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Beyond Bankable: How Private Debt Rewrites the Rules of Financing

A Case Study of P Capital Partner's Financing of KatExpress 1

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Abstract

As of 2024, the private debt market has grown to USD 1.7 trillion in assets under management, reflecting a major shift in the financial ecosystem. Not long ago, what was referred to as shadow banking has now established itself as a crucial intermediary between investors searching for a higher yield and borrowers lacking access to traditional bank financing. This thesis explores the past, present, and future of the private debt market by presenting a case study of P Capital Partner's decision to finance KatExpress 1, a high-speed catamaran. By conducting a thorough investigation and applying tailor-made terms, we demonstrate that a nonbankable case can be transformed into a successful investment. In doing so, we aim to bridge the gap between academic theory and practises employed by private debt funds.

Keywords: Private debt, case study, nonbank lending, private debt funds, direct lending

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1. Introduction

Ever since the global financial crisis, bank lending as we knew it has changed, reshaped by lessons learned and written into regulations to ensure it would not happen again. While it was evident that the newly imposed, more stringent regulations would constrain supply, the demand for financing remained, leading to a market imbalance. Limited financing availabilities from traditional banks and a low-interest environment created an opportunity for alternative lenders to step in (Block et al., 2024; Cai & Haque, 2024; Cumming, Fleming & Liu, 2019; Erel & Inozemtsev, 2024; IMF, 2024; Munday et al., 2018). In only two decades, the private debt market has grown from USD 177 billion in 2006 to approximately USD 1.7 trillion in 2023 (PitchBook Data Inc., 2024).

We define the scope of private debt by identifying key market participants and the various strategies and players within its segments. The largest segment of the market consists of private debt funds (IMF, 2024) that focus on direct lending (PitchBook Data Inc., 2024). The majority of this segment, around 80%, can be defined as sponsored lending activity – private debt funds sourcing their deals by financing private equity transactions (Block et al., 2024; IMF, 2024). We find that in general, private debt funds fill the financing gap for borrowers that are too small (Faulkender & Petersen, 2005), highly levered (Block et al., 2024; Chernenko, Erel & Prilmeier, 2022), or without a strong financial track record (Block et al., 2024; IMF, 2024) to obtain financing from banks or public markets. Private debt funds attract investors by generating attractive returns (Block et al., 2024; IMF, 2024; NAIC, 2024; Roy, 2018), largely due to the illiquidity premium (H. Fahlin, October 25, 2024; P. Svensson, November 27, 2024), as well as diversification benefits (Deutsche Bank, 2024; HedgeNordic, 2023; NAIC, 2024; P. Svensson, November 27, 2024).

However, higher returns are always accompanied by higher risks. To examine the tools and mechanisms that private debt funds can use to get comfortable in providing these highly tailored loans in the first place, we employ a case method. We analyse P Capital Partners' decision to extend financing to a high-speed catamaran owned by Incat, an Australian shipyard, back in 2014. The overarching research question that serves as our case problem is formulated as follows: *How can a private debt fund structure a loan to ensure downside protection when lending to a borrower with a weak financial track record?*

1.1. Purpose

The purpose of this thesis is twofold. First, we aim to provide a comprehensive understanding of private credit as an emerging and increasingly important asset class, contributing to the scarce literature on the topic. We discuss the private market development, different market participants and their roles, as well as the opportunities it presents to lenders, borrowers, and investors. Furthermore, we critically examine the potential vulnerabilities of this exponentially growing asset class and discuss the outlook for the market. The second objective is to apply these insights to real-world business case by analysing *P Capital Partners'* decision to finance *KatExpress 1*, a high-speed catamaran. Structured as a case thesis, this work aspires to offer the Department of Finance at the Stockholm School of Economics valuable material that can be developed into a teaching case study. Thereby, hopefully extending the curriculum to include private debt alongside traditional private asset classes, such as private equity.

1.2. Contribution

The academic literature on private debt is limited as it remains a relatively young asset class. Its complexity with many different market participants and inherently private nature further complicates studying this field. Regardless, what was not too long ago referred to as “shadow banking” has now become the second biggest private asset class, surpassed in volume only by private equity. We contribute to the literature gap by an extensive literature review on the topic, to provide a comprehensive overview of private credit. Given the limited availability of aggregate data on private debt, we will instead conduct an in-depth analysis of a single private debt fund and its selected transaction to explore the mechanisms and intricacies of this asset class.

1.3. Outline

The structure of this paper is as follows: section 2 focuses on a literature review and aims to provide an overview of private credit, including the market development, types and strategies in private debt, and associated opportunities and risks. Section 3 outlines the methodology, including data collection and features inherent to case methodology. Afterwards, in section 4 we develop the case background by covering the Nordic private debt market, P Capital Partners, and key stakeholders such as Incat and Mols-Linien. Thereafter, in section 5, we present the case by exploring the financing rationale through extensive commercial due diligence and complement this with financial analysis and suggested deal terms and features that a typical debt fund would apply. In

section 6 we discuss the key findings, including downside protection mechanisms and stakeholder considerations, while Section 7 concludes with reflections and suggestions for future research.

2. Private Credit

The origins of *private credit* (= *private debt*)[1] markets date back to the 1980s when direct lenders, such as insurance companies, started extending loans to financially strong companies (NAIC, 2024). While various nonbanks engage in private credit through direct lending, including asset managers, investment banks, hedge funds, and other financial institutions, the biggest growth in the private credit market today is driven by private debt funds (Erel, Flanagan & Weisbach, 2024). This chapter starts by outlining the overall development of the private credit market and understanding the different participants and types of private debt. Afterwards, we focus primarily on the direct lending segment, more specifically on the private debt funds, providing an extensive literature review to form a thorough background to the case of this paper. We discuss opportunities for different market players, distinguish between participants and their roles, delve into potential vulnerabilities in the market, and conclude the background by exploring the market outlook.

2.1. Market Development

While direct lending has existed in the financial markets for longer, the prominence and growth of private credit accelerated after the global financial crisis, when the resilience of public debt was challenged, and the private credit sector exploited the environment of low interest rates to rapidly expand (Block et al., 2024; IMF, 2024; Munday et al., 2018). Lower interest rates accompanied by increased regulatory requirements on traditional banks caused an increasing market share of lending to shift from banks to private credit (Cai & Haque, 2024; Cumming, Fleming & Liu, 2019; Erel & Inozemtsev, 2024; IMF, 2024; Munday et al., 2018).

Banks' inability to provide sufficient financing for firms led to a decrease in supply, while the demand for financing remained unchanged, causing an imbalance in the market equilibrium. Stricter regulations and the consolidation of market participants further exacerbated the imbalance in credit supply (Roy, 2018). Thus, it created opportunities for alternative lenders, such as private debt funds, to fill the gap in the market. Non-bank entities also stepped in to provide financing

[1] In this paper we define private credit, used interchangeably with private debt, as the asset class containing of financial institutions who are not subject to commercial bank regulations, and who engage in lending to primarily midsize firms. That includes, but is not limited to private debt funds, BDCs, CLOs, insurance companies, investment banks, hedge funds, and other non-traditional financial institutions.

solutions with higher yields, attending to asset managers' and investors' demand for higher risk-adjusted returns (Roy, 2018).

In the past two decades, the global private credit market's assets under management (AUM) have grown from USD 177 billion in 2006 to approximately USD 1.7 trillion in 2023 (See Figure 1) (PitchBook Data Inc., 2024). As it stands, private debt has become the second-biggest private capital asset class, surpassed in volume only by private equity (Block et al., 2024). Further growth is expected and driven by (1) demand for tailored financing, (2) risk-adjusted returns and diversification benefits for investors, (3) the public market favouring mainly big borrowers, and (4) reduced bank credit (BlackRock, 2023). Private debt, initially developed as an alternative, has now become a direct competitor to banks (NAIC, 2024). In 2023, a total of USD 220.8 billion of new private debt capital was raised (See Appendix A, Figure A1 for historical development), of which USD 52.2 billion and USD 158.1 billion are attributable to Europe and North America, respectively (PitchBook Data Inc., 2024).

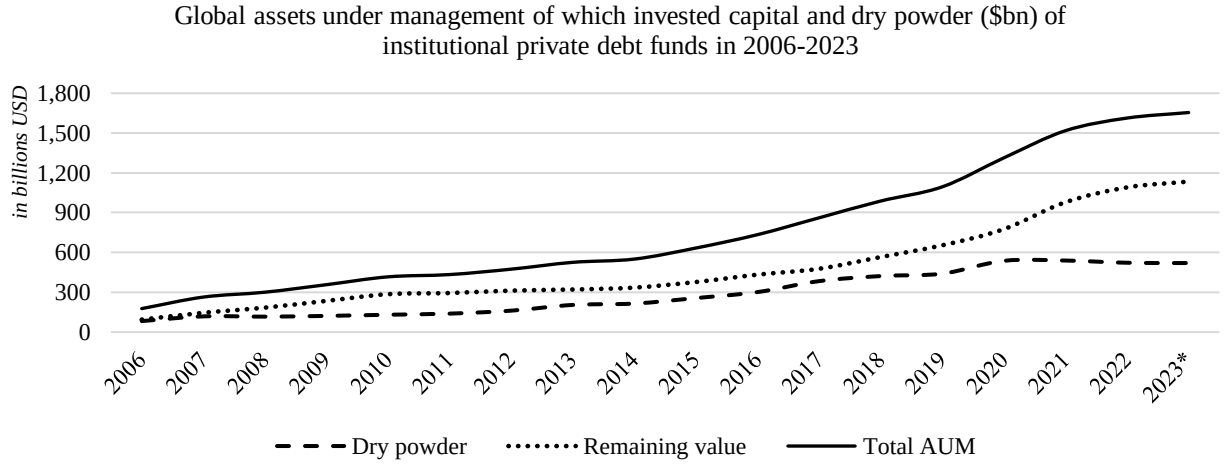


Figure 1. Global assets under management and dry powder ($bn) of institutional private debt funds in 2006-2023. The figure is made by the authors, using data from PitchBook Data Inc. (2024).

2.2. Types and Strategies of Private Credit

Private credit is defined as a non-bank corporate debt or debt-like instrument, typically featuring more customised loan terms due to direct negotiations between the borrower and the lender. As a result, it often imposes higher borrowing costs because of the market being less liquid (NAIC, 2024), and enhanced covenants, but it also offers more flexibility and resources for restructurings, times of distress, or similar problems (IMF, 2024). Defining the private credit landscape is

complicated due to the various structures and underlying strategies employed by different players. Consequently, the expected returns and performance of private credit lenders are somewhat difficult to aggregate, partly explaining the lack of academic research on private credit in general (Munday et al., 2018).

2.2.1. Structure of Private Debt

The overarching structure of private credit market participants can be explained as follows (See Figure 2): long-term institutional ***end investors*** (pension funds, insurance companies, and high-wealth individuals) invest in ***intermediaries*** (Private Debt Funds, Business Development Companies (BDCs), and Collateralised Loan Obligations (CLOs)), to extend loans to ***borrowers*** of mainly small- and medium-sized firms (IMF, 2024), sometimes by employing leverage from banks. Supported by Block et al. (2024), the two most prominent types of intermediaries are private debt funds and collateralised loan obligation funds.

Private debt funds are primarily structured as closed-end funds and account for approximately 81% of the market (IMF, 2024). These funds are similar in their structure to private equity funds, characterised by a limited lifecycle, committed capital and capital calls. In contrast, CLOs are structured as investment instruments instead of funds – securities invested in pools of syndicated loans. Lastly, BDCs refer to typically publicly traded funds, special for the tax-efficient structure, catering mainly to retail investors. CLOs and BDCs contribute approximately 5% and 14% to market allocation, respectively (IMF, 2024).

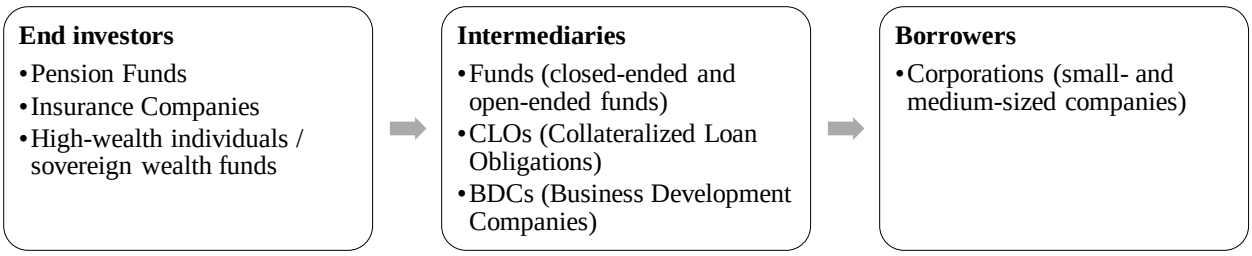


Figure 2. Structure of Private Credit Market Participants. The figure is made by the authors, based on information from IMF (2024).

2.2.2. Private Debt Investment Strategies

The majority of the capital is allocated to debt funds, which we can further categorise into different lending strategies (See Figure 3). BlackRock (2023) divides the main private debt fund strategies as follows: direct lending, distressed, opportunistic, venture, and mezzanine. PitchBook Data Inc. (2024) and Preqin (n.d.) data also suggest including infrastructure and real estate as strategies.

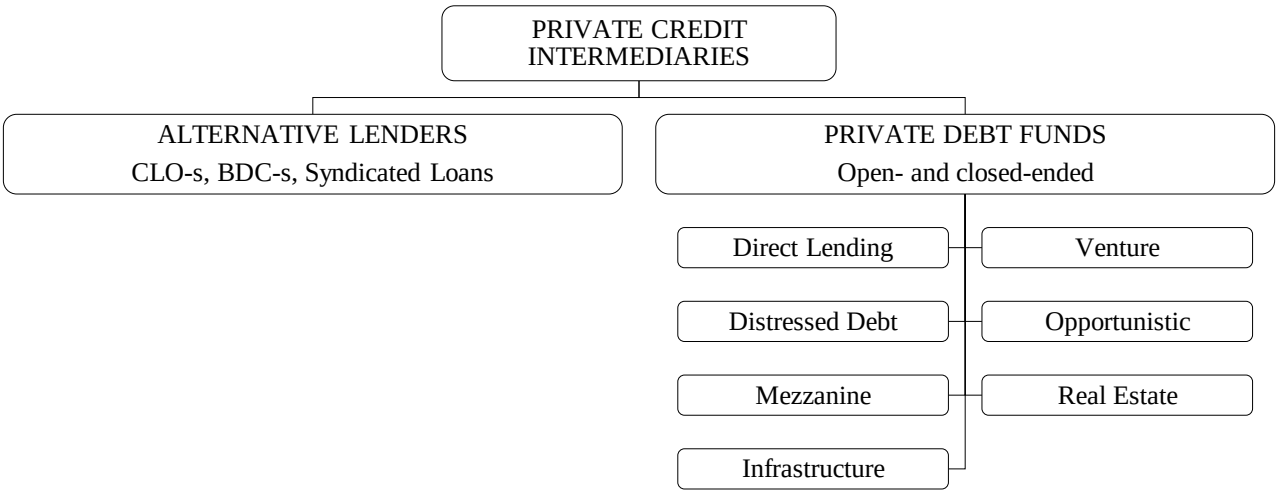


Figure 3. Private credit intermediaries and strategies. The classification and graph are made by the authors using information from BlackRock (2023), PitchBook Data Inc. (2024), and Preqin (n.d.).

The largest segment within these strategies is direct lending, which refers to bilateral loans between companies and nonbank lenders, accounting for approximately one-third of the total fundraising activity for closed-ended funds year-to-date (See Figure 4) (PitchBook Data Inc., 2024). Distressed debt focuses on targeting companies near or in bankruptcy, taking a higher risk to achieve higher returns by improving operational performance (Morgan Stanley, 2024). Special situations cater to non-traditional corporate-driven events, such as spin-offs, mergers & acquisitions, tender offers, or others, and might need a highly customised loan profile (Morgan Stanely, 2024; Preqin, n.d.). Mezzanine refers to a hybrid instrument, subordinated to the senior debt but senior to equity positions (Preqin, n.d.). Venture debt focuses on early-stage or start-up companies that have yet to achieve break-even results (NAIC, 2024).

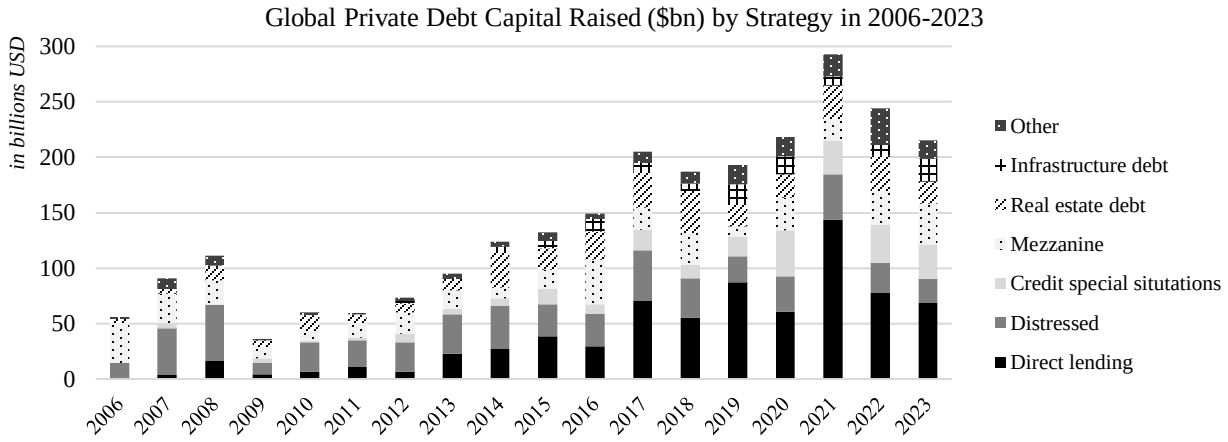


Figure 4. Global Private Debt Capital Raised ($bn) by Strategy in 2006-2023. The graph is made by the authors using data from PitchBook Data Inc. (2024).

2.2.3. Sponsored and Non-Sponsored Financing

Private debt funds' investment activity could be further divided into two strategies – (1) funds that are mainly affiliated with PE sponsors, and (2) those that mainly focus on non-sponsored direct lending. PE sponsors play a big role in both US and European private debt markets by helping private debt lenders in deal sourcing as well as enhancing deal quality and information. PE sponsor dependency is especially prominent in the United States, where 78% of the surveyed GPs have a substantial fraction of their deals coming for PE-sponsored deals. The share of PE-sponsored deals stands at around 40% for European funds. (Block et al., 2024). IMF Global Stability Report (2024) challenges this figure by evaluating the share of sponsored deals in Europe to stand at 77%. Industry participants interviewed for this thesis estimate the figure to be around 75-80%.

Due to a large part of private credit deals being associated with private equity sponsors, the growth in the private debt market is also fuelled by the growth in the private equity market (IMF, 2024). Moreover, private debt is establishing itself as a crucial financing partner for private equity players alongside banks. According to Preqin news, 52% of private equity buyout deals across Europe were financed by private debt, whereas the remaining 48% relied on traditional bank financing (Bennet-Lynch, 2024).

From an investor perspective, both have their advantages and disadvantages. Investing with PE-sponsored funds brings comfort and trust from familiarity, given the maturity of the private equity market. *"The private debt lenders who are targeting the sponsored segment, they have a larger and more frequent deal flow, but it's more competitive and more professional. Private*

equity managers are, I would argue, more difficult to negotiate with. When you go outside the sponsored community, you come up with entrepreneurs – founders that have built fantastic corporations – [that] have very little skill in negotiating against private debt managers. So, you could argue that they are able to create some extra return. But at the same time, they are targeting smaller, less sophisticated, with arguably worse governance corporations, than what the private equity industry does" (P. Svensson, November 27, 2024).

2.3. Opportunities and Benefits of Private Credit

Private debt market growth has been driven by a combination of demand and supply factors, resulting in a unique asset class that shares characteristics with both private equity and other debt instruments. In this section, we focus on the biggest universe within private credit – private debt funds that focus on a direct lending strategy. We explain the mechanisms of these financing intermediaries and explore opportunities this alternative form of financing provides to borrowers. Also, we cover various reasons for investors to allocate their investments to private debt funds.

2.3.1. How Does Private Credit Work?

Closed-end funds are the predominant investment vehicle in the private debt market, accounting for 80% of the market (IMF, 2024). Therefore, our focus is on understanding how these funds operate and manage their financing decisions. Moreover, while there is a plethora of strategies a fund could employ, our primary focus is on direct lending.

Private Debt Funds

Closed-end private debt funds are similar in their structure to private equity funds and are organised as partnerships. Limited Partners (*LPs*), primarily institutional investors, such as pension funds, insurance companies, and high-wealth individuals, commit capital for a fund raised by an asset manager (also *General Partner* or *GPs*) (Block et al., 2024). From that point onward, usually during a five-year investment period, private debt funds issue capital calls to investors. These calls happen after the fund has identified a suitable investment opportunity, which has been approved by an internal credit committee, ensuring it aligns with the fund's investment strategy, risk parameters and that the expected return is sufficient. A typical lifetime of a fund is 10 years, making the investments highly illiquid. Given the investment period and fund lifetime, the average loan duration falls somewhere between 3 to 7 years, which is similar to holding periods in private equity. GPs receive a management fee of around 1.5% to 2% for managing the fund, and usually

also a success fee which is paid at the end of the fund lifecycle and varies around 15%-20% (Böni & Manigart, 2022). According to Block et al. (2024), the management fee is 1%. Private debt funds target gross unlevered IRR around 9.55% and 11.18%, in European and US funds, respectively (Block et al., 2024).

Especially in the United States, deal sourcing is heavily dependent on PE sponsorship (Block et al., 2024). Debt funds affiliated with PE sponsors benefit from receiving at least some pre-existing analysis from sponsors (Ares Management Corporation, 2024; Block et al., 2024; D. Ullenius, November 6, 2024; P. Svensson, November 27, 2024). Regardless of their affiliation with a PE fund or lack thereof, firms invest significant time and resources to evaluate deals by analysing historical cash flows, industry specifics, management team, and the future outlook. Based on the commercial and financial analysis, expected returns are aligned with the fund's general return expectations to proceed with the transaction.

Loan Characteristics

A typical senior direct lending private credit loan is (1) senior in repayment priority, (2) secured by collateral, and (3) has a floating rate and a short tenure, typically around 5-7 years (Ares Management Corporation, 2024). Private debt funds primarily finance senior, often "*unitranche*" loans as they offer lower risk due to having the first repayment priority and strong collateral backing. *Unitranche* more specifically refers to a type of senior debt that bundles senior and subordinated debt into a single loan, replacing the need for a pool of creditors with a single lender (Rothschild & Co, 2024). Less often, the loan is structured as a subordinated or junior debt, which provides a higher expected return but is consequently backed by second-tier collateral and without priority in repayment (Preqin, n.d.).

Typical private debt loans have a floating rate structure, are covenant-heavy, and have numerous tailor-made lending terms (IMF, 2024; NAIC, 2024). Floating rates benefit investors, especially in a high-interest rate environment (NAIC, 2024) but can also make the borrowers more vulnerable to interest rate fluctuations. Furthermore, the terms of lending are significantly higher than for a publicly funded transaction – as high as 400 basis points above the lending rate (Deutsche Bank, 2024).

