

## U.S. Direct Lending & the Cliffwater Direct Lending Index

January 2, 2016

*Direct lending is receiving significant institutional interest due to its attractive return potential and moderate risk. Though illiquid, direct lending portfolios provide high and immediate cash flow with little or none of the J-curve effects associated with private equity.*

*We introduce the **Cliffwater Direct Lending Index (“CDLI”)** as both a research tool to study the rewards and risks of direct lending and as a benchmark to evaluate the performance of direct lending managers. The CDLI is currently comprised of over 5,000 direct loans valued at \$75 billion, with a quarterly return history dating back to 2004.*

*We find that direct lending, measured by the CDLI, has produced attractive 10% average returns over its eleven year history with low volatility, outperforming most major asset classes with the exception of private equity. Looking ahead, Cliffwater believes that direct lending portfolios managed by experienced institutional managers can produce strong risk-adjusted, net-of-fee returns employing modest leverage.*

### **Background**

We define direct lending as loans made to middle market companies without the traditional intermediary role of a bank or broker. The total size of the U.S. direct lending market is estimated to equal approximately \$350 billion, covering a potential universe of 200,000 companies<sup>2</sup>. Traditional direct lending investors include insurance companies, asset managers (on behalf of both institutional and individual investors), and specialty finance companies.

Institutional interest in direct lending has grown significantly since the 2008 Financial Crisis for three reasons. First, middle market companies are increasingly looking to non-bank suppliers of financing as governmental regulation has curtailed traditional bank financing. Second, investors are looking for additional sources of stable cash flow to help them achieve their return objectives. And third, experienced asset managers, with strong credit platforms and seeing opportunity, are stepping into the void left by banks and developing direct lending products that meet investor specifications. These direct lending products include separately managed accounts, commingled funds, and pooled vehicles such as Business Development Companies (BDCs).<sup>3</sup>

Investors find direct lending portfolios attractive not only for their high yields but also because most loans are floating rate, which means they will not suffer capital losses should interest rates rise. Also, direct lending portfolios can be fully built out over a one to two year time frame, unlike private equity which takes five years or more to get invested. And finally, direct loans are generally of higher quality with credit loss rates that historically have been less than those experienced by high yield bonds and equal to bank loans.

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<sup>1</sup> See disclosures at the end of this report.

<sup>2</sup> National Center for the Middle Market, Federal Reserve

<sup>3</sup> See Cliffwater Research Report, “*Business Development Companies (BDCs), A Liquid Alternative to Private Debt*,” dated Jan 30, 2015, at [www.BDCs.com](http://www.BDCs.com), for a detailed description of Business Development Companies.

However, direct lending is like most real estate and private equity in that the underlying security is illiquid, unless held in a publicly traded vehicle like a BDC. Investors must therefore weigh the performance benefits of direct lending against a requirement that invested capital will be locked up for approximately five years, equal to the typical loan maturity.<sup>4</sup>

We believe that a major challenge for investors considering direct lending has been the absence of a direct lending index. Index returns are useful both to measure historical return and risk characteristics for asset allocation purposes, and to benchmark manager performance. Currently investors might collect and compare performance records of a few direct lending managers, but these records suffer from being self-reported with inconsistencies in loan valuation, asset quality, leverage, and time period.

To fill the need for a direct lending index, this report introduces the CDLI<sup>5</sup> which we believe meets institutional standards for index construction and will serve investors in better understanding direct lending as an asset class, and as a tool for benchmarking past performance of direct lending managers.

### ***Index Construction and Composition***

Capturing loan data on the entire U.S. middle market is neither possible nor desirable. Many loans are held directly by insurance companies or private funds where disclosure is limited at best. However, a significant and growing segment of the direct lending market consists of loans originated and held by Business Development Companies where quarterly SEC disclosures provide a vast amount of loan (asset) information, permitting quarterly return calculations based upon reported income, realized gains or losses, and unrealized gains or losses calculated by independent valuation firms.

We constructed the Cliffwater Direct Lending Index from 11 years of quarterly SEC filings covering 60 reporting public and private BDCs that existed during all or part of that time period. Those BDCs collectively hold approximately \$75 billion in assets covering 5,000+ loans at September 30, 2015.<sup>6</sup> The loans captured by our BDC database are a significant subset of the direct lending universe (~25%), and importantly, represent loans that are originated and held to maximize risk-adjusted return to shareholders/investors.

