LMA Loan Market Association

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Financial Stability Board
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SUBMITTED VIA EMAIL AND ONLINE FORM

2 September 2024

Re: Consultation Report of 2 July 2024 regarding Evaluation of the Effects of the G20 Financial Regulatory Reforms on Securitisation

On behalf of The Loan Market Association (the "**LMA**"), we welcome the opportunity to respond to the Financial Stability Board's ("**FSB**") consultation report mentioned above (the "**Report**"). The continuing engagement of the FSB with global market participants on issues related to the securitisation market and, in particular, CLOs, is greatly appreciated.

By way of background, the LMA was established in 1996 and is headquartered in London. Our key objective is improving liquidity, efficiency, sustainability and transparency in the primary and secondary loan markets in Europe, the Middle East and Africa ("**EMEA**"). By establishing sound, widely accepted market practice, we seek to promote the loan product as one of the key debt instruments available to borrowers across the region. Our membership has grown steadily and currently stands at over 850 organisations covering 69 countries, comprising commercial and investment banks, institutional investors, many law firms and service providers, as well as major rating agencies and regulatory and governmental bodies. The LMA's overall mission is to act as the authoritative voice of the EMEA loan markets vis à vis lenders, borrowers, regulators and other interested parties. In particular, many of our members are active participants in the CLO market in a variety of capacities, including as arrangers, managers, investors and trustees as well as fulfilling ancillary agency roles in CLO transactions such as acting as account banks, custodians, paying agents and note registrars.

During its history, the LMA has played a key role in developing standard form documentation for documenting primary loans and forms of documentation and practices for secondary market trading in loans. Our work has contributed to widening and deepening the loan market in EMEA, reducing barriers to accessing capital, and increasing liquidity of assets for investors. Over more than two decades, the LMA has provided responses to proposals for, and as a result of which has influenced the development of, many major EU/UK regulatory reforms in the area of financial services affecting the LMA's members, including in particular, responding to numerous consultation papers published by the European Supervisory Authorities in relation to the EU Securitisation Regulation and those of the UK FCA and PRA in relation to proposals to replace the EU Securitisation Regulation with domestic UK legislation following the UK's departure from the EU.

Given our mission and membership referenced above, our representations in respect of the Report refer solely to European (although we consider our comments in this response in relation to the resilience of CLO structures to apply “globally”) managed collateralised loan obligations i.e. securitisations of broadly syndicated leveraged loans where the applicable CLO collateral manager acquires such loans for securitisation during the CLO transaction’s reinvestment period in the primary and/or secondary loan market from a variety of loan originators and/or sellers (“**CLOs**”) as opposed to “balance sheet” or “private credit” collateralised loan obligation transactions for example (or other, non-collateralised loan obligation, securitisation transactions such as collateralised fund obligation, commercial real estate, residential mortgage, credit card, auto-loan, trade receivables and significant risk transfer transactions), in the hope that we can engage in productive dialogue with the FSB in relation to such asset class in particular. The LMA would be pleased to liaise further with the FSB including to facilitate dialogue between the FSB and key CLO market participants in relation to the matters described in this response.

Questions

Question 1: Does the report draw the appropriate inferences about the extent to which the securitisation reforms have achieved their objectives? Is there other evidence on the effects of the reforms to complement the preliminary findings of the report?

In terms of post-GFC regulatory reforms, the Report focusses on the International Organisation of Securities Commissions (IOSCO) minimum retention recommendations and the Basel Committee on Banking Supervision (BCBS) revisions to prudential requirements for banks' securitisation-related exposures. The Report considers these reforms to be primarily aimed at remedying the problems of incentive misalignment and the associated risk of "moral hazard" as between loan originators and securitisation investors that was revealed by the GFC. By promoting and enhancing "skin-in-the-game", both sets of reforms aim to reduce the incentive for loan originators (in the case of the minimum risk retention rules) and bank investors (in the case of the prudential requirements) to engage in excessively risky practices, by forcing them to more comprehensively consider and internalise the risks implicit in their origination and investment activities (in the case of the risk retention rules, by requiring loan originators to retain an interest in the loans that they securitise, and in the case of the prudential requirements, to increase the cost to banks of investing in a securitisation position).

