's financial leverage by comparing its total liabilities to shareholder equity. D/E ratio reflects a company's reliance on debt financing, which significantly impact its risk profile and cost of capital. Furthermore, the D/E ratio provides critical

insights into a firm's capital structure stability and its potential to meet financial obligations.

- *ROE* - represents a critical profitability metric that assesses a company's ability to generate earnings with respect to the equity invested by shareholders. Incorporating ROE as an independent variable in linear regression analysis allows to consider the efficiency of a company in the use of its equity capital. Additionally, ROE provides valuable insights into the sustainability of a firm's competitive advantage and its appeal to investors.

4.3.5. Difference-in-difference model

To measure the causal effect of an intervention by comparing changes over time between a treatment group and a control group, *DID (Difference-in-Difference)* model is a statistical frame that contributes to explain this situation. Indeed, DID model is a quasi-experimental design that relies on data from treatment and control groups for estimating causal effects. It is commonly applied to assess the impact of a specific intervention, in our case the private equity target's acquisition, by comparing changes in outcomes over time between a group affected by the intervention, the treatment group, and a group not exposed to it, the control group (Columbia, 2013)[1]. By catching the difference in outcomes before and after the intervention for both groups, DID's approach allows to isolate the treatment effect by assuming that, in the absence of the intervention, the two groups would have followed parallel trends, thus enhancing the model's ability to infer causality in observational data. The main strength of DiD analysis stands in the possibility to control a lot of different factors concerning variations of a selected variable over the time between the selected sample and the control group, that may cause endogeneity. Indeed, in our analysis, by taking into consideration only financial indicators among the PE-backed sample without the group of peers, we would incur in the possibility of the presence of other factors different from PE-acquisition that are affecting the financial indicator analyzed throughout the years. Secondly, even trying to consider the observed financial parameter in the second year after the acquisition would provide a limited analysis since we cannot observe its trend throughout the time, and the effect brought by the treatment, namely the PE acquisition

[1] Columbia - "https://www.publichealth.columbia.edu/research/population-health-methods/difference-difference-estimation".

at “year 0”. By considering both the samples, and time periods, it is possible in this way to isolate the effect of the PE acquisition on the financial parameters monitored. Eventually, the DID approach removes biases that could arise from persistent differences between treatment and control groups, as well as biases from time-related trends within the treatment group that may be due to unrelated causes of the outcome.

4.3.6. Assumptions of the model

Difference in Difference model, to estimate causal effects, need four assumptions to be satisfied, as (Columbia, 2013)[1] reports:

- *Parallel Trends* - that requires, in the absence of treatment, that the difference in outcomes between the treatment group (PE-backed-sample) and the control group (non-PE-backed sample) remains constant over time. In particular, this test states that in absence of treatment, in our case PE acquisition, results found for the sample and the group of peers would have remained the same. By relying on this assumption, it is possible to attribute any observed potential difference resulting from the analysis in the post-intervention period, so in the two periods post-acquisition, to the effect of the treatment. Through *STATA* it has been possible to test this assumption by performing a joint test of significance. Specifically, pre-treatment trends are statistically compared through a separate regression, and if coefficients are not significant, this element suggests no statistical difference in the trends of the two samples in the pre-treatment period, so the parallel trends assumption is verified. Results emerging from our analysis on this point are reported in *table 4.3.6.1.*

Variable	*F-value*	*p-value*
Equity	0,63	0,5348
Total Asset	1,26	0,2634
EBITDA	1,89	0,1523
PFN/EBITDA	0,55	0,5799

Table 4.3.6.1. – Joint test of significance for parallel trends assumption

[1] Columbia - “https://www.publichealth.columbia.edu/research/population-health-methods/difference-difference-estimation”.

As it can be seen from *table 4.3.6.1.,* p-values reported in the last column suggest that parallel trends assumption seems to be verified.

- *No Concurrent shocks assumption* – according to DID methodology, we are assuming that that there are no other events or interventions apart from PE-acquisition, affecting either the treatment or control group during the period in which the treatment occurs.
- *Stable composition of Groups* – it is assumed that the composition of the treatment and control groups, in terms of items belonging to the PE and non-PE-backed sample, remains stable over time. There are not significant entries or exits from either group during the study period, since companies of the two groups remain the same.
- *Spillover effect or Interference* – the model adopted assumes that the treatment (the acquisition) applied to each unit of the PE-backed sample, does not influence the control group, so there is not spillover effect, and that items of the samples (companies) are independent of one another.

A further key assumption that is not tightly linked to the DID methodology regards the DID design model adopted for the empirical research, linked to the observation of the treatment event, namely PE acquisition, over time.

- *DID design model* **–** since observations of the treatment (PE-acquisition or investment) have been performed by considering a time window of 8 years, from 2014 to 2021, the analysis should have relied on a *staggered DID method*, as it accounts for cases where treatment (PE acquisition), has occurred at different times across target companies. However, since the empirical research regards companies strictly operating in the same industry over a relatively recent time frame, the treatment event has been standardized. Therefore, the 'treatment', in our case the PE acquisition, has been centered to "year zero" (T) across all observations, by aligning it to a common baseline. This approach allows to focus the analysis on the impact of the acquisition as a synchronized event, allowing for a clearer comparison of pre-and post-acquisition outcomes. Specifically, it considers time periods 'pre' as years T-2, T-1, year '0' as T, and years 'after' as 'T+1' and 'T+2', thus accounting for the

timing effect, even if it does not consider potential exogenous events that may have occurred in every single year of this time frame.

4.3.7. The regression model

In the empirical research performed, multi-linear regression model and difference-in-difference approach have been combined to perform the empirical analysis. Thus, their combination has allowed to account for time-specific factors, to consider the effects of PE-acquisition before and after the 'Year 0' (T), and to consider the different belonging to the treatment group (PE-backed sample) and control group (the group of peers, namely non-PE-backed sample).

By applying *DiD (Difference-in-Difference)* approach on the multi-linear regression analysis model, the equation that best describe the condition object of testing is described as follows.

$$Y = \beta_0 + \beta_1 PE + \beta_2 POST + \beta_3 PE \times POST + \beta_4 RE + \beta_5 EMP + \beta_6 ROE + \beta_7 DE + \delta$$

- β_0 = *constant* of the equation.
- Y = performance indicator *(Equity, Total Asset, EBITDA, NFP / EBITDA).*
- PE = *dummy variable* assuming value 1 when the company belongs to the PE-backed sample, and 0 otherwise.
- $POST$ = *dummy variable* that is worth 1 when we are in one of the two periods after the deal, namely T+1 or T+2, 0 otherwise.
- $PE \times POST$ = *dummy variable* representing the interaction term of the two previous variables: it is worth 1 only in the case of a PE-backed item in the post-acquisition period.
- δ is the error.
- RE = *Revenues*, previously presented and useful as control variable.
- EMP = *Number of employees*, previously presented and useful as control variable.
- ROE = *Return on Equity*, previously presented and useful as control variable.
- DE = *Debt on Equity*, previously presented and useful as control variable.
- δ = *Error*.

The crucial purpose of the research is to determine whether private equity investments has had a significant and measurable impact on the performance of firms, compared to the pre-investment period. This study aims to investigate, as hugely done by previous literature, whether private equity firms really generate an important impact on firms' performance, or if their main ability stands in selecting companies that are already experiencing high growth rates, and only contribute to sustain the growing performance of these firms, by using the just explain models. Results of the analysis have been reported in the following section.

5. EMPIRICAL ANALYSIS

After the presentation of the methodology adopted for the analysis, serving as solid base for the empirical research, chapter 5 aims to examine the impact of private equity investments on key economic and financial indicators of the target companies, to determine whether results of the research highlighted in the existing literature can also be observed in the context of PE acquisitions of Italian companies operating in the luxury and high-end sector. Specifically, the aim of this chapter consists in empirically assessing the impact of private equity investments on the selected financial indicators of companies backed by PE firms. This section's purpose is to find a coherent answer to the three research questions previously presented, first involving the impact of PE funds on target companies' performance indicators, then comparing these results with non-PE-backed counterparts, and finally searching for a correlation between potential performance improvements and PE involvement. In each part of the analysis performed, step by step, results found have been commented and discussed, trying to draw relevant conclusions in aggregate by putting together the different results. The chapter is mainly divided in two sections, the first concerning a number count analysis that aims to investigate general trends among the two samples, by analyzing financial indicators' trend before the acquisition and after the deal. Subsequently, results found for the PE-backed samples are compared with the group of peers, trying to find relevant differences between PE-backed companies and non-PE-backed ones. In the second section presented, through a multi-linear regression analysis following a *DiD (Difference in Difference)* approach, it has been possible to isolate the impact of PE acquisitions on target companies, in order to verify if results coming from general trends and financial parameters growth was tightly linked to the PE-deal, or if it was attributable to other factors. The final aim of the thesis consists in trying and find some meaningful results by observing the combination of the two analysis: specifically, while the number count investigation is a descriptive statistics method aimed at identifying general trends among the two samples, the DiD multi-regression analysis adopts a causal approach by trying to understand if the trends and the potential divergences found in the number count analysis could be attributed to PE firms, or rather to other external factors that characterize this specific industry.

5.1. Number count & general trend analysis

The first numerical analysis presented involves a clinical observation and measurement of the selected financial indicators *(Equity, Total Asset, EBITDA, Net Debt/EBITDA)* before and after the deal, among PE-backed companies. This approach serves as a first insight to understand the trends of the indicators strictly among the PE-backed sample before the acquisition and after it. In order perform this analysis, the mean for each financial indicator has been computed for the periods before the acquisition (T−) and after the acquisition (T+), resulting in two separate averages for each variable and for each company of the PE-backed sample. For instance, considering the EBITDA variable, Mean T- represents EBITDA computed before the PE acquisition, and T+ represents EBITDA computed after the PE involvement. In this phase, the mean pre-acquisition has been computed by considering periods T-2, T-1 and T, while post-acquisition mean has been computed by considering periods T+1 and T+2. This classification has been made basing on two reasons: first, data of many companies was not available in period T-2, so to avoid reducing the sample size. Secondly, it has been assumed that in period T (year '0', in which the deal occurs), PE effects cannot yet be observed. Subsequently, with the aim to assess a statistical significance of the difference between the two means before and after the year of the deal, a Wilcoxon signed-ranks test has been performed. The Wilcoxon signed-ranks test is a non-parametric test useful to determine whether the median difference between two correlated samples is statistically significant. Wilcoxon signed-ranks test has been chosen due to the small sample size, to the non-normal distribution of the data available, and because it is useful to monitor variations regarding items of a sample, before and after a treatment. In our case, the treatment has been considered as the PE acquisition.

First, the descriptive statistics data panel shown in *table 5.1.1.* summarize the main characteristics of the financial parameters analyzed, considering all the items in the selected samples.

	T-2		T-1		T		T+1		T+2	
	Mean	St. Deviation	Mean	St. Deviation	Mean	St. Deviation	Mean	St. Deviation	Mean	St. Deviation
Equity Value (€ M.)	27,24	55,53	23,45	39,60	55,18	134,86	57,18	143,35	59,59	158,00
Total Assets (€ M.)	57,68	96,38	60,39	100,41	114,95	259,10	121,10	267,23	125,86	286,47
EBITDA (€ M.)	5,05	9,66	5,69	13,75	5,03	12,94	5,32	18,12	5,77	26,59
PFN/EBITDA	0,07	4,53	0,01	1,95	0,65	4,47	1,10	3,41	0,51	3,27

Table 5.1.1. - Financial indicators descriptive statistics

To offer a clearer overview of the selected parameters in the time window chosen, the same variables have been computed excluding outliers. Indeed, some critical observations could bring significant variations in the measurements performed. *Table 5.1.2.* reports the values of these parameters without considering outliers. It is necessary to outline that the parameter *PFN/EBITDA (Net Debt / EBITDA)* has not been computed as outlier items are not consistent throughout the periods.

	T-2		T-1		T		T+1		T+2	
	Mean	St. Deviation	Mean	St. Deviation	Mean	St. Deviation	Mean	St. Deviation	Mean	St. Deviation
Equity Value (€ M.)	19,40	28,88	19,17	28,32	38,99	70,12	39,30	65,86	39,40	68,41
Total Assets (€ M.)	44,19	51,31	47,81	57,99	82,60	118,54	87,96	125,78	89,28	124,34
EBITDA (€ M.)	3,82	6,08	3,97	7,73	3,87	10,08	3,43	12,19	2,62	14,60

Table 5.1.2. - Financial indicators descriptive statistics – no outliers

The main emerging outlier resulting from the observations is *Golden Goose*. As it can be seen from the significantly different values assumed with and without this company among the 51 items collected, it emerges its important role in shifting the samples balance upward, due to the important financial performance of the last 10 years. About this company, it is remarkable to outline its financial performance since his born: in particular, (Repubblica, 2024)[1] reports some interesting insights regarding *Golden Goose.* After its foundation in 2007, its first major turning point came six years later, in 2013, when the fund *DGPA Capital* invested in the star-cut shoes. In the following years, revenues had doubled from €11 million in 2009 to €21.3 million in 2012, with an average annual growth rate of 25%, and from €30 million in 2013 to €48 million in 2014. In 2015, *Ergon Capital Partners* and *Zignago* entered the scene, and with *Golden Goose* valued at around €100 million they bought the company. However, less than three years later and well before the average five-year holding period typical of investment funds, *Ergo*n decided to sell to *Carlyle Group*. Between 2015 and 2017,

[1] Repubblica, 2024. “Golden Goose, finora ci hanno guadagnato tutti. Sarà così anche per chi la compra in Ipo?”.

the company grew further, with revenues rising from €70 million to nearly €100 million. The group then started an internationalization campaign by expanding in many foreign markets, closing 2019 with revenues reaching €213 million, up 24% from €161 million in 2018, in which Italy accounted for €58 million. In 2020 *Carlyle* accepted a staggering offer by *Permira* fund for a bid valued €1.3 billion. *Permira* created the current *Golden Goose S.p.A*., which assumed the debt used to finance the acquisition, and the brand's balance sheet valuation also changed, rising from the previous €208 million to €702.9 million due to merger goodwill, aligning with the €1.3 billion paid by *Permira*, reflecting the brand's client relationships. This aspect is particularly relevant for the sake of our analysis: specifically, this increase in the company's evaluation causes a steep total asset increase, that justifies attributing to *Golden Goose* the characteristics of an outlier. On the other hand, being the acquisition financed using leverage, the rising in equity's value cannot be directly attributed to the same factors. Subsequently, the year 2020 closed with slightly lower revenue, down from €212 million to €210 million, compensating for Italy's decline, and in 2021 the company's revenues climbed to €277 million, driven by Italy (€72 million). Recently, after a 2022 and 2023 with revenues rising from €387 million to €416 million (+7.5%), EBIT decreasing from €135 million to €128 million (-4.9%), *Permira* decided to list *Golden Goose* on the Italian Stock Exchange, where an IPO could place 30-40% of the capital. Surprisingly, the company decided to postpone the deal: according to rumors, *Golden Goose*'s valuation is estimated around €3 billion based on 2023 financial data. The mentioned trends strictly regarding this company provides a clear understanding of the outperforming financial outcomes experienced by *Golden Goose*, representing an outlier among the PE-backed sample.

Since this section aims to observe the general trends of the financial variables among the PE-backed sample before and after the acquisition, specific cases of outperformers among the two samples will be deepened and discussed in the next section where each parameter is singularly analyzed. To have a first insight regarding the impact of PE funds on target firms, the differences between the mean values before (T-2, T-1 and T) and after the deal (T+1 and T+2) have been compared, and their statistical significance has been reported. *Table 5.1.3.* reports the results of the *Wilcoxon-signed rank test*, that compares average values of the variables compared, and their statistical difference. The last column of the tab shows the level of significance.

	Mean T-	Mean T+	W	Significance
Equity Value (€ M.)	38,95	58,07	295	***
Total Assets (€ M.)	85,31	123,02	306	***
EBITDA (€ M.)	4,98	5,38	595	
PFN/EBITDA	0,46	0,78	290	

***p<0,01; **p<0,05; *p<0,1*

Table 5.1.3. Wilcoxon-signed rank test

As outlined by *table 5.1.3*, through the Wilcoxon-signed rank test, two variables out of four results to be significant in terms of difference of mean values before and after the acquisition. Specifically, equity value has shown remarkable results by increasing of almost 20 million € of total value, apparently attributing to PE acquisition. Moreover, the statistical coefficient reveals a statistical significance at 99% confidence level, showing that the increase in equity has been impactful and valuable. As mentioned in the methodology section, observing equity parameter is deemed to be fundamental in terms of long-term value creation, as it represents the real value been generated and attributable to shareholders. Indeed, the increase in equity that results from the analysis signals a greater strength in terms of financial stability brought by the PE-deal. Probably, changes in long-term financial strategies and a correct allocation of resources typical of PE acquisition have contributed to equity improvements, signaling that the expertise and competencies brought by PE firms have allowed to effectively use resources to increase shareholder wealth, which is a critical measure of success. In particular, increase in equity value may be attributable to capital injection aiming at expanding the business fund growth initiatives, such as entering new markets, funding new product lines, or improving infrastructure, providing the resources necessary to scale the business. Another potential cause that might have impacted on the average equity value change stands in the possible debt restructuring strategy implemented by the PE firm: although debt itself is often used in acquisitions, a restructuring or refinancing strategy of the company's existing debt could have reduced liabilities, ultimately boosting net equity and making the company more efficient.

Even *total asset* value follows a similar trend of equity: thus, it results a total asset value increase of about 40 million €. As total asset of a company represents the resources available to support business operations and future growth, providing important information about the scale and structure of the company's resources, an increase of this parameter could mainly be explained by two situations. The first

potential reason could concern an asset revaluation of both tangible and intangible assets. Indeed, PE funds use to adjust the book value of assets reflecting their current market value, rather their historical cost, allowing to obtain an accurate asset base. The second reason that support the asset value increase of target companies after the PE acquisition could stand in the linkage with the long-term growth strategy implemented by the PE firm. Therefore, as discussed above, if PE aims to plan to enter in new markets, developing new technologies or expand its customer base, the financial strategy growth must be backed by a solid base of underlying asset and human capital to support the operations. Total asset parameter measures growth in general terms, so for the reasons explained, from the analysis based on asset value change between the periods, it is possible to conclude that PE acquisition has brought to an overall growth of target companies. Thus, as seen in the case of *Golden Goose*, asset revaluation and goodwill typically lead to a significant asset increase caused by the PE deals.

