Invesco

Investment Insights | Fixed Income

Senior secured loans: Attractive current income coupled with a short duration profile and low correlation of returns

March 2022

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Bjoern Wolber, CFA®
Head of EMEA
Investment Analysis

Sanyog Yadav, CFA®
Manager, EMEA
Investment Analysis

When it is obvious that goals cannot be reached, don't adjust the goals, adjust the action steps.

Confucius
(551 BC to 479 BC)

Welcome

Investors are facing growing challenges in the current capital market environment. These are characterized by a mix of compressed risk premiums, low-yielding 'safe-haven' investments, high inflation and heightened volatility.

Due to low yields on high-quality government bonds, actuarial discount rates — used to value future pension liabilities — have also decreased. This has caused the present value of future pension liabilities to increase significantly. This growth in liabilities and their increasing volatility forces institutional investors to consider new asset allocation strategies.

Many of the most commonly used fixed income investments, such as high-quality government bonds, now generate negative real returns, considering the currently high levels of inflation.

Consequently, modified durations of these investments have reached all-time highs, posing significant duration risk to investment portfolios.

With base rates across G7 countries either negative or at historical lows, and the removal of monetary and fiscal stimulus, forward rate and inflation expectations have started to rise. The US Federal Reserve (Fed) hiked rates for the first time in March and market expectations seem to be moving ever higher as the central bank signalled an aggressive fight with inflation.

We believe the current uncertain market environment calls for fundamental changes in asset allocation in order to meet long-term real return targets.

We favour a fixed income allocation that enables 1) a flexible response to future interest rate movements, and 2) attractive yields in a low yield environment.

We believe senior secured loans (SSL) offer features that may meet the needs of investors:

- Attractive current income — independent from market environment
- Minimal duration risk — providing a hedge against rising interest rates and inflation
- Historic record of low volatility of investment returns compared to traditional asset classes
- Strong historic and current risk-adjusted return profile
- Implied comprehensive credit risk mitigation mechanisms
- Low historical correlation of returns providing potential portfolio diversification benefits

This paper looks to provide a detailed introduction to the asset class and takes a deep dive into some of the features listed above. We also have a Q&A with Invesco's Kevin Petrovcik, senior client portfolio manager at our global bank loans business.

Contents

1.0 Introduction to senior secured loans
- 1.1 SSL in comparison with high yield bonds
- 1.2 SSL compared to other ABS
- 1.3 Loan market development
- 1.4 Loan market: trading and liquidity
- 1.5 Loan market: recent developments

2.0 Value add of senior secured loans in an overall asset allocation
- 2.1 Credit risk mitigation measures
- 2.2 Managing the impact of rising interest rates and inflation
- 2.3 Historical return profile in diverse market phases
- 2.4 Historical volatility
- 2.5 Compelling return potential
- 2.6 Attractive diversification benefits for overall asset allocation

3.0 Conclusion

4.0 Q&A with Kevin Petrovcik, Senior Client Portfolio Manager at Invesco Global Bank Loans

Overview

- Bank loans can provide attractive current income coupled with minimal interest rate duration
- Bank loans have outperformed other fixed income asset classes in periods of rising interest rates
- Bank loans are currently attractively priced, in our view, with spreads above pre-COVID levels

1.0 Introduction to senior secured loans

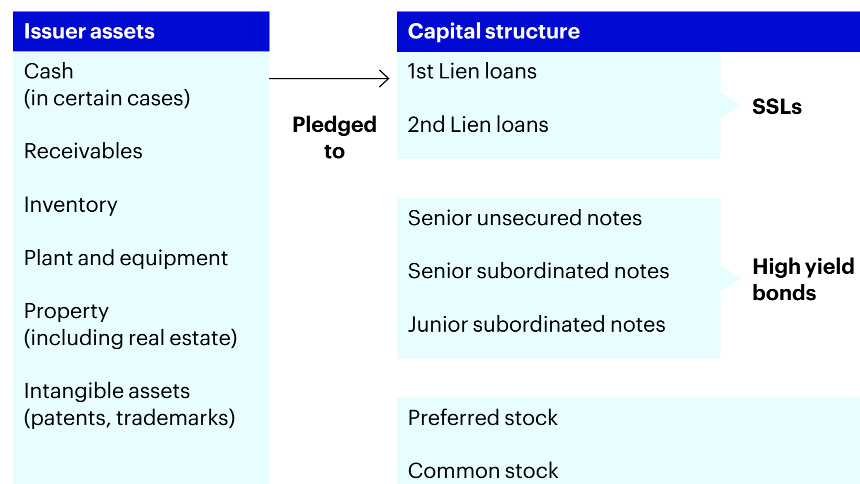
Senior secured loans (SSL) are privately arranged loans issued to a consortium of banks and institutional creditors that provide companies with access to debt capital. SSL traditionally offer a fixed spread over a reference rate, making them 'floating-rate' instruments. Most fixed spreads over the reference rate reflects the credit risk of the issuer.

Generally, borrowers are corporates and the loans are typically dedicated to corporate purposes (such as capital expenditure), M&A-related transactions or refinancing debt. Loans typically have a credit rating below investment grade. Nonetheless, their special credit risk mitigation mechanisms (e.g. comprehensive collateral packages such as share pledges using debt to equity swaps, seniority in the company's capital structure and covenants) rank SSL at the top of a company's capital structure (figure 1). Seniority in the company's capital structure means that SSL investors are effectively ranked first for any repayment in the event of a default by the issuer.

The institutional market for SSL has been in existence for 32 years. The loan syndication and trading association, LSTA, has been a leading advocate for the US syndicated loan market since 1995, fostering cooperation and coordination among loan market participants, facilitating just and equitable market principles, and inspiring confidence among investors in corporate loan assets (source: LSTA). Large loan issuers include Hertz, Dell and Burger King, as well as European corporations such as Alstom, Celanese and Siemens.

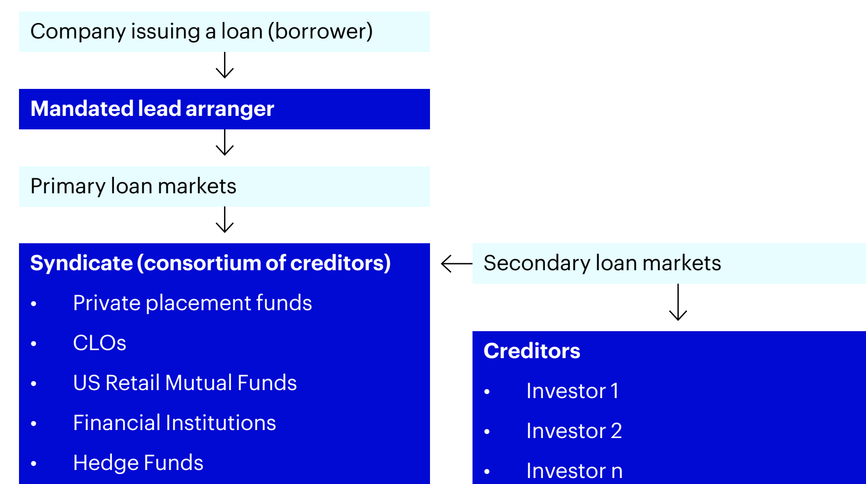
Three parties are typically involved in the structuring of an SSL: 1) the borrower, 2) the mandated lead arranger (commercial or investment bank) and 3) a consortium of creditors (figure 2). The key task of the mandated lead arranger is to structure, arrange and administer the loan on behalf of the borrower. The mandated lead arranger establishes a consortium with creditors. The creditors' main task is to review and evaluate the borrower's creditworthiness, i.e. its future capacity to meet interest and principal payments. The aim is to accurately assess current and future risks as well as 'fair' loan pricing. The origination and syndication of the loan takes place in the primary market, while any sale of the loan by one of the original lenders of the syndicate takes place over the counter (OTC) in the secondary loan market. The US leveraged loan market is very liquid. In 2021, secondary market trading volume hit a record USD780 billion, based on a total market size of USD1.4 trillion. (source: LSTA and Credit Suisse).

Figure 1
Seniority of SSLs



Source: Invesco. For illustrative purposes only.

Figure 2
Structure of a syndicated loan



Source: Invesco. For illustrative purposes only.