When considering whether such reforms have had their intended effect however, we consider it is important to distinguish between CLOs on the one hand, and the complex structures (also referenced in the Report) that actually contributed to the GFC on the other: namely the securitisation by certain residential mortgage originators of their mortgage loans and the subsequent repackaging of the resulting claims into CDOs (and the further repackaging of the CDOs themselves in some cases) through rounds of "re-securitisation". The Report rightly acknowledges that such complex and opaque chains of risk transfer have largely ceased to exist following implementation of the reforms[1] (due not only to the implementation of the rules aimed at encouraging incentive alignment mentioned above, but also because outright prohibitions on re-securitisation have since been introduced in several jurisdictions including Europe and the UK). In this respect, the reforms, together with other measures adopted in various jurisdictions following the GFC; aimed at promoting the use of simpler securitisation structures such as those mandating the provision of certain information by originators and sponsors to investors, and the imposition of investor due diligence requirements, have had considerable success.

By contrast with the structures referred to above, CLOs are simple structures under which a portfolio of broadly syndicated leveraged loans is actively managed by the CLO manager for the benefit of investors. In particular, there are no additional "layers" between the securitisation exposures on the one hand and the liabilities issued by the securitisation issuer on the other, such that investors in such liabilities can easily assess the dependency of the cash flows due to them as holders of securitisation positions, on the cash flows associated with the securitised exposures. There is also both alignment of interest (primarily through the structuring of management fees) and transparency (due to frequent and detailed investor reporting).

[1] FSB, Evaluation of the Effects of the G20 Financial Regulatory Reforms on Securitisation Consultation report 2 July 2024, page 38 – "*Securitisation market structures appear to be simpler and more transparent since the GFC…Complex structures that contributed to the GFC have declined significantly or been restricted…*"

CLO structures also have in-built resilience due to the requirement for certain coverage tests to be satisfied (both in terms of over-collateralisation i.e. credit enhancement, and interest cover) as a condition to continued reinvestment by the CLO collateral manager, as well as the requirement to divert interest collections on the underlying loan portfolio to amortise outstanding principal on the CLO liabilities in order to remedy any test failures. Further structural protections include the application of "haircuts" to the par value of loans for the purposes of such coverage (over-collateralisation) tests, for example when loans are downgraded to below a certain level, become defaulted or were acquired at a deep discount, and portfolio concentration limits on obligors and industries as well as by asset-type (such are those relating to non-senior secured loans, fixed rate loans, loans without any public credit rating and cov-lite loans). Furthermore, CLO structures (in contrast to many pre-crisis structures) are not "marked to market", in that it is the par value (haircut appropriately as mentioned above) and not the market value of the loans that is relevant for the purposes of determining whether over-collateralisation requirements have been breached. Accordingly, there is not the same de-stabilising incentive for CLO collateral managers to become forced sellers of loans that existed in relation to many pre-GFC structures if and when a market-wide decline in the value of the underlying collateral occurs. Nor do CLO managers become forced sellers of CLO assets in order to meet frequent investor redemptions, as CLO liabilities are maturity-matched within the CLO structure to the loan assets contained in the CLO portfolio.

For all of the above reasons, CLO structures have proved resilient throughout both the GFC and more recent instances of market disruption (for example the global pandemic). Such CLO resilience through the GFC in particular supports the view that the extent of post-GFC regulatory reform has not been warranted in respect of this particular asset class – in fact, as will be evident from our answers to certain of the questions below, the application of such reforms to CLOs has in our view significantly stifled what has been (both prior to the GFC and since) a key source of funding for those corporates (of which there are many) that habitually access the European broadly syndicated leveraged loan market for funding in the UK, US and EU.

Question 2: Are the descriptive analyses used to evaluate the effects of the securitisation reforms appropriate? Are there other such analyses to consider? What types of empirical analysis based on available data could inform the evaluation

The Report accurately describes the substantial elimination of complex "CDO" structures since the GFC mentioned above, as well as the simultaneous (and swift) growth of (structurally simpler) CLOs – growth that has been underpinned by the growth in the broadly syndicated leveraged loan market (with CLOs becoming themselves a key ultimate funding source for that market as mentioned above).

