NORGES BANK
INVESTMENT MANAGEMENT

# 04 2014
# SYNDICATED LOANS

DISCUSSION NOTE

Investments in private debt may provide attractive investment opportunities for a large investor able and willing to commit funds to illiquid instruments. In this note we look closer at one particular type of private debt investments, the market for syndicated loans. Syndicated loans are issued with floating rates, supported by collateral and are normally senior to all other debt from the issuer.

**Date** 09/05/2014
**ISSN** 1893-966X



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# SUMMARY


SYNDICATED LOANS

Firms from all points of the credit spectrum access financing via the loan market. Loans are viewed as a flexible source of capital that can be arranged quickly. However, studies on the US loan market suggest that the credit quality of the firm is the primary determinant describing the choice between bond and loan financing.

The syndication process allows the lending bank to share single name credit exposure with other banks and investors while maintaining the relationship with the borrower. Covenants serve to limit the credit risk associated with an investment in a syndicated loan. Findings in studies on the US market suggest that covenants serve as a device for monitoring the borrower and that covenants may help to mitigate conflict of interest between different participants in the syndicate, in particular conflicts of interest that may arise when a loan is sold in the secondary market.

The ability to trade a loan in a secondary market is regulated in the loan documentation. The most developed secondary market is the market for syndicated loans provided to non-investment grade or unrated corporates, so-called leveraged loans. In the US, the leveraged loan market has become quite transparent and public in nature supported by standardised documentation and public loan ratings. In Europe, the market remains less standardised and therefore more private.

Institutional investors have become more active in the market for syndicated loans over time. As for other type of private investments, a successful strategy requires the ability to keep the exposure through periods when general market liquidity is scarce.

To examine the historical risk- return characteristics of leveraged loans we use two indices provided by Credit Suisse, one for the US market and one for Europe. Despite of the differences in market dynamics the two indices have offered fairly similar historical returns.

# Introduction

A syndicated loan is a type of loan where a group of lenders jointly agree to provide a credit facility to a borrower governed by a set of common documents[1]. A loan syndicate normally compromises a lead arranger that originates the loan and participant lenders that fund parts of the loan. The participant lenders delegate to a certain degree screening and monitoring of the borrower to the lead arranger. Although the loan is governed by a single loan contract, every member of the syndicate has a separate claim on the debtor.

The evolution of syndicated lending may be divided into three phases following Gadanecz (2004). Credit syndications first developed in the 1970s as a sovereign business allowing smaller financial institutions to gain exposure to emerging markets without having to establish a local presence and in 1982 most developing countries' debt consisted of syndicated loans. However, when Mexico suspended interest payments in 1982, soon followed by other developing countries, syndicated lending came to an abrupt halt. The second phase in the evolution of the syndicated loan market was characterised by lower activity and smaller volumes. The start of the third phase dates back to the early 90s when the market for syndicated loans experienced a revival driven by developments such as market-based pricing, wider use of covenants, increased transparency through the introduction of public loan ratings and the emergence of a market for secondary trading. What started out as a market mainly focussed on loans to sovereigns had by the late 90s emerged into a market entirely dominated by loans to the corporate sector.

This note is made up of three main sections. First we describe the structure of the market, introduce key concepts and examine the general features of a syndicated loan. Second we discuss the motivation for syndicated loans from the perspective of the originating banks, borrowers and end investors. We also examine the role of covenants and collateral and whether the presence of a secondary market for loans alters the dynamics. This discussion rests on findings in academic studies on the US market. In the last section we look closer into one particular segment of the loan market, the market for so called leveraged loans. Leveraged loans can broadly be defined as loans provided to sub-investment grade or unrated corporates. This is currently the most mature segment in terms of participation from institutional investors and a market segment where high-quality return data is available.

*1 Loan Syndications and Trading Association (LSTA) and the Loan Market Association (LMA) in Europe have developed templates for different types of syndicated loan agreements. These templates are widely used and have facilitated growing participation from institutional investors.*

# Market structure and key features

Loans play an important role in financing economic growth. Firms from all points of the credit spectrum (privately held, unrated, high yield, and investment grade) tap into the loan market. Loans are sometimes syndicated. According to data from Bloomberg[2], global syndicate loans volume was about USD 900 bn. in Q2 2013 and roughly USD 800 bn. in Q1 2013. The Bloomberg data include both syndication of short-term credit facilities and longer-dated loans. Further, the data covers a wide range of different types of loans such as commercial real estate and project finance loans as well as loans provided to investment grade and high-yield corporates.

Globally, there are three types of syndications; an underwritten deal, "best-efforts" syndication, and a "club deal." In an underwritten deal the arrangers of the syndicate guarantee the entire commitment and then syndicate the loan. If they fail to attract sufficient interest to fully subscribe the loan the arrangers are obliged to absorb the difference. In the case of a "best-effort" deal the arrangers commit to underwrite less than the entire amount of the loan and leave the faith of the loan to the market. If the syndication process following fails to attract sufficient interest this may impact the terms of the deal. A "club deal is normally a smaller loan pre-marketed to a group of relationship lenders.