The third parameter analyzed concerning *EBITDA*, thus depicting the profitability of a company coming from its operations, before accounting for financial expenses, seems to be slightly increased. Despite of this result, it does not show statistical significance, as remarked by column ‘significance’ in *figure 5.1.3.* Potentially, EBITDA growth may have signaled an improving efficiency among target companies’ operations, brought by the intervention of PE fund, but the absence of significance suggests that PE acquisition has not had a significant measurable impact on operation profitability. The potential reasons attributable to this outcome could result from several reasons. First, as depicted by the significant equity and total asset’s increase and their statistical significance, PE funds may have prioritized a growth policy rather than an immediate improvement in profitability. Indeed, PE fund investments following the acquisition concerns restructuring costs that arise from different resource allocation measures, that could impact operational profitability in the short-medium term. Moreover, a PE firm acquisition could concern a radical change in operations, bringing to an alteration on supply chain and business models, having a short-term negative impact on profitability. Lastly, as explained in chapter 1, the typical period of PE involvement concerns a time window from 5 to 10 years. Thus, PE firms may prioritize a medium-long term strategy that require initial high costs, giving potential positive results in the

medium or long-term, aspect that could have caused current detrimental effects to profitability.

Finally, the last parameter object of comparison is *Net Debt (or Net Financial Position) on EBITDA ratio*. By explaining the capacity of a firm to pay back its debt by considering the EBITDA parameter as a proxy of cash flow creation, this parameter does not result to be significant, even if it shows an increase in its absolute value. Theoretically, while it results to be quite low, its growth between the two periods suggests a potential general worsening, showing that on average companies have increased their level of net debt compared to their profitability. Indeed, it is important to remember that dangerous values of this parameter are considered to begin from 3 or 4 in absolute value, showing a debt burden that is difficultly reimbursed. On the other side, too small values could depict a wrong leverage exploiting. In the specific case, the NetDebt/EBITDA growth may have resulted from the use of debt by PE firms to fund the acquisition, as seen in the *Golden Goose* case. Indeed, as previously mentioned, being many PE acquisitions financed through leverage, and considering a potential contemporary reduction in EBITDA margin due to a temporary decline or constant value of operating profitability, namely the denominator, could have led to an increase in this parameter.

After a general comparison of periods pre- and post-acquisition related to the PE sample based on the differences of the means in the two periods analyzed, the following section goes deep in analyzing the selected variables for each sample in the timespan considered. The number-count analysis is differentiated for the four variables selected as drivers to establish PE-impact, to identify:

- the general trends occurred among the two samples in the presence of outliers and not, both in absolute terms, in terms CAGR and average growth;
- potential emerging differences between the results found in the two cases;
- further details in the analysis by selecting sub-samples based on categories and dimensions of the firms of the two samples.

5.1.1. Equity Value

EQUITY	Mean	Median	St.Deviation	Min	Max	N
PE-Backed	46.703.573	14.582.118	104.029.643	-3.715.058	675.413.533	51
Non-PE-Backed	91.626.471	26.352.667	182.149.743	-32.666.000	755.682.600	51

Table 5.1.1.1 – Equity Value descriptive statistics

The table showed contains the main descriptive statistics of equity value in the two samples analyzed, for PE-backed companies and their peers. It is important to outline two factors: first, the number of observations is the same in both the samples, for a total of 102 companies analyzed (symmetrically distributed in the two samples). Secondly, both the samples present a huge variability: this aspect is underlined by the high values of standard deviation observed, and from the huge difference between mean and median values. Those values suggest that data is positively skewed, because the mean indicator is hugely affected by the presence of very high equity values that push it upward. To offer an interesting insight on how equity value has evolved, a line graph depicting its trend over time has been reported for both the samples. Moreover, the trend in terms of percentage variation of equity over time has been investigated, as shown in *Chart 5.1.1.2* and *Chart 5.1.1.3.*

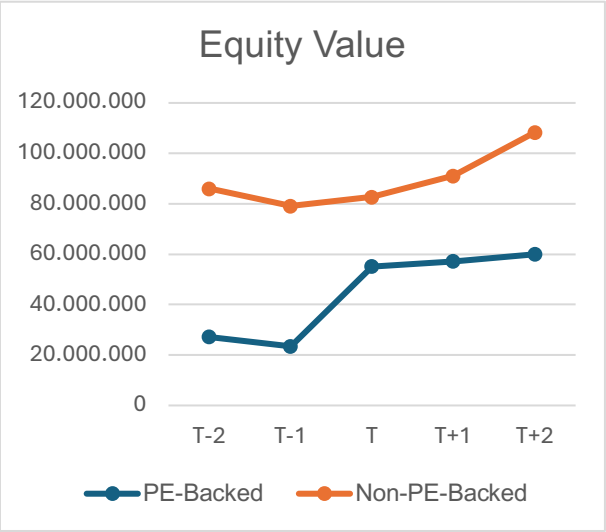

Chart 5.1.1.2. - Equity Value

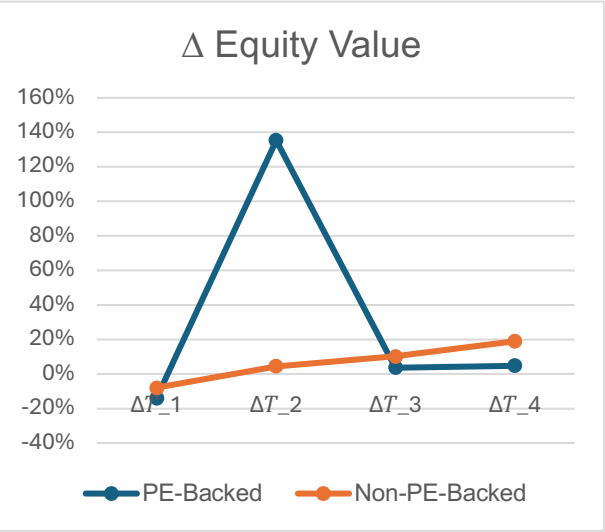

Chart 5.1.1.3. - Δ Equity Value

As it can be noted from the graphs, in terms of absolute value, equity assumes higher valuations in the case of non-PE-backed sample, with respect to PE-backed one. Specifically, it tends to increase over the time until reaching a maximum value of about 110 million in the last period observed, two years after the 'year 0', namely the PE acquisition. Considering that PE-backed and non-PE-backed samples equity value tends to increase over the time, different trends are experienced for the two cases. In particular, a significant growth is experienced by the PE-backed one between the period T-1 and T, when the acquisition deal takes place, as we could expect. This aspect is typical of a PE deal, characterized by two main factors regarding PE intervention: strategic shifts implemented by the fund, and a successful infusion of capital aimed at funding growth initiatives, expanding operations, or improving competitive positioning. Overall, changes in equity value post-acquisition probably describes the specific strategic actions taken by PE investors to optimize value creation, balance financial leverage, and improve long-term performance. Then, PE-backed sample equity keeps on increasing at a lower rate compared to non-PE-backed counterpart, that from period T to T+2 assumes the shape of an exponential growth. Looking at *chart 5.1.1.3.*, on the one hand, in terms of percentual growth over time, it is possible to outline that equity value related to non-PE-backed sample faces a constant growth over time. On the other hand, while between periods T-2 and T-1 the two samples experienced a similar negative growth rate, the PE-backed sample percentage change faces a peak in the year of acquisition (T), until reaching a 135% growth. Subsequently, growth between T and T+1 tends to decrease after PE acquisition until reaching non-PE-backed sample curve. The latter, following its constant growth over time, presents a growth delta in the last period greater than the one of PE-backed sample.

In order to standardize the comparison between the samples and considering the average growth rate in the time span selected rather than absolute value, CAGR (Compounded Annual Growth Rate) estimator has been considered as a descriptive parameter to understand the equity's trend among the companies of the sample. The parameter describes the average equity annual growth rate, accounting for the effects of compounding by smoothing out year-to-year fluctuations, providing a realistic view of long-term trend. Specifically, CAGR value for each company has been computed in

the timespan selected, and the total average value of all the CAGRs has been reported for each sample, to have a comparison measure that could depict the general trend observed among the two samples. For all the parameter measured, two cases have been reported: the first one included all the observations made, while the second one does not include outliers. Relevant notes related to outliers have been reported as their presence in some cases significantly affect the final CAGRs measured.

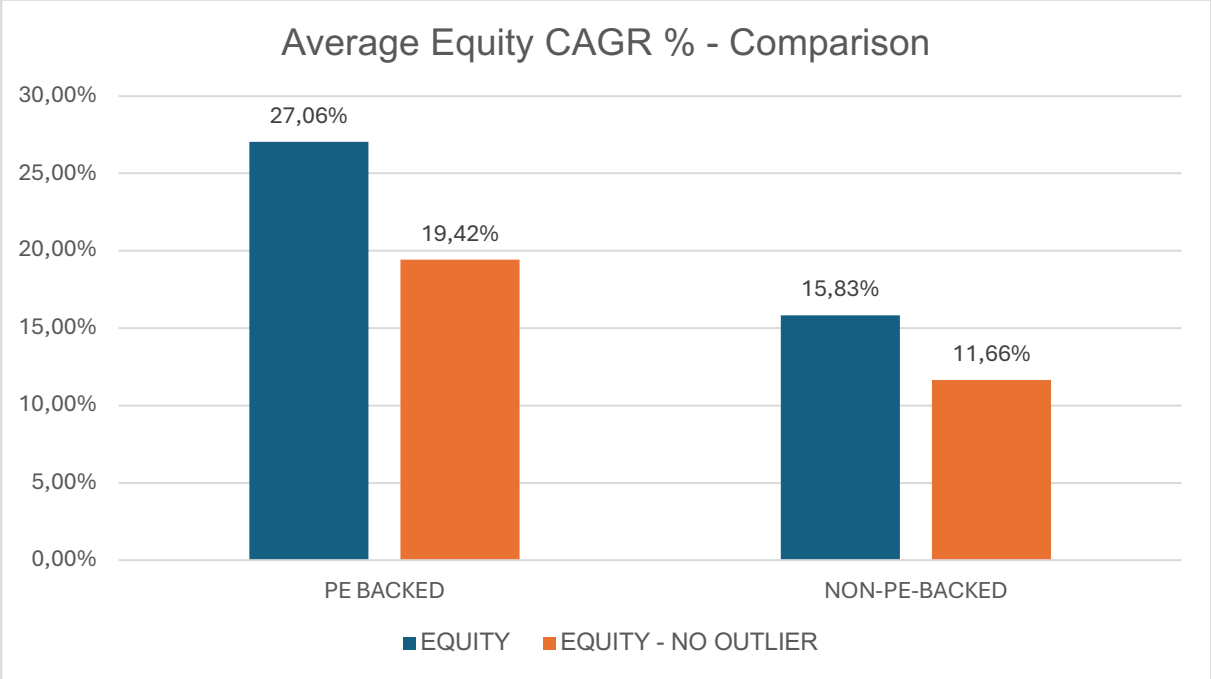

Chart 5.1.1.4. – Average Equity CAGR % - Comparison

As *chart 5.1.1.4.* shows, the average equity value increase in terms of CAGR % reveals to be higher for the PE-backed sample in both cases, by considering the presence of outliers or not. On average, if the PE-backed sample seems to have faced a greater increase in equity than its counterpart, this result has been achieved also thanks to two overperformers, namely *Autry International* and *GCDS*. One interesting aspect is that both the overperformers found among the sample have been acquired, respectively in 2020 and 2021, by *Quadrivio*, an Italian PE-fund specialized in the luxury and high-end fashion. Specifically, *Autry International* has been acquired in 2021 by *Made in Italy Fund (by Quadrivio):* the brand, realizing premium-luxury shoes, has faced a significant growth in the last 3 years shifting from an amount of 30 million of sales in 2021, reaching 110 million of sales in 2023, and from an EBITDA of 8 million to 33 million in the same time span. *Quadrivio* has recently sold the majority stake of *Autry* to *Style Capital*, totalizing an IRR of 75% and earning a return multiple that is 4 times

the invested capital. Also, *GCDS* was acquired by *Made in Italy Fund (by Quadrivio)* in 2020, together with the communication agency *Pambianco.* The respective equity value increase could be justified by the fact that the acquiring PE fund has realized an omnichannel expansion both in physical markets and on online when, by expanding especially in Chinese and British market, and has boosted the e-commerce selling platform. By excluding outliers from the sample, the equity trend in terms of average CAGR is not so far from the one just described. As shown by *chart 5.1.1.4.*, the PE-backed sample keeps on having a higher CAGR of almost 20 percentual points, followed by non-PE-backed sample with 12% average CAGR, even if the growth difference is less pronounced. In general, it can be noted that PE firm acquisition seems to have positively impacted on target companies' equity value, facing an average CAGR that results to be higher than the one of non-PE-backed sample. From this analysis, it emerges that PE funds managed to create a higher value for shareholders concerning Italian companies operating in the luxury and high-end sector with respect to their counterparts. Despite even non-PE-backed sample totalizes a growth rate over the same time span, PE acquisition seems to boost the value of equity collecting an average CAGR that outperform non-PE-backed firms operating in the same sector. Finally, by considering all the companies of the samples in an aggregate form, it emerges that the overall sector has faced a general average equity growth, despite of the slight existing differences emerging from the PE-backed companies and their counterparts.

To give a specific level of detail to the general trends analysis, a measurement of equity average CAGR differentiating by product category has been performed. It is deemed interesting to understand which category has contributed, for both the samples, to the CAGR % growth experienced. It is relevant to outline that, given the limited sample size, equity CAGR % measurement in the case of no outlier has not been performed, cause removing outliers from a potential category with few companies would have brought to misleading results.

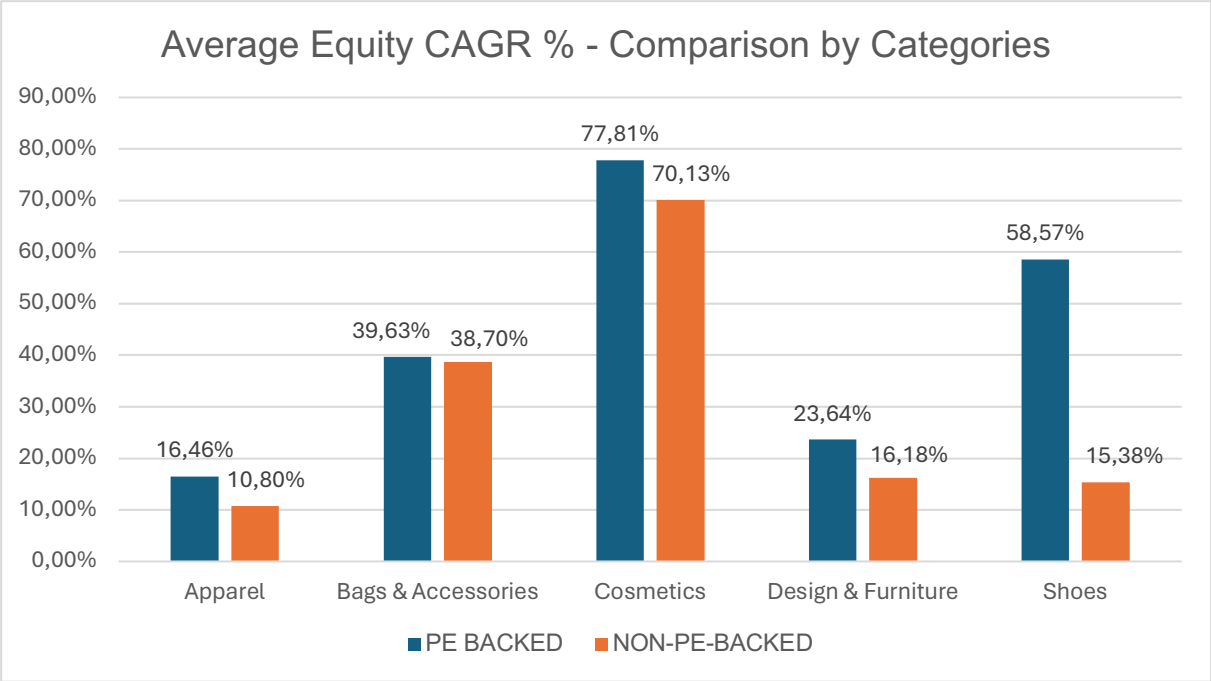

Chart 5.1.1.5. – Average Equity CAGR % - Comparison by Categories

In line with the results found for the general sample trends regarding equity CAGR % value, all PE-backed categories show higher growth with respect to non-PE-backed firms. It is notable that all the categories present a difference in terms of average % CAGR that is generally consisting among the niches analyzed. However, while the *bags & accessories* category presents a few percentages points difference among the samples, the category *Shoes* presents the hugest gap. The discrepancy is mainly due to the presence of *Autry international (Shoes)*, which raises the average by many percentage points, and that has been previously analyzed and categorized as an outlier that shifts the average CAGR % upward. Also in this case, the PE-backed acquisition seems to positively impact on the target companies acquired among all the categories proper of luxury and high-end industry.

Another relevant classification providing information about the companies' equity CAGR has been performed in terms of dimension. Specifically, the dimensional categories have been chosen basing on the last year information on revenues: companies with less than 10 million of sales have been classified as small, between 10 million and 50 million as medium, and more than 50 million as large, by considering the last year available financial data from AIDA. The figure representing equity average CAGR % is reported below.

