2017 Q1 Report on U.S. Direct Lending

Stephen Nesbitt
CEO / CIO
snesbitt@cliffwater.com

Gabriella Zadra
Senior Managing Director
gzadra@cliffwater.com

Jeff Topor
Associate
jtopor@cliffwater.com

Private debt has been a rapidly growing asset class among institutional investors, a trend that Cliffwater expects to continue. This report focuses on first quarter 2017 performance for one of the largest segments of private debt, U.S. middle market corporate lending.

The Cliffwater Direct Lending Index

Our analysis relies heavily upon the Cliffwater Direct Lending Index, or CDLI, an asset-weighted index of over 6,000 direct loans totaling $87 billion in assets.[1] The CDLI is a first-of-its-kind index used by well-known investment firms to help understand asset class characteristics and to benchmark performance of the asset class.

Launched in 2015, the CDLI was reconstructed back to 2004 using quarterly SEC filings required of business development companies, whose primary asset holdings are U.S. middle market corporate loans. Importantly, SEC filing and transparency requirements eliminate common biases of survivorship and self-selection found in other industry universe and index benchmarks. And finally, loan assets in the CDLI are managed for total return largely by independent asset managers, unlike similar assets within insurance companies where statutory and other regulatory requirements can result in non-performance objectives. See www.CliffwaterDirectLendingIndex.com for further information on the CDLI.

CDLI Returns[2]

	First Quarter 2017	Trailing Four Quarters	From Sept 2004 Inception*
Income	2.45%	10.43%	11.21%
Net Realized Gains(Losses)	(0.50)	(1.62)	(1.01)
Net Unrealized Gains(Losses)	0.41	3.28	(0.34)
Total Return**	**2.36%**	**12.16%**	**9.79%**

* Annualized returns through March 31, 2017.
** Return subcomponents may not add exactly to total return due to compounding effects.

Direct lending assets, measured by the Cliffwater Direct Lending Index, earned a 2.36% total return in the first quarter, bringing its trailing four quarter total return to 12.16%. The first quarter return is consistent with the 9.79% inception performance for the Index, which remained unchanged over the quarter.

[1] The Cliffwater Direct Lending Index (the "CDLI") is an index comprised of all underlying assets held by public and private Business Development Companies that satisfy certain eligibility requirements. The CDLI is asset-weighted by reported fair value. Returns are unlevered and gross of all fees and expenses.
[2] Any information presented prior to the Launch Date (September 30, 2015) of the CDLI is back-tested. The CDLI performance has been prepared for informational purposes only. Past performance is not indicative of future returns. Please see additional CDLI disclosures at the end of this report.

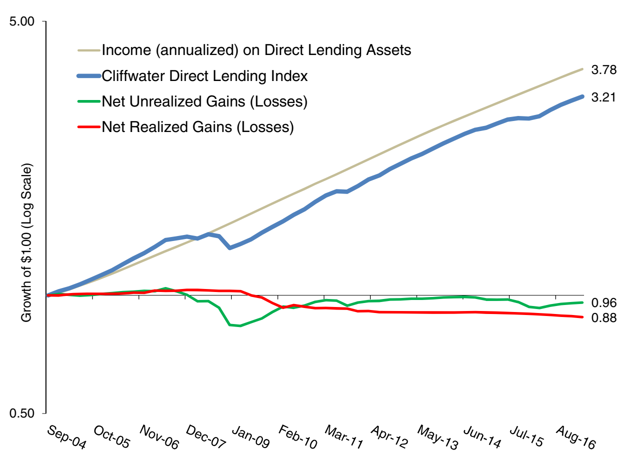
© 2017 Cliffwater LLC. All rights reserved.

Net realized losses totaled -0.50% during the quarter and -1.62% for the trailing four quarters, exceeding the annualized since inception net realized losses of -1.01%. This recent trend of above average realized credit losses reflects the ongoing restructuring and liquidation of oil & gas companies that hit the wall in the first quarter of 2016 and, more recently, some retail and consumer goods companies running into problems.

Net unrealized gains were 0.41% for the quarter, largely an unwinding of previous unrealized losses and conversion to realized losses. We expect cumulative unrealized gains or losses to average close to zero over time, because unrealized losses become realized losses upon default or are reversed upon loan repayment.

