

**CLO Structures**  
An evolution

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# Executive summary



Collateralised Loan Obligations (CLOs) have evolved considerably over the last decade. Whilst still retaining the same core purpose of tranching and redistributing syndicated and leveraged loans from the balance sheets of financial institutions, various adjustments have led to an evolution of CLO structures to ensure they continue to appeal to investors, as well as fulfilling a useful function in the capital markets.

In this paper we outline the features of a CLO which distinguish them from other classes of securitisation. This includes the typical life cycle of a CLO, the role of the CLO manager, plus other common structural features and how those features have evolved over time. Notable changes include: significantly higher levels of credit enhancement, as well as greater spreads on all of the tranches, along with tougher covenants that CLO managers need to operate within.

The paper goes on to discuss the current state of CLO regulation in Europe (under the Securitisation Regulation<sup>1</sup>) and in the United States (US) (under Dodd-Frank<sup>2</sup>), and how that regulation has evolved.

The paper also examines issues currently facing the CLO industry in Europe and the US, and assesses the potential impact of new legislative initiatives such as Simple, Transparent and Standardised (STS) securitisation. Finally we outline an alternative perspective to tackling the challenge of risk retention faced by CLO issuers, particularly CLO managers, who may wish to optimise the capital required to operate their business.

<sup>1</sup> Securitisation Regulation (Regulation (EU) 2017/2402), December 2017

<sup>2</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, July 2010

# What is a CLO?

A CLO is a securitisation transaction containing corporate loans such as syndicated and/or leveraged loans made to corporate borrowers and private equity funds. Within the CLO nomenclature, transactions are typically labelled as being either arbitrage or balance sheet CLOs. The structures that are created allow investors to take a structured exposure to the leveraged loan market, while meeting their risk/return appetite.

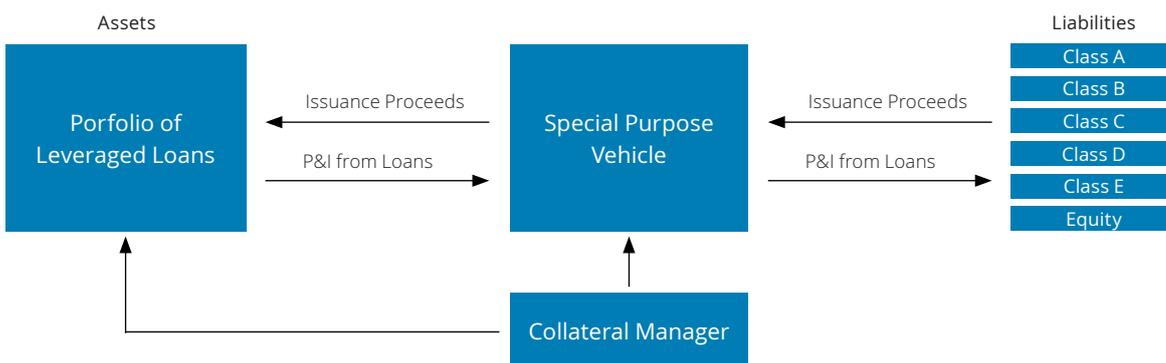
1. CLOs which seek to capture the excess spread that exists between purchasing higher yielding assets and issuing a package of liabilities with a lower yielding cost, are known as *arbitrage* CLOs.
2. CLOs used by financial institutions (typically banks) to fund assets on their balance sheet are typically known as *balance sheet* CLOs. These CLOs are attractive to financial institutions as issuers, as the structures typically allow issuers to fund leveraged loan assets at a lower cost through tranches distribution of credit risk. Depending on the structure of the CLO, regulatory capital relief may also be achieved.

## Role of the collateral manager

Most arbitrage CLOs feature active management (which includes the buying and selling of the underlying leveraged loans) in order to maintain and potentially improve the yield of the portfolio. This role of acquiring and trading leveraged loans is typically performed by the collateral manager. The active management aspect of CLOs differentiates them from other types of securitisation, where investors are typically focused on the credit quality of either a static portfolio of assets, or a dynamic portfolio where new assets may only be added as principal redemptions occur and are not required for noteholder repayment.