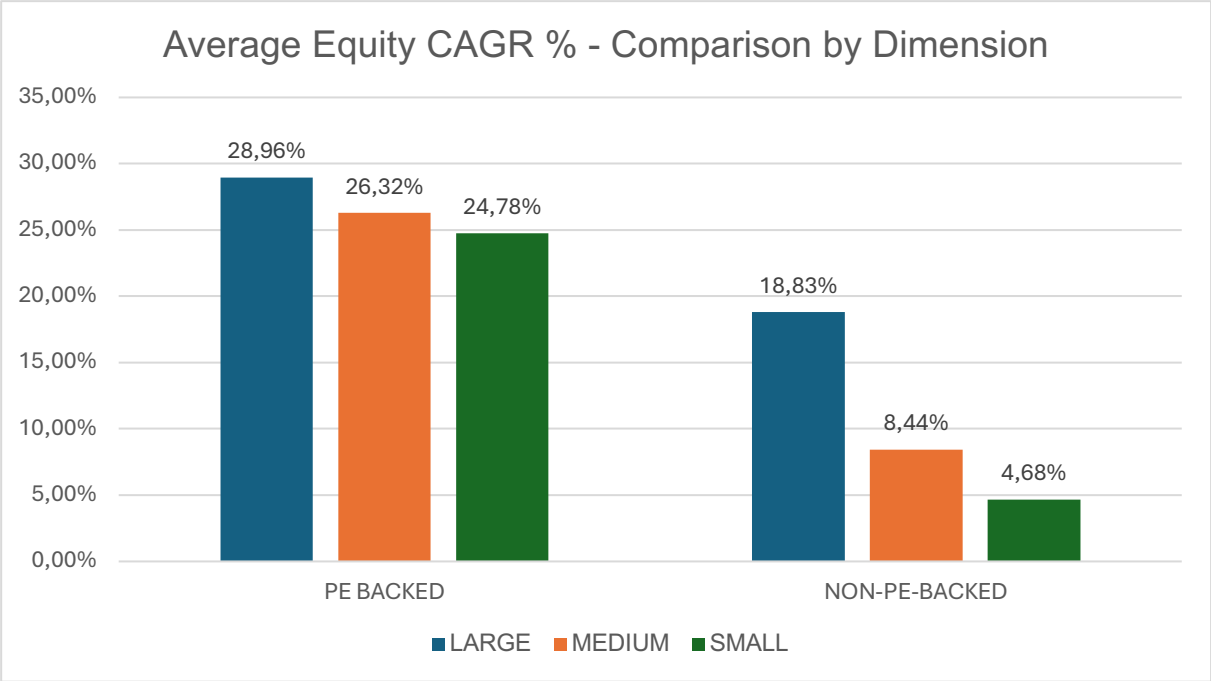

Chart 5.1.1.6. – Average Equity CAGR % - Comparison by Dimension

As outlined in *chart 5.1.1.6.*, both the PE-backed and non-PE-backed sample maintain a similar trends, even if at different levels of average growth, that results to be higher for the acquired targets. In particular, large companies seem to overperform in terms of equity % growth with respect to other categories. This aspect could be caused by the potential greater availability of large companies of more substantial capital base, which allows them to invest in target companies more effectively, achieving a higher equity CAGR %. Indeed, greater resources availability can favor investment strategies driving equity growth at an accelerated rate compared to smaller firms facing limited financial resources. While the gap among large, medium, and small companies in the PE-backed sample consists only in a few percentage points of difference in which values of average equity CAGR % swings between 24% and 28%, the situation differs for the non-PE-backed sample. Indeed, non-PE-backed sample presents a ten percentage points gap between medium and big companies, and medium companies average CAGR growth is twice the CAGR of small companies. However, it should be noted that among the non-PE-backed sample, companies categorized as 'Large' account for 73% of the sample, so they clearly prevail over the medium and small ones. As explained for PE-backed companies, also for their counterparts it can be considered potentially valid the reasons behind the outperformance of large companies with respect to other categories.

5.1.2. Total Asset Value

TOTAL ASSET	Mean	Median	St.Deviation	Min	Max	N
PE-Backed	100.928.273	46.340.192	199.460.975	4.093.255	1.311.803.103	51
Non-PE-Backed	188.840.815	64.149.119	345.779.800	367.448	1.788.022.600	51

Table 5.1.2.1. – Total asset value descriptive statistics

The second parameter that is largely significant for studying PE acquisition impact on target companies' performance is total asset value. Observation of this parameter can be useful to gain an understanding of all economic resources available for a company, reflecting its capacity to generate revenue and sustain operations. As *chart 5.1.2.1.* shows, the main descriptive statistics of asset value in the two samples analyzed, for PE-backed companies and their peers, have been reported. Also in this case, two main factors emerge: first, the number of observations is the same in both the samples, for a total of 102 companies analyzed (symmetrically distributed in the two samples). Secondly, both the samples present a huge variability: this aspect is underlined by the high values of standard deviation observed, and from the huge difference between mean and median values. Those values suggest that data is positively skewed, because the mean indicator is hugely affected by the presence of very high total asset values that push it upward. To offer some insights on how total asset value has evolved along the time, a line graph depicting its trend has been reported for both the samples. Moreover, the trend in terms of percentage variation of asset over time has been investigated, as shown in *Chart 5.1.2.2.* and *Chart 5.1.2.3.*

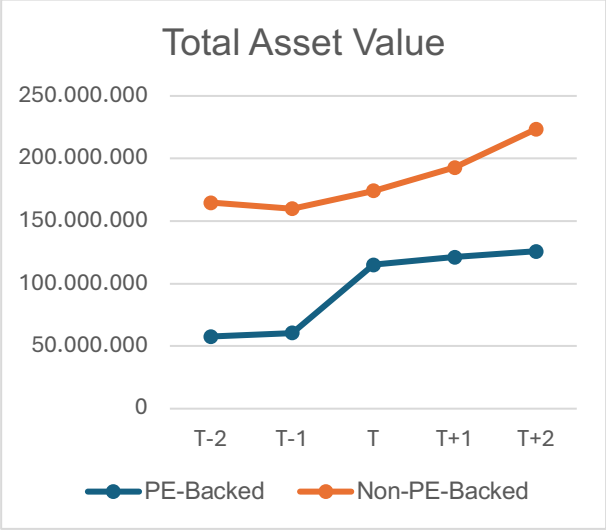

Chart 5.1.2.2. – Total Asset Value

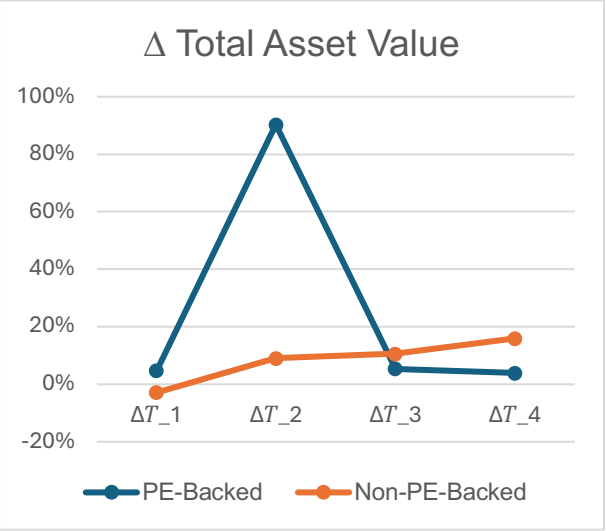

Chart 5.1.2.3. - Δ Total Asset Value

As shown in *chart 5.1.2.1*, average asset value of the two selected samples shows a growing trend. Similarly to what has been observed analyzing equity, while non-PE-backed companies face higher absolute values of total asset, PE-backed sample companies show lower absolute asset values. In terms of growth, the PE-backed sample faces a constant increase in average asset value between the two periods preceding the acquisition, namely T-2 and T-1, and in the periods succeeding the PE-deal. Different behavior emerges in the period of the acquisition, between T-1 and T, in which a steep increase can be observed. This observation is in line with typical PE acquisition dynamics, that experience a significant capital injection to finance expansion and growth initiatives, strategic investments, and asset revaluation. However, the non-PE-backed sample faces a growth in the time window selected that tends to assume an exponential trend. Going deep into looking at delta variations in *chart 5.1.2.3.*, non-PE-backed companies face a constant increase of asset value from the second period considered until T+2, preceded by a steeper linear growth in the first period. For what concerns PE-backed companies, it can be observed that while in the pre-period acquisition the delta value is similar to their counterparts, a peak in the acquisition year is experienced. This result is in line with our expectations concerning asset value increase coming from PE acquisition.

In order to standardize the comparison between the samples and considering the average growth rate in the time span selected rather than absolute value, CAGR (Compounded Annual Growth Rate) estimator has been considered as a descriptive parameter to understand the total asset's trend among the companies of the sample. Specifically, CAGR value for each company has been computed in the timespan selected, and the total average value of all the CAGRs has been reported for each sample, to have a comparison measure that could depict the general trend observed among the two samples. For all the parameter measured, two cases have been reported: the first one included all the observations made, while the second one does not include outliers. Relevant notes related to outliers have been reported as their presence in some cases significantly affect the final CAGRs measured.

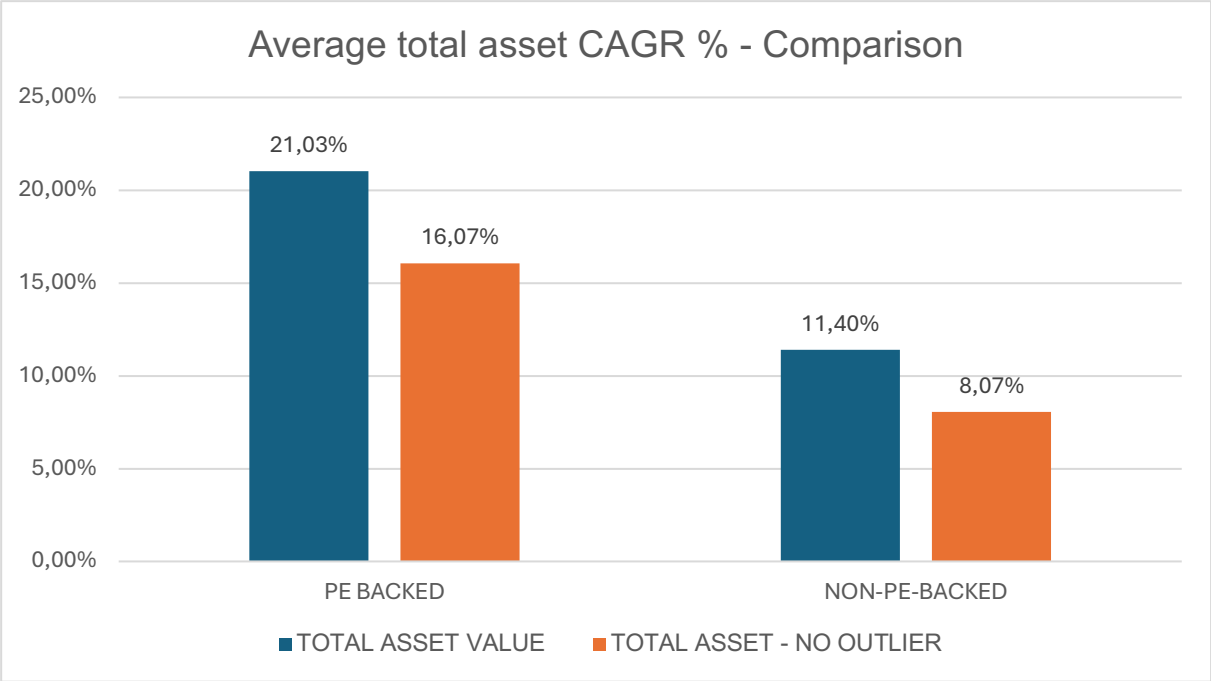

Chart 5.1.2.4. – Average total asset CAGR % - Comparison

A similar analysis has been performed for total asset value by measuring average CAGR for the companies belonging to the two samples. Also in this case, CAGR value for each company has been computed based on availability of data, and the total average value of all the CAGRs has been reported for each sample, to have a comparison measure that could depict the general trend observed among the two samples in terms of total asset. The main results of the measurements are shown in *chart 5.1.2.4.* Total asset value of PE-backed companies results to be almost two times greater than the one of non-PE-backed companies by considering outlier or not. In both cases, the research reveals that PE-backed companies face an increase in the total asset CAGR that is much higher than their counterparts. Results found are in the line with average equity CAGR found in the previous section. Moreover, the situation is coherent with our expectations: specifically, it emerges that Italian companies operating in the luxury and high-end sector seem to face a relevant average asset value increase after the PE deal. Also in this case, *Autry International* covers an important role in the analysis performed as it represents an outlier even concerning average CAGR of total asset. Its remarkable growth in this parameter can be attributed to the reasons explained in the equity analysis.

To give a specific level of detail to the general trends analysis, a measurement of asset average CAGR differentiating by product category has been performed. It is deemed interesting to understand which category has contributed, for both the samples, to the found CAGR % growth. It is relevant to outline that, given the limited sample size, equity CAGR % measurement in the case of no outliers has not been performed, cause removing outliers from a potential category with few companies would have brought to misleading results.

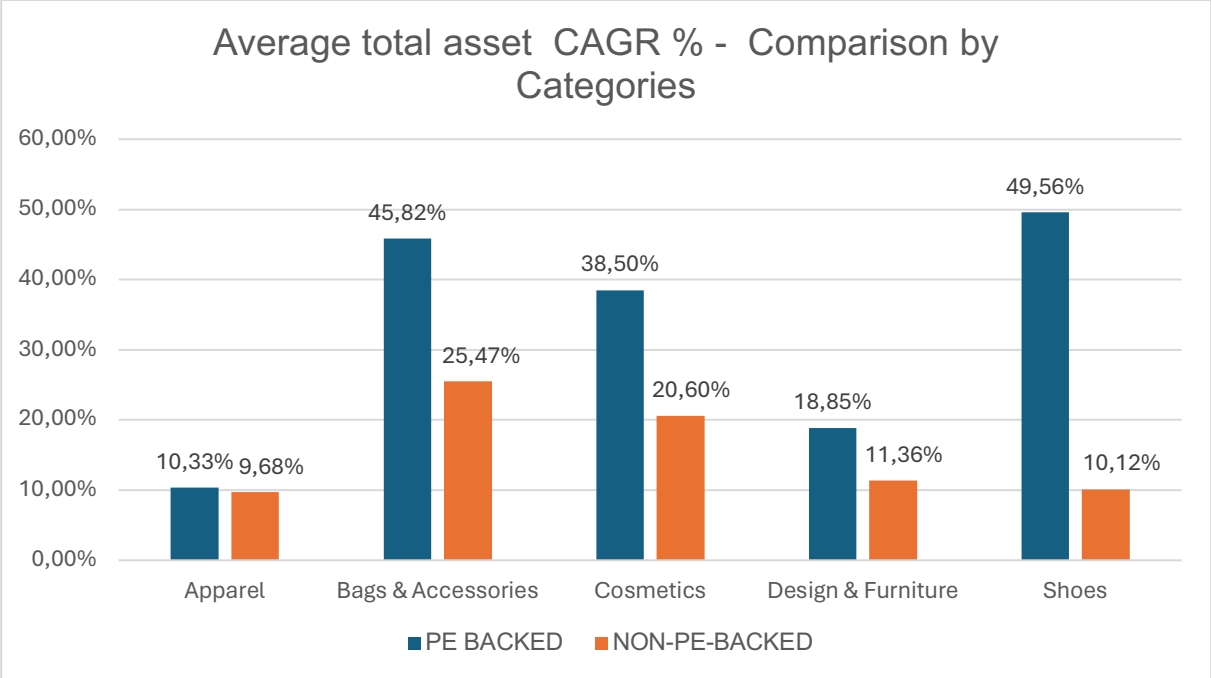

Chart 5.1.2.5. - Average total asset CAGR % - Comparison by Categories

As shown in *chart 5.1.2.5.*, total asset CAGR divided by categories present significant differences in terms of percentage points between the two samples. Specifically, *shoes*, *bags & accessories* and *cosmetics* categories outperform non-PE-backed counterparts of several percentage points, while differences in apparel and *design & furniture* are less impactful. About shoes, once again the presence of *Autry International* as an outlier contributes to shift that specific difference upward. Also *Giuseppe Zanotti* among the *shoes* category tends to shift the average upward, totalizing a final result that shows the average CAGR of shoes category being almost 5 times the counterpart. Despite the non-PE-backed sample presents three particular outperformers in terms of total asset average growth, namely *Venice, Primopiano* and *Heron Preston*, their average growth is not comparable with the one of *Autry* that has

largely outperformed both among the PE-backed samples, and in comparison with the counterparts.

Another relevant classification providing information about the companies' total asset CAGR has been performed in terms of dimension. Specifically, the dimension categories have been chosen basing on the last year information of revenues: companies with less than 10 million of sales have been classified as small, between 10 million and 50 million as medium, and more than 50 million as large, by considering the last year available financial data from AIDA. The figure representing equity average CAGR % is reported below.

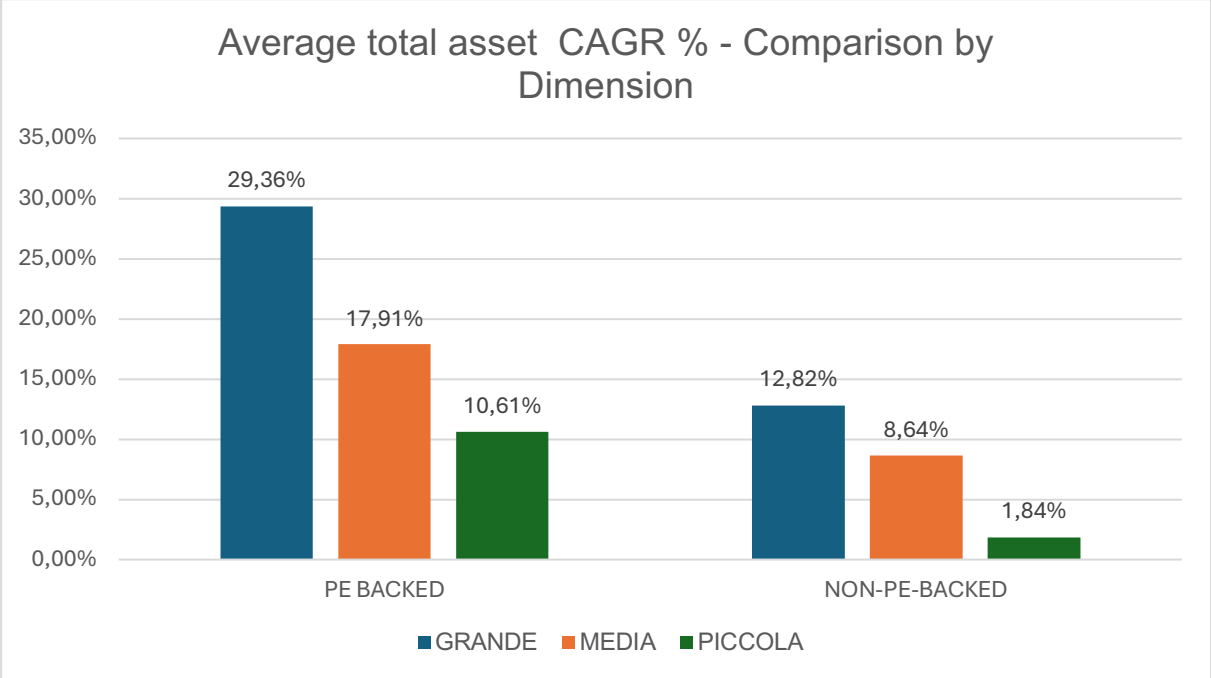

Chart 5.1.2.6. – Average total asset CAGR % - Comparison by Dimension

By observing *chart 5.1.2.6.* it can be underlined a similar trend comparing to what outlined in the equity analysis. In particular, large companies seem to outperform medium and smaller ones, and these results are particularly true among the PE-backed sample. Indeed, in this case large companies face a growth that is almost double with respect to medium companies of the same sample. In the non-PE-backed sample larger companies totalize the higher increase, even if the difference with other dimensions is not as huge as in the PE-backed sample. This result could be attributed to the different scale on which large companies can rely in terms of amount of resources availability. Moreover, this result can be confirmed due to the observation of

the trend among medium and small items, that remains stable by shifting from large, to medium, until small firms. While PE-backed sample average CAGR is led by large companies, significant results also for medium and small firms can be observed, totalizing CAGR of 17,91% and 10,61%. On the other hand, among non-PE-backed sample, differently from medium companies whose average growth results to be lower than larger items, but significant, small companies' impact is almost irrelevant in the total CAGR. Also in this case, it is important to underline that small firms among the non-PE-backed sample result to be a smaller number compared to other categories, thus assuming a lower weight in the overall trend of average CAGR computation.