As further evidence of CLO market growth and resilience, we have included in the Annex to this response a chart showing CLO issuance volumes in Europe (Chart 1). The chart illustrates that since the GFC, CLO issuance volumes in Europe have been on a relatively consistent upward trend. We have also included in the Annex a default summary by original rating for European CLO 2.0 issuers (Table 2) as well as an extract from an S&P report[2] (Table 1) showing Europe CLO upgrades and downgrades percentages and a default summary in 2023, both of which underscore the very low levels of defaults experienced by CLO investors (nil in

[2] https://www.spglobal.com/ratings/en/research/articles/240627-default-transition-and-recovery-2023-annual-global-leveraged-loan-clo-default-and-rating-transition-study-13160502

the case of CLO 2.0 tranches) as well as the stability of CLO liability ratings (and the relative scarcity of ratings downgrades in particular).

The above data illustrates the robustness of CLOs including in particular through the GFC – in our view due in large part to the defining structural features of CLOs mentioned elsewhere in this response.

Question 3: Are the securitisation market trends presented in this report adequate given the scope of the evaluation? Are there other important trends that should be included and, if so, what additional data sources could be used for this purpose?

Further to our comments on questions 1 and 2 above, we note that in June 2024 Standard & Poor's published its 2023 Annual Global Leveraged Loan CLO Default and Rating Transition Study, which considered annual default rates of CLOs for the period from 2001 to the end of 2023 (i.e. both pre and post GFC). As set out in the study:

(i) in each year during that period the annual default rate of CLOs was a fraction of the annual default rate of investment grade corporate debt; and

(ii) in no year during that period has the annual default rate of CLOs exceeded 0.5% and in the year 2023, the global annual default rate for the security was 0.09%[3].

As indicated above, it is worth noting that the resilience of CLO transactions is further exemplified by the fact that since the establishment of the European CLO 2.0 in the post-GFC period, not one of these securities has defaulted[4]. The S&P 2023 report also considered the structural differences between CLO 1.0 (i.e. CLOs issued pre-GFC) and CLO 2.0, noting that CLO 2.0 transactions have (amongst other things):

- greater credit enhancement at the senior tranche levels,
- portfolios more narrowly focused on senior corporate debt, and
- a shorter reinvestment period.

Such S&P report further noted that in 2023, for the third straight year, no European CLOs defaulted (refer to Chart 2 in the Annex to this response) or experienced downgrades. The upgrade rate also rose to a six-year high.

In the Report, we note that the resilience of CLO transactions has also been acknowledged, especially for senior tranches of CLO structures. For example, the paper noted that it would take a loss rate more than twice as severe as that of the 2008 global financial crisis for AAA-rated tranches to incur losses.[5] It was also noted that CLOs 2.0 have higher levels of credit

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[3] As of 27th June 2024, Standard and Poor's Global Ratings. https://www.spglobal.com/ratings/en/research/articles/240627-default-transition-and-recovery-2023-annual-global-leveraged-loan-clo-default-and-rating-transition-study-13160502

[4] https://www.spglobal.com/ratings/en/research/articles/240627-default-transition-and-recovery-2023-annual-global-leveraged-loan-clo-default-and-rating-transition-study-13160502

[5] FSB, Evaluation of the Effects of the G20 Financial Regulatory Reforms on Securitisation Consultation report 2 July 2024, page 41. Reference made to Bank of England (2019), Financial

enhancements such that cash flows can be diverted away and used to pay down liabilities in order of seniority if test triggers are breached.[6]

We have also included Chart 3 in the Annex to this response showing annual Europe default rates for CLOs versus corporates. The chart illustrates the robustness of CLOs compared to corporates and speculative-grade ("BB+" or lower) corporates. The S&P 2023 report considered that one of the reasons CLOs showed a less pronounced increase in defaults is because CLO managers are able to limit their credit exposures to issuers with low ratings.[7]

The above trends should in our view be considered when assessing the impact of the reforms referenced above on CLOs in particular, as we consider these to be indicative of a product that has performed very robustly over several decades (including pre-GFC) due to the combination of all of the structural features outlined elsewhere in this response (as opposed to the impact of a single set of post-GFC regulatory reforms, the objectives of which are not aligned with the structural characteristics of CLOs).

Question 4: Does the report appropriately describe the key aspects of the design and jurisdictional implementation of the BCBS and IOSCO reforms for analysing their impact on securitisation markets? Are there other important aspects of these reforms that should be considered for inclusion?