Exhibit 1 plots the CDLI total return, in blue, together with its components. Casual inspection shows clearly that the return from income steadily drives total return, reduced by net realized losses.

Exhibit 1: Components of CDLI Returns
(Sept 2004 to March 2017)

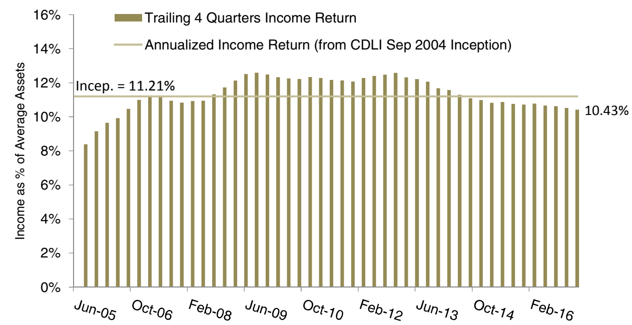


Income Return

The credit markets are witnessing a significant pickup in the supply of capital at a time when demand for debt financing is ebbing, putting downward pressure on credit spreads and interest income, particularly in the public markets. These pressures are also finding their way to the U.S. middle market, which traditionally is less sensitive to macro trends.

Direct lending returns have historically been driven by consistent double digit income returns, 11.21% (annualized) over the lifetime of the Index. As Exhibit 2 shows, income as a percentage of assets has gradually declined over the past several years from their post-2008 highs. The CDLI income return was 10.43% for the 4 quarters ending March 2017, and below the 11.21% annualized since inception income return.

Exhibit 2: CDLI Income Return (Trailing 4 quarters)



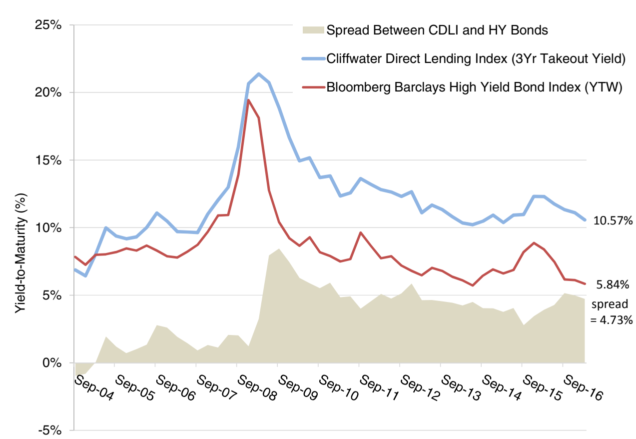
The income decline also results from a higher proportion of senior loans in the CDLI. Senior loans now represent 57% of Index holdings compared to approximately 40% prior to the Financial Crisis. The percentage to senior loans increased by 1% during the first quarter.

Yield-to-Maturity

Total return investors prefer to think of yield through the lens of "yield-to-maturity", reflecting current interest income <u>and</u> the amortization of unrealized gains or losses. Unrealized gains or losses equal the difference between current value and principal paid at maturity.

While most direct loans have a 5 year stated maturity, refinancings and corporate actions reduce their average life to approximately 3 years. We calculate a "3Yr Takeout Yield" for the CDLI[3], which we compare to an equivalent yield-to-worst for the high yield bonds in Exhibit 3.

Exhibit 3: Yield Comparison, Sept 2004 to March 2017



[3] "3Yr Takeout Yield" is calculated by assuming that all loans will be repaid at par in three years, which represents the average life of direct loans.

© 2017 Cliffwater LLC. All rights reserved.

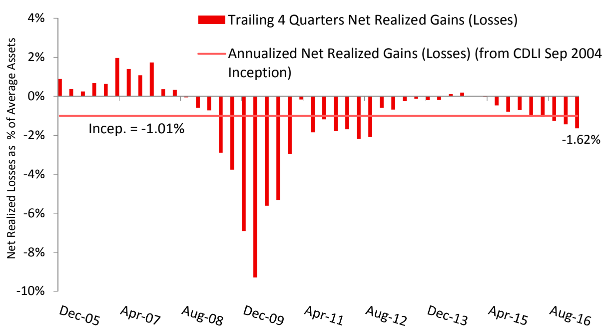
Both the CDLI's 3yr takeout yield and the Bloomberg Barclays High Yield Bond Index's yield-to-worst fell measurably during the first quarter. The CDLI 3yr takeout yield fell 0.53%, from 11.10% to 10.57%, while the Bloomberg Barclays High Yield Bond Index yield-to-worst fell 0.28%, from 6.12% to 5.84%.