The banks may choose to make all type of loans subject to syndication. The most commons one are a revolving credit facility or a term loan[3]. A revolving credit facility, or revolver for short, allows the borrower to draw down, repay, and re-borrow. The facility normally runs for a period of 364 days and acts much like a corporate credit card, expect that borrowers are charged an annual commitment fee on unused amounts.  A term loan is an instalment loan, which the borrower may draw on during a short commitment period and then repay on either a scheduled series of repayment (amortizing term) or a one-time lump sum payment at maturity (bullet loan). Loans targeted for non-bank institutional investors are normally found within the latter category. Revolving credit facilities are most often provided by the banking sector.

Syndicated loans issued with a floating rate and normally quoted as a spread versus a base rate such as LIBOR or LIBOR-equivalent money market rates. Loans provided to institutions with lower credit ratings are normally senior to all other debt issued by the company and secured by collateral. Loans to higher quality institutions are often at the same level of seniority as bonds. The loans have historically normally been issued with maintenance cove-

*2 Bloomberg: Global Syndicated Loans Market Review Q2 2013, http://www.bloomberg.com/professional/files/2012/08/Global-Syndicated-Loans-2012.pdf*

*3 Revolving- and term facility are the two main types of facilities. In addition some syndicated loans are provided as LOCs or acquisition/equipment lines.*

nants[4]. Example of covenants commonly seen in loan agreements are maximum debt to EBITA, minimum (tangible) net worth, minimum fixed charge coverage, minimum interest coverage, minimum ratio of current assets/current liabilities, provisions on the use of proceeds from asset sales and on the disbursement of dividends and limits on type and amount of acquisitions. In general, the higher the risks perceived with the loan engagement, the stricter the covenants. With regards to the number and type of covenants in a typical loan agreement, the market practise in Europe differs from that observed in the US. We discuss the differences between the European and US market in more detail later.

A syndicated loan is perceived as a flexible financing tool as it, in contrast to a public bond, does not require public filings. Private debt markets may also be more efficient if the need for liquidation or renegotiation arise in a situation with financial distress. Such processes tend to become more challenging with a high number of bondholders compared to a limited set of members of a syndicate.

Loan sales are normally structured as a novation, assignment or participation. The two first methods result in the lender disposing of its loan commitment and the new lender assuming a direct contractual relationship with the borrower. In a participation assignment the initial lender retains the contractual relationship. The two first methods typically require the consent of the borrower and agent. The terms governing the transfer of a loan or the ability to trade the loan will be defined in the primary loan agreement. European borrowers will often use "white lists" in the primary loan agreement. A white list is a list or register of those that are being provided a particular privilege, in this context the privilege to enter into the loan agreement on behalf of the initial lender. In the US it is more common to use "disqualified lender lists" to manage the syndicate as their loan trades in the secondary market.

Investors in loans will, unless they chose not to, receive private information about the borrower. Investors' practical approaches to challenges arising from being exposed to private information differ. Some investors in loans choose to rely only on public information memos[5] (IMs) and public material and are able to trade freely in public securities from the same issuer. Other investors operate on the private side of the fence where they receive private information which can be very valuable in credit analysis such as management projections, amendments and quarterly or monthly financial disclosures.

*4 Covenants are restrictions that dictate how the borrowers can operate and carry themselves financially. Covenants allow the lender to intervene before severe losses are realised. Maintenance covenants require the issuer to pass the agreed hurdle every quarter or suffer a technical default on the loan agreement. The alternative is so-called incurrence covenants which are only tested for compliance when the company undertakes one or more of several designated actions such as taking on more debt. Covenant-lite loans are loans issued with less restrictive covenants (covenant-lite). These types of loans are normally priced with a significant margin to other loans. Covenant-lite started to appear in buyouts in 2004, and became a very common feature of LBO capital structures in the following years. After a period with close to none issuance of covenant-lite loans, such loans have emerged in particular in the US. As of late 2013 close to 40 percent of loans included in CS Leveraged Loan index are covenant-lite loans. This is significantly higher than the 20 percent peak register at the peak in 2007.*

*5 In most primary syndications arrangers will prepare a public version of an information memo (IM), stripped of private information like projections. These IMs are distributed to accounts on the public side of the wall.*

# Academic studies on lending and syndication in the US

The section is based on findings from academics studies mostly using data on US syndicated loans and therefore reflecting the underlying dynamics in this particular market.

**Banks: Improve diversification and manage credit risk**

Banks' motivation to syndicate a loan instead of keeping it on their own books is mainly to reduce excessive single name exposure while maintaining the relationship with the borrower. The syndication process allows the bank to tailor its credit risk, adapt to requirements in regulations, reduce the overall cost of loan origination and earn fees.

Dennis and Mullineaux (2000) were the first to study the factors affecting the decision to syndicate a loan. In particular, they found that the more transparent the borrower is, as evidenced by the existence of a credit rating or by being listed on a stock exchange, the more likely the loan is to be syndicated and sold in greater proportions rather than being kept at the banks' books.

A syndicate is characterised by asymmetric information between the lead arranger and the participant lenders. Sufi (2007) examines how information asymmetry between lenders and borrowers influences syndicate structure. Consistent with moral hazard in monitoring, he finds that the lead bank retains a larger share of the loan and forms a more concentrated syndicate when the borrower requires more intense monitoring and due diligence. When information asymmetry between the borrower and lenders is potentially severe, participant lenders are closer to the borrower, both geographically and in terms of previous lending relationships. He further finds that lead bank and borrower reputation mitigates, but does not eliminate information asymmetry problems.

