Comprehensive analysis of CLOs: structure, risks, and opportunities

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1. Introduction

In the fixed income universe, many companies issue hybrid instruments—such as subordinated or preferred bonds—with the aim of preserving their investment grade rating. Rating agencies recognize these instruments as loss-absorbing capital, acting as a cushion that bolsters the issuer's solvency in stressful scenarios.

The logic behind Collateralized Loan Obligations (CLOs)[1] is essentially similar. By structuring a portfolio of loans into different *tranches*, the vehicle redistributes risk and return: senior investors enjoy superior credit protection, backed by subordinated layers that absorb the first losses.

Beyond their technical sophistication, CLOs represent an evolution in credit engineering: they transform corporate loan portfolios into tradable instruments with different liquidity, duration, volatility, and return profiles. Therefore, understanding their internal architecture is not only key to assessing their strength and resilience, but also to understanding why they have maintained a default-free track record in AAA tranches for more than two decades and have established themselves as one of the most stable sources of financing for the loan market.

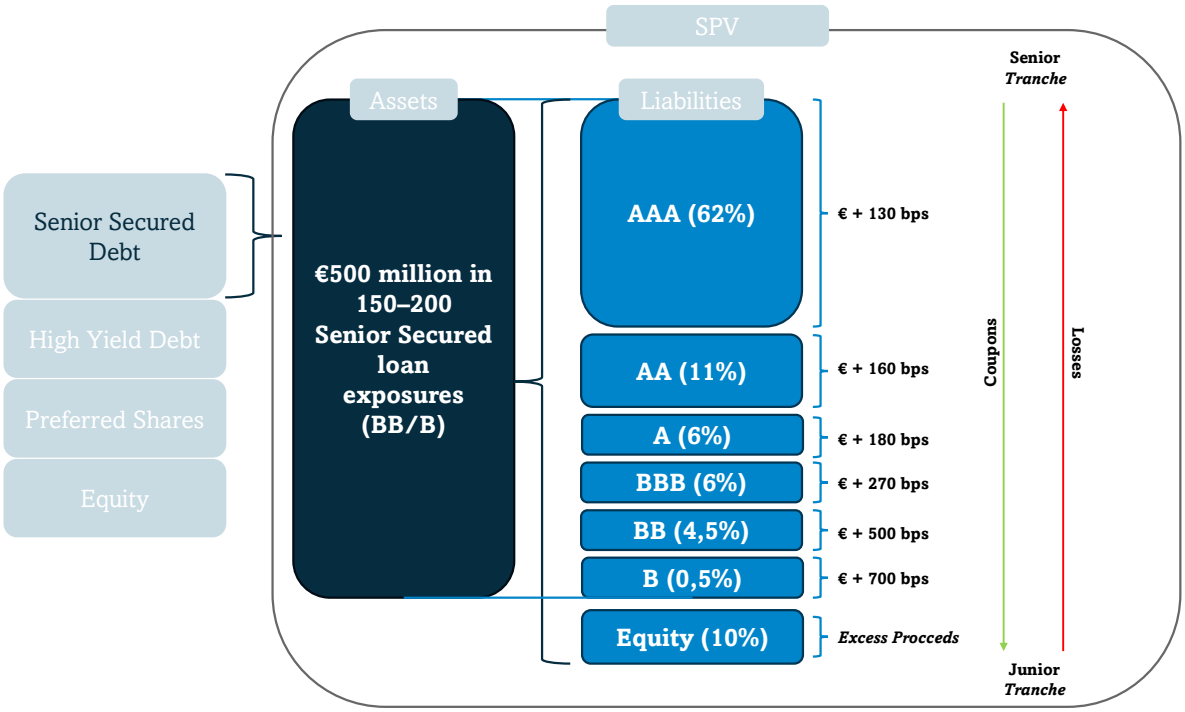
This report will analyze the structural layers, self-correcting mechanisms, and economic logic that enable a CLO to transform loans—from sub-investment grade issuers—into bonds with the performance characteristics of investment grade issuers. It will also address their main sources of return and risk, their role in diversifying institutional portfolios, and the factors that explain their growing importance in corporate financing and global credit strategies.

[1] Throughout this document, unless otherwise indicated, these will be senior secured loans.

2. Structure and mechanics of a CLO

A Collateralized Loan Obligation (CLO) is a securitization vehicle (Special Purpose Vehicle, SPV) that acquires a diversified portfolio of loans and finances it by issuing different tranches of debt and equity. It operates similarly to a financial institution: the cash flow generated by the loans (held-to-maturity assets) is used to cover interest payments and amortisation of the bonds issued (liabilities).

Diagram 1: Example of a CLO structure



Source: Afi

In a CLO, the balance sheet is divided into three blocks:

1. The assets consist of the loan portfolio, which is mainly composed of *senior secured* loans *(SSL)* with collateral and granted to companies with a credit rating below investment grade. These loans, which are floating rate and secured by tangible assets, give holders a preferred creditor position in the event of default or liquidation. For this reason, they have historically higher recovery rates.
2. The liabilities consist of the debt issued by the CLO, structured in different hierarchical tranches with increasing levels of subordination. Each tranche defines a different risk-return profile: unsurprisingly, the most senior tranches have greater structural protection, while the *mezzanine* tranches absorb greater credit risk in exchange for higher spreads.

In short, it is a structure designed to redistribute the credit risk of the underlying asset among investors with different risk profiles.

3. Finally, the *equity* constitutes the vehicle's most junior note. It occupies the most subordinate position in the structure, absorbing the first losses arising from defaults or collateral impairment.
   In exchange, it captures the *excess spread*, i.e., the difference between the return on assets and the cost of financing the debt. The *equity tranche* also has optionality over the structure itself:
   i) It can execute a refinancing (refi), which consists of early repayment of some tranches of debt and replacing them with new issues. If a *tranche* is refinanced at a lower cost and the loan portfolio and CLO structure remain intact, the cost of the liability is reduced and the *excess spread* is increased, which directly benefits the *equity*.
   ii) On the other hand, it can also perform a *reset*, which involves a more profound restructuring: a new set of *tranches* is issued, the life of the CLO is extended, and the reinvestment period is restarted, as if it were a "new" transaction on the same portfolio. The non-call period usually covers the first 2-3 years of the vehicle.

   Typically, the CLO manager maintains a minority stake in the CLO of 5% of the total securitization in compliance with *risk retention requirements,* which could represent approximately 50% or more of the equity tranche. This retention seeks to ensure direct exposure to the vehicle's risk and encourage prudent collateral management, although the economic incentives are more aligned with those of *equity* than with those of debt investors, especially in refinancing decisions.

2.1. Vehicle architecture: layers of protection and liability hierarchy

The design of CLOs is based on a multi-layered protection architecture that preserves structural soundness even in stress scenarios, despite the fact that the underlying assets are loans to below investment-grade companies. The mechanisms described below have ensured that, in more than 25 years of history, no AAA tranche has ever defaulted, despite crises as severe as the 2008 financial crisis and the COVID shock in 2020.

The first line of defense is the hierarchy of tranches or subordination. Each class of debt is protected by the subordinated capital below it. Investors in AAA tranches only suffer losses in the extreme case that all the lower layers are depleted at maturity: AA, A, BBB, BB, and *equity*. This cascade is the basis of any securitization design.

The second line of defense is the existence of more assets than liabilities, which is known as overcollateralisation. For example, a CLO can finance €225 million in AAA debt with a portfolio of €375 million in loans. That difference of €150 million is a protective cushion. Each month, an overcollateralisation (OC) test verifies that the asset/liability ratio remains within the set thresholds. If the ratio falls below the required threshold, cash flows that would have corresponded to *equity* or subordinated tranches are diverted to acquire additional loans or to repay senior debt until coverage is restored. The structure does not require forced asset sales; the structure's *cash flow* is simply redistributed.

It is therefore essential to understand how assets are accounted for in the tests. Unlike other vehicles, CLOs account for loans at their nominal value (par), which prevents daily market volatility from distorting the coverage tests. Only when there is actual credit deterioration—for example, a *downgrade* to CCC—specific adjustments may be applied. A limit of 7.5% of the portfolio is set for CCC loans. Up to that threshold, these assets continue to be accounted for at par in the *tests*, but once it is exceeded, the "CCC *haircut*" is activated: positions above 7.5% are no longer accounted for at par and are instead accounted for at market price. Importantly, the haircut is applied first to the lowest-priced CCC assets, a conservative criterion that prioritizes the impact of the most impaired loans.

For example, in a portfolio of €375 million with 10% of CCC assets trading at 50% of par value, the test will recognize:

- €337.5 million in loans at par (90% of the portfolio).
- €28.1 million CCC loans (up to 7.5%) at par.
- €4.7 million CCC above the threshold, valued at 50% of their nominal value.

If the proportion of CCC loans continues to rise, it could trigger a test failure and, in that case, redirect flows to buy additional loans or to repay senior tranches.

It is important to note that, although loans are recorded at par in coverage tests, their market valuation is based on the effective transaction price. As floating-rate assets referenced to SOFR or Euribor, loans have limited appreciation potential above par and are usually amortised or refinanced when they trade substantially above par.

Another relevant test is the interest coverage (IC) test, which monitors whether the interest received is sufficient to cover payments to the senior tranches. If income falls

below the required level, cash flows are redirected, giving priority to senior holders. A BB tranche may have its coupon payment suspended, which accumulates as deferred interest (*PIK*). In contrast, for an AAA or AA tranche, any interest payment default would be a default event.

In addition, there are a set of quantitative metrics that allow for the continuous assessment of the quality, diversification, and strength of the underlying portfolio, which will be detailed in the following section. These variables are essential for managers, rating agencies, and debt investors alike to determine the stability of the structure.

2.2. Metrics relevant to understanding the solvency of a CLO

CLOs are complex fixed-income instruments, requiring multiple levels of analysis of both the underlying assets, the liability structure and its management. However, they are characterized by remarkable transparency, which allows for detailed assessments of their portfolios, cash flows, and risk metrics.

The following table compares the main credit quality and coverage metrics between two types of CLO portfolios:

1. BSL (*Broadly Syndicated Loan CLOs*), i.e., CLOs backed by large syndicated loans with broad institutional distribution.

2. SME/PC (*Small and Medium Enterprise/Private Credit CLOs*), CLOs that invest in smaller loans or *direct lending*.

Key credit quality and coverage metrics

	BSL Average	SME/PC Average	BSL–SME/PC	BSL St Dev	SME/PC St Dev
Caa %	5,15%	12,43%	–7,28%	2,24%	3,05%
CCC % (S&P)	5,62%	13,26%	–7,63%	2,35%	5,23%
Jun OC Cushion	4,04%	5,23%	–1,19%	1,19%	2,87%
IDT Cushion	4,07%	5,13%	–1,06%	21,75%	4,79%
WAS	3,58%	5,47%	–1,89%	1,83%	1,87%
WAS Cushion	0,48%	–1,10%	1,58%	1,10%	1,62%
WARF	2804	3734	–930	153	99
WARF Cushion	327	109	218	241	135
Diversity	83	42	41	41	9
Diversity Cushion	22	4	18	18	7
MDY WARR *	46,71%	44,34%	2,37%	0,81%	1,65%
WARR Cushion	3,82%	3,12%	0,70%	1,70%	0,54%

Source: Moody's

Each of the metrics is explained below for clarity:

1. **Caa % and CCC % (S&P): credit quality of collateral**

   These metrics measure the proportion of loans rated *Caa* (Moody's) or *CCC* (S&P) within a portfolio, i.e., the weakest assets with the highest probability of default. In CLOs, this figure is crucial because, as mentioned above, it defines the portion of the portfolio that could cease to be valued at par if the *CCC bucket* threshold (normally 7.5% of the total) is exceeded.

   In SME/PC CLOs, the weight of these assets reaches 12.4%, compared to 5.1% in BSLs, materially above that limit. This means that a significant portion of their portfolio is already valued at market prices with *a haircut*, which reduces the effective value of the collateral (*overcollateralisation*). In practice, this reflects a more vulnerable structure with less margin before triggering protection mechanisms (so-called *OC breaches*).

2. ***Junior OC Cushion (Overcollateralisation Cushion)***

   This indicator measures the safety margin between the current level of the *Overcollateralisation* test and the activation threshold that would divert flows to senior tranches.

   In recent data, SME/PC CLOs have a larger cushion (5.2% vs. 4.0% in BSL). This result would imply that they can absorb a greater deterioration in the value of the portfolio before triggering an *OC breach*. However, this additional margin does not reflect greater credit strength, but rather more conservative structuring. Given that private credit portfolios have lower average quality (more CCC/Caa loans) and lower liquidity, they are designed with broader collateral to offset that risk.

3. ***IDT Cushion (Interest Diversion Test Cushion)***

   The *Interest Diversion Test* functions as an early protection mechanism within the CLO structure. Unlike the *Interest Coverage Test* (IC), which measures the vehicle's ability to cover its debt coupon payments, the IDT assesses the structural strength of overcollateralisation before a formal default occurs.

   The Interest Diversion Test is defined as:

$$IDT\ Ratio = \frac{Collateral\ principal\ amount}{Outstanding\ amount\ related\ tranche\ and\ all\ senior\ tranches}$$

   If this ratio falls below the preventive threshold, the excess interest that would normally be distributed to equity is blocked and used to purchase new loans (increasing the numerator) or repay senior debt, strengthening the collateral, depending on whether the transaction is in the reinvestment period.

   The *IDT cushion* measures the safety margin to that critical point, and in this case SME/PC CLOs show a wider margin (5.1% vs. 4.1% in BSL). In practice, the higher *IDT cushion* of SME/PC is a defensive measure, a necessary structural buffer to offset their higher inherent risk, rather than a comparative advantage over BSL.