In 2021, secondary market trading volume hit a record

USD780bn

based on a total market size of USD1.4tn

1.1 SSL in comparison with high yield bonds

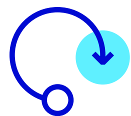
SSL and high yield bonds are both debt instruments that rank higher than equity in a company's capital structure (as shown in table 1). SSL sit at the top of the capital structure above high yield bonds and are backed by assets of the borrower, unlike high yield bonds which are typically unsecured. The difference in seniority between SSL and high yield bonds can have a significant impact on recovery rates. Over the last 34 years (1987 – 2020), the average debt recovery rate, as measured by ultimate recoveries for US SSL, was 80%, compared to 47% on average for US high yield bonds.[1]

Additionally, SSL are floating rate instruments, while high yield bonds are issued with a fixed coupon. High yield bonds tend to have a longer tenor (7 – 10 years on average) compared to SSL (5 – 7 years on average). Generally speaking, the average life of an SSL is three years due to the flexible loan prepayment structure. Loans typically have an average call protection of six months, compared to three years for high yield bonds.

Table 1
Features of SSLs and High Yield bonds

	SSLs		**High Yield bonds**	
Debt Type	1st lien loans	2nd lien loans	Senior Notes	Subordinated Notes
Floating/Fixed?	Floating		Fixed	
Tenor:	3 – 5 years	4 – 8 years	7 – 10 years	8 – 10 years
Prepayment?	Yes		No	
Seniority:	Senior secured		Senior unsecured	Senior subordinated
Secured?	Yes		Sometimes	
Call Protection?	Sometimes		Yes	
Covenants:	Maintenance	Less restrictive maintenance	Incurrence	

Source: Invesco. For illustrative purposes only.



The average debt recovery rate, as measured by ultimate recoveries for US SSL, was

80%

compared to 47% on average for US high yield bonds

1.2 SSL compared to other ABS

Asset Backed Securities (ABS)[2] are securities collateralized by financial assets (such as loans, leases, mortgages, or secured or unsecured receivables) that allow the holder of the security to receive payments dependent primarily on the cash flow from the asset. ABS include SSL, CLO (collateralized loan obligations), MBS (mortgage backed securities), RMBS (residential mortgage backed securities), auto loans and credit card loans.

ABS funds such as CLO[3] funds are key investors in SSL. During the global financial crisis, the ABS asset class became notorious for extreme losses. Today we believe this generalization is not representative of the asset class, as the high level of defaults was confined largely to lower-rated RMB securities, and not ABS in general. Our research highlights some interesting statistics: during the global financial crisis, CLOs not only had the lowest loss rates among ABS, they also had the lowest loss rates among corporate credits.[4] Additionally, the default rate on rated CLO tranches has been well below equivalently rated corporate bonds since 1997 (figure 3).

These findings support our belief in the attractiveness of SSL as an asset class. Its senior rank in the capital structure, relatively high rates of recovery and low rates of default have lent to its resilience during the internet bubble of 2000 and the financial crisis in 2008. The average recovery rate, measured as the "ultimate recovery", which typically takes 1 – 2 years to resolve, was 80% (table 2).

Table 2
Average corporate debt recovery rates as measured by post-default trading prices (%)

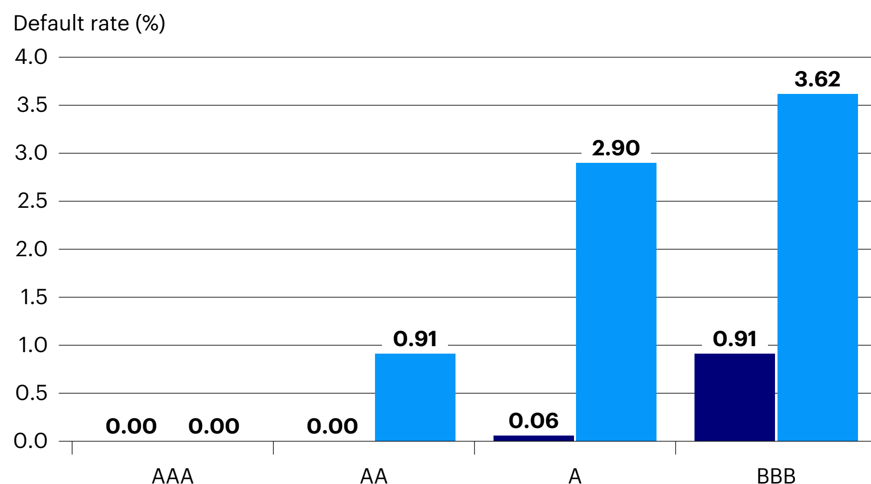
Average corporate debt recovery rates as measured by ultimate recovery

Priority position	2020	2019	1987 – 2020
Revolvers	78.60	89.60	86.30
Term loans	48.50	58.10	72.60
Senior secured bonds	34.80	45.90	61.40
Senior unsecured bonds	8.60	31.30	46.90
Subordinated bonds	0.90	24.70	27.90

Source: Moody's Default Study, 28 January 2021 (latest data available).

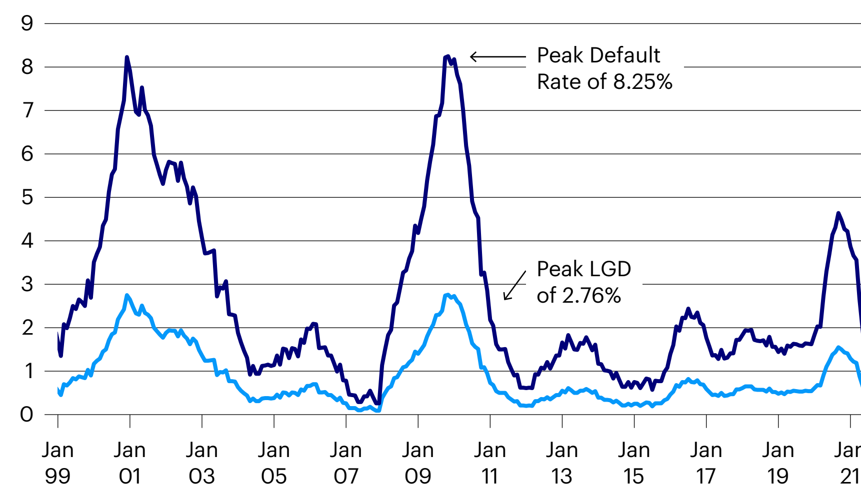
Moreover, loss given default (LGD[5]) rates, using an average recovery of 66.6%, the highest LGD rate over the period of existence of SSL, has been roughly 3%, which was during the financial crisis of 2008 (figure 4). During the same period, the secondary market prices of SSL dropped roughly 29%.

Figure 3
Cumulative investment grade CLO versus corporate default rates (period 1997 – 2018)



Source: Moody's, S&P, data as of 30 June 2019 (latest data available).

Figure 4
US loans default rate and Loss Given Default (LGD) over time (%)



Source: S&P/LSTA as of 31 December 2020.

1.3 Loan market development

Participants and market features

The institutional loan market has grown steadily over the past few years due to SSL's flexibility and lower capital charge compared to alternative asset classes. Secondary-market volumes in the US and Europe have increased five-fold over the last decade (source: Credit Suisse). As of the end of December 2021, the total market size for the US stood at about USD1.4 trillion (figure 5) while the total market size for European institutional loans stood at EUR704 billion (figure 6).

Comparison of European loans versus US loans

The size of the European loan only recently eclipsed its 2008 peak, while the market for European high yield bonds has grown rapidly over the same time period (figure 6). In contrast, in the post-financial crisis period, US high yield bonds and loan markets have each grown steadily. The US loan market is currently four to five times as large as the European loan market, both in outstanding amount and volume of issuance. In table 3, we compare typical characteristics of US and European loans.

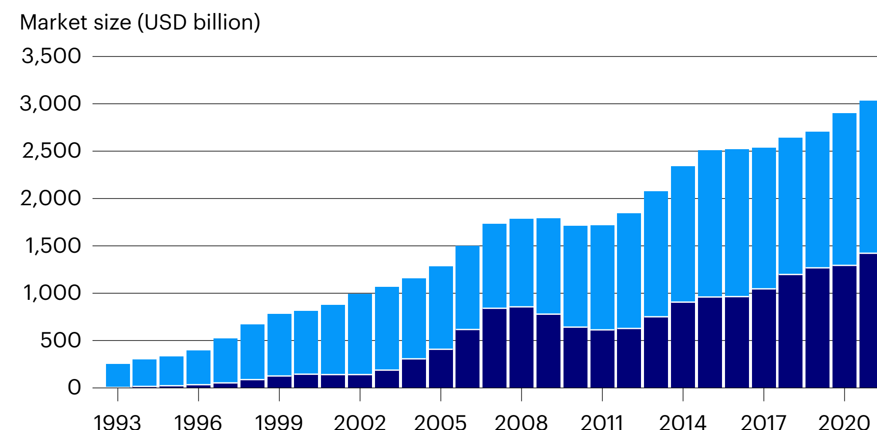
Both European and US loan markets currently offer attractive yields, in our view. In later sections of this paper, we delve deeper into various risk-return characteristics of these loan markets.