We consider the post-GFC risk retention and prudential requirements (and their intended objectives, namely to address the problems exposed by the GFC with increasingly complex and opaque securitisation structures exacerbated by a misalignment of interests and unduly low bank capital requirements) to have been adequately summarised and described. To confirm however, and as expressed throughout this response, we consider that such reforms have largely been misdirected to the extent that they (and their intended objectives) have been applied to CLOs in particular.

Question 5: Does the report accurately identify other G20 and domestic financial reforms that are most relevant for securitisation markets? Are there other reforms that should be considered in terms of their impact on market participants?

We agree that reforms in relation to risk retention and regulatory capital requirements have been key post-GFC reforms. However we would also point to those reforms requiring the provision of information by issuers and sponsors to investors, as well as to those imposing due diligence obligations on investors in the EU and UK as being significant, particularly in relation to their application to CLOs where the result has in our view been the unwarranted imposition of costly additional reporting requirements on issuers and sponsors, and burdensome verification obligations on investors. Since before the GFC, CLO structures have provided investors with the reporting (both in relation to the underlying loan portfolio and the structure and cash flows of the transaction) that they have required in order to make an informed assessment of the credit (and other) risks associated with their investments. Investor, manager

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Stability Report, July <https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2019/july-2019.pdf>

[6] FSB, Evaluation of the Effects of the G20 Financial Regulatory Reforms on Securitisation Consultation report 2 July 2024, page 43.

[7] https://www.spglobal.com/ratings/en/research/articles/240627-default-transition-and-recovery-2023-annual-global-leveraged-loan-clo-default-and-rating-transition-study-13160502

and arranger feedback has in our experience been consistent with this and has invariably been to the effect that the additional reporting in the prescribed form mandated by EU/UK regulation for example, is unnecessary when considered alongside the contractually agreed reporting that investors already receive, and is not in any event in a form that would permit it to be incorporated easily into investors' risk assessments. Such additional reporting becomes particularly costly for CLOs when (as is typically the case in our experience) it needs to be outsourced by the manager to dedicated third party service providers.

Question 6: Does the report adequately explain the objectives, transmission channels and expected outcomes of the securitisation reforms? What other metrics to assess the impact of the reforms should be considered?

Whilst the objectives, transmission channels and expected outcomes are adequately stated in our view, we would also consider it valuable, given the Report's focus on CLOs, to discuss application of those objectives, channels and outcomes to CLOs specifically, especially since a CLO is, in purely economic terms, a managed credit fund, without the mis-alignment of incentives or the informational asymmetries of a typical "balance sheet" securitisation (due to there being no single loan "originator" in a managed CLO, the incentives of whom may become misaligned with those of investors when selling the assets that they have originated into the securitisation). More importantly, CLOs benefit from significant structural protections that should be taken into account when assessing the objectives and impact of the post-GFC reforms in relation to CLOs in particular - each of these having been outlined elsewhere this response. As mentioned above, we consider that taking into account all such factors is crucial to making an accurate assessment of the need for, and the impact of, the reforms identified in the Report in so far as CLOs are concerned. Accordingly, whilst the Report explains the objectives and transmission channels of the reforms adequately in general, the application of the same to CLOs in particular should in our view be given more attention in light of the distinguishing features of CLOs described in this response.

Question 7: Does the report accurately describe the evolution of resilience indicators for the CLO market? To what extent can the evolution of these indicators be attributed to the reforms?

Please see our answers above in relation to the resilience of CLOs through the GFC and beyond, including the default experience of CLOs over a period of 20 years from 2001.

Question 8: Does the report accurately describe risk retention practices in the CLO market before and after the reforms? What additional analysis could be included to assess the effectiveness of risk retention in CLOs across FSB jurisdictions, including on how financing of risk retention deals by third party investors impacts effectiveness?

We consider that CLO market practice has been adequately described i.e. a combination of CLO manager and non-manager holding structures, including both vertical and horizontal methods (in the case of vertical, by way of holding a portion of each tranche of securitisation liabilities issued, and in the case of horizontal, by way of holding a minimum economic interest in the most junior tranche of securitisation liabilities measured by reference to the aggregate notional principal balance of the CLO portfolio) in the former case potentially with third party financing (in our experience, typically by a maturity-matched repo) of the rated securities. Such financing is required to be full recourse to the retention holder (although not necessarily the CLO collateral manager if, for example, such manager is not the designated retention holder), in order for it to remain exposed to the credit risk of the retention investments.