4. ***WAS (Weighted Average Spread)***

   The *Weighted Average Spread* represents the weighted average spread of the portfolio over the benchmark (SOFR or Euribor). SME/PC CLOs have an average WAS of 5.5%, compared to 3.6% for BSLs, reflecting the significant yield premium associated with smaller, illiquid, and lower-rated assets.

5. ***WAS Cushion***

This margin represents the difference between the actual WAS and the minimum required by the *indenture* tests[2] .

In this case, by contrast, BSLs maintain a positive margin (0.5%), while SME/PCs show a negative *cushion* (-1.1%), which means that their structure is tighter (exceeds) the technical limit required by the tests.

6. *WARF (Weighted Average Rating Factor)*

The WARF summarizes the weighted average credit quality of the portfolio. The higher the WARF, the worse the credit quality of the asset.

Moody's factors for calculating the WARF

Moody's Rating	WARF Factor	Estimated Annual PD (%)
Aaa	1	0,00%
Aa1	10	0,02%
Aa2	20	0,03%
Aa3	40	0,04%
A1	70	0,05%
A2	120	0,06%
A3	180	0,08%
Baa1	260	0,12%
Baa2	360	0,17%
Baa3	610	0,24%
Ba1	940	0,40%
Ba2	1.350	0,65%
Ba3	1.800	0,95%
B1	2.200	1,3%
B2	2.600	2,0%
B3	3.490	3,0%
Caa1	6.500	10,0%
Caa2	8.500	15,0%
Caa3	10.000	25,0%
Ca / C	10.000	>25%

Source: Moody's

In SME/PC CLOs, the average WARF is 3,734, well above the 2,804 for BSLs. This jump is equivalent to approximately one full rating step (from B2 to B3), which implies a substantially higher probability of default and reduces the manager's flexibility to add lower-rated assets without exceeding the *indenture* limits.

[2] This refers to the financial and structural tests defined in the vehicle's central legal document—the indenture—which regulates the terms and conditions of the bonds issued by the CLO.

7. ***WARF Cushion***

   The WARF cushion measures the distance between the current WARF and the maximum allowed. BSLs enjoy a margin three times greater (327 vs. 109), giving them a more stable position and the ability to withstand credit downgrades without restrictions on reinvestment. SME/PCs, on the other hand, operate close to the limit, so any further downgrades in ratings may force the manager to restore balance.

8. ***Diversity Score and Diversity Cushion***

   The *Diversity Score* assesses the effective dispersion of risk within the portfolio, considering both sector concentration and the correlation between loans. A high value indicates better diversification and a lower probability of simultaneous defaults.

   In BSL CLOs, diversity is significantly higher (83 vs. 42 in SME/PC), reflecting portfolios with more issuers and less dependence on specific sectors.

   In addition, the *Diversity Cushion* (22 vs. 4) confirms that private credit CLOs operate very close to the minimum allowed, with higher idiosyncratic risk and lower capacity to absorb concentrated shocks.

9. ***MDY WARR (Moody's Weighted Average Recovery Rate)***

   The WARR measures the expected average recovery rate in the event of default, depending on the type of loan (first lien, second lien, cov-lite, etc.). The higher the WARR, the greater the credit protection of the senior tranches.

   BSLs have higher rates (46.7% vs. 44.3% in SME/PC), reflecting stronger collateral and better guarantees.

10. ***WARR Cushion***

    The WARR Cushion measures the gap between expected recovery and the minimum required by rating agencies. BSLs (3.8%) outperform SME/PCs (3.1%), reinforcing their better risk profile.

The data confirms a clear duality: BSL CLOs stand out for their higher credit quality and diversification. In contrast, SME/PC CLOs compensate for their lower structural robustness with a more attractive spread, derived from their exposure to less liquid, smaller loans with higher spreads. Another point highlighted by Moody's is, in 2024, only 24% of SME/PC CLO collateral had reference prices, compared to 99% for BSLs, and their asset turnover is three times lower.

Finally, it is worth noting that in practice, loans with moderate spreads (E+3.5%, equivalent to 5.5%) are attractive in the context of a CLO, as the structure allows for high returns without resorting to higher-risk assets in more speculative segments of the credit markets.

The above analysis shows the structural differences between broadly syndicated loan-based CLOs (BSLs) and those built on private credit portfolios (SME/PC). However, within the corporate finance ecosystem, there are other vehicles that pursue similar objectives—channeling institutional capital into sub-investment grade credit—but do so through very different structures and regulatory frameworks. Understanding these differences is essential to contextualize the role of CLOs vis-à-vis alternatives such as BDCs and risk transfer transactions (SRTs).

The table below provides context for the different mechanisms used to channel sub-IG corporate credit to the institutional market. Later, in section 3.4, we analyze in greater detail Business Development Companies (BDCs) and Significant Risk Transfers (SRTs), two entities that, due to their nature and regulatory framework, may be comparable to CLOs.

Comparison between BSL CLOs, SME/PC CLOs, SRTs, and BDCs

Aspect	BSL CLOs (Broadly Syndicated Loan CLOs)	SME / PC CLOs (Private Credit / Direct Lending CLOs)	SRTs (Significant Risk Transfers)	BDCs (Business Development Companies)
Underlying asset	Large syndicated *first-lien* loans with broad institutional distribution.	Bilateral or *unitranche* loans to SMEs or middle-market borrowers; smaller size and lower liquidity.	Bank loan portfolios held on balance sheet; risk transfer via synthetic credit (CDS or CLN).	Direct loans and equity stakes in middle-market companies; high presence of PIK loans.
Structure / nature	Securitization vehicle (*cash securitization*) with tranched structure (AAA–Equity).	Similar structure but with more static management and less standardized collateral.	Synthetic securitization: the bank retains ownership of loans and transfers only economic risk.	Publicly traded company with its own balance sheet; combines features of investment funds and financing entities.
Liquidity	Deep secondary market (BWICs, active trading).	Indicative pricing and limited turnover.	Private transactions among banks and institutional investors.	Publicly listed, though often trade at a discount to NAV.
Transparency	High: monthly reporting, OC/IC/IDT metrics, and detailed portfolio composition.	Medium: quarterly reporting; internal or third-party valuations.	High for participants, though privately disclosed.	Variable: quarterly reports, *mark-to-model* valuation.
Leverage	Structural (6–10×) within the vehicle; *non-recourse* to investors.*	Similar or slightly lower; wider OC cushions to offset risk.	No structural leverage; risk transfer reduces RWAs and releases regulatory capital.	On-balance-sheet leverage (~1.5–2×) under the Investment Company Act; full recourse to vehicle and shareholders.
Expected return (equity)	12–16%; depends on spreads and vintage.	14–18%; illiquidity and credit-risk premium.	6–10%; stable returns linked to regulatory pricing.	10–14%; wide dispersion depending on underwriting and management.
Protection mechanisms	Automatic OC/IC/IDT tests, payment waterfall, and active reinvestment.	More conservative tests; larger collateral cushions.	Synthetic loss protection tests; no real cash-flow waterfalls.	No structural mechanisms; internal management and provisioning.
Typical investors	Banks, insurers, and institutional funds; IG alternative with *spread pickup* .	Specialist private credit managers and alternative investors.	Issuing banks and credit-opportunity funds; RWA optimization.	Institutional and sophisticated retail investors seeking private-credit exposure with dividend yields.
Economic function / role in the financial system	Channels institutional savings into corporate credit, diversifies risk, and provides liquidity to the syndicated-loan market.	Expands financing to the middle market at the cost of lower liquidity and transparency.	Allows banks to free up capital and transfer economic risk without transferring ownership.	Acts as a bridge between investors and the U.S. middle market, financing corporate growth and generating recurring returns.

*A distinction is made between structural leverage —typical of CLOs— and balance-sheet leverage, characteristic of BDCs. The former is generated within an SPV and is non-recourse, meaning investor risk is limited to contributed capital. The latter occurs on the entity's balance sheet, is full-recourse, and amplifies both returns and losses.

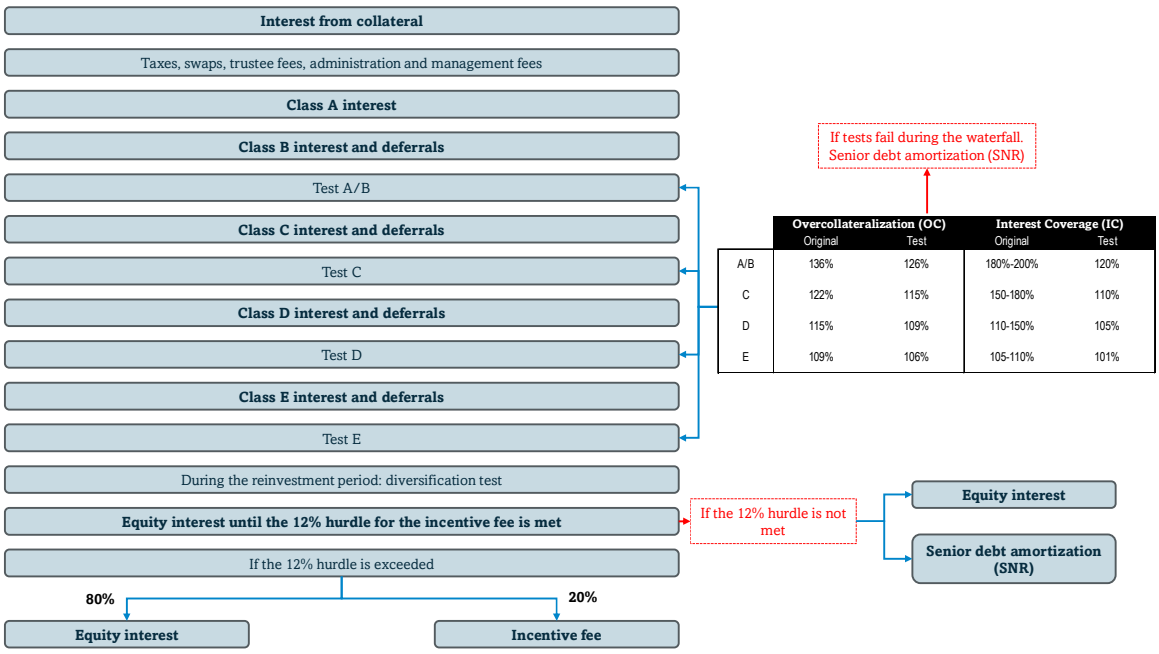
Source: Afi

2.3. *Waterfall*: distribution of cash flows

In a CLO, there are two distinct waterfalls: the interest waterfall and the principal waterfall. The first regulates the payment of interest generated by the underlying loans, while the second determines the application of principal flows. During the reinvestment period, principal payments are used to acquire new loans. Once that period has ended, they are used for the sequential repayment of the debt according to the established order of priority.

The payment waterfall is the backbone of the CLO structure because it precisely defines the order and priorities with which the flows generated by the underlying loan portfolio are distributed. It is not merely a mechanical sequence of payments, but a hierarchical protection mechanism designed to safeguard senior investors and maintain the manager's credit discipline.

Payment waterfall in a CLO



Source: Afi

Cash flows from the assets are distributed as follows:

- At the top of *the waterfall*, basic operating costs are deducted: trustee fees, audit fees, legal expenses, and the CLO manager's senior management fees. This first step ensures the continued functioning of the structure.
- Interest is then paid in strict sequential order: first to the AAA tranches, then to the AA, A, BBB, and so on down to the most subordinated tranche. This hierarchy reflects the risk structure: those who assume less risk are paid first and have greater certainty of payment.

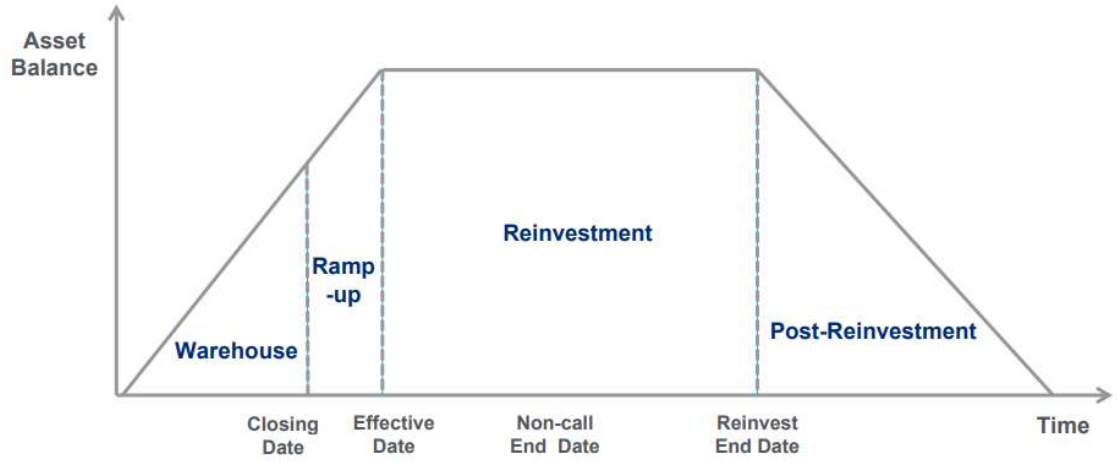
- Each class (A/B, C, D, E) has minimum coverage levels. For example, in our diagram, the most senior tranches (A/B) must maintain a minimum OC of 126% and an IC of 120%, while the subordinated tranches accept lower margins (e.g., 106% and 101% for class E).
- When the tests are passed, the flow continues normally to the lower classes. However, if a test fails because the assets do not generate sufficient cash flow, it is blocked for the subordinated classes and redirected to the repayment of the senior tranches until the ratios return above the required threshold. Non-senior tranches may have their interest payments deferred *(PIK)* or suspended.
- Only when all previous payments have been satisfied is any excess residual cash flow allocated to the *equity* tranche.
- *Equity* cash flows are distributed between investors (e.g., 80%) and the manager (20%) under the *incentive fee*, provided that a minimum profitability threshold (usually an IRR of 12%) has been exceeded for the equity.