5.1.3. EBITDA

EBITDA	Mean	Median	St.Deviation	Min	Max	N
PE-Backed	5.143.455	1.880.294	15.128.277	-10.285.259	90.541.532	51
Non-PE-Backed	22.757.617	5.548.481	49.384.842	-12.307.750	267.116.600	51

Table 5.1.3.1. – EBITDA Value descriptive statistics

The table showed contains the main descriptive statistics of EBITDA value in the two samples analyzed, for PE-backed companies and their peers. Also in this case, it is deemed important to underline two aspects: first, the number of observations is the same in both the sample, for a total of 102 companies analyzed (symmetrically distributed in the two samples). Secondly, both the samples present a huge variability: this aspect is underlined by the high values of standard deviation observed, and from the huge difference between mean and median values. In order to go deep in the EBITDA analysis and to offer an interesting insight on how EBITDA value has evolved, a line graph depicting its trend over time has been reported for both the samples. Moreover, the trend in terms of percentage variation of EBITDA over time has been investigated, as shown in *Chart 5.1.3.2* and *Chart 5.1.3.3.*

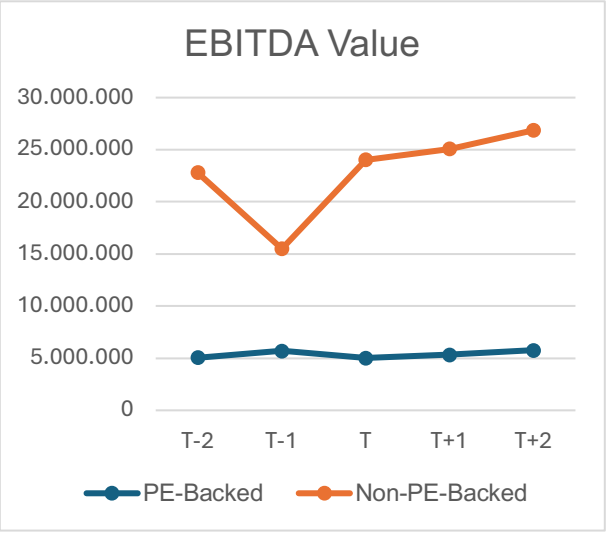

Chart 5.1.3.2. – EBITDA Value

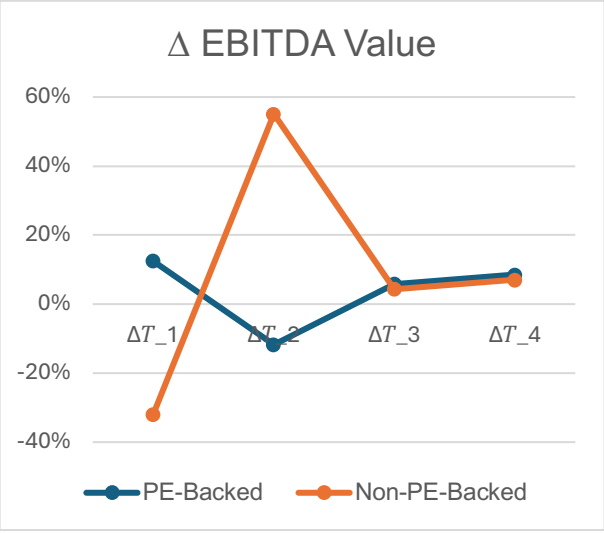

Chart 5.1.3.3. - ΔEBITDA Value

While *chart 5.1.3.2.* shows EBITDA trends over time among the two samples, *tab 5.1.3.3.* depicts variations of EBITDA value among the two samples, the PE-backed and non-PE-backed one. In terms of absolute values, EBITDA tends to be higher for the non-PE-backed sample. The different absolute EBITDA values emerging from

chart 5.1.3.2. is probably since, while PE-backed companies could be represented by firms who need strategical and structural improvements through PE activity, non-PE-backed sample contains companies who are leader in their industry and present consolidated financial results with an average higher operating profitability. General EBITDA trends show different patterns between the two samples. The first important insight that emerges from the trend-over-time graphs consists in the different line shape characterizing the two samples. In particular, while for total asset and equity value it has been noted that among the PE-backed sample a peak was reached in the period of acquisition, the EBITDA curve assumes a different behavior: it tends to slightly decrease from the year before, to the acquisition period. The evidence of the described trend is underlined in *chart 5.1.3.3.,* that shows the magnitude of the EBITDA value variations in terms of delta: basing on the results found, it is deemed important to make some considerations on this theme. First, EBITDA variable can generally present a more fluctuating trend than asset and equity value since it is sensitive to short-term operating changes inside the company. Indeed, this parameter does not measure long-term performance, rather it is affected by day-to-day operations as demand or operating costs, elements that can be subject to sudden variations, not considering elements such as capital structure. After the T period, namely ‘year 0’, the PE-backed sample companies tend to maintain a constant level over time showing a slight constant growth, even if it cannot be considered relevant for the aim of our analysis. Contrarily to what just described, non-PE-backed sample faces a constant trend along the time but reaching a drop in period T-1 and a subsequent steep growth in the following period. Since time periods have been standardized, thus they do not consider the same temporal reference points, no relevant conclusions can be outlined in this case.

In order to standardize the comparison between the samples and considering the average growth rate in the time span selected rather than absolute value, the annualized average growth rate for EBITDA has been considered as a descriptive parameter to understand its trend among the companies of the sample. Specifically, annualized average growth value for each company has been computed in the timespan selected, and the total average value of this measurement has been reported for each sample, to have a comparison measure that could depict the general trend

observed among the two samples. Also in the measurement of EBITDA, two cases have been reported: the first one included all the observations made, while the second one does not include outliers. Relevant notes related to outliers have been reported as their presence in some cases significantly affects the final measurement.

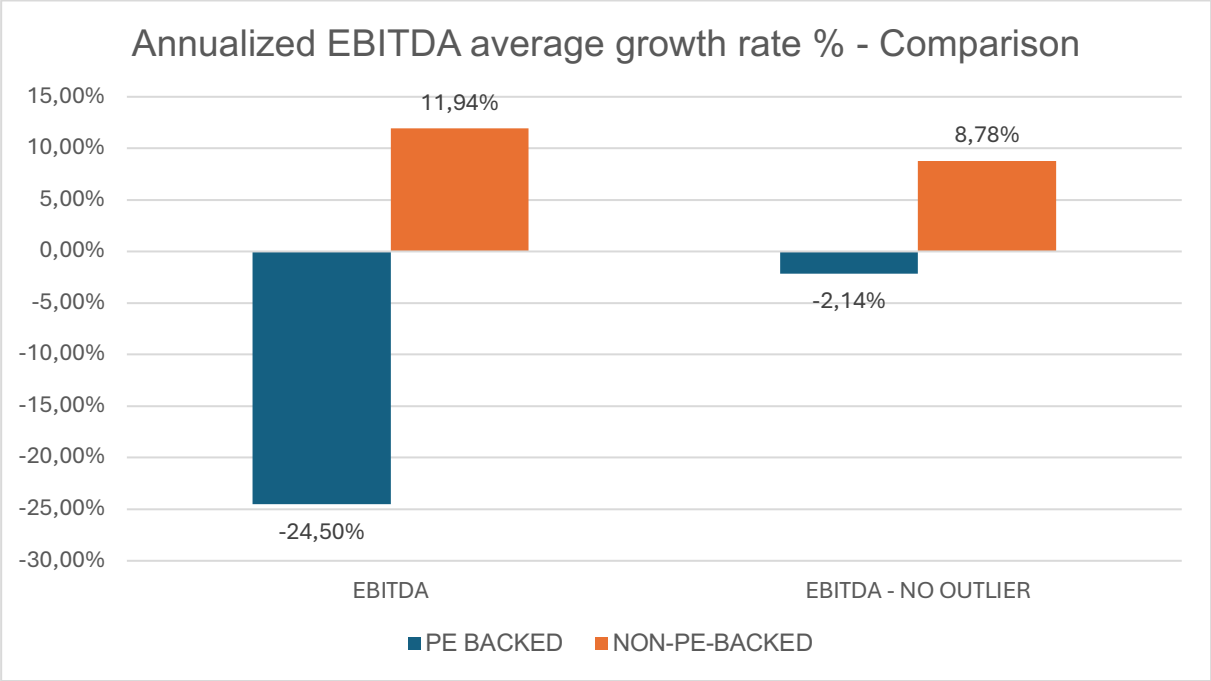

Chart 5.1.3.4. – Annualized average growth rate % - Comparison

As shown in *chart 5.1.3.4.*, the average growth of the EBITDA parameter results to be opposite between the two samples. In particular, the PE-backed one totalizes a negative average trend in the considered time frame, which results in a deterioration of the operating performance of the PE-backed companies. In particular, the EBITDA value by considering outliers inside the samples reaches a negative value of about 25%, dragged down by *GCDS, Luisa Via Roma* and *Pal Zileri* companies. It is notable to underline that the first mentioned firm, *GCDS*, has been considered a positive outlier by measuring its performance in terms of equity value. One of the probable reasons behind this observation could be, after the *Quadrivio* acquisition in 2021, due to the long-term strategic perspective implemented by the PE-fund aimed at a further expansion. As reported by (BeBeez, 2021)[1], *GCDS* recorded a significant growth in 2020, despite the uncertainty of the period related to the Covid-19 health emergency,

[1] BeBeez website.“https://bebeez.it/private-equity/made-in-italy-fund-quadrivio-pambianco-va-al-controllo-del-marchio-di-moda-gcds/”.

reaching a turnover of more than 20 million euros in just 4 years. The company, operating internationally with the greater part of its turnover generated abroad, is particularly attractive to the Asian market. *Made in Italy Fund*'s investment (by *Quadrivio*) of 2021 aimed to further support business development by promoting an omni-channel strategy aimed at strengthening distribution by privileging the Asian and American markets, as well as further implementing the development of the online channel. Thus, the equity value steep increase together with the detrimental trend of EBITDA, namely operating performance, could be linked to the expansion strategy adopted by the PE fund, that require initial significant investments that may probably impact the operating performance in the short-term. By excluding the outliers found, the average growth value remains 2 percentage points negative, even if very close to the zero. By considering the non-PE-backed sample performance, both considering outliers and not, it turns out to have positive average EBITDA growth. While in the case with outliers this growth amounts to roughly 12%, pushed upward by the excellent performance of *Luceplan* and *Lube Industries*, this growth decreases by about 3 percentage points not considering over performers. As described in this section, by considering the EBITDA parameter, the two samples show an opposite performance. One of the underlying reasons that could justify the opposite trend could be linked to the nature of PE activity. Specifically, many players among the non-PE-backed sample are represented my mature companies who probably show a stability and robustness in terms of operating profitability, by relying on consolidated operations that bring the EBITDA to growth. On the other side, as previously mentioned, companies acquired by PE funds have probably faced significant investments linked to expansion, operations improvement, or technological change, that constitute one of the core activities of the PE firms, that may have caused a drop of the EBITDA parameter downward.

To give a specific level of detail to the general trends analysis, a measurement of annualized average growth differentiating by product category has been performed. It is deemed interesting to understand which category has contributed, for both the samples, to the found average growth. It is relevant to outline that, given the limited sample size, EBITDA average growth measurement in the case of no outliers has not been performed, cause

removing outliers from a potential category with few companies would have brought to misleading results.

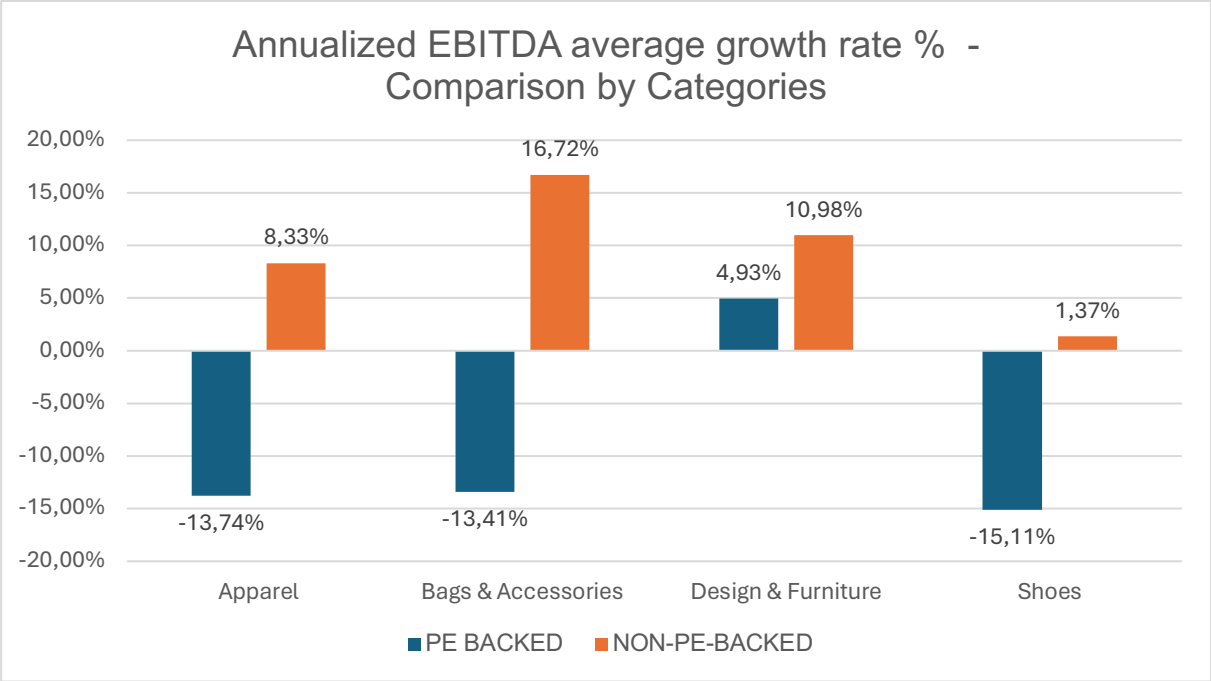

Chart 5.1.3.5. – Annualized EBITDA average growth rate % - Comparison by Categories

As shown in *chart 5.1.3.5.*, EBITDA annualized growth rate divided by categories presents significant differences in terms of percentage points between the two samples, in line with the results found for the measurement performed across the whole samples. First, it is important to outline that the category *cosmetics* has not been considered as the non-PE-backed representative of this niche represented an outlier, so no room for comparison was present. By observing *chart 5.1.3.5.* it can be noted that, among the PE-backed sample, only *design & furniture* category presents positive results. On the one hand, the positive result is achieved by considering the growth performance of *Meridiani, Axo Light* and *Mohd*, companies representing Italian excellence in this sub-niche. On the other hand, the categories *Apparel, Bags & Accessories* and *Shoes* totalize a negative trend with percentage values swinging between 13 and 15 negative points, in line with the general negative trends of the PE-backed sample. Contrarily to this situation, non-PE-backed sample experiences a growth in all the categories analyzed, in which *Bags & Accessories* shows the highest growth of almost 17%, followed by *Design & Furniture* with 11%. Shoes does not contribute significantly to the growth experienced with a score of 1,37%.

Another relevant classification providing information about the companies' EBITDA average growth has been performed in terms of dimension. Specifically, the dimension categories have been chosen basing on the last year information of revenues: companies with less than 10 million of sales have been classified as small, between 10 million and 50 million as medium, and more than 50 million as large, by considering the last year available financial data from AIDA. The chart representing annualized EBITDA average growth is reported below.

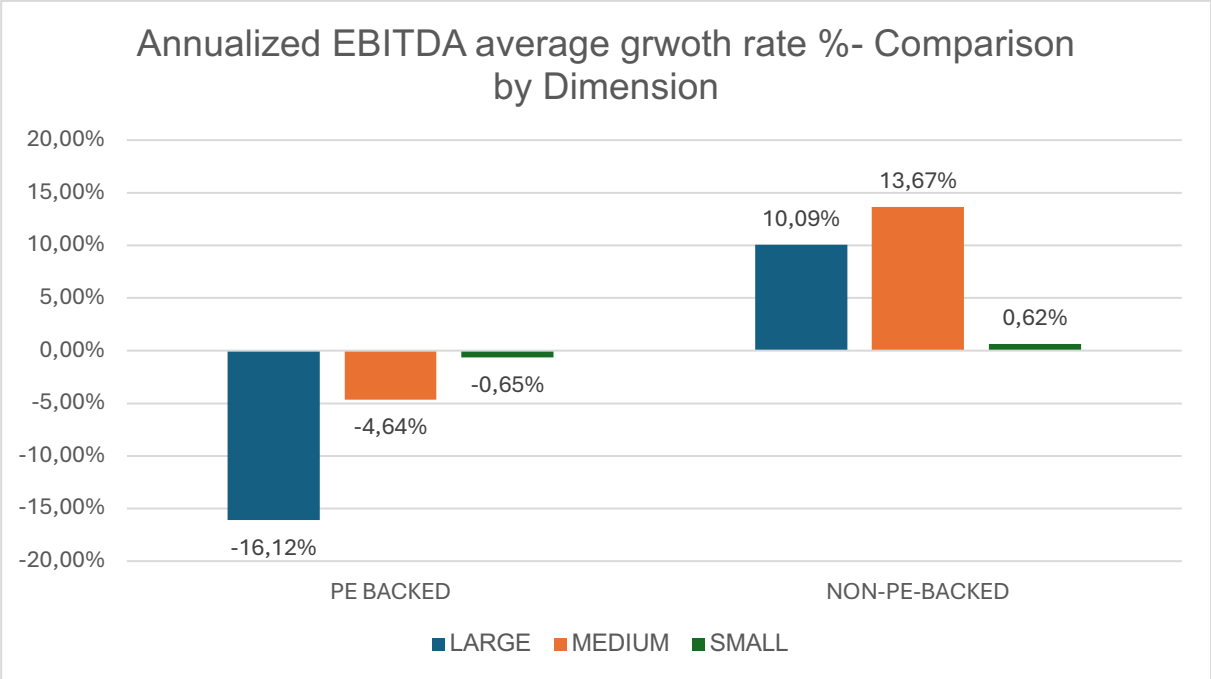

Chart 5.1.3.6. – Annualized EBITDA average growth rate % - Comparison by Dimension

Focusing on the EBITDA trend among the two samples based on the dimensions of the companies analyzed, significant results emerge, as described by *chart 5.1.3.6.* First, coherently to what discussed in the previous section about the general trend overview, PE-backed sample presents a negative trend for the three categories, contrarily to the non-PE-backed one that shows a growth among all the categories. In both cases, small enterprises result to be irrelevant, totalizing a growth very close to zero. This result shows that, in general, small enterprises does not have a significant impact in both the directions, namely upward and downward. Even if the object of this section of the analysis is profitability, it is deemed important to underline that it can be coherent that large and medium firms, due to the larger scale of their operations, have a stronger magnitude on the EBITDA with respect to small companies. Among the non-PE-backed sample, medium firms represent the most growing categories with almost

14%, followed by the large ones with a rough 10% growth. In the PE-backed sample, large companies are crucial to push the trend downward, totalizing about -16%, while medium enterprises assume a lower weight with a score of about -5%. Nevertheless, for the PE-backed sample larger companies constitute the main player with the highest weight in the overall performance of these companies. One of the main interesting aspect, observable among the non-PE-backed sample, is constituted by the crucial role of medium enterprises, that represent the real engine characterizing the non-PE-backed sample. This result is not in line, strictly considering the luxury and high-end Italian industry, with the outcomes achieved by (Gigante, Di Cesare, & Cerri, 2024)[1]. The article, analyzing a sample of European private equity-backed companies between 2005 and 2017, focuses the research on the performance of medium-sized enterprises in Europe. Results found depicted private equity as an effective alternative source of financing, with a positive impact on operational performance and profitability of the target firm. In our research, positive EBITDA performance is experienced among non-PE-backed counterparts, differently from the PE-backed one.