The CLO manager may or may not hold the retained interest itself. In our experience, CLO managers that hold the retained interest often hold in the "horizontal" format mentioned above and hold the entirety of the CLO "equity" tranche in any event i.e. over and above the amount required by the risk retention rules. In such cases, alignment of interest arises as a direct consequence of the manager's circumstances and commercial objectives (rather than due to the imposition of the minimum risk retention rules).

As regards the comments relating to non-manager retention structures, we consider there to be adequate incentive alignment as long as the originator is a separately-governed substantive entity, with a business purpose, capital base and assets extending beyond risk retention (and the related securitisation) activities. We note that, in practice, such "substance" will be assessed by CLO investors as part of their due diligence and is also enshrined in the EU and UK risk retention rules.

In relation to the comments regarding CLO retention financing, typical maturity-matched repo financing structures currently in the market do not in our experience include financing of the equity tranche (which tranche generally serves only as over-collateralisation, if provided as collateral at all).

In any event, we consider the incentive alignment concern underpinning the risk retention reforms to be substantially addressed in the case of managed CLOs by other means: namely by the CLO management fee structure (which ties management fees to performance, both directly through the incentive management fee and indirectly through fees taken on a senior and subordinated basis by reference to portfolio size), as well as by significant reputational concerns, driven by the CLO manager's need to secure repeated investment from a relatively limited set of regular CLO investors.

In any event and to the above point, we would also emphasise the distinction drawn by the US courts (and on the basis of which the US CLO market has operated for several years) between securitisations where an entity commences the securitisation process by transferring assets that it has been responsible for originating on the one hand (a "balance sheet" collateralised loan obligation transaction), and an "open market" CLO on the other, where, as mentioned above, no single loan originator exists but the CLO manager instead selects assets for inclusion in the portfolio by acquiring them from a variety of originators/sellers in the market. It is only the former case – where there is an element of "origination for distribution" and therefore the potential for misalignment of incentives as between such loan originator and investors - that risk retention is required in the US CLO market.

Question 9: Does the report accurately describe the evolution of resilience indicators for the RMBS market? To what extent can the evolution of these indicators be attributed to the reforms?

Our comments are limited to CLOs as noted above.

Question 10: Does the report accurately describe risk retention practices in the RMBS market before and after the reforms? What additional analyses could be included to assess the effectiveness of risk retention in RMBS across FSB jurisdictions?

Our comments are limited to CLOs as noted above.

Question 11: Does the report accurately describe the changes in bank behaviour following the implementation of the BCBS securitisation framework reforms? To what extent can the effects of these reforms be disentangled from the broader Basel III framework, other reforms and confounding factors?

We agree with the Report's conclusion that CLO investment by banks (and importantly, insurance companies in Europe) now comes at a significantly increased regulatory capital cost due to the reforms as a result of which bank investment in CLOs has become increasingly limited to the most senior "AAA" tranche of CLO liability structures (with insurers in Europe and the UK largely ceasing to invest in CLOs altogether). As mentioned in the Report and above, increasing the regulatory capital costs associated with investment in securitisations for bank investors (and therefore "skin-in-the-game") was an intended objective of the reforms. We do not however consider such increased costs to be justified in the case of CLOs since, as mentioned above, these are simple and transparent structures where the credit risk associated with a particular CLO tranche is easily able to be assessed and monitored by regulated CLO investors such as banks (and insurers). We therefore consider that further analysis should be carried out in order to determine the incremental regulatory capital cost (relative to credit risk assumed) that applies at each level of the CLO capital structure, with a view to ensuring proportionality is maintained. In relation to insurers, we have included a table for reference in the Annex to this response (Table 3), illustrating the increased stress factors (and therefore regulatory capital costs) faced by insurers in Europe in respect of investment in loan assets through securitisation (and in particular non-STC securitisation such as CLOs) relative to direct investment in the loan assets themselves.

Question 12: Does the report accurately describe the impact of the introduction of the STC framework on the securitisation market? To what extent has the reform met its objectives?