The items below describe the construction of the CDLI:<sup>7</sup>

1. *Index Base Date*: September 30, 2004
2. *Index Launch Date*: September 30, 2015
3. *Data Universe*: asset data from all private and public BDCs making SEC 10-K and quarterly 10-Q filings
4. *Index Reporting Cycle*: quarterly, with 75 day lag
5. *Quarterly Constituent Exclusions*:
  - a. BDCs that file later than 75 calendar days after quarter-end
  - b. BDCs reporting less than 75% of assets in direct loans
6. *Weighting*: asset-weighted by reported “fair value”
7. *Rebalancing*: quarterly universe reconstitution and rebalancing

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<sup>4</sup> Our research shows that direct loan portfolios turn over every 3.3 years on average, shorter than the typical five year average loan maturity, due to prepayments, which improves the liquidity of a direct lending portfolio.

<sup>5</sup> See disclosures at the end of this report.

<sup>6</sup> Loan assets average \$28 billion from 2004 to 2015, with higher growth occurring from 2010 to 2015.

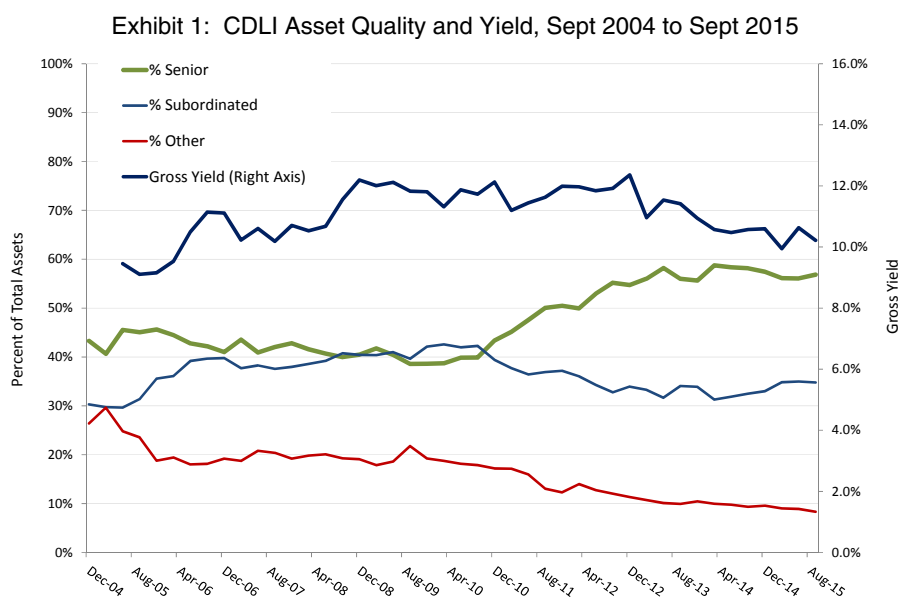
<sup>7</sup> See disclosures at the end of this report.

8. *Reported Quarterly Index Characteristics:* total asset return, income return, realized gains(losses), unrealized gains(losses), and total assets
9. *Location:* [www.CliffwaterDirectLendingIndex.com](http://www.CliffwaterDirectLendingIndex.com) (pending)

The CDLI is consistent with other private asset indices in its quarterly reporting cycle, “fair value” asset valuation, and asset weighting.<sup>8</sup> Returns are unlevered and gross of both management and administrative fees.<sup>9</sup>

Theoretically, the CDLI is investable indirectly through public or private BDC share purchases. However, our primary CDLI return series excludes the application of leverage and imposition of fees, both management and administrative, which for some investors may be negotiable based upon objectives and size of investment. The CDLI return series is useful to potential investors as a building block upon which to customize returns series for expected fees and desired leverage. Later in this report we show pro forma net-of-fee returns using the CDLI return series and leverage.

Exhibit 1 provides two important underlying characteristics of the loan assets comprising the Cliffwater Direct Lending Index: asset quality and yield.



CDLI assets in Exhibit 1 are divided into three categories: senior secured; subordinated; and other.<sup>10</sup> Senior, or first lien, debt has first priority on collateral or cash flow in the event of corporate default. Subordinated debt may be secured or unsecured but is junior to senior debt and is akin in credit quality to publicly traded high yield bonds. “Other” refers to equity or equity-like securities such as warrants and equity tranches in structured finance vehicles.

The largest segment of the CDLI assets is represented by senior debt. Averaging approximately 50% of total assets over the entire 11 year history, senior debt has grown from 40% of assets

<sup>8</sup> Direct loans in the CDLI are valued using Statement of Financial Accounting Standards (SFAS) 157 guidance.