Table 3
European loans versus US loans

	European loans	US loans
Spread (bps)	427	379
Average price	98.80 €	98.7 $
Average floor (in basis points)	96	97
Weighted average life (in years)	4.77	4.88
3-year spread to maturity	472	478
Spread to maturity	457	411

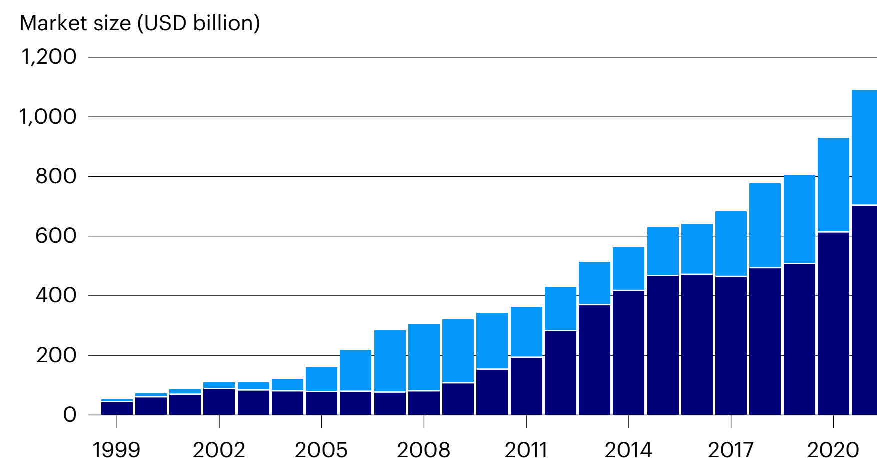
Source: Credit Suisse Research and Analytics, S&P/LSTA as of 31 December 2021.

Figure 5
Comparison of US leveraged loan (LL) versus US high yield (HY)



Source: Credit Suisse Research and Analytics. Data as at 31 December 2021.

Figure 6
European institutional SSL versus high yield (HY)



Source: Credit Suisse Research and Analytics. Data as at 31 December 2021.

The total market size for the US stood at about

USD1.4 tn

while the total market size for European institutional loans stood at EUR704 bn

1.4 Loan market: trading and liquidity

Given the over the counter (OTC) nature of the market, lack of a TRACE trade reporting system, and the private nature of structuring deals, many market participants assume that the bank loan market is illiquid. According to the LSTA, at the end of Q4 2021, the US loan market grew to a record USD1.4 trillion in total issuance outstanding.

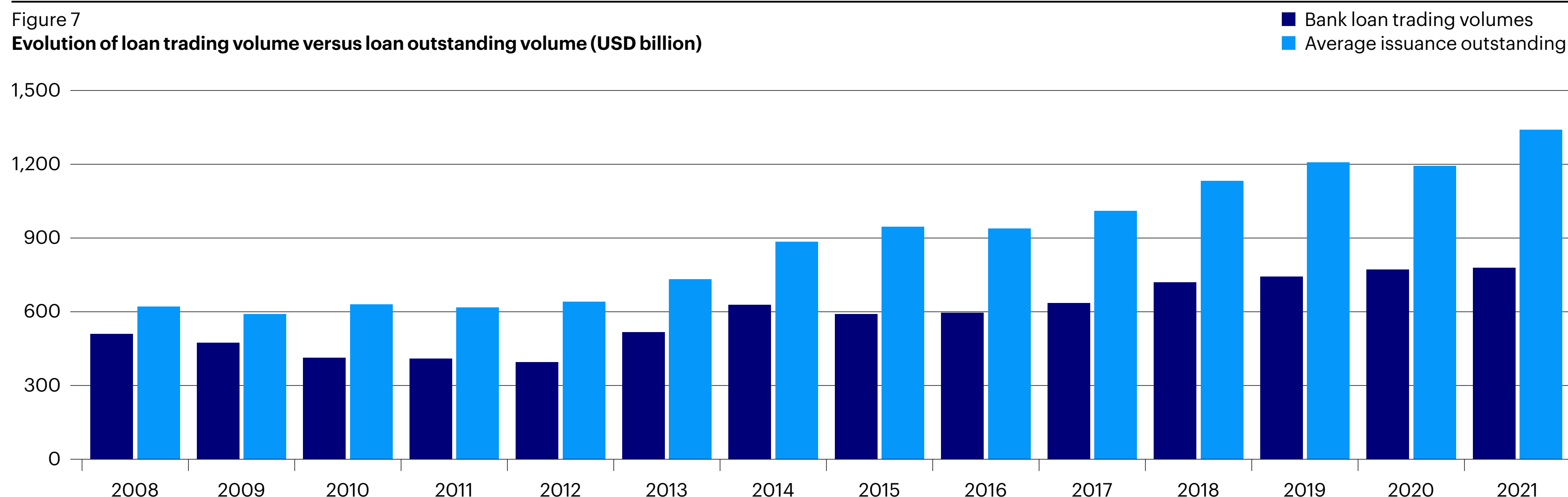
The loan market has grown 114% since the end of 2007. While the size of the loan market has increased significantly, the overall number of issuers in the loan market has decreased from 1,740 in 2008 to 1,158 as of June 30, 2020. There are some misconceptions in the market regarding bank loans, including the following:

1. A common misconception in the bank loan space that arises as result of the OTC nature of the market is that bank loans are illiquid. The secondary market for bank loans is, however, surprisingly active and growing. Bank loan trading volumes hit record highs in 2021, reaching USD780 billion for the year (figure 7). Over the past five years, bank loan volumes have grown by over 4.2% year-over-year according to LSTA.

2. An important metric to consider when assessing liquidity in an OTC market is market breadth, or how much of the market trades on any given day, two statistics tracked monthly by the LSTA. As of March 31, 2020, over the trailing 12 months, 524 traded on average each day (up from 520 in 2018 and 430 in 2017). On average, 51% of bank loans traded 20 or more times per month over the past year ending in Q1 2020, an average of one trade per day. Compared to corporate bonds, bank loans trade much more frequently. Research by the US Securities and Exchange Commission and Financial Industry Regulatory Authority has shown that only 20% of TRACE eligible corporate bonds trade on any given day.

3. Finally, bank loan settlement is another area where misconceptions surrounding illiquidity arise. Investors often assume that the 30-plus days it can take to settle the small percentage of distressed loans is the standard for the market. However, settlement times fell to an eight-year low in 2019, with the median settlement time for the market at 11 days. Even during periods of bank loan market stress, as seen in March 2020, 59% of loan trades settled within 10 days.

Figure 7
Evolution of loan trading volume versus loan outstanding volume (USD billion)



Source: LSTA, data as of 31 December 2021 (latest data available).

1.5 Loan market: recent developments

Covenant-lite and misconceptions

Loan credit agreements typically contain two types of covenants (figure 8):

1. **Affirmative covenants** require the issuer to adhere to certain terms, such as providing audited financial statements by a certain date.
2. **Negative covenants** are an agreement by the borrower to prevent actions that could negatively impact lenders without their consent. Negative covenants include, but are not limited to, clauses such as a negative pledge (prevents the borrower from issuing debt in the future that would negatively impact a first lien lender's priority claim), restricted payments (limits the borrower's ability to pay dividends or distributions), additional indebtedness (limits or restricts additional debt), and financial covenants, which are explained below.

There are two types of financial covenants in the negative covenant category:

1. **Maintenance covenants** outline certain levels of financial ratios that a borrower must maintain, such as levels of leverage (debt-to-EBITDA), and cash flow coverage (EBITDA to-interest), which are tested quarterly.
2. **Incurrence covenants** are tested only upon the "incurrence" of an event. These events can include (i) issuing additional debt (preventing further leveraging) or (ii) restricting a company from paying dividends to equity holders.