[1] Gigante, G., Di Cesare, N., & Cerri, A. (2024). Determinants of the performance of private equity backed SMEs: an empirical analysis at the European level. *Economic research-Ekonomska istraživanja*, *37*(1).

5.1.4. Net Debt / EBITDA

NET DEBT / EBITDA	Mean	Median	St.Deviation	Min	Max	N
PE-Backed	0,51	0,66	2,17	-6,35	3,95	36
Non-PE-Backed	0,17	-0,01	2,22	-6,01	5,48	44

Table 5.1.4.1.- Net Debt / EBITDA

Table 5.1.4.1. contains the main descriptive statistics of the parameter Net debt/EBITDA value in the two samples analyzed, for PE-backed companies and their peers. In this case, it is deemed important to underline two aspects: first, the number of observations is not the same between the samples, and it results to be reduced with respect to the previous indicators analyzed. The reason behind this aspect concerns availability of data to compute this financial indicator, namely EBITDA and Net financial Position (or Net Debt), representing total outstanding debt and subtracting cash & equivalents, that in some cases was not available. Secondly, data related to some periods considered in the analysis was not representative of the situation, since they assumed abnormal values. Indeed, the parameter analyzed usually can assume values between 0 and 5, where 5 represents a reduced and almost null capacity to pay back debt. In some cases, also negative values have been found and analyzed. However, levels of this parameter that have been considered hugely outside the range just explained have been considered as outliers, and excluded from the general trend analysis, since they represent the outcome of very particular situations and would have brough to misleading results. One of the first insight emerging by looking at descriptive statistics concerns the variability present in both the samples, as it results for the other variables, underlined by the high values of standard deviation observed, and from the difference between mean and median values. To go deep in the NetDebt/EBITDA analysis and to offer an interesting insight on how this parameter's value has evolved, a line graph depicting its trend over time has been reported for both the samples. Moreover, the trend in terms of percentage variation over time has been investigated, as shown in *Chart 5.1.4.2.* and *Chart 5.1.4.3.*

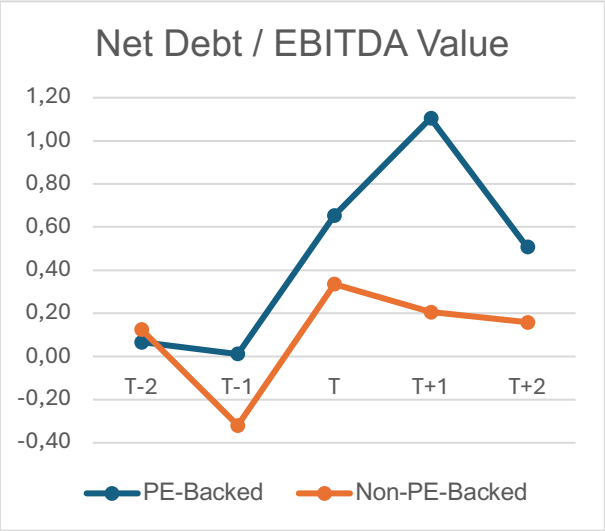

Chart 5.1.4.2. – Net Debt / EBITDA Value

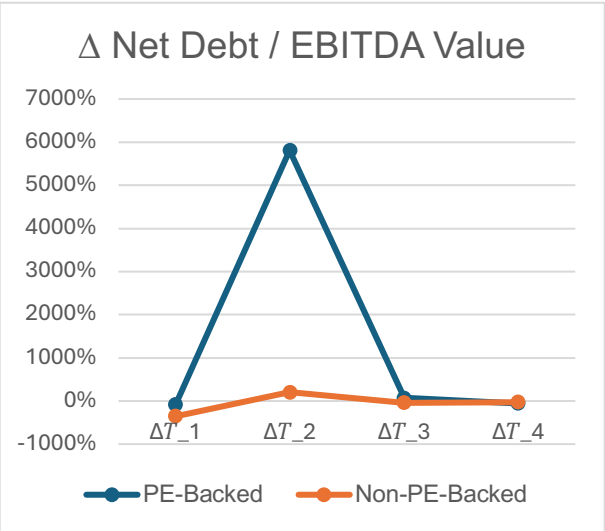

Chart 5.1.4.3. - ∆Net Debt / EBITDA

As outlined by *chart 5.1.4.2.,* Net Debt / EBITDA parameter assmes both positive and negative values. By considering the numerator and denominator of the equation, is deemed fundamental to make some previous considerations. Positive NFP/EBITDA, representing the time a company would employ to pay its net debt through operating cash flow, can usually assume values from 0, up to 4 or 5. After this threshold, the debt burden represents an important issue. In the cases of negative values of this parameter, two scenarios can emerge: on the one hand, it can reflect a negative financial situation, where the minus sign is given by a negative EBITDA value. This condition represents a negative operating profitability, thus the company is not generating enough cash flow to sustain the debt burden. On the other hand, a negative NFP/EBITDA that presents a positive EBITDA and a negative NFP usually represents a good situation, in which the company's liquidity and cash flow availability is greater with respect to financial debt. The observations showing a negative NetDebt/EBITDA will be ad-hoc discussed later, in this section.

By analyzing general trends observed among the two samples in terms of NetDebt/EBITDA, the first interesting aspect is given by the simlar shapes assumed by the two curves. Looking at *chart 5.1.4.2.*, it can be noted that, after a slight decrease of the PE-backed sample and a more impactful decrease among non-PE-backed one in the first period, both the samples face the same growth in 'T-1', even if the PE-backed sample increase is more impactful. The first significant difference underlined

emerge after period T, considered as ‘year 0’ or the year in which the PE deal occurs, where the curves follow the opposite pattern: PE-backed sample companies keep on increasing, while non-PE-backed ones face a slight decrease. Given the considerations reported above, for the PE-backed sample the curve’s behavior may be due to two main factors: on the one hand, an increase of this parameter could be the consequence of a decrease in EBITDA, namely the denominator of the equation, given by a possible temporary declining operating profitability. Indeed, as reported in the EBITDA analysis section, being PE activity typically focused, in the initial stages, on investment strategies aimed at expansion and improvements goals, operating profitability could be sensitive to increased costs, resulting in a decreased EBITDA. On the other hand, an increase of net debt could be due firstly to the realization of the deal itself, in particular if it concerns a leveraged buyout, thus if the acquisition has been performed with a large amount of debt. Moreover, given that PE funds tyically tends to optimize equity for the sake of value creation for shareholders, by using leverage to finance the acquisition, the potential return on equity (ROE) is maximed. Indeed, if the acquired company generates enough annual cash flow to pay back debt, the leverage exploitation allows to achieve firstly tax benefits, secondly a maximization of equity value, even if at a higher risk. In general, the increase in NFP/EBITDA follows our expectation since the initial phases of PE activity concerns financing strategies and the realization of multiple investments that usually exploit leverage. Finally, between the last two periods considered, both the samples show a decrease of this indicator, even if the one related to the PE-backed sample curve is steeper. Generally, it can be noted that the PE-backed sample shows higher fluctuations along the time. In particular, after the peak reached in the period ‘T+1’, the following one is characterized by a decreasing curve of NetDebt/EBITDA, probably due to the fact that operating profitability starts to increase, and Net Debt to decrease. This outcome could result from the initial outcomes evincible by PE activity, leading to an increasing EBITDA from operations and a gradual reduction of net debt due to potential improvements, actions that are typical of PE firms in the years following the acquisition.

Focusing on *chart 5.1.4.3.*, depicting variations in terms of delta, the first main divergency is represented by the different behavior of the two curves. Indeed, while the non-PE-backed one results to be quite stable, the PE-backed one faces a peak in

the year of PE deal. It is relevant to underline that the outstanding percentage representing the peak of the PE-backed curve is due to the high sensitivity of percentage variations for very small values around the zero of this measurement. Therefore, even if the absolute variations goes from 0,01 to 0,65, thus remaining close to zero and inside the range of acceptable level of the indicator analyzed, the percentage growth results to be very high for the mentioned reason. By excluding the period in which the peak is reached, the two curves tend to follows a similar trend.

As previously mentioned, one of the most important aspects concerning this parameter's analysis consists in understanding whether NetDebt/EBITDA parameter assumes negative values due to a negative EBITDA or a negative net financial position. Indeed, the cases showing an average negative indicator among the PE-backed sample have been separately investigated, to try and catch some insights on the reasons leading to a negative sign. Among the items object of analysis, 33% of them shows an average negative NFP/EBITDA along the years considered. Among these items, 25% of them assume a negative indicator due to a negative EBITDA, roughly 60% due to a negative net financial position, and about 15% show in some years a negative EBITDA, while in other years a negative NFP. Thus, it emerges that most of the items presents a negative NFP/EBITDA due to a negative NFP, and a positive EBITDA. By further investigating the premises considered at the beginning of this section, the observed trend follows our expectations. Indeed, on the one hand the negative NFP, representing a major fraction of available cash flow with respect to financial debt can be considered as a general improvement in terms of capital structure. On the other hand, cases of negative NFP/EBITDA caused by a negative EBITDA could reflect the leverage exploiting typical of PE firms concerning the investment and expansion strategies usually adopted in the first years of the investment period, potentially leading to a short-term negative EBITDA.

In order to standardize the comparison between the samples and considering the average growth rate in the time span selected rather than absolute value, the annualized average growth rate for NetDebt/EBITDA has been considered as a descriptive parameter to understand its trend among companies of the two samples. Differently from the other financial indicators, the measurement of NetDebt/EBITDA does not take into consideration the scenario including outliers. As previously

mentioned, in this case the outliers found show values of this parameter that excessively shift the balance of the results, thus they have not been considered.

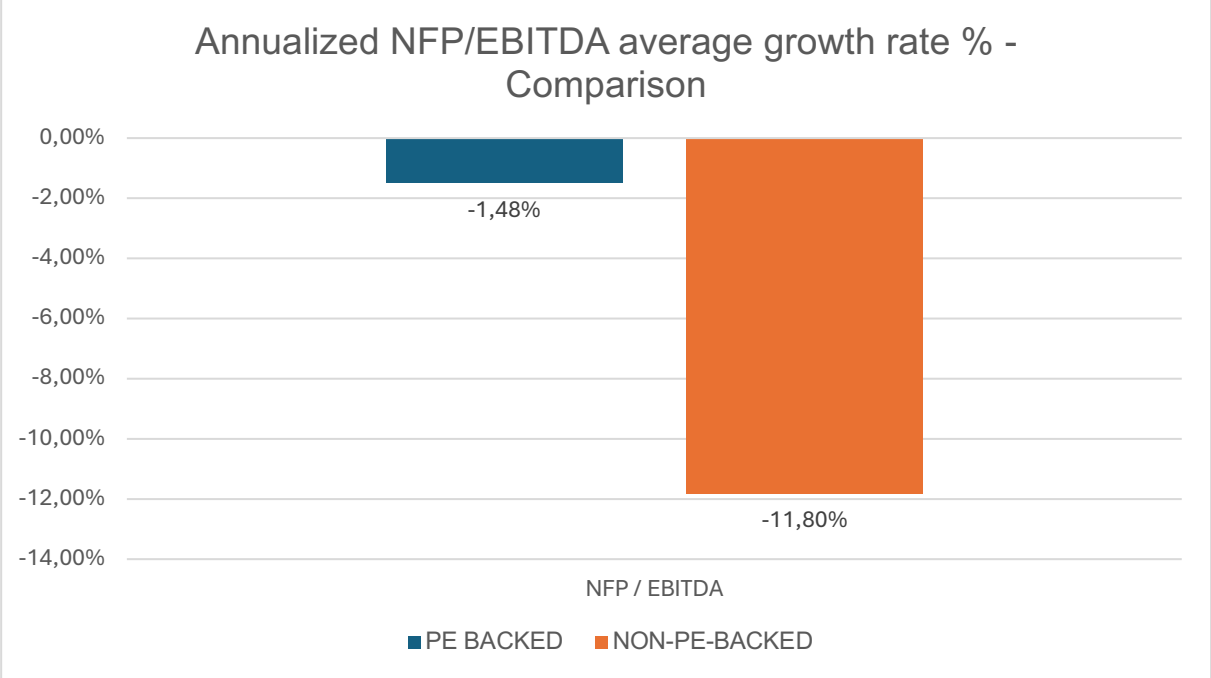

Chart 5.1.4.4. - Annualized NFP/EBITDA average growth rate % - Comparison

First, it is deemed fundamental to outline a specific aspect: a decrease in NetDebt/EBITDA where the final value assumed by the parameter is a negative one, as previously mentioned, has an ambiguous effect. On the one hand, it could represent that cash & cash equivalent reserves exceed net debt, while on the other hand, it could reveal a negative EBITDA value. Since most of the cases observed, as mentioned above, present a condition in which the negative sign is given by a negative Net Debt, it is generally been considered that a reduction in NFP/EBITDA represents a performance improvement, thus a reduction of debt burden. By observing *chart 5.1.4.4.,* it is possibile to note the different average values in terms of growth followed by the parameter Net Debt / EBITDA, among the two samples. Specifically, on average, both the samples present a decrease in the percentual growth of this parameter. This element suggests that, on average, the indicator investigated has reduced, so a general positive effect emerges from this observation. However, the diminishing trend for non-PE-backed sample companies is far more pronounced than the PE-backed one, with almost 12%. This observation reveals a notably positive outcome evinced among non-PE-backed sample, that results to have reduced on average their its burden or increased its EBITDA, aspects that result in an improved

capacity and a lower time period to pay back the debt, thus reducing the debt burden. On the other side, even if PE-backed sample diminishing percentage results to decrease, the absolute value results to be irrelevant with almost 1,5%. This outcome reveals a quite stable trend of this parameter, thus resulting in a slightly average positive performance, even if not as good as the one observed among the non-PE-backed. This results is quite in line with expectations since it can be reasonable that, on average, PE-backed companies can rely on debt more than their counterparts for several reasons. First, this outcome reflects the typical leverage exploiting by PE funds to finance the acquisitions, in particular in LBO (Leveraged Buyout) operations, that is gradually reimbursed in the following years. Second, initial interventions of PE funds aimed at firms' improvements could need a fraction of debt to be financed, causing a potential increase in debt and a reduction in EBITDA due to the higher costs faced. Third, since debt represents a crucial element to exploit, especially in initial phases of a PE deal, the overall debt reimbursement through the cash flow coming from operating activities could not represent a short-term crucial objective of the fund, as it implies a certain number of years. Before moving to the comparison in terms of net-debt-to-EBITDA ratio based on categories, some relevant aspects linked to the measurement of this parameter can be underlined. Specifically, since this indicator is computed as a ratio, it allows to identify general levels of debt typical of certain industries. Indeed, not all the sectors are characterized by the same levels of this indicator, since the amount of leverage exploited in each industry depends on two main factors: first, the capital intensity linked to the type of investments needed in that specific sector, secondly the predictability of cash flow generated from the business activity. By consdering these two elements, it is possibile to try and find a benchmark for Italian companies operating in the luxury industry. Specifically, as reported by (StockViz, 2024)[1] the average net-debt-to-ebitda ratio of the top 9 Italian luxury goods companies at the beginning of November 2024 amounts to 0.88. Looking at *tab 5.1.4.1.*, this result is quite in line with the same financial indicators computed for the two samples investigated. Eventually, it can be concluded that the average net-debt-to-ebitda ratio empirically computed for the samples satisfy our expectations since it results to be pretty in line with the one that is proper of this specific industry.

[1] StockViz, 2024. https://stockviz.com/en/ranking-of-italy-stocks-in-luxury-goods-by-net-debt-to-ebitda-ratio.

To give a specific level of detail to the general trends analysis, a measurement of annualized average growth differentiating by product category has been performed. It is deemed interesting to understand which category has contributed, for both the samples, to the found average growth. It is relevant to outline that, given the limited sample size, NetDebt/EBITDA average growth measurement in the case of no outliers has not been performed, cause removing outliers from a potential category with few companies would have brought to misleading results.

