



LEVERAGED FINANCE | SEPTEMBER 2024

How do performance metrics of European leveraged loans compare against the broader market – last 10 years of data reviewed



MANDATUM
ASSET MANAGEMENT

AN ANALYSIS OF EUROPEAN LEVERAGED LOANS' PERFORMANCE METRICS

1. What are leveraged loans?

A leveraged loan is a form of senior debt that is borrowed by a company that has a credit rating below investment grade, arranged by a group of banks and typically syndicated to a group of institutional investors.

- Typically used to finance leveraged buyouts by private equity funds
- Senior secured first lien instruments providing downside protection in terms of recovery
- Floating rate instruments with base rate floored to zero
- Non-listed instruments, but with secondary market liquidity through banks' trading desks (broadly syndicated loans)
- Typical maturity 5-7 years (average lifetime shorter)

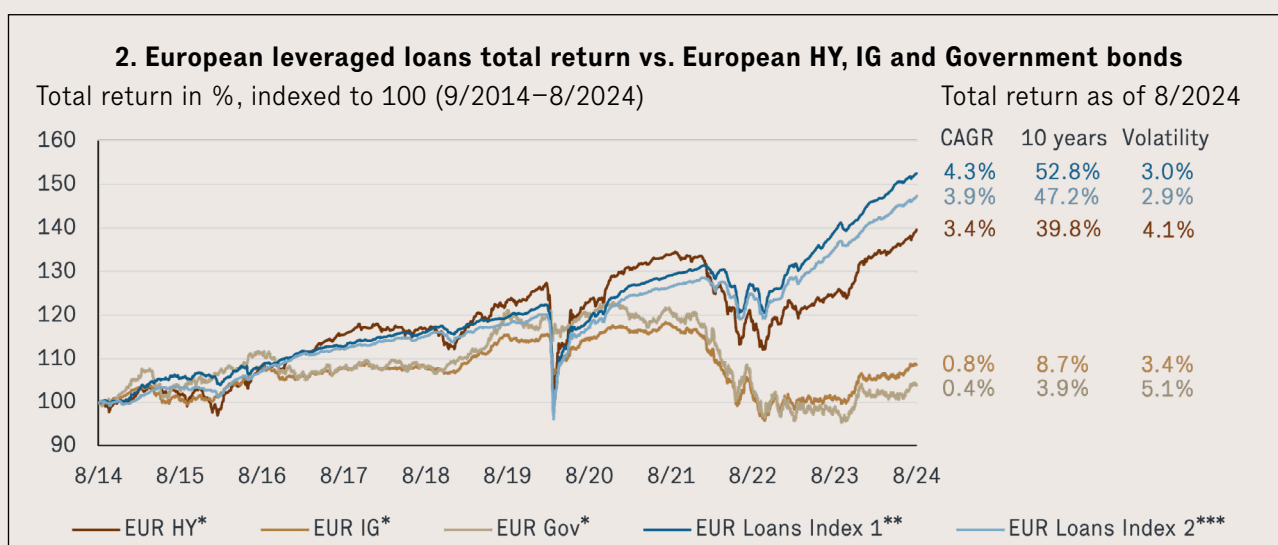
Returns over the last 10 years

We have often been asked how volatile loan returns are compared to other liquid asset classes or how sensitive those are to downturns. Loans have shown to have more steady performance over time, however, we wanted to take a closer look at the underlying metrics from the past years' performance, which we share in this interim white paper for 2024.

To start, in Table 2 below, we have laid out the historical 10-year daily gross returns for liquid European credit including indices for European syndicated leveraged loans ("EUR Loans"), high-yield bonds ("EUR HY"), investment grade bonds ("EUR IG") as well as government bonds ("EUR Gov"). Acknowledging the varying risk-return profiles, the data shows a relatively steady performance and lower volatility of leveraged loans compared to the other selected credit and fixed income segments.

Despite Euribor rates being mostly negative over the past decade, EUR loans have delivered consistently strong returns. They have significantly outperformed EUR HY, EUR IG and EUR Gov, especially since the rates normalisation from late 2021 onwards. This shift has driven exceptional loan returns, which continue to be supported by high coupon rate (around 7–8%) as we discussed in our January 2024 white paper¹.

In terms of annualised volatility, EUR Loans have recorded the lowest rate of 3.0% (on daily data) compared to 4.1% for EUR HY and 3.4% and 5.1% for lower credit risk segments such as EUR IG and EUR Gov, respectively.