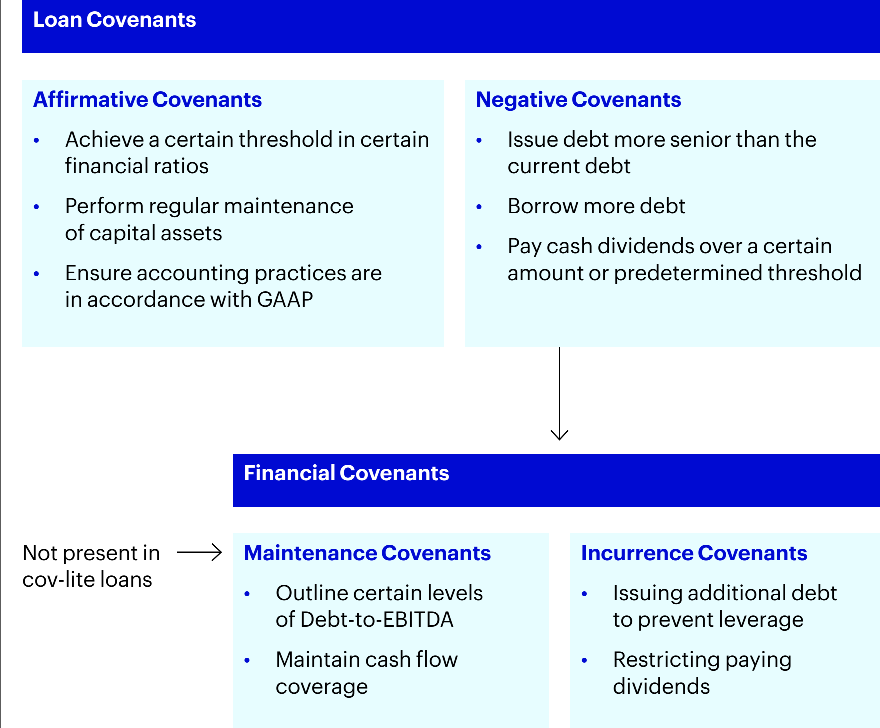
It is important to note that so-called covenant-lite loans still contain affirmative and negative covenants. Covenant-lite strictly relates to the lack of financial maintenance covenants. All high yield bonds are considered "cov-lite" as they do not have maintenance covenants but do have incurrence covenants.

While financial covenants offer structural protection, they have not historically been a contributing factor in preventing credit deterioration or used by lenders to accelerate their loans and push companies into default. Instead, lenders have used covenant defaults primarily as an economic tool to extract additional spread and/or fees and, at times, to tighten credit agreements.

A covenant default is distinctly different from a payment default, which can induce a restructuring or bankruptcy. A large majority of new loans coming to market are cov-lite, but loans that contain maintenance covenants are generally of lower quality and thus require covenants to secure financing from the market.

A common perception about covenant-lite loans is that they are riskier than loans with covenants because they lack certain protections that serve as early warning signs of a company's financial trouble. We disagree with this view because financial performance is available to lenders with or without covenants. With such information, investors can detect a deterioration in earnings and take appropriate action without the need for covenants. In fact, covenants can be a lagging indicator of performance deterioration.

Figure 8
Structure of loan covenants



Source: Invesco. For illustrative purposes only.

Lesser subordinated capital in capital structure

Much of the growth of the senior secured loan market has come at the expense of traditional unsecured high yield bonds. Both issuers and investors have migrated to the loan asset class. Issuers have valued the relatively lower cost of financing (given the senior secured status of loans and the flexibility to prepay or refinance. In contrast, unsecured high yield bonds are typically costlier from a coupon perspective, in addition to pre-payment penalties. Investor demand has been driven by loans' relatively high coupons, low volatility and floating rate structure, amid expectations of rising rates.

The senior secured loan market is now similar in size to the high yield bond market. Less subordinated capital below loans in the capital structure will likely provide less cushion to losses in default scenarios, potentially leading to recoveries below historical long-term averages. With that said, loan managers should take capital structure considerations into account to derive their internal credit risk ratings. Even without subordinated debt, loans remain senior secured obligations and investors should continue to benefit from higher recoveries relative to unsecured or subordinated debt. Given weaker terms in documentation and less subordination in capital structures, recoveries will likely be lower, but defaults will likely be less than at historical peaks and, as a result, we believe credit losses will not be meaningfully different from past cycles.

ESG (Environmental, Social and Governance) developments

ESG considerations have become increasingly relevant to investors, especially in Europe. Therefore, it is natural to see this theme emerge in the loan space. It is important to remember, however, that loans are not a security and issuers are often private companies or may be sponsored by a private equity firm. In this way, the loan market is unique, as managers cannot source data from external providers to access ESG-related information.

This does not mean that investment managers do not possess the ability to make an impact. Although loan managers do not have voting rights or control over an issuer's ESG activities or conduct, they can emphasize the importance of ESG issues to management teams as it relates to their ability to raise capital. By integrating ESG considerations into their internal credit rating models, loan managers can drive credit spreads based on ESG considerations, which can, in turn, incentivise issuers to manage their ESG-related risks to achieve favourable credit spreads. That being said, loans managed with ESG considerations are still relatively new and Invesco is a leader in the ESG effort.

ESG considerations have become increasingly relevant to investors, especially in Europe. Therefore, it is natural to see this theme emerge in the loan space.

Implications of LIBOR's phase-out

During the global financial crisis, it was alleged that LIBOR had been manipulated. Since then, banks have reduced their interbank (LIBOR) borrowing. As a result, regulators have argued that LIBOR is no longer based on robust observations and that submissions are based on "expert judgement" rather than actual transactions or interpolation of transactions. US LIBOR is the widely used reference rate for nearly USD200 trillion in contracts. The December 2021 phase out of LIBOR and subsequent replacement rate transition seeks to 1) identify benchmarks anchored in observable transactions that are supported by appropriate governance structures, and 2) develop a plan to accomplish a transition to new benchmarks. In late 2014, the Alternate Reference Rates Committee ("ARRC") was formed to identify a replacement.

The ARRC has identified the Secured Overnight Financing Rate (SOFR) as the replacement rate for cash products, such as syndicated loans and collateralized loan obligations. SOFR is an overnight, secured risk-free rate, while LIBOR is an unsecured rate with a term curve. Because SOFR is secured and thus expected to be lower than LIBOR, loans that "fall back" to SOFR will require a spread adjustment to make the successor rate more comparable to LIBOR (more on "fall backs" below.) SOFR is the combination of three overnight US Treasury repurchase agreement (repo) rates. The market for repo agreements is very liquid and deep, with more than USD1 trillion of trading per day. This means that SOFR will likely be robust, durable and difficult to manipulate — all perceived shortcomings of LIBOR.

2.0 Value add of senior secured loans in an overall asset allocation

In our view, the attractive features of SSL can offer investors added value relative to other portfolio components:

2.1
Credit risk mitigation measures

2.2
Managing the impact of rising interest rates and inflation

2.3
Historical return profile in diverse market phases

2.4
Historical volatility

2.5
Compelling return potential

2.6
Attractive diversification benefits for overall asset allocation

2.1 Credit risk mitigation measures

A key strength of SSL is that, despite their classification as non-investment-grade investments, they offer several mechanisms that can help creditors mitigate the likelihood of default or, in the case of insolvency, strengthen their position with regard to all other capital providers:

- Collateral package: SSL are secured by collateral that typically includes a company's assets, such as real estate properties, plant and equipment, and patents. The review and evaluation of collateral is a key component of due diligence analysis. In practise, most defaults are settled through debt to equity swaps, unless the defaulting company liquidates its assets.
- First lien on the company's assets in the event of bankruptcy: in the company's capital structure, SSL creditors are senior to all other capital providers. If a company defaults, SSLs are first in line to be repaid, resulting in a generally higher recovery rate compared to high yield bonds (see section 1.1).
- Covenants: SSLs are governed by a written contract that includes contractually agreed-upon financial covenants that place significant limitations on a borrower's business operations and are designed to limit the default rate.
- Effective post-investment monitoring: rigorously monitoring a company's compliance with covenants, its financial health and capacity to meet principal payments using a combination of public and non-public information provides creditors with increased transparency and ensures that non-compliance can be addressed at an early stage.

The historical recovery rates (as discussed in section 1.1) for defaulted loans demonstrate the effectiveness of the credit risk mitigation mechanisms of SSL.