Since debt investors have a contractually limited upside, they must structure loans strategically to minimise potential losses and protect their downside risk. According to Jang (2024),

direct lenders act a lot like banks regarding the way they structure their loans and monitor the lending by introducing covenants and general undertakings. "*Although private credit loan contracts tend to be more covenant-heavy than their public counterparts, higher creditor control brings the benefit of being able to provide more customised loan terms*" (Degerli & Monin, 2024, para. 7). The customised covenants help to protect the downside of investors of these naturally riskier transactions but also provide greater flexibility in distressed times to minimise defaults and financial distress costs (Denis & Mihov, 2003; IMF, 2024). Alike commercial banks, both maintenance and incurrence covenants are utilised to monitor loan performance.

Maintenance covenants refer to a set of requirements or financial tests that borrowers have to continuously adhere to throughout the loan term and thus can be seen as the stricter of the two. Typical maintenance covenants focus on metrics related to a borrower's ability to service debt, such as EBITDA and interest coverage ratios, or on debt-level metrics, such as Loan-to-Value (LTV) and Debt-to-Equity ratios (Ares Management Corporation, 2024). Incurrence covenants are only relevant upon a specific, pre-defined event – for example, upon an issuance of new debt. Maintenance covenants are more prevalent in the context of private direct lending, as they serve as efficient tools to provide lenders with early notice if a borrower's financial condition deteriorates (Nesbitt, 2014). If a covenant is breached, lenders can impose additional requirements, such as ensuring continuous communication with borrowers and requesting additional securities (H. Mühlhofer, November 13, 2024; Jang, 2024).

Other risk control mechanisms are earnings definitions, base rate floors, and non-call features to limit early repayment risk (Ares Management Corporation, 2024). Thus, while private debt funds share a lot of similar characteristics to private equity funds due to the structuring of the funds, the financing instruments are inherently different. "*Direct lenders can tailor-make their documentation, and they have all these covenants and security packages – they can actually take the company from the borrowers if they need to. So, debt and equity – sometimes people compare them, but you should never forget that they are two very distinct and different asset classes"* (P. Svensson, November 27, 2024).

Historical Performance

The private debt market has shown one of the highest gross returns over the last two decades in comparison to debt markets as well as other asset classes, such as private equity and public

equity markets (IMF, 2024). According to Morgan Stanley's analysis (2024), direct lending yielded an average return of 11.6% from 2008 to 2023 compared to 5% for leveraged loans and 6.8% for high-yield bonds. Regarding target IRR-s for the private debt funds, Block et al. (2024) report a gross levered return for European funds of around 9.6% and for American funds of approximately 11.2%. These returns also vary across strategies due to differing in risk profiles and levels of volatility (See Figure 5).

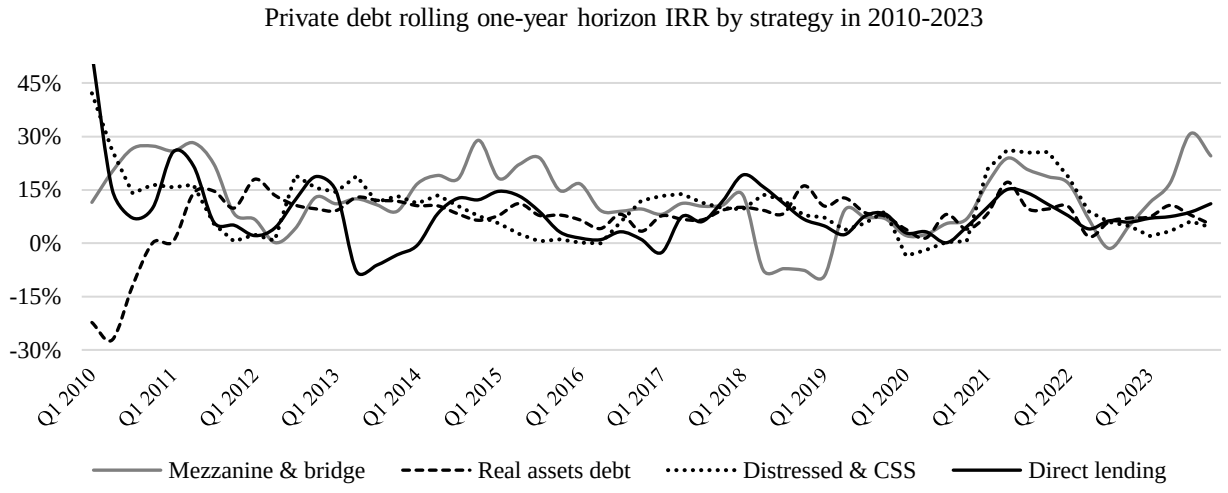


Figure 5. Rolling one-year horizon IRR-s of debt funds by different strategies in 2010-2023. The graph is made by the authors using data from PitchBook Data Inc. (2024).

While the private debt market is too young to yet truly capture its resilience to economic downturns, we can observe its persistent returns over the last two decades, while the bond market has been more cyclical (See Figure 6). During COVID-19, while the high-yield bond market as well as leveraged loans experienced significant drops in performance, private credit remained more stable (IMF, 2024). Nevertheless, the evidence remains inconclusive and only a significant market downturn will fully reveal the resilience of the private debt market.

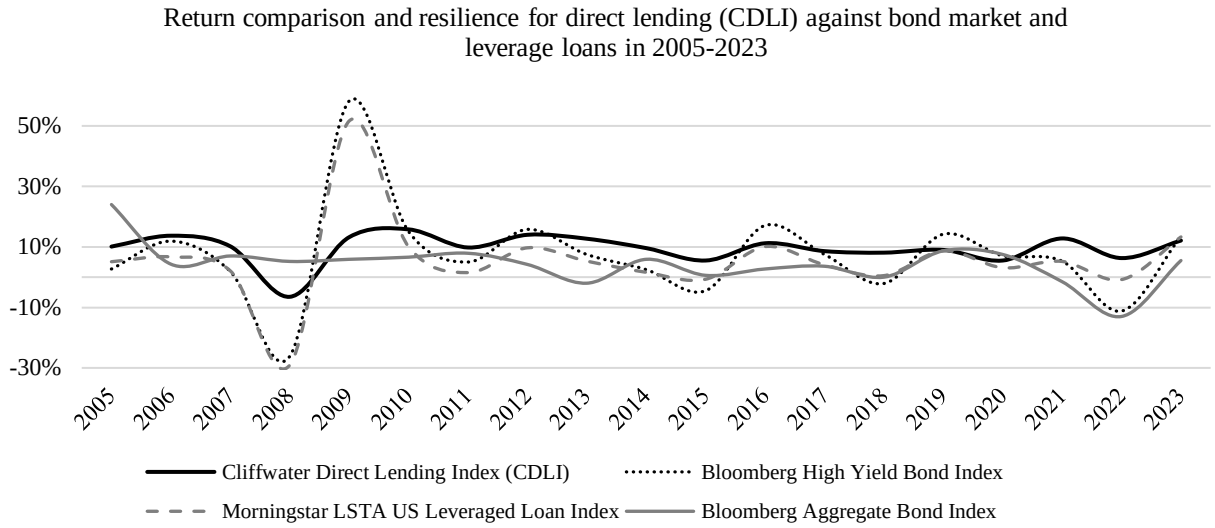


Figure 6. Return comparison for direct lending, represented by Cliffwater Direct Lending Index (CDLI) against other debt instruments. The graph is made by the authors using data from the Ares Management Corporation report (2024), which references Cliffwater as a source of data.

Per Svensson (November 27, 2024) notes that overall, 2021-2024 have been strong years for private debt, driven by high interest rates pushing up the cash margins. Nevertheless, there has also been an increase in default rates, probably to some extent driven by private equity managers and other corporations using too much leverage. In general, the private debt market is attractive due to it experiencing historically low default rates (Cai & Haque, 2024; IMF, 2024; Morgan Stanley, 2024). European Investment Bank (2024) states that over the reporting period of 1994-2023, the default rate has been 3.56%. It must be noted that these statistics must be critically assessed because, in the direct lending market, technical defaults may not appear in reported statistics as they are typically resolved internally by fund managers (P. Svensson, November 27, 2024). The inherent opacity of the private debt market makes it challenging to aggregate and compare performance data across funds.

2.3.2. Opportunities for Borrowers

The primary beneficiaries of private debt are small and medium-sized enterprises (SMEs) that lack access to banks and public debt markets (Faulkender & Petersen, 2005) and are highly leveraged (Chernenko, Erel & Prilmeier, 2022). Thus, they depend on obtaining debt from lenders who conduct thorough screening and monitoring (Cumming, Fleming & Liu, 2019; Diamond, 1991). Due to increased regulations and stricter lending rules, firms with negative EBITDA, lack of recent profitable financial track record, or high leverage, characterised by high Debt-to-EBITDA ratios

could be deemed nonbankable (Block et al., 2024; Chernenko, Erel & Prilmeier, 2022; Erel & Inozemtsev, 2024; IMF, 2024). As lending to firms with higher risk profiles is too costly for banks, such firms are better positioned to receive financing from alternative non-bank lenders. High leverage could also be driven by private equity sponsors leveraging their reputation to boost returns for their investors by increasing the debt on the balance sheet of their portfolio companies (Haque, 2023; Malenko & Malenko, 2015). Achieving high PE returns through leverage means these returns are driven by higher risk. Securing additional bank financing may be challenging, making such cases well-suited for private debt funds focusing on sponsored deals with a higher risk appetite (Chernenko, Erel, & Prilmeier, 2022; IMF, 2024).

In many cases, private debt serves as an alternative to traditional bank loans, but it also competes with public debt for financing. Correspondingly, a firm might opt for private when alternative loan instruments, such as corporate bonds and public debt, are unavailable due to the company being too small to meet public debt issuance requirements (Block et al., 2024). For that exact reason, a large part of the private debt market is focused on small- and medium-sized enterprises. However, it could also be a conscious decision of a company to avoid costs and disclosure of public debt and receive private debt funding comparable to syndicated loans or bonds (IMF, 2024). Denis & Mihov (2003) highlight the importance of information asymmetry and the resulting agency costs in the choice between public and private debt. They argue that higher-quality firms with lower information symmetry would opt for public debt with lower associated costs. Whereas low-quality firms with a high degree of information symmetry are more likely to seek private debt, as they could benefit from closer monitoring and tailored loan terms.

The third alternative source of capital for firms in need of financing is private equity. Generally, debt funding is considered a more favourable option than equity due to its non-dilutive nature and lower cost of capital. While much of the research focuses on the opportunities created by private debt providers to companies without a strong financial track record, there are other benefits to choosing private debt. For example, family-owned or entrepreneur-led companies may prefer private debt over private equity despite private equity being known to back established businesses. Mature companies with strong financials could also choose to turn to non-bank lenders instead of banks due to more tailored loan offerings (NAIC, 2024), ranging from junior to senior-secured instruments (Haque & Kleymenova, 2023), or the execution speed due to less stringent operations (H. Fahlin, October 25, 2024; IMF, 2024).

2.3.3. Attraction to Investors

A white paper by Ares (2018), a leading global alternative investment manager, highlights that the most attractive characteristics for investors in direct lending are floating rates, high yields, and stable income flows with relatively low volatility. Academia highlights the overperforming unlevered gross returns as the dominant reason LPs invest in private debt funds (Block et al., 2024; IMF, 2024; NAIC, 2024; Roy, 2018). In addition, these returns are generated with lower levels of leverage compared to banks or CLOs, reducing the overall investment risk, and ultimately leading to superior risk-adjusted returns. Together with greater expected resilience for market downturns (Cumming, Fleming & Liu, 2019; IMF, 2024), private debt funds end up attracting limited partners such as pension funds, insurance companies, and other institutional investors.

A key driver for the overperforming returns is the illiquidity premium – similar to private equity, investors receive an extra return to compensate for the illiquidity of their investment into private assets (H. Fahlin, October 25, 2024; P. Svensson, November 27, 2024). Private debt firms can also introduce market efficiency through customised solutions. In the PE-sponsored segment, fast, efficient, and tailored financing is highly valued, with speed over bank loans increasing private equity firms' willingness to pay a premium (H. Fahlin, October 25, 2024). The illiquidity premium serves investors with long-term investment horizons, such as pension funds and insurance companies. Asset managers are good at matching these maturities, hence, the liquidity and maturity transformation risks introduced by the relatively long lock-up period are not seen as disadvantages in such cases, as they allow investors to reap the premium (H. Mühlhofer, November 13, 2024; IMF, 2024). Moreover, predictable and stable income over a longer period can be seen as an advantage over other asset classes (Erel, Flanagan & Weisbach, 2024).

From an LP perspective, another important aspect to consider is the correlation between different asset classes and investments. The private debt market is relatively uncorrelated with the public equity market (Deutsche Bank, 2024; P. Svensson, November 27, 2024). Moreover, due to the floating rate structure, private debt investments are uncorrelated with interest movements, resulting in no duration risk exposure, unlike in fixed-income investments (P. Svensson, November 27, 2024). Adding private debt into the portfolio alongside private equity and public credit will also potentially reduce overall portfolio correlation through diversification (H. Fahlin, October 25,

2024; HedgeNordic, 2023; NAIC, 2024). The risk in private debt is lower than in private equity, also helping to reduce portfolio volatility (P. Svensson, November 27, 2024).

However, within private assets, it might be essential to also diversify across vintages to lessen exposure to market timing risks. That is due to the overall correlation between these markets. Private debt is inherently linked to private equity cycles, as approximately 80% of transactions are PE-sponsored. As a result, private debt is naturally correlated with private equity. Additionally, private debt and public credit share a base level of correlation due to overall credit risk. Since public credit and equity risks are also interlinked, private debt, as a private credit asset, will inevitably reflect some correlation with both (H. Fahlin, October 25, 2024; Swedish House of Finance, 2014).

However, it is worth emphasising the fundamental difference between debt and equity and their resilience in economic cycles, such as the high-interest rate environment, which tends to slow down PE deal activity. *"As much as very low interest rates benefit equity owners, high interest rates are working in the opposite direction – […] benefiting the direct lenders. But [only] as long as the whole equation doesn't fall apart, i.e. corporations going into bankruptcy [due to high interest costs]"* (P. Svensson, November 27, 2024). Nonetheless, the growing market for non-sponsored deals is generally seen as a positive development, providing exposure to non-private equity-linked private assets (P. Svensson, November 27, 2024).

There has however been some lag for widespread investments – while the attractiveness of the asset class is somewhat obvious, it has taken time to amend the investment rules to allow investments. There has been and still is a need to increase the preparedness to invest by closing the knowledge gaps and building relevant competencies as an investor. That means both implementing and increasing the pockets or mandates of institutional investors to invest in the first place, as well as building internal competencies to properly assess the risks and features of the asset class (H. Fahlin, October 25, 2024; Swedish House of Finance, 2014).

2.4. Vulnerabilities and Risks of Private Credit

Since the global financial crisis, the origination and funding of credit to corporations have increasingly shifted from relatively transparent public markets and regulated banks to non-transparent, less-regulated credit firms (IMF, 2024). The significant growth of the private debt market over the past 20 years amplifies potential financial vulnerabilities. The surge of the asset

class, as exemplified by Ares Management raising $34 billion, including a significant amount of bank leverage, for its latest private credit fund (Platt, 2024), positions private credit to compete with banks for larger deals and challenge other credit markets, such as the public bond market, in size (IMF, 2024). More competition could lead to lower returns and related terms (Block et al., 2024), which may increase default rates (IMF, 2024). Moreover, the inclusion of bank leverage further complicates the value chain, increasing interconnectedness that is sometimes apparent and at other times hidden. While private credit performed well compared to syndicated loans and public bonds during COVID-19 (IMF, 2024), it has not yet experienced a significant downturn in its current size. Consequently, it is reasonable to highlight the potential vulnerabilities and risks that the asset class poses.

2.4.1. Growth of Nonbank Lending & Increased Competition

Increased regulation of commercial banks following the global financial crisis has incentivised nonbanks to expand their participation in credit markets, raising concerns about financial stability (Erel & Inozemtsev, 2024). These concerns increase with the sector's growth, suggesting fragility could emerge if the nonbanking sector grows too large (Luck & Schempp, 2014). Additionally, an increase in nonbanks complicates the credit intermediation process. Nonbanks add more steps to the process, making it harder for market participants to understand their counterparty risk (Greenwood & Scharfstein, 2013). The nonbank sector has grown significantly and shows no sign of slowing down (McKinsey & Company, 2024a). As an example, some private credit funds have outgrown the mid-market segment to now compete with syndicated loans and bonds for much larger deals (Financial Times, 2024; Goldman Sachs, 2024; IMF, 2024). Increased competition is a concern for some American and European investors, suggesting that more competition could lead to lower returns and softer terms (Block et al., 2024).

In some cases, non-banks still collaborate with banks to utilise their loan-origination services (PitchBook, 2023). However, an increasing share of loans are direct and self-originated without the involvement of banks (Bain, 2024; Chernenko et al., 2022; Loumioti, 2022). Irani et al. (2021) show that nonbank lenders with fragile liabilities are less likely to roll over loans and experience higher price volatility. However, loans originated by nonbanks have a more flexible structure, partly explained by not having to comply with bank regulations (Chernenko et al., 2022; Loumioti, 2022). Block et al. (2024) support these findings by demonstrating that a majority of

U.S. and European private debt investors choose private debt over bank debt partly due to its more flexible covenant structure. However, the evidence on the matter is inconclusive as Jang (2024) does not find evidence that direct lenders use covenants any less than banks do. In addition, Block et al. (2024) highlight a concern among private debt fund managers regarding their perceived low bargaining power in enforcing covenant rights in private equity sponsored deals, which arises from their high dependence on the sponsor for future deal origination. A deterioration in pricing and non-pricing terms could potentially increase default rates and require careful monitoring (IMF, 2024).

2.4.2. Borrowers

Private credit borrowers are SMEs, usually with weaker earnings and higher leverage ratios that lack access to banks and public markets (Carey, Post & Sharpe, 1998; Chernenko et al., 2022). Refer to Chapter 2.3.2. for more information on borrower characteristics. A higher leverage level could also be driven by private equity sponsors (Haque, 2023; Malenko & Malenko, 2015). Demiroglu & James (2010) find that private equity sponsors and lenders build relationships through repeated transactions. Additionally, to preserve the relationship with sponsors, lenders often expect sponsor equity injections, ensuring borrower safety in periods of distress (Jang, 2024). In contrast, Aldasoro, Doerr & Zhou (2023) explain how relationships with private credit lenders do not enhance borrowers' access to financing in times of crisis, potentially resulting in a transition from relationship-based lending to transaction-focused lending, thereby worsening the effects of financial shocks. Since loans have primarily floating rates, these borrowers are vulnerable to interest rate shocks, particularly in a stagflation scenario (IMF, 2024).

To mitigate the overall higher risk profile of their borrowers, lenders can implement a wide range of strategies which are discussed in Chapter 2.3.1. In times of distress, direct lenders appear to be more flexible by deferring more amortisation and interest payments, while experiencing fewer restructurings and bankruptcies (Jang, 2024). The finding aligns with comments made by Helmut Mühlhofer and David Ullenius, highlighting a willingness to negotiate with borrowers in the event of a potential covenant breach (D. Ullenius, November 6, 2024; H. Mühlhofer, November 13, 2024). The flexibility of direct lenders could help borrowers in the short term but may amplify losses if a firm's deteriorating performance cannot be reversed (IMF, 2024).

2.4.3. Valuations

Due to their illiquid nature and lack of secondary markets, valuing private credit assets presents significant challenges. Additionally, loans are often customised to meet the financing needs of the borrower, making it difficult to compare transactions (IMF, 2024). In the absence of clear market prices, firms use their own models based on internal assumptions, which increases uncertainty and may heighten the risk of managerial manipulation (Ball, 2006; Dudycz & Praźników 2020; IOSCO, 2023). To mitigate these risks, firms use third-party valuation firms for independent asset valuation services (IMF, 2024). However, the risks might not be fully mitigated as these valuation firms work on behalf of their asset manager clients and, thus, may value client retention over impartiality (Efing & Hau, 2015; Short & Toffel, 2016). In addition, there is a time lag associated with these valuations, typically conducted quarterly but may occur as infrequently as annually (IOSCO, 2023). Despite valuing assets as frequently as quarterly, there have been instances where assets have been written down significantly in just one quarter (P. Svensson, November 27, 2024).

Comparing price movements of BDCs with high-yield bonds and leveraged loans, IMF (2024) shows evidence that private credit prices experience less volatility than those in high-yield and leveraged-loan markets. Additionally, examining the reaction to credit shocks, IMF (2024) finds that despite the lower credit quality of their loan portfolios, the price reaction of BDC loans is significantly smaller than that of B-rated leveraged loans. Analysing bond mutual funds, Choi et al. (2022) show that stale valuations present a first-mover advantage where long-term investors are at risk of dilution. However, private credit funds with their closed-end structure are protected from this issue as they have strong defence mechanisms in place to prevent investors from withdrawing their investments (IOSCO, 2023).

2.4.4. Interconnectedness

The global financial crisis revealed how an increase in subprime mortgage defaults spiralled into an interconnected financial system, ultimately causing a world-wide crisis (Gorton & Metick, 2012). Since then, nonbank lending has significantly increased, shifting credit risk out of the traditional banking sector (Chernenko et al., 2022; Loumioti, 2022). This is a shift from the more transparent, regulated banking sector into the less regulated, opaque world of private credit, a realm that still has its evident and subtler ties to different financial institutions. With investors,

funds and borrowers all using leverage, spillover risks because of interconnectedness could be further exacerbated by multiple layers of leverage throughout the value chain (IMF, 2024).

One example is private debt funds, which interconnect with private equity through two main channels (IMF, 2024). First, IMF (2024) shows that approximately 42% of firms and 81% of the capital in firms that manage private debt funds also manage private equity funds. Second, examining 702 European private debt deals from September 2023 to August 2024, Deloitte (2024) finds that approximately 86% of deals were made with a private equity sponsor-backed firm. However, these interconnections can also prove beneficial. In a survey of private debt funds, investors value sponsored deals for providing access to more and higher-quality deals and reduced information costs (Block et al., 2024). Furthermore, Jang (2024), provides evidence that in times of distress, private equity sponsors inject equity in a larger share of deals led by direct lenders (40%) compared to deals led by banks (23%). Additionally, the equity injection made direct lenders more likely to extend additional loans to the sponsor in the future (Jang, 2024). Lastly, private equity-backed firms benefit from larger equity injections during financial distress compared to similar non-sponsored companies (Haque, 2023).

Banks are often a source of financing for nonbanks, creating interconnections between the two (Erel & Inozemtsev, 2024). By providing leverage, banks gain exposure to private debt funds, a practice more common in the USA than in Europe. According to Block et al. (2024) 95% of American funds surveyed reported using leverage, with an average leverage level of 40% of capital. In contrast, 67% of European funds do not use leverage, with an average of 11% of capital. The argument is supported by Anders Thelin, head of the credit committee at PCP, who stated during a recent Centre for Economic Policy Research panel discussion on private debt that PCP does not use leverage at the fund level, simply because their investors do not want it (SAFE-CEPR, 2024). If private debt funds use leverage, they may be subject to rollover risks. One of the primary sources of leverage at the private debt fund level is banks, which frequently impose loan-to-value covenants. Consequently, leveraged private debt funds could encounter collateral calls during times of stress (IMF, 2024). Banks are also exposed to BDCs, which can borrow with their undrawn committed capital as security (Ballock & Gonzalez-Uribe, 2021). However, BDCs are regulated, and thus required to maintain an asset coverage ratio of 150% (LSTA, 2024), likely a result of the majority of their investors being retail investors. Per Svensson (November 27, 2024) highlights the risks associated with retail investors increasing their exposure to private debt,

suggesting that they lack the long-term resilience of institutional investors. As a result, they could be financially hurt by not being able to withdraw capital.

