



Facultad de Ciencias Económicas y Empresariales

ICADE

The Evolution and Strategic Innovation of the European CLO Market: Convergence with Private Credit and the Transformation of Non-Bank Lending

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Resumen del trabajo

El propósito de este trabajo es examinar la evolución del mercado europeo de collateralized loan obligations (CLOs) y analizar cómo su desarrollo reciente se relaciona con cambios más amplios en la financiación no bancaria. En primer lugar, se explican los fundamentos estructurales de los CLOs, su papel dentro del ecosistema de leveraged finance y los principales agentes implicados en su emisión, gestión y distribución. A continuación, se estudia la evolución histórica del mercado europeo, con especial atención a su recuperación tras la crisis, a su creciente relevancia dentro de la titulización europea y a sus diferencias estructurales respecto al mercado estadounidense. El análisis también aborda el marco regulatorio aplicable, especialmente los efectos de Basilea III, la normativa europea de titulización, los requisitos de retención de riesgo y las exigencias de transparencia, con el fin de evaluar su influencia sobre el desarrollo del mercado. Sobre esta base, el trabajo examina la conexión creciente entre el mercado de CLOs y la expansión de la financiación alternativa en Europa. En particular, se analiza cómo una regulación bancaria más estricta, los cambios en los requisitos de capital y el auge del private credit han transformado el contexto en el que operan estos instrumentos. Mediante una metodología cualitativa basada en literatura académica, publicaciones regulatorias e informes sectoriales, el estudio concluye que el mercado europeo de CLOs está evolucionando hacia una relación cada vez más estrecha con el private credit y consolidándose como una pieza relevante dentro de la arquitectura de la financiación no bancaria moderna.

Abstract

The purpose of this dissertation is to examine the evolution of the European collateralized loan obligation (CLO) market and to assess how its recent development relates to broader changes in non-bank lending. The paper begins by explaining the structural fundamentals of CLOs, their role within the leveraged finance ecosystem, and the main participants involved in their issuance, management, and distribution. It then traces the historical development of the European CLO market, paying particular attention to its post-crisis recovery, its growing relevance within European securitization, and its structural differences from the more mature U.S. market. The analysis also considers the regulatory framework surrounding the asset class, especially the effects of Basel III, EU securitization rules, risk-retention requirements, and disclosure standards, in order to understand how these factors have influenced market development. Building on this foundation, the dissertation explores the increasing connection between the CLO market and the wider expansion of alternative lending in Europe. In particular, it examines how tighter bank regulation, changing capital requirements, and the rise of private credit have altered the context in which CLOs operate. Special attention is given to the emergence of middle-market and private-credit CLOs as a new area of development within European structured finance. Through a qualitative methodology based on academic literature, regulatory publications, and industry reports, the study analyzes these trends from a historical, regulatory, and strategic perspective. Overall, the dissertation concludes that the European CLO market is moving toward a closer relationship with private credit and is becoming an increasingly relevant element in the architecture of modern non-bank lending.

Palabras clave

Obligaciones garantizadas por préstamos apalancados (CLOs), mercado europeo de CLOs, private credit, financiación no bancaria, préstamos apalancados

Key words

Collateralized Loan Obligations (CLOs), European CLO market, Private credit, Non-bank lending, Leveraged loans

Index

Section 1: Introduction.....	7
1.1. Objectives of the study	7
1.2. Rationale and significance of the topic	7
1.3. Methodology overview.....	8
1.4. Structure	8
Section 2: Literature review	10
2.1. Securitization as the broader framework for understanding CLOs.....	10
2.2. CLO resilience and remaining gaps in literature.....	11
Section 3: Fundamentals of CLOs	13
3.1. Definition and essential characteristics of a CLO	13
3.2. Leveraged loan origination and the role of CLOs in the leveraged finance ecosystem	15
3.3. The lifecycle of a CLO transaction	17
Section 4: Historical Development and Market Evolution of the CLO Market in Europe..	23
4.1. Origins of the CLO market in Europe and comparison with the U.S.	23
4.2. Post-crisis recovery and evolution since 2008	24
4.3. Market Size and Issuance Trends	25
Section 5: Regulation and Market Dynamics	28
5.1. The impact of Basel III and bank capital constraints	28
5.2. EU Securitization Regulation and risk-retention rules	29
5.3. Transparency, disclosure, and investor protection requirements	30
5.4. Comparative insights: European vs. U.S. regulatory frameworks	30
Section 6: Strategic Innovation and Convergence with Private Credit.....	33
6.1. Emergence of Middle-Market and Private-Credit CLOs	33
6.2. Drivers of Convergence Between Structured and Private Lending	35
6.3. The Role of Asset Managers and Institutional Investors	37
6.4. Strategic Implications for Scalability and Diversification	39
Section 7: Conclusions.....	42
Section 8: Generative AI Tools Usage Declaration	44
Section 9: References.....	45

Index of Figures

Figure 1 - European CLO Default History	11
Figure 2 - Simplified CLO vehicle structure	15
Figure 3 - CLO Lifecycle	17
Figure 4 - CLO Investor Base	21
Figure 5 - Pre-crisis vs. Post-crisis CLO structure	25
Figure 6 - Global CLOs Outstanding by Geography.....	27

Section 1: Introduction

1.1. Objectives of the study

The objective of this dissertation is to analyze the evolution and strategic innovation of the European CLO market, with particular attention to its adaptation to the changing financial and regulatory conditions and to the growing convergence between CLOs and private credit within the broader transformation of non-bank lending.

More specifically, the study will trace the historical development of the European CLO market and compare its trajectory with that of the more established U.S. CLO market. It will also examine the structural characteristics of European CLOs and the role of key market participants, including arrangers, managers, investors, and rating agencies, in order to understand how their functions and incentives shape market dynamics. In addition, the dissertation will assess the impact of regulatory and policy frameworks, such as Basel III, the EU Securitization Regulation, and risk-retention rules, on market growth, transparency, and investor behavior. Finally, it will analyze recent innovations in the market, particularly the emergence of middle-market and private credit CLOs, to evaluate how these structures reflect a convergence between traditional securitization and private lending, as well as their implications for market scalability, diversification, and the future positioning of the European alternative credit market.

1.2. Rationale and significance of the topic

The choice of this topic is justified by the growing importance of CLOs within modern credit markets and, at a more personal level, by an initial interest developed during a summer internship in the Credit Strategies team at Arcano Partners, where I was exposed to the preparation of the firm's first CLO issuance. More broadly, the European CLO market has gained relevance within the wider transformation of non-bank lending, as tighter banking regulation, changing capital requirements, and the expansion of alternative asset managers have gradually shifted credit intermediation beyond traditional bank balance sheets. Although CLOs have traditionally been analyzed as a structured finance product linked to the leveraged loan market, their role has become more significant in recent years, particularly in Europe, where the market combines the structural features of an established securitization product with a more recent process of market development, regulatory adaptation, and strategic innovation. This transformation is especially visible in the gradual convergence between traditional CLO structures and private credit, a trend that is already more advanced in the United States but has only recently begun to take part in Europe through the

first private-credit CLO transactions, which we will later analyze.

The relevance of the study also lies in the relative lack of integrated research on this topic. While CLOs have been widely discussed in relation to their structure, risk profile, and historical resilience, the European market has received less attention than the U.S. one, and even less has been written about its recent strategic evolution in connection with private credit. This dissertation seeks to contribute to that gap by offering a structured analysis of the European CLO market that combines historical development, regulatory context, and recent innovation trends. In doing so, it aims to be useful not only for students and researchers interested in securitization, leveraged finance, and alternative credit, but also for market participants seeking a broader perspective on the general functioning of CLOs and how they may continue to shape the future architecture of European non-bank lending.

1.3. Methodology overview

This dissertation will adopt a qualitative methodology based primarily on the review and synthesis of secondary sources. Rather than relying on an original quantitative dataset or econometric testing, the study will draw on academic literature, regulatory documents, market reports, and specialized industry publications in order to examine the European CLO market. This approach is considered appropriate given the nature of the topic, as the main objective is to organize, connect, and interpret a set of developments that are often analyzed separately, including the evolution of CLO structures, the role of market participants, the impact of regulation, and the growing convergence between CLOs and private credit. The analysis will therefore combine three complementary dimensions: a descriptive review of the market's historical development, a comparative perspective with particular attention to the U.S. market, and a strategic interpretation of the recent innovations reshaping the European CLO ecosystem.

1.4. Structure

The dissertation is organized as a progressive analysis of the European CLO market, moving from the conceptual foundations of the product to its broader strategic implications within non-bank lending. It begins by explaining the fundamentals of CLOs, including their structure, lifecycle, and the role of the main market participants. It then turns to the historical development of the European market, paying particular attention to its post-crisis evolution and to its comparison with the more established U.S. market. The following part examines the regulatory environment surrounding

European CLOs, with a focus on capital regulation, securitization rules, risk-retention requirements, and disclosure standards, while also highlighting the main contrasts with the U.S. framework. Building on this background, the dissertation then explores the most recent phase of market innovation, specifically the emergence of middle-market and private credit CLOs, the drivers behind the convergence between structured finance and private lending, and the strategic implications of this trend. Finally, the study closes with the main conclusions, together with some possible avenues for future research.

Section 2: Literature review

2.1. Securitization as the broader framework for understanding CLOs

To provide a comprehensive foundation for this literature review, it is essential to first situate CLOs within the broader evolution of securitization. In the literature, securitization is generally understood as the process through which loans that would otherwise remain on financial intermediaries' balance sheets are transformed into securities and placed in capital markets. Gorton and Metrick (2012) stress that this process became one of the largest capital-market developments of the pre-2008 Global Financial Crisis period and, despite its transformative effect on financial intermediation, remained underexplored in academic literature relative to its importance. CLOs sit under an even more unknown segment within this securitization environment of the financial landscape.

At the same time, the post-crisis literature makes clear that securitization cannot be presented only as a neutral efficiency-enhancing innovation. Shin (2010) argues that securitization was initially meant to disperse credit risk toward those better able to bear it, but in practice often extended intermediation chains and concentrated risk within the financial sector itself. This post-crisis reassessment is useful because it gives us an idea about why all structured credit products came under suspicion after 2008. It also helps frame a key analytical question that later appears in the CLO literature: whether CLOs should be treated simply as another expression of pre-crisis structured finance, or whether their structure, collateral base, and funding model justify a more differentiated interpretation.