"A key strength of SSL is that, despite their classification as non-investment-grade investments, they offer several mechanisms that can help creditors mitigate the likelihood of default.

2.2 Managing the impact of rising interest rates and inflation

Forecasting future interest rate movements is difficult, but with core inflation in most developed markets well above central bank targets, we expect rates to increase in the short term and potentially stabilise in the long term.

We consider the following two interest rate scenarios to be the most likely:

Scenario 1: medium to long-term stability of interest rates

Scenario 2: medium to long-term increase in interest rates

Due to the special features of SSLs, we believe SSL investors are well positioned for both scenarios.

Scenario 1

Compared to other fixed-income investments, we believe SSLs offer an attractive investment opportunity in a low interest rate environment due to their high current income (table 4).

Table 4
Relative yields of key fixed income indices

Index	Universe	Rating	Interest	Modified Duration	Yield to Maturity
S&P Leveraged Loan Index	US	non-IG	floating-rate	45 – 60 days	SOFR +379 bps
S&P European Leveraged Loan Index	Europe	non-IG	floating-rate	45 – 60 days	EURIBOR +427 bps
BbgBarc Euro Aggregate Government 500MM TR	Europe	IG	fixed-rate	8.41	0.13%
BbgBarc Euro Aggregate Corporate 500MM TR	Europe	IG	fixed-rate	5.21	0.52%
BofAML Euro High Yield TR	Europe	non-IG	fixed-rate	3.99	2.85%
BbgBarc US Aggregate Government TR	US	IG	fixed-rate	6.15	1.64%
BbgBarc US Corporate IG TR	US	IG	fixed-rate	8.70	2.33%
BofAML US High Yield TR	US	non-IG	fixed-rate	5.17	4.90%

Source: Barclays, BofAML, Credit Suisse as of 31 December 2021.

Scenario 2

We believe SSLs are well positioned for scenario 2. Although the floating rate nature of loans may cause modest fluctuations in coupons, components of the coupon (SOFR + credit spread) have historically been inversely related. As SOFR increases, usually due to macroeconomic strength, strong demand for floating rate loans enables issuers to reprice or refinance their loans at a lower credit spread. Conversely, if SOFR declines, usually amid macroeconomic weakness, credit spreads have typically increased to compensate investors for perceived additional default risk.

This dynamic has ultimately resulted in a relatively stable and high coupon rate, regardless of the direction of interest rates. Additionally, SOFR floors[6] may give investors additional yield protection when interest rates decline significantly.

To demonstrate the protective nature of SSLs, we use empirical evidence from the period June 2004 to June 2006 when the US Federal Reserve increased interest rates seventeen times by a total of 425 basis points.[7] During this period, the SSL benchmark indices (Credit Suisse Leveraged Loan Index and Credit Suisse Western Europe Leveraged Loan Index) outperformed key US bond indices on return, risk and risk-adjusted basis (table 6).

Table 5
Scenario analysis — medium to long-term increase in interest rates

	Market Price	Accounting (according to IFRS 19)	Future Income
Straight Bond	decrease	write-down	unchanged
Senior Secured Loan	unchanged	unchanged	increase

Source: Invesco. For illustration purpose only.

Table 6
Performance of key US bond indices versus SSL benchmark indices in an environment of rising market interest rates

	Return	Std Dev	Sharpe Ratio	Sortino Ratio	Max Drawdown
Credit Suisse Leveraged Loan USD	5.88	0.66	3.75	15.92	
Credit Suisse Western European Leveraged Loan Index EUR Hedged	6.00	0.48	7.16		
BBgBarc US Agg Bond TR USD	3.09	2.85	-0.04	-0.06	-1.81
BBgBarc US Corp Bond TR USD	2.94	3.75	-0.06	-0.08	-2.85
BBgBarc 1–3 Yr US Treasury TR USD	1.74	1.03	-1.38	-1.51	-0.59
BBgBarc 1–5 Yr Treasury TR USD	1.67	1.60	-0.92	-1.11	-1.08

Source: Morningstar. Monthly returns, time period: 01.06.2004 to 30.06.2006, in BASE currency. Past performance is not a guide to future returns.

2.3 Historical return profile in diverse market phases

The historical performance of US and European SSLs — as represented by the Credit Suisse Leveraged Loan Index and Credit Suisse Western Europe Leveraged Loan index respectively — is very compelling, in our view (figures 9 and 10). Since its launch in January 1992, the Credit Suisse Leveraged Loan Index has recorded a positive total return in each calendar year coupled with consistent income and moderate price fluctuation, except for the crisis year of 2008.

It is interesting to note that the maximum drawdown in 2008 was offset after 12 months by a strong rebound in performance. Even in 2020, post liquidity-related 'sell-off' in March 2020, the index rebounded strongly and ended the year positive. Along similar lines, the Credit Suisse Western Leveraged Loan Index has recorded a positive total return or moderate negative total return in each calendar year, coupled with consistent income and moderate price fluctuations, except for the crisis year of 2008.

After analysing 2008, we can conclude that the sharp drawdown was caused by a massive sell-off of loans, primarily driven by two extraordinary effects: 1) deleveraging pressure experienced by some market participants in the course of the Lehman bankruptcy and 2) a serious overhang stemming from already signed loans on bank balance sheets that had not yet been syndicated.

Despite the sharp correction in 2008 and 2020, two important observations can be made:

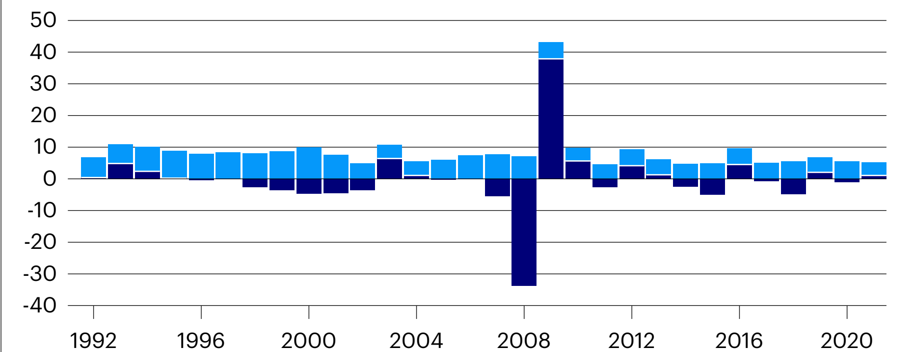
1) Compared to other asset classes that also experienced heavy selling pressure, loans continued to pay highly stable cash flows.

2) As this sharp drawdown was not really driven by fundamentals, the mispricing was corrected during the following year. Investors who maintained a buy-and-hold strategy were rewarded. Between January 2008 and December 2010, SSL investments produced an absolute annual total returns of 4.3%[8] and -3.69%[9] for the US and Europe. Similarly in 2020, SSL investments produced an annual total return of 2.8% and 2.4% for the US and Europe respectively. This result was achieved even though SSL default rates reached a record high during this period.

Despite occasional volatility in money and capital markets, SSLs recorded solid to strong performance through the business cycle over the past decade (table 7).

Figure 9
Breakdown of US SSL historical total return into price and income return (%)
(as measured by the Credit Suisse Leveraged Loan Index USD)

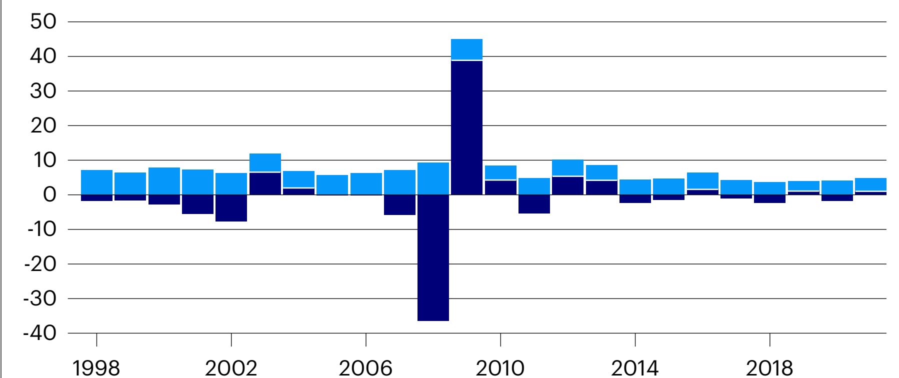
■ Price Return
■ Income Return



Source: Credit Suisse January 1992 to 31 December 2021.