<sup>9</sup> CDLI construction is most comparable to the NCREIF equity real estate index. Direct loans represent over 90% of CDLI assets. Remaining assets generally represent equity/warrants attached to direct loans or structured finance assets.

<sup>10</sup> Loans and other assets are categorized by the asset managers themselves into three or more credit segments in 10-K and 10-Q filings.

before the Financial Crisis to almost 60% of assets today. We attribute the increase in senior debt to the addition of new asset managers with a higher credit orientation and greater senior financing opportunities as banks retreat from the middle market. Most of the increase in senior debt allocations has come from reductions in equity-like securities, also reflecting the growing opportunity for non-bank financing that was previously filled by equity or structured finance investments.

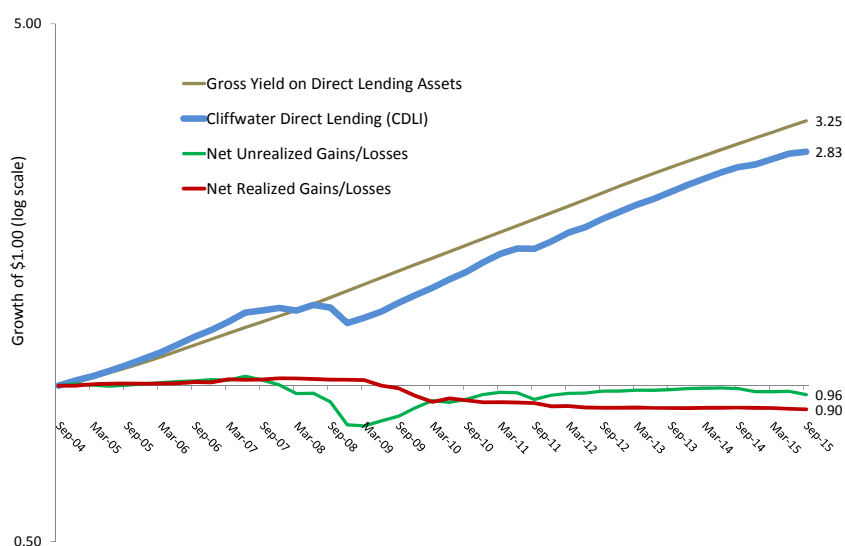
Exhibit 1 also reports quarterly yield (blue line, right axis) for assets represented in the CDLI.<sup>11</sup> Yields have been fairly stable over time, ranging between 10% and 12%. As expected, yields were closer to 12% in the aftermath of the Financial Crisis. The gradual drop in yield to levels closer to 10% in recent years is due to an overall market decline in credit spreads and the shift in allocations toward senior debt.

Loan assets within the CDLI are also very well diversified across industry groups, mirroring the business composition of the U.S. middle market. For example, energy debt, a higher risk exposure currently, equals a modest 3% of total assets compared to over 10% in the Barclays High Yield Bond Index.

### Index Performance

Exhibits 2 and 3 report the Cliffwater Direct Lending Index (CDLI) performance from its September 30, 2004 inception through September 30, 2015.<sup>12</sup>

Exhibit 2: Cliffwater Direct Lending Index Performance, Sept 2004 to Sept 2015<sup>13</sup>



The blue line in Exhibit 2 plots the cumulative (growth of \$1.00) CDLI return, consisting of asset yield (tan line) plus net realized gains/losses (red line) and plus net unrealized gains/losses (green line). The vertical axis uses a log scale so that a straight line indicates a constant rate of return. For example, gross yield<sup>14</sup> for the CDLI over the 11 year period appears as a straight line, suggesting that yields on direct lending assets have remained relatively constant over the period.

<sup>11</sup> CDLI gross yield is calculated by dividing quarterly interest income by average asset value, and multiplying by four to get annualized yield.

<sup>12</sup> Return calculations are based upon aggregated data from income statements and balance sheets and are not actual returns achieved by investors.

<sup>13</sup> Dates indicated by mm/yy are end of month.

<sup>14</sup> Gross yield equals quarterly investment income divided by average gross assets.

Exhibit 3 reports the CDLI returns for its entire history and trailing sub-periods.