Bushman and Wittenberg-Moerman (2012), investigate the role played by the reputation of the lead arrangers of syndicated loans in mitigating information asymmetries between borrowers and lenders. Consistent with prior research (e.g. Sufi 2007, Ross 2010), they measure bank reputation based on lead banks' market share in the syndicated loan market. They document that higher lead arranger reputation is associated with higher company earnings and cash flow persistence, and with corporate earnings that more strongly predict future credit quality of the borrower. Gopalan, et al. (2011) examine to what extent poor performance damages the reputation of the lead arranger and find that it does.

Identical contractual conditions do, however, not mean that all members of the syndicate earn the same return. Hallak and Schure (2011) examine such return differences and find that large lenders typically receive a larger percentage of the upfront fees than smaller lenders and interpreted this is an indication that the fee structure incorporates anticipated costs associated

with borrower illiquidity, notably the costs of coordinating the workout and providing liquidity insurance.

### Investors: Floating rate exposure with claims on underlying assets

Jiang et al. (2010) document the rising interest from institutional investors in syndicated loans using a data set for the period 1987 to 2006. They find that non-bank institutions tend to participate in loans issued by risky borrowers for risky purposes[6]. They argue that such preferences are in stark contrast to institutional investors' general preference for "prudent" investments on the equity side.

Lim et al. (2014) find that roughly 30 percent of the loan facilities in their sample had at least one non-bank institutional investor and find that these loans have a significantly higher spread than an otherwise similar bank-only loan facility. They hypothesize that non-bank institutional lenders invest in loan facilities that would not otherwise be filled by banks and that borrowers are willing to pay spread premiums when loan facilities are particularly important to the firm. Consistent with this they find that firms spend the capital raised by loan facilities priced at a premium faster than other loan facilities, especially when the premium is associated with a non-bank institutional investor.

Gatev and Strahan (2009) decompose syndicated loan risk into credit, market and liquidity risk and investigate how these different types of risks shape the syndicate structure. They find that commercial banks dominate relative to non-banks in loan syndicates that expose the lender to liquidity risk in the form of credit lines. Bank dominance is much less pronounced in term lending that is fully funded at origin. They argue that commercial banks have a competitive advantage in hedging this liquidity risk due to synergies linking deposits to lending. Axelson et al. (2012) examine the composition of debt in a sample of global LBO-deals as a function of market conditions. They find that during very liquid credit markets, when leverage is high, banks hold a lower fraction of traditionally syndicated buyout debt.

Ivashina and Sun (2011a) ask whether the inflow in institutional funding in the syndicated loan market experienced between 2001 and 2007 led to mispricing of credit. To understand this relation they define the institutional demand pressure as the number of days a loan remains in syndication. They find that a shorter syndication period is associated with a lower final interest rate and that increasing demand pressure from institutional investors causes the interest rate on the institutional tranches to fall below the interest rate on bank tranches[7].

A number of the institutional investors in syndicated loans also hold significant equity positions in the same firm, so called "dual holding". Jiang et al. (2010) study what happens when shareholders also are creditors and find that syndicated loans with the presence of dual holders are associated with

*6 Risky borrowers in this study are defined as companies with high book-to-market, high leverage, poor credit ratings, poor recent stock performance, and/or high return volatility. Examples of risky purposes are LBOs and take overs.*

*7 This effect is significantly larger for loan tranches bought by structured investment vehicles.*

lower loan yield spreads (18 to 32 bps). They argue that the presence of dual holder mitigate the conflicts between shareholders and creditors, and thus lower the yield spread.

### Borrowers: A flexible source of funding

The trade-off theory, which is one of the most commonly used explanations for leverage in the literature on company capital structure, suggests that the capital structure of a firm should be tailored to the characteristics of that firm's assets (see Myers (2001) for a detailed discussion).The implicit assumption has been that a firm's leverage is completely a function of a firm's demand for debt. Faulkender and Petersen (2006) show that access to capital is also an important determinant of observed capital structure and show that firms with access to the public debt market have substantially higher financial leverage than firms lacking such access. Maskara and Mullineaux (2011) complement this research and show that syndicated loans provide an alternative source of funding for firms that would otherwise not have been able to raise funds through public debt issues or bilateral bank loans such as small firms with already high leverage. The high level of leverage excludes these issuers from the bilateral loan market while the fixed costs associated with a bond issuance make this route less appealing.

Denis and Mihov (2003) examine the borrowers' choice among bank debt, non-bank private debt, and public debt. They find that the primary determinant of the debt source is the credit quality of the issuer. Firms with the highest credit quality borrow from public markets while firms with medium credit quality borrow from banks and firms with the lowest credit quality borrow from non-bank lenders. The debt choice is also related to a firm's age. Johnson (1997) finds that a firm's age is positively related to the probability of issuing public instead of private debt. Firms in the early stage of their life cycle create credit reputation through bank loans and use this reputation later to access the public debt market (Diamond 1991).