Figure 10
Breakdown of European SSL historical total return into price and income return (%)
(as measured by the Credit Suisse Western European Leveraged Loan Index EUR Hedged)

■ Price Return
■ Income Return



Source: Credit Suisse from January 1998 to 31 December 2021.

Table 7
SSL Performance in diverse market phases

	SSL work in most interest rates scenarios										
Thesis	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Europe Business Cycle Stage	Recession	Recovery	Recovery	Expansion	Expansion	Expansion	Expansion	Recession	Recession	Recovery	Recession
Changes in ECB Deposit Facility Rate	-150bps	-50bps	-25bps	—	+25bps	+125bps	+50bps	-100bps	-155bps	—	—
US Business Cycle Stage	Recession	Recovery	Recovery	Expansion	Expansion	Expansion	Expansion	Recession	Recession/ Recovery	Recovery	Recovery
Changes in Fed fund rate	-475bps	-50bps	-25 bps	+175bps	+200bps	+100bps	-100bps	-400bps to -425bps	—	—	—
CS LL Index Return	2.6%	1.1%	11.0%	5.6%	5.7%	7.3%	1.9%	-28.8%	44.9%	10.0%	1.8%
CS WstEur LL Eur Hdg Return	1.5%	-1.9%	12.2%	6.9%	5.5%	6.0%	1.0%	-30.2%	47.2%	8.5%	-0.6%

	SSL work in most interest rates scenarios									
Thesis	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Europe Business Cycle Stage	Recession	Recession	Recovery	Recovery	Recovery	Recovery	Recovery	Recovery	Recession	Expansion
Changes in ECB Deposit Facility Rate	-25bps	—	-20bps	-10bps	-10bps	0bps	0bps	0bps	0bps	0bps
US Business Cycle Stage	Recovery	Recovery	Recovery	Recovery	Recovery/ Expansion	Recovery/ Expansion	Expansion	Expansion	Recession	Expansion
Changes in Fed fund rate	—	—	—	—	+50bps	+75bps	+100bps	-75bps	-150bps	0bps
CS LL Index Return	9.4%	6.2%	2.1%	-0.4%	9.9%	4.3%	1.1%	8.2%	2.8%	5.4%
CS WstEur LL Eur Hdg Return	10.4%	8.7%	2.0%	3.1%	6.5%	3.3%	0.6%	5.0%	2.4%	4.6%

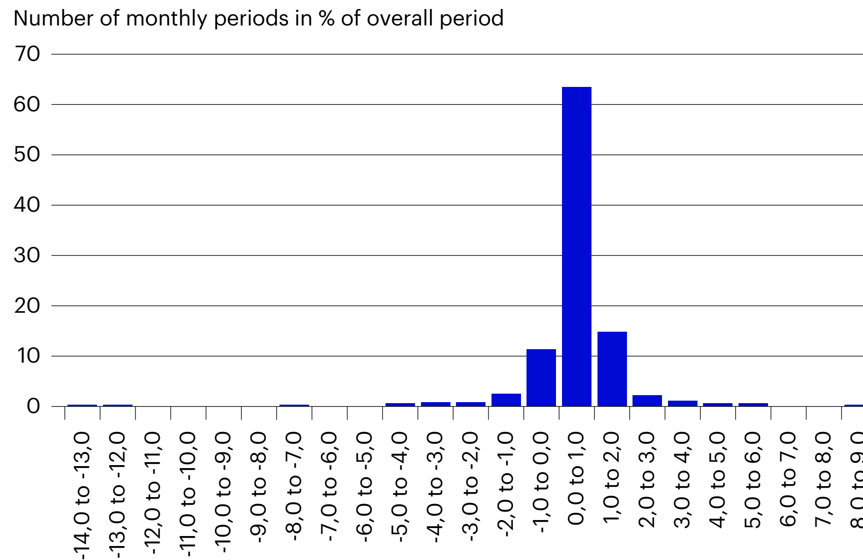
Source: US Federal Reserve, Morningstar as of December 31, 2021, index performance based on Credit Suisse Leveraged Loan Index (in USD) and Credit Suisse Western European Leveraged Loan EUR Hedged Index (in EUR). Past performance is not a guide to future returns. An investment cannot be made in an index.

Remarkably, the index also recorded solid performance during the crisis years of 1993 and 1994 ('bond bubble'), 1998 ("LTCM collapse") and 2000 to 2002 ("tech bubble"). We believe the consistent performance across various market cycles underscores the attractive risk/return profile of the SSL asset class.

Analysing monthly performance figures for the Credit Suisse Leveraged Loan Index substantiates this consistent performance: over the last 29 years, 83% of US SSL monthly returns have been positive (figure 11). Over the same period, the incidence of large negative returns (left tail of the return distribution) has been low at just 0.4% of all cases (figure 11). On average, US loans delivered annual returns above 4% in about 68% of all calendar years. Similarly, monthly figures for the Credit Suisse Western Europe Leveraged Loan Index were highly consistent: over the last 23 years, 80% of monthly returns were positive (figure 12). Over the same period, the incidence of large negative returns has been low at just 0.4% of all cases (figure 12). Additionally, European loans delivered annual returns above 4% in 55% of all calendar years (figure 12).

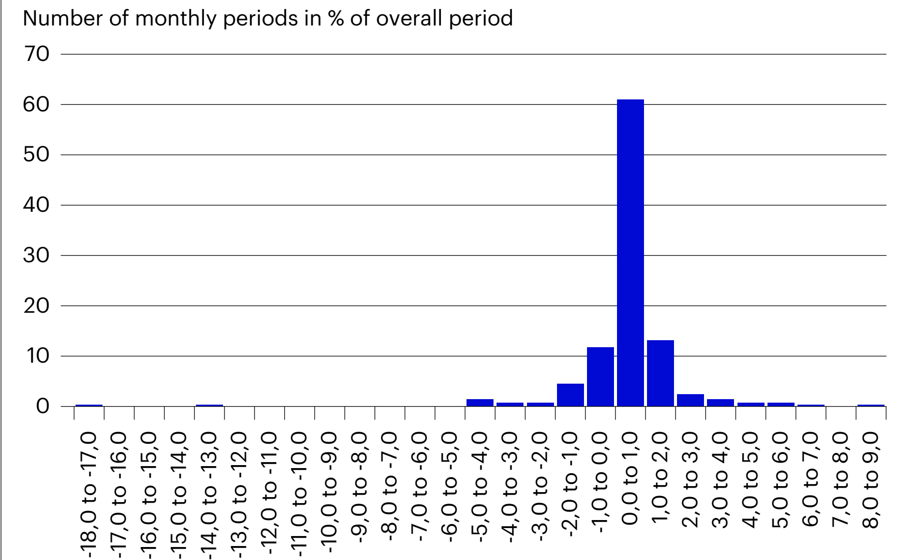
We believe the consistent performance across various market cycles underscores the attractive risk/return profile of the SSL asset class.

Figure 11
Return distribution since inception – Credit Suisse Leveraged Loan Index (USD)



Source: Data from Credit Suisse Leveraged Loan Index (in USD) as at 31 December 2021.

Figure 12
Return distribution since inception — Credit Suisse Western Europe Leveraged Loan Index (EUR Hedged)



Source: Data from Credit Suisse Western Europe Leveraged Loan EUR Hedged Index (in EUR) as at 31 December 2021.