**Figure 1 – Structure of a CLO**

This diagram illustrates the typical structure of a CLO



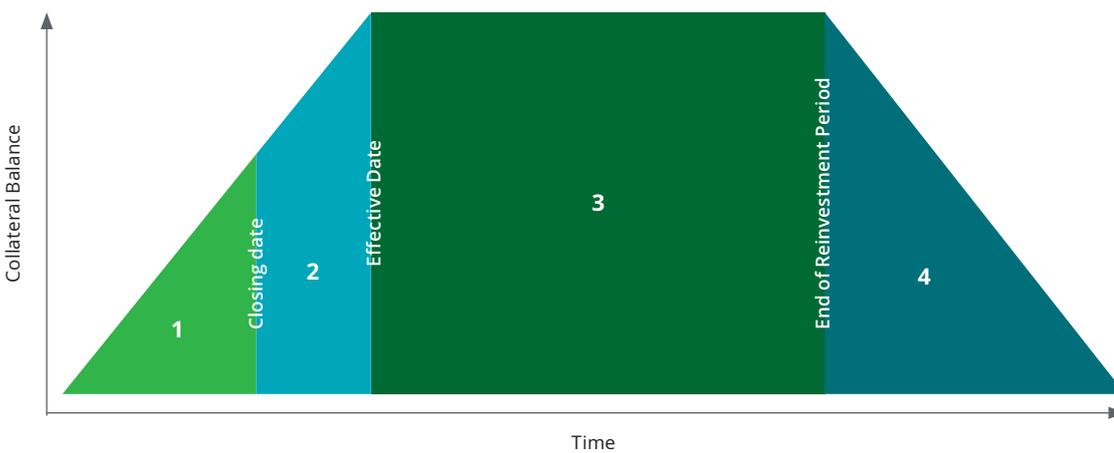
A typical CLO structure is very similar to that of other classes of securitisation except for one key additional role, the CLO manager

### Life Cycle of a CLO

Another characteristic which distinguishes CLOs from other types of securitisation is the life cycle that is typically observed.

Phase	Description
1. Warehouse Period	Collateral Manager acquires assets on behalf of the CLO using warehouse facilities
2. Ramp-up period	Collateral Manager acquires further assets for the CLO using issuance proceeds
3. Reinvestment Period	Collateral Manager trades assets on behalf of the CLO
4. Post Reinvestment Period	Proceeds from the assets are used to pay down the liabilities

Figure 2 – Life cycle of a CLO



*This diagram illustrates the typical life cycle of a CLO*

### CLO Structural Protections

Active management presents CLO investors with greater upside potential, but also greater risk. Therefore, investors seek protection from the unlimited discretion of CLO managers by requiring the transaction to adhere to various performance metrics, providing a framework for the CLO manager to operate within. Such features are somewhat similar to eligibility criteria applied to non-CLO securitisations, but with a CLO specific adaptation. The table below outlines some of the most common tests.

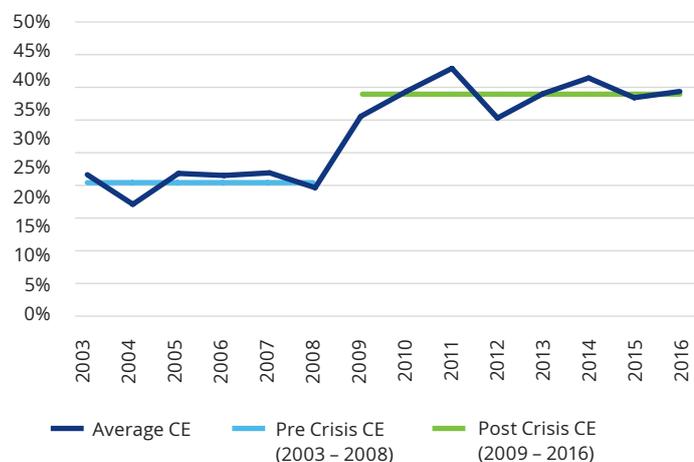
Test	Description
<b>Over Collateralization (OC)</b>	The OC tests protect noteholders against a deterioration in the value of the portfolio collateral. This is tested by comparing the value of outstanding notes versus collateral and ensuring it is sufficiently over collateralised.
<b>Interest Coverage (IC)</b>	The IC tests protect noteholders against a deterioration in interest income from the portfolio. This is tested by comparing the interest income received versus the liabilities due to ensure there is sufficient coverage.
<b>Weighted Average Life (WAL)</b>	The weighted average life of all the loans in the portfolio. Designed to prevent the total risk horizon of the portfolio from exceeding a covenanted level.
<b>Weighted Average Spread (WAS)</b>	The average effective interest rate spread for the loan portfolio over an index rate such as LIBOR. This test ensures a minimum level of income from the underlying portfolio that should be sufficient to pay interest on the liabilities.
<b>Weighted Average Rating</b>	A measure of the average credit rating of the portfolio, which is an indicator of the portfolio's average credit risk.