Exhibit 3: Cliffwater Direct Lending Index (CDLI) Performance, Sept 2004 to Sept 2015

	Trailing Periods ending Sept 2015						June-Dec 2008*
	Last Quarter*	Last Year	Last 3 Years	Last 5 Years	Last 10 years	Sept 2004 Inception	
Gross Yield on Direct Lending Assets	2.55%	10.76%	11.30%	11.70%	11.60%	11.30%	6.02%
<i>plus</i> Net Realized Gains/Losses	-0.22%	-0.77%	-0.23%	-0.79%	-1.14%	-0.95%	-0.30%
<i>plus</i> Net Unrealized Gains/Losses	<u>-1.51%</u>	<u>-2.70%</u>	<u>-0.53%</u>	<u>0.41%</u>	<u>-0.42%</u>	<u>-0.37%</u>	<u>-13.07%</u>
<i>equals**</i> Cliffwater Direct Lending (CDLI)	0.83%	7.04%	10.48%	11.28%	9.95%	9.92%	-7.73%

\* not annualized

\*\* items may not sum exactly due to compounding effects

We make the following observations about the performance of direct lending assets, as captured by the CDLI:

1. Investment income (gross yield) on a diversified portfolio of direct middle market loans appears high and stable over the CDLI history at approximately 11% per year. High yield bonds and bank loans, by contrast, have yields that are generally known to be lower and more cyclical.
2. Realized losses, a measure of credit risk, average an annual -0.95% for the CDLI from its 2004 inception. By comparison, reported credit losses for high yield bonds and leveraged loans average 1.26% and 0.91%, respectively, for the same period.<sup>15</sup> The results suggest that the higher yields provided by direct lending are not offset by higher credit losses.
3. Realized losses were greatest in the years immediately following the 2008 Financial Crisis where about one-half of the 13% in unrealized losses accumulated in 2008 later became realized losses during 2009-10. Realized losses before and after those Crisis years averaged less than 0.20% per year.
4. Unrealized losses for the CDLI equal -0.37% annualized over the cumulative period and trend toward zero over time, which should be expected from shorter maturity, floating rate, direct loan investments.
5. The CDLI, gross of fees and unlevered, produced a fairly consistent 9.92% return from inception, net of realized and unrealized losses, but for a moderate drawdown during the 2008 Financial Crisis.
6. The CDLI experienced only one drawdown period over its history, during the six months from June 2008 through December 2008, shown in the last column in Exhibit 3, when the Index return fell -7.73% as a result of -13.07% in net unrealized losses.

### **Comparisons to other Asset Classes**

Exhibits 4a and 4b compare direct lending performance, measured by the Cliffwater Direct Lending Index, with other private and publicly-traded asset classes.

Exhibit 4a plots cumulative returns (growth of \$1.00) for the Cliffwater Direct Lending Index together with six other asset classes covering the complete 11 year CDLI history. Exhibit 4b follows Exhibit 4a with return, risk, and correlation statistics for all asset classes based upon quarterly data. The bold blue line in Exhibit 4a represents the CDLI, copied from Exhibit 2.

<sup>15</sup> *J.P. Morgan Markets*. J.P. Morgan reports default and recovery ratios. We calculate loss ratios from the J.P. Morgan data by combining reported default and recovery rates.