Despite the STC regime, the reforms have directly increased capital requirements for banks (and insurance companies) holding positions in non-STC securitisations as mentioned above incentivising banks, in particular, to hold only the most senior liability tranche. Were the STC regime to be extended to CLOs, we would expect increased investment in securitisations by bank (and insurance company) investors across the CLO capital structure. The structural simplicity and transparency of CLOs makes them in our view a natural fit under the existing STC criteria (and for banks to prudentially invest in, beyond the most senior "AAA" CLO tranche).

Question 13: Does the report accurately describe the main effects of the reforms on financing the economy? Is there additional analysis that could be undertaken to estimate the benefits and costs of these reforms and to assess their impact on securitisation as a financing tool?

CLOs securitise the debt of sub-investment grade corporates that habitually access the broadly syndicated leveraged loan markets for funding. A robust corporate debt market in this important market segment is essential for economic growth more generally. CLOs offer this much needed capital to such corporates. CLOs should not be disadvantaged (through e.g. lack of STC eligibility) because they are actively managed. The focus instead should be on the historical performance of CLOs through both the GFC and, more recently, the global pandemic. We do not consider that the Report focuses enough on the importance of CLOs as a corporate financing tool, nor on the particular features of CLOs mentioned above that would in our view justify a more targeted (and proportionate) regulatory treatment.

In particular, for the reasons given above, we consider that CLOs should be permitted to qualify for more favourable regulatory capital treatment for banks and insurers (whether by extending the "STC" regime to include CLOs or otherwise). We also consider, as noted above, that the "open market" exemption that has operated effectively for several years for US managed CLOs could serve as a model for a similar limitation in the scope of application of the minimum risk retention requirement in the UK and Europe. In the years following the GFC, investors in the CLO market have come to expect simpler ("2.0") structures in which all of the classes of CLO liabilities have more easily understandable risk profiles than the pre-GFC ("1.0") structures (despite such pre-GFC structures not themselves being a contributor to the GFC and having performed robustly since). The post-GFC securitisation regulatory reforms referenced in the Report should acknowledge and support this shift in CLO market consensus (i.e. from "1.0" to "2.0") by responding positively to it in the manner described above.

Question 14: Does the report accurately describe the extent to which there has been a redistribution of risk from the banking to the non-bank financial intermediation sector? What role did the reforms play in this process and what are the main benefits and risks from a system-wide perspective? How have the reforms impacted the demand and supply of liquidity in securitisation markets?

Please see comments above in relation to disincentives to bank (and insurance company) investment in CLO tranches in particular. As mentioned above, we would support a more balanced approach under which bank (and insurance company) investment were better enabled and incentivised commensurate with the (readily ascertainable) underlying credit risks involved. A more balanced and diversified investor base will not only encourage funding to the underlying corporates in need of it, but will enhance system resilience by increasing liquidity for CLO investors. As mentioned above, CLOs are simple structures where investing banks can make prudent risk assessments regardless of the part of the CLO structure in which they invest. Effectively penalising banks for investing in all but the most senior CLO tranche is therefore unwarranted in our view, including from the standpoint of the distribution and diversification of risks through the financial system.

Question 15: Are there any other issues or relevant factors that should be considered as part of the evaluation?

No.

We would welcome the opportunity to discuss this response with you and in particular to facilitate discussion with key market participants in order to highlight the ongoing positive performance of CLOs.