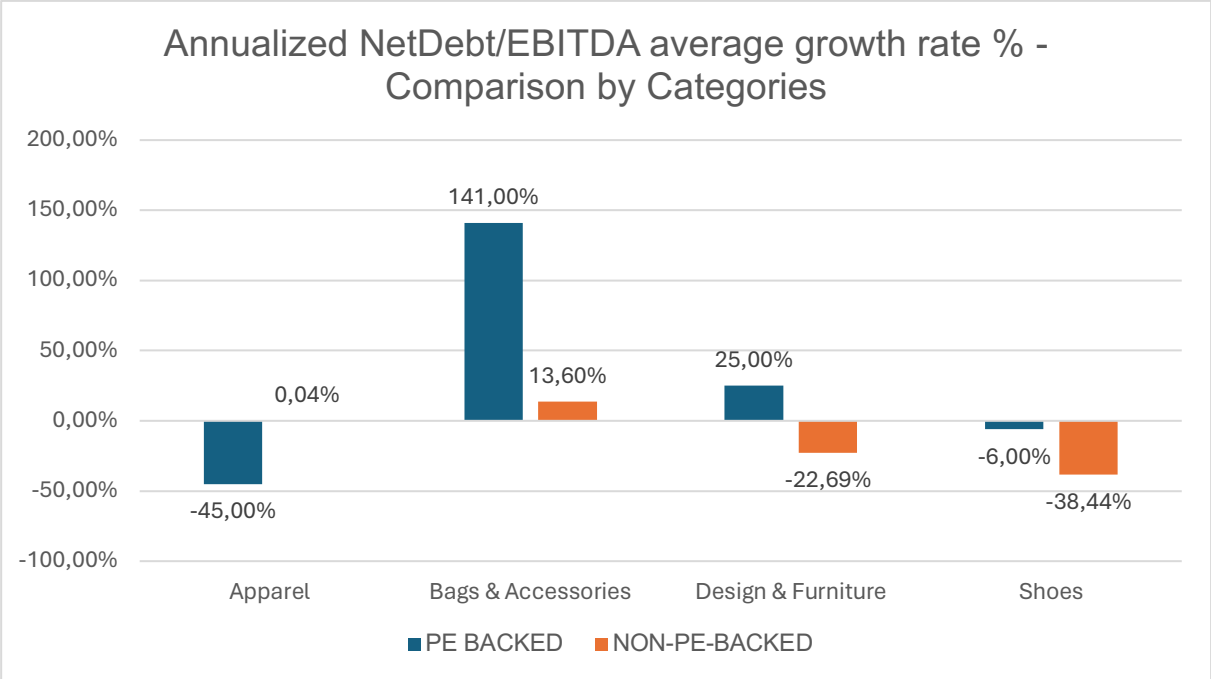

Chart 5.1.4.5. - Annualized NetDebt/EBITDA average growth rate % - Comparison by Categories

As shown in *chart 5.1.4.5.*, NetDebt/EBITDA annualized growth rate divided by categories presents significant differences in terms of percentage points between the two samples, in line with the results found for the measurement performed across the whole samples. First, it is important to outline that the category cosmetics has not been considered as the non-PE-backed representative of this niche represented an outlier, so no room for comparison was present. The worst category for the PE-backed sample is represented by bags & accessories, that totalizes a growth of almost 141%. Specifically, both *Rosantica* and *Gianni Chiarini* push the growth upward due to a worsening in NetDebt/EBITDA that shift from negative to positive values in the years considered. On the other side, the counterpart related to non-PE-backed sample faces a slight growth. Among PE-backed companies, even *design & furniture* scores a growth of this parameter led by *Flos* and *Gervasoni*, while the respective companies

of the group of peers face a decrease, thus improving their level of debt. An opposite trend can be underlined among the apparel category: in particular, this niche is characterized by a decrease in the NetDebt/EBITDA for PE-backed companies, while the non-PE-backed counterparts face a result around zero, thus considered not significant. The category shoes pushes the mean of non-PE-backed sample downward, by scoring an almost -40%, and the PE-backed counterparts face a negative 6%, thus resulting in a good result, even if slightly significant. Summarizing, the group of peers divided by category maintains a trend that is coherent with the general one occurred. Contrarily, the PE-backed sample is negatively affected by the results faced in the *bags & accessories* niche and by *design & furniture*, and positively impacted by *apparel* category, thus the general scenario shows an increase in the level of debt burden throughout the years.

Another relevant classification providing information about the companies' NetDebt/EBITDA average growth has been performed in terms of dimension. Specifically, the dimension categories have been chosen basing on the last year information of revenues: companies with less than 10 million of sales have been classified as small, between 10 million and 50 million as medium, and more than 50 million as large, by considering the last year available financial data from AIDA. The chart representing annualized NetDebt/EBITDA average growth is reported below. Differently from the previous analyses, in this case medium & small companies have been considered together as a unique category due to availability of data.

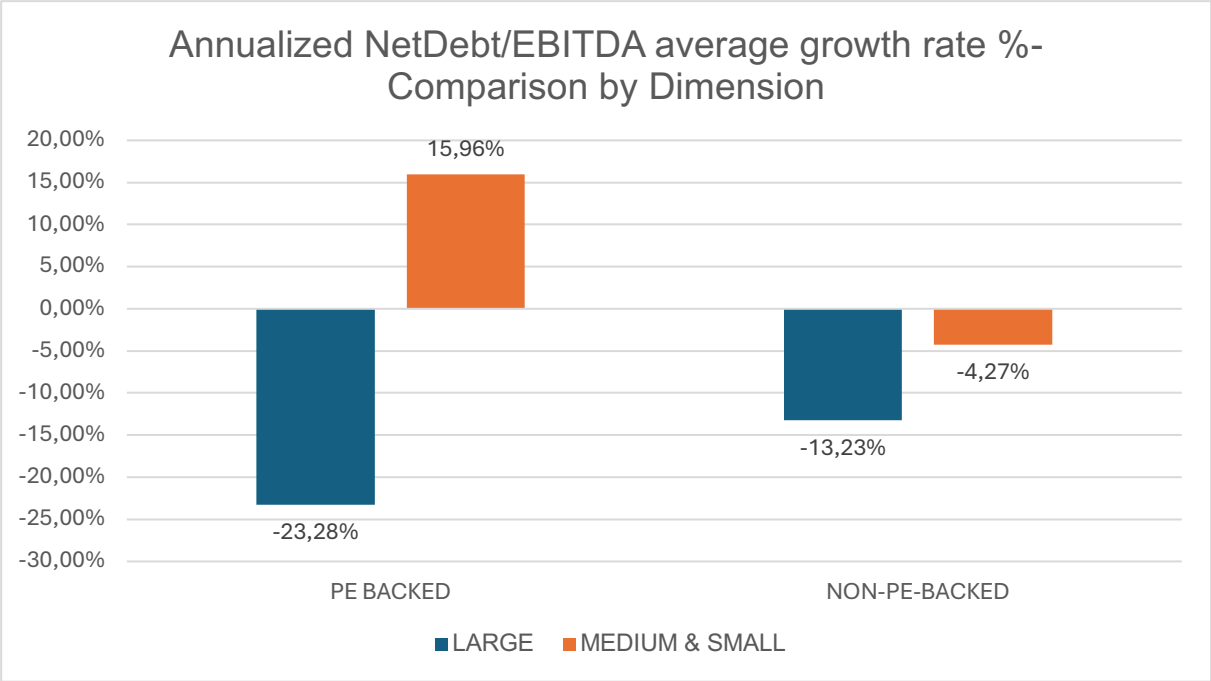

Chart 5.1.4.6. - Annualized NetDebt/EBITDA average growth rate % - Comparison by Dimension

Focusing on net-debt-to-ebitda ratio based on companies' dimensions, *chart 5.1.4.6.*, offers a clear representation on the differences occurred among the two samples. First, it is possible to outline that both categories of non-PE-backed firms are characterized by a percentual decrease, even if larger ones seem to outperform the smaller by scoring a diminishing trend that is four times the one of the medium & small companies. A different situation can be remarked among PE-backed sample companies. Specifically, while large companies maintain a consistent negative net-debt-on-ebitda ratio, medium & small ones tend to score a positive ratio of about 16%, resulting in an increase of the debt burden. In this case, large firms show a consistent and greater average decrease in the net-debt-on-ebitda ratio, while medium and small companies show the opposite trend. While companies of non-PE-backed sample show coherent average trends of this financial indicator between the two-dimensional groups, the PE-backed companies classified by dimensions result to have an opposite trend, in which medium & small firms pull the average growth upward. Results found could be explained by the fact that, in general, larger firms can firstly benefit of a more stable EBITDA given by a consolidated operating profitability leading to a progressive and gradual reduction of this indicator. Indeed, even after some potential initial investments made by the PE firms, larger enterprises can rely on a stability in terms of profitability coming from established operations that allow to maintain a constant or growing trend,

thus resulting in an improved net-debt-on-EBITDA ratio. Contrarily, smaller firms could be characterized by a less stable EBITDA, presenting fluctuations and even decrease of this parameter. Indeed, due to their reduced dimensions, medium & small firms that have been object of PE acquisition that potentially aim to a long-term value creation and performance improvements, could initially face more difficulties to achieve profitability due to the changes brought by PE firms. Secondly, another potential reason behind the results found could be attributed to the increased level of debt risk faced by the two types of companies. Specifically, while large companies typically have a greater debt financing capacity with respect to medium and small ones, and in particular more favorable interest rates that reflect the risk faced by creditors given by an affirmed financial structure, medium and small companies could face difficulties on this aspect due to more uncertainty characterizing their activity in terms of cashflow generation and profitability.

5.2. Multi-linear regression results

The results of the DiD analysis and regression model have been elaborated using *STATA* tool. For reach dependent variable considered and previously presented the regression has been run, and related results and discussion of results are presented in this section. It is deemed fundamental to describe the method through which the companies' data have been provided to the statistical software, and the detail of the companies whose correlation has been analyzed. First of all, data have been considered and modelled following a *Panel Data* frame. This model concerns a type of dataset that combines time series dimensions, allowing to merge multiple observations on several units (companies of the two samples, in our case) and to compare it on a time-based model, useful in our case to observe potential changes between pre- and post-acquisition periods. This frame has been fundamental to apply the linear regression model through the *Difference-in-Difference (DiD)* approach, to perform a more robust and causally interpretable analysis. In each section where results of the multi-linear regression related to the single parameter have been presented, a discussion of the outcomes found take place. In particular, the first table of each section presents the outcome of the general multi-linear regression, while the second table reports information about the robustness of coefficients of the regression and their significance. Specifically, the second table shows how the coefficients of each variable vary by gradually adding independent variables. Thus, a potential stable coefficient describes that the result found is probably robust and it is not affected by other external factors, by strengthening the validity of final outcomes. In each section, results found through the statistical method applied are presented, commented, and compared with outcomes of the number count analysis. Indeed, since the regression analysis performed investigates the causal effect of PE acquisition, it allows to state if results found in the number count analysis can be directly attributed to PE acquisition.

In order to structure the database containing the companies observed in the selected time-period, the following procedure has been followed. First, data of all the target companies acquired by a PE-fund have been standardized by considering acquisition year as 'T'. Then, each peer of the non-PE-backed company has been paired with its counterpart based on the ATECO code, and for the company belonging to the non-PE-backed sample year '0' has been considered as the year '0' of the PE-backed

counterpart. Once having paired all the items, a database concerning all the observation has been constructed, by using the dummy variables *PE* to differ between PE and non-PE-backed firms. Furthermore, despite data collection provide us with data in 5 different periods, namely T-2, T-1, T, T+1 and T+2, 4 time periods have been considered in the regression analysis, named as period 1, 2, 3 and 4: the choice has been made as several data was missing in the year T-2. Thus, in order to avoid removing several observations from the sample due to this issue that would have bring to a significant sample-size reduction, period 1 has been considered T-1. Indeed, period 1 and period 2 have been considered as pre-acquisition periods, by considering period 2 as 'T', while periods T+1 and T+2 have been considered as post-acquisition periods. Moreover, since for some companies' data was not available for both periods T-2 and T-1, a small part of observations has been removed from the samples. Before the presentation of the results found in the regression analysis performed, a test of multicollinearity has been applied. This test aims at verifying whether independent variables chosen to describe the dependent variable are highly correlated, namely they are characterized by variability trends that are similar each other. Indeed, the potential presence of multicollinearity may cause misleading regression outcomes as their effect could overlap, making coefficients found unsignificant. Testing multicollinearity confers gives additional reliability and robustness to the results found in the regression. Since independent variables used to perform the regressions are the same for all the indicators, multicollinearity has been priorly tested, as shown by *table 5.2.1.*

Variable	VIF	1/VIF
DID	**3.05**	**0.327924**
employees	**2.99**	**0.334069**
revenues	**2.90**	**0.345010**
treated	**2.11**	**0.473484**
post	**2.01**	**0.496789**
roe	**1.21**	**0.828922**
de	**1.10**	**0.911145**
Mean VIF	**2.20**	

Table 5.2.1. – Multicollinearity Test

Since acceptable levels of this parameter are considered for values lower than 5, it seems that the independent variables chosen are not affected by multicollinearity, thus the interpretation of their coefficients emerging from the regression analysis performed can be considered reliable.

The final analyzed companies' database results to contain the following PE-backed companies, and the corresponding peers. Under the column representing companies it has been reported the commonly known name of the brand relating to that specific company, for both the samples. The last column reports the niche in which each selected company operates. It is important to underline that many brands among those reported offer a huge variety of products in their activity, especially among the *apparel* category, however the sub-niche characterizing each of them has been reported basing on the ATECO code classification. For instance, companies such as *Golden Goose* whose most popular and representative items are shoes, presents an ATECO code referred to the selling of general apparel as *"Confezione in serie di abbigliamento esterno"*, indeed it has been reported among the apparel category. *Table 5.2.2.* reports the described classification.

PE-backed companies	Non PE-backed companies	Category
Harmont & Blaine	Elisabetta Franchi	Apparel
I Pinco Pallino	Dolce & Gabbana	Apparel
Luciano Barbera	Loro Piana	Apparel
Pal Zileri	Raffaele Caruso	Apparel
Frette	Vincenzo Zucchi	Apparel
Roberto Cavalli	Boggi Milano	Apparel
Aspesi	Enrico Mandelli	Apparel
Corneliani	Exelite	Apparel
Boglioli	Xacus	Apparel
Forte Forte	Alanui	Apparel
La Perla Manufacturing	Herno	Apparel
Mr & Mrs Italy	Il Gufo	Apparel
120%Lino	Max Mara	Apparel
Missoni	Angelo Carillo	Apparel
MSGM	Aquazzurra	Apparel
Nicole Fashion Group	Carvico	Apparel
Save the Duck	Diesel	Apparel
Trussardi S.p.A.	Dream Project	Apparel
MooRER	Venice	Apparel
GCDS	DernaMaria	Apparel
Dondup	Heron Preston	Apparel
Etro	Jil Sander	Apparel
Luisa Via Roma	Ash Italia	Apparel
Sport Fashion Service	G&B Negozio	Apparel
Golden Goose	Marni Group	Apparel
Il Bisonte	Guccio Gucci	Bags & Accessories
Gianni Chiarini	Fendi	Bags & Accessories
Rosantica	Bulgari Gioielli	Bags & Accessories
Fueguia	Acqua di Parma	Cosmetics
Flos	Iguzzini	Design & Furniture
Visionnaire	Molteni	Design & Furniture
Gervasoni	Agape	Design & Furniture
Giorgetti	Lube Industries	Design & Furniture
B&B Italia	Veneta Cucine	Design & Furniture
Arc Linea Arredamenti	Poliform	Design & Furniture
Meridiani	Arredo3	Design & Furniture
Axo Light	Artemide	Design & Furniture
Devon & Devon	Baxter	Design & Furniture
Calligaris	Flexform	Design & Furniture
Saba Italia	Minotti	Design & Furniture
Sozzi Arredamenti	Rimadesio	Design & Furniture
Interni	L'Ambiente	Design & Furniture
Mohd	Primopiano	Design & Furniture
Ivela	Foscarini	Design & Furniture
Viabizzuno	Luceplan	Design & Furniture
Giuseppe Zanotti	Tod's	Shoes
Bruno Magli	Santoni	Shoes
Philippe Model	Gianvito Rossi	Shoes
Autry International	Dsquared2	Shoes
Ghoud	Premiata	Shoes
Sergio Rossi	Salvatore Ferragamo	Shoes

Tab 5.2.2. – List of the companies of the samples with the respective category

5.2.1. Equity – multi linear regression analysis

Source	SS	df	MS	Number of obs	=	328
				F(7, 320)	=	61.30
Model	4.4037e+18	7	6.2911e+17	Prob > F	=	0.0000
Residual	3.2839e+18	320	1.0262e+16	R-squared	=	0.5728
				Adj R-squared	=	0.5635
Total	7.6877e+18	327	2.3510e+16	Root MSE	=	1.0e+08

equity	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
treated	2.26e+07	1.63e+07	1.39	0.166	-9393350	5.46e+07
post	-2847316	1.59e+07	-0.18	0.858	-3.41e+07	2.84e+07
DID	1.52e+07	2.26e+07	0.67	0.501	-2.92e+07	5.96e+07
revenues	-5271.382	20326.94	-0.26	0.796	-45262.69	34719.93
employees	.6861496	.0550429	12.47	0.000	.5778579	.7944413
roe	-320232.8	182423.2	-1.76	0.080	-679133.1	38667.56
de	-1.12e+07	5642789	-1.98	0.048	-2.23e+07	-86224.79
_cons	-5594768	1.30e+07	-0.43	0.668	-3.13e+07	2.01e+07

Table 5.2.1.1. – equity results of multi-linear regression analysis

	(1) equity	(2) equity	(3) equity	(4) equity	(5) equity
treated	-35767329.0	-1937857.0	23194012.5	20432109.7	22592436.6
	(-1.50)	(-0.10)	(1.43)	(1.25)	(1.39)
post	13954805.1	9716293.4	-3092144.0	-3803217.4	-2847315.8
	(0.58)	(0.50)	(-0.19)	(-0.24)	(-0.18)
DID	7107829.2	9028564.5	21497629.9	18952846.9	15202932.7
	(0.21)	(0.33)	(0.95)	(0.84)	(0.67)
revenues		193410.1***	-5427.7	-10041.7	-5271.4
		(12.96)	(-0.27)	(-0.50)	(-0.26)
employees			0.685***	0.696***	0.686***
			(12.58)	(12.65)	(12.47)
roe				-234678.9	-320232.8*
				(-1.32)	(-1.76)
de					-11187876.7**
					(-1.98)
_cons	76012468.6***	7825971.1	-16640203.7	-11894152.3	-5594767.8
	(4.50)	(0.53)	(-1.36)	(-0.94)	(-0.43)
r2	0.0145	0.352	0.565	0.568	0.573
N	328	328	328	328	328

t statistics in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 5.2.1.2. – equity results of multi-linear regression analysis (2)

For the financial parameter considered, equity value in this case, a multiple-linear regression following a DiD approach has been performed, and two tables have been reported in the presentation of results. While *table 5.2.1.1.* shows general results of the regression performed, *table 5.2.1.2.* contains a robustness analysis that reports the coefficients of the variables and their significance by progressively adding independent control variables step by step. Firstly, the **adjusted R-squared** value depicting how well independent variables of the model describe the behavior of the dependent one, results to be **56%**. Generally, an adjusted R-squared value greater than 50% is considered acceptable as a good proxy of the reliability of the model. Going deep in the analysis of the regression coefficients, the first significant insight concerns the non-significance of the DID variable. As previously mentioned, the DID variable represents the core parameter of this analysis as it explains the potential causality correlation between the equity value increase and PE acquisition event. Being not statistically significant, the regression model does not seem to be in line with results found in the number count analysis, that apparently showed a positive impact of PE acquisition on target firms' performance. From the results found, it looks like target companies backed by PE funds have shown a greater increase than their counterparts in terms of average equity CAGR value due to factors that are external from the PE acquisition. **So, there is not clear evidence that PE deals in the luxury and high-end sector bring to a value creation outcome for target companies.** Even if the DID variable just discussed is considered the core outcome of our analysis, by further analyzing the control variables parameters, it emerges that employees, ROE and D/E factors are statistically significant. Specifically, it emerges that coefficients linked to number of employees and ROE, even if significant, can be considered irrelevant by observing the magnitude of the values analyzed. However, D/E factor results to be significant at 95% level and negatively correlated to equity value. Indeed, as it can be seen from its coefficient in *table 5.2.1.2.,* an increase in the mentioned parameters cause a decline in equity of 11 million €. This result clearly explains that a higher D/E ratio, namely an increase of the debt level with respect to the equity value that remains constant or decreases, lead to detrimental effects for the long-term value sustainability of the firms. These results are in line with our expectations, and they can be explained under different standpoints. First, a high D/E ratio could suggest that companies rely on a greater part of debt financing for its activity, with respect to equity. This aspect allows to exploit the benefits linked to debt financing, but at the same time

it increases the financial risk faced by shareholders, especially during periods of uncertainty in which annual cash-flow could be not enough to cover debt expenses. In this context, it is deemed necessary to make a remarkable observation. Indeed, as (Deloitte, Global Fashion & Luxury Private Equity and Investors Survey, 2023)[1] reports, in 2023, 2022 and 2021 one of the most used deal structures for new fashion & luxury investments has been LBO (Leveraged Buyout), mainly funded by senior debt. Since LBO operations rely on a huge fraction of debt, the trends found in this research can be considered coherent with respect to the information reported in the mentioned report, as M&A investments in this sector seem on having relied for the most part on debt financing. Apart from the mentioned possible explanation of the high debt level, in general, a high D/E ratio usually signal a situation of financial distress, leading to a higher risk perceived by shareholders that could bring detrimental outcomes in terms of equity value. Indeed, risk of default tends to rise, and interest rates could excessively increase and shifting up the cost of debt, until reducing the net equity value. Moreover, a high D/E ratio is often interpreted by shareholders as a negative signal on the general management of a company's activities, aspect that could reduce the investors trust on the potential future outcomes of the company itself, furtherly reduce the equity value.