Therefore, this payment cascade is monitored by coverage *tests* (OC/IC). If the portfolio deteriorates (e.g., due to an increase in CCC-rated loans or defaults), these *tests* automatically redirect the flows until the indicators are restored. This mechanism is one of the main structural defenses of the CLO.

2.4. Life cycle of a CLO: from origination to amortisation

Finally, the life of a CLO unfolds in several clearly differentiated stages, reflecting both its structuring process and its active management over time. The following diagram shows the balance sheet on the Y-axis and the main events over time.

Diagram: Life cycle of a CLO



Source: Afi

First, the construction period begins with the "Warehouse" phase, in which the manager opens a line of credit with the bank to acquire the first loans that will form part of the collateral. This stage, which usually lasts between three and six months, allows an initial asset base to be formed before the transaction is closed.

Once a sufficient portion of the portfolio has been completed, the CLO moves into the ramp-up phase. During this period, following *pricing* and legal closing of the transaction, the manager uses the funds obtained from the bond issue to complete the acquisition of the remaining loans until the initial target par is reached. The vehicle then enters its *effective date* and begins to operate fully.

Once these initial stages are complete, the CLO enters the reinvestment period, which usually lasts between two and four years. During this time, cash flows from early repayments, sales, or prepayments of loans are used to purchase new assets, always within the limits and quality tests established in the *indenture*. This reinvestment capacity allows the size and quality of the portfolio to be maintained. This reinvestment period coexists with a "non-call" period, during which the *equity* tranche cannot refinance debt. After this period, equity investors can exercise their right to refinance or reset the transaction—that is, to modify the liability structure or extend the life of the CLO. By contrast, unscheduled prepayment of senior notes occurs only if coverage tests fail and cash flows are redirected to deleveraging under the payment waterfall.

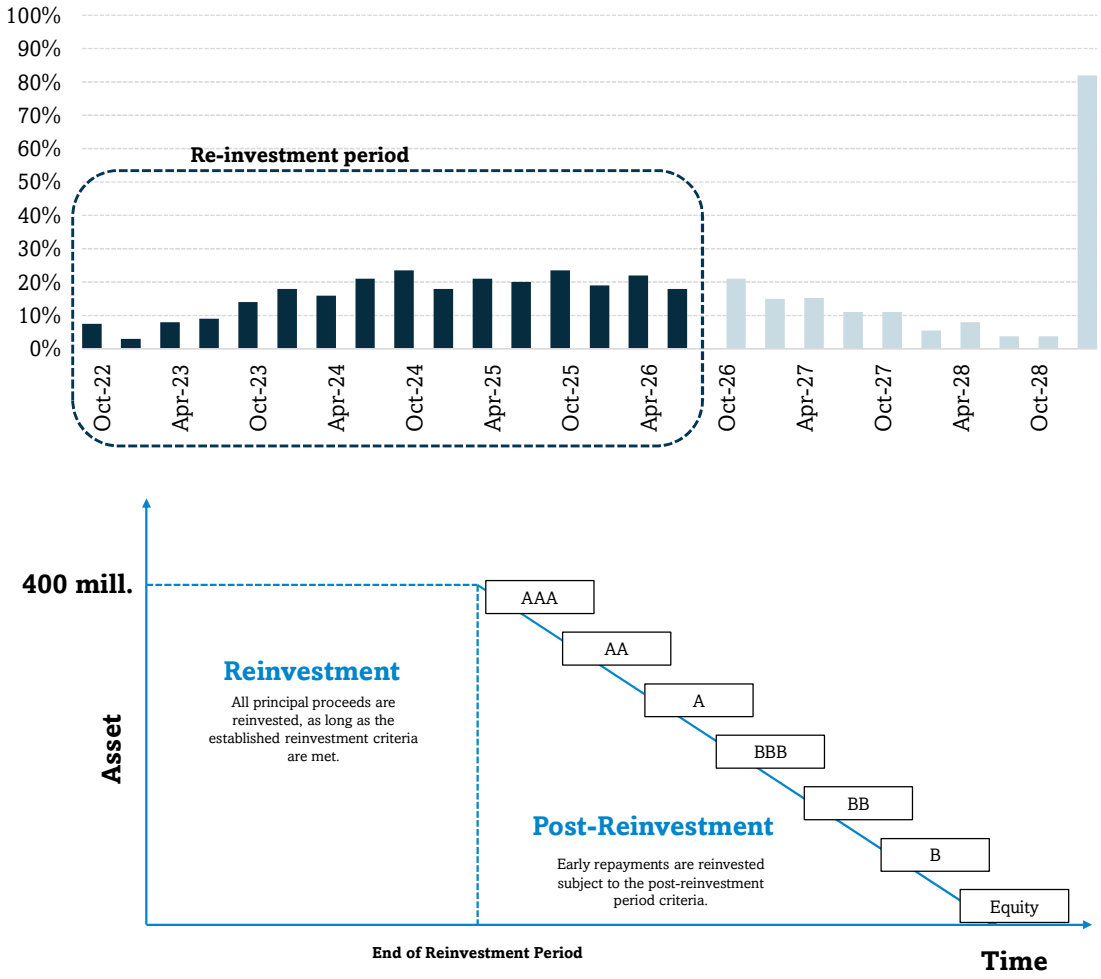
Finally, when the reinvestment period ends, the repayment phase begins. At this stage, principal income is no longer reinvested but is used to sequentially reduce the CLO liabilities, starting with the most senior tranches (AAA). This process continues until the

structure is completely liquidated, returning the capital to investors and distributing the remainder to *equity*.

Overall, this cycle—from initial construction to final amortisation—can last between 4 and 10 years, depending on the design of the vehicle and market conditions. In practice, however, it is unusual for CLOs to reach maturity, as the manager usually exercises the *call* option when the cost of financing increases and the effective leverage of the vehicle has declined. The existence of distinct warehouse, ramp-up, and reinvestment periods reflects the hybrid nature of the CLO: a securitized structure, but actively managed and designed to maximize the efficiency of arbitrage between asset returns and liability costs.

Illustrative cash flows of a CLO (above)

Diagram: CLO reinvestment and deleveraging periods (below)



Source: Afi

2.5. Key participants in the CLO market

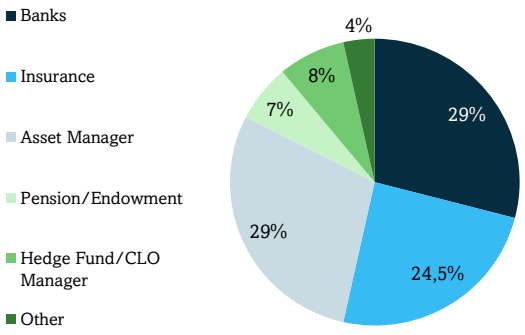
Before the 2008 crisis, the main buyers of CLOs were vehicles that were highly dependent on short-term financing, such as SIVs (Structured Investment Vehicles) and bank *conduits*. These investors disappeared with the crisis, as they lost access to liquidity. This was one of the reasons why price declines in 2008 were due more to forced sales and lack of liquidity than to actual asset deterioration.

After 2008, the market was rebuilt on a much more solid basis. Today, CLO buyers include banks, insurance companies, and asset managers, which in recent years have been joined by ETFs, opening up this market to an even broader investor base.

The CLO ecosystem involves other players essential for the proper functioning of the vehicle and market stability. Each has a specific role in the origination, structuring, management, and financing of these transactions, notably:

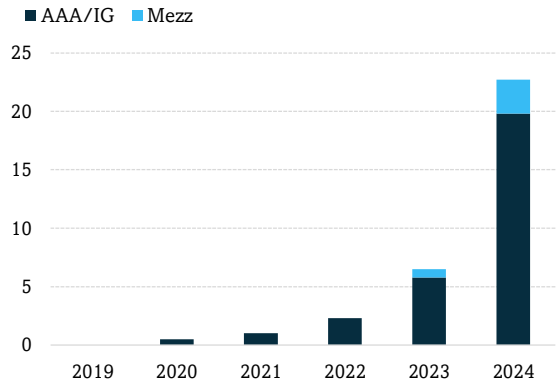
- Loan originators: these are usually commercial banks or financial institutions that participate in the syndication of loans to companies with a sub-investment grade profile.
- CLO managers (Collateral Managers): these are firms specializing in the selection, supervision, and replacement of assets within the portfolio. During the reinvestment period, they monitor the loan market and adjust the composition of the portfolio to optimize performance and maintain compliance with the tests. Their active management is a determining factor in the performance of the CLO, especially for subordinated tranches and *equity*.
- Institutional investors and hedge funds: these represent the final demand for the various debt and equity tranches. Banks and insurers tend to focus on senior tranches (AAA/AA), attracted by their low capital consumption, while fund managers, *hedge funds*, and credit funds participate in *mezzanine* or *equity* tranches, seeking higher returns in exchange for taking on more risk. This diversity of investors allows risk to be distributed throughout the structure and adds depth to the secondary market.
- Credit rating agencies: play a key role in assessing risk and assigning ratings to each class of debt. Their methodologies—based on analysis of diversification, credit quality of loans, and levels of subordination—determine the final structure of the CLO and the cost of financing each tranche. In addition, they periodically monitor transactions to detect possible deterioration or improvement in credit quality.

Global CLO holders (Oct-24)



Source: Barclays

Flows in CLO ETFs



Source: Bloomberg

3. Market context and macro-financial environment

3.1. Historical evolution and consolidation of the CLO market

The CLO market emerged in the late 1980s, alongside the development of other securitization products. Since then, it has gone through three major stages, each marked by regulatory changes and lessons learned from various crises.

The first generation (CLO 1.0) developed from the mid-1990s until the financial crisis of 2008. These structures combined loans with high-yield bonds and typically had long reinvestment periods—usually six years or more. Risk management was still in its infancy, while edging mechanisms and *covenant* protections were limited. Market expansion was supported by securitization innovation and demand for structured products. The 2008 crisis exposed the shortcomings of buyer risk models (SIVs, conduits), leading to a thorough review of the regulatory framework.

Between 2010 and 2013, CLOs were redesigned with a much more conservative approach. Greater subordination was introduced, *high-yield* bonds were removed from portfolios, and the focus shifted exclusively to *senior secured* loans. Reinvestment periods were shortened, structural protection levels were strengthened, and overcollateralisation (OC) and interest coverage (IC) tests were tightened. In addition, new regulations—such as the *Dodd-Frank* Act—strengthened oversight and transparency, with the aim of reducing risks and restoring investor confidence in these types of products.

Starting in 2014, the current generation, CLO 2.0, gained momentum, initially maintaining this conservative framework but gradually adapting to the market environment. Amendments to the *Volcker Rule* in 2020 allowed for the limited reintroduction of exposure to *high-yield* bonds, typically between 5% and 10%. Today, they clearly dominate the market.

Another key difference is that CLO 2.0 prohibits re-securitization, while 1.0 structures could include tranches from other CLOs or ABS within the collateral. Second-generation vehicles no longer allow this, ensuring greater transparency and simplicity. Likewise, the possibility of refinancing tranches individually (*tranche-by-tranche* refinancing) was introduced, providing flexibility to adjust the cost of financing without reopening the entire transaction.

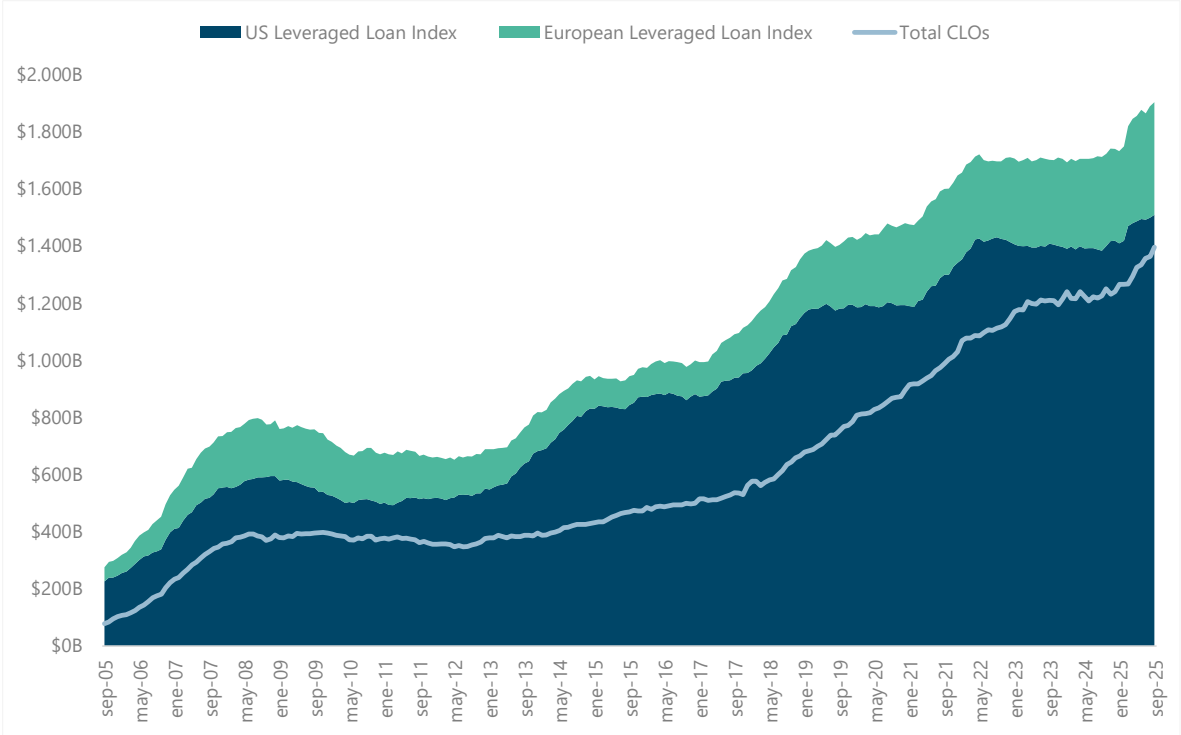
From a quantitative point of view, the structural change has been significant. In CLOs 1.0, 75% of liabilities were concentrated in the AAA class, while in CLOs 2.0 this weight is reduced to 62% in favor of a greater share of subordinated tranches and equity. The probability of losses is thus distributed more evenly. Overall, CLOs 2.0 represent a more prudent, robust, and transparent version of the product, with greater protection buffers and a stricter contractual framework, which has helped to strengthen investor confidence and consolidate their role within the securitization universe.