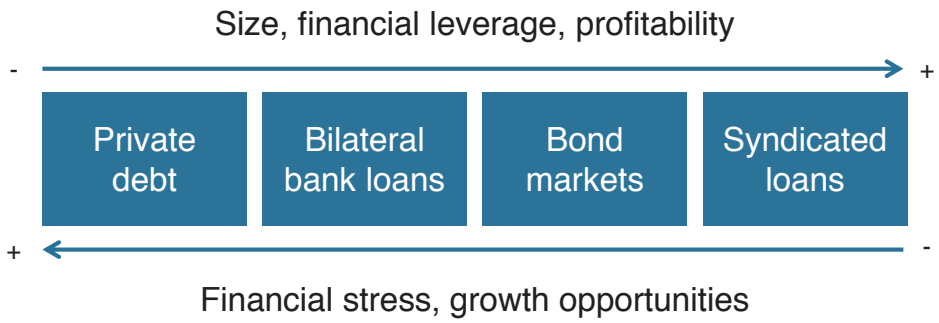
As in Denis and Mihov (2003), Arena (2011) identifies a pecking order on debt choices depending on credit quality although with some important differences regarding the use of traditional private placements. When examining the incremental debt issue decision Arena (2011) finds that high credit quality firms prefer public bonds while good credit quality firms that are not large enough to overcome the barrier created by flotation costs prefer to raise capital through traditional private debt offerings rather than bank loans .These bank loans are extensively used by a large group of moderate quality issuers while firms with the poorest credit quality preferentially issue 144A debt[8].

Altunbas et al. (2010) investigate how the financial characteristics of European firms influence their marginal financing choice between the market for syndicated loans and corporate bonds respectively. They find that syndicated loans are the preferred instrument on the extreme end where firms are very

*8 144a is an SEC rule that modifies the two year lockup requirement on private placement securities. 144a allows debt private placements to trade to and from "QIGs" or qualified institutional investors with above $100 million of investments. Banks must pass a $25 million minimum net worth test to qualify as QIG for 144a trades. 144a securities are often called "restricted securities." 144a has served to increase the liquidity for private placements.*

large, have high credibility and profitability, but fewer growth opportunities. Their findings are summarised in the figure below, taken from their paper.

*Figure 1: Firm financial state and debt structure*




### The role of covenants and collateral – limit credit risk

Bharat et al. (2007) argue that the lead arranger has more information than other syndicate participants and may prefer to renegotiate a loan instead of enforcing the covenant because it finds other benefits in building/maintaining its lending relationship with the borrower.

Rajan and Winton (1995) investigate how loans made by financial intermediaries on behalf of other investors can be structured to best enhance the institutions' role as delegated monitors. They find that covenants make a loan's effective maturity contingent on monitoring by the lender and can be motivated as a contractual device that increase a lender's incentive to monitor. Berger and Udell (1998) find that the close monitoring of the covenants associated with bank debt and traditional private-debt reduce the cost of debt for small firms that are early in their life cycle and have not had the opportunity to build reputation about their credit quality yet.

Dass et al. (2011) argue that in addition to being a device for monitoring the borrower, covenants can help mitigate conflicts of interest between the lead-arranger and participants in the syndicate. They develop a simple model and find empirical support[9] for its predictions that covenants are less likely to be present in non-syndicated loans than in syndicated loans and that covenants are less likely to be present when the lead's allocation is greater. In general, it appears that the more covenants are demanded by the other participants in the syndicate, the lower is the fraction of the loan the leads need to retain.

Failure to meet a covenant generally results in an increased spread in order to better compensate the lender for the current level of risk. Chava and Roberts (2008) show that financial covenants violations also have an effect of business activity. They find that capital investments decline sharply following a financial covenant violation and argue that the transfer of control rights associated with a violation of a covenant serves as a mechanism through which financing frictions impact investments.

9 *Based on data from the Dealscan database.*

### Trading a loan in the secondary market

In contrast with typical loan syndication which is dominated by loans to investment grade companies, the secondary loan sales market is dominated by more risky loans or so-called leveraged loans. The majority of loans traded in the US secondary market are purchased by non-bank, institutional investors (Yago and McCharthy, 2004 and Druker and Puri, 2009).

Altman et al. (2010) examine whether the relative monitoring advantage of banks[10] persist in the presence of an active secondary market for bank loans and conclude that it does. Nevertheless, the secondary market represents some challenges to banks and their borrowers. First, a loan sale can dilute the monitoring incentives of banks since they can more easily offload to third parties. Second, a loan sale represents an opportunity for lenders to sell loans they know, based on private information, will perform badly.

Bushman and Wittenberg-Moerman (2009) examine whether the secondary market trading of syndicated loans compromise the quality of bank lending practises. For loans originated by reputable lead arrangers, they find evidence that borrowers of traded loans actually perform better than borrowers of non-traded loans do. Loan sales therefore appear to have a positive effect on reputable arrangers' incentive to monitor and screen borrowers. For loans originated by lower reputation lead arrangers, they find some evidence that the performance of borrowers of traded loans is worse than for non-traded loans while restructuring purpose loans[11] perform worse relative to other loans, regardless of whether or not they are traded.

A loan sale might exacerbate information asymmetries between lenders and borrowers as the new lenders are likely to have less borrower-specific information and ability to monitor the borrower. Druker and Puri (2009) examines the secondary market for loans sales and find that sold loans contain additional covenants and more restrictive net worth covenants than loans that are not sold in the secondary market. Since covenants are written into the contract at origination, lenders have to anticipate future selling at the stage of entering into the contract. This indicates that some of the concerns raised above are mitigated through the design of initial loan contract. Further, their analysis suggest that sold loans are nearly two times larger and entail higher risks as measured by the leverage ratio than loans that are not sold.