Within this broader securitization universe, literature usually treats CLOs as a more specific category, as it is linked to leveraged corporate credit rather than to household credit or static bond pools. PineBridge emphasizes that leveraged loans are more than just the collateral backing a CLO, as their characteristics also help explain some of the product's main advantages. In particular, they support its floating-rate income profile and contribute to its resilience, given their senior secured nature and their historically stronger recovery rates compared with many other forms of sub-investment-grade credit. In other words, CLOs appear here not as an isolated product, but as one branch of securitization that became especially relevant in leveraged finance because it linked institutional investors to syndicated loan markets through a structured but durable form of intermediation (PineBridge Investments, 2024).

2.2. CLO resilience and remaining gaps in literature

One of the most important reasons why CLOs deserve separate treatment in literature is that they have generally been discussed as more resilient than other structured products that became infamous during the 2008 crisis, especially certain Collateralized Debt Obligations (CDO) structures. Oaktree argues that CLOs contain embedded protections designed to impede the kind of self-reinforcing and risk-amplifying dynamics associated with crisis-era CDOs. The point is not that CLOs are risk-free, but that the literature does not usually place them in the same analytical category as the products most closely associated with “mortgage-related contagion”. This distinction is especially relevant for us because it helps explain why CLOs have remained an active and investable segment of structured credit even after the reputation shock suffered by securitization more broadly. It also provides a natural bridge from the generic post-crisis debate on structured finance to the more specific question of why CLOs continued to develop rather than disappear (Oaktree Capital Management, 2023).

This distinction is reinforced by European default data. As shown in Amundi’s review of European securitizations, historical default rates for European CLO tranches have remained extremely low, which supports the view that CLOs should not be treated analytically in the same way as the structured products most closely associated with the 2008 crisis. In the data presented, cumulative defaults across European CLO tranches remain minimal over the full sample, while post-crisis “CLO 2.0” structures, a category explained later in the dissertation, record no defaults at all (Vannier et al., 2024).

European CLO Default History by tranche from 2001 to 2023

	EUR CLOs (2001-2022)	EUR CLOs (2001-2022)	EUR CLO 1.0 (2001-2009)	EUR CLO 2.0 (2010-2023)
Original Rating	Total Tranche Number	Number of defaulted tranches	Number of defaulted tranches	Number of defaulted tranches
AAA	1327	-	-	-
AA	1144	-	-	-
A	843	-	-	-
BBB	863	4	4	-
BB	739	17	17	-
B	485	1	1	-
Total count	5401	22	22	0
Cumulative default		0.41%	1.5%	0.0%

Source: Amundi Institute, European Securitisations: Risk and Opportunities for Pension Funds (2024)

Figure 1 - European CLO Default History

This differentiated treatment is also supported by academic literature on CLO performance. Cordell, Roberts, and Schwert (2021) show that CLO debt tranches have offered higher returns than similarly rated corporate bonds, while equity performance reflects a persistent spread between leveraged-loan pricing and CLO debt funding costs. More importantly for the framing of this dissertation, the same study explicitly links CLO resilience to structural features such as their closed-end design, long-term funding, and embedded reinvestment options.

Still, the more recent supervisory literature adds an important note of caution. IOSCO (2024) acknowledges that leveraged loan and CLO markets historically had low default rates and performed well during the global financial crisis, but it also argues that the market has evolved materially since then. According to its review, borrower quality has weakened on average, covenant-lite structures have become more common, documentation has grown more complex, and the investor base has shifted from banks toward non-bank investors, especially CLOs themselves. The key issue is no longer just whether CLOs performed better than other structured products in the past, but whether the underlying leveraged-loan market is changing in ways that could matter for future performance, transparency, and investor protection.

A further reason why this topic remains relevant is that the literature is still fragmented. Much of the available work is either broad background on securitization, product primers written by market participants, regulatory and supervisory analysis, or performance studies that rely heavily on U.S. data. From the perspective of this dissertation, the main gap is therefore not the absence of material, but the absence of a sufficiently integrated framework that connects structured credit, the European CLO market, and the broader reconfiguration of non-bank lending. That is precisely where this dissertation aims to contribute.

That gap becomes even more relevant once the discussion is extended to private credit. PIMCO argues that tighter liquidity conditions, regulatory scrutiny, and higher capital costs have pushed banks to retreat from many forms of lending, creating space for private capital to step in (Weinstein et al., 2023). This shows that the evolution of CLOs can no longer be interpreted only within the traditional boundaries of syndicated leveraged finance. Instead, CLOs increasingly need to be read alongside the wider transformation of credit intermediation outside bank balance sheets. Literature is already clear on the rise of private credit as a consequence of bank retrenchment, but it is still less developed when it comes to linking that shift to the future role of the European CLO market.

Section 3: Fundamentals of CLOs

3.1. Definition and essential characteristics of a CLO

A CLO is a structured credit vehicle that securitizes a portfolio of leveraged loans, typically 200 or more, which tend to be senior secured loans extended usually to non-investment-grade companies; this is, companies with a BB+ Credit Rating or lower. These loans, characterized by higher yields and greater credit risk than traditional corporate lending, and often arising as a typical financing component for Leveraged Buyout (LBO) transactions, constitute the main assets of the Special Purpose Vehicle (SPV) under which the CLO is issued. Although CLO portfolios may occasionally include other types of debt instruments, such as high-yield bonds, their presence is limited, as the structure primarily relies on floating-rate leveraged loans (typically tied to a benchmark such as SOFR in the U.S. market and EURIBOR in the European market) to generate consistent cash flows and mitigate interest rate risk (Ares Management Corporation, 2023; PineBridge Investments, 2024).

In recent years, a growing subset of CLOs has also started to incorporate private-credit loan exposures, also known as middle-market CLOs. These are loans to smaller or private companies originated by non-bank lenders such as private credit funds. This development reflects the broader expansion of the private credit asset class and its gradual convergence with traditional leveraged-loan CLOs, a trend that will be examined in greater detail later in this study.

The SPV finances the acquisition of this loan portfolio by issuing several tranches of debt with different risk and return profiles, ranging from senior AAA-rated debt to a single B tranche and the remaining subordinated equity. Investors usually invest in one of these tranches rather than the whole CLO vehicle, and the tranche election will depend on the risk appetite and typology of the investor. The cash flows generated by the underlying loans, such as interest and principal repayments, are distributed to investors following a predefined priority of payments, known as the “waterfall”. Under this structure, senior tranches receive interest and principal payments first, while junior tranches and the equity tranche are paid only if and after all obligations to more senior investors have been satisfied (Ares Management Corporation, 2023).

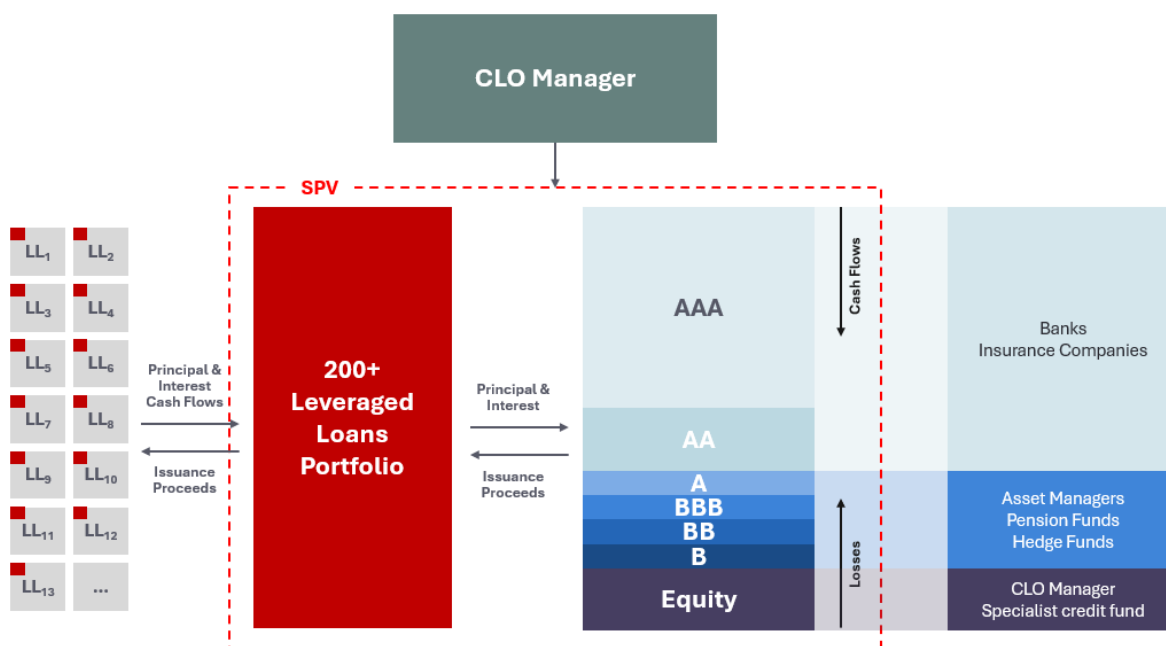
The equity tranche, which absorbs potential losses first and benefits from residual cash flows last, is often partially retained by the CLO manager or its affiliates to align incentives and demonstrate commitment to performance. The return profile for the debt tranches is relatively straightforward:

they pay a floating-rate coupon indexed to a benchmark plus a fixed spread, and the underlying leveraged loans in the collateral pool are also floating-rate instruments tied to that same benchmark rate. By contrast, the equity tranche's return emerges primarily from the spread between the yield on the loan portfolio and the cost of funding represented by the CLO's issued debt. To illustrate this concept with a simplified example: if a CLO vehicle acquires a pool of Leveraged Loans averaging Euribor + 400bps and the weighted average cost of its debt tranches is Euribor + 200bps, the "excess spread" would be approximately 200bps. If the total asset size is EUR 400 million and equity represents about 10% (EUR 40 million), then the net excess margin of EUR 8 million (400×0.02) corresponds to an annualized return on equity of 20% ($8/40$). In this sense, the equity tranche is effectively levered at 10x, so that structural arbitrage of the pool of assets generates a 20% return on the 200bps spread.