The yield spread between the CDLI and high yield bonds fell slightly to 4.73%, but remains above the 4.44% average spread measured over the past 10 years.

Net Realized Gains (Losses)

CDLI net realized losses equaled -1.62% for the 4 quarters ending March 2017, exceeding the -1.01% annualized net realized losses since the Index inception, as shown in Exhibit 4.

Exhibit 4: CDLI Net Realized Gains (Losses)
(Trailing 4 quarters)



By comparison, JPMorgan calculates 2016 realized losses for high yield bonds and broadly syndicated bank loans equal to -2.52% and -0.56%, respectively. Over the 2005 to 2016 time period, JPMorgan calculates realized losses for high yield bonds and syndicated bank loans equal to -1.45% and -0.97%, respectively.[4] This data supports the view that credit losses in U.S. middle market corporate lending are no greater than the syndicated credit markets and perhaps less so.

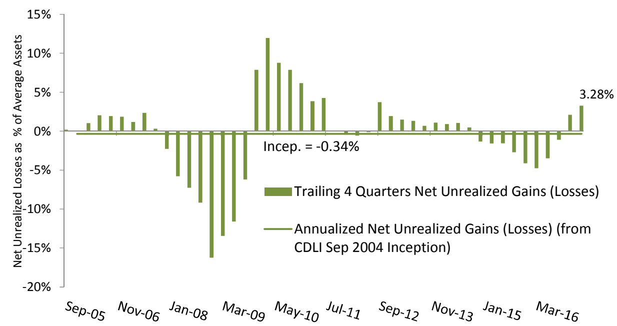
Net Unrealized Gains (Losses)

Unrealized gains or losses will reflect changes in overall market credit spreads or will harbinger expected but uncertain future credit losses in the same way that banks book reserves against future losses. CDLI unrealized gains or losses come from quarter to quarter changes in (independent) valuations of existing loans.

[4] Source: JPMorgan Default Monitor. J.P. Morgan reports default and recovery ratios. Cliffwater calculates loss ratios from the J.P. Morgan data by combining reported default and recovery rates. This information is provided for purposes of comparison.

Exhibit 5 reports rolling 4 quarter net unrealized losses for the CDLI, with annualized net unrealized losses equal to -0.34% since inception. We would expect a long term average close to zero because unrealized losses will either convert to net realized losses upon a credit default, or they will be reversed when principal is fully repaid.

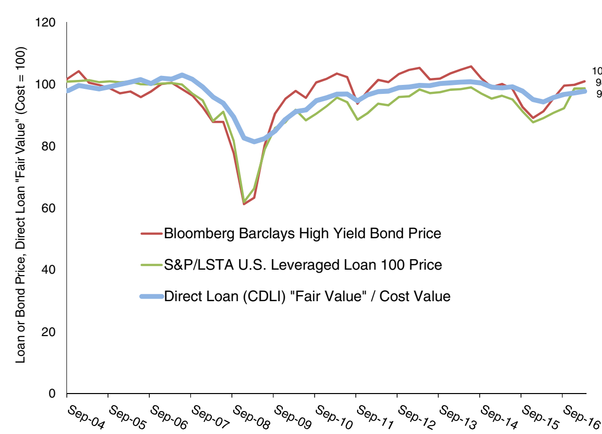
Exhibit 5: CDLI Net Unrealized Gains (Losses)
(Trailing 4 quarters)



The CDLI has seen unrealized gains over the last two quarters, climbing to 3.28% for the four quarters ending March 2017. These gains partially offset unrealized losses in energy credits during 2015 and early 2016.

The potential for future gains or losses is partially telegraphed by the ratio of loan value to amortized cost, the latter representing remaining principal value. This ratio of value to cost is shown in Exhibit 6 together with similar ratios for high yield bonds and broadly syndicated bank loans.