[1] Deloitte, 2023. "Global Fashion & Luxury Private Equity and Investors Survey".

5.2.2. Total Asset - multi linear regression analysis

Source	SS	df	MS	Number of obs	=	328
				F(7, 320)	=	100.89
Model	1.9355e+19	7	2.7650e+18	Prob > F	=	0.0000
Residual	8.7702e+18	320	2.7407e+16	R-squared	=	0.6882
				Adj R-squared	=	0.6814
Total	2.8125e+19	327	8.6010e+16	Root MSE	=	1.7e+08

asset	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
DID	3.00e+07	3.69e+07	0.81	0.417	-4.26e+07	1.02e+08
post	-6629492	2.59e+07	-0.26	0.798	-5.77e+07	4.44e+07
treated	4.83e+07	2.66e+07	1.82	0.070	-4005040	1.01e+08
revenues	1.250974	.0899516	13.91	0.000	1.074003	1.427945
employees	76596.15	33218.47	2.31	0.022	11241.97	141950.3
roe	-524298.2	298117.7	-1.76	0.080	-1110816	62220.02
de	-8186608	9221499	-0.89	0.375	-2.63e+07	9955814
_cons	-2.56e+07	2.13e+07	-1.20	0.232	-6.75e+07	1.64e+07

Table 5.2.2.1. - total results of multi-linear regression analysis

	(1) asset	(2) asset	(3) asset	(4) asset	(5) asset
treated	-70385770.0	53230741.2**	52119256.2**	46685632.2*	48266428.1*
	(-1.54)	(2.00)	(1.98)	(1.76)	(1.82)
post	26852995.7	-8566187.8	-5930033.8	-7328962.5	-6629491.9
	(0.59)	(-0.33)	(-0.23)	(-0.28)	(-0.26)
DID	10830839.9	40633198.7	37715837.8	32709364.0	29965404.6
	(0.17)	(1.10)	(1.03)	(0.89)	(0.81)
revenues		1.414***	1.237***	1.258***	1.251***
		(25.82)	(13.94)	(14.05)	(13.91)
employees			82182.9**	73105.5**	76596.1**
			(2.52)	(2.22)	(2.31)
roe				-461695.1	-524298.2*
				(-1.59)	(-1.76)
de					-8186608.3
					(-0.89)
_cons	160154202.1***	-34968586.2*	-39497926.3**	-30160791.6	-25551284.8
	(4.96)	(-1.75)	(-1.99)	(-1.46)	(-1.20)
r2	0.0154	0.679	0.685	0.687	0.688
N	328	328	328	328	328

t statistics in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 5.2.2.2. – total asset results of multi-linear regression analysis (2)

For the financial parameter considered, total asset value in this case, a multiple-linear regression following a DiD approach has been performed, and two tables have been reported in the presentation of results. While *table 5.2.2.1.* shows general results of the regression performed, *table 5.2.2.2.* contains a robustness analysis that reports the coefficients of the variables and their significance by progressively adding independent control variables step by step. Firstly, the **adjusted R-squared** value depicting how well independent variables of the model describe the behavior of the dependent one, results to be **68%**. Generally, an adjusted R-squared value greater than 50% is considered acceptable as a good proxy of the reliability of the model. Thus, in this case, the model seems to be a good estimator of the situation analyzed. Going deep in the analysis of the regression coefficients, the first significant insight concerns the non-significance, also in this case, of the DID variable. As previously mentioned, the DID variable represents the core parameter of this analysis as it explains the potential causality correlation between the total asset value increase and PE acquisition event. **Also in this case, despite the results found in the number count analysis show a greater total asset value increase among PE-backed companies with respect to their counterparts, the regression performed reveals that this increase cannot be directly attributed to PE acquisition.** An interesting information given by the multi-linear regression performed is given by the 90% significance of the variable *treated.* Since this variable describes the belonging to the companies to one of the two samples, by analyzing its coefficient it seems that companies of the PE-backed sample are characterized by a total asset value greater of about 48 million with respect to their counterparts, with a significance of 90%. By looking at this result and considering the non-significance of the coefficient DID, namely the core object of the analysis, **it emerges that companies of the PE-backed sample, independently from the event of the acquisition and the post-period performance, are positively correlated with total asset value, and in particular they show a total asset value that is about 48 million greater than their counterparts.** This outcome explains that the greater total asset value of the PE-backed sample represents an intrinsic characteristic of the companies of that sample, thus it is not tightly correlated with the PE acquisition, due the non-significance of the DID coefficient. Similarly to the results emerging from the equity variable observation, also in this case the trends found in the number count analysis for total asset value are not confirmed by the regression results.

This outcome could reflect the fact that PE firms do not effectively contribute to an increase in total asset value through their acquisition, rather they are able to select pre-deal-high performers already showing a greater asset value than their counterparts. By observing the coefficients of the control variables, revenues, number of employees and ROE result to be consistently significant. Specifically, as the regression performed suggests that on average, revenues and number of employees' parameters are positively correlated with total asset value, while ROE seems to be negatively correlated. However, by considering the magnitude of data considered, the coefficients of these parameters cannot be considered significant.

5.2.3. EBITDA - multi linear regression analysis

Source	SS	df	MS	Number of obs	=	328
				F(7, 320)	=	200.59
Model	4.3527e+17	7	6.2182e+16	Prob > F	=	0.0000
Residual	9.9199e+16	320	3.1000e+14	R-squared	=	0.8144
				Adj R-squared	=	0.8103
Total	5.3447e+17	327	1.6345e+15	Root MSE	=	1.8e+07

ebitda	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
treated	6737916	2825661	2.38	0.018	1178697	1.23e+07
post	2039112	2758586	0.74	0.460	-3388145	7466368
DID	-541044.6	3920627	-0.14	0.890	-8254505	7172416
revenues	.2031972	.0095666	21.24	0.000	.1843758	.2220186
employees	1210.999	3532.878	0.34	0.732	-5739.602	8161.601
roe	190234.8	31705.66	6.00	0.000	127856.9	252612.7
de	167356.8	980732.5	0.17	0.865	-1762141	2096855
_cons	-1.26e+07	2267705	-5.57	0.000	-1.71e+07	-8175385

Table 5.2.3.1. - EBITDA results of multi-linear regression analysis

	(1) ebitda	(2) ebitda	(3) ebitda	(4) ebitda	(5) ebitda
treated	-13535081.1**	4513546.0	4546446.7	6770231.4**	6737915.5**
	(-2.19)	(1.53)	(1.54)	(2.41)	(2.38)
post	6730289.5	1558912.1	1480880.1	2053410.8	2039111.7
	(1.09)	(0.54)	(0.51)	(0.75)	(0.74)
DID	-7083755.2	-2732462.2	-2646106.3	-597138.6	-541044.6
	(-0.81)	(-0.67)	(-0.65)	(-0.15)	(-0.14)
revenues		0.206***	0.212***	0.203***	0.203***
		(34.01)	(21.33)	(21.35)	(21.24)
employees			-2432.7	1282.4	1211.0
			(-0.67)	(0.37)	(0.34)
roe				188955.0***	190234.8***
				(6.14)	(6.00)
de					167356.8
					(0.17)
_cons	19633530.5***	-8855369.7***	-8721298.1***	-12542647.7***	-12636878.7***
	(4.49)	(-4.00)	(-3.92)	(-5.71)	(-5.57)
r2	0.0482	0.792	0.793	0.814	0.814
N	328	328	328	328	328

t statistics in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 5.2.3.2. - EBITDA results of multi-linear regression analysis (2)

As it can be seen from *table 5.2.3.1*. and *5.2.3.2.*, in monitoring the EBITDA through the DiD regression analysis, the following results emerged. First of all, the **adjusted R-squared** value results to be significant with a rough **81%** level: it means that in this case, independent variables describe very well the attitude of dependent variable. Among 328 observations, the main variable *DID,* namely the interaction variable*,* does not result to be significant. This mean that it is not visibly clear an impact in terms of EBITDA caused by the PE acquisition over the selected period, so there is no evidence that PE-acquisition has brought significant advantages or disadvantages to acquired companies through the acquisition. However, the dummy variable 'treated' results to be significant at 95% level, with a positive coefficient. Thus, from the regression analysis it seems that on average, companies belonging to the PE-backed sample experience a greater EBITDA value than their counterparts of about 6,7 million €, even if this outcome does not seem to be directly attributed to the causal effect of the PE deal, rather it seems to be an intrinsic characteristic proper of the respective sample. Looking at *chart 5.1.3.3.,* by considering that the number count & general trend analysis shows firstly higher absolute value of EBITDA and secondly a greater increase of this parameter along the time characterizing the non-PE-backed sample with respect to its counterpart, results obtained from the two analyses seem to be contradictory. However, it is deemed fundamental to underline that the number count & general trend analysis measurement could underestimate some underlying intrinsic characteristics of the two groups. Indeed, since the regression analysis allows to isolate the effect of the dummy variables by controlling for other characteristics, for instance dimensions, the number count results can be affected by external factors that are not considered. Conclusions of the EBITDA study can be outlined by differentiating outcomes in terms of absolute performance and relative performance. **In absolute terms, the number count analysis shows that PE-backed companies tend to have lower EBITDA levels and slower growth compared to their non-PE-backed peers.** As previously mentioned, the result could be in line with expectations since the group of peers is characterized by affirmed companies who can rely on a consolidated financial performance. **This suggests that PE funds often target companies characterized by a weaker financial condition relative to industry peers**, that is coherent with the final aim of PE activity, namely the providing of strategic improvements. However, since the regression analysis performed reveals that the variable 'treated' is positive and significant, results indicate that PE-backed firms, when compared to companies

of similar size, industry, and characteristics, demonstrate relatively higher EBITDA. This highlights that **PE funds are particularly able to select companies with a significant improvement potential over the time, even if these companies do not cover the role of market leaders.** By merging the results found through the two analyses, it is possible to underline that PE-backed companies may show worse absolute EBITDA compared to the group of peers, but better results in relative terms compared to other firms with similar starting conditions. These findings reveal that PE funds' strategy consists in targeting promising companies with room for operational or strategic improvements, driving EBITDA growth through their intervention. Despite DiD and the other dummy variables represent the core of our observation, going deep in analyzing control variables coefficients and their significance, it emerges that revenues and ROE result to be statistically significant with a level of 99%, and they are associated to a positive correlation with EBITDA value. However, both the coefficients found result to be almost unsignificant by considering the magnitude of the data analyzed.

5.2.4. Net Debt / EBITDA - multi linear regression analysis

Source	SS	df	MS	Number of obs	=	268
				F(7, 260)	=	4.86
Model	331.590622	7	47.3700888	Prob > F	=	0.0000
Residual	2536.51416	260	9.75582368	R-squared	=	0.1156
				Adj R-squared	=	0.0918
Total	2868.10478	267	10.7419655	Root MSE	=	3.1234

netdebtebi~a	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
post	.0154456	.5152191	0.03	0.976	-.9990878	1.029979
treated	.2700281	.5532656	0.49	0.626	-.8194238	1.35948
DID	1.127601	.7777601	1.45	0.148	-.4039095	2.659112
employees	.0005172	.0007298	0.71	0.479	-.0009199	.0019543
revenues	2.32e-10	2.00e-09	0.12	0.908	-3.72e-09	4.18e-09
roe	.0014051	.006524	0.22	0.830	-.0114415	.0142516
de	.9586321	.1995007	4.81	0.000	.5657892	1.351475
_cons	-.5928985	.4256622	-1.39	0.165	-1.431083	.2452857

Table 5.2.4.1. – PFN/EBITDA results of multi-linear regression analysis

	(1) netdebtebi~a	(2) netdebtebi~a	(3) netdebtebi~a	(4) netdebtebi~a	(5) netdebtebi~a
post	0.102	0.0855	0.0957	0.0961	0.0154
	(0.536)	(0.533)	(0.536)	(0.536)	(0.515)
treated	0.326	0.486	0.480	0.443	0.270
	(0.566)	(0.570)	(0.572)	(0.575)	(0.553)
DID	0.852	0.852	0.842	0.775	1.128
	(0.801)	(0.797)	(0.799)	(0.806)	(0.778)
employees		0.000767*	0.000929	0.000879	0.000517
		(0.000416)	(0.000752)	(0.000756)	(0.000730)
revenues			-5.38e-10	-4.58e-10	2.32e-10
			(2.08e-09)	(2.08e-09)	(2.00e-09)
roe				-0.00448	0.00141
				(0.00667)	(0.00652)
de					0.959***
					(0.200)
Constant	0.0448	-0.226	-0.213	-0.121	-0.593
	(0.379)	(0.405)	(0.409)	(0.431)	(0.426)
Observations	268	268	268	268	268
R-squared	0.023	0.035	0.035	0.037	0.116

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 5.2.4.2. – PFN/EBITDA results of multi-linear regression analysis (2)

Table 5.2.4.1. and *5.2.4.2.* present the results obtain through the multi-linear regression analysis, concerning the parameter NFP/EBITDA. The first relevant aspect to focus on regards the **adjusted R-squared** value, that results to be **9,18%:** it means that, differently from the other cases, independent variables do not seem to describe very well the attitude of dependent variable, **so the model is not enough representative of the situation**. Starting from this consideration, coefficients found in the analysis and their statistical significance will be discussed, even if it is crucial to consider this aspect across the following discussion. First, the number of observations amount to 268 differently from the previous cases, due to the reasons described in the section of the NetDebt/EBITDA number count analysis: to remain coherent with the considerations made, it has been decided to rely on the same dataset. Concerning the discussion of coefficients, the main variable *DID,* namely the interaction variable*,* does not result to be significant. This mean that it has not been noted an impact in terms of NetDebt/EBITDA caused by the PE acquisition over the selected period, so there is no evidence that PE-acquisition has led to significant positive or negative outcomes to acquired companies. The dummy variables treated and post do not result to be significant, and the same condition is experienced by independent ones, except for Debt/Equity ratio. Looking at *chart 5.1.3.3.,* from the number count analysis the NetDebt/EBITDA trend among the PE-backed sample results to be ambiguous. Indeed, PE-backed firms face a slight (almost irrelevant) decrease in this parameter, contrarily to the group of peers who remarked a significant decrease. In general, it can be concluded that results found for net-debt-to-ebitda ratio cannot be directly attributed to PE activity. In this specific case, by considering that the adjusted R-squared value is not a good descriptor of the situation, thus the model does not seem to provide reliable results, **it can be concluded that from the regression analysis, on average, PE acquisition does not have a clear impact on the net-debt-on-ebitda ratio.**

6. CONCLUSIONS

The structure of the empirical research performed has allowed firstly to give general insights on the time-based trend of each indicator selected, and its magnitude, for both the samples, and the statistical methodology adopted to implement the DiD regression has allowed to study the causality effect of potential performance changes, aimed at identifying potential variations directly attributable to PE acquisition. Starting by considering the isolated effect of PE-backed deals on the general performance of target companies performed through the Wilcoxon-signed rank test, **values of equity and total asset face an increase among PE-backed companies.** Differences in EBITDA and in NetDebt/EBITDA between the periods pre- and post-acquisition both show a slight increase, however they do not result to be significant, thus no relevant conclusions on these financial parameters can be reported. Overall, from the Wilcoxon-signed rank test, by considering only the significant cases examined, it can be outlined that results found seem to be quite in line with our expectations. Indeed, an increase in equity value describes an improved shareholders' wealth led by an investment strategy leading to a long-term value creation, that represents one of the most typical objectives of PE activity. Improvements in total asset value can firstly describe a revaluation of firms' internal resources, and a crucial requirement serving as solid base to satisfy the initial investment strategy. By considering the single financial indicators measured in terms of comparison between companies of the two samples and outlining a potential coherent linkage between the number count and the regression analysis results, the following outcomes emerge. Regarding **equity**, results of the regression coefficients show that the DID variable, crucial to evaluate the causal relationship between equity value changes and PE acquisitions, is not statistically significant. This result is not in line with the number count analysis, that seemed to suggest a positive impact of PE acquisitions on companies' performance. The results indicate that probably the higher equity CAGR among target companies is driven by factors that are external to PE acquisitions. Thus, no clear evidence supports value creation by PE deals among Italian companies belonging to the luxury and high-end sector object of analysis. Concerning independent variables, the D/E ratio, significant at the 95% level, results to have a negative impact, causing a reduction of equity by €11 million. This result is coherent with expectations since a high D/E ratio indicates greater reliance on

debt, heightening financial risks, but since it has been outlined that LBO deals are widely spread in the luxury sector, the huge fraction of debt can be partially explained. Concerning **total asset value,** it is notable that the variable *treated* is significant at 90% level, thus it seems that PE-backed companies show a higher total asset value compared to their non-PE-backed counterparts, with an average difference of about 48 million. However, this difference cannot directly be attributed to the impact of PE acquisitions, as the key *DID* variable lacks statistical significance. Thus, the greater total asset value seems to be an intrinsic characteristic of PE-backed firms rather than a result of the acquisition deal. The findings support the idea that PE firms tend to select high-performing companies rather than significantly driving asset value growth through the acquisition. Regarding **EBITDA,** the *DID* variable of the regression, representing the impact of PE acquisitions, is once again not significant, suggesting lack of direct causal effect of PE deals on EBITDA over the observed period. On the other hand, the variable *treated* shows significance at 95% level, suggesting that PE-backed firms, on average, have a higher EBITDA of about €6.7 million with respect to non-PE-backed counterparts. On the one hand, this outcome appears to be an intrinsic characteristic of PE-backed firms rather than a result of the acquisition itself, on the other hand trend analyses underline some contradictions, as PE-backed firms show slower EBITDA growth and lower absolute values compared to peers. A possible explanation could reflect that PE funds target underperforming companies with high potential to increase. Indeed, regression results clarify that PE-backed companies demonstrate better EBITDA performance, underlining PE funds' ability to select firms with high growth potential, contrarily to the control sample companies among which several consolidated players operate. Finally, the regression analysis regarding **NFP/EBITDA** parameter shows limited explanatory power, as reported by the low adjusted R-squared value, suggesting that the model is not representative of the situation. Moreover, the *DID* variable is not significant, meaning no clear impact of PE acquisitions on the NFP/EBITDA ratio was observed. From the number count analysis both PE-backed and non-PE-backed companies show a decrease in the percentual growth of the analyzed parameter, indicating an overall positive trend. However, non-PE-backed firms show a significantly greater decrease of about 12%, compared to the 1.5% of PE-backed companies. In general, it can be concluded that, on average, non-PE-backed firms have reduced their debt burden more effectively.