A key conceptual distinction within this product lies between balance sheet CLOs and arbitrage CLOs. Balance sheet CLOs are typically issued by banks or lending institutions as a risk management tool, allowing them to transfer credit exposure and regulatory capital requirements from their own balance sheets to external investors. In contrast, arbitrage CLOs, which represent the vast majority of modern transactions, are created by independent asset managers to capture the spread we just mentioned in the example above. This study will focus on arbitrage CLOs, as they constitute the dominant form in the European market and are the main driver of its dynamics (Hwang, 2021).

Figure 2 below provides a schematic representation of a typical CLO structure and the distribution of cash flows across tranches.

Simplified structure of a CLO and distribution of cash flows, losses, and investor participation



Source: own elaboration

Figure 2 - Simplified CLO vehicle structure

3.2. Leveraged loan origination and the role of CLOs in the leveraged finance ecosystem

The origin of a CLO must be traced back to the issuance of the leveraged loans that will constitute the vehicle's assets. Non-investment-grade companies, as we said, often private equity-backed or in the context of an LBO, seek debt financing to support such LBOs, dividend recapitalizations, or refinancings.

The process typically begins with an investment bank structuring and underwriting the leveraged loan. The bank issues this loan to institutional investors through the syndicated loan market, distributing exposure among banks, funds, and CLO managers. CLO vehicles actually constitute the largest source of demand in this market, providing stable and recurring demand for leveraged loans and thereby acting as a critical liquidity component in the leveraged finance space (Ares Management Corporation, 2023).

The interaction between leveraged loan issuance and CLO formation creates an interconnected mechanism within the leveraged finance ecosystem. High investor demand from CLOs compresses

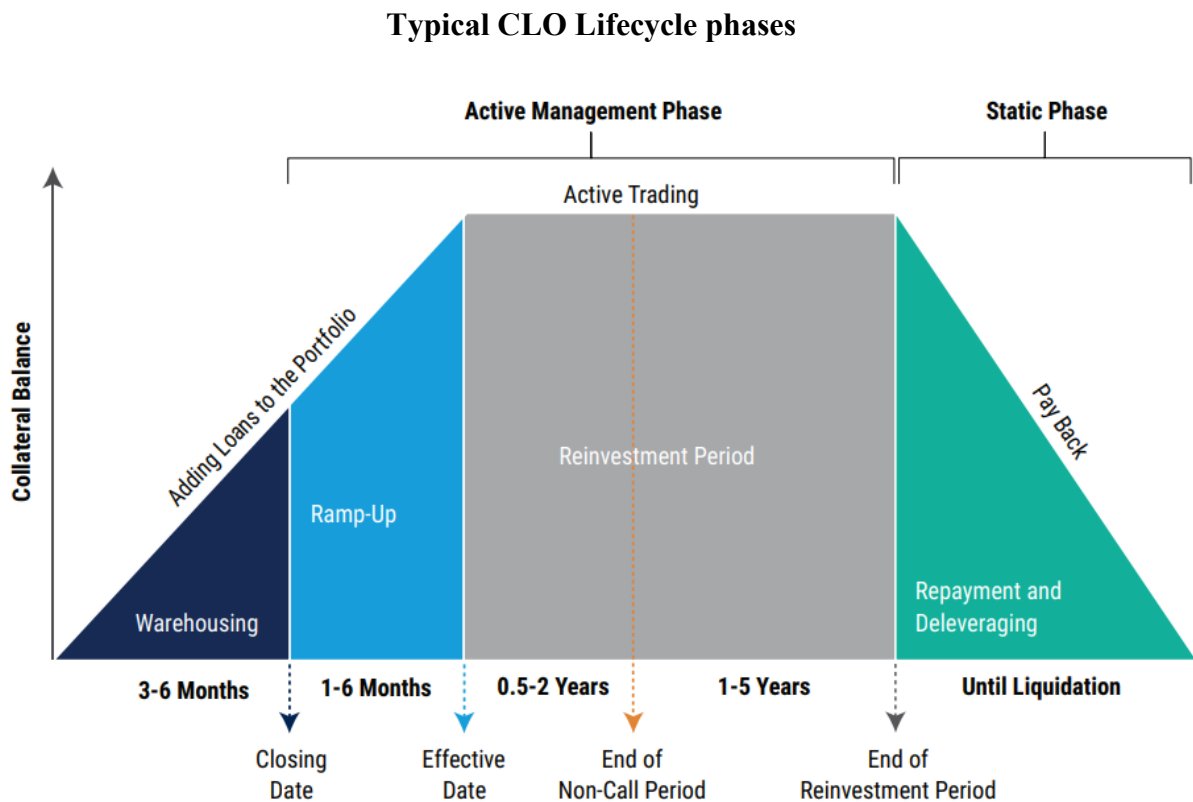
loan spreads and facilitates large LBO transactions, while a slowdown in CLO issuance tends to tighten funding conditions for these sub-investment-grade borrowers. This interdependence has become particularly evident during market stress periods, such as the 2020 COVID-19 liquidity shock and the 2022–2023 rate-hiking cycle, when CLO issuance slowed, which could be interpreted to have led to a contraction in leveraged lending activity (International Monetary Fund, 2024).

From an ecosystem perspective, CLOs primarily serve as a demand anchor for the leveraged loan market. By increasing leveraged loan liquidity by the means of rated securities with differentiated risk profiles, CLOs broaden the investor base that can access leveraged credit exposure. This transformation allows institutional investors with varying mandates, such as insurance companies, pension funds, or asset managers, to participate in the leveraged loan market through specific tranches that match their risk and return preferences, rather than holding loans directly (Ares Management Corporation, 2023).

As a result, CLOs facilitate the efficient distribution of leveraged credit across the financial system and amplify the scalability of leveraged lending. Their presence supports continuous loan origination by providing arrangers and borrowers with a relatively stable source of institutional demand, reducing reliance on bank balance sheets and enabling larger and more frequent leveraged transactions.

3.3. The lifecycle of a CLO transaction

The figure below illustrates the typical lifecycle of a CLO, highlighting the sequence of stages through which the vehicle is created, managed, and ultimately amortized over time.



Source: PineBridge Investments, Seeing Beyond the Complexity: An Introduction to Collateralized Loan Obligations (2024)

Figure 3 - CLO Lifecycle

(a) Formation of the CLO Vehicle and the Warehouse Phase

The warehouse phase represents the preparatory stage of a CLO transaction, during which the manager starts accumulating a portfolio of leveraged loans before the vehicle's issuance. This stage is typically financed through what is called a warehouse facility, with leverage on the manager's equity provided by the arranging bank, enabling the manager to ramp up the portfolio to around 40-50% of the final target par value before closing (Western Asset Management, 2021). This warehouse period usually lasts around three to six months.

Once the portfolio is sufficiently ramped, the transaction moves to the securitization and issuance phase, where the SPV issues the multiple debt tranches and an equity tranche. Credit rating agencies evaluate the transaction's robustness through stress modelling of defaults, recoveries, and cash flows to determine the credit protection required for each tranche (ESMA, 2023).

(b) Ramp-Up Period

The ramp-up period begins immediately after the CLO closing, when the proceeds from the issuance are used to complete the acquisition of loans for the collateral portfolio. During this phase, the manager gradually builds the remaining portion of the portfolio in accordance with the eligibility, diversification, and quality tests defined in the CLO documentation. This period generally lasts between one and six months (Guggenheim Investments, 2024; Lesne, 2025).

(c) Reinvestment period

The reinvestment period typically lasts up to five years. During this phase, the CLO manager actively manages the loan portfolio by purchasing and selling loans, and by reinvesting principal proceeds from loan repayments or sales into new collateral. This flexibility allows the manager to optimize portfolio quality, capture additional spread, and maintain credit diversification (Lesne, 2025).

Reinvestment activity is conditioned by the investment criteria and concentration limits defined in the CLO's indenture. These include restrictions on single obligor exposure, industry concentrations, minimum weighted-average spreads, and limits on loans rated CCC or below (Callahan, 2020). During this stage, the CLO operates as an actively managed credit portfolio rather than a static securitization, and performance depends greatly on the manager's ability to navigate credit cycles and manage secondary market liquidity (Hwang, 2021).

Notably, this active reinvestment window overlaps with a contractual non-call period, typically ending about two years after the effective date, after which equity investors may direct a call, refinancing, or reset of the transaction (Lesne, 2025).

(d) Amortization phase

At the end of the reinvestment period, the CLO enters its amortization or also known as wind-down or repayment phase, during which the manager can no longer reinvest principal proceeds into new assets. Instead, all available funds are applied to amortize the outstanding CLO liabilities following the predefined waterfall of payments.

During this phase, the priority of payments becomes central. Interest and principal collected from the loan portfolio are distributed sequentially: first to cover administrative expenses and senior management fees, then to pay interest on the senior tranches, followed by the subordinated

tranches, and finally any residual cash flow to the equity investors. If certain performance or coverage tests are breached, such as the over-collateralization (OC) or interest coverage (IC) tests, the waterfall automatically diverts cash interest from junior tranches to repay senior tranches until the tests are met again. This mechanism ensures senior note protection and preserves credit stability (Kollmorgen & Kramer, 2024; Invesco, 2024).

(e) Refinancing, resets and optional redemption mechanisms

Within the lifecycle of a CLO, the manager and equity holders can make use of structural mechanisms (refinancing, resets and early redemptions) after the non-call date, which, as previously mentioned, will typically end two years after the reinvestment period starts, to optimize financing costs and adapt to evolving market conditions.

Refinancing involves replacing existing debt tranches with new debt at lower spreads, while typically leaving the underlying collateral unchanged. Such refinancing allows the CLO to benefit from tighter credit conditions and improve equity returns by reducing funding costs.

Reset transactions go a step further. They consist of a refinancing of all tranches in the vehicle and they can carry substantial modifications to the deal terms (such as extending reinvestment or maturity periods, altering tranche sizing, or adjusting structural triggers). So they re-issue the CLO, normally under improved conditions.

Optional redemption or early calls allow the equity tranche to redeem the outstanding debt earlier than the legal maturity, usually once the non-call period has expired and market conditions are favorable. This enables full repayment and redistribution of residual cash flows to equity (Kollmorgen & Kramer, 2024; Clifford Chance, 2023).