### Evolution of CLOs

Since 2008 the CLO market has seen a number of adjustments in order to meet the risk return requirements of investors. These post-crisis CLO transactions (often referred to as CLO 2.0) distinguish themselves from pre-crisis CLOs due to the following features:

- **Higher levels of subordination:** providing greater protection or credit enhancement (CE) to the senior tranches.
- **More rigorous collateral eligibility requirements:** to restrict the CLO manager from trading in riskier collateral.
- **Shorter non-call periods:** allowing managers to re-price earlier and take advantage of interest rate changes. In addition the post crisis CLOs typically have the ability to refinance on a tranche-by-tranche basis, providing added flexibility to the CLO manager.
- **Shorter reinvestment periods:** typically have the effect of shortening the average life of the CLO as the portfolio moves in to run down sooner.

Figure 3 – Evolution of European CLO CE



Source: Market Data

The table below illustrates the changes observed for certain transactional features pre and post crises.

Covenants/Features/Terms	Pre Crisis	Post Crisis
Weighted Average Spread Covenant (bps)	200–250	350–450
CLO AAA Spread (bps)	25–35	140–160
Leverage Multiple (Debt/Equity)	10–12	8–12
Reinvestment Period (years)	5–7	3–4
Non-call Period (years)	3–4	1.5–2



# Regulation of CLOs

## Current CLO regulation in Europe

All securitisations (including CLOs) are regulated under the Securitisation Regulation which came into effect from 1 January 2019. Prior to this securitisation had been regulated in a more piecemeal fashion, through various other regulations such as the Capital Requirements Regulation<sup>3</sup> (CRR), the Alternative Investment Fund Managers Directive<sup>4</sup> (AIFMD), and Solvency II.

Much of the new regulation has been built on the foundations of the previous regulation, for instance CRR Articles 405 to 409 and AIFMD Articles 51 to 53 broadly align to Articles 5, 6, 7 & 9 in the Securitisation Regulation. These address the need to comply with risk retention obligations and in addition, for CLO managers and sponsors to meet investor due diligence requirements for securitisation transactions.

Article 5 of the Securitisation Regulation outlines the due diligence requirements for institutional investors. This is largely the same as previous regulations (CRR Articles 405 & 406).

Article 7 outlines the transparency requirements for originators, sponsors and Securitisation Special Purpose Entities (SSPE's) of a securitisation. It is intended to provide investors with all the relevant information in order to allow them to understand, compare and assess securitisation transactions independently. It also creates a formal requirement to provide information on exposures underlying the securitisation on a quarterly basis.

Article 6 of the Securitisation Regulation outlines the risk retention requirements of originators, sponsors or original lenders. The previous rule-set established these requirements via an indirect approach, whereby counterparties are not directly subject to risk retention and the onus is placed on investors to check whether the originator, sponsor or original lender has retained risk. Article 6 introduces a direct risk retention requirement and a reporting obligation on the originator, sponsor or the original lenders. For securitisations where neither the originator, sponsor nor original lender is not established in the EU, the indirect approach will continue to apply.

The Securitisation Regulation outlines five methods that CLO managers can employ to satisfy holding the necessary retained interest in their CLO transactions.