Nevertheless, banks' direct exposure to private credit remains low. Surveying 32 global banks actively engaged in private credit, Moodys (2024) finds that private credit loan commitments accounted for an average of 3.8% of total loans of USD 525 billion in 2023. Allocations to private debt funds made up 18% of total private credit commitments. Banks' direct exposure to private credit is currently assessed as contained (IMF, 2024). Nevertheless, bank exposure to private credit is growing significantly. Among the surveyed banks, exposure increased at an average annual growth rate of 18% between 2021 and 2023 (Moodys, 2024). The growing size of the nonbanking sector and its interconnectedness with banks may increase the risk of a crisis in the nonbanking sector spilling over into the traditional banking system, potentially triggering a systemwide crisis (Luck & Schempp, 2014).

Pension funds and insurance companies have also increased their investment in private debt. However, exposure is still rather low for the majority of institutions, accounting for a small single-digit percentage of total assets under management (IMF, 2024). Pension funds and insurance companies invest in other illiquid assets such as real estate and private equity. Moreover, in both private debt and private equity, investors need to have liquidity ready to meet capital calls and provide funds within a short timeframe. An increase in the share of illiquid assets raises concerns about potential market disruptions, particularly if engaging in derivatives and other forms of leverage (IMF, 2024). To mitigate the risk of a forced fire-sale scenario, these institutions must comply with investment rules that limit investments in illiquid assets (Finansdepartementet, 2000), essentially making private debt compete with private equity and real assets for allocation.

2.5. Outlook of the Market

Despite significant growth since the global financial crisis, private debt as an asset class is expected to continue growing. Preqin (2023a) projects an IRR of 12% from 2023 to 2029, an increase from 8.1% between 2017 and 2023, with total private debt assets under management to reach USD 2.6 trillion by 2029. In consensus, 43% of over 300 global LPs surveyed indicated that they expect to increase their allocation to private debt over the next three years, compared to 22% who anticipate decreasing their allocation (McKinsey & Company, 2024a). Moreover, General Partners of private debt funds appear optimistic about the continued outlook for the asset class. In September 2021,

European investors rated the long-term outlook for private debt at 8.30 and American investors rated it at 8.24, both on a ten-point scale (Block et al., 2024).

While still heavily concentrated in America and Europe, private debt is experiencing significant growth in other regions, including Asia and Saudi Arabia (IMF, 2024; Preqin 2024). The current constraint for growth appears to be investor demand. *"Some investors are fully allocated and if the market grows [further], there will be a lack of institutional investors [...] you see various new initiatives where private capital managers go to retail markets"* (P. Svensson, November 27, 2024). Initiatives targeting retail investors, such as the European Long Term Investment Fund (ELTIF) have been introduced (ALFI, 2023). ELTIFs are generally closed-end funds, which could pose challenges if unsophisticated retail investors do not fully understand the product.

With several positive projections for assets under management, the industry consensus suggests that private credit is here to stay (Lynam, 2023; McKinsey & Company, 2024b; Morgan Stanley, 2024) *"Once the product is there, it doesn't go away just because the environment has changed. I think a lot of the investors appreciate the fact that there is one additional element of diversification which does not correlate directly with the stock market for example, or the bond market"* (H. Mühlhofer, November 13, 2024).

Looking more specifically at private debt funds, a clear trend emerges where the ten largest funds are capturing an increasing share of aggregate capital raised. Preqin (2023b) reports that during the first nine months of 2023, 51% of the capital raised came from the ten largest funds, up from 35% in 2022. While funds ranked 11 to 50 have maintained their share of aggregate capital, those outside the top 50 have seen their share decline from 24% in 2022 to only 9% in the first nine months of 2023. Although the private debt market is still in its early stages, large established funds have significant advantages when raising subsequent funds. In addition, they are more likely to succeed in raising a subsequent fund with a different investment strategy than an entirely new fund without a track record attempting to raise capital. *"When private debt reaches steady state, [the pension funds] will try to keep the number of GPs down and rather be invested with more funds with each GP, and the rationale for that is that it is costly to monitor GPs"* (H. Fahlin, October 25, 2024).

Costly due diligence is highlighted as one of the key reasons, along with historical track records and an anchoring bias in favour of existing managers. *"There is a [investor] bias toward being anchored with existing managers [...] – investing with a new manager is ten times as much work [...] as long as someone is not completely making a fool out of themselves, they have a really good head start by just approaching existing investors"* (P. Svensson, November 27, 2024). Consequently, capital is consolidating among larger, established players at the expense of new entrants. *"The institutional market for alternative investments [...] has matured and become very competitive in the sense that LPs expect all managers to be able to provide very granular information of their portfolios [...] and access to the GP itself. This has also created a demand from the LPs whereby they prefer to invest with large GPs who has more than one strategy [...] who could sort of offer them a menu of investment strategies and funds so that they don't have to adopt to you know 50 GP's with different sorts of systems [...] because it's as with any developed financial market it's a scaling game and the more you have to tailor for every GP, it creates a lot of cost for the LP's"* (D. Ullenius, November 12, 2024).

3. Methodology

3.1. Empirical Methodology

This thesis aims to provide a comprehensive academic and commercial analysis of a selected business case. The case method is a valuable tool in qualitative research, bridging theoretical concepts and their real-world applications in decision-making (Nije & Asimiran, 2014). While Yin (2003) acknowledges criticisms of case studies, such as their perceived lack of rigour compared to methods like experiments or surveys and their limited generalisability, we conducted a thorough literature review to mitigate these concerns and to deepen our understanding of the private debt field, potentially extending beyond our primary scope of private debt funds. This will help us with the more specific methods described in 3.3. to validate the research. Yin (2003) also highlights the distinction between case study research and case study teaching. Case study research is a systematic approach that aims to report findings objectively and comprehensively. In contrast, a teaching case can be purposefully written from a specific perspective to emphasise a single point more effectively (Yin, 2023).

Herreid (2011) argues that from a pedagogical perspective, the content of a case thesis is designed to offer sufficient information for developing a teaching case that could be used in the context of academia. The case study method can be traced back a hundred years ago when this teaching approach started being used at Harvard Business School by professors who were initiating a dialogue between students on a specific business problem. Today, the use of case studies for teaching is common practice, especially in subjects like law, business, and public policy (Herreid, 2011).

3.2. Data Collection

The main source of our data collection is interviews with both case-related, dependent parties, as well as other independent individuals with extensive market experience. Dependent parties refer to employees of P Capital Partners without whose contribution this case thesis would not be possible. We conducted interviews with David Ullenius and Ulf Hamberg, who were the main parties in executing the transaction of the case study in question back in 2014. Moreover, we held more general interviews with Philipp Probst to understand the investment strategy of PCP and explore the development of the private debt market in the Nordics. In addition to the company employees, we aimed to gather insights from external limited partners to both understand their

opinions on private debt from the investors' perspective as well as learn about their views on market development and the market outlook.

All interviews (See Table 1) were carried out in person (with one exception for Allianz, which is headquartered in Germany) during October and November 2024 in Stockholm and organised in a semi-structured manner, where the interviewees were encouraged to talk freely while guided by the questions we had prepared beforehand. While it was important to cover case-relevant topics and details, a more relaxed setting yielded insights into matters or considerations we did not know to cover before delving into this process. The interviews were recorded for the use of documenting accurate potential quotes to enrich the case, and to enable full focus on engaging in a meaningful discussion with interviewees without missing out on any details. Given that the interpretation of the interviews is somewhat subjective, relistening allowed us to go back to the interviewees with clarifying follow-up questions to ensure accuracy.

Table 1. Interviewees.

Interviewee	Company	Role	Dependence	Date
Philipp Probst	P Capital Partners	Investment Manager	Dependent	09.10.2024 18.10.2024 26.11.2024
Ulf Hamberg	P Capital Partners	Managing Director, Credit Committee	Dependent	29.10.2024
David Ullenius	P Capital Partners	CIO & Managing Director, Credit Committee	Dependent	06.11.2024 12.11.2024
Per Svensson	AP4	Senior Portfolio Manager in Alternative Investments	Dependent*	27.11.2024
Hans Fahlin	AP2	Chief Investment Officer 2010-2022	Independent	25.10.2024
Helmut Mühlhofer	Allianz Real Estate Gmbh	Head of Debt and Capital Markets 2008-2021	Independent	13.11.2024

**AP4 has invested (and remains as an investor as of date) in PCP funds since PCP I.*

In addition to interviews, we employ data and information collected from both public and private sources by having been granted access to selected internal materials by P Capital Partners. This access to internally used commercial analyses provided valuable insights into PCP operations, helped us prepare for interviews and guided us in formulating our research scope. Confidential materials will not be published in their original version but are restrictedly described when applicable. The deal terms of the transaction and financial analysis is entirely based on publicly available information and the use of market statistics for formulating the assumptions. For external

materials, we use financial reports, press releases, and media issuances about case parties available on the Internet. A lot of market information is attributable to primers published by major asset managers.

3.3. Research Quality and Validity

Methodology plays a crucial role in research papers. Qualitative research, especially the case study method is often criticised due to the analysis being dependent on multiple factors, as explained by Quintão, Andrade & Almeida (2020). For example, the outcome of an interview is naturally affected by the interaction between participants, particularly important in semi-structured interviews, where the level of information revealed can be highly volatile and depends on the proactivity of both the interviewee and the interviewer. Moreover, while clarifying questions are asked both during the interview and in some cases as a follow-up by reaching out by email, the interpretation of the interview content is somewhat subjective. Lastly, the accuracy of details might be affected by the interviewees' ability to remember events, particularly those associated with the transaction that occurred more than ten years ago.

To address these issues related to data validity, Quintão, Andrade & Almeida (2020) suggest the following key methods to be employed. First, triangulation of data, meaning using multiple data sources to ensure higher credibility of data. Second, the research should be well-structured, consistent, and thoroughly documented. Third, the findings should be reviewed with the participants to ensure accuracy and validate interpretations. Yin (2013) adds that researchers should always consider rival explanations to rule out results being retrieved by question framing or dependence on one source. Finally, Yin (2013) addresses the common critique regarding the generalisation of results by arguing that by adhering to methodological guidelines, case studies can effectively contribute to generalisable knowledge through theoretical application, even if their level of generalisability does not match that of random sampling.

4. Case Background

The following chapter is divided into four sections. First, we describe the private debt market in the Nordics and how P Capital Partners, our case company, positions in it. Afterwards, we provide a more in-depth introduction and overview of the history, structure, and investments' overview of PCP. In addition, we describe the owner of the financeable asset (Incat), and the ferry operator (Mols-Linien A/S), who will be the stakeholders in the investment analysis.

4.1. Private Debt in the Nordics

"In Europe, the Nordic region is probably the most exciting organic growth opportunity," says Michael Massarano, a partner at Arcmont Asset Management in Private Debt Investor's regional guide (Coe Smith, 2024, para. 2). According to Deloitte's Private Debt Deal Tracker as of Autumn 2024, Sweden is the primary driver of growth in the Nordics, accounting for as many deals as Norway, Denmark, and Finland combined. Since the inception of the deal tracker, over the last 47 quarters or almost 12 years, the country statistics stand as follows: Sweden with 190 deals, Denmark with 87, Norway with 67, followed by Finland with 30 deals (Deloitte, 2024).

Although the private debt market was underdeveloped also in the United States, there had always been an active market for securitisation; meanwhile, in Europe, the private debt market was essentially non-existent until after the global financial crisis (H. Mühlhofer, November 13, 2024). Thus, the main evolution of the private debt market in Nordics is driven by the same phenomenon as globally. The global financial crisis, accompanied by stricter regulations on financial institutions, institutional investors' "search for yield", and a supply-demand imbalance, opened up market space for alternative lenders. *"Investors were demanding more instruments with not full equity risk to get more returns, and at the same time, borrowers were looking for new lenders because the banks were being constrained by regulations"* (H. Fahlin, October 25, 2024).

Since 2010, there has been strong growth in the market, and increasing adoption of these investment opportunities by all market participants. Despite the attractiveness of private debt as a new asset class, raising initial funds was challenging due to limited market familiarity and investor hesitancy or lack of relevant mandates. Raising the first funds without being able to showcase historical fund performance, required significant reliance on personal relationships and alternative investment track records to demonstrate the capabilities of the asset manager (D. Ullenius, November 12, 2024). For example, AP4 has been invested in P Capital Partners since the first fund,

PCP I, which was raised as Proventus' first private debt-focused external fund in 2009. Although there was no fund-level track record, by that time, Proventus had been providing bilateral loans from their own balance sheet for around five years or more, providing trust and history for AP4 to invest (P. Svensson, November 27, 2024).

Over time, regulatory changes have increasingly facilitated institutional participation in the market. Per Svensson refers to the importance of AIFMD (Alternative Investment Fund Managers Directive) regulations implementation, in Sweden enforced in 2013 (Finansinspektionen, n.d.). *"In essence, that was a way to try and regulate what had been an unregulated market space, often referred to as shadow-banking. Today, [the term] shadow-banking no one really uses; it is private debt or private credit*" (Per Svensson, 30.11.2024). For instance, Swedish national pension buffer funds, AP1-AP4, bypassed a new regulation in 2020, which allows investment focus into private debt (HedgeNordic, 2023). *"It wasn't until 2020, that we could do private debt in the classic private equity format – indirect credit exposure in a fund. Up until that, we did some structuring, so everything we did was in a listed format"* (P. Svensson, November 27, 2024). In addition to introducing relevant legislation to start investing in a new asset class, it takes time to build up internal competencies regarding a proper understanding of different strategies and assessment of the credibility of newly arisen investment opportunities (H. Fahlin, October 25, 2024).

Kreditfonden's Head of Investments and PM, Fredrik Sjöstrand, highlights that the Nordic market has a lot of characteristics that position it favourably for further growth. He claims that "*Generally speaking, Swedish companies are well-managed with defined control functions, known legal framework, and a high level of transparency. This should not be underestimated as it facilitates lending processes considerably and makes a solid foundation for good relationships with the lenders*" (Furelid, 2020, p.33). Thus, while the Nordic market has some catching up to do compared to the US, it is rapidly growing and becoming an attractive region for private debt investors (Furelid, 2020). See Figure 7 for the European fundraising development.

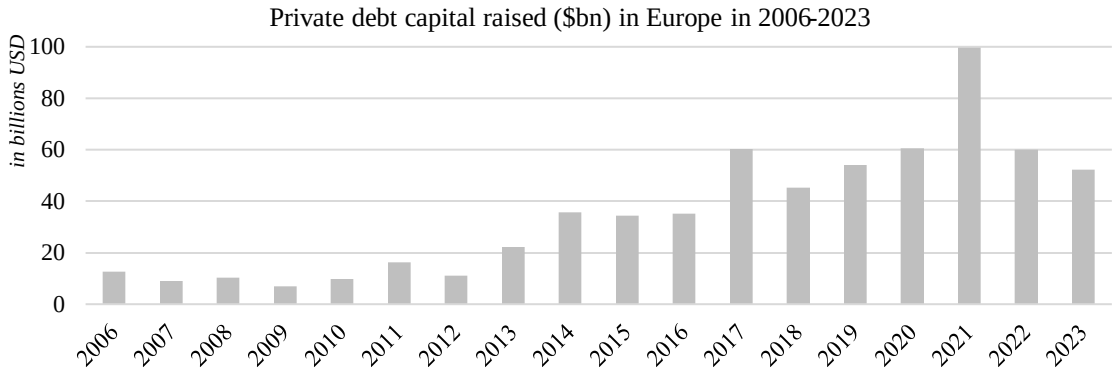


Figure 7. Private debt capital raised ($bn) in Europe in 2006-2023. The graph is made by the authors using data from PitchBook Data Inc. (2024).

4.2. P Capital Partners

"PCP provides tailored, non-dilutive funding solutions to mid-sized companies across Europe. We act as a strategic financial partner to entrepreneur- & family-owned companies, including developers of sustainable infrastructure. Since inception, we have invested in over 170 companies, helping them to maximise their potential" (Appendix B, slide 2)[2]. In this chapter, we provide an extensive overview of the history, structure, and investment strategy of P Capital Partners to provide a comprehensive understanding of the nature of the largest non-sponsored focused Nordic and European private debt fund.

4.2.1. History of P Capital Partners

P Capital Partners' (*PCP* onwards) investment heritage traces back to the 1960s with the establishment of the Weil family office, Proventus. Led by Robert Weil, Proventus has been an active investor in Sweden's public market, including investments into companies like Puma, as well as the private sector. Feedback from entrepreneurs in the private sector indicated a strong demand for growth funding in a non-dilutive form. In response, Proventus, alongside its equity strategy and investments in corporate bonds, began offering bilateral loans from their own balance sheet to these companies – well before the private debt market had formed as we know it today. Seeing the welcoming response from the market, PCP's current CEO Daniel Sachs together with Proventus' CEO Robert Weil designed a strategy to cater to the needs of these entrepreneurs. (P. Probst, October 9, 2024)

[2] PCP Introductory Materials slide deck is available in the Appendix B.

"*They [Proventus] also realised there was a super interesting white spot in the capital markets – the corporate debt market – both in the Nordics and across Europe really, where banks […] were way too exposed from a risk perspective and also from the volume perspective on mid-size companies. And that became extremely evident during the peak of the global financial crisis*" (D. Ullenius, November 6, 2024). As a response to market and demand changes, P Capital was established within Proventus in 2002, leading to the first external fund, PCP I (predecessor for Corporate Credit strategy), raised in 2009. In 2013 PCP became an independent management-owned company. (Proventus, n.d.) Five fund-generations later, PCP has since provided over EUR 5 billion in financing to more than 170 companies, positioning itself as the largest debt financier for entrepreneur- and family-owned companies in Europe (D. Ullenius, November 6, 2024).

4.2.2. PCP Platform and Fund Structure

Like other debt funds, PCP invests through closed-end capital funds, which have an inherently similar structure to the one used in private equity. The main investment strategy – Corporate Strategy – focuses on multi-sector mid-sized companies with stable cash flows by providing debt tickets in the range of EUR 25-150 million (PCP Introductory Materials, n.d.). Fundraising for the fifth flagship fund, PCP Corporate Credit Fund V, was completed in March 2024, closing at over EUR 1.7 billion (P Capital Partners, 2022). To obtain diversification benefits and optimise resource allocation, a fund maintains a minimum ticket size and consists of roughly 45 investments per fund (P. Probst, October 9, 2024). This positioned it as the 4th largest fund raised in the first half of 2024 in Europe's direct lending space (Deloitte, 2024).

Already in the early stages, PCP has financed a lot of infrastructure projects, such as solar, wind, and other sustainable technologies. As these assets have de-risked over time, the financing costs have decreased accordingly, making the usual private debt costs too high for these projects (P. Probst, October 18, 2024). To accommodate for the continuing capital need to finance the sustainability transition, PCP launched the first Transition Partner Fund in 2021, closing at approximately EUR 700 million. The fund targets three main themes: (1) companies directly aiming to reduce CO2 emissions, like those in solar and wind energy, (2) circular business models, and (3) companies using the proceeds to transition from "brown" to "green" operations (P Capital Partners, 2024a).

To further complement the main strategy and cater to the currently underserved market of late-stage innovation companies, PCP has launched a Growth Strategy. While the main fund primarily targets more established and financially solid businesses, the Growth fund, with correspondingly higher-cost debt, allows for a broader reach, including companies with proven business models that might yet be cash-flow negative. The first-generation fund is still in the fundraising stage, however, the first investment under this strategy has been completed. In November 2011, PCP announced its first transaction with Foodji, a food-tech company, to enable Foodji to substantially broaden its market reach and supply SMEs across Germany with flexible food vending machines (Nemitz, 2024; P Capital Partners, 2024b). With these three complementary strategies, PCP aims to provide debt financing for companies throughout the entire business life cycle (See Appendix B, slide 3).

4.2.3. Investment Strategy and Portfolio Characteristics

The flagship funds, PCP Corporate Strategy funds, are sector-agnostic, meaning there is no industry-specific investment focus. Investments range from industries such as consumer goods, real estate, healthcare, technology, consumer services, financial services, alternative energy, and industrials (See Appendix B, slide 4). The exclusion of certain industries is mainly driven by ethical reasons. Key considerations are more focused on balancing business and financial risks, as PCP has mandates from senior secured debt to preferred equity (D. Ullenius, November 6, 2024). For companies with strong asset backing and lower operational risk, for example, real estate, PCP can take higher financial risk, deriving at similar aggregate risk levels. Collateral is also crucial for downside protection. Since returns are contractual, the upside is limited, unlike in equity investments, where a mix of strong and weak investments can offset each other on a portfolio level. While the majority of investments (80%) are structured as senior financing, this allows for flexibility to consider junior or second-lien structures when appropriate. (P. Probst, October 9, 2024)

A distinguishing feature of PCP is its focus on non-sponsored transactions, accounting for approximately 75% of the portfolio (P. Probst, October 9, 2024). They primarily source deals through direct collaboration with family-owned and entrepreneur-led businesses. For that reason, deal sourcing and initial screening differ from PE-backed firms, where the deals come neatly packed into IMs (*Investment Memo*) complemented with due diligence (*DD*) materials (U.

Hamberg, October 29, 2024). Whereas non-sponsored deals are more spontaneous in sourcing, driven mainly by a network of strong relationships, and thus require more work in the screening phase due to a lack of pre-existing materials. In terms of geographic target region, roughly half of PCP's portfolio is in the Nordic region, followed by Germany, Ireland, and the UK as more prominent target countries. Typical financing focuses on capex, acquisitions, but also refinancing of existing debt. (P. Probst, October 9, 2024)

PCP's focus on the non-sponsored segment is quite unique in the European market, enabling them to act as a close finance partner to attractive entrepreneur-led companies that benefit from non-dilutive financing compared to equity. Given the small number of other private debt funds focusing on the non-sponsored segment, they continue to strengthen their position as the preferred financier. "*In most situations, we compete more with equity, as an alternative – that the companies would instead go to the equity market. But usually, when we miss out on a transaction, it is rather that it maybe has been bankable – they got cheaper financing – but we rarely see a direct competitor of us taking a deal away from us in the non-sponsored sector*" (P. Probst, October 9, 2024). Moreover, the focus on a non-sponsored segment is also attractive for investors: *"If you invest in a more typical private debt firm [sponsor-affiliated], you are still very much correlated to the private equity segment. Because if you finance a buyout on both the equity and debt side, it is a very similar risk exposure. Whereas with PCP you can access companies you wouldn't otherwise have access to"* (P. Probst, October 9, 2024).