Exhibit 4a: Asset Class Performance Comparison, Sept 2004 to Sept 2015

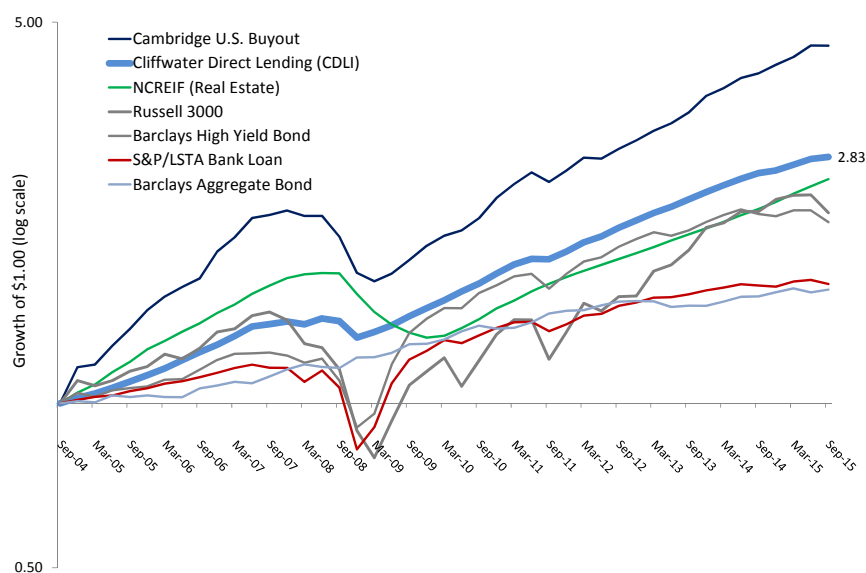


Exhibit 4b: Asset Class Return and Risk Comparison, Sept 2004 to Sept 2015

	Return	Risk	/Risk	2008 Draw Down*	CDLI	U.S. Buyout	NCREIF (Real Estate)	Russell 3000	Barclays High Yield Bond	S&P /LSTA Bank Loan	Barc Aggr
<u>Private Asset Classes:</u>											
Cliffwater Direct Lending (CDLI)	9.92%	3.8%	2.64	-8%	1	0.76	0.43	0.72	0.72	0.76	-0.34
Cambridge U.S. Buyout	14.72%	10.0%	1.47	-29%		1	0.59	0.77	0.57	0.52	-0.27
NCREIF (Real Estate Equity)	8.99%	6.1%	1.49	-24%			1	0.24	-0.08	-0.03	-0.19
<u>Public Asset Classes:</u>											
Russell 3000	7.59%	16.5%	0.46	-46%				1	0.78	0.69	-0.25
Barclays High Yield Bond	7.20%	11.6%	0.62	-27%					1	0.94	-0.05
S&P/LSTA Bank Loan	4.69%	11.2%	0.42	-30%						1	-0.23
Barclays Aggregate	4.47%	3.2%	1.39	5%							1

\*Drawdown periods range by asset class but all range within the 2007-09 period affected by the Financial Crisis

We make the following observations about the comparative performance of direct lending and other asset classes:

1. The three private asset classes shown in Exhibit 4b (U.S. buyout, real estate, and direct lending) all produced higher total returns over the study period when compared to the three publicly traded asset classes. This is consistent with investor expectations that illiquid private assets should outperform liquid publicly traded assets.
2. Direct lending, measured by the CDLI, outperformed all asset classes but for U.S. Buyout. The outperformance by U.S. Buyout should be expected because it represents capital that has less seniority compared to direct loans in the corporate capital structure and therefore should have a higher return.
3. Direct lending outperformed the NCREIF index of institutional commercial real estate at a lower level of risk, which is of special note because both indices have common construction methodologies and similar oversight in asset valuation. Also, both asset classes share the common role of stable income and lower risk within diversified institutional portfolios.
4. The CDLI experienced the lowest level of risk, whether measured by standard deviation or drawdown, during the 2008 Financial Crisis except for the Barclays Aggregate Bond Index.

5. The CDLI earned the highest risk-adjusted return (return divided by risk) compared to other asset classes over the measurement period.
6. The CDLI has similar correlations to equities, as measured by the Russell 3000 Index, as high yield bonds and loans, and higher correlations compared with private equity and real estate.

Based upon these CDLI historical return and risk measurements, we view direct lending as a valuable source of high and steady returns, driven primarily from interest income, but with moderate short term volatility that is linked to overall market risk and created by realized and unrealized credit losses. However, like private equity and real estate, valuation risk is likely understated for direct lending so that investors should be cautious making direct risk comparisons with the public traded asset classes, such as stocks, high yield bonds, and loans in Exhibit 4b.

### ***A Practical Application including Fees and Leverage***

CDLI returns are potentially not reflective of returns that investors will actually achieve because management fees are not included and direct lending assets are often modestly levered, which they are not in the CDLI. In Exhibit 5 we provide underlying fee and leverage assumptions that are representative of an institutional direct lending separate account or commingled vehicle.<sup>16</sup> Those assumptions are then used in conjunction with the CDLI to project *investable* returns.

Exhibit 5: Example Specifications for a Direct Lending Portfolio

Direct lending asset returns	Cliffwater Direct Lending Index (CDLI)
Leverage (borrowing/net assets)	0.0 (unlevered) 0.6 (average for BDCs) 1.0 (moderate leverage) 2.0 (higher leverage)
Cost of debt	3.98%, equal to the average 2004-15 historical financing cost of the 60 BDCs in the CDLI, taken from 10-Qs/Ks
Management fee	1.25% of net assets
Administrative fees	0.10% of gross assets
Carried interest/preferred return	15%/7%

The net of fee return for this direct lending portfolio example is calculated in Exhibit 6, assuming leverage equal to 0.60 (60%) of net assets. This is the average leverage used by BDCs on their loan portfolios over the last 11 years. The fees selected for our example are representative of an institutional account, but below fees charged by the average publicly-traded BDC.