Option	Method
1	Retention of no less than 5% of the nominal value of each of the tranches sold or transferred to investors.
2	For securitisations of revolving exposures, retention of the <b>Originator's Interest</b> of no less than 5% of the nominal value of the securitised exposures.
3	Retention of <b>randomly selected</b> exposures, equivalent to no less than 5% of the nominal value of the securitised exposures.
4	Retention of the first loss tranche and, if necessary, other tranches having the same or a more severe risk profile than those transferred or sold to investors and <b>not maturing any earlier</b> than those transferred or sold to investors, so that the retention equals in total no less than 5% of the nominal value of the securitised exposures.
5	Retention of a <b>first loss exposure</b> not less than 5% of every securitised exposure in the securitisation.

The retained position must be held by the retaining party through the life of the transaction, and cannot be subject to any credit risk mitigation or hedging for this period.

Due diligence requirements for securitisation transactions (including CLOs) are outlined in the Securitisation Regulation and build on those found previously in CRR and AIFMD. They state that before an institution becomes exposed to a securitisation, that it must be able to demonstrate it has a comprehensive and thorough understanding of the risks in the securitised positions. As a consequence, should there be any retained positions, CLO managers will need policies and procedures to analyse the risk characteristics of retained securitisation positions, the exposures underlying those positions, as well as the historic performance of the originators or sponsors of the exposures underlying the securitisation position. There is also a need to comply with risk retention on an ongoing basis, as well as having capabilities to value the collateral supporting the securitised exposures and also perform regular stress tests.

<sup>3</sup> CRR (Regulation (EU) No 575/2013), June 2013

<sup>4</sup> AIFMD Delegated Regulation (EU No 231/2013), December 2012

### Current CLO regulation in the United States

The Dodd-Frank Financial Reform and Consumer Protection Act (Dodd-Frank), in the United States introduced Risk Retention Rules for CLOs which came into effect on 24 December 2016.

This requires CLO managers to purchase and retain a minimum of 5% of the fair value of any CLO issued after the effective date in order to be compliant. This poses sizable additional costs for CLO managers, as a CLO of \$500m now creates approximately a \$25m commitment for the manager. CLO managers are therefore challenged to seek financing to meet the requirement, if they do not have capital readily available.

The 5% retention may be held as i) a vertical slice, ii) a horizontal slice, or iii) a combination of the two creating an 'L' shaped slice; provided this amounts to not less than 5% of the credit risk of the securitisation. Similar to the EU rules, the vertical interest requires a minimum of 5% notional of each tranche issued in the securitisation transaction be retained. However unlike in Europe, for the horizontal slice (or an L piece), a total of 5% of the fair value of all asset-backed securities issued are to be retained.

The duration of the risk retention differs between the US and EU. The securitiser is restricted from hedging or transferring its retained interest until the later of i) the unpaid principle of collateral pool falls below 33% of closing date balance, ii) the unpaid principle on issued asset-backed securities falls below 33% of closing date balance, or iii) two years after closing of the CLO this compares to holding it for the lifetime of the transaction under the EU requirements.

Jurisdictional reach of risk retention rules also differs in the US. A 'safe harbour' exists whereby the risk retention does not apply. This includes where a securitisation transaction is not SEC registered, no greater than 10% of the value of the asset-backed security is sold or transferred to US persons, that the sponsor and issuer are neither US entities nor US branches of non US entities, and no more than 25% of the unpaid principle of the pool is acquired from US affiliates or branches.

However, open-market CLOs are no longer subject to risk retention as the definition of a "Sponsor" was successfully challenged in court. In February 2018 a three judge panel ruled unanimously that managers of "open-market CLOs" were not subject to credit risk retention rules mandated by the Dodd Frank Act. The court reasoned that open-market CLO managers are not securitisers as defined by Dodd Frank because they do not sell or transfer assets to the CLO, and therefore risk retention rules do not apply to them.