1) https://www.mandatuman.com/48fd1d/globalassets/mam/pdf/1-2024/mam_whitepaper_eng_0124_v5-1.pdf
 *) ICE BofA bond indices; **) Morningstar European Leveraged Loan Index "ELLI", ***) Credit Suisse / UBS Western European Leveraged Loan Index ("WE LLI")
 Source: Bloomberg, Pitchbook Data Inc, ICE BofA, Credit Suisse / UBS

3. European leveraged loans performance metrics vs. EUR bonds and global equities

	10-year data (9/2014–8/2024)	ELLI	WE LLI*	EUR HY	EUR IG	EUR Gov	US 500	SE 600
Daily return data	Annual return (CAGR)	4.3%	3.9%	3.4%	0.8%	0.4%	12.3%	4.4%
	Volatility	3.0%	2.9%	4.1%	3.4%	5.1%	17.6%	16.3%
	Sharpe ³	1.38	1.30	0.81	0.25	0.10	0.73	0.34
	Max drawdown	-20.1%	-20.0%	-20.5%	-19.1%	-22.4%	-33.9%	-35.6%
	Alpha (against STOXX Global)	3.5%	3.1%	1.9%	0.5%	0.2%	1.8%	-3.2%
	Beta (against STOXX Global)	0.06	0.06	0.14	0.03	0.02	1.02	0.81
	R ² (against STOXX Global)	0.10	0.10	0.24	0.02	0.00	0.74	0.55
	VaR (-5%)	2.0%	1.5%	4.9%	5.1%	8.0%	26.4%	25.1%
	Min return	-3.0%	-3.5%	-3.7%	-2.0%	-1.7%	-12.1%	-11.5%
	Max return	2.0%	1.7%	1.9%	1.5%	2.1%	9.4%	8.4%
Monthly return data	Volatility	6.5%	5.8%	7.2%	5.1%	5.5%	15.4%	14.1%
	Sharpe ³	0.69	0.69	0.50	0.19	0.10	0.84	0.38
	Max drawdown	-15.7%	-14.5%	-15.8%	-17.7%	-21.4%	-25.4%	-23.0%
	Alpha (against STOXX Global)	1.2%	1.1%	-0.9%	-1.6%	-1.0%	1.8%	-5.0%
	Beta (against STOXX Global)	0.30	0.27	0.41	0.23	0.14	1.01	0.94
	R ² (against STOXX Global)	0.40	0.39	0.59	0.38	0.13	0.79	0.81
	VaR (-5%)	3.9%	3.2%	8.2%	7.0%	8.9%	24.0%	19.7%
	Min return	-14.9%	-13.6%	-13.2%	-6.9%	-5.2%	-12.2%	-14.8%
	Max return	8.3%	6.7%	6.0%	5.1%	4.1%	13.1%	13.7%

Performance metrics

Next, we will compare EUR Loans against EUR credit and two main equity indices in more detail. Table 3 above collates both daily and monthly data for the last 10 years², which has evidenced a number of sizeable market events and varying degrees of market strength and weakness. For credit, we compare EUR Loans mainly against EUR HY but also kept lower credit risk EUR IG and EUR Gov for reference, with main US and European equity indices being STOXX US 500 (in local currency) and STOXX Europe 600. Alpha, Beta and R² are measured against STOXX Global.

For the review we have selected both Morningstar ELLI index as well as CS/UBS Western European Loan Index (“WE LLI”) to track EUR Loans performance. The indices differ somewhat in composition and size, but statistics show there is insignificant difference in metrics between the two. At a small margin, WE LLI does look to come with slightly lower risk profile (especially on monthly basis) while ELLI compensates with decently better returns (10-year annualized return 4.3% vs 3.9%).

Based on this broader historical data output above, EUR Loans compare quite favourably against the other asset classes both in terms of risk and return.

On the return side, apart from impressive returns for the US equity, notably EUR Loans offer significantly higher risk-adjusted returns, as measured by the Sharpe ratio, compared to other markets.

Alpha for EUR Loans in turn is consistently positive with both daily and monthly data, whereas the EUR HY and EUR IG have negative alphas with monthly data (or noticeably less positive on daily data). This indicates that the EUR Loan market generates meaningful excess returns that cannot be explained by the performance of the broader equity market. Consequently, the data shows that the return stream of the EUR Loan market is fairly distinct from that of the equity markets.