A loan that is trading in the secondary market is more liquid than loans remaining in the books of the members in the initial syndicate. Gupta et al. (2008) find that this liquidity is reflected in the pricing of US term loans at origination. Banks charge lower spreads on loans that are expected to trade in the secondary market, in doing so banks appears to pass over some of their cost savings to the borrower. When comparing liquidity between the two main categories of loans, they find that leveraged loans are more liquid than investment grade loans mirroring the more active secondary market for leveraged loans discussed in previous sections.

*10 View for example Diamond 1984, Ramakrishnan and Thakor 1984 and Fama 1985*

*11 Restructuring purpose loans = loans with primary purpose of takeover, LBO, MBO or recapitalisation*

A number of academic studies document a positive and statistically significant return associated to press articles on loan agreements. This evidence suggests that market participants view press reported bank loans as material events (see, for example, Mikkelson and Partch (1986), Lummer and Mac Connell (1989), Best and Zhang (1993), James and Smith (2000)). A number of studies have examined the relationship between bank loans and stock market prices and found that loan announcements tend to have a positive impact on stock prices. Gande and Saunders (2012) investigate the relationship between secondary market trading and equity returns and finds that loan trading is valuable to equity holders. Their findings are at odds with findings in earlier studies, such as Dahiya et al. (2003). Gande and Saunders (2012) argue that this discrepancy mirrors a "sea change" in the way equity holders value the loan market. The latter is no longer perceived as a market where the only transactions that take place are the ones where informed lenders off-loaded their troubled borrowers' loans.

Investors in loans routinely receive private information about the borrower. Ivashina and Sun (2011b) ask whether institutional investors use private loan information to trade in public securities. They find that institutional participants in loan renegotiations subsequently trade in the stock of the same company and outperform other managers by approximately 8.8 percent in annualised terms in the month following loan re-negotiations.

# The market for leveraged loans

Leveraged loans can broadly be defined as loans provided to sub-investment grade or unrated corporates. This is currently the most mature segment in terms of participation from institutional investors[12].

### Market size and structure

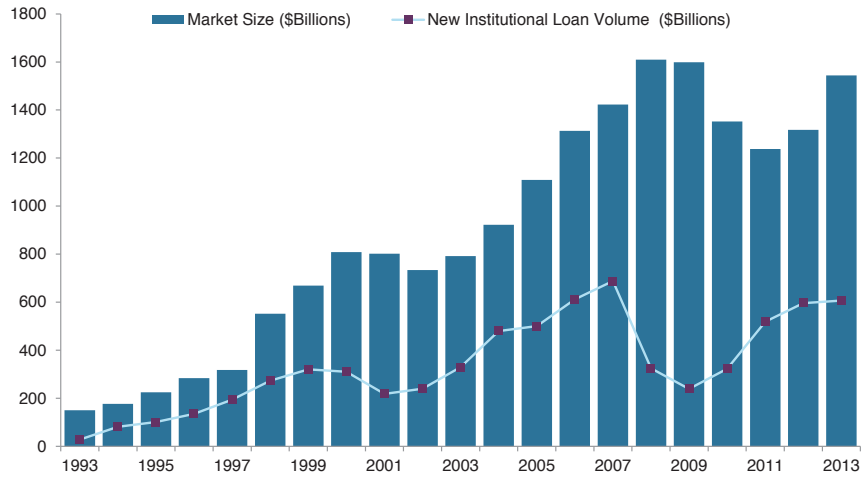
As for other non-exchange traded instruments, high-quality comprehensive datasets are hard to come by. The leveraged loan market in US amounted to 1.544 bn as of end December 2013[13]. This figure includes USD-denominated non-investment grade bank debt, covering both non-institutional (revolvers and pro-rata) tranches and institutional facilities. Of the leveraged loan market, fully drawn institutional term loans made up roughly half of the market. The corresponding figures for the European leveraged loan market as of end December 2013 was EUR 394 bn. and roughly one third of the loan market[14].

*12 Note that the term "leveraged" refers to the credit quality of the issuer and not a potential use of leveraging strategies.*

*13 Source: Credit Suisse*

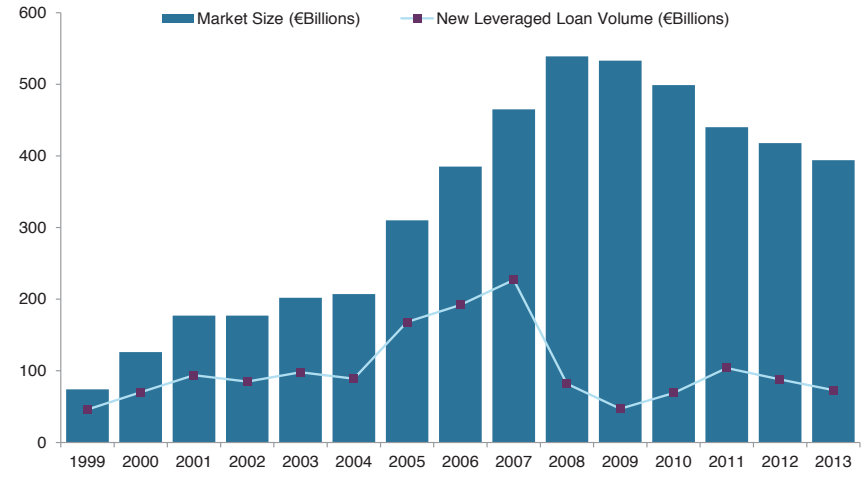
*14 Source: Credit Suisse*

*Chart 1: Market size and new institutional loan volume for the US leveraged loan market*




*Source: Credit Suisse*

*Chart 2: Market size and new institutional loan volume for the Western European leveraged loan market*




*Source: Credit Suisse*

## Market Dynamics

The US and European market for leveraged loans differ a long a number of dimensions. The most important ones are the pricing standard, the use of public ratings, the liquidity, the availability of information and the requirements for documentation. In general, the US leveraged loan market is more mature, public and transparent than that in Europe which is more private and negotiated in nature.