3.2. Global market structure and dynamics

The chart reflects the size and sustained growth of the global CLO market, which has established itself as one of the structural pillars of leveraged credit. Since 2005, the aggregate volume of syndicated loans and CLO issuances has grown almost continuously, with particularly strong expansion since 2012, following the post-crisis market recovery.

Currently, the size of the CLO universe exceeds $1.3 trillion, of which approximately $1 trillion corresponds to the United States and more than $300 billion to the European market. This figure puts CLOs on a par with *high-yield* bond markets, confirming their central role in corporate financing for companies with *sub-investment grade* ratings. The chart also highlights the close relationship between the loan market and the *stock* of CLOs, where structural demand for these vehicles has provided a stable investor base for new issues, helping to maintain market liquidity and depth.

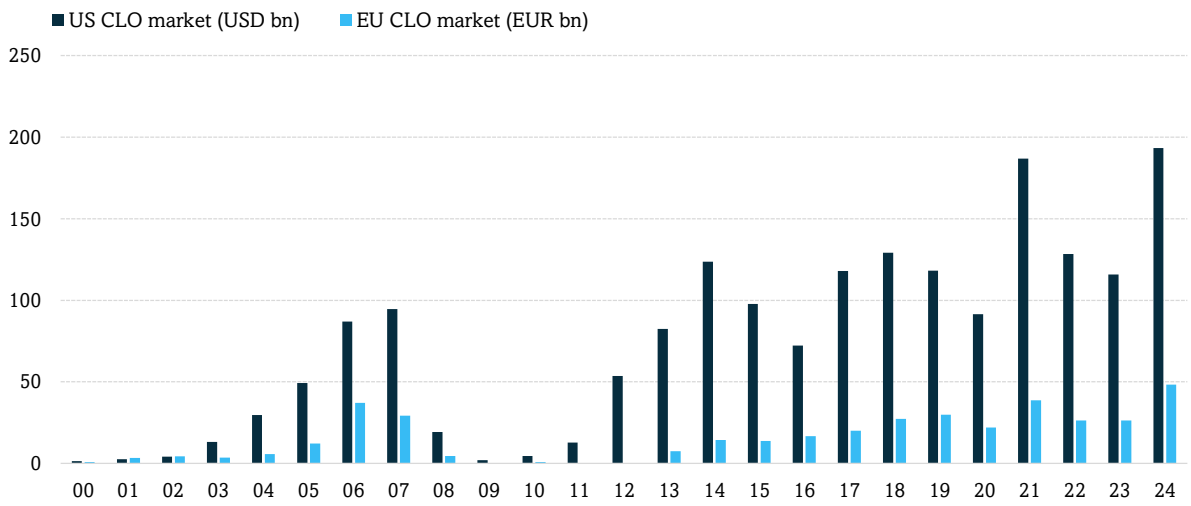
Outstanding balance in credit markets (billions)



Source: Pitchbook LCD (Leveraged Loan Indices) and Citi (CLO Data)

Since the market reopened in 2013, primary issuance of CLOs has been remarkably robust. In the United States, volumes temporarily declined in 2015–2016 with the oil & gas crisis, but soon resumed their growth trajectory. The 2020 slowdown due to the pandemic was equally brief, 2021 saw a strong recovery, and although 2022–2023 saw a further slowdown due to monetary tightening, the market once again demonstrated its ability to adapt. In 2024, new issuance reached an all-time high of $243 billion, surpassing even the previous record set in 2021 and consolidating CLOs as one of the pillars of the securitization universe.

Evolution of CLO issuances (billions)



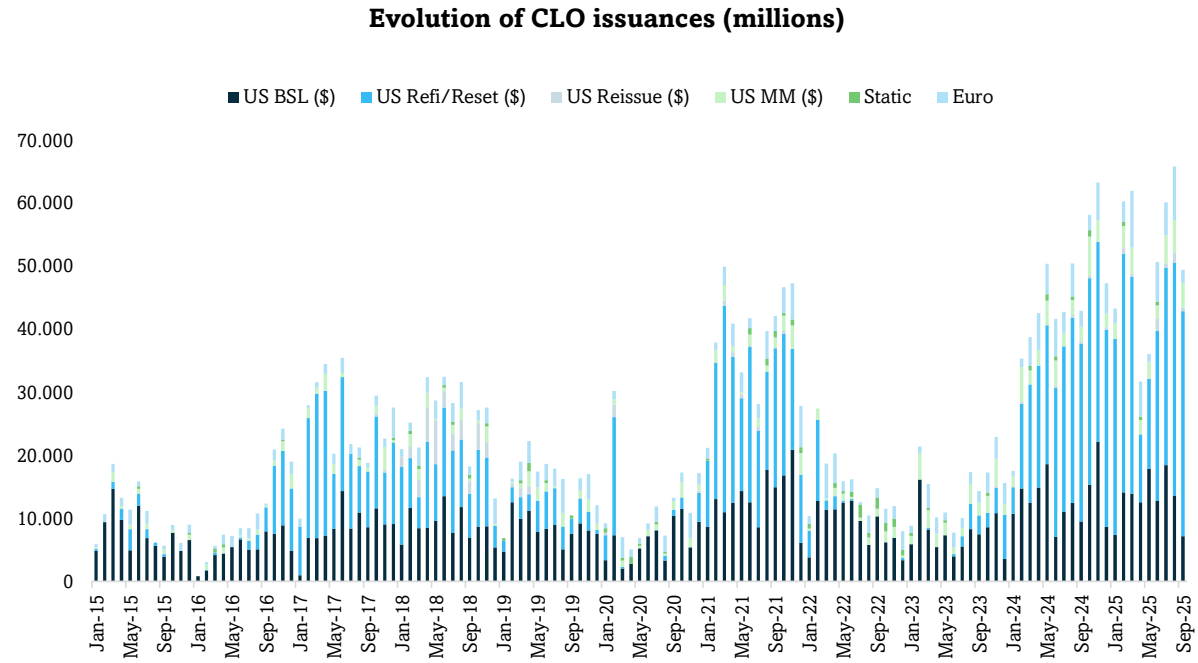
Source: Afi

The CLO market has shown a remarkable capacity for self-regulation, as can be seen in the chart, thanks to the flexibility of its financing model. In periods of widening spreads, the greater differential between loan yields and the cost of liabilities drives the creation of new transactions, while in periods of narrowing spreads, activity is geared toward refinancing and resets in order to optimize financing and extend the life of existing structures.

The periods 2019-2020 and 2022-2023 are significant, as the tightening of financial conditions and the consequent increase in the cost of liabilities eliminated the incentive to refinance previous CLOs, which were originated in a lower interest rate environment, reducing investor appetite for *reset* transactions. As a result, issuance focused on new BSL vehicles, while the market awaited a stabilization of financial conditions.

Over time, episodes of stress—such as the 2008 financial crisis, the disruption caused by COVID-19, or the monetary tightening of 2022—have caused only temporary pauses, followed by a rapid market recovery. This behavior reinforces the perception of CLOs as a mature, liquid, and resilient asset, whose expansion reflects both the strength of the loan market and the growing acceptance of the product among global investors.

The expansion of the CLO market is closely linked to the dynamism of *private equity*. Since syndicated loans are the underlying asset of CLOs, periods of lower *leveraged buyout* (LBO) or *exit* volumes reduce the flow of new loans originated, thus limiting the ability to structure new CLOs.



Source: Bank of America, Fair Oaks

3.3. Sector diversification and active management

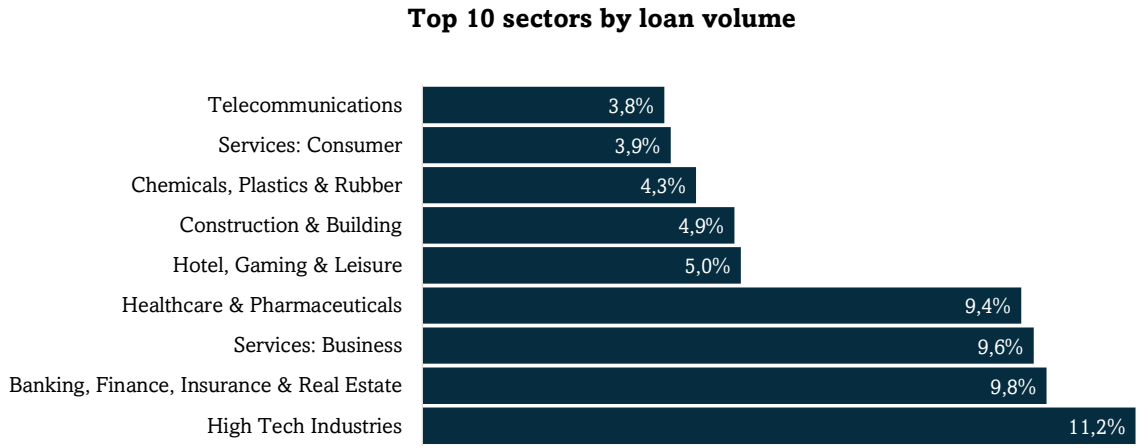
Sector diversification is one of the pillars of CLO stability. Portfolios typically consist of between 150 and 300 loans, spread across more than 20 sectors, which reduces exposure to idiosyncratic events and maintains a balanced risk profile.

Currently, the sectors with the greatest weight in European and US CLOs are technology, business services, banking and insurance, and healthcare/pharmaceuticals, which together account for more than a third of the eligible loan universe. According to recent data, the High Tech, Banking & Finance, and Business Services sectors each account for around 10% of exposure, reflecting managers' preference for companies with scalable business models and recurring access to financing.

In terms of performance, these sectors have been resilient in 2024, while more cyclical industries—such as materials, automotive, and energy—have performed more negatively. This composition reinforces the defensive nature of CLOs in economic slowdowns by prioritizing sectors such as services, technology, and healthcare.

Additionally, active decisions by the manager—to overweight or underweight sectors, or even temporarily exclude certain issuers—are one of the main sources of *alpha* generation within the CLO universe. The ability to anticipate sector cycles, detect opportunities, or reduce exposure in times of credit stress distinguishes the best managers and has a direct impact on the vehicle's profitability and the stability of its cash flows.

In short, balanced sector composition and active exposure management act as complementary mechanisms for protection and value generation, reinforcing the role of CLOs as diversified instruments.



Source: Afi

3.4. BDCs and SRTs as counterparties to CLOs

Within the finance ecosystem, CLOs share certain characteristics with two vehicles: *Business Development Companies (BDCs)* in the United States and *Significant Risk Transfers (SRTs)* in Europe. Although all three models channel institutional capital into sub-investment grade corporate credit, they do so through very different structures and regulatory frameworks, which is essential to understanding their behavior when making comparisons.

BDCs are private or publicly traded companies that act as direct lenders to medium-sized US companies. They operate on their own balance sheet and are regulated by the Investment Company Act of 1940, which requires them to maintain moderate levels of leverage and distribute most of their profits as dividends. In practice, they function as a gateway to private credit for institutional and retail investors, combining the characteristics of an investment fund and a financial institution. While CLOs purchase and package existing broadly syndicated loans, BDCs often originate and hold them on their balance sheets, deriving their returns from interest income and capital gains on their holdings.

The BDC sector has attracted particular attention in recent quarters, following episodes of volatility and some pressure on margins and valuations. In this context, the comparison is favorable for CLOs, which have a more standardized structure and more disciplined leverage management. In addition, the composition of collateral in CLOs is generally more conservative and liquid—focused on first lien syndicated loans—while BDCs typically have a greater presence of PIK loans[3] .

In Europe, SRTs (Significant Risk Transfers) play an equivalent role in the banking sector. Through synthetic securitizations, banks transfer the economic risk of a loan portfolio to

[3] PIK (Payment-in-Kind) loans are instruments in which interest is capitalized into the principal rather than paid periodically in cash.

external investors, while keeping the assets on their balance sheets. This mechanism, supervised by the regulator, allows capital to be freed up and requirements under the CRR and Basel III frameworks to be reduced, while diversifying the banking system's sources of funding.

Although their structures are very different, CLOs, BDCs, and SRTs fulfill a convergent economic function: channeling institutional savings toward medium- to high-risk corporate credit, diversifying risk, and sustaining the liquidity of the financial system.

Finally, the regulatory treatment of CLOs under Solvency II remains one of the factors explaining their yield spreads. Currently, European regulations consider CLOs to be type 2 securitisations, with significantly higher capital weightings than other fixed-income assets with an equivalent rating . This penalty increases the cost of capital for insurers and funds subject to Solvency II, but also introduces potential tailwinds if the future review scheduled for 2027 adjusts this treatment towards a more proportional framework. These issues will be discussed later in this report.