4.2.4. Credit Committee and Portfolio Monitoring

A critical step in the underwriting process is the credit committee review, where each transaction undergoes rigorous evaluation. This includes a thorough discussion of the business case, ownership review, financial analysis, and, most importantly, an assessment to ensure the loan's structure aligns with the presented transaction's specifics. Each deal goes through three phases: initial screening, investment brief, and credit committee. To get an idea of the volume, approximately 400 investment opportunities are reviewed by PCP annually, eventually resulting in 15-18 investments each year, a conversion rate of approximately 4-5%. The credit committee acts as a gatekeeper to ensure proper documentation, due diligence, and structuring is completed in all stages. For that purpose, the credit committee is composed of senior team members (seven people), both involved and not involved in actively running deals. The director leading the

transaction would not be a part of the credit committee for the respective case. (D. Ullenius, November 6, 2024)

As a lender, in contrast to being an owner through equity, PCP still takes on the role of being a financial strategic partner, rather than merely extending a loan. To support this goal, they always aim to take a board observer seat in the company (or if not possible for legal reasons, a similar set-up with regular management meetings), allowing them to stay close to operations and offer strategic guidance to help achieve the company's goals, beyond simply providing financing. Access to boardroom discussions is also a crucial variable in getting comfortable with risk monitoring. (D. Ullenius, November 6, 2024; P. Probst, October 9, 2024)

Typically, the investment monitoring is conducted by maintaining close communication with the borrowers and gathering information on financials, management, and other operational metrics on at least a quarterly basis. Thereafter, quarterly reviews are held to assess both the overall portfolio performance and the progress of individual transactions. Key metrics are evaluated using a traffic-light system, to ensure timely flagging of any deviations from baseline scenarios (yellow) and focus on understanding the reasons behind it. Should the investment end up in the red category, more action might be needed to steer the company in the right direction. This could mean injecting capital, consulting management to implement necessary changes, or in rare cases and only as a last resort, enforcing over the security pool. (D. Ullenius, November 6, 2024)

Alongside quarterly reviews, there are continuous requirements that the borrower must adhere to. This usually refers to covenants and undertakings, which can be connected to financial, operational, or other (for example, ESG-related) metrics. Especially in the non-sponsored segment, a fund manager has a better position to set meaningful maintenance covenants – for PCP the average number of covenants is two, whereas for the sponsored market it is usually one (PCP Proprietary Materials, n.d.)[3]. *"You have very strong tools as a lender, even though you are not the owner, to steer the company through an agreement that has been signed, to a certain direction"* (P. Probst, October 9, 2024). The financing structures are typically tight, leaving limited headroom, which can lead to technical breaches. That being said, in these cases, the main focus is

[3] PCP Proprietary Materials (n.d.) will not be disclosed in original format but may be referenced or described in a redacted version, where applicable.

understanding the reason for the breach, rather than enforcing the consequence mechanisms of the breach (D. Ullenius, November 6, 2024).

4.2.5. Sustainability

Given their sector-agnostic approach and ability to customise loans to balance business and credit risks based on the deal's risk profile, there are essentially no limitations on the types of deals considered during the initial screening phase. There is however an exclusion criteria from an ESG perspective, meaning that PCP is not investing in industries like fossils, alcohol, gambling, and more. While the transition fund was launched specifically to focus on sustainable investments, the investments from Corporate Strategy also have fundamental criteria to be directed toward businesses with positive social and environmental impact. An illustration of how to incentivise sustainable business cases is the implementation of margin ratchets, which are usually linked to financial or leverage metrics. But these could also be tailored to ESG metrics – e.g. depending on the goal level of emissions, a reduction could lead to a lowered margin. *"Debt is an instrument which you can tailor a lot, and you can write it into a contract that is being signed. So, in the end, you can really create hard incentives"* (P. Probst, October 9, 2024).

According to Anna Skarborg, PCP's Director of Sustainability, non-sponsored private debt, which accounts for only 13% of the European credit landscape, provides tailored, non-dilutive capital that aligns with the specific needs of businesses navigating the complexities of the sustainable transition. That is because transition cases often struggle in early growth stages due to a lack of accessible funding, and thus, there is a critical funding gap in this space in the market. *"As I now move to P Capital and the credit side, I do this out of a profound belief that non-sponsored credit is one of the key pieces needed to address the "missing middle" - lack of capital in early scaling phases - and the "missing model" - misalignment of entrepreneurial needs and the traditional financial system"* (Anna Skarborg, 2024, p.2).

4.2.6. PCP Investment Team

As of 2024, the PCP investment team consists of 28 professionals who are fully dedicated to managing credit investments. Of whom, five are dedicated to the Transition Partner Fund team and two are spearheading the new Growth fund. The core investment team, along with the support team, forms a fully independent group of approximately 40 professionals at PCP. In addition, the deal origination flow and industry-specific knowledge are supported by a strong advisory network.

Our case study will feature two PCP investment professionals, who at the time analysed and executed the deal – David Ullenius and Ulf Hamberg.

David Ullenius

David Ullenius, Chief Investment Officer (CIO) and Managing Director at PCP, joined the firm in 2009 after its first private debt-focused fund was raised. Prior to PCP, he spent nine years at SEB, starting as an analyst and later managing his own transactions, which led to his collaboration with Proventus. At PCP, David oversees the deal pipeline, supports the underwriting process for the credit committee, and monitors portfolio company performance. During his tenure at PCP, David has led many transactions with particular expertise in transportation assets. As a senior investment team professional, David was leading the KatExpress 1 financing decision.

Ulf Hamberg

Freshly graduated from the MSc Finance program at Stockholm School of Economics in 2009, Ulf joined Pareto Securities and then pursued to live in London for 2 years to work in M&A in metals and mining for RBC Capital Markets. Tired of London and spotting an opportunity to join Proventus (before PCP became independent shortly after), Ulf has been with the company since 2013. As a managing director, Ulf is responsible for transactions by overseeing deal sourcing, execution, and monitoring portfolio companies. At the time of the KatExpress 1 transaction, Ulf had been in the company for a year as an associate, working closely with David.

4.3. International Catamarans Tasmania (Incat)

International Catamarans Tasmania (*Incat*) is an Australian shipbuilding company focusing on developing lightweight, high-speed catamarans. Founder Robert Clifford was born with an entrepreneurial spirit, having built his first boat while still in school (Mather, 2016). The idea to build catamarans came when Clifford operated a river cruise business in 1975 following the Tasman Bridge collapse. Clifford figured a faster ferry was needed to survive as the bridge was restored, and Incat was established Founded in 1977, Incat started building fast passenger-only ferries operating in the North Queensland area (Incat, 2018; Incat, 2024a).

A breakthrough came in 1990 when Incat built the first catamaran capable of carrying cars, revolutionising the shipbuilding industry (Incat, 2024a). In 2024, Incat is building the world's largest electric ferry, boasting a total of 130 meters with the capacity to carry 2,100 passengers and over 220 vehicles (Incat, 2024a). Vessels are built in the Prince of Wales Bay shipyard at

Derwent Park in Hobart, Tasmania, Australia. Nearby, a new site has been acquired, expected to double Incat's current shipbuilding capacity and workforce (Incat, 2024b). Since its inception, Incat has built almost 100 catamarans, ranging from commuter ferries and freight ships to workboats for the offshore industry, and delivered military crafts to the Australian, US, and Japanese navies (Incat, n.d.; Incat, 2024a). 47 years after its inception, Incat is still owned by the Clifford family. Founder Robert is still active and acting as Chairman of the Board. His children all play a role in the company, with Craig serving as Managing Director, Kim as a Marketing Director, and Rohan as an electrician (Mather, 2016).

4.3.1. KatExpress 1

KatExpress 1 is a 112-meter high-speed catamaran with the capacity to carry 417 motorcars and 1,200 passengers (See Appendix C for more information about the vessel). The vessel was built in 2009, initially for traffic between Dover and Boulogne under the French shipping operator LD Lines (Incat, 2009). After entering into a ten-year bareboat charter agreement with High Speed Catamaran Limited, Mols-Linien began operating KatExpress 1 in 2012 (Mols-Linien A/S, 2013). At the time, KatExpress 1 was one of the world's largest high-speed ferries. The new vessel had increased capacity, a restaurant, a VIP lounge, a bistro, a business lounge with reclining seats, and a children's playroom. (Mols-Linien A/S, 2013).

4.4. Mols-Linien A/S

Mols-Linien is the leading ferry operator in Denmark. Founded as a subsidiary of Danish shipping and logistics company DFDS in 1964, the company commenced operations in 1966 with the ferry Mette Mols, sailing its first ferry route between Sjællands Odde and Ebeltoft (Færgejournalen, n.d.). With the newly built Incat vessel Max Mols, Mols-Linien commenced traffic between Sjællands Odde and Århus in 1999 (Simplon Postcards, n.d.). In 2017, under its new private equity owner Polaris, Mols-Linien changed its name to Molslinjen (Polaris Equity, 2017). In 2024, Molslinjen operates as an independent company under the pan-Nordic ferry operator Nordic Ferry Infrastructure under the ownership of private equity firm EQT and its fund EQT Infrastructure V (EQT, n.d.). As a critical part of Danish transportation infrastructure, Molslinjen operates 21 ships on ten routes, including connections to Sweden and Germany, serving approximately 15 million guests annually (Molslinjen, n.d.).

4.4.1. Historical Financial Performance as of 2013

After the global financial crisis, Mols-Linien's financial performance deteriorated, primarily due to weak customer demand and increasing oil prices. In response, a new CEO was brought in, and Mols-Linien conducted a strategic business review in 2011, shifting focus to operating only high-speed passenger ferry services with vessels of higher gross tonnage capable of carrying trucks (Incat, 2013; Mols-Linien A/S, 2013). In May 2012, KatExpress 1 (*KE1*) joined the fleet on a ten-year charter agreement, followed by the sister vessel KatExpress 2 (*KE2*) the following year, also on a ten-year charter agreement, replacing the older, smaller vessels Mai Mols and Mie Mols (Mols-Linien A/S, 2013). These new vessels were better suited to Mols-Linien's operations.

Moreover, to align with its new organisation, the ferry operator was streamlined, divesting assets and cutting costs by up to 40%. Additionally, between 2011 and 2012, the number of FTEs was reduced by approximately 36% (Mols-Linien A/S, 2013). The strategic review, the subsequent operational changes, and a promising result in the second half of 2012 led Mols-Linien to expect a profit after tax in 2013 (Mols-Linien A/S, 2013). However, 2013 turned out to be a disappointment. Revenue growth was slower than expected, driven by a slower passenger ramp-up for KatExpress 2 compared to KatExpress 1, as well as unforeseen weather conditions (Mols-Linien A/S, 2014). In particular, the storm Bodil affected Mols-Linien in 2013, forcing the ferry operator to shut down operations during the busy Christmas period. Consequently, net income was once again negative, amounting to DKK 35.1 million. Although the result was negative, the launch of a new pricing initiative led to a 27% increase in the number of passengers for Mols-Linien in 2013. Refer to Table 2 for selected financials from 2009-2013.

Table 2. Selected financials of Mols-Linien 2009-2013. Data from Capital IQ, annual report, 2013 and 2014.

DKKm	**2009**	**2010**	**2011**	**2012**	**2013**
Total Revenue	**673.9**	**491.5**	**501.1**	**464.7**	**535.5**
Y-o-y growth, %	*(14.5%)*	*(27.1%)*	*2.0%*	*(7.3%)*	*15.2%*
EBITDA	**77.6**	**11.0**	**(22.9)**	**21.2**	**48.9**
Margin %	*11.5%*	*2.2%*	*(4.6%)*	*4.6%*	*9.1%*
EBIT	**7.0**	**(44.4)**	**(80.5)**	**(24.2)**	**(2.4)**
Margin %	*1.0%*	*(9.0%)*	*(16.1%)*	*(5.2%)*	*(0.4%)*
Net Income	**(1.8)**	**(77.5)**	**(118.9)**	**(88.5)**	**(35.1)**
Margin %	*(0.3%)*	*(15.8%)*	*(23.7%)*	*(19.0%)*	*(6.6%)*
Cash flow from operating activities	*77.9*	*10.2*	*(10.6)*	*(20.0)*	*(14.1)*
Number of passenger cars	*682,690*	*672,030*	*694,639*	*751,635*	*938,465*
Number of car units[4]	*n.a.*	*693,986*	*719,703*	*812,306*	*1,044,313*
Number of passengers	*2,039,687*	*2,045,056*	*1,902,569*	*2,038,408*	*2,463,081*
Avg. number of FTEs (incl. disc. operations)	*430*	*394*	*351*	*223*	*233*

[4] Number of car units is found in the 2014 annual report. Although it was published after the analysis was conducted, we assume this is a metric that was available to management at the time.

5. The Case

This chapter focuses on the transaction central to the case – PCP's investment into KatExpress 1 in 2014. The overarching case focus question is formulated as follows: *How can a private debt fund structure a loan to ensure downside protection when lending to a borrower with a weak financial track record?* While the borrowing entity itself is the SPV (High Speed Catamaran Limited) holding KatExpress 1, as there are no operations in the SPV and the charter agreement income will be used for servicing the debt, we approach the analysis accordingly. Note that all financials are retrieved from public annual reports and deal terms are based on our own assumptions. The assumptions are derived from our understanding of how a private debt fund would structure such a transaction, based on the preceding literature and market analysis, complemented by interviews with different market participants.

5.1. Transaction

The first discussions between PCP and Incat sparked when a friend of David Ullenius' brother from Australia was in Sweden to run a marathon. The first discussions between David and the person who oversaw Incat's sales activities were initiated, as there was an obvious need for increasing capex. Incat was family-owned and focused on expansion through increasing capacity by building more vessels. Given that these vessels cost around EUR 50-100 million to build, Incat needed to secure debt financing or succeed with outright sales, rather than have them on their own balance sheet and tie up extensive capital. At the time when PCP started discussions with the Clifford family, Incat had three vessels on their balance sheet, highlighting a clear opportunity for collaboration (D. Ullenius, November 6, 2024).

As a family-owned and strong asset-backed opportunity, it aligned well with PCP's foundational criteria, making it a case worth looking further into. Nonetheless, two crucial considerations were driving the more in-depth analysis: (1) the value of the deal, or more precisely of the vessel that PCP would finance, and (2) the financial strength of the vessel operator to service the bareboat charter agreement[5] (in this case Mols-Linien). Based on these aspects, further analysis

[5] Bareboat charter – an arrangement for the chartering or hiring of a ship or boat, whereby no crew or provisions are included as part of the agreement. In a bareboat or demise charter, the owner gives possession of the ship to the charterer and the charterer hires its own master and crew (PCP's own analysis).

focused on different scenarios, such as the default of the operator, the potential stepping-in of the owners, government support, the sale of the vessel, and others.

The loan would be extended with the intention of financing a specific vessel (KatExpress 1), which was held by an Irish-incorporated SPV (High Speed Catamaran Limited). Ultimately held by Robert Clifford, the founder and owner of Incat, an Australian, family-owned shipyard which built both KE1 and KE2. The charter agreement was between the SPV and Mols-Linien A/S, enabling the SPV to use the charter agreement income to pay the loan obligations to PCP (See Figure 8).

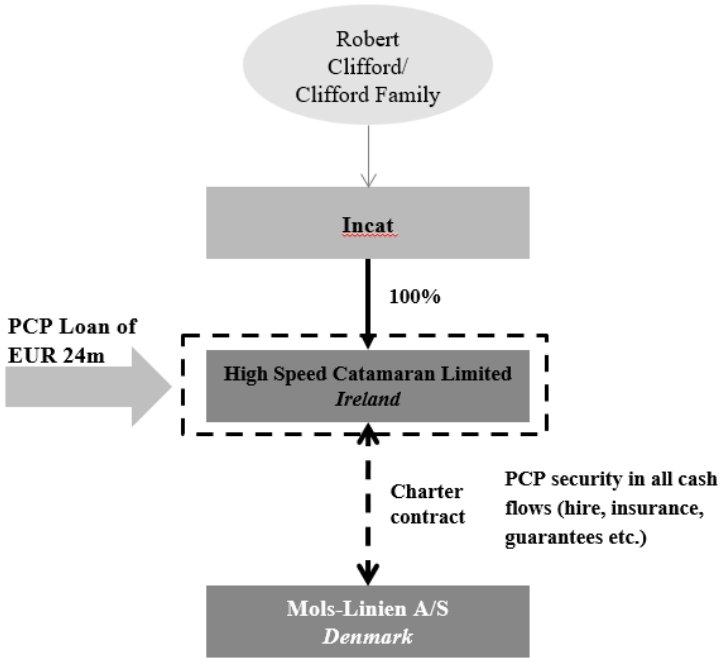


Figure 8. Loan structure between the three main counterparties – PCP as a lender, loan borrowed by SPV (High Speed Catamaran Limited), and loan serviced by the charter agreement income with Mols-Linien.

Essentially, there are three major counterparties in this transaction: PCP as the lender providing financing for the vessel, Incat who builds the ships, and Mols-Linien, who is a customer of Incat and intends to operate their vessels. Thus, while the asset to be financed belongs to Incat, there are no operations in the SPV itself which holds the vessel and receives the loan. For that reason, the focus of commercial due diligence is heavily placed on Mols-Linien, as their ability to successfully operate the vessel and fulfil charter fee obligations to the SPV directly translates into incoming cash flows into the SPV. These cash flows, in turn, support the SPV's capacity to service its debt obligations to PCP. This type of structure with multiple counterparties is inherently more

complex than a single-counterparty arrangement. It requires extensive stakeholder analysis to get comfortable with analysing all the potential downside scenarios and enforce necessary protection mechanisms.

With respect to ownership due diligence in general, it is a key part of PCP's investment analysis both for non-sponsored and sponsored deals. In addition to in-house analysis, they typically involve a 3rd party provider for more extensive background checks. As to sponsored deals, the process might be somewhat different in structure, but not less extensive. The focus is on the past performance of the owner's portfolio companies, specifically their experience in handling and sponsoring portfolio companies with financial difficulties (PCP, personal communication, November 28, 2024). As for Incat, PCP spent time building relationships with the Clifford family, to understand their willingness to support the obligations towards PCP, among other things (D. Ullenius, November 6, 2024).

5.2. Financing Rationale

This transaction was typical for PCP in terms of being non-sponsored, meaning a lot of independent in-house due diligence would be required to get comfortable with the structuring. "*There is a reason why these firms do not get bank financing from traditional banks at 3-4% margin and come to us for a somewhat higher margin instead"* (U. Hamberg, October 29, 2024). In this case, the primary concern for any external observer would likely be the ferry operator's poor historical performance. However, a closer examination through modelling the unit economics driven by fleet upgrades could reveal a significantly different perspective, one that might remain invisible to a surface-level analysis. Secondly, the asset class itself in this case is very niche, requiring more flexibility and expertise when accounting for default scenarios. Regardless, with a proper valuation and appropriate LTV levels, the vessel provides great security. The following sub-chapters will examine the core aspects of the financing rationale, detailing the considerations and analyses that informed the decision to extend credit, including management's turnaround potential, commercial prospects, risk assessments, and broader business implications.

5.2.1. Mols-Linien's Potential for Turnaround

The due diligence focused primarily on the Mols-Linien's operational performance, as their ability to service the bareboat charter agreement directly translates to the first line of repayment of the debt. Despite Mols-Linien's poor financial track record in the aggregated view, there were some

immediate signs that initiated further analysis into the company. The upcoming years promised a more favourable outlook than could be inferred from purely looking at the historical track record, and the increased possibility of delivering the business plan was supported by changes in management.

Namely, a newly appointed CEO (as of 2011), Søren Jespersen, with previous experience at SAS and DFDS in the transportation segment, brought relevant industry expertise (Dixon, 2011). In connection with the appointment of Søren Jespersen as the new CEO, Poul Jacobsen was appointed CFO. The board of directors stated the need for new leadership to move forward with the strategic review (Maritime Danmark, 2011), outlining a clear trajectory towards breaking even on both EBIT and cash flow projections. A change in management supported the assessment of the company's ability to fulfil the charter contract and steer operations in a positive direction. Confidence in management's ability to turn around the somewhat weak performance was one of the crucial factors in deciding to pursue the analysis for this financing opportunity in the first place (D. Ullenius, November 6, 2024).

A key operational change was the replacement of old vessels with new modernised ones with increased capacity and efficiency. The deployment of KatExpress 1 in 2012 and KatExpress 2 in 2013 set the ground for a more viable business model and promised a positive future outlook (Mols-Linien A/S, 2014). Moreover, in 2011, Mols-Linien discontinued operations in servicing the ferry route between Kalundborg and Aarhus due to it being unprofitable (Lastbil Magasinet, 2011). In conjunction with the discontinuation, Mols-Linien sold two older ferries, Maren Mols and Mette Mols, in the same year on favourable terms, enabling repayment of all capital debt to Skibskredit A/S (Mols-Linien A/S, 2012). Streamlining operations through the renewal of the fleet continued, when the company disposed of Mie and Mai Mols for recycling in 2013 and 2014, respectively (Mols-Linien A/S, 2014). Historically, Mols-Linien had also owned their ports and relevant infrastructure but sold Ebeloft and Odden terminals to Storebælt end of 2005 (Sund & Bælt Holding A/S, 2007).

5.2.2. Commercial Due Diligence

At the time of analysing the deal, KatExpress 1, together with its sister ship KatExpress 2, were servicing the Odden-Aarhus route, as per the ten-year bareboat charter agreement with Mols-Linien, which would end in 2022 (Mols-Linien A/S, 2013). With loan durations typically ranging

between 5 and 7 years, the income from the bareboat charter agreement plays a pivotal role in debt servicing and thus needs to be matched duration-wise. The ten-year term of the agreement provides reassurance that repayment will be completed well before the contract expires.

The sister vessels, KE1 (built in 2009) and KE2 (built in 2013), were newly built, offering significantly larger capacity, improved cost-efficiency, and the ability to transport a wider range of vehicles, including caravans, buses, trucks, cars, and motorbikes. These upgrades not only modernised the fleet but also strengthened the business case from both a customer experience and environmental standpoint (Mols-Linien A/S, 2013). Moreover, having identical vessels enabled the most efficient scheduling and operations between two cities (U. Hamberg, October 29, 2024). Modern vessels also required less staff, were fully compliant with the new environmental regulations, and consumed less fuel per unit of carrying capacity, making them more resilient to the prevailing high oil prices (Mols-Linien A/S, 2013).

All in all, the unit economics of these vessels made an attractive business case and promised a clear improvement in operational performance. *"It's not a very complicated operation – they run two ships back and forth. By doing modelling on sort of unit economics and so on, you can prove that if they get the right vessels in – they were running it with old capacity old vessels, and these [KE1 and KE2] were supposed to replace those old vessels – and if you run those numbers, you see that they go from being very unprofitable to actually being reasonably profitable*" (U. Hamberg, October 29, 2024).

One of the key parts of the analysis was assessing the current level of ship traffic and projecting its future trajectory. The Aarhus - Copenhagen route was served through four routes and thus faced significant competition from alternative means of transportation (See Table 3 for comparison). The less significant competitors were taking a train over the Great Belt Bridge or travelling on domestic flights. Both options are significantly more expensive than the ferry or car alternative without offering any substantial advantages such as reduced travel time. The principal contender was taking a car over the Great Belt Bridge, taking around three hours of travelling time, and characterised by daily passenger volumes of around 60,000 people (30,000 cars). Taking the bridge has the obvious advantage of being independent of scheduling and planning. Thus, it was

expected that the bridge would continue capturing the biggest part of the market (PCP's own analysis)[6].