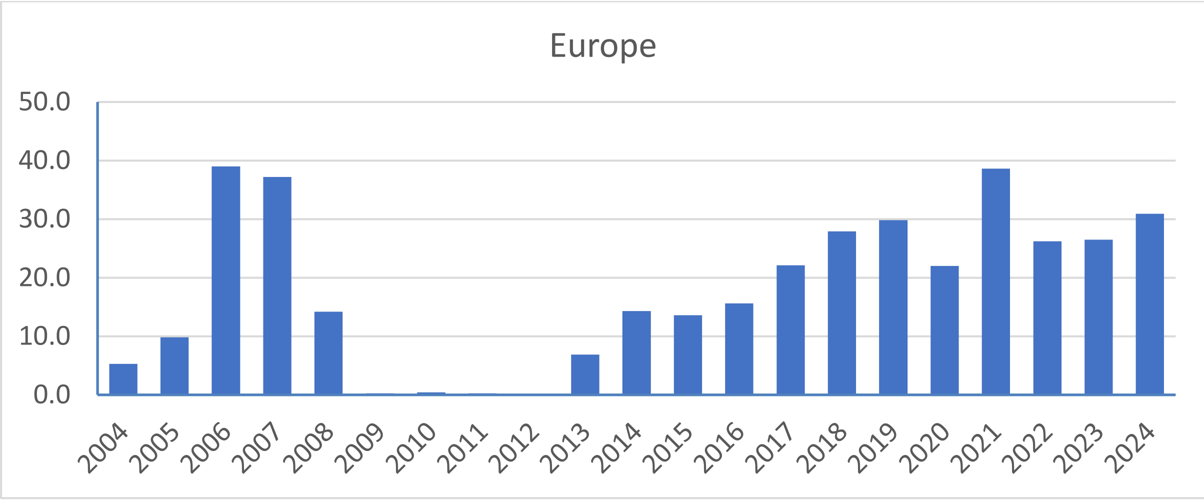
If you would like to do so, please contact me nicholas.voisey@lma.eu.com.

Yours faithfully

Nicholas Voisey
Managing Director
Loan Market Association

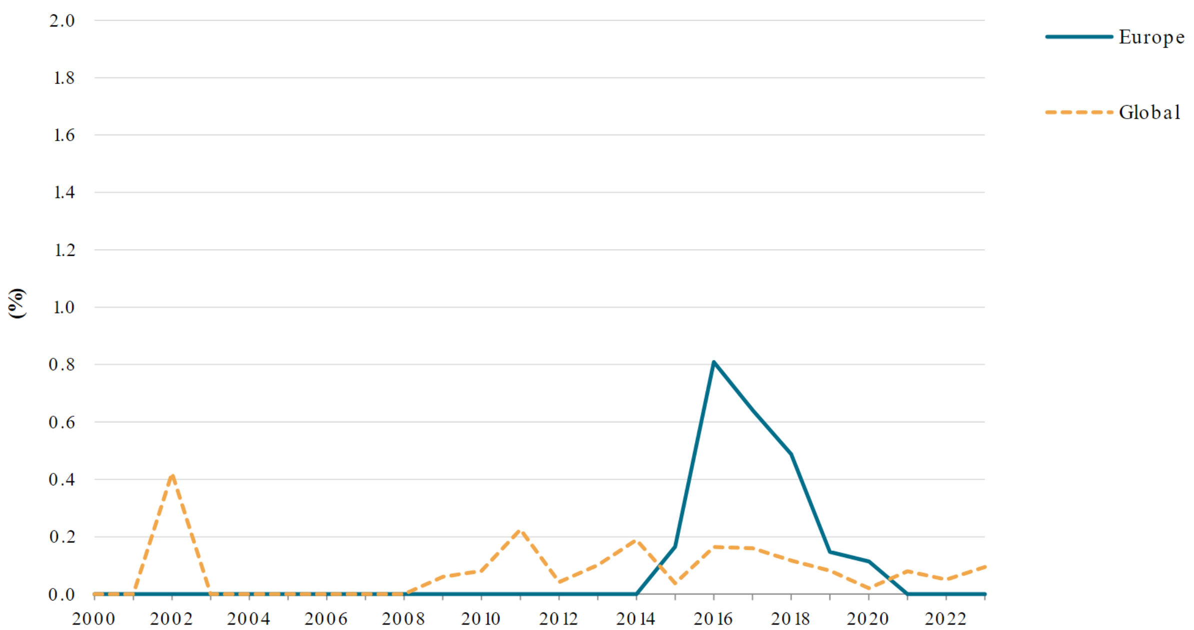
ANNEX

Chart 1 - CLO issuance volumes Europe (BN euros)