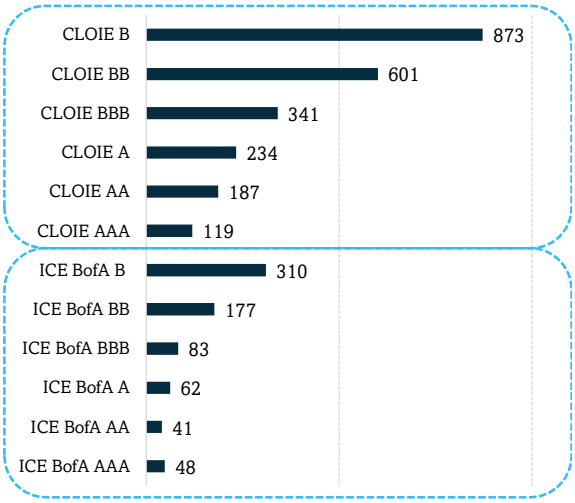
4. Sources of return and risk

4.1. Sources of return

The return on a CLO originates from the arbitrage between the yield on the underlying syndicated loans and the cost of the liabilities issued. The manager seeks to capture the *excess spread*, i.e., the difference between the coupons generated by the assets and the payments due to the various debt tranches.

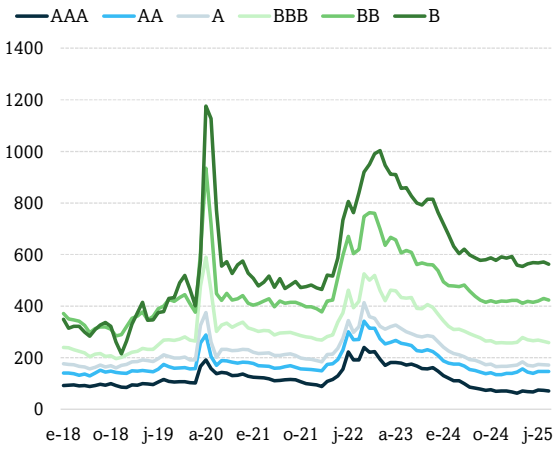
1. AAA/AA tranches offer spreads of between 120–190 bps above Euribor, levels that exceed *investment grade* bonds with the same rating. They represent the most defensive part of the structure, with an extremely low risk profile and high institutional demand.
2. A/BBB tranches with spreads of 230-350 bps represent the balance between return and risk, benefiting from improved coverage tests (OC/IC) and the resilience of the underlying asset.
3. BB and B tranches: these represent the *sweet spot* for risk-adjusted returns, with spreads between 500 and 850 bps, although they are more sensitive to *downgrades* and credit events.
4. Equity: returns are variable and depend on the credit cycle and the manager's skill, with expected returns of 14–18% per annum, supported by 9–10 times leverage on AAA.

Asset swap spread differentials on CLOs (CLOIE) and _cash_ (ICE) in EUR



Source: Afi, ICE, CLOIE

Spread differential by credit rating in EUR CLOs



Source: Afi, ICE, CLOIE

The chart on the right shows how, despite market normalization following the volatility episodes of 2020 and 2022, CLOs maintain a structurally higher spread compared to corporate credit, especially in the BB and B tranches. This gap is one of the main sources of the asset's relative attractiveness compared to other credit classes.

During the reinvestment period, the manager can replace loans that have been repaid or sold with others that have a better risk-return profile. This flexibility allows the portfolio to be adjusted to the credit cycle, preserving the average quality of the collateral and maintaining the excess spread compared to static structures.

In addition, the ability to anticipate cycle changes and adjust sector exposure or the credit quality of the portfolio is another key source of returns. Prudent risk management preserves the value of the vehicle and protects the cash flows of the more subordinated tranches.

4.2. Main risks

Credit risk is the main determinant and stems from potential defaults or downgrades on underlying loans that trigger coverage *tests* (OC/IC) and redirect flows.

It is important to understand that, in the European market, ratings are not an accessory element; they are the key that opens or closes the door to certain investors. They condition capital requirements under Solvency II and CRR, and they set internal eligibility limits. It should be remembered, as mentioned in the section on "Main players in the CLO market," that not all agencies rate using the same criteria, and this methodological difference can result in variations in the final rating:

- S&P tends to look at CLOs from the perspective of loss severity. Its analytical framework places a lot of weight on expected recovery rates in the event of loan default. In practice, this means that a CLO with exposure to sectors with strong collateral (e.g., utilities, infrastructure with stable cash flows) may fare better than another with the same WARF but focused on low-recovery sectors such as retail or cyclical services. For an investor, this implies that the "S&P lens" penalizes severity more than the probability of default.
- Moody's, on the other hand, emphasizes portfolio diversification and granularity. Its star metric is the Diversity Score. Under this lens, a CLO with a large number of medium-sized borrowers in different sectors may receive a better rating than another with loans of the same rating but more concentrated in a few large companies. In other words, Moody's methodology rewards portfolio breadth rather than the potential recovery level of each loan.

Furthermore, under Solvency II, the capital charge is calculated on the lowest rating assigned. Therefore, a one notch lower rating from Moody's, even if S&P has assigned AAA, can translate to several additional capital consumption points in the Solvency Capital Requirement (SCR), thereby reducing the efficiency of the investment.

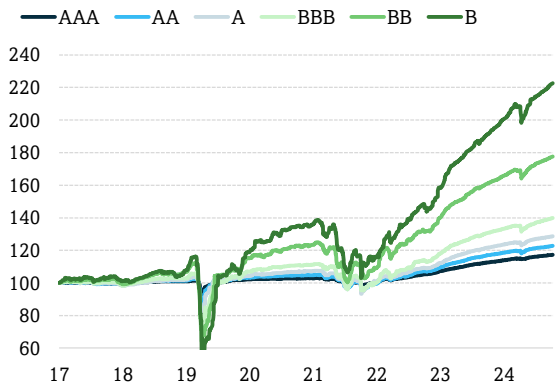
The structural risk of CLOs does not come solely from direct defaults, but also from the potential interaction between credit deterioration and cash-flow diversion.

The resilience of CLOs has been demonstrated in multiple crises:

- Asian crisis (1997–98) and Mexican default (1994): the product was still in its infancy, but already showed flexibility.

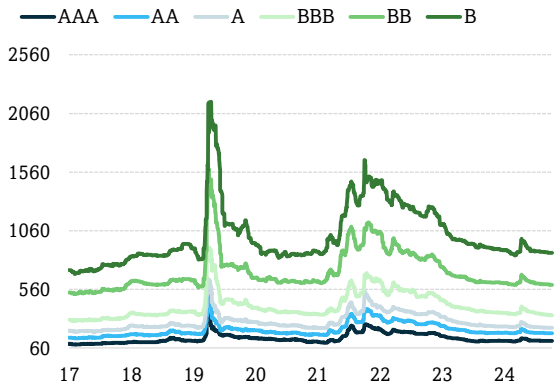
- Dotcom (2001–02): there were significant declines in technology and telecommunications loans, with no impact on senior tranches. Default rates on leveraged loans rose temporarily to around 8–9%, but OC/IC tests worked properly, preserving the structural integrity of the transactions. Sector diversification, with exposures to sectors such as *Technology, Media & Telecom* below 10–12% of the total, helped to limit the transmission of credit deterioration and maintain the stability of senior tranches.
- Global financial crisis (2008–09): no defaults in AAA or AA tranches; less than 0.01% in A and BBB. Price declines were due more to forced sales and lack of liquidity than to actual asset deterioration. The contrast with subprime RMBS CDOs reinforced the perception that CLOs are structurally sounder. From 2010 onwards, CLOs were reborn as a key financing instrument.
- COVID-19 (2020): B/BB tranches suffered temporary price declines but recovered quickly, confirming the stabilizing role of protection mechanisms. Overall, CLOs offered higher convexity than high yield.

Total return on EUR CLO indices (Base 100: 2018)



Source: Afi, CLOIE

Credit spreads in EUR CLOs (bps)



Source: Afi, CLOIE

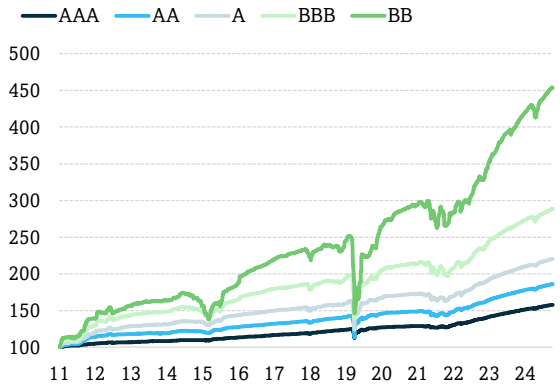
Other types of risk that determine the dispersion of returns:

- **Early repayment or extension risk**: CLOs can be refinanced or reset once the non-call period has ended. Refinancing does not change the length of the reinvestment period or maturity of the CLO. In a reset, the duration is extended by restarting the reinvestment period. It is, in essence, a reissue with the same loan portfolio as collateral, but with new terms and a new reinvestment period. In both cases, a CLO note investor will be offered the option to be repaid in full.
- **Market risk:** their floating asset nature (referenced to SOFR or Euribor) means that CLOs' sensitivity to interest rate movements and changes in secondary prices mainly reflect market expectations of default rates and recovery levels of the underlying loans. In the mezzanine and equity tranches, this sensitivity to the credit environment is greater, as they concentrate exposure to loss risk and changes in the vehicle's excess spread.

5. Risk analysis by tranche and stress scenarios

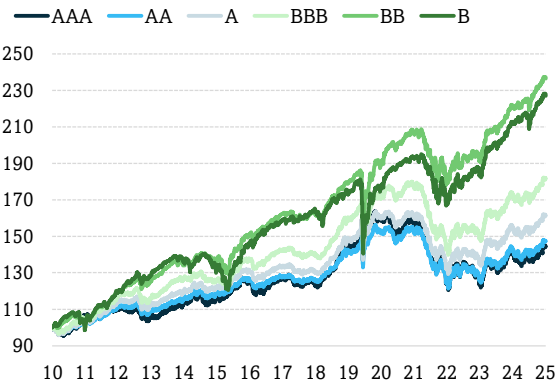
Risk assessment in a CLO is essentially an exercise in anticipating how its different tranches will react to changes in the economic cycle and credit markets. Scenario analysis allows us to understand not only the differences in expected returns, but also the convexity inherent in each tranche: how small changes in defaults, spreads, or prepayments are amplified asymmetrically throughout the structure. Below are the cumulative return charts for CLOs and corporate credit bonds in USD[4] .

Total Return on USD CLOs (Base 100: Oct-10)



Source: Afi, CLOIE

Total Return on USD Corporate Credit (Base 100: Oct-10)



Source: Afi, ICE

Base scenario: fragile stability

In a scenario of weak but positive growth, with defaults of around 3–4% per year and recoveries of 60–65%, CLOs remain in equilibrium.

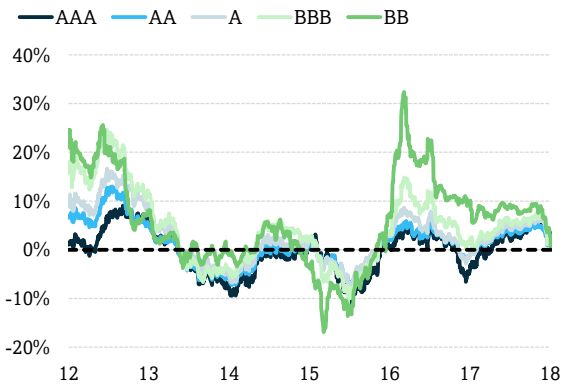
AAA ratings act as a safe haven. Their fundamental risk is low and subordination protects them from losses. After the 2008 crisis, for example, no AAA tranche of CLOs 2.0 recorded defaults. In subsequent years, with defaults at historic lows (2011–2019, with default rates below 2%), CLO *tranches* offered higher returns than other assets with the same rating, consolidating their role as *a core holding* for banks and insurers, although not without volatility, as shown in the chart of CLOs' year-on-year excess returns compared to corporate bonds.

CLO Mezzanine returns are based on its carry. In the decade following the GFC, BB spreads hovered around 700 bps, with low defaults, generating double-digit returns for many credit funds. In this scenario, as long as the OC tests remain in compliance, the mezzanine investor receives its coupon.

[4] USD indices are used due to the greater availability of data.

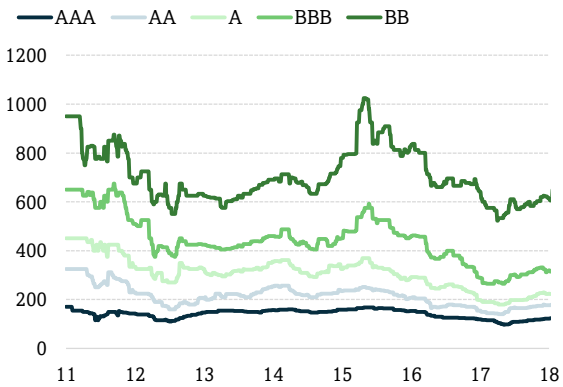
Finally, equity secures consistent returns thanks to excess spread. Between 2012 and 2019, CLO 2.0 vintages generated an average return of 12–15%, supported by stable arbitrage and low OC Test breach levels. In this context, early calls lose their appeal: equity holders prefer to exhaust reinvestment and continue to capture carry. The sharp decline in spreads favored *refinancing* and *reset* transactions (see section *3.2. Global market structure and dynamics*).

Excess returns of CLOs compared to corporate bonds between 2012 and 2018



Source: Afi, ICE, CLOIE

Evolution of *spreads* in the primary market for CLOs between 2012 and 2018 (basis points)



Source: Afi, CLOIE

Optimistic scenario: tailwinds

The macroeconomic environment surprises on the upside: defaults fall to 1–2%, recoveries reach 70%, and spreads compress.