Exhibit 6: Comparison of Market Value versus Cost (Principal) Value for CDLI with High Yield Bond and Bank Loan Prices, Sept 2004 to March 2017[5]



[5] "Direct Loan (CDLI) "Fair Value" / Cost Value" is calculated based on the SEC filings of the BDCs that comprise the CDLI. Because direct loans are not traded assets and fair values are independent and unbiased estimates of the market values of assets, Cliffwater believes this metric can be used a reasonable comparison to high yield bond and bank loan prices.

© 2017 Cliffwater LLC. All rights reserved.

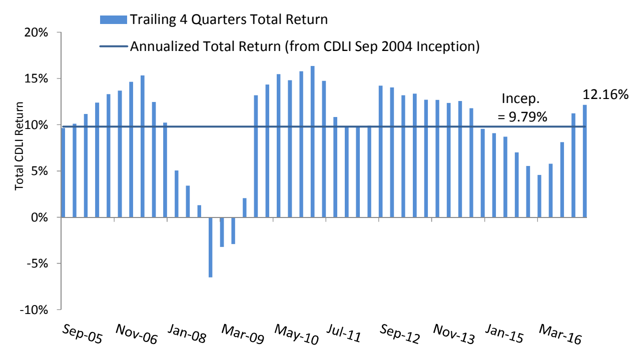
The CDLI was valued at 97.74 at March 31, 2017, equal to a 2.26% discount from cost or principal value. This discount causes the CDLI 3yr takeout yield to exceed its current yield and will result either in the reversal of unrealized losses, the conversion to realized losses, or both, depending upon whether the direct loans are fully repaid at maturity or default, respectively.

Exhibit 6 also shows the similarity in valuation over time between direct loans, high yield bonds, and bank loans. The direct loans in the CDLI are valued quarterly using "fair value" accounting rules while high yield bonds and bank loan prices are market determined. Despite differing sources for price, Exhibit 6 shows that direct loan valuation follows closely the high yield bond and bank loan markets, except in 2008, a time of extreme market distress. At March 31, 2017, the CDLI "fair value" was below market prices for high yield bonds and bank loans, suggesting that middle market loans values are conservatively priced.

Total Return

Exhibit 7 shows trailing 4 quarter CDLI total return, combining the income return (Exhibit 2), net realized gain(loss) (Exhibit 4), and net unrealized gain(loss) components (Exhibit 5). The 12.16% trailing 4 quarter CDLI total return ending March 31, 2017 is the second in almost two years to exceed the 9.79% total return since the CDLI September 2004 inception.

Exhibit 7: CDLI Total Return (Trailing 4 quarters)



With the exception of 2008 when the CDLI return was -6.50%, all other calendar year returns were positive, ranging between 5% and 16%. The compound annual total return from inception of the CDLI on September 30, 2004, through March 31, 2017, equals 9.79%.

© 2017 Cliffwater LLC. All rights reserved.

Disclosures

The views expressed herein are the views of Cliffwater LLC ("Cliffwater") only through the date of this report and are subject to change based on market or other conditions. All information has been obtained from sources believed to be reliable but its accuracy is not guaranteed. Cliffwater has not conducted an independent verification of the information. No representation, warranty, or undertaking, express or implied, is given as to the accuracy or completeness of the information or opinions contained in this report. This report is not an advertisement, is being distributed for informational and discussion purposes only, should not be considered investment advice, and should not be construed as an offer or solicitation of an offer for the purchase or sale of any security. The information herein does not take into account any investor's particular investment objectives, strategies, tax status or investment horizon. Cliffwater shall not be responsible for investment decisions, damages, or other losses resulting from the use of the information. Past performance is not indicative of future returns, which may vary. Future returns are not guaranteed, and a loss of principal may occur.

Statements that are nonfactual in nature, including opinions, projections and estimates, assume certain economic conditions and industry developments and constitute only current opinions that are subject to change without notice. Further, all information, including opinions and facts expressed herein are current as of the date appearing in this report and is subject to change without notice. Unless otherwise indicated, dates indicated by the name of a month and a year are end of month.

There can be no assurance that any expected rates of return will be achieved. Expected rates of return are subjective determinations by Cliffwater based on a variety of factors, including, among other things, investment strategy, prior performance of similar strategies, and market conditions. Expected rates of return may be based upon assumptions regarding future events and conditions that prove to be inaccurate. Expected rates of return should not be relied upon as an indication of future performance and should not form the primary basis for an investment decision. No representation or assurance is made that the expected rates of return will be achieved.