6.1. Limitations of the study

The world of private equity deals and the impact that these entities cause on target companies has been hugely debated by previous literature. Moreover, this theme can be seen and analyzed from different standpoints. This research focuses on the effect brought by PE firms on Italian target companies' performance strictly operating in the luxury and high-end sector. Despite outcomes have been investigated through a number count analysis followed by statistically based research, the study presents some limitations.

The first limit arises **from availability of data**. Specifically, since the research aimed to accurately select a set of companies belonging to a precise niche of the market in the period 2014-2021, the sample object of research has been object of a precise selection. Specifically, the number of items has been restricted to make the study valuable and insightful for the specific industry analyzed, namely Italian B2C (Business to Consumer) companies operating in the luxury and high-end sector. During the selection process, as mentioned in the methodology section, some companies could not be considered, even satisfying these requirements, due to the lack of a significant amount of financial statement data. The second limitation of this research, tightly linked to the first one, is the relatively **small dimension of the samples**. Indeed, one of the potential risks arising from this limit stands in the limited statistical power of the study, and in a limited generalizability, thus results found for the companies analyzed could not be extended to the overall sector analyzed. The third limitation of the empirical research is given by **the selection of the group of peers**, that could be object of potential biases. Specifically, since the industry analyzed consists in a precise niche of the market, the selection and pairing of the group of peers with the items belonging to the PE-backed sample could have caused some mismatches, especially in terms of dimensions. Indeed, by tighten the environment analyzed, the selection of the group of peers has been made through a random selection that could have brought to relevant differences and non-comparable characteristics between the two samples.

6.2. Future Research

As outlined in chapter 6, results of the thesis highlight mixed outcomes in terms of PE impact on target companies and the comparison with the group of peers. However, there can be room for expanding the research by using this thesis as inspiration.

One of the potential improvements could consist in considering inside the sample also **B2B companies** of the luxury and high-end sector. Indeed, Italian manufacturing companies providing products and services strictly for luxury companies are largely diffused and represent an excellence worldwide. Thus, by considering their financial performance when acquired by PE funds may be interesting to widen the scope of the research and to highlight potential emerging differences with respect to B2C companies. Another interesting insight to deepen the research could consist in the expanding the analysis including **European companies**. This aspect could allow to rely on a greater PE-backed sample, that would strengthen the validity of the analysis, and could give room for a comparison between Italian and European luxury and high-end firms. Thirdly, since this thesis has focused the performance measurement on four financial parameters that offer a general overview of the financial situation of the companies analyzed, the research could be extended **by accounting for other financial parameters**, to provide additional details on companies' financial performance.

References

21Invest. (2024). Tratto da https://www.21invest.com/it/

AIFI - Associazione Italiana del Private Equity, V. C. (2024). *Private Equity*. Tratto da AIFI - Associazione Italiana del Private Equity, Venture Capital e Private Debt: https://aifi.it/it/private-equity

AIFI, & PwC. (2023). *I Semestre 2023 - Il mercato italiano del private equity e venture capital.* Tratto da Il mercato italiano del private equity e venture capital: https://www.aifi.it/visualizzaallegatodocumenti.aspx?chiave=4j153146H3bT3792W290n3g1M4WhT8

AIFI, & PwC. (2024). *AIFI - Associazione Italiana del Private Equity, Venture Capital e Private Debt*. Tratto da Pubblicati i dati sui rendimenti dei Private Equity nel mercato italiano: https://aifi.it/it/private-capital-today/pubblicati-i-dati-sui-rendimenti-dei-private-equity-nel-mercato-italiano

Antoni, F., Burgelman, R., & Meza, P. (2004). *LVMH in 2004: The Challenges of Strategic Integration*. Tratto da Stanford Business Graduate School: https://www.gsb.stanford.edu/faculty-research/case-studies/lvmh-2004-challenges-strategic-integration

Anzolin, E., & Za, V. (2023). *Focus: Private equity persuades Italian luxury suppliers that bigger is better*. Tratto da Reuters: https://www.reuters.com/business/retail-consumer/private-equity-persuades-italian-luxury-suppliers-that-bigger-is-better-2023-01-16/

Badunenko, O., Baum, C., & Schäfer, D. (2010). Does the tenure of Private Equity investment improve the performance of European firms?

Battistin, E., Bortoluzzi, P., Buttignon, F., & Vedovato, M. (2017). Minority and majority private equity investments: firm performance and governance. *Journal of Management & Governance*, 659-684.

BeBeez. (2021). Tratto da https://bebeez.it/private-equity/made-in-italy-fund-quadrivio-pambianco-va-al-controllo-del-marchio-di-moda-gcds/

Belyakov, A. (2020). Economics of leveraged buyouts: Theory and evidence from the UK private equity industry. . *Jacobs Levy Equity Management Center for Quantitative Financial Research Paper*.

Bruining, H., Verwaal, E., & Wright, M. (2013). Private equity and entrepreneurial management in management buy-outs. Small Business Economics, 40, 591-605.

Brun, A., & Castelli, C. (2013). "The nature of luxury: a consumer perspective." International Journal of Retail & Distribution Management 41.11/12 (2013): 823-847.

Carlyle. (2024). Tratto da https://www.carlyle.com

Caselli, S., Gigante, G., & Tortoroglio, A. (2021). *Corporate and investment banking: a hands-on approach. Bocconi University Press.* Egea.

Chevalier, M., & Mazzalovo, G. (2021). *Luxury Brand Management in Digital and Sustainable Times.* Wiley.

Clessidra. (2024). Tratto da https://www.clessidragroup.it/?_gl=1%2Awuspkn%2A_up%2AMQ..%2A_ga%2AMTM1MjQ5NzI1Ni4xNzMwODgzMDI1%2A_ga_2QVTCMYNFT%2AMTczMDg4MzAyNC4xLjEuMTczMDg4MzAzNS4wLjAuMA..

Columbia. (2013). Tratto da Columbia - Mailman school of public health: https://www.publichealth.columbia.edu/research/population-health-methods/difference-difference-estimation

Cressy, R., Munari, F., & Malipiero, A. (2007). Playing to their strengths? Evidence that specialization in the private equity industry confers competitive advantage. Journal of Corporate Finance, 13(4), 647-669.

Dallabona, A. (2014). Narratives of Italian craftsmanship and the luxury fashion industry: Representations of Italianicity in discourses of production.

Danziger, P. N. (2024, June 20). Innovation Needed As The Luxury Goods Market Stalls In 2024. *Forbes*. Tratto da Forbes: https://www.forbes.com/sites/pamdanziger/2024/06/20/innovation-needed-as-the-luxury-goods-market-stalls-in-2024/

D'Arpizio, C., & Levato, F. (2024, June 18). *Following a record year, the stalled luxury goods market faces a dilemma between catering to top clientele and reaching new audiences amid ongoing complexities*. Tratto da Bain & Company: https://www.bain.com/about/media-center/press-releases/2024/following-a-record-year-the-stalled-luxury-goods-market-faces-a-dilemma-between-catering-to-top-clientele-and-reaching-new-audiences-amid-ongoing-complexities/

De Barnier, V., Falcy, S., & Valette-Florence, P. (2012). Do consumers perceive three levels of luxury? A comparison of accessible, intermediate and inaccessible luxury brands. . *Journal of Brand Management*, 623-636.

Deloitte. (2021). *Global Fashion & Luxury Private Equity and Investors Survey.* Tratto da Deloitte: https://www.deloitte.com/it/it/services/financial-advisory/analysis/fashion-luxury-private-equity-investors-survey-deloitte-italia.html

Deloitte. (2022). *Global Fashion & Luxury Private Equity and Investors Survey.* Tratto da Deloitte: https://www.deloitte.com/it/it/services/financial-advisory/research/fashion-luxury-private-equity-and-investors-survey-2022.html

Deloitte. (2023). *Global Fashion & Luxury Private Equity and Investors Survey.* Tratto da Deloitte: https://www.deloitte.com/it/it/services/financial-advisory/analysis/fashion-luxury-private-equity-investors-survey-deloitte-italia.html

D’Arpizio, C., Levato, F., Steiner, A., & de Montgolfier, J. (2024). *Long Live Luxury: Converge to Expand through Turbulence*. Tratto da Bain & Company: https://www.bain.com/insights/long-live-luxury-converge-to-expand-through-turbulence/

E.V.C.A. (2007). Guide on private equity and venture capital for entrepreneurs.

Fenn, G., Liang, N., & Prowse, S. (1997). The private equity market: An overveiw. Financial Markets, Institutions & Instruments, 6(4), 1-106.

Ferraro, M. (2024). *The luxury industry slowdown*. Tratto da Milano Finanza: https://www.milanofinanza.it/fashion/the-luxury-industry-slowdown-202405091052182145

Fidanza, B. (2010). Private Equity in Italia: caratteristiche del mercato e ruolo per le imprese. In Evoluzione e discontinuità nel sistema finanziario internazionale (pp. 149-175). McGrawHill.

Gigante, G., Di Cesare, N., & Cerri, A. (2024). Determinants of the performance of private equity backed SMEs: an empirical analysis at the European level. *Economic research-Ekonomska istraživanja*.

Giusti, N. (2013). Diffuse entrepreneurship and the very heart of «made in Italy», for fashion and luxury goods. *Современная конкуренция*, 58-64.

Gottschalg, O., & Wright, M. (2011). Understanding the buyers' role in private equity returns-The influence of skills, strategy and experience. In Conference, New York City.

Growthgate. (2019). *Brand Equity meets Private Equity.* Tratto da https://growthgate.com/wp-content/uploads/2019/09/Brand-Equity-meets-Private-Equity.pdf

Guo, S., Hotchkiss, E. S., & Song, W. (2011). Do buyouts (still) create value? *The Journal of Finance*, 479-517.

Heinrich, V. (2023). Private Equity Transactions: Value Creation through Operational Engineering–Evidence from Europe. *Junior Management Science (JUMS)*, 634-657.

Hotchkiss, E. S., Smith, D. C., & Strömberg, P. (2021). Private equity and the resolution of financial distress. *The Review of Corporate Finance Studies*, 694-747.

Il Giornale d'Italia. (2024, Novembre 18). *Clessidra, superato €1 mld di interventi a vent'anni dalla fondazione. Obiettivo 2023: espansione all'estero*. Tratto da Il Giornale d'Italia: https://www.ilgiornaleditalia.it/news/mondo-imprese/458685/clessidra-superato-1-mld-di-interventi-a-vent-anni-dalla-fondazione-obbiettivo-2023-espansione-all-estero.html

Ionescu, R., Charizona, A., & Cavallaro, E. (2024). *Tracing the Evolution of Italy's Private Equity Landscape and Its Impact on the Fashion and Luxury Industries*. Tratto da BSPEC - Bocconi Students, Private Equity Club: https://bspeclub.com/tracing-the-evolution-of-italys-private-equity-landscape-and-its-impact-on-the-fashion-and-luxury-industries/

Kapferer, J. N. (2014). The future of luxury: Challenges and opportunities. . *Journal of Brand Management*, 716-726.

Kapferer, J. N., Klippert, C., & Leproux, L. (2014). Does luxury have a minimum price? An exploratory study into consumers' psychology of luxury prices. *Journal of Revenue and Pricing Management*, 2-11.

Kapferer, J.-N. (2014). The artification of luxury: From artisans to artists. . *Business horizons*, 371-380.

Kapferer, J.-N., & Bastien, V. (2017). The specificity of luxury management: Turning marketing upside down. *Advances in luxury brand management*, 65-84.

Kaplan, S. N., & Strömberg, P. (. (2009). Leveraged buyouts and private equity. Journal of economic perspectives, 23(1), 121-146.

Koinos, C. (2023). *The 2023 of the Italian private equity market*. Tratto da Koinos Capital: https://koinoscapital.com/2023/12/30/the-2023-of-the-italian-private-equity-market/

Le Nadant, A.-L., Perdreau, F., & Bruining, H. (2018). Industry specialization of private equity firms: a source of buy-out performance heterogeneity. Venture Capital, 20(3), 237-259.

LIUC. (2016). *Private Equity Monitor, 2016.* Tratto da http://www.privateequitymonitor.it/attach/rapporto_pem_2016_download.pdf

Ljungqvist, A. (2024). The economics of private equity: A critical review.

Meles, A., Monferrà, S., & Verdoliva, V. (2014). Do the effects of private equity investments on firm performance persist over time? *Applied Financial Economics*, 203-218.

Meuleman, M., Amess, K., Wright, M., & Scholes, L. (2009). Agency, strategic entrepreneurship, and the performance of private equity–backed buyouts. *Entrepreneurship Theory and Practice*, 213-239.

Norbäck, P.-J., Persson, L., & Tåg, J. (2010). Ownership efficiency and tax advantages: The case of private equity buyouts (No. 841). IFN Working Paper.

Pecunya. (2024). Tratto da https://www.pecunya.com/it/blog/i-piu-grandi-fondi-di-private-equity-italiani/

Permira. (2024). Tratto da https://www.permira.com

Prowse, S. D. (1998). The economics of the private equity market. Economic Review-Federal Reserve Bank of Dallas, 21-34.

PwC. (2021). *The economic impact of private equity and venture capital in Italy.* Tratto da https://www.pwc.com/it/it/publications/assets/docs/economic-impact-2021.pdf

Quadrivio. (2024). Tratto da https://www.quadriviogroup.com/it

Repubblica. (2024, June 5). Golden Goose, finora ci hanno guadagnato tutti. Sarà così anche per chi la compra in Ipo?

Silverstein, M. J., & Fiske, N. (2003). Luxury for the masses. *Harvard Business Review*.

StockViz. (2024, November 10). *Top Luxury Goods companies in Italy by Net Debt to EBITDA Ratio*. Tratto da https://stockviz.com/en/ranking-of-italy-stocks-in-luxury-goods-by-net-debt-to-ebitda-ratio

Verbouw, J., Meuleman, M., & Manigart, S. (2021). The real effects of private equity buyouts: a meta-analysis. *Academy of Management Proceedings (Vol. 2021, No. 1, p. 14309), Briarcliff Manor, NY 10510: Academy of Management*.

Wilson, N., Wright, M., Siegel, D. S., & Scholes, L. (2012). Private equity portfolio company performance during the global recession. *Journal of Corporate Finance*, 193-205.

Wright, M., Amess, K., Weir, C., & Girma, S. (2009). Private equity and corporate governance: Retrospect and prospect. Corporate Governance: An International Review, 17(3), 353-375.

Ringraziamenti

Il presente elaborato di tesi rappresenta il completamento di un percorso ambizioso, impegnativo e avvincente. Questa sezione è dedicata a tutti coloro che mi hanno supportato, e che ho avuto il privilegio di avere accanto in questi anni universitari.

Al professor *Enrico Luciano*, in primo luogo per la passione tramessa durante i suoi insegnamenti. Per i preziosi consigli professionali e “di vita” che porteremo sempre con noi, e per l’immensa disponibilità e guida che mi ha accompagnato nella stesura di questa tesi, che ha reso il lavoro divertente ed appagante.

Alla mia famiglia, papà *Marco*, mamma *Claudia*, mio fratello *Andrea*, da sempre mio supporto in tutte le vicende affrontate nel corso della vita.

A nonno *Dino* e nonna *Edda*, che mi guardano da lassù, a nonna *Franca* e nonno *Romano*. Ed anche, a tutti gli zii e cugini che compongono la mia immensa e meravigliosa famiglia, sempre e comunque presenti fin da quando ero bambino. Ed anche, ai piccoli appena arrivati.

A *Nick,* per le nostre chiacchierate infinite senza arrivare ad una soluzione, per essere ‘nati storti’ ed andarne fieri, e per riuscire a capirmi in ogni situazione. A *Monta*, per le nostre risate, passate e future, e per il tuo incoraggiamento ogni volta che mi mancava l’ultimo passo. Ad *Andrea*, amicizia più recente ma altrettanto importante, ai nostri confronti costanti, sinceri e alla nostra visione diversa di alcune cose.

A *Letizia*, al legame che si è instaurato fin da quando ho messo piede a Torino per la prima volta, a tutte le esperienze condivise insieme, alla tua disponibilità e gentilezza nel porgere la mano nel momento del bisogno.

A *Michi*, con cui ho condiviso tantissimo dai banchi universitari fino al posto di lavoro, ed a tutti i miei *colleghi di K*, per questo ultimo anno passato insieme.

A *Luca*, alla nostra intesa, ed alla possibilità di spaziare da discorsi professionali a temi personali in qualche millesimo di secondo.

A *Fra* e *Marco*, perché nonostante la distanza, quando ci si rivede non è mai passato un giorno.

A *Giorgia*, la mia sorella minore torinese.

A *David, Luca* e *Mati*, per i viaggi stupendi che abbiamo fatto insieme, e per quelli che faremo.

Ai miei coinquilini di questi tre anni, *Hsuan, Pietro, Lionello, Luca, Vincenzo, Carola, Angelica e Chiara*: se ho vissuto meravigliosamente questi tre anni di convivenza a Torino, è stato così anche grazie a voi.

Ai *Noodles* e a *JEToP*, per aver condiviso tutte (o quasi) le avventure torinesi di questi anni, da quelle formative a quelle ludiche.

Ed infine, a *Giacchetto*, per avermi ricordato che non è mai tardi per sognare, inventare, creare ed imparare.