### CLO Regulation in Japan

As of 31 March 2019, the Japanese Financial Services Agency's (JFSA) new rules on securitisation investor due diligence came into effect. These rules apply to most Japanese institutional investors in securitisations, and have two key components,

1. Risk assessment system
2. Risk retention compliance or appropriate origination of assets

The first of these, the risk assessment system is similar to the EU requirement that investors have a thorough understanding of the risks in the securitisation positions they hold or intend to acquire. With regards to the second component, the JFSA has taken an either/or approach, i.e. investors can either determine the originator retains a 5% interest in an appropriate format or investors must satisfy themselves that the assets were appropriately originated.

# Industry issues facing CLOs

## In the European Union

The proposed STS criteria raise some challenges for CLOs, should CLO managers wish to issue structures that comply with these requirements to benefit from lower risk weighting for investors. Key challenges are:

- The prohibition of active portfolio management of the securitised loans; and
- That repayment of noteholders will not depend on the sale of assets securing the underlying exposures

The first would affect CLO managers' business models, by more than likely reducing their fees. Their ongoing role in the transaction would significantly reduce given they would no longer be permitted to actively manage the portfolio, with their role becoming more akin to a trustee of the assets.

The second presents a potential problem for CLO (and also Commercial Mortgage Backed Securities) transactions, as it effectively prohibits the inclusion of exposures with a tenor that exceeds the tenor of the bonds issued or interest only loans that are dependent on the market value of the asset to repay/refinance. This is to ensure noteholders are not reliant on the sale of assets, but rather the repayment of loans. The consequence of which may be to alter the composition of assets in CLO portfolios to ensure STS compliance.

## Global Regulatory Divergence

Post financial crisis a consensus emerged that one of the issues which needed to be tackled was originate to distribute business models, the answer to which was the concept of risk retention. This saw regulators converge on the principle that originators/sponsors of securitisations should hold a minimum a 5% interest in their securitisations in order to ensure alignment of originator/sponsor interests with that of investors.

A 5% net economic interest requirement was implemented by the EU in 2009 through CRD2<sup>5</sup> and a 5% credit risk requirement was implemented in the US via Dodd Frank. However, risk retention has begun to unravel somewhat in both jurisdictions with a) the EBAs RTS on risk retention<sup>6</sup> which permits NPLs that have been written down by 5% or more to satisfy risk retention, and b) the US court ruling on the definition of a securitiser which effectively removes risk retention requirements for open market CLOs. Added to this are the recent Japanese FSA rules on risk retention which are similar, but different to the European and US rules.

This divergence of risk retention rules has the potential to inhibit cross-border investment as investors may find themselves unable to satisfy due diligence requirements set by their home regulators and in a position where they are prohibited from investing. Such an outcome is clearly sub optimal as it would inhibit the creation of a deep global markets for ABS products including CLOs.

## Funding risk retention

Funding the risk retention requirements is potentially another major challenge for CLO managers. In any funding scenario the returns from the retained position in the CLO plus any management fees, would need to exceed the managers' cost of capital. This therefore raises a question regarding the optimal debt/equity structure and funding mix of a CLO manager.

<sup>5</sup> CRD 2 (Directive 2009/111/EC), September 2009

<sup>6</sup> Final Draft RTS specifying the requirements for originators, sponsors and original lenders relating to risk retention (EBA/RTS/2018/01), July 2018

# Tackling risk retention

## An alternative approach to risk retention

The issue of risk retention is a challenge faced by both US and European CLO managers, as many are thinly capitalised. Below we consider an alternative perspective to addressing issues created by risk retention requirements, the "5% wrapper". This alternative approach ensures a 5% net economic interest as well as meeting the regulatory intention of alignment of interests between issuers and investors, through ensuring that issuers share downside risk with investors. However it does not force the manager to raise additional day one capital to operate their business.