3.4. Key participants: arrangers, managers, investors, and rating agencies

The functioning of the European CLO market depends on the coordinated activity of several specialized actors whose functions and incentives are interdependent. The four key participants are: arrangers, CLO managers, investors, and rating agencies.

(a) Arrangers

Arrangers, typically investment banks, are responsible for structuring, underwriting, and

distributing CLO transactions. Their role begins at the intersection between leveraged loan origination and securitization. They arrange the warehouse financing to accumulate the collateral portfolio, coordinate the engagement of rating agencies, and manage the syndication and placement of the CLO tranches with investors.

In the European market, arrangers frequently act as both leveraged loan originators and CLO underwriters. This dual role connects the leveraged loan market directly to securitization, ensuring liquidity and facilitating the flow of credit to sub-investment-grade borrowers.

Arrangers earn structuring and placement fees, typically a small percentage of the deal's notional amount, which align their incentives with successful execution and distribution (Bates, 2022).

(b) CLO Managers

CLO managers oversee the portfolio of leveraged loans, making active investment decisions and ensuring compliance with the transaction's structural tests. Their responsibilities include loan selection, trading, monitoring of credit risk, and maintaining the CLO's eligibility criteria. During the reinvestment period, they reinvest principal proceeds and manage loan sales to maintain yield and diversification.

Managerial incentives are structured to align with investors through a combination of management and performance fees. Typically, managers receive a senior management fee based on the outstanding collateral, a subordinated incentive fee linked to equity performance, and in Europe they are also required to retain part of the equity tranche (generally at least 5% of the transaction's value) under the so-called "skin-in-the-game" requirement, to ensure alignment of interests (Kollmorgen & Kramer, 2024).

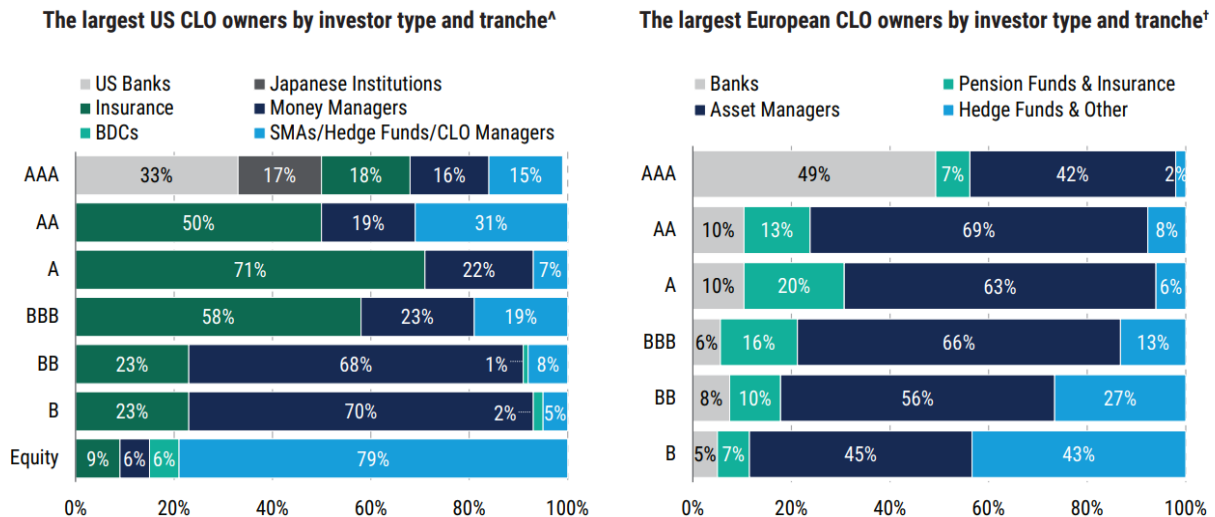
(c) Investors

Investors in CLOs include banks, insurance companies, pension funds, asset managers, and hedge funds, each targeting tranches consistent with their risk appetite, return expectations, and regulatory frameworks.

- Banks and insurance companies typically buy senior AAA tranches, attracted by high credit protection and favorable capital treatment under Basel III and Solvency II.
- Pension funds and traditional asset managers often invest in mezzanine (AA–B) tranches to achieve higher spreads with moderate risk.

- Hedge funds and specialist credit funds favor subordinated and equity tranches, drawn by their leveraged return potential and flexibility and control in refinancing and reset opportunities (M&G, 2024).

Typical CLO Investor Base by Geography and Tranche



Source: PineBridge Investments, Seeing Beyond the Complexity: An Introduction to Collateralized Loan Obligations (2024)

Figure 4 - CLO Investor Base

As illustrated in the figure above, banks in the U.S. CLO market are primarily concentrated in the most senior AAA tranches, reflecting their preference for the lowest-risk exposures with favorable regulatory treatment. By contrast, European banks exhibit a broader presence across all debt tranches, although their participation remains most significant in the AAA category. Another key distinction lies in the role of insurers: insurance companies represent a dominant investor base in the U.S. market, holding more than half of the AA to BBB range of tranches. In Europe, however, asset managers play a far more prominent role, representing the largest investor group across nearly all tranches except the AAA level. This divergence highlights how regulatory environments and institutional structures shape the investor composition of the CLO across geographies. It may also partly reflect the fact that, in Europe, banks remain more embedded in the broader leveraged finance ecosystem and may in some cases retain exposure to parts of the CLO capital structure, although risk-retention (a concept discussed in greater detail later in the dissertation) is not uniformly held by underwriting banks and is often satisfied by the CLO manager or a third-party originator.

(d) Rating Agencies

Rating agencies such as Moody's, S&P Global Ratings, Fitch, and Scope play a very significant role in the design and marketability of CLO transactions. They assess tranche-level credit risk through quantitative models incorporating assumptions on default probability, recovery rates, and portfolio correlations. These analyses determine the subordination level required for each rating category and thus directly shape the deal structure (ESMA, 2023).

Rating agencies also publish ongoing surveillance reports that update investors on credit-quality metrics and compliance with coverage tests. This continuous monitoring enhances secondary-market transparency and confidence. However, heavy market reliance on ratings can amplify systemic risks. For instance, tranche downgrades can trigger forced selling by regulated investors during market stress (ESMA, 2023).

Section 4: Historical Development and Market Evolution of the CLO Market in Europe

4.1. Origins of the CLO market in Europe and comparison with the U.S.

The CLO market originated in the United States in the 1990s, when investment banks and asset managers began securitizing portfolios of leveraged loans to redistribute credit exposure and provide institutional investors with floating-rate access to corporate credit (Barings, 2023; Guggenheim Investments, 2023). These transactions evolved from earlier CDOs but were distinct in being backed primarily by actively managed pools of senior secured loans rather than static bond portfolios (TwentyFour Asset Management, 2025).

In the U.S., CLOs quickly became a central element of the leveraged loan market, connecting corporate borrowers with non-bank investors. By the late 1990s, standardized deal structures, featuring multiple tranches of debt and equity and a defined payment “waterfall”, had established the foundation for the modern arbitrage CLO (PineBridge Investments, 2024).

The European CLO market emerged shortly thereafter, with the first rated transactions appearing around 2000, marking the beginning of what is now commonly referred to as the CLO 1.0 era. These early deals adapted the U.S. framework to Europe’s more fragmented credit environment and were primarily backed by loans to large corporates. Despite operating through major disruptions such as the dot-com downturn and the 2008 financial crisis, these early European CLOs demonstrated extremely strong credit resilience: of roughly 1,500 tranches issued between 2000 and 2009, only 22 ever defaulted, representing a lifetime default rate of about 1.5% (S&P Global Ratings, 2024).

While both regions share the same fundamental design, several distinctions, in part related to the nature of both economies, still persist. The first and most evident difference is the sheer size of each market, into which we will dive deeper later. European CLO portfolios typically show greater geographic diversification (although clearly skewed towards the western region), whereas U.S. CLOs are better diversified in terms of industry and number of borrowers.

In terms of credit rating, European CLOs show a higher share of B-rated exposures, while U.S. CLOs include more CCC-rated loans, reflecting a higher risk tolerance, also justified by a usually higher degree of leverage. It is also remarkable that European CLOs have outperformed U.S. ones during economic distress periods, such as the Global Financial Crisis and Covid-19 (TwentyFour

Asset Management, 2025). The investor base also differs: U.S. CLOs benefit from a deep domestic pool of banks, insurers, and funds, while European transactions attract a more international investor mix, with Japanese and U.S. banks buying senior tranches and European asset managers focusing on mezzanine and equity tranches (Kundu, 2022).

4.2. Post-crisis recovery and evolution since 2008

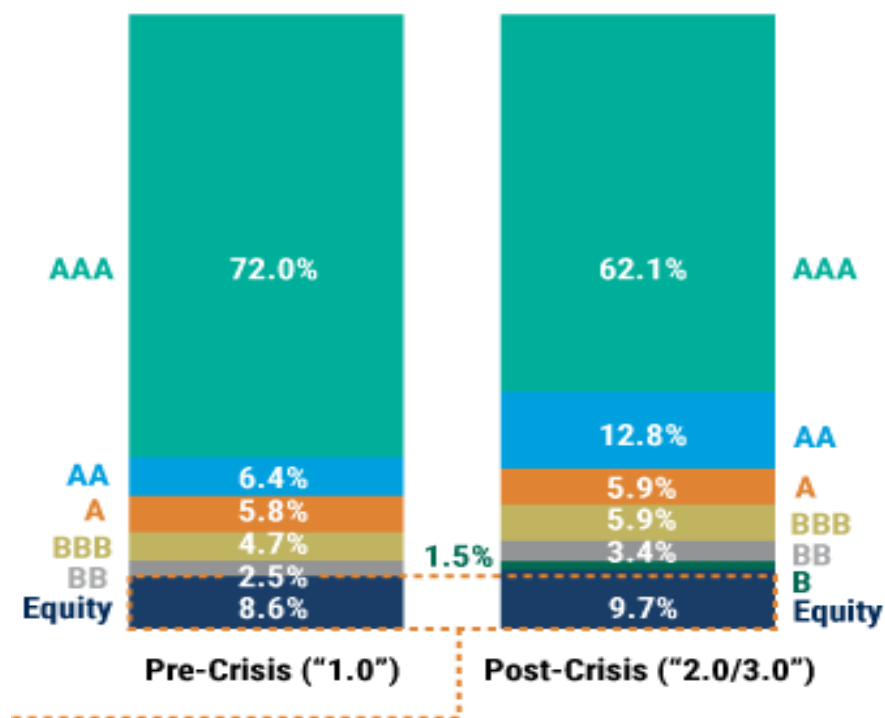
After the 2008 Global Financial Crisis (GFC), a new generation of CLOs emerged in the market. These vehicles, known as CLO 2.0, introduced a couple structural and regulatory enhancements that distinguished them from their predecessors. The origin of this distinction lies in the GFC itself, as all collateralized products came under scrutiny, leading regulators and arrangers to design more conservative and investor-protective structures.