In Europe, banks have traditionally been the key funding source for corporates, while US corporates to a greater extent have tapped into other sources of funding[15]. It is fair to assume that the relative importance of banks shapes the way the leveraged loan market works in respective regions[16]. Banks generally play a more prominent role in the European market than in the

*15 85 percent of European corporate debt was on banks' balance sheets compared to 53 percent for the US. The estimate for the US corporate sector also includes lending to farms and small unincorporated firms. If you exclude these segments the share of corporate debt on banks' balance sheets falls to 30 percent. (Samuels, Harrison and Rajkotia: There Must Be Some Way Out of Here – Can European bank funding be fixed?, Barclays Equity Research , 19 March 2012).*

*16 View section 5 for a discussion on the dynamics in the leveraged loan markets in US and Europe.*

US where institutional investors are more active. In addition, the fact that the European corporates tend to have a more complex corporate structure than US corporates due to the multi-jurisdictional nature of Europe and the dominant role played by private equity firms (see below) may also partly explain the observed differences in market dynamics. Table 1 is based on the summary one European loan manager has made on key differences between these two markets.

*Table 1: Key differences US and European market for leveraged loans*

| Characteristics | Europe | US |
|---|---|---|
| Type of Borrower | The market has traditionally been dominated by corporates owned by Private Equity funds | More evenly balanced between levered corporates and corporates owned by Private Equity funds. |
| Type of Lender | Commercial banks and some institutions. | Institutions, credit funds, prime/retails funds and some banks |
| Lender dynamics | Consolidated, barriers to entry, large new issue allocations | More of a capital market, fragmented, small allocations |
| Type of syndication | Underwritten deals. | Usually "best –effort" deals. |
| Pricing | Largely standard, i.e. fixed spread vs. LIBOR. | Market driven. Most loans are today issued with a LIBOR floor. |
| Information Disclosure | Any information transmitted between issuer and lender is confidential. Investors have tendency to stay on the private side of the wall. | Loans and bonds are traded on a comparable information basis and may be managed by the same desks. |
| Documentation | Bespoke, strong protection of lender through high voting thresholds, strong burden on lenders to do due diligence, covenant-lite loans not common | Standardised, weaker protection of lenders than in Europe, covenant-lite loans common |
| Defaults | Most bankruptcy regimes in Europe and the dominant role of relationship banking favour private restructuring of distressed transactions rather than public default. Generally a secured lender driven bankruptcy process, but this requires capacity to engage in time consuming restructuring processes. | Public defaults, court-driven and more transparent, less ability for secured lenders to influence the process |
| Public ratings | Growing, but a still a minority of the market | Universal |
| Secondary market liquidity | Variable | Better than in Europe, primarily because of the type of lenders active in the market |

*Source: M&G Leveraged Finance*

## Historical performance – leverage loans

To examine the historical risk-return characteristics of leveraged loans in the US and Europe we use two indices provided by Credit Suisse, the Credit Suisse Leverage Loan Index (CS LL) for US and Credit Suisse Western European Leveraged Loan Index (CS WELL).

The CS LL is an index designed to mirror the investable universe of the USD denominated leveraged loan market. The index inception is January 1992. The index frequency is monthly. A new loan is added to the index on its effective date [17] if:

- It is rated rated "5B[18]" or lower
- It is a fully- funded term loan
- The tenor is at least one year
- The issuer is domiciled in developed countries

So-called fallen angels[19] are added to the index subject to the new loan criteria above. Loans are removed from the index when they are upgraded to investment grade, or when they exit the market (for example, at maturity, refinancing or bankruptcy workout). Note that issuers remain in the index following default. The total return of the index is the sum of three components: principal, interest, and reinvestment return. The cumulative return assumes that coupon payments are reinvested into the index at the beginning of each period.

The CS WELL is designed to mirror the investable universe of the Western European leveraged loan market. The index includes loans denominated in USD and Western European currencies and follows the same principles for inclusion and exclusions as the US version of the index albeit with a smaller number of issues. In the below analysis we examine the historical risk return characteristics of the two indices over the period from January 1998 through November 2013. The CS WELL is hedged to euro. Despite of the differences in market dynamics the two indices have offered similar historical returns as shown in Table 2.

