The *Cliffwater Direct Lending Index* (*CDLI*) Meets the Highest Standards for Benchmarking Private Debt Performance

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While private debt managers have almost universally embraced the Cliffwater Direct Lending Index (CDLI) as a description of their own lending strategies and a measure of private debt performance, many private debt investors benchmark private debt performance against liquid credit indices or private debt funds in the same vintage cohort. This paper uses industry best practices to weigh the merits of these different approaches to private debt benchmarking. We find that the CDLI comes far closer to meeting benchmark standards compared to other options.

What private debt benchmarks are available?

Current private debt benchmarks fall into three categories.

a. Universe benchmarks, from the likes of Cambridge, Burgiss, Preqin, and Pitchbook, provide internal-rates-of-return (IRR) for private debt funds on an aggregated basis across time periods and by vintage year.

b. Public-equivalent indices, like the Morningstar LSTA US Leveraged Loan Index or the Bloomberg US Corporate High Yield Bond Index, asset-weight a population of individual public loans to create periodic time-weighted total returns (TWR). Oftentimes, a constant return spread of 1-3% per annum is added to the public-equivalent return to reflect a private return premium expected from private loans.

c. Private debt indices, like the Cliffwater Direct Lending Index (CDLI) or LSDI[1], asset-weight a population of individual *private* loans to create periodic time-weighted total returns (TWR), further decomposed into income and gain (loss) components.

What defines a good performance benchmark?

The answer was settled 35 years ago when Richards & Tierney (R&T) consultants identified six criteria describing a good benchmark:[2]

1. Unambiguous: index constituents and weights are known.
2. Measurable: sufficient information is available to calculate periodic rates of return.
3. Investable: a passive portfolio can be constructed that replicates the index.
4. Appropriate: index holdings reflect the investment strategy of the manager.
5. Specified: index holdings and weights are known in advance of evaluation period.
6. Reflective: managers should have knowledge of index constituents and characteristics.

[1] Lincoln Senior Debt Index, an index of approximately 500 private senior loans sourced and valued through Lincoln International's valuation business.
[2] J.V. Bailey, T.M. Richards, and D.E. Tierney, "Benchmarking Portfolios and the Manager/Plan Sponsor Relationship," Journal of Corporate Finance, 1988, p. 25-32.

How do the three categories of benchmarks stack up against the R&T criteria?

a. *Universe benchmarks* fail criteria 1, 2, 5, and 6 though some institutional investors and consultants still find them useful because investors (LPs) are familiar with the approach from private equity. Their main drawback is lack of transparency which causes them to fail the unambiguous criteria. These failures have been particularly acute for private debt universes where commercial venders have only recently collected data and defined sub-strategies. Also, vendors appear to have been engaged in significant backfilling[3] and defining historical vintage cohorts with only a few funds.

   Universes of private fund returns are also of limited value, providing no useful information on loan losses, the key to private debt performance evaluation. Instead, they parse private funds into strategy sub-categories and compare fund returns. These sub-categories are loosely defined with a large and vaguely defined "opportunistic" category that can't be deciphered unless their constituent funds are available, which they are not.

   Universe returns are reported using IRR, which we have shown elsewhere is inappropriate for private debt and tends to overstate investor returns. Universe returns and IRR are also challenged when it comes to risk. Standard deviation is incompatible with the IRR calculation which leaves investors unable to measure risk-adjusted return.

b. *Public-equivalent indices* fail criterion 4, a critical deficiency. Many allocators who use universe comparisons to judge individual private funds also use public-equivalent indices to evaluate their overall multi-fund performance.[4] This benchmarking approach is flawed because comparing the performance of public loans to private loans is completely apples-to-oranges. The public credit indices also tend to either outperform all private funds or underperform all private funds as they go through a market cycle, creating confusion as to whether private funds are performing well or not. Adding a credit return spread to a public loan index does not change the lack of comparability. Finally, a cynical view is that allocators prefer a public-equivalent benchmark because they are easy to outperform and at lower volatility.

c. *Private debt indices* like the Cliffwater Direct Lending Index (CDLI) meet all R&T criteria. It is unambiguous with its more than 7,000 unique private loans and weights available to anyone through public SEC filings, satisfying criterion 1. Returns, both total and component (income, realized, and unrealized) are calculated quarterly using the time-weighted return calculation methodology, satisfying criterion 2. The CDLI is investable, as demonstrated by its utilization amongst the largest and most prominent private debt interval funds and BDCs meeting criterion 3. The CDLI matches the lenders' desired investment domain, satisfying criterion 4. CDLI loan constituents and weights are also known quarterly in advance, satisfying criterion 5. Finally, fundamental data covering index investment characteristics regularly inform lenders of the CDLI coverage, satisfying criterion 6.