However, the new modern vessels provided a new improved level of customer experience and had the potential to also offer it at a competitive pricing level. Customers opting for the ferry, should travel from Copenhagen to Odden by car (or other), and take the ferry connection from Odden to Aarhus or Ebeltoft. For families or tourists, the addition of new food and drink options in catering services enhanced the comfort of travelling. In addition, taking the ferry offers a strong value proposition to business travellers and professionals. Corporate travellers could use the time to work and enjoy the comfort of business lounges, and for example, truck drivers could count the time on the ferry towards mandatory resting times (U. Hamberg, October 29, 2024).

These travellers could also benefit from being more frequent travellers and thus take advantage of the pre-booked discounted price offers. Hence, a lot of the steady passenger traffic was expected to be driven by commuter traffic, rather than tourism. Another feature enhancing the appeal of the ferry was the new express highway from Copenhagen down to the port that was currently under construction. That would reduce the time and make it directly comparable to uninterrupted car journey time. (U. Hamberg, October 29, 2024)

Table 3. Comparison of the four routes from Aarhus to Copenhagen. Adapted from PCP's own and our analysis.

	Ferry and car	**Car over the Great Belt Bridge**	**Train over the Great Belt Bridge**	**Domestic flights**
Travelling time	Ca. 2 hours	Ca. 3 hours	Ca. 3 hours	Ca. 3 hours (40 min flight)
Ticket price*	DKK 1,550 (without reservation) DKK 798 (flex)	DKK 470 (standard) DKK 380 (weekend)	DKK 2,110 (standard) DKK 1,440 (small group)	DKK 4,400 (economy)
Travelling costs including gas	DKK 1,720 DKK 968	DKK 971 DKK 881	= as above	= as above
Pros of travelling method	+ business travellers using time for work + mandatory resting time for truck/bus drivers + environmental considerations + customer experience (buffet, wifi, lounges)	+ no scheduling needed + cheapest for irregular passenger + convenience + default option (public knowledge)	+ no driving needed + environmentally conscious choice + no variable gas costs and car-owning costs	+ 40 min airtime + no driving needed

[6] PCP's own analysis is not disclosed in its original version but can be referenced to or described in the analysis, where applicable.

Cons of travelling method	- pricing becomes competitive for frequent and preplanned travellers - scheduling required - sensitive to oil prices	- dedicated driver needed - affected by oil prices - costs of owning a car	- scheduling needed - more expensive compared to car / car-pooling	- most expensive - no total time reduction in travel - 6 SAS daily flights - environmental strain

** Average ticket price based on several assumptions about the average fuel consumption, depreciation, and average family size and composition. Price estimations by PCP, and the qualitative analysis by the thesis authors.*

All of the above-mentioned improvements related to management changes, infrastructure modernisation, and renewal of fleet proved to have hoped effect already early on. Seeing evident results on the isolated business case enabled PCP to gain more confidence in further analysis, knowing that the company was on the right trajectory. A significant amount of time was spent gaining comfort with the unit economics, validating that Mols-Linien with a very high likelihood would be able to service the charter agreement (D. Ullenius, November 6, 2024).

5.2.3. Default and Recovery Analysis

The bareboat charter income generated by Mols-Linien operating the ferries was the first line for loan repayment. However, regardless of the promising outlook, in order to get comfortable with downside protection, multiple layers of default and recovery scenarios were analysed and used for loan structuring. *"We dislike binary risks, so a risk which is if something goes wrong, you have zero recovery, zero value in the business, doesn't really work for us"* (Ulf Hamberg, 25.10.2024). In the first scenario, should Mols-Linien struggle to meet its charter agreement obligations, we could expect the owners to inject equity or banks to increase facilities, to protect the operations. But what happens if Mols-Linien defaults and no financial remedies from shareholders are available?

Default of the Operator

One of the first key findings from looking into the commercial and regulatory due diligence was the potential for government support in case of default given its importance in Denmark's infrastructure. "*We understood that there is a law that says that there needs to be floating traffic on both sides of the Great Belt Bridge. And if the operator – and this was a market without any subsidies being provided by the Danish State*[7] *[…] – would fold, the Danish Government will likely ascertain that a new operator comes into play very soon after the bankruptcy or that they stop*

[7] The operator provided traffic services without any grants or subsidies, including none on ticket sales.

operating. And it is also very likely that they would want to continue using the assets that we have funded" (D. Ullenius, November 6, 2024).

Thus, while there were no subsidies or guarantees provided by the Danish Government to the operator, as the floating traffic plays an important role in Danish infrastructure, there are strong incentives to step in if needed to uphold ferry operations. *"That doesn't mean that they would necessarily save this operator if it would go bankrupt. But as an operator who has been working there for 20-30 years, once a tender comes out, you would probably be in a very good position to use those ferries and run there* (U. Hamberg, October 29, 2024). Either through restructuring the existing operator or taking the ferries out of Mols-Linien, there was some security from the vessel's point of view. Especially since the sister vessels – KatExpress 1 and KatExpress 2 – with the same parameters, made the booking and planning of the traffic very efficient, it would be a very likely scenario, that only the operator would change. Regardless, given that there would be a tender required by law, the scenario of KE1 not being chosen as a servicing vessel cannot be disregarded. In such a scenario, the borrower would be keen to find an alternative route for the vessel. However, it is uncertain whether they could cover all loan payments while the vessel remains idle, which is expected to last around six to twelve months (PCP's own analysis).

Historically, it seems that Mols-Linien also had a good relationship with Storebælt, a state-owned Great Belt Bridge operating company, as Storebælt purchased the port infrastructure from Mols-Linien in 2005 (Sund & Bælt Holding A/S, 2007). As a state-owned company, according to Act on Ferry Services, it needs to ensure the existence of alternative routes, should anything happen to the bridge traffic (Sund & Bælt Holding A/S, 2014). Thus, we can view it as a credit-positive impact from the presence of another strong stakeholder incentivised to see Mols-Linien succeed.

Sale of the Vessel

The second main scenario of the default analysis focused on the value of the vessel itself, should there be no continuation of operations, and a sale would be initiated instead. Given the lack of comparable transactions and the difficulty in valuing the asset, a third-party analysis was outsourced to complement PCP's own calculations. Given the asset's illiquidity, it remains a crucial, albeit last-resort, option to ensure downside protection in any scenario. The sale of a vessel would require considerable time and resources, and ensuring a reasonable sales price would strain

even more. The default and recovery analysis further reveals that while there are potential alternative operators mapped out that could benefit from buying the vessel, the whole re-marketing process would take 6-12 months.

"*If we had gone out and sold the vessel, would we have received the fair market value – probably not. But would we have received at least 50% of the value – yes"* (U. Hamberg, October 29, 2024). Thus, the primary focus was to assess the vessel's value, using this as a basis to perform a loan-to-value analysis by comparing it against the loan amount. On top of that, the LTV would be rapidly decreasing after the first years through loan amortisation using charter agreement income (See further analysis in 5.3.4.).

5.2.4. ESG Due Diligence and Regulatory Considerations

As an early mover in assessing sustainability factors, an important part of the investment analysis involved understanding and evaluating the environmental impact of the underlying business. To begin with, the investment should adhere to the Responsible Investment Policy that PCP has set in place as well as be in line with any requirements set by Limited Partners. Furthermore, as part of building sustainable business cases, regulatory as well as commercial tailwinds should be assessed to ensure the business case is future-proof.

As mentioned in the previous chapters, the new vessels were significantly more fuel-efficient, both reducing fuel costs as well as reducing CO2 emissions (See Figure 9) and providing a better and environmentally conscious customer experience. For example, after employing KatExpress 1 in its operations and adjusting the timetables, Mols-Linien reported a 33% reduction in CO2 emissions per passenger and motorcar in 2012 relative to 2011 (Mols-Linien A/S, 2013). Moreover, the fuel consumption in 2012 – 1.3 million GJ of fuel – was 28% lower compared to 2011 and marks the lowest level of energy consumption in 2009-2012 (Mols-Linien A/S, 2013).

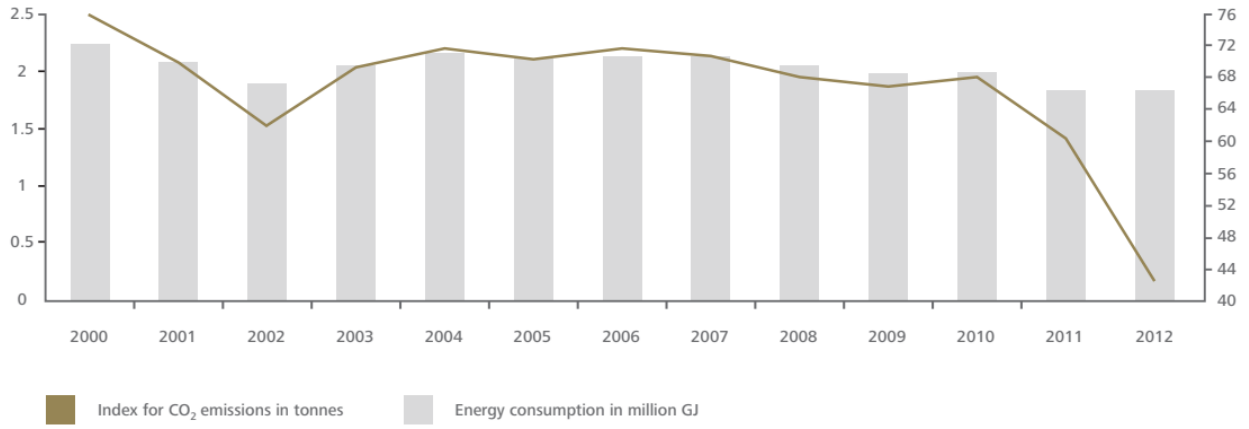


Figure 9. Mols-Linien's energy consumption in million GJ and index for CO2 emissions tonnes. The graph is from the Annual Report for 2012 (Mols-Linien A/S, 2013).

One of the most crucial business risk exposures for Mols-Linien is the price of the fuel. To mitigate these risks, Mols-Linien hedges oil prices to ensure that two-thirds of the upcoming year's oil consumption is hedged (Mols-Linien A/S, 2013). For example, as of the end of 2012, the company had fixed the price for the first nine months of 2013 and set a maximum price level for the last quarter (Mols-Linien A/S, 2013). Since fuel prices are paid in USD, Mols-Linien hedges fuel costs in DKK, eliminating both the commodity risk and the currency risk. In addition to general demand-supply driven price fluctuations in oil, tightening of environmental standards and regulations could drive the fuel costs upwards in a longer time horizon.

Furthermore, as most ships used fuel oil with relatively high sulphur content, which is harmful to the environment (Danish Maritime Authority, n.d.-a), continuous improvement attempts were driven by regulatory changes. On the one hand, it increases the business risks due to increased compliance requirements which can be costly to implement. On the other hand, early adoption of environmentally conscious practices will benefit the company in the long term. For example, according to International Maritime Organization MARPOL Annex VI, implemented in 2005, Emission Control Areas (ECAs) were defined to establish and enforce stricter sulphur emission limits (International Maritime Organization, n.d.).

Shortly before the transaction in November 2012, a new directive under Annex VI was introduced, requiring Emission Control Areas (ECAs) to enforce a lower sulphur limit of 0.10% in marine fuel by January 2015 (European Parliament & Council of the European Union, 2012). This directive mandated that ship operators comply by either (1) using fuel oil with a sulphur content of less than 0.1%, (2) implementing approved abatement technologies (e.g., scrubbers), or

(3) transitioning to alternative fuels such as LNG or biofuel (Danish Maritime Authority, n.d.-b). Given that Mols-Linien and KE1 were already using Low Sulphur Marine Gas Oil (LSMGO), they were compliant and had absorbed these costs earlier than many competitors. While they were compliant at the time, the eventual widespread shift to LNG (Liquefied Natural Gas) was anticipated to happen in the future, potentially introducing new compliance requirements and associated costs.

5.3. Deal Structure & Financial Analysis[8]

Based on the commercial analysis, we deem this a business case with an attractive investment rationale. However, we note the risks and uncertainties that should be addressed by establishing a robust loan structure that appropriately prices the risk and has downside protection mechanisms written into its design. The following section will focus on the financial analysis of Mols-Linien based on the publicly available annual reports. Furthermore, based on this analysis we determine the pricing that would yield market target returns and define a realistic loan payment schedule. Lastly, we argue for different covenants and undertakings that a private debt fund would employ to minimise the downside in different default and recovery scenarios discussed in 5.2.3.

5.3.1. Financial Analysis of Mols-Linien A/S

Despite implementing a strategic review and subsequent operational changes, Mols-Linien reported a negative result for the fiscal year 2013. Consequently, it would be crucial for PCP to gain confidence in the unit economics regarding the new ferries, resulting in Mols-Linien's return to profitability and ensuring the company could cover the charter agreement, ultimately leading to PCP receiving loan payments. Hence, most of the financial analysis focused on the ferry operator.

The financial analysis of Mols-Linien involves estimating revenue and cost models, combined to project the company's future financial performance. After forecasting Mols-Linien's financial performance, the operating cash flow is estimated to assess the company's ability to service the charter agreements. At the time, Mols-Linien had two outstanding charter agreements for KatExpress 1 and KatExpress 2. Therefore, it is necessary to consider Mols-Linien's ability to

[8] To ensure academic adequacy and replicability in a case study context, we conducted the financial analysis entirely using public information and market information to formulate necessary assumptions. The goal is to provide a quantitative analysis that a typical private debt fund would perform to assess this case, and that could be used in formulating the teaching case. As such, the deal terms presented do not represent actual deal terms but are assumed by the authors of this thesis.

service both charter agreements, ensuring that the entire fleet remains operational. If Mols-Linien could honour the charter agreements, the lending entity, High Speed Catamaran Limited, would be paid, thereby ensuring loan payments to PCP through 2020 when the loan is assumed to have reached maturity. Refer to chapter 5.3.2. for suggested financing terms.

Because of Mols-Linien's strategic review in 2011, which resulted in KatExpress 1 joining the fleet in 2012 and KatExpress 2 in 2013, the most relevant year for comparison is 2013, with 2012 being somewhat comparable. As a result, the financial analysis will include only two historical years. The analysis has been focused on getting confidence in the numbers for 2014, ensuring the company can be profitable with the new vessels and within the new organisation.

Revenue Model

Mols-Linien's financial reports from 2012 and 2013 provide revenue data divided into two segments: ferry revenue and catering. Moreover, the financial reports also provide data on the number of passengers, cars, and car units[9]. The metric for car units was introduced in the 2014 annual report (Mols-Linien A/S, 2015); we assume it was already known internally by management beforehand. Additionally, Mols-Linien projects a 6% increase in cars from 2013 to 2014, stating it would amount to approximately one million cars in 2014 (Mols-Linien A/S, 2014).

The ferry revenue given in the financial statements is assumed to come from car units and passengers. Initially, in 2012, revenue from car units is estimated at 54%, while revenue from passengers contributed 46%. The relatively small difference is explained by the fact that Mols-Linien did not specialise in heavy vehicles at the time. It was only with the addition of KatExpress 1 and KatExpress 2 that the fleet developed the capacity to carry caravans, trucks and buses. With the addition of KatExpress 2, which further strengthened the heavy vehicle capacity, car units are expected to have gained a significant share of revenue, estimated at 60% in 2013, equalling DKK 278 million while passenger revenue is expected to amount to DKK 185 million. These figures serve as the basis for projecting ferry revenue moving forward (See Table 4). Car unit revenue will increase based on the growth in the number of car units multiplied by the growth in revenue per car unit. Passenger revenue will increase based on the growth in the number of passengers multiplied by the growth in revenue per passenger. With most expenses fixed, such as fuel and

[9] A financial metric used to convert various types of vehicles, including bicycles, motorcycles, cars, trucks and buses into a standard unit equivalent to a passenger car.

salaries, growth in the number of passengers and car units would significantly contribute to higher profitability by improving overall revenue without substantially raising costs.

Table 4. Breakdown of the revenue by segment in 2012 and 2013 and forecast for 2014. Data from Mols-Linien A/S annual report 2013 and own analysis.

DKKm	**2012A**	**2013A**	**2014E**
Revenue			
Car units	220	278	321
Passengers	187	185	194
Ferry revenue	407	463	515
Catering	57	73	80
Total revenue	**465**	**536**	**595**
Number of car units	*812,306*	*1,044,313*	*1,138,301*
Number of passengers	*2,038,408*	*2,463,081*	*2,561,604*

Mols-Linien ferried 938,465 cars in 2013 and expects a 6% increase in 2014. (Mols-Linien A/S, 2014). 6% growth would equal an estimated 994,773 cars ferried in 2014. Based on the 6% increase in number of cars, a 9% growth in car units is projected for 2014. Compared to cars, the larger increase in car units is attributed to both KatExpress ferries being operational for the full year for the first time and greater awareness of the route among heavy vehicle operators, supported by marketing efforts aimed at business drivers. Naturally, tickets for heavy vehicles will cost more than car tickets, leading to high growth in revenue per car unit, estimated at 6%. Combined with the expected 9% increase in the number of car units, the growth in revenue per car unit suggests that car unit ferry revenue will amount to DKK 321 million, 16% higher than in 2013. Beyond 2014, the marketing efforts targeting business drivers are expected to drive continued growth, leading to a rise primarily in car units. As a result of the increase in business drivers and their higher-priced tickets, revenue per car unit is projected to grow, albeit by a smaller percentage. Over time, these results are expected to stabilise.

Due to the larger increase in the number of car units, as business drivers are expected to travel alone, the growth in the number of passengers is anticipated to be lower than that of cars, amounting to 4% for 2014. As a result of the successful pricing initiative in 2013, introducing discounted tickets, Mols-Linien is expected to keep price increases for passengers relatively low. Therefore, the price of a passenger ticket is projected to increase by 1% in 2014, with a slight rise

in subsequent years. By combining the expected growth in the number of passengers with the anticipated price increases, passenger revenue is projected to reach DKK 194 million in 2014, 5% higher than in 2013.

The second reported segment in the annual report, catering revenue, amounted to DKK 73 million in revenue in 2013, approximately 14% of revenue. The new ferries provided an expanded food and drink offering, including the recent addition of a coffee bar in collaboration with Baresso (Mols-Linien A/S, 2013). Given these improvements and the significant 27% increase in catering revenue in 2013, substantial growth of 10% is expected for 2014, increasing catering revenue from DKK 73 million in 2013 to DKK 80 million in 2014. The projected catering revenue, along with the anticipated car unit revenue of DKK 321 million and the expected passenger revenue of DKK 194 million, results in a projected total revenue of DKK 595 million for the fiscal year 2014, reaching DKK 890 million in 2020. As a result of previous analysis, car units are projected to increase their share of ferry revenue from 60% in 2013 to approximately 62% in 2014, reaching circa 67% by 2020. Based on the available information, assumptions made for 2014 are used as a baseline, with adjustments smoothing out projections beyond 2014. See Appendix D for a complete breakdown of the revenue model (Table D1), including underlying assumptions (Table D2).

A KPI analysis is conducted to validate the revenue model. Among the KPIs analysed are passenger per car unit, revenue per passenger, revenue per car unit and catering revenue per passenger (See Table 5). Passenger per car unit and catering revenue per passenger for 2012 and 2013 can be derived from the annual reports. As more business drivers travel alone, passenger per car unit is expected to decrease over time, from 2.4 in 2013 to 2.3 in 2014, reaching 2.0 in 2020. Catering revenue per passenger, partly due to a larger offering, is projected to increase slightly, from 30 in 2013 to 31 in 2014, rising to 37 in 2020.

Table 5. Revenue historical figures and forecast per unit and passenger. Data from Mols-Linien A/S annual report 2013 and own analysis.

DKK	**2012A**	**2013A**	**2014E**
KPIs			
Revenue/ passenger	*92*	*75*	*76*
Revenue/ car unit	*271*	*266*	*282*
Catering revenue/ passenger	*28*	*30*	*31*

Number of passengers/ car unit	*2.5*	*2.4*	*2.3*
Number of departures	*6,316*	*6,428*	*6,220*
Average number of passengers/ departure	*323*	*383*	*411*
Average number of car units/ departure	*129*	*163*	*183*

The numbers for car units and passengers provided in the annual reports, combined with the estimated share of ferry revenue for car units and passengers in 2012 and 2013, show revenue per passenger decreasing from DKK 92 to DKK 75 and revenue per car unit decreasing from DKK 271 to DKK 266 in 2013. Given the introduction of a pricing initiative, including discount pricing in 2013, the decreases appear feasible and are projected to have a positive effect on the average number of passengers and car units per departure. In the coming years, revenue per passenger is expected to gradually increase, from 75 in 2013 to 76 in 2014, reaching 85 by 2020. Given the estimates for growth per car unit, driven by the growth in larger, more expensive vehicles, revenue per car unit is expected to increase by a greater amount, rising from DKK 266 in 2013 to DKK 282 in 2014, reaching DKK 348 in 2020. See Appendix D, Table D3 for the complete KPI analysis.

Cost Model

Similarly to the revenue model, we established a cost model to project costs beyond the historical period based on Mols-Linien's reporting structure. Historically, fuel and salaries have been Mols-Linien's largest expenses. In 2013, fuel accounted for approximately 42% of revenue, while salaries made up around 21%.

The largest expense item for operating expenses related to vessels, fuel costs is estimated by projecting the number of ferry departures along with a component for the expected commodity price, in this case, crude oil. As crude oil is a component in LSMGO, the fuel used by KatExpress 1 and KatExpress 2, it serves as a good proxy for estimating price increases. For 2014, the number of ferry departures is expected to decrease by 3%, driven by more efficient operations, as the sister vessels with increased capacity are now deployed on the same route for the entire year. Beyond 2014, the number of ferry departures is expected to remain steady, rising by 0.5% annually. To project crude oil prices, we used actual prices from 2013 as a baseline, supported by Q1 2014 projections for crude oil from the investment research departments of Deutsche Bank, Goldman Sachs and Morgan Stanley. These research departments project an average crude oil price decrease of approximately 3% for 2014. As a result, fuel costs are projected to decrease from DKK 224

million in 2013 to DKK 211 million in 2014 and further to DKK 201 million in 2015 before rising gradually again, reaching 211 million by 2020 (See Table 6). Moreover, as a share of revenue, fuel costs are expected to decline significantly, dropping from approximately 42% in 2013 to around 35% in 2014 and further to circa 24% by 2020.

Table 6. Operating expenses related to vessels. Data from Mols-Linien A/S annual report 2013 and own analysis.

DKKm	**2012A**	**2013A**	**2014E**
Operating expenses – vessels			
Fuel	214	224	211
Spare parts	26	26	26
Insurance	7	10	10
Other	1	1	1
Total operating expenses – vessels	**247**	**261**	**249**

For operating expenses related to vessels, the smaller expense categories are projected to experience general price increases. For example, the category spare parts is expected to see yearly price increases of 3%, while insurance is estimated to have a higher annual increase of 5%, assuming the insurance is customised, and few brokers offer ferry insurance.

Other operating expenses are expected to undergo general price increases (See Table 7). Terminal and port fees are projected to grow in line with the expected inflation rate of 2%. Furthermore, in line with the growth in catering revenue, catering costs are projected to rise by a significant 8% in 2014, assuming an increase in goods sold. Beyond 2014, catering costs are expected to grow at a slower rate each year. Finally, sales and admin costs are anticipated to increase by 5% in 2014, driven by marketing expenses targeting business drivers. Expenses for sales and administrative costs will continue to increase, albeit at a slower rate each year, eventually stabilising at 3% in 2017 and beyond.