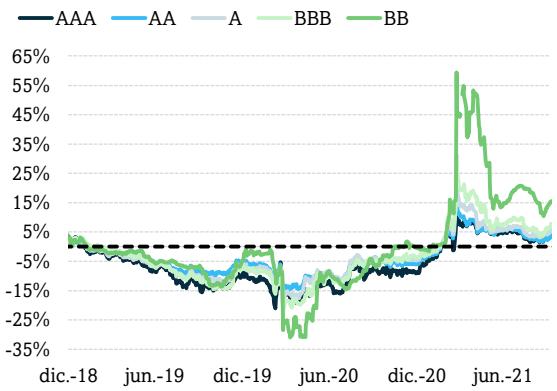
In 2019, before the pandemic, European AAA bonds were trading at +90 bps above Euribor. The *upside* was very limited due to their negative convexity, and the exercise of early *calls*.

Mezzanine bonds capture the rally in full: In 2019, European BB spreads narrowed significantly. Most investors who had entered at price discounts after the volatility of 2018 saw their *tranches* recover to par.

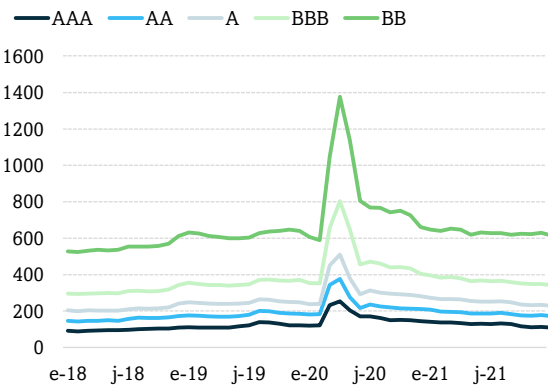
Equity returns are enhanced: In that same year, 2019, equity holders not only received abundant cash flows, but also executed resets to extend reinvestment periods under very favorable conditions. The result was returns that in some cases exceeded 20%.

Excess returns of CLOs versus corporate bonds between 2018 and 2021

CLO *spread* evolution between 2018 and 2021 (basis points)



Source: Afi, ICE, CLOIE



Source: Afi, CLOIE

Stress scenario

Stress scenario: recession, defaults at 7–10%, recoveries at 40–50%, and widening spreads.

AAA ratings have proven resilient even in the worst of times. During the GFC (2008–2010), loan defaults reached 10–12%, but AAA tranches did not suffer any principal losses. They did experience drastic spread widening—in 2009 they traded at +400 bps—generating severe mark-to-market losses for those who needed liquidity (SIVs and bank conduits), but those who held their positions collected their coupons and principal in full.

Mezzanine prices were volatile. In 2008–2009, BB and BBB fell 40–60 points in price, and a non-trivial percentage of CLOs breached their OC Test triggers and diverted cash to buy additional loans or to amortise senior tranches. More recently, in March 2020 with the COVID shock, European BBs widened by 300 bps in weeks and traded at around 70–75% of par. Many positions recovered in the following months, but the volatility showed the vulnerability of these tranches in stressed environments. BB tranches, including many that went PIK for a brief period, recovered fully and paid par and accrued and unpaid interest.

Equity was the hardest hit in both episodes. In 2008, many equity holders in CLOs which were out of their reinvestment period lost their initial investment as triggers redirected flows to senior debt for long periods, deleveraging the CLOs. CLOs within their reinvestment period, however, were able to buy loans at a significant discount, enhancing subordination. In 2020, equity stopped receiving distributions in numerous CLOs during the second quarter when OC tests tightened. Only the Fed's rapid intervention and the rebound in lending allowed the structures to recover flows toward the second half of the year. Without the expansionary monetary policy, the story would have been different.

A third example occurred in 2022–2023, when the Fed's tightening pushed raised the cost of CLO liabilities. AAA ratings held up but new issue equity saw its excess spread narrow dramatically.

History therefore confirms the logic behind the design of CLOs:

- In stable conditions, all tranches fulfill their role: AAA as a safe haven, mezzanine as a source of carry, and equity as a catalyst for double-digit returns.
- In positive markets, mezzanine and equity are the big winners, with positive convexity multiplying returns.
- In times of stress, AAA tranches preserve par, mezzanine tranches suffer volatility and limited or no principal losses, and equity underperforms.

The historical episodes of 2008, 2020, and 2022–2023 show that, although AAA is rarely threatened in terms of principal, mezzanine and equity depend critically on the timing of the cycle and the quality of the manager to avoid failing *tests*. In short, CLOs are not immune to crises, but they are designed so that they offer investors a differentiated risk profile by tranche.

6. Regulatory environment and considerations for European investors

Discussing European CLOs requires examining regulation. In Europe, large potential buyers—insurers and banks—make their decisions based not only on return, but also on how it fits with regulatory capital consumption and transparency obligations. In other words, the attractiveness of a CLO in Europe depends as much on the spread it offers as on the regulatory treatment it receives on the investor's balance sheet.

For years, Solvency II has been an obstacle for insurers interested in CLOs. The framework differentiated between STS (Simple, Transparent, Standardized) and non-STS securitizations, treating the former very favorably and the latter very harshly. Since CLOs, by definition, do not meet the STS criteria—being managed vehicles, with ramp-up and reinvestment—they were punished with disproportionate capital charges.

Main differences between a CLO and a traditional (STS) securitization

Aspect	CLO (Collateralized Loan Obligation)	STS Securitisation (Simple, Transparent & Standardised)
Type of underlying asset	Active portfolio of leveraged loans with sub-IG rating.	Static portfolio of homogeneous assets (mortgages, auto loans, consumer loans, leasing…).
Vehicle management	Active: the manager can buy/sell loans during the reinvestment period.	Passive: no management, no asset replacement once the deal is closed.
Main objective	Optimize the arbitrage spread between assets and liabilities and offer diversified exposure to leveraged credit.	Transfer credit risk of pre-existing assets to free up bank capital.
Nature of cash flows	Cash flow securitization: based on interest and amortization of underlying loans.	Pass-through of standardized asset flows without reinvestment management.
Structural complexity	High: multiple tranches, OC/IC tests, reinvestment and optionalities (refi, reset).	Low: predetermined structure, no reinvestment or complex options.
STS compliance (EU Securitisation Regulation)	Not eligible: does not meet simplicity or standardization criteria due to active management.	Eligible if it meets transparency, simplicity, and standardization requirements.
Capital consumption (Solvency II)	High in current version; partial reduction after 2025 reform (only senior tranches).	Low: lower weightings due to STS status and lower complexity.
Typical investor profile	Specialized managers, banks and insurers in senior tranches, credit funds in mezzanine/equity.	Insurers and banks with ALM orientation or need to meet regulatory criteria.

Source: Afi

These structural differences explain why European regulation distinguishes between the two types of vehicles. While STS securitisations are designed for the simple transfer of banking risk, CLOs are more dynamic institutional credit management structures, whose regulatory treatment is being reviewed to better reflect their historical performance and actual risk profile. In practice, this meant that an insurer purchasing an AAA CLO had to tie up more capital than if it purchased a BBB corporate bond, even though the risk of loss was objectively lower.

The Solvency II reform proposal presented in the summer of 2025 radically changes this equation. For the first time, a distinction is made between senior and non-senior within the non-STS universe, and risk factors for senior tranches are drastically reduced. The

change is so significant that it is worth citing an example: a 2.5-year AAA CLO would go from an SCR of 31.3% to 6.8%, a drop of –78%. For AA, the reduction is similar (from 33.5% to 8.3%), and for A it is also significant (from 41.5% to 11.0%).

The message is clear: regulators want insurers to once again view senior securitizations as an efficient capital investment alternative. In practical terms, with current spreads, the return on regulatory capital of a AAA CLO in euros may even exceed that of an investment grade corporate bond. In other words, what was once a "punitive" asset is now a potentially strategic component of insurers' ALM portfolios.

For mezzanine and equity tranches, the story is different. Although there are also cuts, they are much more modest. A BBB, for example, barely drops from 19.7% to 18.8% of SCR; a BB falls from 82% to 38.9%, a considerable improvement in relative terms, but still well above the cost of capital of a high-yield corporate bond (~4.5%). The consequence is that, even with the reform, insurance demand will continue to be concentrated at the top of the structure, leaving mezzanine and equity in the hands of less capital-focused investors.

Current and revised SCR

Activo	Market Spread (pbs)	Sharpe Ratio	SCR (% Market Value)	Return on SCR Ratio
EUR IG AAA	25	7,40%	2,40%	10,30%
EUR IG AA	35	10,00%	2,90%	11,80%
EUR IG A	55	15,30%	3,60%	14,60%
EUR IG BBB	80	19,40%	4,10%	19,40%
EUR Sov Semi Core	50	14,30%	0,00%	n/d
EUR Peripheral	70	15,20%	0,00%	n/d
USD IG AA	50	11,40%	2,80%	18,80%
USD IG BBB	110	18,50%	6,60%	17,20%
EUR CLO AAA – Current	130	40,30%	31,30%	4,10%
EUR CLO AA – Current	195	40,60%	33,50%	5,80%
EUR CLO A – Current	260	41,00%	41,50%	6,30%
EUR CLO BBB – Current	320	22,50%	49,30%	6,50%
EUR CLO AAA – Proposed	130	40,30%	6,80%	19,10%
EUR CLO AA – Proposed	195	40,60%	22,50%	8,70%
EUR CLO A – Proposed	260	41,00%	30,00%	7,70%
EUR CLO BBB – Proposed	320	22,50%	47,00%	6,80%

Source: Morgan Stanley

At the same time, the regulatory framework for banking is also evolving. The Capital Requirements Regulation (CRR) and the CRD IV directive establish capital requirements for securitizations on bank balance sheets. Although European CLOs do not qualify as STS, the overall effect is clear: banking regulation, like insurance regulation, is moving towards a more favorable environment for securitization. This translates into a deeper

primary market and narrower spreads at the top of the structure, where banks and insurers converge.

7. Opportunities and strategic positioning

The performance of CLOs is weakly correlated with the rest of the credit market. Although the underlying asset—loans—belongs to the same universe of issuers as corporate high yield, the structure of the CLO cushions the direct transmission of *market shocks*. In other words, the sensitivity of CLO returns to credit price movements is structurally lower than that of a corporate bonds.

Historical correlation analyses confirm this dynamic. In Europe, the correlation of BB CLOs with high yield stands at 0.46, while in the United States it is slightly higher. The contrast is even greater when compared to traditional fixed income segments: European CLOs show correlations close to 0 with government debt and around 0.20 with equities. In the case of IG, the correlation with government debt is between 0.5 and 0.7, and that of HY with equities is between 0.5 and 0.6.

Correlation matrix between asset groups

Correlaciones	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Ger 5-7 (1)	1,00	0,87	0,60	0,69	0,21	0,05	0,25	-0,08	0,09	0,01	0,06	-0,01
Esp 5-7 (2)	0,87	1,00	0,81	0,70	0,32	0,21	0,33	0,17	0,17	0,11	0,07	0,00
Ita 5-7 (3)	0,60	0,81	1,00	0,54	0,29	0,21	0,30	0,27	0,16	0,15	0,02	-0,01
IG BBB (4)	0,69	0,70	0,54	1,00	0,78	0,54	0,52	0,37	0,41	0,37	0,49	0,39
HY BB (5)	0,21	0,32	0,29	0,78	1,00	0,80	0,56	0,61	0,54	0,50	0,59	0,46
COCO (6)	0,05	0,21	0,21	0,54	0,80	1,00	0,62	0,62	0,45	0,42	0,37	0,29
EM Local (7)	0,25	0,33	0,30	0,52	0,56	0,62	1,00	0,47	0,26	0,49	0,25	0,23
RV Europa (8)	-0,08	0,17	0,27	0,37	0,61	0,62	0,47	1,00	0,65	0,62	0,23	0,20
RV EEUU (9)	0,09	0,17	0,16	0,41	0,54	0,45	0,26	0,65	1,00	0,59	0,24	0,18
RV EM (10)	0,01	0,11	0,15	0,37	0,50	0,42	0,49	0,62	0,59	1,00	0,27	0,27
CLO BBB (11)	0,06	0,07	0,02	0,49	0,59	0,37	0,25	0,23	0,24	0,27	1,00	0,74
CLO BB (12)	-0,01	0,00	-0,01	0,39	0,46	0,29	0,23	0,20	0,18	0,27	0,74	1,00

Source: Afi, ICE, Bloomberg

The low structural correlation is due to three main factors:

- CLOs are composed of floating-rate loans, secured by collateral and with priority over high-yield debt. Additionally, they have a significant level of overcollateralisation, which reinforces their loss absorption capacity and reduces their sensitivity to changes in market prices or spreads.
- Overcollateralisation (OC) and Interest Coverage (IC) tests act as self-correcting systems: cash flows are redirected to senior tranches, reducing leverage. This design limits the impact of rating downgrades or market volatility.
- The CLO market is dominated by buy-and-hold investors—insurers, banks, and credit managers—with long investment horizons. This stability limits speculative turnover, reduces forced selling flows, and thus cushions the volatility observed compared to other assets with higher turnover, such as high yield or credit ETFs.

Overall, CLOs offer exposure to credit risk with lower systemic correlation and a more stable risk/return profile, especially in investment grade tranches. Therefore, their inclusion in diversified portfolios improves the efficient frontier, reducing aggregate volatility without sacrificing returns.

Now, we will carry out an exercise in which we select different assets which could belong to a traditional fixed-income portfolio. The objective is to propose a number of possible alternative portfolios which can be used to draw conclusions about the expected return and risk profile of incorporating the BBB and BB tranches of a CLO as a new *asset class* and as a substitute or complement to investment grade and high *yield* corporate bonds.