One of the most notable differences is the reduction of the reinvestment and non-call periods, which typically came to stand at around four and two years, respectively (Kundu, 2022). Structurally, CLO 2.0 and 3.0 transactions featured greater credit enhancement and higher subordination levels. The average subordination for senior AAA tranches increased from roughly 28% in pre-crisis structures to around 38% in the post-2013 vintages, reflecting investors' preference for stronger protection and improved credit stability (PineBridge Investments, 2025). These enhancements were accompanied by a more sophisticated credit rating environment and the introduction of the European risk-retention rule.

The next phase, referred to as the CLO 3.0 era, began in 2014. This generation sought to further mitigate risks by excluding high-yield bonds and complying with the Volcker Rule and other post-crisis regulations. The Volcker Rule, enacted in 2010 as part of the Dodd-Frank Act, restricted proprietary trading by banking entities and limited their ability to own interests in certain "covered funds." In its original interpretation, CLOs holding any securities other than loans, such as high-yield bonds, could fall within this definition, thereby constraining banks' capacity to invest in those structures. As a consequence, new U.S. CLO transactions were redesigned as predominantly "loan-only" vehicles, with bond buckets either eliminated or strictly limited. This regulatory constraint significantly influenced the architecture of post-crisis CLOs and reinforced the central role of senior secured leveraged loans as underlying collateral (Invesco, 2024). In 2020, amendments to the Volcker Rule allowed CLOs to reintegrate a limited portion of high-yield assets, generally between 5% and 10%, while simultaneously increasing subordination levels to protect senior tranches. As PineBridge Investments (2024) notes, the CLO 3.0 framework demonstrates the

market’s continued evolution toward stronger investor safeguards and long-term resilience.

Pre-crisis vs. Post-crisis CLO Tranche Capital Structure Distribution



PineBridge Investments, CLO Equity: A Primer for Investors (2025)

Figure 5 - Pre-crisis vs. Post-crisis CLO structure

4.3. Market Size and Issuance Trends

The European CLO market has become a central component of Europe’s structured finance system, with issuance volumes and investor participation expanding substantially over the past decade. Although smaller in absolute size than the U.S. market, the European segment has demonstrated remarkable maturity and resilience, especially following the post-pandemic recovery in leveraged loan origination and the normalization of monetary conditions.

According to the European Securities and Markets Authority (ESMA, 2023), total securitization issuance in Europe averaged around €260 billion per year between 2009 and 2022, with CLOs representing an increasing share of this total, from about 9% in 2016 to nearly 19% in 2021. This expansion illustrates growing investor confidence and the structural importance of CLOs. ESMA also highlights that the post-COVID-19 period marked a sharp rebound in issuance, supported by strong demand for floating-rate instruments amid rising interest rates and a persistent appetite from insurance companies and pension funds.

Recent data confirm that this upward trajectory has continued through 2025. S&P Global Ratings (2025) indicates that European CLO issuance, including new transactions, refinancings, and resets, has reached approximately €70 billion year-to-date and is expected to set a new record by year-end. Market activity has been driven not only by new deals but also by a marked resurgence in refinancing and reset operations, as managers seek to extend reinvestment periods and lock in more favorable funding. The temporary slowdown in April 2025, linked to tariff-related market volatility, was quickly reversed as loan supply recovered and investor demand strengthened.

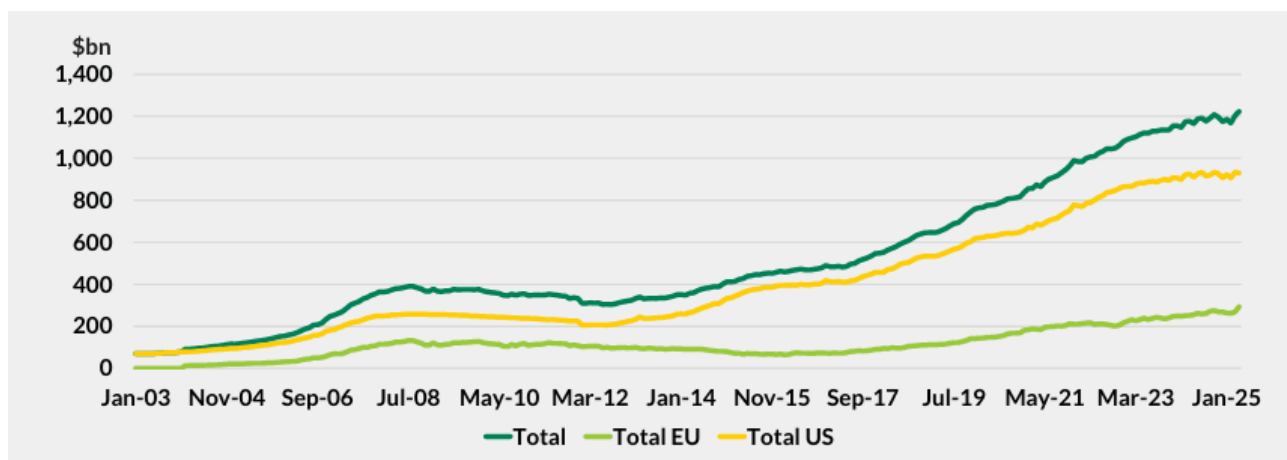
This resurgence in reset activity has been one of the defining themes of 2025. Following several years of limited opportunities due to volatile market conditions, a significant backlog of transactions accumulated between 2021 and 2023. Many of these deals, originally priced at wide spreads during a period of uncertainty, have now returned to the market for resets as credit spreads tightened and investor sentiment improved. In several cases, transactions that were initially expected to be called at the end of their reinvestment period have instead been reset, reflecting the growing perception of CLOs as “perpetual” financing vehicles. Moreover, some managers continue to prefer resets over refinancings, as extending the reinvestment period often outweighs the marginally better pricing that a refinancing might offer. However, market participants note that this surge is largely temporary, driven by the clearing of the reset backlog rather than a structural shift (9fin, 2025).

Nevertheless, this wave of resets has also exposed underlying portfolio challenges. Many 2021-vintage LBO loans, originated under abnormally low-rate conditions, have since come under pressure as funding costs rose and the credit quality of those loans have weakened (we have to remember these instruments are floating rate so the spread pressure has a distress effect on such loans). CLOs with higher concentrations of such assets face difficulties meeting the credit quality requirements needed to execute a reset, particularly regarding the share of triple-C rated loans. Managers often need to “clean up” their portfolios by selling weaker assets before a reset can proceed, but this process has become complicated for them by limited liquidity and the absence of natural buyers for these distressed or downgraded loans. So there appears a dilemma because selling these positions at deep discounts can crystallize losses, yet failing to do so prevents the transaction from being reset (9fin, 2025).

Figure 6 below illustrates the evolution of the total CLO market size in both the United States and Europe, highlighting the cyclical nature of issuance activity. The sharp contraction following the

GFC is clearly visible, as is the steady recovery and sustained growth observed in recent years.

Global CLOs Outstanding Over Time Split by Geography



Source: TwentyFour Asset Management, An introduction to Global CLOs (2025)

Figure 6 - Global CLOs Outstanding by Geography

Section 5: Regulation and Market Dynamics

5.1. The impact of Basel III and bank capital constraints

Basel III, the post-2008 global banking reform, fundamentally raised the quality and quantity of capital banks must hold in relation to their Risk-Weighted Assets, alongside new liquidity and leverage requirements. From a financial stability perspective, Basel III's reforms have made individual banks safer and the banking sector more shock-resistant. These stricter regulations have significantly influenced bank lending behavior and made corporate lending less attractive for banks. This dynamic has opened the space for non-bank lenders to fill the credit gap as banks retreated (Acharya, 2023).

The higher capital and liquidity buffers' side-effect has been the migration of credit intermediation outside the traditional banking system. Academic and industry analyses highlight that when bank capital requirements rise, financial activity often shifts to the "shadow" banking sector in an act of regulatory arbitrage. Rather than holding risky loans on balance sheet (which now carry prohibitive capital costs), banks originate and distribute these loans through securitizations like CLOs or sell them to debt funds. This actually enables banks to reduce balance sheet risk and capital usage while still earning fees and spreads. So banks remain involved indirectly, but the actual credit exposure is transferred to these non-bank investors. Acharya (2023) describes this evolution as banks transforming risks and shifting them to NBFIs (non-bank financial institutions), so the actual overall system leverage remains high even as banks become "safer".

This regulatory-driven shift has supported the rise of the CLO market and private credit, so one could argue it actually increases the total leverage in the market, since more parties are now incentivized to take part on this whole financing chain, now that leverage is spread among more actors and the risk is better distributed. In the years after Basel III's implementation, global CLO issuance grew substantially and non-bank credit funds also expanded, stepping in as banks pulled back from leveraged lending (FSB, 2025).

The result is a symbiotic model: banks fund non-bank lenders (through warehouse lines, term loans, or by purchasing securitization tranches), and non-banks provide credit to end-borrowers. However, this regulatory arbitrage does not necessarily imply that credit risk is really diluted across the financial system. Instead, banks may remain indirectly exposed to the credit risk of non-bank lenders, which operate under much lighter prudential requirements and with lower levels of

regulatory oversight than traditional banks. Through these funding and investment linkages, banks are ultimately exposed to the performance of end-borrowers and to potential defaults occurring outside the regulated banking perimeter. This interconnected structure raises concerns that credit risk may become less transparent rather than genuinely reduced, contributing to what some observers describe as “hidden leverage” within the financial system. In this context, JPMorgan CEO Jamie Dimon observed during a recent earnings call that “when you see one cockroach, there’s probably more, and so everyone should be forewarned on this one,” highlighting how initial signs of distress in non-bank credit markets may reflect deeper vulnerabilities that are harder to see in the beginning (Dimon, 2023; Reuters).