Table 7. Other operating expenses. Data from Mols-Linien A/S annual report 2013 and own analysis.

DKKm	**2012A**	**2013A**	**2014E**
Other operating expenses			
Terminal and port fees	36	44	45
Catering goods	19	25	27
Catering other	5	6	7
Sales and admin costs	3	3	3

Total other operating expenses	**83**	**99**	**104**

Salaries have historically been the second-largest expense for Mols-Linien, accounting for 21% of revenue or DKK 112 million in 2013. Future salary projections will depend on the anticipated adjustments in personnel and annual salary increases (See Table 8). Following a strategic review in 2011, Mols-Linien streamlined its operations, including a significant reduction in staff. Therefore, Mols-Linien is expected to keep its operations lean, with a gradual increase in personnel of 1%. To retain personnel, key staff will receive significant salary increases, while less critical staff will see smaller adjustments, resulting in a projected average annual salary increase of 3%. As a result, salaries are expected to increase from DKK 112 million in 2013 to DKK 117 million in 2014, representing an increase of 4%. Expenses for board remuneration, pension contributions and expenses for social securities will increase at the same rate as salaries. See Appendix E for a complete breakdown of the cost model, including underlying assumptions.

Table 8. Personnel-related expenses. Data from Mols-Linien A/S annual report 2013 and own analysis.

DKKm	**2012A**	**2013A**	**2014E**
Personnel expenses			
Board remuneration	2	2	2
Salaries	99	112	117
Pension contributions	9	10	10
Expenses for social securities	3	3	3
Total personnel expenses	**113**	**127**	**132**

Projected Financials

By incorporating the revenue and cost models and additional assumptions, we can project Mols-Linien's Income Statement (See Table 9). For 2014, EBITDA is expected to reach DKK 111 million, compared to DKK 49 million in 2013, primarily driven by the increase in revenue and decrease in fuel costs. Moreover, in line with expectations outlined in the 2013 annual report (Mols-Linien A/S, 2014), Mols-Linien is projected to achieve a positive result in 2014, albeit at a modest DKK 2 million. Beyond 2014, Mols-Linien is expected to generate additional profits, steadily increasing to DKK 209 million by 2020.

Table 9. Historical and forecasted Income Statement for Mols-Linien. Data from Mols-Linien A/S annual report 2013 and own analysis.

DKKm	**2012A**	**2013A**	**2014E**
Total revenue	**465**	**536**	**595**
Operating expenses – vessels	247	261	249
Other operating expenses	83	99	104
Personnel expenses	113	127	132
EBITDA	**21**	**49**	**111**
Depreciation and amortisation	82	42	57
EBIT	**(61)**	**7**	**54**
Financial net	(24)	(42)	(51)
EBT	**(85)**	**(35)**	**3**
Taxes	0	0	(1)
Result from discontinued operations	(4)	0	0
Net income	**(88)**	**(35)**	**2**

Regarding assumptions for the income statement, depreciation, and amortisation have been calculated using information from the 2013 annual report (Mols-Linien A/S, 2014). All items are depreciated linearly with the calculated book value of each item divided by its remaining useful life, resulting in an annual depreciation amount for each asset, which is then summarised to determine total annual depreciation, which is projected to be DKK 57 million between 2014 and 2019, before dropping to 37 in 2020 when Max Mols is fully depreciated. Amortisation is expected to be zero throughout the entire period.

For the first time in 2014, Mols-Linien will have both catamarans on its books for the entire year. As a result, the financial net is projected to increase significantly, rising by 20%. However, due to future amortisation, interest payments will decrease, leading to a reduction in the financial net category of between 4-5% annually beyond 2014. Danish Corporate income tax is projected to remain at 25% for 2014 and 2015 before decreasing to 22% in 2016 and beyond, in line with Vækstplan DK, a Danish growth reform aimed at spurring investments (Birket-Smith & Larsen, 2014). Please refer to Appendix F for income statement projections for the entire period (Table F1), including underlying assumptions (Table F2), and depreciation estimates (Table F3).

Ability to Service Charter Agreement

Despite PCP only financing one of the charter agreements at the time, we aim to assess Mols-Linien's ability to cover both the charter agreements for KatExpress 1 and KatExpress 2. If the company fails to honour even one of the agreements, its operations will become unsustainable. To assess Mols-Linien's ability to honour the charter agreements, we can calculate the operating cash flow to determine whether Mols-Linien can cover the charter agreements solely through income from operations (See Table 10). To calculate operating cash flow from EBITDA, we deduct capex investments, adjust for changes in working capital and subtract taxes paid. For 2014, capex is estimated at 70% depreciation, or DKK 40 million, because of the new fleet, which consists mostly of new vessels. As a percentage of depreciation, capex is projected to gradually increase with its ageing fleet, rising to 85% by 2020. Changes in working capital are assumed to be half of the average change in 2012 and 2013. The average is divided by two to lower the impact of the significant change between 2011 and 2012, likely a result of the strategic review in 2011. In 2014, the change in working capital is projected to be negative DKK 3 million, partly due to increased inventory stocking for expanded food and drink offerings on the new catamarans. Lastly, the actual tax paid is projected to equal the tax expense, resulting in a projected operating cash flow of DKK 67 million in 2014, expected to rise gradually to DKK 249 million by 2020.

Table 10. Mols-Linien's ability to service the charter agreements based on free cash flow projections. Data from Mols-Linien A/S annual report 2012 and 2013, as well as own analysis.

DKKm	**2012A**	**2013A**	**2014E**	**2015E**	**2016E**	**2017E**	**2018E**	**2019E**	**2020E**
EBITDA	**21**	**49**	**111**	**166**	**211**	**251**	**283**	**316**	**342**
Capital expenditure	(49)	(55)	(40)	(40)	(43)	(43)	(45)	(45)	(31)
Change in working capital	(20)	8	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Cash tax	0	0	(1)	(15)	(24)	(33)	(41)	(48)	(59)
Operating cash flow	**(48)**	**1**	**67**	**108**	**141**	**172**	**194**	**219**	**249**
Financial lease commitments	(1)	(28)	(64)	(80)	(80)	(80)	(80)	(80)	(80)
Sale of assets	35	23	0	0	0	0	0	0	0
Free cash flow	**(14)**	**(3)**	**3**	**28**	**62**	**93**	**114**	**139**	**169**

To assess Mols-Linien's ability to service both charter agreements, including covering interest and amortisation payments, we must estimate the future payments associated with these charter agreements. In line with the information provided in the 2013 annual report, the charter

agreement follows a fixed repayment profile (Mols-Linien A/S, 2014). Additionally, Mols-Linien expects financial lease obligations to be approximately DKK 64 million in 2014 and around DKK 319 million between 2015 and 2018. The DKK 319 million is assumed to be evenly distributed over those years, resulting in approximately DKK 80 million in annual payments. A lower amount in 2014 is assumed to have been pre-arranged, providing Mols-Linien with sufficient time to ramp up its operations before being required to pay the full amounts of both charter agreements. Beyond 2018, because of the fixed repayment schedule of the charter agreement, financial lease commitments are expected to remain constant at DKK 80 million. The analysis of Mols-Linien's ability to honour the charter agreement concludes that the company can cover its financial lease commitments using its operating cash flow, ensuring the lending entity High Speed Catamaran Limited. receives payment, ultimately generating loan payments to PCP.

In 2014, free cash flow after financial lease commitments is projected to be DKK 3 million, gradually increasing to DKK 169 million by 2020. Please refer to Appendix G for a detailed breakdown of the assessment of Mols-Linien's ability to cover the charter agreements (Table G1), including the underlying assumptions (Table G2).

5.3.2. Suggested Financing Terms

When it comes to pricing the loan by setting the appropriate interest rate, there are multiple considerations to be taken into account. First of all, the rate should be appropriate given the risk profile of the borrower which can depend on a combination of historical financial performance, industry risks, creditworthiness, presence and quality of the collateral, and the inherent business risks. Balancing business and credit risks plays a great role in deciding whether to make an investment and how to structure it (e.g., senior or junior).

Additionally, when structuring the loan, it is necessary to consider the investor return requirement. Historically, private credit returns have ranged from 10% to 12% between 2008 and 2023, an average return of 11.6% was recorded (Morgan Stanley, 2024). When analysing the loan return profile, Money Multiple (MM), and Internal Rate of Return (IRR) are useful metrics. Both yield to maturity as well as yield to the end of the non-call period are considered – ideally the spread between multiples should be relatively small.

Lastly, as discussed, this case has some unique risks that would consequently affect the loan structuring. While the loan could be senior secured and asset-backed by the vessel, the asset

itself is illiquid and from a very niche industry. Furthermore, at the time, the financing market was less mature and open, making it more difficult for an Australian shipyard to raise debt in Denmark (D. Ullenius, November 6, 2024). PCP's ability to build these long-term relationships is an important determinant in underwriting this deal in the first place. Based on a thorough analysis of the business risks, a lot can be mitigated or controlled for through appropriate covenants and undertakings.

Proposed Loan Terms

The term loan of EUR 24 million would be primarily used to refinance the currently outstanding facilities and reinvest into the business. Given that the average loan duration typically falls somewhere between 5 and 7 years, we assume the loan is amortised over 6 years and fully repaid through amortisation. A common feature among debt funds is to ensure a minimum money multiple to achieve the required returns is implementing a non-call period or a prepayment penalty (Block et al., 2024; Proskauer, 2023). Based on market data suggesting that loans are paid around 1-3 years before maturity (Antares Capital, 2024), we assume that a non-call period of around four years would be implemented for this loan. Given the very low interest rate environment, a non-negative floor for EURIBOR would be set to limit downside interest rate risk. Based on the assumed loan duration, market pricing, and target returns, we model the floor using a 7.5% cash margin. This margin has been validated by calculating respective returns, as a typical debt fund would do to determine a sufficient yield. See Table 11 for a summary of illustrative loan terms.

Table 11. Assumed loan terms and sources and uses for the loan.

ILLUSTRATIVE LOAN TERMS	
Coupon:	EURIBOR + 7.5% (with non-negative lower floor for EURIBOR)
Duration:	6 years
Prepayment:	Non-call period for 4 years
Covenants:	Minimum EBITDA and Maximum LTV (both set on the SPV – High Speed Catamaran Limited)
Undertakings:	Normal for a vessel financing facility, including but not limited to a change of control, cross-default, step-in rights in all material contracts, Operator's maintenance of the bareboat charter contract, no additional financial indebtedness, dividends, disposals of assets etc.

SOURCES AND USES[10]			
Sources:	**(mEUR)**	**Uses:**	**(mEUR)**
PCP Loan	24.0	Refinancing Outstanding Facilities	21.6
		Transaction Costs	1.0
		Reinvestment	1.4
Total:	**24.0**	**Total:**	**24.0**

Expected Returns of the Investment

Based on the commercial and financial analysis in previous chapters, and assuming the baseline scenario, we have determined the expected IRR and money multiple of the loan using the illustrative loan terms (See Table 12). We consider both holding the loan until maturity (March 2020) and assuming the loan is called after four years (two years before maturity). In the case of holding until maturity, the annualised IRR is 9.36% and the corresponding money multiple is 1.29x. Should the loan be repaid after four years as per the end of the non-call period, the IRR is 9.45% and the money multiple is 1.26x. Given the aggressive amortisation profile, the difference is not substantial, yet, ensuring a non-call period to be set to yield the desired return, as close to the return over the whole tenure, is crucial.

[10] Assumed split for use of proceeds; 90% to be used for refinancing the existing debt facilities.

Table 12. Loan payment schedule and resulting IRR and MM for a loan held until maturity and a loan paid back after the end of the non-call period. Note that the initial cash outflow is EUR 23.5 million, equivalent to the total loan amount minus the upfront fee. We assume the duration of the loan to be 6 years (4 years non-call), constant payment schedule with the loan to be fully amortised over the holding period, and terms at EURIBOR + 7.5%. Note that loan amount outstanding is at the end of each month.

EURm	**03/2014**	**03/2015**	**03/2016**	**03/2017**	**03/2018**	**03/2019**	**03/2020**
Upfront fee	0.48						
Monthly payments to PCP	0.42						
Loan amount outstanding	24.0	20.78	17.27	13.47	9.35	4.86	0
Interest portion	0.00	0.14	0.12	0.09	0.06	0.03	0.01
Principal	0.00	0.28	0.30	0.33	0.36	0.39	0.42
LTV	**50%**	**47%**	**42%**	**35%**	**26%**	**14%**	**0%**
Cash flows if held until maturity							
Cash flows (monthly)	-23.52	0.42	0.42	0.42	0.42	0.42	0.42
Total Distributions	30.99						
IRR annualised	**9.36%**						
MM	**1.29x**						
Cash flows if called after 4 years							
Cash flows (monthly)	-23.52	0.42	0.42	0.42	9.77		
Total Distributions	30.16						
IRR annualised	**9.45%**						
MM	**1.26x**						

Money multiple and IRR are both performance metrics based on the cash flows generated during the holding period. They have an inverse relationship with respect to time. In this example, while the IRR for holding until maturity is slightly lower than for a four-year period, the money multiple is higher. That is because IRR accounts for the timing of the cash flows, appreciating the distributions with regard to the time value of money. Moreover, the upfront fee paid on day one significantly boosts the IRR. Whereas holding the loan until maturity allows it to accrue more interest, resulting in a higher overall money multiple.

5.3.3. Downside Protection Mechanisms

Covenants and Undertakings

Just like for all loans, to ensure lender protection, a list of undertakings would be placed upon the borrower to maintain control over the asset in the event of any deviations from the agreed-upon plans. Frequently used general undertakings, placed upon a borrower regardless of industry include but are not limited to requiring a borrower to conduct business in compliance with all relevant laws and regulations, and to pay all taxes and other governmental charges. Additionally, a borrower is

required to provide the lender with financial and non-financial information, such as reporting on ESG metrics. There are also industry- or asset-specific undertakings, more customised to the counterparty. For an underlying asset like a vessel, that could include maintaining sufficient insurance coverage for the vessel and performing all necessary maintenance and repairs on the asset.

Usually, there are two main types of maintenance covenants used to monitor the loan: (1) cash-flow or EBITDA-based metrics, which track the borrower's loan servicing ability, and (2) leverage ratios (such as LTV, D/E, Debt-to-EBITDA, etc.), which assess the capital structure and financial risk. Consequently, we assume two maintenance covenants would be placed upon High Speed Catamaran Limited, the SPV that held the vessel itself and had a bareboat charter agreement with Mols-Linien. First, to ensure debt servicing capability, we assume a minimum EBITDA covenant would be employed. The required level was based on the SPV's ability to meet its debt obligations, derived from the payments received from Mols-Linien with respect to the charter contract. Essentially, the covenant should be designed to trigger if the operator encountered financial difficulties that could affect their ability to pay the charter fees and consequently hinder the SPV's ability to service its debt. If the operator struggles to meet its financial obligations, it would serve as a safeguard by providing early warning, which could lead to increased monitoring or further negotiations.

Given that it is an asset-backed loan, to safeguard the security of the loan with collateral, we assume an LTV covenant would be set. LTV is a useful metric to continuously assess how much "financial cushion" is available, should the borrower default. A significant drop in the collateral's value or a deviation from the amortisation payment schedule would be reflected in the LTV, signalling increased risk. Based on our analysis, at the time of making the deal, the LTV would be approximately 50% (See analysis in 5.4.2). We note that this is lower than what would typically be set for real estate-backed loans – this is because of the market's illiquidity and the very limited demand for this niche asset. To determine the level of the covenant, a typical headroom for an LTV covenant is around 10-20%. For continued lender protection, the LTV covenant gets tighter over time in absolute terms as the projected LTV decreases.

Further Downside Protection

While covenants mainly aim to monitor the smoothness of the operations and provide early notification of any concerns, private debt funds typically employ several other downside protection mechanisms. First, specific measures are implemented to increase the protection of the collateral, the vessel. Complementing the particular undertaking obligating a borrower to maintain sufficient insurance, a lender can be required to be the primary beneficiary of the insurance. As a result, in the event of an incident involving the vessel, the lender would receive payment from the insurance policy ahead of the vessel's owners. Additionally, with collateral over the vessel, the lender can swiftly accelerate payments to recover the debt or take possession of the vessel.

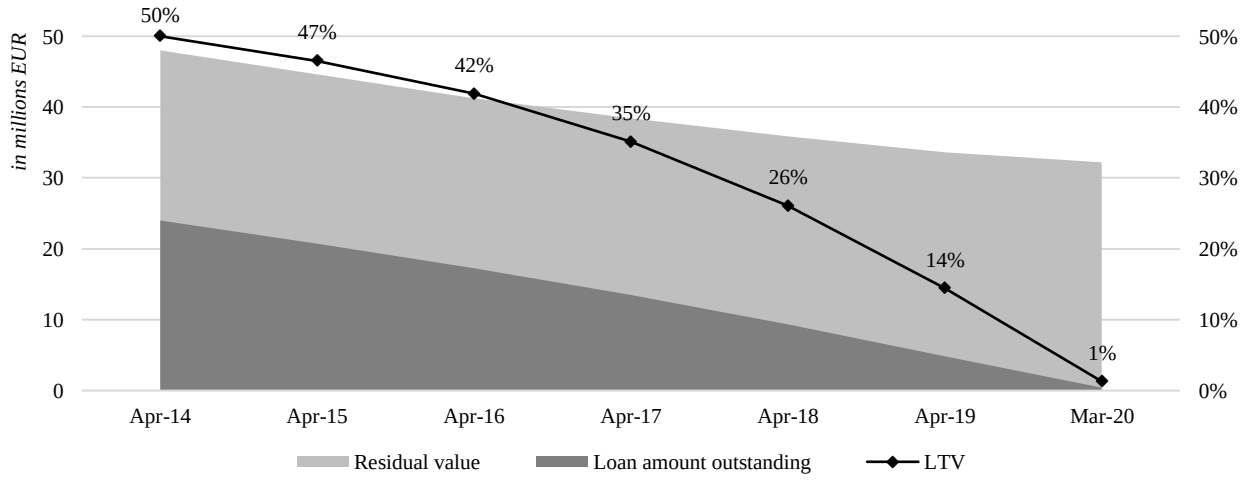
Second, as an additional security, the lender can take collateral over the bareboat charter agreement. If such a contract is breached, further measures can be implemented, such as increased monitoring of the operator or a right to find another ferry operator for the vessel. In a scenario where the lender would enforce its rights over the vessel, either by attempting to find a new operator or an outright sale, such a process would take time. To ensure sufficient liquidity in such a case, the lender may require cash collateral equivalent to three to twelve months of charter payments. We assume that a minimum of three months' charter payments would be pledged by the ferry operator to an account held by the lender, offering added security and acting as a buffer to allow additional time in such a scenario. Lastly, to get comfortable with vessel valuation, annual reviews and re-evaluations are typically conducted in vessel financing to maintain a continuous assessment of its value (D. Ullenius, November 6, 2024; U. Hamberg, October 29, 2024).

5.3.4. Loan-to-Value Analysis Based on Vessel Valuation

As touched upon in the qualitative investment analysis, a major consideration in financing asset-backed loans is the value of the collateral, in this case, the vessel itself. Given the illiquid nature of this niche asset, it was crucial to determine an appropriate loan-to-value level, where PCP would feel comfortable in its exposure, should Mols-Linien default. In contrast to real estate, an asset that typically appreciates in value, giving the lender confidence to offer a higher LTV, vessels depreciate over time and are less liquid, requiring a more conservative LTV approach. As there are not many comparable transactions in the market, determining the true market value of the vessel is difficult. Moreover, even if the valuation result would perfectly represent the fair market

value, the liquidation value would be discounted due to the limited number of buyers and the lack of market efficiency to enforce the true market price.

The vessel valuation is estimated by PCP and validated by a 3rd party analysis. The estimates for the residual value curve of the vessel over the loan holding period are available in Appendix H. Assuming linear value depreciation and constant payment method (CPM) of the loan, we can observe a fast derisking of the financing. In the first couple of years, the income generated from the charter agreement will be used to rapidly amortise the loan, which would allow PCP thereafter to benefit from a low LTV (See Figure 10 for LTV analysis). Note that when modelling the loan payment schedule, the 5-year swap rate from 2014 is used to project the loan payments, effectively modelling the loan as a fixed-rate loan (The Royal Bank of Scotland, 2014). Given the assumed six-year maturity with a four-year non-call period, 5-year swap rate serves as a reasonable proxy for both.



EURm	Apr-14	Apr-15	Apr-16	Apr-17	Apr-18	Apr-19	Mar-20
Loan amount outstanding	24.00	20.78	17.27	13.47	9.34	4.86	0.42
Interest portion	0.17	0.14	0.12	0.09	0.06	0.03	0.01
Principal	0.26	0.28	0.30	0.33	0.36	0.39	0.42
Vessel residual value	48.00	44.60	41.30	38.40	35.90	33.60	32.20
LTV	**50%**	**47%**	**42%**	**35%**	**26%**	**14%**	**1%**

Figure 10. Loan-to-Value analysis over the loan tenure. Loan amount outstanding at the beginning of each month. The graph and the analysis are made by the authors.

To understand the sale realisation risk, we can determine the level of discount on the residual value at which a sale would result in PCP not recovering its principal (See Table 13). We

consider the likelihood of a sale taking place in 2014 or early 2015 as negligible due to most of the oil exposure being hedged for this period (Mols-Linien A/S, 2014), making the expected Mols-Linien performance at least neutral. Moreover, assuming cash collateral to the pledged account, the risk is reduced further, as this would help offset sales and marketing costs for the sale. We conclude that in order not to recover the loan principal in its entirety, the sale of the vessel has to take place at more than a 60% market value discount.

Table 13. Sensitivity of the sales value over total debt based on levels of discount from the residual value upon sale realisation. The table and the analysis are made by the authors.

Sale Discount from RV	Apr-14	Apr-15	Apr-16	Apr-17	Apr-18
20%	160%	172%	191%	228%	307%
30%	140%	150%	167%	199%	269%
40%	120%	129%	143%	171%	230%
50%	100%	107%	119%	142%	192%
60%	80%	86%	96%	114%	154%
70%	60%	64%	72%	85%	115%
80%	40%	43%	48%	57%	77%

5.4. Epilogue

In August 2014, PCP announced the financing to High Speed Catamaran Limited – EUR 24 million senior secured term loan would be used to refinance existing debt facilities. Despite an alternative offer with a slightly lower interest rate, PCP was ultimately chosen as the lender (P. Probst, November 27, 2014). Overall, PCP presented a more compelling offer, including additional financing on top of the bank refinancing. This allowed Incat to reinvest in the growth of their business and offered the opportunity to establish a long-term partnership with PCP, with the potential to finance future vessels.

5.5.1. Events During the Holding Period

Reflecting on the deal, PCP recalls never having any issues with Incat and highlights the good collaboration and pleasure from seeing both Incat and Mols-Linien thrive throughout the holding period. In the following section, we highlight the most significant events that occurred during the holding period for retrospective evaluation.