Over the last 29 years

83%

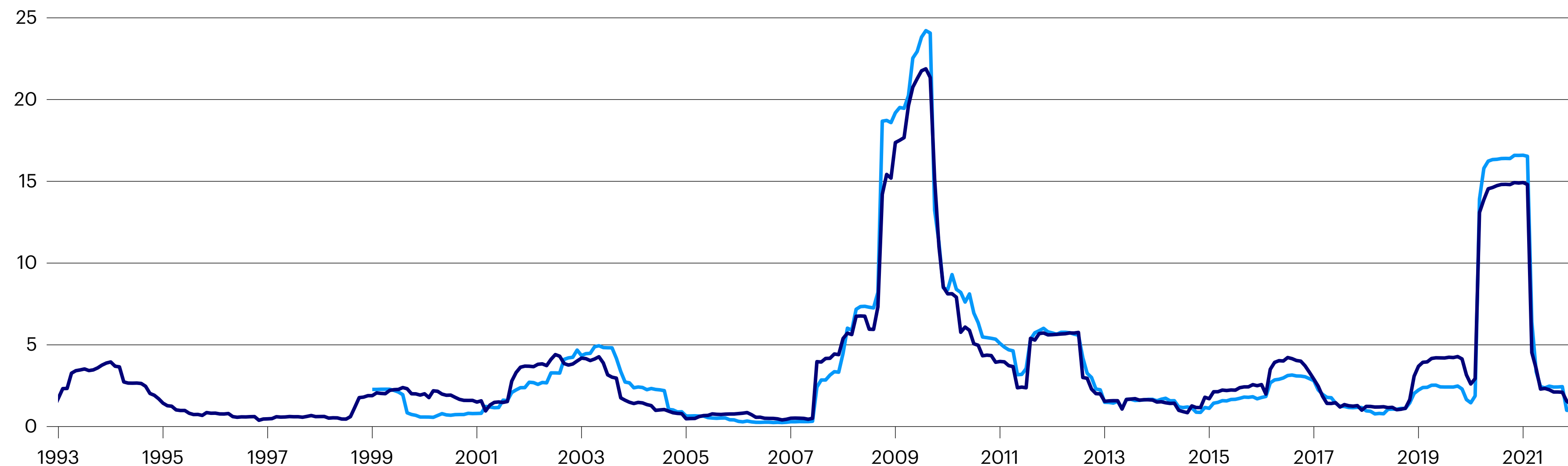
of US SSL monthly returns have been positive

2.4 Historical volatility

The solid return profile of SSLs is also reflected in their volatility, as measured by the Credit Suisse Leveraged Loan Index for US loans and the Credit Suisse Western European Leveraged Loan Index. Since the launch of these loan indices, their annual volatility has averaged between 2% and 3%, except for the subprime crisis period of October 2008 to March 2010. In addition to consistently low "absolute" volatility, except for the subprime crisis period and liquidity crunch experienced during Q2 2020, "relative" volatility compared to selected European and US bond indices (investment grade, non-investment grade) has been low (figure 13).

This phenomenon can be explained by the regular adjustment of SSL floating rates to current market rates and attractive credit spreads that have driven stable returns. Assuming unchanged market liquidity and creditworthiness, changes in market rates typically have a marginal impact on SSL prices. In contrast, fixed-interest bond prices adjust as market rates change, which can lead to increased volatility of fixed-interest bonds and thus price risk.

Figure 13
Rolling standard deviation[1]



[1] Rolling window: 1 year, 1-month shift. Source: Morningstar as of 31 December 2021, in base currency.

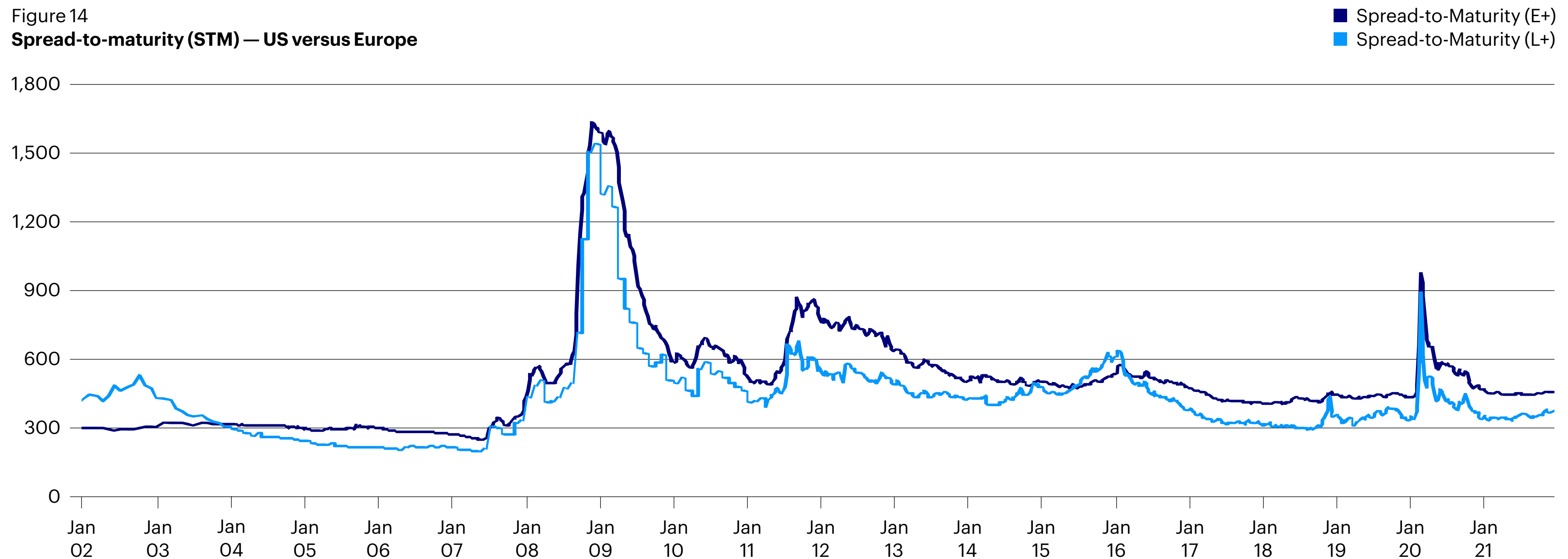
2.5 Compelling return potential

To evaluate the attractiveness of the SSL market, we employ commonly used measures, such as spread to maturity, seeking to identify the fair market value, which we then compare to current and historical values.

The spread to maturity is based on the excess spread of the loans' yield to maturity over the current reference rate. The advantage of this valuation method lies in the fact that it does not consider the current level of money market rates, thus allowing for an exclusive comparison of current and historical excess spreads at any point in time. For example, we would consider a spread of SOFR + 371 basis points as of the end of December 2021 to be attractive compared to the average spread of SOFR + 296 basis points during the pre-financial crisis period (December 2002 to October 2008) (figure 14).

Overall, both US and European loan markets currently look attractive, in our view. A global loan portfolio, combining investments in both regions, could provide diversified sources of yields and the potential to improve the risk-adjusted returns compared to standalone investments in either region.

Figure 14
Spread-to-maturity (STM) — US versus Europe



Source: S&P/LSTA, data as at 31 December 2021.

2.6 Attractive diversification benefits for overall asset allocation

Due to their attractive features (short duration, relatively high current income and credit risk mitigation measures) and solid historic performance across different market cycles, we believe SSLs offer the potential for low correlation to alternative asset classes. These diversification benefits relate to traditional asset classes such as fixed income, equities and commodities. For example, adding SSLs to a European bond portfolio — irrespective of the investment universe and credit rating — may offer attractive diversification benefits.

This is because SSLs have exhibited a low (pre-crisis) to moderate (post crisis) correlation to European corporate bonds. At the same time, correlations to government bonds have been negative (pre-crisis) or close to zero (post crisis), as shown in figure 15. In our view, the integration of SSLs into an investment grade portfolio potentially offers an opportunity to exchange the insufficiently priced duration risk of a high quality bond for the (historically) attractively priced credit risk of an SSL.

Figure 15
Pre- and post financial crisis

Pre-subprime crisis	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1 Credit Suisse Leveraged Loan USD	1.00									
2 Credit Suisse WstEur Lev Loan TR Hdg EUR	0.83	1.00								
3 S&P 500 NR USD	0.49	0.44	1.00							
4 MSCI World NR USD	0.55	0.51	0.96	1.00						
5 MSCI Europe NR EUR	0.49	0.47	0.90	0.91	1.00					
6 BBgBarc Euro Agg Bond TR EUR	-0.14	-0.17	-0.28	-0.27	-0.36	1.00				
7 BBgBarc Euro Agg Corp 500MM TR EUR	0.34	0.25	0.05	0.10	-0.02	0.82	1.00			
8 BBgBarc US Agg Bond TR USD	-0.02	0.01	-0.21	-0.17	-0.31	0.78	0.67	1.00		
9 BBgBarc US Corp IG TR USD	0.38	0.32	0.10	0.17	0.00	0.66	0.85	0.85	1.00	
10 Bloomberg Commodity TR USD	0.23	0.09	0.03	0.19	0.05	0.04	0.24	0.05	0.24	1.00
Post subprime crisis	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1 Credit Suisse Leveraged Loan USD	1.00									
2 Credit Suisse WstEur Lev Loan TR Hdg EUR	0.94	1.00								
3 S&P 500 NR USD	0.64	0.61	1.00							
4 MSCI World NR USD	0.68	0.65	0.97	1.00						
5 MSCI Europe NR EUR	0.68	0.63	0.81	0.86	1.00					
6 BBgBarc Euro Agg Bond TR EUR	0.22	0.26	0.07	0.08	0.55	1.00				
7 BBgBarc Euro Agg Corp 500MM TR EUR	0.69	0.72	0.48	0.51	-0.02	0.75	1.00			
8 BBgBarc US Agg Bond TR USD	0.06	0.11	-0.08	-0.04	0.41	0.63	0.46	1.00		
9 BBgBarc US Corp IG TR USD	0.59	0.61	0.36	0.40	0.42	0.65	0.82	0.79	1.00	
10 Bloomberg Commodity TR USD	0.48	0.44	0.57	0.62	0.05	-0.11	0.24	-0.08	0.25	1.00

Pre subprime crisis: February 2002 to September 2008. Post subprime crisis: April 2009 to December 2021. US loans represented by Credit Suisse Leveraged Loan Index in USD, European Loans represented by Credit Suisse Leveraged Loan Index EUR Hedged in EUR. Source: Morningstar. Monthly returns in base currency.