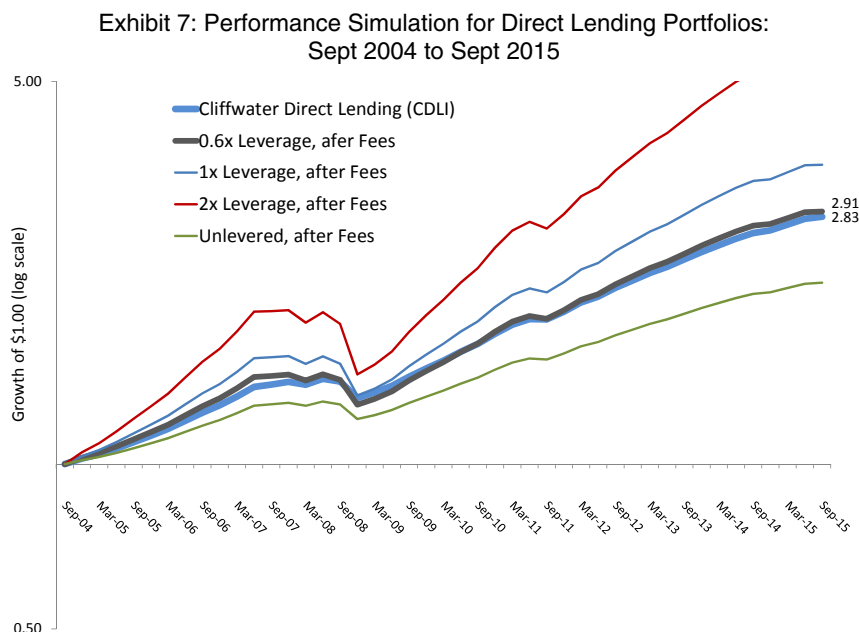
Exhibit 6: Fee Analysis for Direct Lending Portfolio Example

9.92%	Asset return net of realized, unrealized losses
+ 5.95%	Gross return from 0.6 times leverage
- <u>2.39%</u>	<u>Cost of leveraged financing</u> (@3.98% of borrowings)
= 13.48%	Gross of fee return
- 0.16%	Administrative fees (@0.10%)
- 1.25%	Management fees (@1.25% of net assets)
- <u>1.85%</u>	<u>Incentive fees</u> (@ 15% of return net of management fee)
<b>10.22%</b>	<b>Net return to investors</b>
23%	Manager fees as a % of gross of fee return

<sup>16</sup> Fees estimates are based upon Cliffwater experience with advising clients on direct lending portfolios and will generally be lower for accounts that are larger, focus on senior debt, or use less or no leverage.

The net, after fee return for the direct lending portfolio with average asset performance (CDLI) and 0.6 leverage ratio equals **10.22%**.<sup>17</sup> In this example, total fees paid equal 3.10% of net assets (1.25% plus 1.85%) and represent 23% of the direct lending portfolio's 13.48% gross return.<sup>18</sup>

The cumulative return for the 0.6 levered direct lending portfolio is plotted in Exhibit 7, where one dollar grows to \$2.91 over the 11 year period. With fees and moderate leverage, the portfolio produced a cumulative return similar to the asset returns for the CDLI, which is repeated from Exhibit 2. Exhibit 7 also includes cumulative returns calculated for direct lending portfolios with no leverage, a 1.0 leverage ratio, and a 2.0 leverage ratio.



Portfolio return and risk statistics for the CDLI and the four alternatively levered direct lending portfolios are reported in Exhibit 8. Portfolio statistics are net of fees.

**Exhibit 8: Simulated Return and Risk for Levered Direct Lending Portfolios:  
Sept 2004 to Sept 2015**

	Return	Risk	Return/ Risk	2008 Draw Down*
Cliffwater Direct Lending (CDLI)	9.92%	3.8%	2.64	-8%
Unlevered, after Fees	7.18%	3.2%	2.25	-7%
0.6x Leverage, after Fees	10.21%	5.1%	2.00	-12%
1x Leverage, after Fees	12.13%	6.4%	1.90	-15%
2x Leverage, after Fees	17.11%	9.7%	1.76	-23%

\*June - Dec 2008

As expected, direct lending return and risk increases with leverage. Asset managers often use leverage with direct lending and other credit instruments to enhance returns. Investors might

<sup>17</sup> Performance may vary when accounts are managed by actual managers.