5.2. EU Securitization Regulation and risk-retention rules

In the aftermath of the Global Financial Crisis, the European Union also adopted a comprehensive Securitization Regulation to restore confidence, protect investors and ultimately encourage responsible securitization. A cornerstone of this framework is the mandatory risk-retention rule we already briefly introduced, designed to align the interests of securitization sponsors/originators with those of investors. Since 2011, EU law mandates that the originator of a securitization must retain at least 5% of the deal’s credit risk on an ongoing basis, either by holding 5% of every tranche (vertical stake), or 5% of the first-loss equity tranche (horizontal stake). Importantly, the retained interest cannot be hedged, sold or otherwise transferred. This “skin in the game” provision was introduced to prevent a return to what in the pre-2008 era was called originate-to-distribute practices, where lenders could offload all risk and totally dismiss loan quality, since they had no incentives whatsoever in not doing so (Janus Henderson Investors, 2025).

By contrast, the United States implemented a similar 5% risk-retention rule for Asset Backed Securities (such as CDOs, MBS, credit card ABS, etc.) under Section 941 of the Dodd–Frank act, but in 2018 the requirement for Open-market CLOs was effectively removed after a court ruling. U.S. regulators had defined CLO managers as “securitizers” subject to holding 5% of the deal, but the Loan Syndications and Trading Association (LSTA) successfully challenged this, arguing that CLO managers simply manage portfolios and do not originate the loans (Cadwalader, 2018). This divergence has become a key regulatory difference between the two markets. But nonetheless, many U.S. CLO managers may still voluntarily take equity stakes to signal confidence and comply with EU retention rules, in case they want to attract European investors.

Beyond risk retention, the EU Securitization Regulation introduced a unified set of standards for

securitization governance. It harmonized what was previously a patchwork of national rules into one regime covering things like due diligence, disclosure, and risk retention for all securitizations as of January 2019. The reform's broad goal was to restart European securitization on a good footing, as a strong tool to finance the real economy, while avoiding the excesses that led to the crisis (Janus Henderson Investors, 2025).

5.3. Transparency, disclosure, and investor protection requirements

As it is said, hand in hand with risk retention, the European framework also establishes strict transparency and disclosure standards for securitization transactions. Article 7 of the European Securitization Regulation requires originators, sponsors, and Securitization Special Purpose Entities (SSPEs) to provide investors and regulators with a consistent set of information, including loan level data on the underlying exposures, all essential transaction documentation, periodic investor reports on credit quality and cash flows, and notifications of any significant events that may affect performance (European Union, 2017, Article 7). To support comparability across transactions, ESMA introduced standardized disclosure templates that must be used for reporting. As a result, a European CLO is required to share detailed portfolio characteristics, payment waterfalls, triggers, and quarterly performance information through a securitization repository, giving investors a clearer and more complete view of the structure throughout its life.

The Securitization Regulation introduced the Simple, Transparent and Standardized (STS) framework to promote high quality and low complexity securitizations in the European market. However, this framework has only limited relevance for CLOs. The STS criteria were designed mainly for securitizations of static asset pools and for certain short term commercial paper programs, so transactions that rely on active portfolio management are excluded by design. As a result, arbitrage CLOs cannot qualify for STS status and consequently do not benefit from the preferential capital treatment associated with STS securitizations (Janus Henderson Investors, 2025; ESMA, n.d.).

5.4. Comparative insights: European vs. U.S. regulatory frameworks

As we have been seeing, the regulatory treatment of CLOs differs substantially between Europe and the United States, and these differences shape the markets greatly. The most visible divergence concerns risk retention. Europe mandates a 5% retention for all securitizations, including CLOs, while in the U.S., by contrast, since 2018 managers of open market CLOs don't have such

requirement (although Balance sheet and Middle-Market CLOs still do).

A second point of contrast relates to banking regulations. As we said, the U.S. Volcker Rule for some time restricted banks from owning interests in covered funds, which originally captured CLOs that included any securities such as high yield bonds. Later amendments introduced some flexibility, allowing limited bond buckets, but the U.S. market has remained strongly loan focused. Europe has no equivalent restriction, although Credit Rating Agencies usually consider a prudential range of exposure to high yield bonds to be around 5-10% at most (Invesco, 2024).

And finally, transparency also differs markedly across jurisdictions. European CLOs must report through ESMA templates, providing loan level information, quarterly metrics, and standardized documentation. These disclosures are publicly accessible through securitization repositories. The U.S. market is much more Rule 144A based (allowing financial institutions to resell restricted securities to other qualified institutional buyers without having to register them with the SEC) and therefore does not follow a regulator defined template, relying instead on trustee reports and offering documents.

This closer look at the regulatory frameworks suggests that the differences between both systems go far beyond technical requirements. They reflect two distinct philosophies about how to align incentives and how to manage risk for these complex credit structures. Europe adopts a more preventive-focused position based in standardization, mandatory retention and uniform disclosure, with the objective to make sure quality is built into the product from the start. The United States relies more on market discipline itself and specialized investors under the assumption that misaligned incentives will eventually be corrected through pricing and investor selection without such a need of regulatory design. This contrast helps explain why European banks appear across a wider range of tranches as we saw earlier, from AAA to *Mezzanine*, while in the U.S. these same layers are often dominated by hedge funds, CLO funds or other specialized credit investors. The U.S. framework, more permissive and market driven, naturally channels risk towards non-bank actors that are comfortable with structural leverage and perhaps promotes more fast moving credit cycles. In that sense, the regulation does not simply shape how CLOs work, but also who is willing to hold the risk.

This divergence also reveals something about innovation and financial complexity. The United States tends to incubate new structures faster, simply because the regulatory perimeter leaves more

room for experimentation and in consequence market participants are accustomed to absorbing innovative risk formats before they are fully standardized. Many influential innovations in structured credit first emerged there, such as the early generations of ABS backed by unconventional assets or the first large scale experiments with private credit funds that combined origination, leverage and fee-based models long before these strategies expanded globally. Europe, by contrast, usually follows the U.S. later and incorporates these developments more slowly and filters them through a stricter and more cautious framework, which tends to produce structures that are more homogeneous and less exposed to the most speculative forms of complexity. This difference matters because it shapes how the convergence between CLOs and private credit is unfolding. In the U.S., hybrid vehicles and integrated credit platforms have scaled quickly thanks to this flexible legal environment and also to a deep base of specialized investors. Europe is following a similar path, but the speed and form of that convergence are conditioned by retention rules, disclosure templates and capital requirements that somehow limit how far innovation can go.

Section 6: Strategic Innovation and Convergence with Private Credit

6.1. Emergence of Middle-Market and Private-Credit CLOs

The past decade has seen the rise of middle-market (MM) CLOs, also called private-credit CLOs (PCLOs), as a new frontier in the CLO market. While traditional Broadly syndicated Loans (BSL) CLOs securitize leveraged loans purchased in the open market, these new vehicles are backed by loans directly originated by private credit funds to smaller or mid-market borrowers. In functional terms, they resemble more balance sheet CLOs, since the originator of the loans and CLO equity holder are generally the same entity and the objective is often to recycle capital and obtain liquidity, rather than to extract an arbitrage spread through trading the underlying loans. In the United States, managers began structuring CLOs backed by middle-market loans in the 2010s, and this segment gained significant momentum by the mid-2020s. By 2024, CLOs securitizing loans from private credit portfolios (often directly originated loans to smaller companies) made up roughly 19% of new U.S. CLO issuance. In absolute terms, about \$36 billion of new U.S. CLO deals in 2024 were private-credit CLOs, but the impressive part is the 16% year-on-year growth in this more niche segment of the market. Private credit funds have found that securitizing their loans via CLO structures can unlock additional funding and leverage, marking this convergence between the previously separate worlds of direct lending and structured finance (Macfarlanes, 2024).

In Europe, the development has arrived much later and more cautiously than in the U.S., as usual (Loan Market Association, n.d.). In November 2024 Barings priced the first European PCLO, a €380 million vehicle pooling European mid-market loans. This long-awaited debut raised huge industry interest, as it demonstrated the feasibility of such structures in the European context. It was then followed by a second European direct-lending CLO in mid-2025, a £305 million deal by Ares Management, in this case with reinvesting capabilities, rather than static as is the case of Barings. Most recently, in October 2025, Barings issued a second European PCLO sized at €401 million, which not only included a reinvestment period but was also the first European private-credit CLO to adopt a multicurrency format (euros and pounds) (Barings, 2025).

These first deals required substantial scale and expertise: Barings, for example, leveraged both its established CLO platform and its direct lending team to assemble a portfolio of nearly 50 private loans across eight countries. The need for a sufficiently diverse loan pool is one of the most important barriers for this market. Barings noted that the difficulty of creating a diversified mid-market portfolio had “prevented a true middle market CLO from being executed in Europe” until

now. Thanks to a large pipeline of private loans (over €13 billion across 153 transactions in the last three years) and even including a bucket of broadly syndicated loans to boost diversity, Barings was able to achieve the necessary scale (Barings, 2024).

When thinking about important differences between MM CLOs and traditional BSL CLOs, diversification is a key distinction. A typical BSL CLO invests in 150–250 loans from large, syndicated deals, creating a highly diversified portfolio across many industries. By contrast, a mid-market CLO might contain, as we saw with the example of Barings, around 50 loans. Because middle-market loans are often smaller and less widely distributed, it takes effort to accumulate a critical mass of distinct borrowers, and especially in Europe, where private credit markets remain underdeveloped and the secondary market is very small. Thus, an originator must directly source a large number of individual loans to approach the diversity that a BSL CLO achieves with broadly syndicated credits. This is one of the reasons why, only large players with extensive deal flow have launched European PCLOs so far.