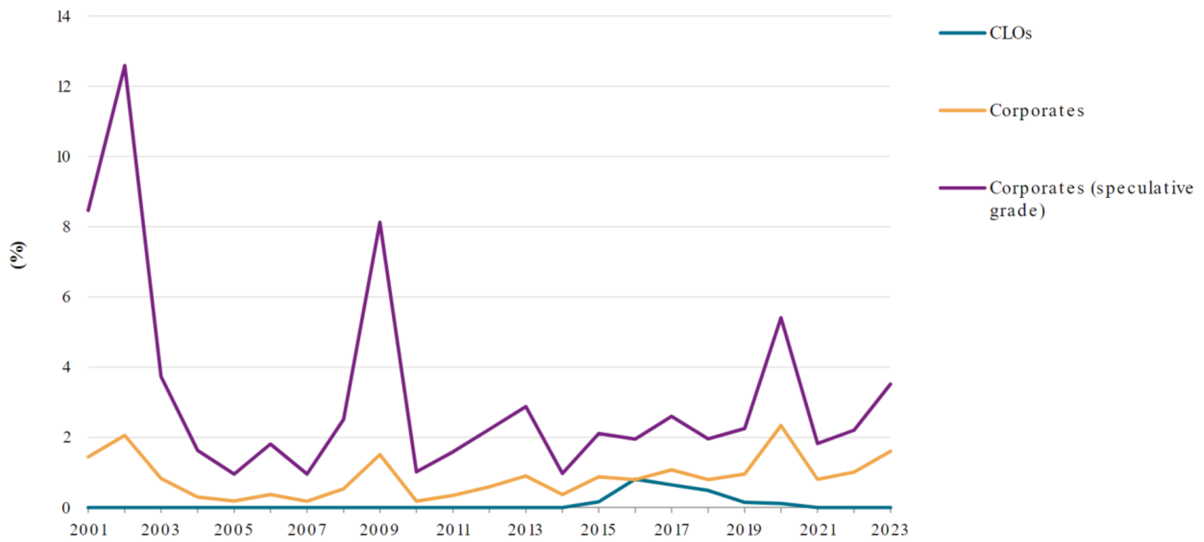
Source: S&P Capital IQ LCD

Chart 2 – European CLO default rates



Source: S&P Global Ratings Credit Research & Insights and S&P Global Market Intelligence's CreditPro

Chart 3 – Annual Europe default rates (CLOs versus corporates)



Default rate for CLOs and corporates includes all European-rated entities.

Source: S&P Global Ratings Credit Research & Insights and S&P Global Market Intelligence's CreditPro

Table 1 – Europe CLO transition and default summary extract (2023 versus one-year average)

	--2023--					--One-year average--			
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)
Overall	8,449	97.2	2.2	0.6	0.09	83.7	10.4	5.9	0.08
Europe	2,219	95.8	4.2	0	0	80.1	12.1	7.8	0.1

Source: S&P Global 2023 Annual Global Leveraged Loan CLO Default And Rating Transition Study (27 June 2024)

Table 2 - Data on defaults by CLO 2.0 issuers

European CLO 2.0 issuers -- default summary by original rating

	No. of CLOs	No. of defaults	No. of outstanding CLOs
AAA	418	0	373
AA	422	0	380
A	423	0	380
BBB	423	0	381
BB	421	0	381
B	393	0	364
Total	2,500	0	2,259

CLO--Collateralized loan obligation.

Source: S&P Global, CLO Spotlight: Twenty-Five Years Strong: European CLOs' Lifetime Default Rate Is Only 1.5% (18 April 2024)

Table 3

Under the current Solvency II rules (implementing prudential requirements for insurers in Europe) all three sets of "Securitisation Investment Stress Factors" are higher than the "Direct Investment Stress Factors", i.e. an insurer is required to hold more regulatory capital in respect of an investment in loans through a securitisation structure compared with a direct investment in the loans, assuming the credit quality step ("CQS") and modified duration of each type of investment is the same. The difference between the Securitisation Investment Stress Factors and the Direct Investment Stress Factors for non-STS securitisation positions (which would include CLOs) is particularly large. The following table illustrates the difference in the required regulatory capital that results from the difference between the stress factors:

Credit Quality Step	CQS 0 (AAA rating)	CQS 1 (AA rating)	CQS 2 (A rating)	CQS 3 (BBB rating)	CQS 4 (BB rating)	CQS 5/6 (B rating or lower)
Direct investment in corporate loan	0.90%	1.10%	1.40%	2.50%	4.50%	7.50%
Most Senior Tranche of STS Securitisation	1.00%	1.20%	1.60%	2.80%	5.60%	9.40%
Other Tranche of STS Securitisation	2.80%	3.40%	4.60%	7.90%	15.80%	26.70%
Non-STS Securitisation	12.50%	13.40%	16.60%	19.70%	82.00%	100.00%