<sup>18</sup> Management fees for other alternative asset classes, such as private equity and hedge funds, generally range from 30% to 40% of gross return.



think about the optimal amount of leverage by comparing the risk and 2008 drawdown columns in Exhibit 8 with comparable data for private equity and real estate in Exhibit 4b. Comparisons with publicly-traded high yield bonds and bank loans are interesting as well but risk statistics for those asset classes are based upon market price and not quarterly determinations of SFAS 157 “fair value.”

We believe most institutional investors in direct loan portfolios might consider leverage up to two turns (2.0) but would most likely select one turn (1.0). One turn of leverage (1.0) would bring a direct lending portfolio to a level of volatility comparable to private unlevered real estate while two turns (2.0) of leverage would bring a direct lending portfolio to a level of volatility comparable to private equity. We believe most investors would want equal emphasis put on yield and risk in a direct lending portfolio and therefore would lean toward one turn of leverage. One turn of leverage produces a projected risk equal to 6.4% and 2008 drawdown equal to -15%, roughly one-half the level for a portfolio of U.S. buyout funds.

Our leverage analysis, however, is based upon a direct lending portfolio whose composition reflects the overall direct lending market, captured by the CDLI, which consists of both senior and subordinated loans. Portfolios consisting primarily of less risky senior secured loans might well consider higher levels of leverage.

**Manager Selection and Credit Losses**

Direct lending is a dynamic market as managers continuously originate and refinance middle market corporate loans every three to four years. The Cliffwater Direct Lending Index captures the collective (asset-weighted) work product of these managers. Not surprisingly, some managers have produced better outcomes than others. These differences have been significant and suggest that investors need to look well beyond stated portfolio yield when selecting managers.

As an example, in Exhibit 9 we show asset performance for two different direct lending managers that manage BDCs, for the September 2004 to September 2015 time period. Both manager track records are real and are included as part of the Cliffwater Direct Lending Index.

Exhibit 9: Performance Comparison of Two Direct Lending Managers

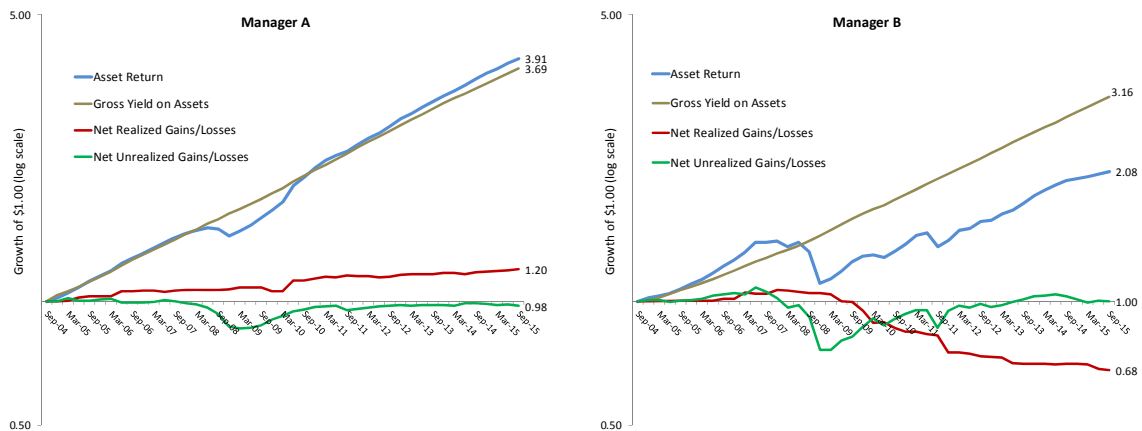


Exhibit 9 shows clearly that not all managers are alike when executing a direct lending investment program. A dollar invested with Manager A at September 2004 would have grown to \$3.91 as shown in the blue line, representing a 13.20% annualized return, gross of fees. Manager A’s 13.20% asset performance is also 3.28% above the 9.92% return for the CDLI, indicative of significant manager skill at direct lending. On the other hand, a dollar invested with Manager B