Table 4 demonstrates the share of positive returns (win rates) implying more steady return stream of EUR Loans with the highest win rates across the board; 88% positive quarterly or 91% positive annually over the past 10 years (ELLI).

4. Win rates

9/2014–8/2024	ELLI	WE LLI	EUR HY	EUR IG	EUR Gov	US 500	SE 600
Win Days %	67%	73%	62%	54%	52%	54%	54%
Win Months %	79%	78%	63%	57%	54%	69%	58%
Win Quarters %	88%	83%	73%	61%	61%	78%	66%
Win Years %	91%	82%	73%	64%	82%	82%	64%

2) Data period 10 years, 1.9.2014–31.8.2024;

3) Sharpe calculation assumes risk free rate at zero for the full period, no impact to comparability between indices

*) WE LLI includes only weekly data until the end of 2015, daily data used from 2016 onwards

Source: Bloomberg, Pitchbook Data Inc, ICE BofA, Credit Suisse / UBS, STOXX Ltd

Performance metrics (continued)

Turning to the risk side and in terms of volatility the findings are largely intuitive, however on daily basis as noted earlier, EUR Loans show the lowest volatility across the indices. Whilst EUR IG and EUR Gov could be expected to exhibit lower volatility, the data suggest the gap is quite marginal even on monthly basis. This is likely explained by rates volatility and impact of duration which the loan market is largely segregated from.

EUR Loan beta and R-squared in turn suggest quite modest relative sensitivity and low dependency vis-à-vis global equity performance, both measures also being meaningfully lower than those of EUR HY.

Regarding min returns and max drawdowns (the largest downward top-to-bottom move for any period until recovered) such readings were largely recorded during March 2020, but also some instances occurred from 2021 onwards, especially for EUR IG and EUR Gov. To broaden out the analysis, we summarised the top-5 worst drawdowns for each index for the same 10-year period (Table 5). Interestingly on the average of losses over those top-5 events, loans come out least affected. For EUR Loans and EUR HY, outside of March 2020, the second worst drawdown occurred during 2022 when EUR Loans managed to cut losses to a half compared to EUR HY. Also, the downturn lasted less than half of the time vs. EUR HY. In turn, technically the drawdowns for EUR IG and EUR Gov are still ongoing (boxed in Table 5) albeit valley already having been passed.

5. Top-5 worst drawdowns (daily data)

9/2014 – 8/2024	ELLI	WE LLI	EUR HY	EUR IG	EUR GOV	US 500	SE 600
#1	-20%	-20%	-20%	-19%	-22%	-34%	-36%
#2	-8%	-7%	-17%	-8%	-6%	-26%	-27%
#3	-3%	-2%	-7%	-4%	-6%	-20%	-23%
#4	-2%	-2%	-5%	-3%	-6%	-14%	-11%
#5	-2%	-1%	-2%	-2%	-1%	-10%	-8%

Further, we examined a few key market events over the last couple of years, including i) late-2018 FED tightening, ii) March 2020 C19 breakout, iii) mid 2021 to end of 2022⁴ covering inflation outburst, rates increase and the Russian invasion of Ukraine and iv) events around bank failures in March 2023. Top-to-bottom worst and total performance of these events are summarised in Table 6 and they further highlight that EUR Loans incurred only minimal losses, except for March 2020, from which, however, they recovered before the year-end. As to the recent August 2024 brief but swift volatility event, EUR Loan market saw only limited impact of -0.35% (ELLI) during those few days and made new highs two weeks later.

We also measured the sensitivity of EUR Loans to shocks in the equity market via volatility (VIX index) and found the correlation between VIX and ELLI for the last 10 years being very low (-0.18).

To summarise, EUR Loans have often tended to showcase quite resilient performance during times of volatility or distress, which is also what the daily and monthly VaR results suggest.