It also means that portfolio composition differs: BSL CLOs buy portions of liquid syndicated loans (both rated and traded), whereas PCLOs securitize illiquid, privately originated loans that typically carry no initial credit ratings. Managers of PCLOs must therefore obtain or estimate ratings for these loans to meet regulatory and investor requirements, adding a lot of time and cost to the structuring process. Additionally, underwriting standards and access to information differ. In the syndicated market, loans are arranged by banks and broadly placed, so CLO managers rely on public information and market prices to trade exposures. In the private credit area, by contrast, the CLO manager is usually the direct lender. This can imply an informational advantage and closer monitoring of the borrower, but it also means that the manager is effectively buying its own originated loans, a very different dynamic from external secondary market transactions (Macfarlanes, 2024).

Liquidity is another differentiator. Loans in a traditional CLO benefit from an active secondary market; a manager can trade out of deteriorating credits or adjust the portfolio within the CLO's reinvestment period. Middle-market loans are far less liquid. They are more like buy-and-hold assets, often with private documentation and no trading market. For instance, Barings' inaugural European deal was a static CLO (no reinvestment period). The illiquidity also means valuation and risk management rely on fundamental credit work rather than market pricing. In practice, managers mitigate this by focusing on loans from stronger sponsors and by structuring in ample cushions.

Indeed, private credit CLO tranches have in some cases obtained higher credit enhancement and ratings than comparable tranches of BSL CLOs.

I think this is especially interesting because if securitization becomes a standardized extension of private credit, we could be witnessing a deeper strategic transformation in the role of alternative asset managers. By combining origination, and structured distribution into a single internal loop, the asset manager ceases to be just a lender. It sort of becomes a platform architect who takes part in capital flows but can also define the format in which credit risk is transmitted to the market. A manager that controls the full pipeline can decide what risk is retained, what is syndicated, and under what terms. It can optimize the timing of CLO issuance, design bespoke capital structures, and segment investor demand more precisely. Over time, this may create a self-reinforcing advantage, where only a couple large managers can really afford the infrastructure, scale and product innovation required to operate efficiently across both ecosystems.

If this trend consolidates, the consequence may be a market where private credit platforms become the new gatekeepers of credit creation, much like investment banks once were in the syndicated loan market. The result could be the CLO functioning not as a passive risk-transfer tool, but as a programmable extension of the manager's balance sheet strategy. Power would be increasingly centralized, while risk would be distributed more widely. If left unchecked, this could generate the typical distorted incentives where managers may over-originate, confident that only part of the downside remains with them.

6.2. Drivers of Convergence Between Structured and Private Lending

The growing presence of private credit is a structural response to several powerful drivers. Regulatory dynamics are the first and most important. Post-2008 banking reforms dramatically raised capital and liquidity requirements for banks, which forced them to deleverage and hold more equity against loans. As a consequence, the cost of traditional bank lending rose and certain types of lending (those negatively affected in terms of capital treatment, notably leveraged corporate loans and mid-market financing) became less attractive for banks. In the UK, for example, every 1% increase in bank capital requirements has been estimated to raise loan pricing by ~13 basis points (Loan Market Association, n.d.). This retreat created a space in credit lending that private markets filled, boosting the growth of private credit since the 2010s. Private credit funds swiftly moved to provide the loans that banks were no longer willing or able to underwrite, again, especially in the middle-market and sponsor-driven financing for leveraged buyouts. Globally,

non-bank finance now accounts for roughly half of all financial-sector assets, illustrating how significant this shift has become (Loan Market Association, n.d.).

The rise of private credit has also been fostered by investor demand in a low-yield environment. Institutional investors such as insurance companies, pension funds, and asset managers have increasingly sought exposure to higher-yielding credit through non-bank channels. They can invest in private credit funds or in CLO securities (or often, in both), and in doing so they face different regulatory capital charges than banks would for holding the same loans. This dynamic can be understood as a gradual shift of credit intermediation away from bank balance sheets towards those of institutional investors. In this context, it is reasonable to consider that some traditional CLO investors, for example life insurance companies that have historically focused on senior tranches, may also be increasing their direct exposure to private loans. This growing overlap in the investor base helps to explain the emergence of hybrid structures and “take-out” mechanisms linking the two markets. So, to exemplify how CLOs serve as a pipeline for private credit origination: private lenders can originate loans, earn a spread for a period, then package those loans into a CLO and sell down the senior risk to CLO investors, all while retaining the equity slice. This originate-to-distribute model in the private credit space mirrors the securitization model pioneered by banks long ago.

Moreover, we can consider the convergence between CLOs and private credit to be mostly driven by the interest of the latter, and this is explained by several reasons. Traditional direct lending funds rely on investor commitments and often short-term warehouse credit lines to finance loans. By contrast, a CLO provides long-term, non-recourse financing for a portfolio of loans. In the U.S. market, which serves as a better reference by the means of its market size, private credit CLO notes carry an average stated maturity of around 12 years, going beyond the term of the underlying loans, which is typically between 5 and 7 years (FSB, 2025), which means the manager doesn’t need to worry about refinancing, as the CLO structure “locks in” financing through the life of the loans. Moreover, CLO liabilities can achieve higher advance rates than bank credit lines. Managers report that the amount of leverage available via a CLO is often greater than under a typical secured funding facility. In practical terms, a well-structured PCLO might allow a manager to borrow a greater part of the portfolio value by issuing debt tranches, whereas a bank warehouse might advance only a smaller amount. This frees up more of the manager’s capital to make new loans, thus increasing lending capacity (Macfarlanes, 2024).

Another driver of convergence is that many of the same investors participate in both CLO tranches and private credit funds. Pension funds, insurance companies, endowments, and even banks themselves are searching for yield in a low-rate world and allocate to various forms of leveraged credit. This creates demand for “hybrid” products that combine attributes of private loans and structured notes. For instance, an institutional investor comfortable with leveraged loans may buy a mezzanine CLO tranche, while another group of investors might prefer a mixed fund of direct loans. As the two investor pools overlap, sponsors have innovated to offer new combinations – such as funds that invest in both loans and CLO debt, or CLOs that contain both broadly syndicated and privately originated loans. The convergence is further reinforced by banks’ ongoing role in the ecosystem: even though banks lend less to corporates directly, they often arrange and facilitate CLO transactions. Investment Banks have been arrangers of private credit CLOs, bridging their syndication expertise into the private credit realm. Banks also provide repo lines or financing to investors who buy CLO tranches, and they make a market in CLO paper. In this way, the CLO mechanism becomes a structural interaction channel linking private credit with the broader financial market. It ties together loan origination, securitization, and investor distribution, involving both non-bank and bank intermediaries in new configurations of credit intermediation.

6.3. The Role of Asset Managers and Institutional Investors

An important feature of the CLO–private credit convergence is the leading role played by large global asset managers. Firms such as Ares Management, Carlyle, KKR, and PGIM (among others) have built substantial businesses in both broadly syndicated loan CLOs and Private credit. Their presence across both markets is a deliberate strategic positioning to exploit synergies in origination, underwriting, and distribution of credit.

One reason for this duality is the complementary nature of the skills required. Whether managing a CLO or a private credit fund, the core competency is credit selection and monitoring, so they can apply their credit expertise to a wider opportunity set and decide the best channel for every investment. Moreover, a multi strategy credit platform can offer investors a “one-stop shop”, so that they have a menu of products ranging from senior structured notes (CLO tranches) for more risk-averse investors, to illiquid *mezzanine* loans for higher yield-oriented investors. This broad approach attracts more capital to the manager, which in turn increases assets under management and fee revenues. Indeed, fee economics and incentives help explain the dual presence. Private credit funds typically charge management fees and performance fees on committed capital, while CLO managers earn ongoing senior and subordinated fees based on assets under management. By

participating in both, an asset manager diversifies its revenue streams. Crucially, when a manager issues a CLO backed by its own loans, it effectively earns fees twice: once on the underlying loan origination (via the fund's fees and interest income on retained pieces) and once on managing the CLO vehicle. This can be attractive, provided any conflicts of interest are managed appropriately (e.g. ensuring loans are sold into the CLO at fair value).

Another motivation is that operating in both areas enables synergies in deal sourcing and portfolio management. Large alternative credit managers have extensive networks with private equity sponsors, corporates, and banks that feed them loan opportunities. For instance, Barings credited its long-standing sponsor relationships for the ability to originate a diversified pool of 50+ private loans for its European PCLO (Barings, 2025). A direct lending team might see hundreds of mid-market deals a year; not all will fit in a given private fund, but some could be suitable for a CLO or vice versa. There is also efficiency in credit analysis, as the same analyst who covers an industry for the CLO team can share insights with the direct lending team, creating a richer credit view.

Institutional investors benefit from the dual market presence of these managers through improved liquidity and market depth. When an asset manager operates across liquid and illiquid credit, it can provide liquidity where none existed. For example, a direct lender that also manages CLOs might periodically trade loans between its funds and CLOs to rebalance portfolios. This creates at least an internal secondary market for otherwise illiquid loans, potentially smoothing valuations and offering borrowers more stable financing. Large managers with global platforms can also commit to deals with the confidence that they have multiple exit or financing strategies. They might hold a loan on balance sheet, then later distribute it via a CLO or to other funds. This commitment capacity can make them more reliable partners to borrowers, especially in volatile markets when banks might pull back.

The presence of global players across both markets is also gradually standardizing practices and improving pricing efficiency. As firms bring private loans into CLOs, they introduce more rigorous data collection, modeling, and rating processes for those assets, which over time can reduce information asymmetry. This could eventually lead to investors viewing certain private credit CLO tranches as a comparable asset class to traditional CLO tranches, which encourages more participation and competitive pricing. As seen in the U.S., the entrance of many direct lenders into the CLO space has broadened the investor base for CLO liabilities (Steiner, Mandinach & Gannaway 2025). In Europe, although still at an early stage, the involvement of top-class managers

attracts attention from insurance firms and banks that historically bought CLOs and are now curious about PCLO deals. Market depth improves as a result: for instance, Ares' debut £305 million direct lending CLO drew enough interest and is expected to pave the way for further issuance (Ares Management, 2025). As more transactions come, secondary trading of PCLO tranches should also pick up, aided by banks making markets.

An integrated manager can also afford to take a lower fee on one product knowing it might be compensated by another. Managers can even use this flexibility to offer more competitive loan pricing to borrowers or better terms to investors (for example, seeding a new CLO with some higher-quality loans from its fund to gain investor confidence). Thus, the dual presence of asset managers can create a virtuous cycle: more deals get done, investors have more choice, and borrowers ultimately gain access to a deeper pool of capital under varied structures.