*Table 2: Historical risk and return, (monthly data, Jan 1998 – Nov 2013, annualised returns)*

| | United States | Western Europe |
|---|---|---|
| Average return | 5.2 % | 4.9 % |
| Volatility | 6.2 % | 6.8 % |
| Min (monthly return) | -13.0 % | -17.7 % |
| Max (monthly return) | 8.0 % | 8.5 % |

*Source: Credit Suisse*

The three key risks an investor is exposed to are credit risk, call risk and market volatility. Although a loan normally enjoys seniority over other credi-

*17 The effective date is the date the loan is closed.*

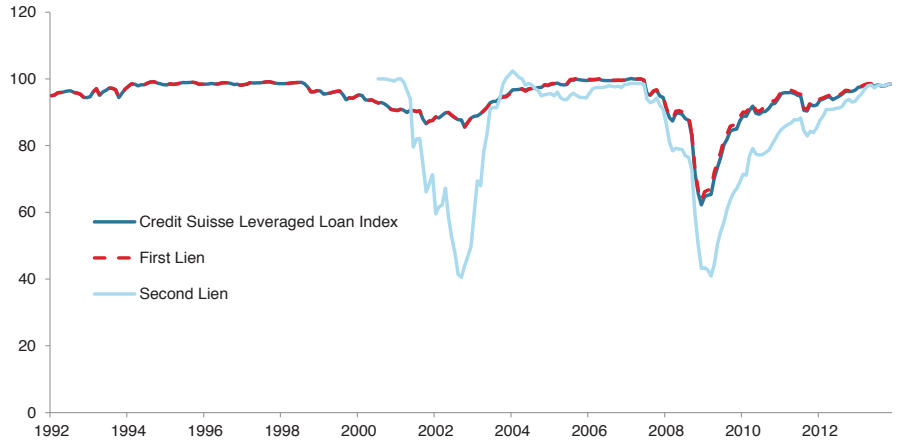
*18 The term "5B" is in terms of credit rating used to described loans issued with a Baa1/BB+ or Ba1/BBB+ rating*

*19 A fallen angel is a term used to describe an issuer or borrower that once investment grade but that since have been downgraded to sub-investment grade*

tors, the loan is nevertheless provided to a non-investment grade corporate. Each loan requires on-going credit research and monitoring. Due to their position at the top of the capital structure loans have historically had lower default rates and higher recovery rates than high yield bonds. JP Morgan loan data from the US from 1990 to June 2013 stipulate long-term default rate for senior loans to 3.5 percent with a recovery rate of 68 percent resulting in an average default loss rate of 1.12. The corresponding number for high yield is 4 and 40.2 percent and 2.32

During the financial crisis the US leveraged loan market experienced a sharp decline in market values and a spike in volatility. The sell-off was driven by technical factors, caused by excessive new issuances and forced selling by leveraged vehicles with market-value based triggers. Prices fell into the low 60s for vanilla first lien loans, mid-50s for first-lien covenant-lite and as far as the low 40s for second lien loans as shown in Chart 3. Second lien facilities are loans where the claim on collateral is junior to that of other first lien loans.

*Chart 3: Average price by seniority, CS LLI*




*Source: Credit Suisse*

Issuers' ability to redeem the loan at par (callability) is a standard feature of loan contracts. A loan investment therefore exposes the investor to call risk. Supply-demand imbalances may expose an investor to volatility risk. Investments in loans require the ability to keep the exposure through such periods. Before the financial crisis, performing loans generally traded close to or even slightly above par. The potential for appreciation was capped by the callability while the seniority in the capital structure capped the potential for depreciation.

## Leveraged loans in a portfolio context

Loans are typically grouped together with traditional fixed income investments. While it is true that the principal amount that an issuer of a contract has to repay at maturity is fixed, there are distinct differences between loans and other type of fixed income instruments such as bonds, most notably the floating rate and the seniority in the capital structure. Since the loan rate normally is reset on a quarterly basis, interest rate sensitivity expressed as

loan duration is typically around 0.25 years compared to around 5 years in the broader fixed income indices.

In Table 3 we compare risk and return characteristics of the Credit Suisse Leverage Loan index to a set of US fixed income indices; high-yield, treasuries, corporate (investment grade).

*Table 3: Historical risk return (monthly data, annualised returns)*

*Panel A: Full sample (01/01/1999 - 29/11/2013)*

| | CS LLI | High Yield | Treasuries | Corporate |
|---|---|---|---|---|
| Mean return | 5.2 % | 8.0 % | 5.1 % | 6.1 % |
| Standard deviation | 6.3 % | 10.0 % | 4.6 % | 5.7 % |
| Return / st. dev. | 0.8 | 0.8 | 1.1 | 1.1 |

*Panel B: Sub-sample (01/01/1999 - 31/10/2005)*

| | CS LLI | High Yield | Treasuries | Corporate |
|---|---|---|---|---|
| Mean return | 5.1 % | 6.0 % | 5.3 % | 6.1 % |
| Standard deviation | 2.4 % | 8.2 % | 5.0 % | 4.9 % |
| Return / st. dev. | 2.1 | 0.7 | 1.1 | 1.2 |

*Panel C: Sub-sample (31/10/2005 - 29/11/2013)*

| | CS LLI | High Yield | Treasuries | Corporate |
|---|---|---|---|---|
| Mean return | 5.3 % | 9.8 % | 4.9 % | 6.2 % |
| Standard deviation | 8.3 % | 11.4 % | 4.4 % | 6.4 % |
| Return / st. dev. | 0.6 | 0.9 | 1.1 | 1.0 |

*Source: Credit Suisse, Barclays NBIM calculations*

The perhaps most striking result is the differences in risk return characteristics between the two sub-samples. In the first sub-sample (Panel B) leveraged loans was the most attractive fixed income investment when measured in terms of return per unit of risk, while it was the least attractive one if we limit our analysis to the second half of the sample (Panel C). The latter has to be seen in relation to the development in the leveraged loan market at the height of the financial crisis in 2008, when loans traded down nearly as much as high yield bonds, but with about half of the coupon of high yields.