6. Top-to-bottom and total return for selected market volatility events

Period top-to-bottom return (daily data)

	Q4 2018	March 2020	Mid 2021– 2022 ⁴	March 2023
ELLI	-1.6%	-19.0%	-8.4%	-1.2%
WE LLI	-2.0%	-19.1%	-7.4%	-1.3%
EUR HY	-4.3%	-18.7%	-16.7%	-2.3%
EUR IG	-1.3%	-7.8%	-19.1%	-1.1%
EUR Gov	-0.7%	-5.7%	-20.7%	-1.7%
US 500	-19.6%	-28.5%	-26.1%	-4.8%
SE 600	-14.2%	-27.6%	-22.5%	-6.0%

Period total return (daily data)

	Q4 2018	March 2020	Mid 2021– 2022 ⁴	March 2023
ELLI	-1.0%	-14.9%	-1.7%	-0.1%
WE LLI	-1.8%	-13.6%	-1.7%	0.0%
EUR HY	-3.6%	-13.2%	-11.2%	-0.6%
EUR IG	-0.7%	-6.9%	-15.6%	0.9%
EUR Gov	1.5%	-2.6%	-18.3%	2.0%
US 500	-13.9%	-12.2%	-12.1%	3.2%
SE 600	-11.9%	-14.8%	-6.9%	-1.0%

4) Mid 2021–2022 represents a period of 1.7.2021–31.12.2022
Source: Bloomberg, Pitchbook Data Inc, ICE BofA, Credit Suisse / UBS, STOXX Ltd

Loan market characteristics explaining lower volatility?

Possible explanations for the observed lower volatility for EUR Loans could be a combination of the following factors, or characteristics of the loan market.

Demand side is comprised predominantly of real money institutional demand, with absence of derivatives, ETFs or daily index funds. CLOs have accounted for more than 50% of the loan market (likely closer to around 70% today), the remaining portion mainly comprising of dedicated loan funds as well as insurance companies and pension funds, equally with more long-term investment horizon. Given the lack of ETFs and other daily index funds in Europe especially, one can assume such to reduce the daily liquidity swings and thus secondary pressures. The aforementioned investor base also likely creates less short-term speculative activity. Yet the loan market remains actively traded on the secondary market providing liquidity if needed or the possibility to right-size positions.

Furthermore, given the floating rate and resulting short duration there is no comparable price volatility stemming from movements in interest rates. This contrasts with bonds, which can appreciate and trade well above their nominal value when rates fall, but in turn can decline

considerably during times of rapidly rising rates as observed in 2021–2022. Additionally, unlike bonds, loan prices are “capped” to around par due to different prepayment provisions.

Despite the above factors, loans are understandably not immune to larger selloffs and rising risk premia. However, from a broader perspective, they compare favorably to other asset classes in terms of volatility, as we have observed.

Return correlations

As the last point of data, we wanted to present correlations for the last 10-year period with daily and monthly data (Table 7).

The data shows clearly the low correlation EUR Loans have against most indices (up to 0.34 on daily data). However, EUR HY is understandably an exception with a 0.7 correlation. EUR HY also has higher correlation to equity compared to that of EUR Loans. Even though not shown here, we analysed also longer and shorter data periods, and those findings were quite similar. We also show monthly figures for consistency and correlation increases across the board as data becomes less granular, however, it still indicates relatively favourable correlation figures for EUR Loans.

7. Correlation matrices for daily and monthly returns

	Daily returns (9/2014–8/2024)							Monthly returns (9/2014–8/2024)								
ELLI	-							ELLI	-							
EUR HY	0.70	-						EUR HY	0.85	-						
EUR IG	0.28	0.43	-					EUR IG	0.61	0.81	-					
EUR Gov	0.07	0.20	0.85	-				EUR Gov	0.23	0.44	0.82	-				
US 500	0.22	0.41	0.12	0.07	-			US 500	0.55	0.75	0.62	0.36	-			
SE 600	0.34	0.57	0.10	0.05	0.58	-		SE 600	0.60	0.77	0.58	0.32	0.81	-		
WE LLI	0.89	0.73	0.27	0.06	0.30	0.32	-	WE LLI	0.99	0.87	0.62	0.23	0.57	0.59	-	
	ELLI	EUR HY	EUR IG	EUR GOV	US 500	SE 600	WE LLI		ELLI	EUR HY	EUR IG	EUR GOV	US 500	SE 600	WE LLI	

Source: Bloomberg, Pitchbook Data Inc, ICE BofA, Credit Suisse / UBS, STOXX Ltd

Impact of EUR Loans on portfolio metrics

Lastly, we illustrate below (Table 8) how loan exposure could have impacted return, volatility and Sharpe ratio with a few generic equity-bond allocations with 50/50 global equity (STOXX Global) and EUR credit based on the same daily 10-year data. For the credit component, alternative 1 has no loan exposure alongside equally weighted EUR HY, EUR IG and EUR Gov (16.7% each). Alternative 2 adds EUR Loans with equal weight (12.5% each), while alternative 3 in turn computes higher weighting for loans (25.0%). These are only indicative and for demonstration, however despite the risk profile of both portfolios 2 and 3 increasing due to the larger HY credit allocation (both bonds and loans) thereby also increasing the return (from 5.96% to 6.32% and 6.78%), volatility is slightly reduced and Sharpe ratios somewhat improved.