6.4. Strategic Implications for Scalability and Diversification

The convergence of CLOs with private credit raises critical strategic questions about scalability and diversification, particularly in the European context, until possibly becoming a meaningful part of the market. So far, Europe's first PCLO issuances have demonstrated that it is possible to get around the structural hurdles, but it also highlighted that success depends on having a large, well-diversified loan pipeline. Not every manager has a €10+ billion private loan book to draw upon. In the near term, European middle-market CLOs are likely to remain a niche product used by top-tier credit firms. Moody's has noted that the relatively high cost of liabilities in European PCLOs (the yields demanded by investors for these structures) could erode much of the arbitrage that makes CLOs attractive (Neuwirth, 2024). Unless the investor base broadens and funding costs decline, many mid-sized managers will conclude that the economics do not justify launching a CLO. This contrasts with the U.S., where a larger universe of middle-market loans and a more developed buyer base for CLO tranches currently exists. In Europe, even a rapid growth path will likely leave PCLOs as a small percentage of the overall CLO market for the next several years.

That said, the trajectory is upward, and there are signs that scalability will improve over the next decade. As Europe's private credit AUM continues to grow (driven by institutional investors seeking yield and by banks' continued retreat from leveraged lending), the raw material for PCLOs, diversified loan pools, will become more plentiful. We may also see collaborative models emerge: smaller direct lenders could team up, contributing loans to a jointly managed CLO that achieves the critical mass they would not be able to reach alone. Additionally, regulatory adjustments could

play a role. Regulators in the EU and UK are actively reviewing securitization rules to better balance prudence with market development. For example, reforms to Solvency II in the EU are set to make high-quality securitizations more attractive to insurance investors by reducing capital charges of senior rated tranches of CLOs (Zdorovenin, 2025). If CLOs (including those backed by private loans) receive more favorable capital treatment for insurers, demand for tranches would certainly rise, lowering the cost of issuance.

Another issue is whether private credit CLOs will expand or remain a specialty tool in managers' arsenals. In the U.S., private credit CLOs have already expanded beyond a niche, but for Europe, in the medium term, private credit CLO issuance will probably be confined to leading alternative asset managers (the "Ares and Barings" club so far, possibly joined by a few others). These first movers will test the product, educate investors, and establish track records. Any early stumble in this innovative structure could set back the market. Another possibility is that we might also see hybrid CLOs that combine a majority of broadly syndicated loans with a minority bucket of direct loans, as a gradual way of introducing private credit exposure to CLO investors. Such innovations could blur the lines between BSL CLOs and PCLOs, effectively converging them into a single type or at least mixed type of product.

The convergence carries implications for diversification from the perspective of CLO investors and the market as a whole. For CLO investors, one benefit of including private credit assets is the exposure to different industries or economic drivers. For instance, a European mid-market loan portfolio might include companies in niche manufacturing or local services less represented in the syndicated loan indices. In theory, adding such exposure could reduce correlation in a broader credit portfolio. Investors in CLO tranches might therefore welcome PCLOs as a way to diversify their holdings beyond the usual universe of broadly syndicated leveraged loans.

On the other hand, there are diversification drawbacks that must be taken into account when considering the asset on its own. Within a single PCLO, the smaller number of obligors (e.g. 50 loans instead of 200) means idiosyncratic risk is higher, so one large default can have a bigger impact on the portfolio's metrics. Additionally, private loans being less transparent can make mark-to-market volatility less visible, which is not something meaningful in positive in calm times, but it is in a stress scenario where it might get harder for investors to understand deterioration until the financial statements emerge. For the broader market, a concern is that if many private credit loans end up in CLOs, the risk could become more correlated with traditional CLO markets during

systemic shocks. There is a possibility that as non-bank credit grows, it could amplify credit cycles in ways similar to the pre-2008 structured credit market. However, there is an argument that having more diverse structures adds resilience: since private credit CLOs are typically in the hands of longer-term investors and do not have market price valuation triggers, they may be less prone to forced sale than other credit vehicles. This could provide stability when markets are turbulent, as CLOs did during the COVID-19 shock by avoiding fire sales (Cordell et al., 2021).

Looking ahead, asset manager consolidation might also come into play: as convergence progresses, having an integrated platform becomes advantageous, which could drive mergers or acquisitions among mid-sized CLO or direct lending managers to achieve the necessary scale. In terms of products, Europe may even develop its own versions of U.S. Business Development Companies (BDCs) or listed private debt funds to complement the CLO route, which add up over \$300bn to the private credit market in the U.S. (Loan Market Association, n.d.). These vehicles, while not CLOs per se, are another convergence tool, since they provide leveraged exposure to private loans for a broad investor base. All these innovations point to a European alternative credit market that is more interconnected, larger in volume, and offering a wider spectrum of risk-return options than today.

Section 7: Conclusions

This dissertation has argued that the European CLO market should no longer be understood only as a technical segment of structured finance. Its evolution shows something broader: CLOs have become an increasingly relevant tool and mechanism through which leveraged credit can be distributed, funded, and scaled outside traditional bank balance sheets. From this perspective, the European CLO market is not simply a niche product linked to leveraged loans, but part of what can become a wider reorganization of credit intermediation in which non-bank actors, especially alternative asset managers and institutional investors, play a more central role than in the past.

One of the main conclusions of the study is that the development of the European CLO market has been shaped by the interaction of three forces. The first is historical and structural: the market has matured from a relatively small and more fragile post-crisis segment into a more established component of European securitization. The second is regulatory: post-2008 reforms, including Basel III, EU securitization rules, risk-retention requirements, and disclosure obligations, have not only changed how CLOs are structured, but also who is willing to hold them and under what conditions. The third is strategic: the recent emergence of private-credit and middle-market CLOs shows that the market is no longer evolving only within the boundaries of the broadly syndicated loan universe. Instead, it is beginning to connect with the faster-growing world of direct lending and private credit.

In terms of the practical implications of this evolution, for asset managers, CLO technology offers a potential tool for funding diversification, balance-sheet efficiency, and investor segmentation. For institutional investors, it expands the set of possible ways to access leveraged credit, from senior floating-rate exposure to more subordinated positions with a much higher return potential while achieving good diversification. For the European credit market more broadly, this evolution may contribute to a deeper and more flexible capital market ecosystem, being less dependent on the direct risk capacity of banks. At the same time, this does not mean that risk disappears. Rather, risk is redistributed and transformed, and in some cases made less visible, which is something to watch out for in all forms of securitization. As a result, the growing role of CLOs in non-bank lending should be seen as both a source of market innovation and a reason for continued attention to transparency, incentives, and systemic linkages between banks and non-bank financial institutions.

A further conclusion is that Europe is moving in the same general direction as the United States,

but not at the same speed and not in the same form. The U.S. market continues to provide the leading reference point for innovation, scale, and investor depth. Europe, by contrast, remains more constrained by regulatory design, market fragmentation, diversification challenges, and a still more limited base for private-credit CLO issuance. This means that convergence is real and happening, but still at an early stage. For the time being, the ability to operate across both private credit and CLO platforms appears concentrated among a small number of large managers with sufficient origination capacity, structuring expertise, and investor access.

At the same time, the themes developed in this dissertation open several relevant avenues for further research. One path would be to simply examine future European private-credit CLO transactions in greater detail, focusing on deal structure, diversification, performance, and rating behavior as the market develops and new transactions continue to take place. Additional research could build on a larger dataset of European CLO documentation in order to identify recurring structural patterns, potential changes in covenant design, and different strategic models of convergence between syndicated and private lending. Another important avenue would be to examine whether, and to what extent, the expansion of the CLO market has contributed to increasing the supply of credit to European companies beyond the balance-sheet capacity of traditional banks. This line of research could compare the growth of CLO-funded and other non-bank lending with the evolution of traditional bank lending, bank capital constraints, and corporate financing volumes over time, while also assessing whether this shift has supported business investment, and the broader economic activity.

Overall, the central conclusion of this dissertation is clear. The European CLO market is evolving from a product primarily associated with leveraged-loan securitization into a more strategic component of modern non-bank lending. This transition is still taking place and subject to important constraints, but its direction is already visible. The relevance of CLOs in Europe now lies not only in how they are structured, but in what they tell us about the future organization of credit markets: a system in which funding, risk transfer, and credit origination are increasingly shaped by non-bank platforms operating between both private lending and capital markets.

Section 8: Generative AI Tools Usage Declaration

Por la presente, yo, Lucas Américo Casas, estudiante del Doble Grado en Administración y Dirección de Empresas, y Análisis de Negocios/ Business Analytics de la Universidad Pontificia Comillas al presentar mi Trabajo Fin de Grado titulado "The Evolution and Strategic Innovation of the European CLO Market: Convergence with Private Credit and the Transformation of Non-Bank Lending", declaro que he utilizado la herramienta de Inteligencia Artificial Generativa ChatGPT u otras similares de IAG de código sólo en el contexto de las actividades descritas a continuación:

1. **Brainstorming de ideas de investigación:** Utilizado para idear y esbozar posibles áreas de investigación.
2. **Crítico:** Para encontrar contra-argumentos a una tesis específica que pretendo defender.
3. **Referencias:** Usado conjuntamente con otras herramientas, como Science, para identificar referencias preliminares que luego he contrastado y validado.
4. **Corrector de estilo literario y de lenguaje:** Para mejorar la calidad lingüística y estilística del texto.
5. **Sintetizador y divulgador de libros complicados:** Para resumir y comprender literatura compleja.
6. **Revisor:** Para recibir sugerencias sobre cómo mejorar y perfeccionar el trabajo con diferentes niveles de exigencia.
7. **Traductor:** Para traducir textos de un lenguaje a otro.

Afirmo que toda la información y contenido presentados en este trabajo son producto de mi investigación y esfuerzo individual, excepto donde se ha indicado lo contrario y se han dado los créditos correspondientes (he incluido las referencias adecuadas en el TFG y he explicitado para que se ha usado ChatGPT u otras herramientas similares). Soy consciente de las implicaciones académicas y éticas de presentar un trabajo no original y acepto las consecuencias de cualquier violación a esta declaración.

Fecha: 19/03/2026

Firma: 

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