2016: Polaris delisting Mols-Linien

As hoped for, Mols-Linien picked up its operating performance very quickly and even outperformed expectations. Furthermore, Mols-Linien benefited from external factors, as declining fuel prices significantly reduced the company's largest expense (Trading Economics, 2024). Having demonstrated a strong turnaround in the operations and presenting a solid outlook with the renewed fleet and favourable financials, Mols-Linien caught the attention of investors. Polaris, a Copenhagen-based private equity firm, announced its plans to buy all the outstanding shares and delist the company by making the first voluntary public offer for Mols-Linien A/S shareholders on July 3, 2015 (Reuters, 2015). By September 3rd, 2016, negotiations between shareholders in Mols-Linien were finalised, resulting in the agreement, whereby Holdco of Polaris Private Equity IV K/S and Lind Invest ApS agreed to establish a joint holding company (Polaris Equity, 2016). Mols-Linien delisting was completed on October 11, 2016 (Mols-Linien A/S, 2017).

Thus far, the company had a dispersed ownership structure typical of publicly traded firms, which could be argued to have exacerbated implementing efficient operational and strategic changes. Therefore, considering the financial struggles of Mols-Linien in the past, an owner with experience and cash backing to support and invest in the company according to the need, was viewed as credit positive development from PCP's viewpoint. Besides, the borrower was still SPV owned by Incat, not Mols-Linien, thus, there would be no direct impact on the loan agreement if ownership at Mols-Linien changes. That being said, regarding ownership changes in the borrowing company, having necessary protections in place via a Change of Control clause is a common practice. Ownership is a crucial determinant in credit assessment, and changes beyond pre-determined levels would trigger either amendment through a waiver of the Change of Control clause, or a full or partial payback of the loan to ensure the owner's controlling stake (PCP, personal communication, November 28, 2024).

An ownership change like this would test the robustness of a deal structure in terms of having strong creditor rights in place as well as security over the company's assets. PCP had spent significant time underwriting the deal to create a solid deal structure that would ensure the recovery of principal and intended returns in every adverse scenario. While other financiers might have hesitated to extend this type of loan at the time, PCP's meticulous structuring and analysis allowed

them to get comfortable with the risk, demonstrating their belief in Mols-Linien's ability to turn around its performance.

This confidence proved well-founded when Polaris very shortly after acquired the company. *"We spent six months on the underwriting, but we created a structure that was super solid where we had full control; where we were very comfortable that we would recover both the principal and also our return in case the company would fall over. But then 1.5 years into our tenure with the company, they were taken over by a private equity sponsor"* (D. Ullenius, November 6, 2024). Although Polaris was now able to raise cheaper HoldCo-level bank financing, PCP retained its senior secured position, ensuring stability and reassurance for their investment (D. Ullenius, November 6, 2024).

2018: KatExpress 1 Starts Operating on a New Route

In 2018, another operational change occurred when the vessel began servicing a new route, transitioning from its previous assignment while remaining under Mols-Linien operations. Upon winning the tender conducted by the Ministry of Transport in Spring 2016 to take over the ferry operations between Rønne-Ystad, Mols-Linien reorganised their vessels' allocation. The 10-year charter contract to service Bronholm with a starting date of September 1, 2018, would be serviced with Express I (renamed from KatExpress 1) and Max Mols (Transportministeriet, 2018).

As KE2 and KE3, by that time both also financed by PCP, continued to service the route, there was no negative impact on Mols-Linien's performance to be expected. Furthermore, while KE1 was to now service a new route, there was no material adverse change to the operations and consequently to debt servicing ability. While the charter agreement specifies the vessel's routes, there is typically some flexibility to accommodate similar routes or adjustments within the designated area (e.g. within the same country). Deployment outside the defined limits would not be possible unless the borrower would allow it in which case it would be assessed more carefully to assess the feasibility of enforcement in downside scenarios as well as the business impact on the operator. In this case, the change was considered acceptable (PCP, personal communication, November 28, 2024).

2020: EQT Infrastructure Acquires Mols-Linien from Polaris

In December 2020, EQT announced the definitive agreement between EQT Infrastructure and the group of shareholders, led by Polaris, for the acquisition of Mols-Linien A/S (EQT, 2020). With

the transaction closing in February 2021, Mols-Linien together with Torghatten (acquired in March 2021), would become a part of EQT Infrastructure later established as a joint pan-Nordic ferry operator – Nordic Ferry Infrastructure (EQT, 2022). At the time of EQT's acquisition of Mols-Linien, the PCP of KatExpress 1 was almost fully amortised, and by the end of Q1 2021, the loan was repaid in full.

5.5.2. Follow-up Financings

Having built strong relationships with the Clifford family and having no concerns about Incat as a borrowing party, PCP decided to deepen and expand their partnership. At the time of the investment in Kat Express I, PCP was aware of the sister vessel (KE2) still being on Incat's balance sheet. Furthermore, there were discussions about building the third vessel, very shortly after. Mols-Linien had already very quickly turned around their performance, and having a third vessel played an important role in continuing this trajectory. In October 2015, Mols-Linien placed a construction order for what would become the fourth Incat vessel in their fleet (Incat Tasmania Pty Ltd., 2015). Instead of Mols-Linien buying the vessel outright themselves, PCP stepped in to provide two-tiered financing to refinance KatExpress 2 and receive construction financing for KatExpress 3 (D. Ullenius, November 6, 2024).

In January 2016, PCP refinanced the current debt facilities in place for KatExpress 2, which was already operating under Mols-Linien chartering together with its sister vessel (P Capital Partners, 2016). Releasing tied-up capital enabled the construction of the third sister ship – KatExpress 3 (*KE3*) – to be procured. Construction financing set up by PCP enabled drawdowns against milestones or manufacturer's performance (D. Ullenius, November 6, 2024). Once the construction of KE3 is completed, it was planned to join KE1 and KE2 in servicing the Aarhus – Copenhagen route in Denmark (P Capital Partners, 2016). The construction was completed in April 2017, when Express 3 (renamed), a slightly refined version of its sister vessels left on her delivery voyage from Tasmania to Denmark (Incat Tasmania Pty Ltd., 2017).

The combination of PCP's tailored financing, Incat's world-class shipbuilding, and Mols-Linien's business transformation translated into Mols-Linien breaking historical profit records in 2017. *"Credit must go to the vision and hard work of Mols-Linien's Board, Management and Employees, who have grown traffic on their routes between Sjaelland and Jutland by 48 percent in the past three years such that they now annually carry over 2.5 million passengers, one million*

cars and 350,000 freight vehicles per year," says Tim Burnell, CEO of Incat in 2017-2023 (Incat Tasmania Pty Ltd, 2017, para. 14).

Further strengthening the relationship and collaborative track record, in September 2021, PCP provided 4th financing to Incat. The financing is used to complete the acquisition of Incat hull 093 (also known as Volcán de Taidía) from the shipyard and repay Export Finance Australia for the financing provided during the construction. The 111-meter catamaran will together with its sister vessel (Volcán de Tagoro) be operated by Naviera Armas, a Spanish operator, between Las Palmas de Gran Canaria and Santa Cruz de Tenerife (P Capital Partners, 2021).

With four financing transactions executed by PCP with Incat since 2013, PCP demonstrates its commitment to building long-term collaboration and partnership with entrepreneurs. Over a decade-long collaboration spans multiple funds, with the latest loan being provided by PCP IV. The alignment between the extended timelines of shipbuilding projects and PCP's fund concentration limits has proven beneficial, enabling consistent engagement and support over the years. David Ullenius comments: *"We are happy to deepen our relationship with Incat and we look forward to continue our involvement with Incat's state of the art high-speed catamarans over the coming years"* (P Capital Partners, 2021, para. 5).

6. Discussion

In this section, we discuss if and how the typical characteristics of private debt discussed in the literature could be applied to PCP's financing decision of KatExpress 1. We summarise the key factors that made the financing rationale for the transaction. Most importantly, we aim to answer our research question by establishing a link between the literature review and how common practices in private debt would be applicable to the case.

How can a private debt fund structure a loan to ensure downside protection when lending to a borrower with a weak financial track record?

It is worth emphasising that in this specific transaction, the borrowing entity was the SPV holding KatExpress 1, which itself has no operations. However, we have established that the ability to service the debt agreement is dependent on the bareboat charter agreement payments made by Mols-Linien, the Danish ferry operator. We discuss how to structure the commercial due diligence analysis to ensure that all risks and scenarios from having multiple counterparties are thoroughly analysed and accounted for. Furthermore, based on this analysis, we highlight and discuss the downside protection measures we see fit to be employed in loan structuring.

6.1. Financing Rationale

Financing KatExpress I, owned by Incat, was a typical transaction for PCP in that it was a non-sponsored transaction involving a family-owned company. Sponsored debt firms have a more frequent deal flow due to affiliated sourcing (Ares Corporate Management, 2024; Block et al., 2024; P. Svensson, November 27, 2024) and a head-start in investment analysis, as the deals usually come with pre-existing due diligence and investment memos (Ares Management Corporation, 2024; Block et al., 2024, D. Ullenius, November 6, 2024; P. Svensson, November 27, 2024). Whereas non-sponsored fund managers depend on proprietary sourcing (D. Ullenius, November 6, 2024; U. Hamberg, October 29, 2024) and their origination directors (P. Probst, October 9, 2024). In this deal, the original connection was established by David Ullenius through mutual acquaintances. While this almost accidental origination does not fully reflect how sourcing typically works, it does highlight the kind of niche opportunities that non-sponsored firms are more likely to access. Moreover, a non-sponsored lender is likely to receive more financing opportunities as they gain experience, build relationships, and expand their network.

Moreover, a big differentiator and value-creation tool in private debt in general is the ability and expertise to put together structure and underwriting for more complex deals (D. Ullenius, November 6, 2024; Degerli & Monin, 2024; P. Svensson, November 27, 2024; P. Probst, October 9, 2024). PCP spent six months on the underwriting process, conducting thorough due diligence on commercial and financial aspects, as well as including third-party providers for additional analysis (e.g. vessel valuation).

We have summarised the commercial due diligence analysis behind the financing decision in a SWOT analysis below (See Table 14). At the time of analysing the deal, Mols-Linien had not delivered positive financial results in recent years. However, by assessing the unit economics of the vessel operations and gaining comfort in future projections driven by management changes, divestments, and fleet renewal, PCP identified a financing opportunity that traditional banks would have overlooked. Through a more in-depth analysis, private debt firms can get comfortable with business cases, that might lack rationale for external viewers (Cumming, Fleming & Liu, 2019; Diamond, 1991). Private debt firms fill an important financing gap when it comes to firms that lack a strong historical track record or are deemed nonbankable (Block et al., 2024; Chernenko, Erel & Prilmeier, 2022; Erel & Inozemtsev, 2024; IMF, 2024). Ultimately, a combination of limited access to bank financing and PCP's position as a preferred lender, due to promising long-term collaboration opportunities, drove the decision. In August 2014, PCP extended a EUR 24 million senior secured term loan to the KatExpress 1 holding SPV.

Table 14. Executive summary of the investment analysis highlighting the most important commercial as well as downside protection analysis. The analysis is made by the authors, using own and PCP's own analysis.

Strengths	**Opportunities**
+ Modern vessels with improved efficiency, bigger capacity (incl. new vehicle classes), compliance with new environmental regulations, and better customer experience	+ Strong projected performance of Mols-Linien with evident operational improvements under new management visible already
+ Strategic importance to Danish infrastructure and imperative to ensure floating traffic	+ Structuring the loan as senior-secured and retaining a low LTV due to strong asset-backing; non-call period and attractive returns
+ Eight years remain on the bareboat charter contract, allowing full amortisation of the loan before the agreement's maturity	+ High strategic motivation to keep sister vessels operating (either by a new operator or in a different setting) due to operational efficiency of identical vessels
Weaknesses	**Threats**
- Historically poor financial performance of the vessel operator, Mols-Linien	- Increased regulatory requirements or changes in oil prices driving up the fuel costs

- Worse than expected results for Mols-Linien in 2013 despite fleet upgrades due to a slow ramp-up in traffic and weather conditions	- In case of the operator's default, an EU-wide tender might result in the vessels no longer being employed on the same route
- Somewhat complicated structure due to multiple stakeholders involved	- Second-hand market for vessels rather illiquid; time and resource-consuming process, should a sale be needed

6.2. Downside Protection Mechanisms

Given the poor historical performance of Mols-Linien, our analysis focused heavily on establishing a structure that would provide sufficient downside protection. This included discussing mechanisms to ensure that the debt would be fully recovered, or at a minimum partially recovered, in the event Mols-Linien would face difficulties servicing the bareboat charter agreement, thereby hindering the SPV's ability to service the debt obligation to PCP. Consequently, a multi-layer analysis was required. Two main scenarios were identified in the default and recovery analysis: (1) alternative routes or operators for the vessel if Mols-Linien struggled to meet its charter obligations or defaulted, and (2) the residual value of the vessel in the event of a sale.

To accommodate the different scenarios, substantial time and effort in the underwriting process needs to be invested. As emphasised by academia as well as market participants, private debt fund managers stand out due to their ability to use different mechanisms, such as lien structuring, undertakings, covenants, and others to tailor loan agreements (Denis & Mihov, 2003; IMF, 2024; NAIC, 2024; P. Svensson, November 27, 2024; P. Probst, October 9, 2024). A thorough analysis and a solid structure would be necessary to secure the credit committee's approval.

6.2.1. Loan Structuring

Based on the combination of business and financial risks, private debt managers can choose to structure the loan either as senior, *unitranche*, junior, or other (Ares Management Corporation, 2024; Block et al., 2024; Rothschild & CO, 2024; Roy, 2018). For more mature businesses with low operational risk, it might make sense to use more junior liens, as that would allow a higher margin (P. Probst, October 9, 2024). Vice versa, strong asset-backing combined with senior security can provide sufficient comfort for a private debt fund to underwrite a loan that might not be realistic for a traditional bank from the credit risk perspective. Loans have a floating rate (IMF, 2024; NAIC, 2024) and higher margins compared to those offered by banks (Deutsche Bank, 2024).

For this case, the combination of business and credit risk reasoned that the EUR 24 million loan to High Speed Catamaran Limited would be structured as a senior secured term loan.

To provide a comprehensive quantitative analysis to further illustrate how a typical private debt fund would price and structure such a loan, we made assumptions based on our literature review, market statistics, and interviews with various market participants. Based on our financial analysis, we determined that an appropriate pricing for the loan would be approximately at a rate of EURIBOR + 7.5%. Given the very low EURIBOR rate environment at the time of extending the loan – consistently well below 1% –, the IRR yield for this investment, assuming it is held until its six-year maturity, is 9.4%. This is slightly on the lower end when looking at the aggregate returns over the two decades but is well aligned with the returns in 2014 – CDLI recorded a return of 9.6% (Ares Management Corporation, 2024).

Moreover, one could argue that providing a higher loan amount by allowing for reinvestment in the business could allow for a higher margin to be charged. We opted for keeping our focus on the non-pricing related protection mechanisms that a private debt lender should employ, and refrain from speculating around fund managers' ability to negotiate higher terms. Focusing on tailored loan features is also better aligned with our research question. Rather, we argue, that to ensure a minimum money multiplier and protect from rapid repayment risk, a non-call period would be used. Furthermore, considering the low interest rate environment, a non-negative floor for EURIBOR should be implemented to limit downside interest rate risk. Increased competition, potentially leading to lower returns and softer terms, concerns some investors (Block et al., 2024). This further emphasises the importance of constructing an optimal combination of pricing and non-pricing terms to manage a successful portfolio.

6.2.2. Stakeholder Analysis and Monitoring Covenants

Since the borrower is not owned by a prominent private equity firm, which would somewhat simplify ownership due diligence in the sponsored segment, conducting a comprehensive stakeholder analysis and ensuring robust control mechanisms is essential. Undertakings and maintenance covenants are useful tools to protect the downside (Block et al., 2024; Degerli & Monin, 2024; Denis & Mihov, 2003; Jang, 2024). While the borrower was the SPV, not Mols-Linien, indirect measures would be taken to closely monitor Mols-Linien's performance. We suggest that the EBITDA covenant should be set on the SPV at a level that would flag any

deterioration in the performance of the ferry operator. Despite Mols'Linien's performance being the focus of monitoring, placing the covenant on the SPV is considered sufficient to ensure effective risk management. Moreover, in such a scenario, Mols-Linien might object to covenants being placed on the company, as they are not directly involved in the transaction. In addition, the LTV covenant, also to be set on the SPV, would serve as a useful metric to monitor PCP's level of exposure as well as the overall performance of the loan. Due to the distance between the lender, the borrowing entity and the ferry operator, as well as the involvement of multiple jurisdictions, PCP could face challenges in enforcing contractual protections.

In addition to financial covenants, mapping out all stakeholders and their potential actions in scenarios where Mols-Linien might fail to honour its charter agreement offers valuable insights. Different measures could be implemented to ensure greater control. For instance, while owners, banks, or the government might not necessarily bail out Mols-Linien if it faced financial difficulties, it would also not be in their interests to allow the company to go into insolvency. In the absence of support from existing equity owners, the government would likely have strong incentives to maintain floating traffic and avoid a monopoly-like situation where customers would be forced to use the Great Belt Bridge route. Moreover, ensuring alternative traffic to the bridge is important from an infrastructure and security perspective. Despite Mols-Linien's seemingly good relationship with the bridge operator Storebælt (e.g. obligation to ensure an alternative route for the bridge, Sund & Bælt, 2014), it is uncertain whether the bridge operator would be incentivised to support a competitor. Additionally, Mols-Linien as an operator is not an entirely irreplaceable link in the system – the modern vessels would likely appeal to another operator. Lastly, the vessel owner Incat would be motivated to quickly find a new route or owner for the vessel and to maintain a good relationship with the lender. Overall, in a typical loan setup, the lender would also be protected by a Change of Control clause.

6.2.3. Collateral and Asset-Backing

All in all, as a senior asset-backed loan, it represents a fairly common structure used in the private debt direct lending market. While selling the illiquid asset would never be the preferred scenario, as recovering its residual value could prove challenging, having physical assets with high value relative to the loan ultimately provides strong security for the lender. To successfully enforce lender protection, specific considerations must be addressed and written into the loan agreement,

ensuring PCP has full control over the asset. For instance, this includes always being first in line of repayment, such as receiving insurance payments if anything happens to the vessel. Moreover, the owners would not be allowed to sell the vessel nor deploy it beyond defined limits in terms of operations or region. The same applies to the charter agreement where PCP would likely have the right to find another operator for the vessel if the agreement was breached. Although having the right to it, a breach is more likely to initiate further discussions or negotiations regarding additional protection mechanisms. By deferring more amortisation and interest payments, direct lenders demonstrate greater flexibility than banks (Jang, 2024). Furthermore, a borrower would probably find it easier to negotiate with a private debt fund than a syndicated loan, where amendments require agreement from multiple counterparties.

In the event of selling the vessel, PCP would likely ensure it maintains control over the process. To ensure a good understanding of the fair market value, it is common to have annual revaluations in place to actively monitor any unexpected decline in the value of the underlying asset. As the sale process of the illiquid asset would be time-consuming and costly, we assume that a private debt fund would likely require the SPV to maintain sufficient buffer liquidity.

6.3. Retrospective Evaluation

In retrospect, we conclude that the loan performed as expected, without the need to explore the realisation of default scenarios. It is important to note that Mols-Linien benefited from favourable external factors, particularly a significant drop in oil prices in 2014, reducing the largest expense item – fuel. (Trading Economics, 2024). Regardless, we note several events, such as the change in the operator's ownership and the route of KatExpress 1, which highlight the different scenarios and structural complexities a debt fund has to consider.

7. Concluding Remarks

Our research argues that private debt funds bridge an important financing gap when it comes to firms with a weaker financial track record, too complex structure, or insufficient size or maturity for the public market. Where a case might be deemed nonbankable, private lenders can step in by conducting rigorous due diligence and having the ability to tolerate higher risks by being compensated by somewhat higher margins and well-defined downside protection mechanisms. *"Direct lenders can tailor-make their documentation, and they have all these covenants and security packages – they can actually take the company from the borrowers if they need to* (P. Svensson, November 27, 2024).

PCP's decision to extend a loan to the holding entity of KatExpress 1 back in August 2014 might not seem obvious in terms of financing rationale at first glance. The SPV itself had no operations and its income generation was entirely dependent on the bareboat charter agreement with a Danish ferry operator, Mols-Linien, that had been financially struggling in recent years. However, private lenders' expertise and willingness to consider and thoroughly analyse cases like these can turn into successful investments. In addition to commercial analysis, we present an extensive default and recovery analysis and suggest multiple layers of protection mechanisms that a lender can establish in response. All in all, we believe this analysis illustrates what academia refers to when highlighting private debt intermediaries' ability to tailor lending solutions and bridge the financing gap.

We acknowledge there are some limitations in the generalisability of our conclusions, which is common to case study research. For one, while there are many private debt intermediaries in the market, we focused on private debt funds in the direct lending segment. Second, our case company in focus represent a compelling, yet less dominant strategy by conducting most of its transactions independently from private equity sponsors. Third, while having had the ambitious goal of providing a systematic review of existing literature, we acknowledge the persistent literature gap and the scarcity of aggregable and generalisable information on this market in general.

7.1. Further Research

Having that in mind, we suggest a few research avenues that would improve the overall market understanding. First, with limits on illiquid assets causing private debt to compete for allocation

against private equity and real assets, can large institutions such as insurance companies and pension funds benefit from incorporating private debt into their investment strategies? Notably, two out of four Swedish pension buffer funds are now investing in private debt. A qualitative analysis investigating why some funds have decided to invest while others do not could highlight different perspectives on how these institutions evaluate the asset class and how it compares to other illiquid assets. Second, it has been noted that private debt showed a somewhat greater resilience during COVID-19, with the impact more visible through contraction in bank lending. However, to our knowledge, there is yet no research focusing on this topic in depth. We suggest this to be a good starting point to explore the potential threats and opportunities of private debt during economic downturns.