The above data is further detailed in Graph 9, showing the efficient frontier. This visual representation illustrates the relationship between annualised returns and standard deviation (volatility) across various optimal portfolio combinations/weights. By “optimal,” we refer to portfolios with the highest ex-post Sharpe ratios at each level of risk and return.

Incorporating EUR Loans (ELLI) into the example equity-bond portfolio shifts the efficient

frontier leftward (as depicted by the dark blue line), regardless of portfolio weights. This indicates that including EUR Loans can enhance risk-reward metrics, allowing for potentially higher returns at equivalent volatility levels or similar returns with reduced volatility. Such improvements stem from the diversification benefits due to low correlations between EUR Loans and other markets.

Closing remarks

We have presented loans as an asset class and its characteristics more in detail in our last two white papers (please see links in the footnote), whilst for this interim commentary we were focussing only on the topic of various performance metrics.

We find the data compelling, namely with EUR Loans showcasing steady and strong risk-adjusted returns, positive alpha, less sensitivity to market shocks and lastly relatively low correlation to other selected markets, which combined can add potential diversification benefits and enhance one’s portfolio metrics.

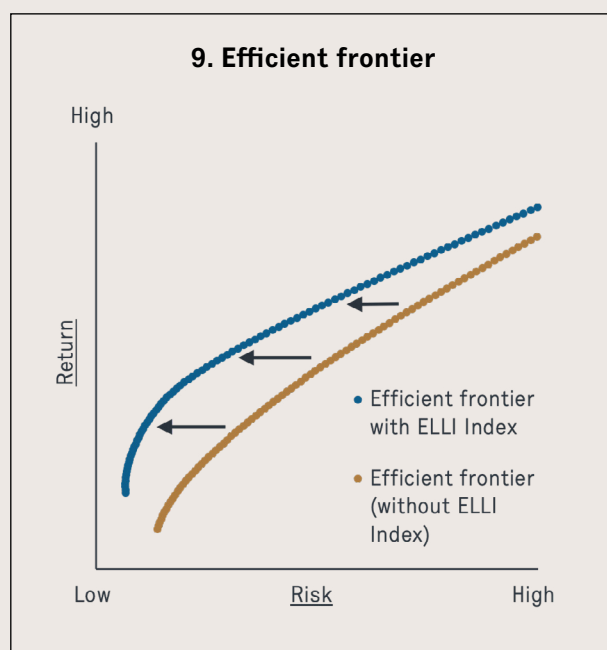
The return profile of loans combined with the risk metrics we have found, adds to our thinking of loans being an attractive asset class namely to complement a broader portfolio including other asset classes.

8. Portfolio scenarios			
Portfolio weights	Portfolio 1	Portfolio 2	Portfolio 3
STOXX Global	50.0%	50.0%	50.0%
EUR HY	16.7%	12.5%	12.5%
EUR IG	16.7%	12.5%	6.3%
EUR GOV	16.7%	12.5%	6.3%
ELLI	0.0%	12.5%	25.0%

↓

10-year performance metrics (9/2014–8/2024)

Performance	Portfolio 1	Portfolio 2	Portfolio 3
Return – annual %	5.96%	6.32%	6.78%
EUR Volatility	8.09%	8.00%	8.05%
Sharpe	0.74	0.79	0.84



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 Source: Bloomberg, Pitchbook Data Inc, ICE BofA, STOXX Ltd

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AUTHORS



ALEXANDER GALLOTTI

Director | Head of Leveraged Finance
alexander.gallotti@mandatumam.com



KIMMO SALOKOSKI

Senior Portfolio Manager | Leveraged Finance
kimmo.salokoski@mandatumam.com



ILKKA LAMPIO

Senior Portfolio Manager | Leveraged Finance
ilkka.lampio@mandatumam.com



ALEX BOUYAHIA

Analyst | Allocation Products
alex.bouyahia@mandatumam.com



MANDATUM
ASSET MANAGEMENT

Mandatum Asset Management Ltd
Bulevardi 56, P.O Box 1221,
FI-00101 Helsinki, FINLAND

www.mandatumam.com

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