The Cliffwater Direct Lending Index (the "CDLI") is an index comprised of all underlying assets held by public and private Business Development Companies ("BDCs") that satisfy certain eligibility requirements. The CDLI is asset-weighted by reported fair value. Cliffwater believes that the CDLI is representative of the direct lending asset class. The CDLI is owned exclusively by Cliffwater, and is protected by law including, but not limited to, United States copyright, trade secret, and trademark law, as well as other state, national, and international laws and regulations. Cliffwater provides this information on an "as is" and "as available" basis, without any warranty of any kind, whether express or implied.

Past performance of the CDLI is not an indication of future results. It is not possible to invest directly in the CDLI. The CDLI returns shown are not based on actual advisory client returns and do not reflect the actual trading of investible assets. The performance of the CDLI has not been reviewed by an independent accounting firm and has been prepared for informational purposes only.

Index returns do not reflect payment of any sales charges or fees a person may pay to purchase the securities underlying the CDLI or a product that is intended to track the performance of the CDLI. The imposition of these fees and charges would cause the actual and back-tested performance of these securities or products to be lower than the CDLI performance shown.

Any information presented prior to the Launch Date (September 30, 2015) of the CDLI is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-tested calculations are based on the same methodology that was in effect when the CDLI was officially launched. Please refer to the methodology paper for the CDLI (available at www.CliffwaterDirectLendingIndex.com) for more details about the CDLI, including the Base Date/Value (September 30, 2004 at 1,000) and the Launch Date of the CDLI and the manner in which the CDLI is rebalanced, the timing of such rebalancing and the eligibility criteria for the CDLI.

Prospective application of the methodology used to construct the CDLI may not result in performance commensurate with any back-tested returns shown. The back-test period does not necessarily correspond to the entire available history of the CDLI. Another limitation of back-tested hypothetical information is that generally the back-tested calculation is prepared with the benefit of hindsight. Back-tested data reflect the application of the CDLI methodology and selection of the CDLI constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the financial markets in general which cannot be, and have not been, accounted for in the preparation of the CDLI information set forth, all of which can affect actual performance.

When Cliffwater was unable to determine the nature of a BDC's investments because of limited information included in historical SEC filings, Cliffwater did not apply the portfolio composition criteria (at least 75% of total investments represented by direct loans) to the BDC. All other eligibility criteria were applied to determine whether to include the BDC in the historical CDLI composition and return. All CDLI returns and characteristics are reported with a 2.5 month lag to allow sufficient time for SEC filings.

The CDLI may include inaccuracies or typographical errors. Due to various factors, including the inherent possibility of human or mechanical error, the accuracy, completeness, timeliness and correct sequencing of such information and the results obtained from its use are not guaranteed by Cliffwater.

The CDLI is derived from sources that are considered reliable, but Cliffwater does not guarantee the veracity, currency, completeness or accuracy of the CDLI or other information furnished in connection with the CDLI. No representation, warranty or condition, express or implied, statutory or otherwise, as to condition, satisfactory quality, performance, or fitness for purpose are given or duty or liability assumed by Cliffwater in respect of the CDLI or any data included therein, omissions therefrom or the use of the CDLI in connection with any product, and all those representations, warranties and conditions are excluded save to the extent such exclusion is prohibited by applicable law.

References to market or composite indices (such as the S&P 500), benchmarks or other measures of relative market performance over a specified period of time (each, an "index") are provided for information only. Reference to an index does not imply that a portfolio will achieve returns, volatility or other results similar to the index. The composition of an index may not reflect the manner in which a portfolio is constructed in relation to expected or achieved returns, portfolio guidelines, restrictions, sectors, correlations, concentrations, volatility or tracking error targets, all of which are subject to change over time.

The Bloomberg Barclays U.S. High Yield Index (Bloomberg Barclays High Yield Bond) covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

The S&P/LSTA U.S. Leveraged Loan 100 Index is a market value-weighted index designed to measure the performance of the U.S. leveraged loan market. The index consists of 100 loan facilities drawn from a larger benchmark – the S&P/LSTA Leveraged Loan Index.

Cliffwater is a service mark of Cliffwater LLC.

© 2017 Cliffwater LLC. All rights reserved.