In Table 4 we examine the correlations between the same five indices. We find that the returns on the CS LLI has been positively correlated to credit spread sensitive instruments such as high-yield and corporate bonds, while the correlations to interest rate sensitive products such as Treasuries have been negative.

*Table 4: Correlation between different fixed income indices*

*Panel A: Full sample (01/01/1999 - 29/11/2013)*

| | CS LLI | High Yield | Treasuries | Corporate |
|---|---|---|---|---|
| CS LLI | 100 % | | | |
| High Yield | 78 % | 100 % | | |
| Treasuries | -37 % | -20 % | 100 % | |
| Corporate | 32 % | 55 % | 57 % | 100 % |

*Panel B: Sub-sample (01/01/1999 - 31/10/2005)*

| | CS LLI | High Yield | Treasuries | Corporate |
|---|---|---|---|---|
| CS LLI | 100 % | | | |
| High Yield | 61 % | 100 % | | |
| Treasuries | -22 % | -5 % | 100 % | |
| Corporate | 7 % | 36 % | 86 % | 100 % |

*Panel C: Sub-sample (31/10/2005 - 29/11/2013)*

| | CS LLI | High Yield | Treasuries | Corporate |
|---|---|---|---|---|
| CS LLI | 100 % | | | |
| High Yield | 86 % | 100 % | | |
| Treasuries | -50 % | -31 % | 100 % | |
| Corporate | 40 % | 63 % | 37 % | 100 % |

*Source: Credit Suisse, Barclays NBIM calculations*

When we compare the performance of leveraged loans to other fixed income investments during periods with rising and falling interest rates[20] we find that both leveraged loans and high yield bonds historically have performed well during periods with rising interest rates. Possible explanations are that credit spreads on high yield bonds have a tendency to compress in periods with rising interest rates[21] and that high-yield indices tend to have shorter maturity than other fixed income indices[22].

*Table 5: Performance in different interest rate environments*

| | CS LLI | High Yield | Treasuries | Corporate |
|---|---|---|---|---|
| Rate up: mean return | 11.1 % | 12.5 % | -6.7 % | -2.6 % |
| Rate down: mean return | 0.3 % | 4.4 % | 16.3 % | 14.2 % |

*Source: Credit Suisse, Barclays, NBIM calculations*

Leveraged loans and high-yield bonds are seen as close substitutes by many investors and relative valuation methods are often applied to gauge the relative attractiveness. However, there are challenges in the evaluation. Converting a LIBOR based loan into yield to compare returns on leveraged loan to high yield bonds to LIBOR-based is not straight forward. Loans are callable at any time. Quantifying the prepayment risk is difficult at best. It is not only the absolute level of interest rates but also changes in issuer credit quality and required spread level that affect prepayment behaviour. The calculated yield on the CS LLI is the equivalent fixed-rate yield-to-refunding of the facility. The

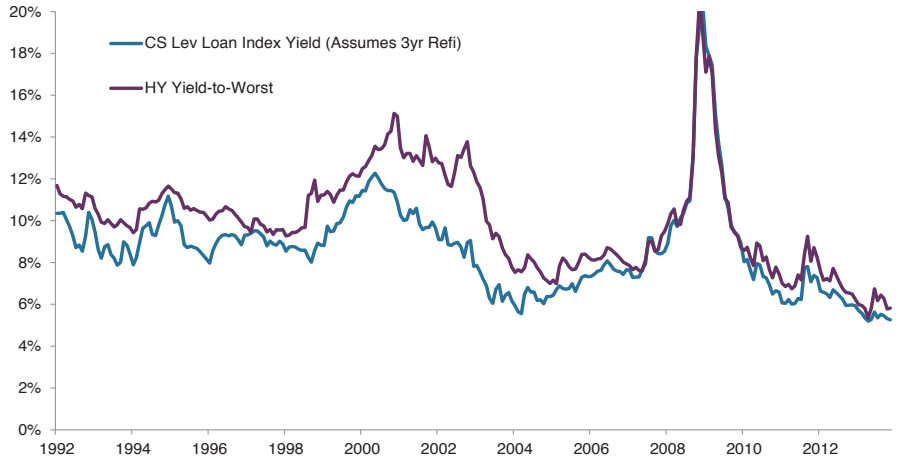
*20 Measured by the 5-year US Treasury constant maturity.*

*21 View NBIM Memo On Fixed Income Investments, dated 18 March 2011*

*22 Average duration Treasuries 5.5 years, Corporate 6 years and High Yield 4.5 years over the sample period.*

index provider calculates this yield given different assumptions about maturity. In chart 5, the maturity is fixed to three years.

*Chart 4: US Leveraged Loan Yield vs. High Yield Bond Yield*




*Source: Credit Suisse*

When comparing the two instruments it is critical to appreciate and understand those nuanced differences between loans and bonds in order to identify attractive investment opportunities. Broad indices covering investing opportunities in the high-yield and leverage loan market respectively do not necessarily include the same issuers. To gauge differences in the pricing of secured and unsecured debt investors need to dig deeper into respective indices and compare bond and loans by same issuer.

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