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Appendix

Appendix A. Private Debt Market Data

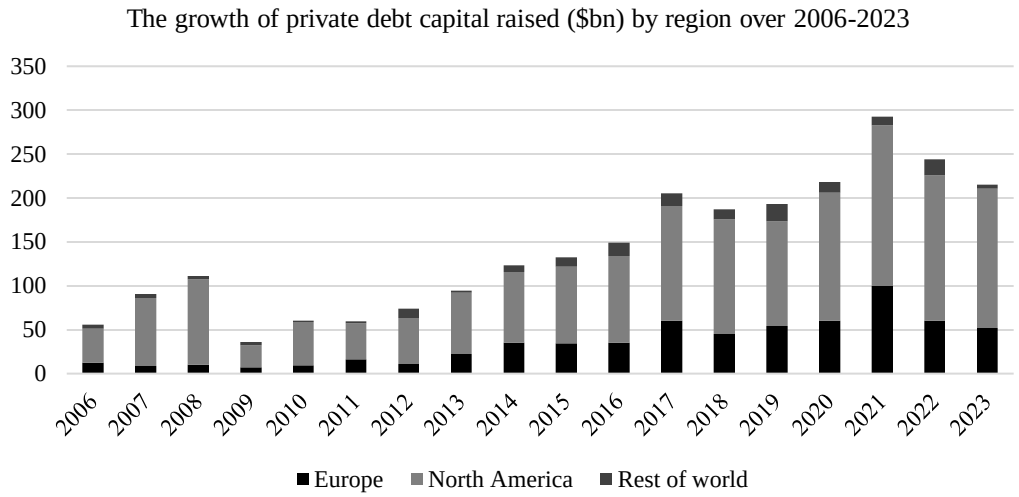
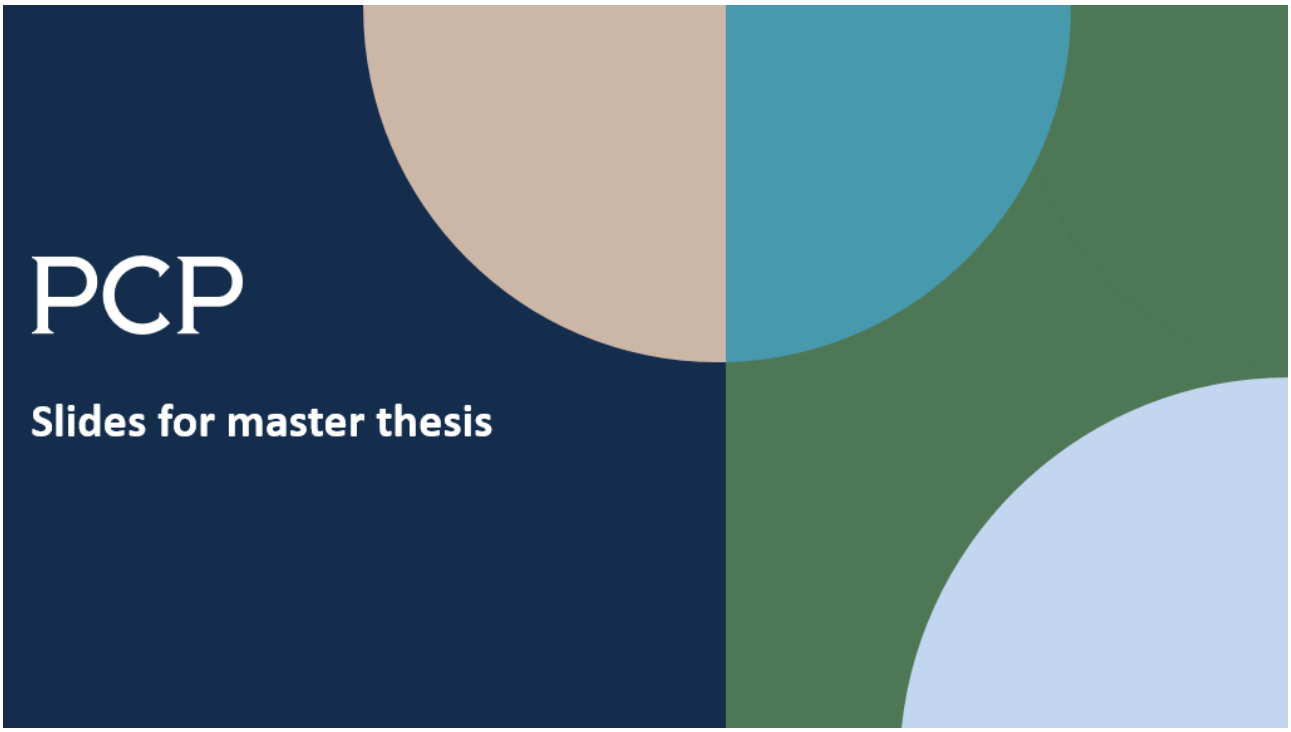


Figure A1. The growth of private debt capital raised in USD billion by region over 2006-2023. Data from PitchBook Data Inc. (2024).

Appendix B. PCP Introductory Materials.



PCP

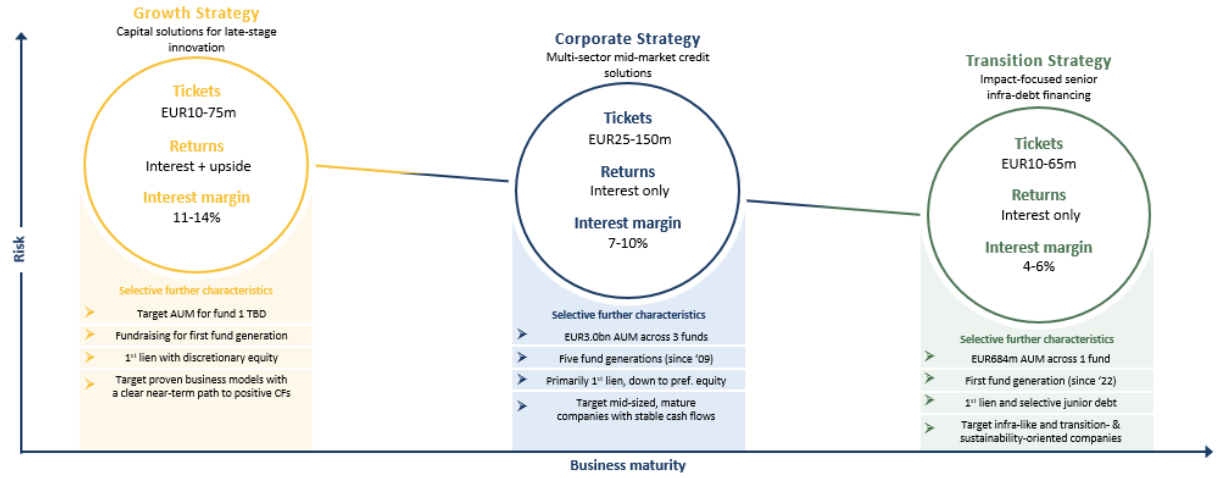
PCP is a strategic financial partner for private credit solutions

*PCP provides **tailored, non-dilutive funding solutions** to mid-sized companies across Europe. We act as a **strategic financial partner to entrepreneur- & family-owned companies, including developers of sustainable infrastructure**. Since inception, we have **invested in over 170 companies**, helping them to maximise their potential.*

PCP

PCP

PCP platform

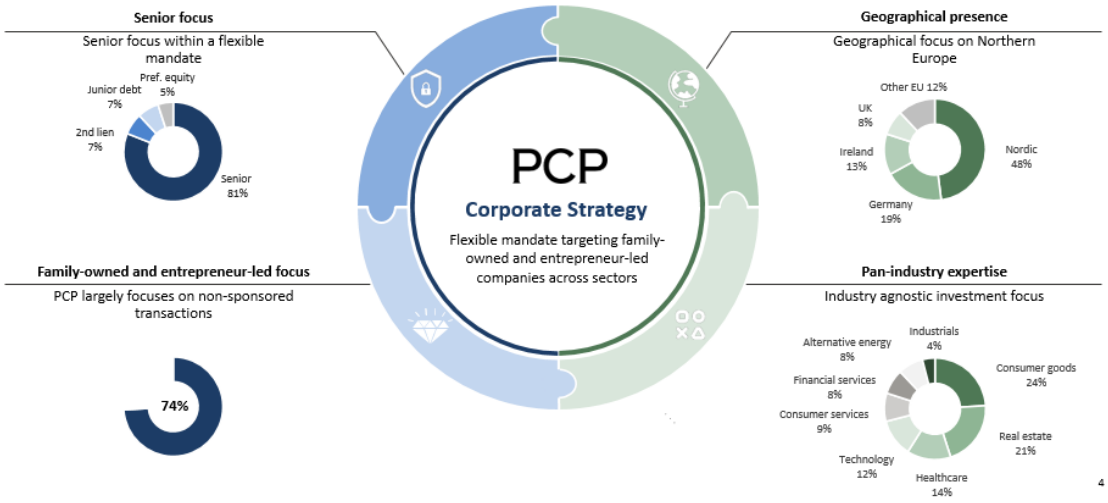


Complementary investment strategies enabling support throughout the entire business maturity lifecycle

PCP

PCP portfolio characteristics

PCP Corporate Strategy portfolio characteristics



PCP

Selected investments

MTD 2024 Capex Netherlands	plug 2024 Capex Netherlands	Foodji 2024 Capex Germany	CIC Hospitality 2024 Capex Norway	learnd 2024 Acquisition Germany	RUBIX 2024 Capex Switzerland
sparc 2024 Acquisition Sweden	LUNEOS 2024 Capex Poland	AVIA PHARMA 2024 Acquisition Sweden	AKBUTHNOT LATHAM 2023 Refinancing UK	be better energy 2023 Capex Denmark	ILMATAR 2023 Capex Finland
SCENIC 2023 Capex Switzerland	KINGFISH 2022 Capex Netherlands	GLENWOOD 2022 Acquisition Germany	hima 2022 Capex Norway	Scandinavianbiogas 2022 Capex Sweden	kry 2022 Capex Sweden

Growth Fund transactions *Transition Partner Fund transactions* *Corporate Strategy and Transition Partner Fund transaction*

PCP

Case study: KatExpress 1

Investment specifications

KatExpress 1	
Year of investment	2014-2021
Geography	Denmark
Sector	Transportation
Amount	€25m
Purpose	Refinancing / Growth
Structure	Senior secured

Investment overview

Company description

- **KatExpress 1** ("KE1" or the "Vessel") is a **high-speed catamaran owned** at the time by Robert Clifford, the founder/owner of Incat, an Australian shipyard which built KE1 and KE2
- The Vessel, together with sister ship KE2, was on a **bareboat charter** with the **Danish ferry operator Mols-Linien A/S** ("Mols-Linien"), serving the route Odden – Aarhus on Kattegat
- KE1 was **built in 2009**, is **112 meters long**, can reach a **speed of c. 40 knots** and can **carry 417 motorcars / 1,200 passengers**

Transaction background

- The owner of KE1 sought funding to **refinance existing indebtedness, pay transaction costs** and **reinvest into growth of the business**
- PCP appreciated the **strategic value of the Vessel** and **the route to Danish infrastructure**; the **superior customer experience**, and **environmental benefits** compared to older vessels and the **strong recent and projected performance of ferry operator Mols-Linien**
- Further, PCP enjoyed senior security over the Vessel with a **low LTV.** As such, PCP decided to provide a **€25m amortising facility.**

Investment details

- Following the investment in KE1, **PCP also provided financing for KE2 and the**, at the time, **newly built KE3**
- The Vessel, which remained operated by Mols-Linien throughout the loan, **changed route at the end of 2018**, sailing the Bornholm – Ystad route
- Driven by **strong utilisation**, which remained robust following the initial Covid-19 months, the Vessel and Mols-Linien continued their **strong performance** and through a cash-sweep mechanism **amortised on the PCP loan monthly**
- In Feb-21, **Mols-Linien was acquired by EQT Infra**, when PCP exposure had almost been fully amortised. **In Q1-21, the PCP facility was fully repaid**

Investment period timeline

2014

PCP

€25m PCP debt funding to refinance existing debt, pay transaction costs and enable reinvestments into the continued growth of Incat

KatExpress 1

Investment considerations:

1. Strategic value of the Vessel and route to Danish infrastructure
2. Modern Vessel, providing superior customer experience and more environmentally friendly services compared to older vessels
3. Strong recent and projected performance of Mols-Linien
4. Asset-backed with low LTV
5. Amortised across the loan period

2015

PCP

PCP expands its support with funding for KE2 and newly built KE3

Continuous strong utilisation and performance of the Vessel and Mols-Linien, coupled with monthly amortisations on the PCP KE1 facility

KatExpress 2 and 3

PCP refinances KE2 and supports in the construction and subsequent funding of the newly built KE3

2021

PCP

PCP, after enjoying monthly amortisations on its KE1 funding, **is successfully repaid in Q1-2021**

MOLSLINJEN EQT

In Feb and Mar-21, **EQT Infra acquired Mols-Linien and Torghatten**, respectively to form a pan-Nordic ferry operator

KatExpress 1

In Q1-21, following monthly amortisations since investment in 2014, the **PCP facility to KE1 was successfully repaid**

In 2014, PCP became a long-term financier to the owners of KE1 and subsequently KE2 and KE3, providing asset-backed funding to support the construction of new vessels, operate respective charters and facilitate reinvestment into the business

Appendix C. KatExpress 1 Overview

Table C1. Selected specifications for KatExpress 1. Retrieved from Incat website https://incat.com.au/wp-content/uploads/2018/02/hull-066-112m-mini-spec.pdf.

General:	2009; Yard No. 066; built by Incat Tasmania Pty Ltd.
Classification:	Det Norske Veritas; +1A1 HSLC R1 Car Ferry "B" EO
Size:	Overall length: 112.60m; waterline length: 105.6m; beam: 30.5m
Speed:	Approximately 39 knots at 600 DWT (Deadweight Tonnage)
Passenger Capacity:	1,200 people (including crew)
Vehicle Capacity:	417 cars or 567 truck lane metres* at 3.1m wide and 4.6m clear height plus 195 cars

** Authors' comment: if the truck lanes are maximised for trucks, the maximum capacity would be a combination of approximately 40 trucks + 195 cars in the remaining space.*

Figure C1. KatExpress 1. From top left: 1) 066 Express; 2) Trucks loaded on ferry; 3) Passengers bar/lounge; 4) Business class with recliner seating. All pictures from https://incat.com.au/vessel-gallery/066/.

Appendix D. Projected Revenue Model

Table D1. Revenue model. The analysis was conducted by the authors.

Revenue model (DKKm)	2012A	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Revenue									
Car units	220	278	321	360	401	438	469	500	525
Passengers	187	185	194	204	214	225	235	244	254
Ferry revenue	407	463	515	565	615	663	704	745	780
Catering	57	73	80	86	93	98	103	107	110
Total revenue	465	536	595	651	708	761	807	852	890

Table D2. Assumptions for revenue forecast model. The analysis was conducted by the authors.

Assumptions	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Share of revenue									
Car units	54%	60%							
Passengers	46%	40%							
Growth number of car units			9.0%	7.0%	6.0%	5.0%	4.0%	4.0%	3.0%
Growth number of passengers			4.0%	3.5%	3.2%	3.0%	2.5%	2.0%	2.0%
Growth revenue per car unit			6.0%	5.0%	5.0%	4.0%	3.0%	2.5%	2.0%
Growth revenue per passenger			1.0%	1.5%	1.5%	2.0%	2.0%	2.0%	2.0%
Catering growth			10.0%	8.0%	7.0%	6.0%	5.0%	4.0%	3.0%

Table D3. KPI analysis. The analysis was conducted by the authors.

KPI analysis	2012A	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E
KPIs									
# of departures	6,316	6,428	6,235	6,266	6,298	6,329	6,361	6,392	6,424
# of cars	751,635	938,465	994,773	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
# of car units	812,306	1,044,313	1,138,301	1,217,982	1,291,061	1,355,614	1,409,839	1,466,232	1,510,219
# of passengers	2,038,408	2,463,081	2,561,604	2,651,260	2,736,101	2,818,184	2,888,638	2,946,411	3,005,339
Rev/ passenger, DKK	92	75	76	77	78	80	81	83	85
Rev/ car unit, DKK	271	266	282	296	311	323	333	341	348
Catering revenue/ passer	28	30	31	33	34	35	36	36	37
Passenger/ car unit	2.5	2.4	2.3	2.2	2.1	2.1	2.0	2.0	2.0
Average # of cars	119	146	160	n.q.	n.q.	n.q.	n.q.	n.q.	n.q.
Average # of car units	129	162	183	194	205	214	222	229	235
Average # of passengers	323	383	411	423	434	445	454	461	468

Appendix E. Projected Cost Model

Table E1. Cost model. The analysis was conducted by the authors.

Cost model (DKKm)	2012A	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Revenue									
Ferry revenue	407	463	515	565	615	663	704	745	780
Catering	57	73	80	86	93	98	103	107	110
Total revenue	465	536	595	651	708	761	807	852	890
Operating expenses - vessels									
Fuel	214	224	211	201	202	205	208	209	211
Spare parts	26	26	26	27	28	29	30	30	31
Insurance	7	10	10	11	11	12	13	13	14
Other	1	1	1	1	1	1	1	1	1
Total operating expenses - vessels	247	261	249	240	243	246	252	254	257
Other operating expenses									
Terminal and port fees	36	44	45	46	47	48	49	50	51
Catering goods	19	25	27	29	31	32	34	35	36
Catering, other	5	6	7	7	7	8	8	8	9
Sales and admin costs	24	24	25	26	27	28	28	29	30
Total other operating expenses	83	99	104	108	112	116	119	122	126
Personnel expenses									
Board remuneration	2	2	2	2	2	2	2	2	2
Salaries	99	112	117	121	126	131	136	142	148
Pension contributions	9	10	10	10	10	11	11	11	12
Expenses for social securities	3	3	3	3	3	3	3	3	3
Total personnel expenses	113	127	132	137	142	148	153	159	165
Share of revenue									
Fuel	*46.1%*	*41.9%*	*35.4%*	*30.9%*	*28.6%*	*26.9%*	*25.8%*	*24.6%*	*23.7%*
Salaries	*21.3%*	*20.9%*	*19.6%*	*18.6%*	*17.8%*	*17.2%*	*16.9%*	*16.7%*	*16.6%*
KPIs									
Avg # of employees	223	233	235	238	240	242	245	247	250
Revenue per FTE	2,084,067	2,298,386	2,529,541	2,739,455	2,947,590	3,138,156	3,296,230	3,443,842	3,563,462
Personnel costs per FTE	505,888	543,725	559,955	575,660	591,832	608,484	625,631	643,288	661,468

Table E2. Cost model assumptions. The analysis was conducted by the authors.

Assumptions	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Fuel, # of departures	6,428	-3.0%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Fuel, price increase of LSMGO	109	-3.0%	-5.1%	0.0%	0.7%	1.3%	0.0%	0.0%
Spare parts	26	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Insurance	10	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Terminal and port fees	44	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Catering	31	8.0%	7.0%	6.0%	5.0%	4.0%	3.5%	3.0%
Sales and admin costs	24	5.0%	4.0%	3.5%	3.0%	3.0%	3.0%	3.0%
Personnel, # of staff	233	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Personnel, salary increases		3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

Table E3. Crude oil price estimations. Data from Equinor, Morgan Stanley Research, Goldman Sachs Equity Research & Deutsche Bank Markets Research. The analysis was conducted by the authors, with the last estimated price from each research department assumed for the subsequent years.

Crude oil price estimates	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Equinor	108.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Morgan Stanley	108.0	103.0	98.0	102.0	104.0	108.0	108.0	108.0
Goldman Sachs	108.7	106.5	100.0	100.0	100.0	100.0	100.0	100.0
Deutsche Bank	108.9	106.5	102.0	98.0	98.0	98.0	98.0	98.0
Average	**108.6**	**105.3**	**100.0**	**100.0**	**100.7**	**102.0**	**102.0**	**102.0**

Appendix F. Projected Financials

Table F1. Projected income statement. The analysis was conducted by the authors.

Income Statement (DKKm)	2012A	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Revenue									
Ferry revenue	407	463	515	565	615	663	704	745	780
Catering	57	73	80	86	93	98	103	107	110
Total revenue	465	536	595	651	708	761	807	852	890
Growth	*(7%)*	*15%*	*11%*	*9%*	*9%*	*8%*	*6%*	*6%*	*5%*
Operating expenses - vessels									
Fuel	214	224	211	201	202	205	208	209	211
Spare parts	26	26	26	27	28	29	30	30	31
Insurance	7	10	10	11	11	12	13	13	14
Other	1	1	1	1	1	1	1	1	1
Total operating expenses - vessels	247	261	249	240	243	246	252	254	257
Other operating expenses									
Terminal and port fees	36	44	45	46	47	48	49	50	51
Catering goods	19	25	27	29	31	32	34	35	36
Catering, other	5	6	7	7	7	8	8	8	9
Sales & admin costs	24	24	25	26	27	28	28	29	30
Total other operating expenses	83	99	104	108	112	116	119	122	126
Personnel expenses									
Board renumeration	2	2	2	2	2	2	2	2	2
Salaries	99	112	117	121	126	131	136	142	148
Pension contributions	9	10	10	10	10	11	11	11	12
Expenses for social securities	3	3	3	3	3	3	3	3	3
Total personnel expenses	113	127	132	137	142	148	153	159	165
EBITDA	21	49	111	166	211	251	283	316	342
D&A	82	42	57	57	57	57	57	57	37
EBIT	(61)	7	54	109	154	194	226	259	306
Financial net	(24)	(42)	(51)	(49)	(47)	(44)	(42)	(40)	(38)
EBT	(85)	(35)	3	60	107	150	184	219	268
Taxes	0	0	(1)	(15)	(24)	(33)	(41)	(48)	(59)
Net income from continued operations	(85)	(35)	2	45	84	117	144	171	209
Result from discontinued operations	(4)	0	0	0	0	0	0	0	0
Net income	(88)	(35)	2	45	84	117	144	171	209
KPIs									
EBITDA-margin	*4.6%*	*9.1%*	*18.6%*	*25.5%*	*29.8%*	*33.0%*	*35.1%*	*37.1%*	*38.5%*
Profit margin	*neg.*	*neg.*	*0.4%*	*7.0%*	*11.8%*	*15.4%*	*17.8%*	*20.1%*	*23.5%*

Table F2. Further assumptions. The analysis was conducted by the authors.

Assumptions	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E
D&A	42	57	57	57	57	57	57	37
Financial net	(42)	20%	-4%	-4%	-5%	-5%	-5%	-5%
Taxes	25%	25%	25%	22%	22%	22%	22%	22%

Table F3. Depreciation estimation. The analysis was conducted by the authors.

Depreciation (DKKm)	Useful life, years	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Ferry - Max Mols	6	120	20	20	20	20	20	20	0
Ferry - KatExpress 1	23	342	15	15	15	15	15	15	15
Ferry - KatExpress 2	24	437	18	18	18	18	18	18	18
Terminals and port facilities	10	18	2	2	2	2	2	2	2
Inventory	4	7	2	2	2	2	2	2	2
Total depreciation			**57**	**57**	**57**	**57**	**57**	**57**	**37**

Appendix G. Estimated Ability to Service Charter Agreement

Table G1. Ability to service charter agreement. The analysis was conducted by the authors.

Ability to service charter agreement	2012A	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBITDA	**21**	**49**	**111**	**166**	**211**	**251**	**283**	**316**	**342**
Capex	(49)	(55)	(40)	(40)	(43)	(43)	(45)	(45)	(31)
Change in working capital	(20)	8	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Cash tax	0	0	(1)	(15)	(24)	(33)	(41)	(48)	(59)
Operating cash flow	**-48**	**1**	**67**	**108**	**141**	**172**	**194**	**219**	**249**
Financial lease commitments	(1)	(28)	(64)	(80)	(80)	(80)	(80)	(80)	(80)
Sale of assets	35	23	0	0	0	0	0	0	0
Free cash flow	**-14**	**-3**	**3**	**28**	**62**	**93**	**114**	**139**	**169**

Table G2. Assumptions used to project free cash flows. The analysis was conducted by the authors.

Assumptions	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Capex	0	(40)	(40)	(43)	(43)	(45)	(45)	(31)
Change in working capital	8	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Cash tax	0	(1)	(15)	(24)	(33)	(41)	(48)	(59)
Expected financial lease payment	-28	(64)	(80)	(80)	(80)	(80)	(80)	(80)
Sale of assets	23	0	0	0	0	0	0	0

Financial lease obligations	
Within 1 year	64
Between 1-5 years	319
Beyond 5 years	781

Appendix H. Vessel Valuation

Table H115. Residual values of the vessel based on internal valuation with support from third-party valuation company The initial fair market value is assumed to be EUR 48 million in 2014. The vessel is assumed to depreciate around 35-40% over the six years, with the assumption of accelerated value depreciation. Residual values at the beginning of each year.

Residual Values	EUR
2015	45,500,000
2016	42,000,000
2017	39,000,000
2018	36,500,000
2019	34,000,000
2020	32,500,000