## The 5% Wrapper

- **Retained Economic Interest:** The CLO manager guarantees to each bondholder to cover 5% of the losses that each bond suffers. This effectively gives the manager a 5% vertical exposure to the entire structure (akin to option 1 of the CRR risk retention options).
- This allows the manager to originate transactions without requiring the significant 5% outlay required to purchase 5% of each tranche, while ensuring the manager shares losses alongside the bondholders, which would be in keeping with the regulators intentions of ensuring a minimum of 5% net economic interest in the transaction.
- **Mechanics:** In order to minimise bondholders' counterparty exposure to the CLO manager, the manager would post cash equal to a 5% change in the value of the bonds each interest payment date (IPD) to an escrow account. This margining would be one way, capping at the maximum of 5% of the value of each bond when the bond fell to a value of zero.
- In order to necessitate the margining, the bonds will need to be valued each IPD (ideally based on an active market where possible).
- **Repayment:** When a particular class of bonds redeems at par (i.e. no losses occur), the cash that has been margined by the CLO manager with respect to that class of bond can then be released back to the CLO manager.

- Where a loss occurs i.e. the note repays below par the margined cash can be used to repay investors equal to 5% of the loss, anything held in the margined account in excess of 5% of the loss can be returned to the CLO manager.

Periodic verification of the value of the notes could be performed by a verification agent in order to provide further assurance to noteholders that enough cash was being posted to the margin account.

In terms of funding a 5% wrapper, the CLO manager could utilise a revolving credit facility, which they could draw down on as needed, to post cash collateral to the margin account. This therefore potentially limits the funding costs of the manager to when margin is required to be posted.

## Worked example of the 5% wrapper

In CLO ABC the Class D notes have a notional of \$100m. During the life of the transaction, the CLO manager has been required to set aside \$750k in the Class D margin account due to changes in the valuation of the bonds throughout their lifetime.

At redemption, the CLO has suffered losses and Class D noteholders are in line to receive a total of \$88m from the sale of assets in the portfolio; therefore suffering a loss of 12 cents on the dollar.

However because of the 5% wrapper provided as part of this risk retention structure, the CLO manager would be required to make good 5% of the bondholders losses (\$12m \* 5% = \$600k). This would mean that bondholders would receive \$88.6m in total for the Class D notes.

Therefore \$600k from the Class D margin account will go to the Class D noteholders and \$150k will be released back to the CLO manager as a surplus.

This compares with an upfront investment of \$5m should the CLO manager purchase a vertical retention.

# Next steps

**Role of CLOs:** CLOs continue to play an important role in funding both syndicated and leveraged loans as well as being a mechanism through which risk can be transferred from originators balance sheet to investors. As we have illustrated, CLOs have evolved considerably over the last 10 years and now offer greater protections to investors.

**Current regulation:** The EU Securitisation Regulation and Dodd-Frank provide the current regulatory framework for CLOs in the EU and US respectively. The risk retention requirements of the two were originally broadly similar, with the US providing greater flexibility through permitting “L” shaped retention pieces, however, they are now somewhat divergent with the US not requiring open market CLOs to satisfy risk retention. Market participants also need to be alert to the STS changes which will likely shape European securitisation issuance over the coming years.

**Industry issues:** STS is expected to impact CLOs through a prohibition of active portfolio management, as well as structures which ensure that noteholder repayment is not dependent on the sale of assets underlying the exposures. For CLO managers who are looking to be STS compliant this is likely to trigger changes in their business models, which include lower management fees and exclusion of certain assets from the structure, ultimately leading to a less profitable business model. One likely outcome is consolidation within the industry for those CLO managers who are looking to comply with STS as gaining scale is likely needed to counteract the decline in profitability.

**Tackling risk retention:** In this paper we have discussed an alternative perspective to approaching risk retention in the form of the 5% wrapper, which fulfils the regulatory desire to see the alignment of interest between issuers and investors, along with ensuring that issuers share downside risk with investors. The 5% wrapper has the added advantage of achieving this while not forcing the issuer to raise additional day one capital.

# Authors



**David O'Neill**  
**Senior Manager**  
+44 (0)20 7007 1948  
doneill@deloitte.co.uk

# Contacts



**John Kent**  
**Partner**  
+44 (0)20 7007 3748  
jrkent@deloitte.co.uk



**Dan Keeble**  
**Partner**  
+44 (0)20 7303 4461  
dkeeble@deloitte.co.uk



**Simon Stephens**  
**Partner**  
+44 (0)20 7303 2930  
sstephens@deloitte.co.uk

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# Notes





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