3.0 Conclusion

In the current market environment, very few fixed income investments offer attractive current income with short duration and historically low volatility. SSLs combine these features while offering potentially attractive diversification benefits due to their historically low correlation to other asset classes. As a result, adding SSLs to a portfolio has the potential to decrease overall portfolio volatility while at the same time providing attractive return contributions.

Due to these factors, we believe SSLs currently offer an attractive investment opportunity. Yet despite the benefits of SSLs, European investors have tended to remain underinvested in the loan asset class. We believe this is primarily due to the non-investment grade nature of SSLs and associated regulatory constraints. Compared to other non-investment grade investments, however, SSLs benefit from certain credit risk mitigation measures that guarantee seniority to creditors in the case of default. This has historically resulted in lower default rates and higher recovery rates compared to unsecured non-investment grade securities.

In the current low interest rate environment, we believe an allocation to floating-rate SSLs can help reduce duration risk, potentially without diluting returns. Consequently, this should help to hedge portfolios against potential future increases in interest rates. Given SSLs' high level of yield, their currently attractive valuations and historically low volatility, we believe SSLs offer an income generating investment with an attractive risk-return profile.

Investment risks
The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

Many senior loans are illiquid, meaning that the investors may not be able to sell them quickly at a fair price and/or that the redemptions may be delayed due to illiquidity of the senior loans. The market for illiquid securities is more volatile than the market for liquid securities. The market for senior loans could be disrupted in the event of an economic downturn or a substantial increase or decrease in interest rates. Senior loans, like most other debt obligations, are subject to the risk of default. The market for senior loans remains less developed in Europe than in the U.S. Accordingly, and despite the development of this market in Europe, the European Senior Loans secondary market is usually not considered as liquid as in the U.S.

4.0 Q&A

with Kevin Petrovcik, Senior Client Portfolio Manager at Invesco Global Bank Loans

We speak to Kevin about Invesco's competitive edge when it comes to managing bank loans and the current state of the bank loan market.

Could you describe Invesco's loan team?
With over USD41 billion (as of January 31, 2022) under management, the senior secured loans team operates as one global team and has been managing bank loans for clients around the world for over 30 years. Invesco's bank loan team has the best of both worlds: we are part of the larger Invesco organization and its global support model, but because we deal with private companies and information, we also operate independently within the Invesco framework. We manage institutional and retail portfolios for clients seeking income and yield within the global credit markets.

What has been the biggest driver of Invesco's bank loan platform growth?
The key drivers of our growth and success have been new business development and product innovation. Invesco has been a product innovator in the loan space for the past 30 years. We were one of the first independent bank loan managers in the late 1980s. We have been managing CLOs in the US since 1999 and in Europe since 2002. We have been managing commingled products with daily liquidity since 2006 and passively managed bank loan products since 2011.

What differentiates Invesco's bank loan platform?

- **Diversity of Invesco's bank loan platform**
  Invesco operates in every segment of the senior secured loans space: institutional, including long-term investors; structured and CLOs, including more opportunistic investors; and retail and ETFs, including more thematic investors. This is important because we believe shifting investor profiles can create potential opportunities for other investor types. Our significant scale across different markets creates trading leverage and the ability to execute trades in the primary and secondary markets.
- **Exclusively dedicated to bank loans**
  Because bank loans are a private asset class, our singular focus on loans gives us access to material non-public information that other investors who work with high yield do not have. We also have one of the largest teams dedicated to the asset class.
- **Managing bank loans for over 30 years**
  Our clients are seeking yield and income, and to minimize volatility in their portfolios. Over the last 30 years, this asset class has proven that it can provide just that. We have one of the longest track records in the industry, managing loans for pension funds, corporations, endowments, financial institutions, insurance companies and high net worth and retail investors around the world.

ESG is an umbrella term encompassing different things for different investors. Could you highlight Invesco's approach to ESG in the context of bank loans?
Because bank loans are private instruments, they represent a small pool of the investable universe rated by outside ESG rating providers. When we sought ESG ratings for bank loan issuers, we found data on only around 10% of our investment universe. To develop an ESG product that would work for our clients, we needed to develop a proprietary framework to rate each issuer from an ESG perspective. The ESG evolution over the past couple of years has increased clients' desire to invest in a socially responsible way. There is no one definition of what to incorporate in an ESG approach, so we worked with existing clients at the forefront of ESG investing to develop a framework that works today and is flexible enough to evolve in the future.

Do you think Invesco has a first mover advantage in bank loan ESG strategies?
As with other bank loan strategies, we believe there is an advantage in being a first mover in the ESG space. ESG is not an exact science, but we believe it is very important to be measurable and actionable. Invesco's bank loan analysts have conducted ESG-specific due diligence reviews with issuers' management teams and are one of the first, and most progressive, bank loan analysts from an ESG perspective. We have independently rated over 800 issuers from an ESG perspective.

Kevin Petrovcik
Senior Client Portfolio Manager

ESG ratings in the bank loan space are fairly new. Could you explain how ESG ratings are derived?
Our analysts measure each loan on a scale of 1-5 for risks related to multiple ESG factors under separate pillars for E, S and G (1 = negligible risk; 2 = low risk; 3 = average risk; 4 = above average risk; 5 = high risk).

To derive an issuer-level ESG rating:

1. We average the various factors under each E/S/G pillar to determine a Pillar Rating.
2. We then weight each pillar by the average E/S/G pillar weights published by MSCI ESG Research by industry sector to come up with an ESG Composite Score.
3. Each ESG rating is reviewed and approved by Invesco's senior investment committee (the same committee that approves all bank loans from a credit perspective).
4. Each ESG rating is included in new deal underwriting and reviewed at least annually.

Could you explain how Invesco constructs ESG portfolios?
The investment objectives of our ESG portfolios involve an investment screen for ESG.

The ESG screening process is designed to be flexible and currently incorporates the following criteria:

1. Exclude companies based on their involvement in:
    - Production of tobacco products
    - Controversial weapons
    - Involvement in gambling
    - Extraction of thermal coal
    - Extraction of fossil fuels from unconventional sources
    - Generation of electricity above a defined percentage from coal-fired plants
    - Non-compliance with UN Global Compact principles
2 Exclude issuers with an E/S/G pillar score above a certain level
3. Exclude issuers with a Composite E/S/G score above a certain level

How has the market responded to Invesco's unique approach to ESG for bank loans?
For the most part, investors appreciate not only our approach, but the active engagement that we employ when discussing ESG with the underlying issuers.

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[1] Moody's Default Study. Jan. 28, 2021.
[2] Definition based on 2010 Dodd-Frank Financial Reform.
[3] CLOs are a form of securitization where receivables from SSL are pooled together and passed on to different owners in various tranches.
[4] Moody's, Standard & Poor's, June 30, 2019 (latest available data).
[5] LGD=default rate*(1-recovery rate).
[6] SOFR Floors provide minimum LIBOR level even if it falls below a certain level, e.g. a loan with a SOFR floor of 1% priced at SOFR plus 4 percent will provide a coupon of 5 percent, even if SOFR dropped to 0.5% percent.
[7] Source: US Federal Reserve.
[8] Data from Credit Suisse Leveraged Loan Index (in USD) as of Dec. 31, 2021.
[9] Data from Credit Suisse Western Europe Leveraged Loan EUR Hedged Index (in EUR) as of December 31, 2021.

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