For this exercise, we used the expected returns from the following table, as well as other risk parameters for each of the assets and other statistical variables, such as the correlations between the historical returns of these assets. The asset groups to be worked on, the correlation coefficients between them, and the distribution of weights among the different assets are shown in the following tables:

Alternatives proposed for portfolio distributions by asset

	Rent. Esp.	1	2	3	4
Ger 5-7	1,2%	5,0%	5,0%	5,0%	5,0%
Esp 5-7	2,5%	15,0%	15,0%	15,0%	15,0%
Ita 5-7	2,7%	15,0%	15,0%	15,0%	15,0%
IG BBB	3,5%	15,0%	10,0%	15,0%	10,0%
HY BB	5,0%	10,0%	10,0%	5,0%	5,0%
COCO	5,5%	5,0%	5,0%	5,0%	5,0%
EM Local	6,0%	5,0%	5,0%	5,0%	5,0%
RV Europa	8,0%	15,0%	15,0%	15,0%	15,0%
RV EEUU		10,0%	10,0%	10,0%	10,0%
RV EM	12,0%	5,0%	5,0%	5,0%	5,0%
CLO BBB	5,0%	0,0%	5,0%	0,0%	5,0%
CLO BB	7,5%	0,0%	0,0%	5,0%	5,0%
Total		**100,0%**	**100,0%**	**100,0%**	**100,0%**

Source: Afi

The variance-covariance matrix between this set of assets is required to estimate portfolio volatility, and to calculate the probabilities of loss and outperforming inflation over different time horizons, VaR[5] and Tail VaR[6] .

The following table shows how the return and risk parameters vary depending on the distribution of assets in the portfolio. The expected returns of the portfolios range from 4.24% to 4.44%, with volatilities of around 1.85%.

[5] A measure of risk that indicates the maximum estimated loss at a given confidence level, generally 95%.

[6] TailVar estimates the average loss that can be expected when the loss is above that indicated by VaR.

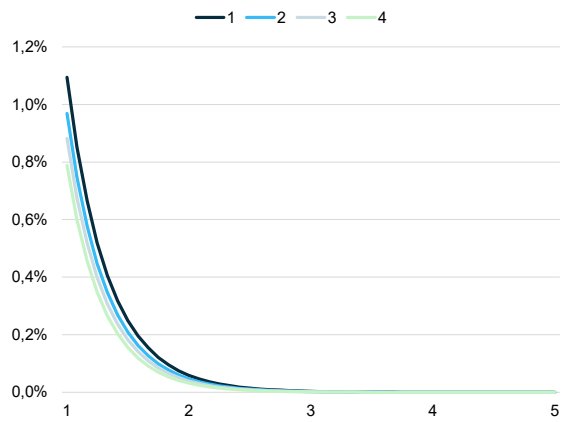
One element to consider when carrying out this analysis is whether the volatility of the portfolios under consideration should be considered as a key measure of risk. As can be seen in the table, this volatility averages around 1.85%. This degree of price variability means that with an average return on the portfolios of around 4.44%, the probability of beating inflation over a five-year horizon is close to 100%. Another key element is that in portfolios that include CLO *tranches*, the VaR and Tail VaR are similar to the rest of the portfolios. Furthermore, the Sharpe ratio improves considerably when they are included.

Results of the return and risk parameters for the portfolios

Parameter	1	2	3	4
Expected Portfolio Return	4.24%	4.32%	4.37%	4.44%
Volatility	1.85%	1.85%	1.84%	1.84%
VaR (95%)	-3.0%	-3.0%	-3.0%	-3.0%
Tail VaR (95%)	-3.8%	-3.8%	-3.8%	-3.8%
Maximum Loss	-18.3%	-18.8%	-19.6%	-20.1%
Sharpe	2.29	2.34	2.37	2.41
Prob. of loss in 12 months	1%	1%	1%	1%
Prob. of loss in 5 years	0%	0%	0%	0%
Prob. to beat inflation (12m)	83%	84%	84%	85%
Prob. to beat inflation (5y)	98%	99%	99%	99%

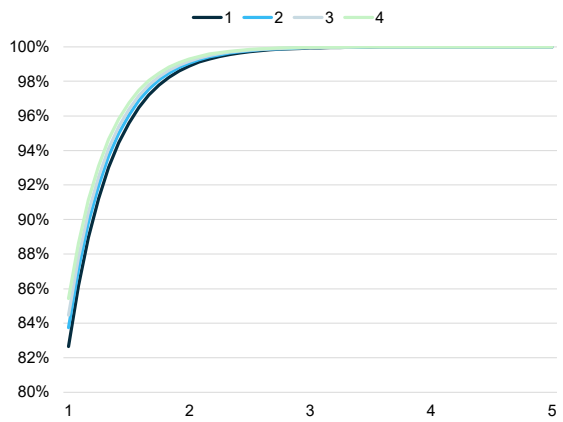
Source: Afi

Probability of loss



Source: Afi

Probability of beating inflation



Source: Afi

8. Advantages and risks of investing in CLOs

Throughout this report, we have identified several factors that explain why CLOs remain one of the most resilient structures in the structured credit universe. Their hierarchical design, self-correcting mechanisms (OC/IC), and active management have enabled the product to go more than two decades without losses in the senior tranches. However, their complexity and recent developments in the loan market also introduce risk factors that should be assessed.

8.1. Advantages

Along with the previous analysis, which demonstrated how CLOs can add value to fixed-income portfolios, we would highlight the following:

- Low default history

The data from S&P Global Ratings is conclusive: no AAA tranche of CLOs has defaulted, compared to default rates of 0.68% for AAA corporates and 2.9% for BBB corporates. Even mezzanine tranches show a substantially lower incidence of defaults than their comparables. This track record spans five global crises—from the Asian crisis in 1997 to the pandemic in 2020—consolidating CLOs as one of the most resilient structured products on the market.

- Reduced volatility

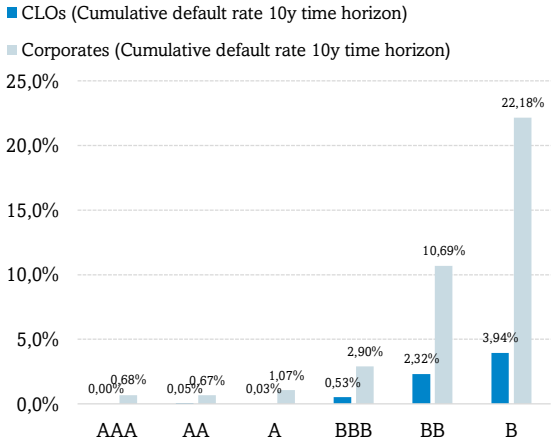
Another key advantage is their structural "par value" nature. Although CLO tranches are marked to market, price fluctuations are smaller because the underlying assets—floating-rate, secured loans—are accounted for at face value in coverage tests. The vehicle's performance therefore depends mainly on the effective repayment of the loans, rather than on any technical volatility of the secondary market. This feature reduces its correlation with corporate credit and cushions price volatility in stress scenarios.

- Greater liquidity than comparable assets

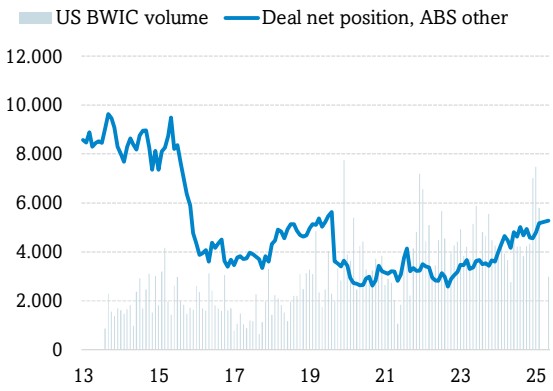
In terms of liquidity, the market has matured significantly. BWIC (*Bids Wanted in Competition*) mechanisms, organized auctions in which investors sell tranches of CLOs through competitive bids from different buyers, allow debt to be traded transparently and with efficient price formation. During the episodes of volatility in 2020 and 2022, monthly volumes exceeded USD 7 billion in the US and USD 3 billion in Europe, demonstrating that the market maintained active prices even when *dealers* reduced their activity.

Default rates on CLOs and corporates (%)

BWIC volume vs. dealer inventory in ABS



Source: Moody's



Source: AFI, Fair Oaks

- Possibility of dynamic management

Active management is another distinguishing advantage. Unlike static securitizations, CLOs are dynamically managed vehicles: the CLO manager can sell impaired loans, reinvest amortisations, and execute resets or refis to optimize the cost of the liabilities. This room for maneuvering translates into one of the main sources of alpha generation (which will be detailed in point 9 of this report), especially in phases of volatility or spread dispersion.

- High transparency

The European regulatory framework, under the EU Securitization Regulation, has significantly increased transparency and reporting discipline. Managers are required to publish granular information on each loan, while investors must monitor key metrics such as WARF, the weight of CCC assets, and compliance with coverage tests. This *ongoing due diligence* regime reinforces traceability and institutional investor confidence.

8.2. Risks

- Complexity and high (unjustified) stigma

The product is highly complex in structure. Analyzing it requires knowledge of specific metrics (OC/IC, WARF, WARR, CCC bucket) and an understanding of self-correcting mechanisms. This technicality restricts access to specialized investors and maintains a certain stigma inherited from the pre-2008 era, even though today's CLOs have a much more robust architecture.

- Increase in *covenant-lite*

In terms of underlying credit risk, the composition of the loan market reflects a clear shift toward B/B– ratings, which increases sensitivity to adverse shocks. In addition, more than 70% of European loans and more than 80% of US loans are *covenant-lite*, which reduces

the capacity for early intervention and tends to lower recovery rates (around 70% for *senior secured loans* and below 40% for *second lien loans*).

However, the structure of CLOs imposes eligibility limits and control mechanisms that mitigate some of this risk. The vehicle's documentation restricts the inclusion of certain assets—such as PIK loans, real estate loans, or emerging market loans—and requires a minimum level of quality. In addition, quality and coverage tests act as safeguards: if either deteriorates, the manager must strengthen. Taken together, these elements require a positive credit quality bias compared to other private credit vehicles, such as BDCs, which pursue higher returns by assuming greater structural risk.

- Conflict of interest

There is a risk of conflict of interest, not only because of the manager's fee structure—linked to equity performance—but also because of the inherent tension between the interests of the equity tranche and those of the debt. Equity seeks to maximize the excess spread and the vehicle's return, while debt investors prioritize capital preservation and the stability of coverage tests. Therefore, the assessment of the manager, their alignment of interests, and the governance of the CLO are critical aspects of the analysis.

- Market dynamics between private credit and CLOs

The reduction in the primary pipeline of new syndicated loans observed in 2023 was mainly due to lower demand for CLO vehicles in a high interest rate and CLO spread environment, which favored private credit. In contrast, during 2024, the revival in demand for CLOs facilitated the refinancing of private credit loans into broadly syndicated loans, partially restoring the balance between the two segments.

- Par build and active portfolio management

Par build consists of selling loans that are potentially trading above *par* and reinvesting in lower priced assets. This practice is strictly regulated in the CLO documentation, which only allows it when sales are made at prices above certain thresholds and always within limits. Far from being an artificial maneuver, these transactions are rational from the perspective of debt investors, as loans above *par* are prepayable and their sale allows the nominal value and *excess spread* to be reinforced without altering the fundamental risks.

Risk analysis should therefore focus on the evolution of the real par and the MVOC (Market Value Over-Collateralisation)—a non-contractual but widely used metric—which allows for the detection of more aggressive behaviors, such as sales of impaired assets or opportunistic management prior to defaults.

In this regard, the IOSCO and ESMA reports highlight the need to enhance transparency regarding credit quality metrics and the traceability of *par management* operations, so that investors can assess the economic soundness of the portfolio beyond mere technical compliance with the *tests*.

9. Alpha generation

Throughout this report, we have shown how active management and the structural design of CLOs not only preserve value in adverse environments, but also have the potential to generate additional returns compared to other credit classes. This section summarizes the main drivers of alpha generation in this type of vehicle. It should be noted that alpha generation is not exclusive to the manager; documentation arbitrage—the last point in this section—is also a significant source of value for investors in CLO tranches. To illustrate these mechanisms in a practical way, the Appendix includes a selection of three case studies provided by Fair Oaks that show real examples of value creation through collateral analysis, documentation review, and management strategy execution.

- Active management

Active portfolio management is the fundamental driver. CLOs are not static structures like an STS: the manager can replace amortized or impaired loans with assets with a better risk-return profile, adjusting the portfolio to the cycle and maintaining credit quality. The data show that vehicles with higher asset turnover have a lower default rate and higher average *equity* returns than less active vehicles. Dynamic management has the potential to anticipate loan deterioration, execute early sales, and maintain overcollateralisation (OC) tests at comfortable levels, reducing the likelihood of breaches.

- Sector selection

Each credit cycle has concentrated defaults in different segments—technology and telecommunications in 2000–2002, finance and real estate in 2008, and energy in 2015–2016—reinforcing the importance of diversification and active sector management. An outperforming managers may reduce exposure to cyclical sectors and reinforce defensive companies (software, healthcare, services, utilities), improving cash flow stability and risk-adjusted returns.

- Control of CCC or lower assets

Keeping this exposure below the contractual threshold (7.5–10%) avoids penalties in OC tests and preserves cash flow to subordinated tranches.

- Par *building* strategies

Par building strategies—selling loans above or close to par and reinvesting in lower priced assets with good credit profiles—increases the par value of collateral, expanding structural buffers and improving the structural resilience of the CLO.

- Liability optimization

Experienced managers take advantage of market windows to refinance or execute resets, reducing the cost of financing or extending the life of the vehicle. In 2024, *reset* transactions exceeded $250 billion, with savings of up to 60 bps in the average cost of debt. These strategic decisions can add several percentage points to *equity* returns.