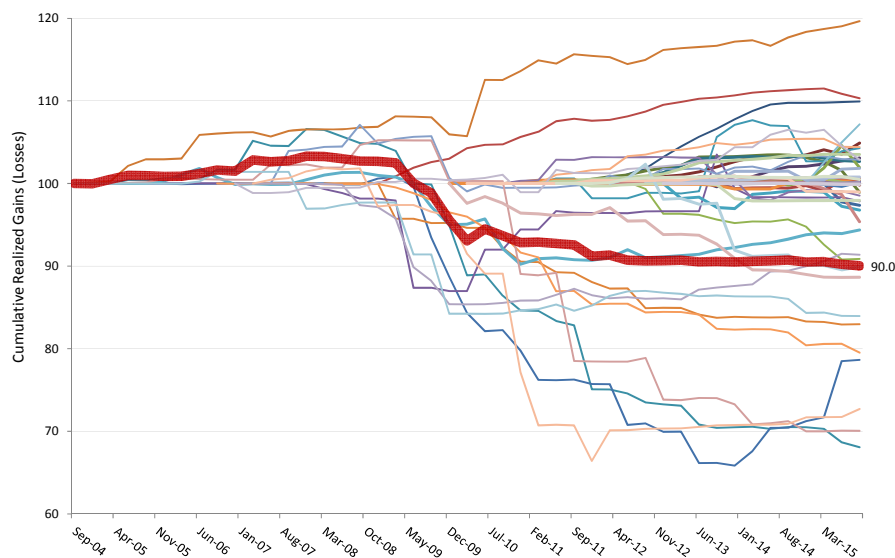
for the same period would have grown to \$2.08, representing a 6.88% annualized return which is 3.04% below the CDLI.

The performance difference between the two managers is largely explained by realized credit losses, shown in the two respective red lines in Exhibit 9. Manager A produced net credit gains at a 1.67% annualized rate while Manager B produced net credit losses at a -3.45% annualized rate. The absolute difference between the two managers' credit gain (loss) returns equals 5.12% (1.67% plus 3.45%), which accounts for 81% of the 6.32% (13.2% minus 6.88%) absolute difference between their total asset returns.

Higher realized credit losses are not necessarily bad. Manager B could be investing in higher yielding, more junior debt, expecting the higher income to offset higher credit losses. However, in our comparison Manager B in fact produced lower portfolio income compared to Manager A. Manager A has generated a 12.60% return from interest income, compared to 11.03% for Manager B. The 1.57% difference explains the remaining 19% (100% minus 81%) difference in asset returns.

More broadly, we find that realized credit losses also explain most of the performance differences across the 60 direct lending managers comprising the Cliffwater Direct Lending Index. Exhibit 10 illustrates this point by plotting cumulative realized gains (losses) by manager. The length of track record varies across managers with many starting a BDC after the Financial Crisis. As a result, Exhibit 10 contains track records of realized gains (losses) of differing lengths. The dark red line represents aggregate CDLI realized losses. The graphic is however useful in showing the dispersion of outcomes across managers and the importance of manager selection.

Exhibit 10: Cumulative Realized Gains (Losses) by Asset Manager: Sept 2004 to Sept 2015



## Conclusion

Investors should give direct lending strong consideration when constructing a diversified portfolio, either as an alternative to liquid credit investment, such as high yield bonds or bank loans, or as part of an allocation to private assets. Allocations to direct lending of up to 10% of total assets could seem appropriate, depending upon investor objectives.

Our Cliffwater Direct Lending Index (CDLI) provides the types of information – historical returns, risk, correlations, yields, credit losses – that potential investors should find useful in making asset

allocation decisions and the Index returns are easily manipulated to create customized portfolio solutions and benchmarks that are often found in direct lending.

We expect the direct lending market to continue to grow, and with it, greater institutional participation which could improve performance further through superior underwriting and better fee structures.

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## **Disclosures**

*The views expressed herein are the view 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 purposes only and should not be considered investment advice, nor shall it be construed as an offer or solicitation of an offer for the purchase or sale of any security. The information we provide 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 does not guarantee future performance.*

*The Cliffwater Direct Lending Index (the "Index") 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.*

*Past performance of the Index is not an indication of future results. It is not possible to invest directly in the Index. The Index returns shown are not based on actual advisory client returns and do not reflect the actual trading of investible assets. The performance of the Index 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 Index or a product that is intended to track the performance of the Index. 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 Index performance shown.*

*Any information presented prior to the Launch Date (September 30, 2015) of the Index 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 Index was officially launched.*

*Prospective application of the methodology used to construct the Index 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 Index. 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 Index methodology and selection of Index 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 Index 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 Index composition and return. All Index returns and characteristics are reported with a 2.5 month lag to allow sufficient time for SEC filings.*

*The Index is derived from sources that are considered reliable, but Cliffwater does not guarantee the veracity, currency, completeness or accuracy of the Index or other information furnished in connection with the Index. 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 Index or any data included therein, omissions therefrom or the use of the Index 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.*

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