- Access to secondary markets

Similarly, access to secondary markets allows *relative value trading* opportunities to be captured: buying loans at a discount during periods of stress and selling them when conditions normalize to generate additional returns without compromising the structure.

- Documentation opportunities

An additional source of value, less visible but essential, is documentation. CLO documentation is extensive, relatively standard and highly transparent, much more so than in traditional bond markets, providing fertile ground for managers and institutional investors with analytical capabilities. Understanding and negotiating the details of contracts—*indentures*, *offering circulars*, or *collateral management* agreements—requires teams capable of analyzing dozens of clauses that define the vehicle's operational flexibility.

9.1. Comparison of strategies and alpha generation in senior tranches

Even in seemingly passive strategies, evidence confirms the ability of active management to generate alpha even in the most defensive (AAA) tranches. In the European CLO ETF market, FAAA—the first actively managed ETF, launched by Fair Oaks Capital in 2024, with 100% AAA exposure—has outperformed the weighted average return of its peers (despite the fact that most European AAA CLO ETFs are required to only hold 80% of AAA rated assets).

At the end of October 2025, FAAA's cumulative net return over the average European CLO AAA ETF exceeded 50 basis points, a significant excess return in the context of yields in the 2-3% range. Active selection of issuers and portfolio management explains much of this differential performance.

If the efficiency of this return is measured using the information ratio, which relates the excess return relative to the index and to the volatility of that excess, FAAA would achieve a value of approximately 0.7. This figure implies that, for each percentage point of active risk assumed, the fund has generated 0.7 points of excess return, a result that reflects efficient and consistent active management.

$$Information\ Ratio = \frac{Rp - Rb}{\sigma(Rp - Rb)}$$

$R_p$is the fund's return andR_b is the benchmark index's return.

Based on the observed annualized returns (3.84% for FAAA and 3.37% for the Peer Index) and an estimated excess return volatility of around 0.7% per annum—consistent with the monthly standard deviation of ±0.2% observed in comparable products—a ratio close to 0.7 is obtained.

This level is indicative of recurring alpha generation, not attributable to chance, and places FAAA in the upper range of efficiency among high-quality structured credit strategies.

In lower-rated segments, comparisons with indices have structural limitations: CLO indices do not reflect operational frictions or delays in the *settlement* of new issues. However, evidence shows that actively managed strategies consistently outperform risk-adjusted indices, both in terms of total return and loss control.

10. Conclusions

CLOs have established themselves as a key participant in leveraged credit markets. Their ability to transform corporate loan portfolios into instruments with differentiated risk profiles allows financing to be channeled to sub-investment grade companies while maintaining solid protections for senior investors.

Throughout this report, we have noted that CLOs have shown remarkable resilience across cycles, with a track record of defaults well below that of other equivalent credit products and no defaults in AAA tranches since their inception. Active management emerges as one of the main sources of alpha generation and risk control. This ability to anticipate credit deterioration and maintain coverage tests (OC/IC) at comfortable levels is the basis for their stable performance even in stressed environments.

Analysis of the structure shows how subordination and structural protection mechanisms (overcollateralisation and interest tests, sector diversification, and concentration limits) support CLOs' defensive profile. Mezzanine tranches (B/BBB) are the optimal point for risk-adjusted returns, combining attractive carry with significant structural protection.

CLOs also provide diversification for investors. Their low correlation with high yield and other credit segments reduces systemic exposure and broadens the return universe within structured credit.

In an environment of historically tight corporate spreads, monetary policy in transition, and greater regulatory scrutiny, the balance between return, risk control, and transparency will continue to determine market developments. The reforms promoted by ESMA and IOSCO in terms of methodologies and transparency improve disclosure and mitigate potential conflicts of interest.

Current pricing levels reflect an environment of greater differentiation between tranches and regions. European AAA ratings are around +120-150 bps above Euribor, mezzanine (BBB/B) between +300 bps and +800 bps. These spreads are wider than the average for the last decade and they adequately compensate for credit risk, remaining attractive compared, on a relative value basis, to high yield. Overall, current spreads offer interesting entry points for investors willing to consider the asset class.

11. Glossary of terms

CLO arbitrage:

Spread between the average return on assets (loan portfolio) and the average cost of liabilities (CLO notes issued). This margin, known as *excess spread*, is the basis for the return on the equity tranche.

Broadly Syndicated Loans (BSL):

Loans to generally large companies syndicated among institutional investors. These are the traditional assets in CLOs, as opposed to *Middle Market CLOs*, which invest in smaller, less liquid loans.

Call / Early repayment:

Right of the equity tranche (after the *non-call* period) to repay the CLO debt early, at par, if market conditions are favorable. This allows for refinancing at a lower cost or reinvestment with more attractive spreads.

Payment waterfall:

Sequence of payments governing the distribution of cash flows. First, expenses and fees are covered, then interest and amortisation of the senior tranches, and finally payments to equity.

Collateralized Loan Obligation (CLO):

A securitization vehicle (*Special Purpose Vehicle*) that acquires a diversified portfolio of broadly syndicated loans and issues different tranches of debt and equity with varying levels of risk and return to finance them.

Collateral Manager:

Professional manager responsible for selecting, monitoring, and replacing loans within the CLO, within the limits set by the vehicle's documentation.

Covenant-lite (cov-lite):

A loan with fewer contractual requirements (e.g., no periodic financial tests). Although it increases the borrower's flexibility, it reduces the creditor's ability to intervene early.

Credit Enhancement (CE):

Level of structural protection for each tranche, measured as the proportion of subordination below. The higher the CE, the lower the risk of loss for the investor.

Default / Recovery Rate:

Default is the non-payment of a loan. The *recovery rate* represents the percentage recovered after the restructuring or liquidation process.

Equity tranche:

The most subordinated tranche of the CLO. It has no rating and absorbs the first losses, but the equity captures the entire excess spread once payments to the senior tranches have been covered.

Excess spread:

Difference between the return on assets and the total cost of liabilities (including fees and expenses). It is the main source of profit for equity holders and a key measure of *CLO arbitrage*.

Haircut:
Discount applied to the nominal value of an asset for the calculation of structural tests, for example, on CCC loans or in default.

Interest Coverage (IC) test:

Ratio that compares interest income from loans with interest payment obligations on liabilities. Failure to meet this ratio results in the redirection of cash flows to acquire additional loans or to repay senior tranches.

Leveraged Loan:

Loan granted to companies with a high debt ratio or below *investment grade* rating. They are the underlying assets of CLOs.

Overcollateralisation (OC) test:

A structural protection measure that compares the nominal value of assets with that of liabilities. If the ratio falls below the established threshold, cash flows are diverted to acquire additional loans or to repay senior debt.

Par value:

Nominal or face value of a loan or bond. In CLOs, assets are accounted for at par (rather than at market value), which reduces price volatility.

Ramp-up / Warehousing:

Initial period of the CLO in which the manager purchases the loans for the CLO portfolio. *Warehousing* can be financed through a bank line prior to the closing of the vehicle.

Rating Tranche:

Each level of debt issued by the CLO, with a different credit rating (AAA, AA, A, BBB, BB, B). The higher the rating, the lower the return and the lower the risk.

Reinvestment:
Period—usually 2 to 5 years—during which the manager can reinvest the cash flows generated by repayments or sales, maintaining the CLO's asset level.

Reset:
Comprehensive restructuring of the CLO that extends its life, updates spreads, and redefines debt tranches. Equivalent to a "reopening" of the vehicle.

Refinancing (Refi):

Replacement of one or more debt tranches with new bonds with a lower coupon, maintaining the original structure.

Spread (credit margin):

Differential over the reference rate (Euribor or SOFR) that remunerates the credit risk assumed by the investor.

Subordination:
Order of priority in payments. The most subordinated tranches (equity and mezzanine) absorb losses first and are paid last.

Coverage tests:

Set of ratios (OC, IC, Interest Diversion) that ensure that cash flows and asset quality are sufficient to protect senior debt holders.

Vintage:
Year of issuance of the CLO or origination of the loans.

Weighted Average Rating Factor (WARF):

Indicator of the average credit risk of the portfolio, weighted by the weight of each loan according to its rating.

Weighted Average Life (WAL):

Weighted average duration of the CLO's assets.

12. Appendix: *Fair Oaks Case Studies*

12.1. Portfolio - Loan Selection

Although CLO tranches generally offer attractive spreads, risk-adjusted returns depend on the quality and composition of the underlying loan portfolio. A bottom-up analysis that identifies future risks not yet reflected in ratings or market prices allows for the anticipation of spread widening and to position the portfolio accordingly. Although CLOs are not subject to daily mark-to-market valuation and have structural protection mechanisms for debt holders, active collateral selection remains key: a higher-quality portfolio tends to perform better in the secondary market and is more likely to see prepayments on favorable terms.

Given that a significant portion of the CLO investor base is "generalist" and tends to analyze portfolios primarily through "aggregate" variables (average portfolio price, average credit rating, etc.), the ability to anticipate changes before they are reflected in prices or ratings allows for the generation of "alpha." For example, two portfolios may currently have a similar weighted average price, with most loans around 99.5c, and give rise to BBB tranches issued at the same level, such as Euribor+3.5%. If bottom-up analysis detects a higher concentration of "risky names" in one of them, with a greater probability of suffering price falls in the future, preference for the portfolio that we consider "cleaner" has no cost at the time of investment: price and coupon are identical. If our analysis is too conservative, the ex post result will also be similar however, if the analysis is correct, the second transaction will probably suffer a future spread widening in the secondary market.

Case study: First Brands Group

Fair Oaks has a team of credit analysts who assign internal ratings using direct information from loan issuers. Each loan within a CLO portfolio is evaluated using an internal scoring system, which allows us to identify portfolios with higher future credit risk at the issuer level, even when that risk is not yet reflected in market prices or current credit ratings. The added value of the corporate credit team was evident in the case of First Brands Group. In October 2023, when the company's credit rating was BB- (Fitch) and B+ (S&P), our analysts identified the issuer as problematic, despite trading very close to par, and classified it as high risk based on i) a highly commoditized product offering, with significant exposure to cheaper alternatives; ii) aggressive cost-saving assumptions with no certainty of execution in the short term; and iii) insufficient cash flow generation to meet expected debt obligations.

In September 2025, First Brands filed for Chapter 11 bankruptcy protection under US law. The loan maintained an average purchase price of 97.5 cents between September 2023 and August 2025, which suggested little risk. The standard indicators used by CLO investors (weighted average price of the portfolio, asset volume below 80 cents, or credit ratings themselves) would not have justified considering a CLO with high exposure to First Brands to be problematic. However, thanks to the application of rigorous bottom-up credit analysis, Fair Oaks identified the fundamental problems before they were reflected in market prices or triggered warning metrics in CLOs, making it possible to avoid transactions or adjust portfolios before the market discounted for this risk.

12.2. Documentation

The documentation governing CLO transactions establishes a comprehensive framework of tests that regulate portfolio transactions. Before executing any transaction, the collateral manager must verify that the proposed transaction complies with the portfolio profile and coverage tests. Unlike other structured products, CLO documentation has not deteriorated over time; following the global financial crisis of 2008/09, it even incorporated improvements in certain aspects of investor protection. However, within this robust framework, small changes in definitions, limits, or cure mechanisms can cause a transaction to have a marginal bias towards CLO debt or equity holders.

Case study: Weighted Average Life (WAL) test

The WAL test measures the expected average repayment time of the principal of the underlying loans, weighted by the amount of each loan. This ensures that the collateral manager maintains a maturity profile aligned with the CLO's liability structure. While most WAL definitions are standard, in 2024 Fair Oaks identified a number of transactions in which they were relatively more conservative or aggressive.

Given that the market typically values CLOs assuming a standard prepayment scenario (end of the reinvestment period plus 12 to 18 months), these non-standard definitions created opportunities by anticipating shorter or longer effective average lives than those implied in the price.

In 2024, when many BBB tranches were trading at a small discount to par, the ability to identify transactions with shorter than expected effective average lives than those assumed by the market made it possible to combine attractive coupons with a high probability of pull to par before the date discounted by the market. As a result, at the end of 2024, the Fair Oaks Dynamic Credit Fund portfolio held 13% in AA/A-rated tranches. These tranches were originally rated BBB and benefited from rating (and price) upgrades as a direct result of the quicker amortisation of senior (mainly AAA) tranches, which generated attractive returns while reducing the portfolio's average credit risk.

12.3. Manager

In addition to the basic analysis of a CLO manager's management capabilities, there are more subtle variables that can have a significant impact on returns.

Fair Oaks' due diligence process is based on three pillars: i) regular meetings with management teams, facilitated by our position as a specialized CLO investor across the entire capital structure (from senior tranches to equity), which allows for continuous access to the manager; ii) the systematic use of historical information available in detailed monthly CLO reports ("trustee reports") to analyze manager performance and detect patterns in different market environments; and iii) the analysis of prices observed in BWIC processes in both primary and secondary markets, which allows us to evaluate how each

manager's investment decisions are perceived in the market and how their tranches perform under different scenarios.

Case study: High cash balances

Fair Oaks' systems allow for the analysis of historical information on any CLO portfolio (through payment reports) and the comparison of different vintages from the same manager, even if Fair Oaks has not invested in that transaction. In one such exercise, Fair Oaks identified that older CLOs showed marginally high cash balances during or just after the reinvestment period. This, for example, could be due to difficulties in identifying suitable loans for the portfolio (e.g., having to invest in loans with shorter maturities due to WAL restrictions). From the perspective of an investor in AAA–BBB tranches, this extension of the life of the transaction is not optimal. After discussing this with the manager, the latter acknowledged the limitations in finding eligible loans and proceeded to reduce cash balances, prepaying debt and, as a result, increasing subordination for the senior tranches.

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