Does the Cliffwater Direct Lending Index (CDLI) pass the reasonable test?

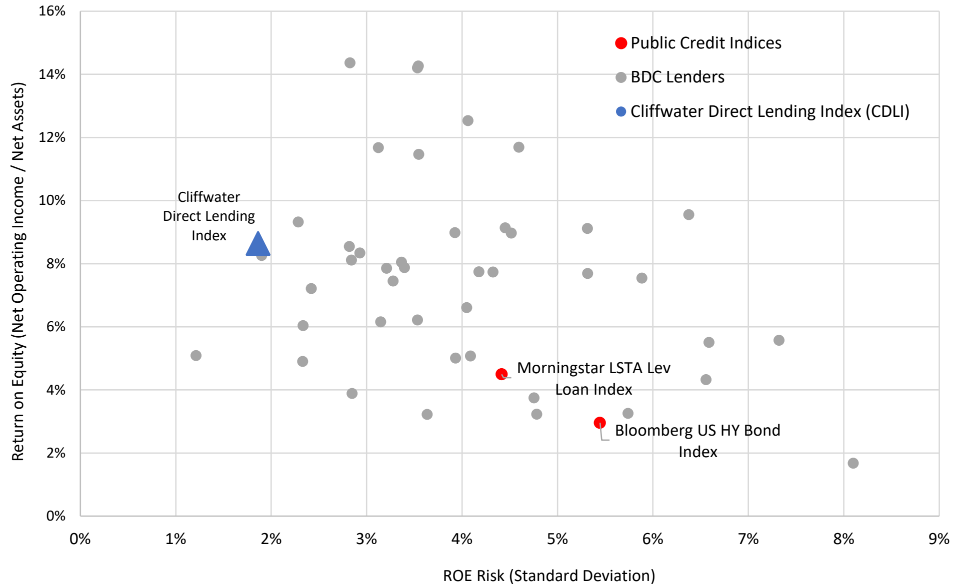
Exhibit 1 below reports time-weighted return and risk (standard deviation) for the CDLI, all 44 public and private BDCs with 5-year track records, and the two most popular public credit-oriented indices that benchmark private debt.[5]

Visual inspection of Exhibit 1 would conclude that only the CDLI passes the reasonable test for a private debt benchmark. Most importantly, the 8.64% CDLI return (y-axis) falls approximately at the median of

[3] Backfilling is known to bias historical returns upward as poor performing funds tend not to report.
[4] Cliffwater proprietary research finds that 33 of 41 state pensions investing in private debt benchmark their composite private debt return to a public credit index plus a return spread.
[5] BDC and CDLI returns use fair value accounting to determine NAV. The two public credit indices rely on market values to determine return. The CDLI and public credit are unlevered and gross of fees. The BDC returns include leverage and are net of fees.

BDC returns, a ranking one would expect a benchmark would have. By contrast, the vast majority of BDCs outperform the Morningstar LSTA and Bloomberg High Yield indices. Even when a return spread is added to either public index, or a weighted average of the two indices, most BDC managers easily win.

Exhibit 1: Five-Year Return and Risk for BDCs Compared to the CDLI and Public Credit Indices



CDLI risk level is far below most BDCs. This is for two reasons. First, the CDLI contains far more loan holdings compared to the average BDC. Second, the average BDC deploys 1:1 leverage while the CDLI is unlevered.

The CDLI would be equivalent to the widespread institutional use of NCREIF-NPI to evaluate private real estate.

Many allocators to private debt appear trapped by performance conventions used by private equity, relying on vintage and IRR for performance evaluation. Replacing those tools with a public-equivalent index creates different, and perhaps more serious, issues. There is a good answer in the Cliffwater Direct Lending Index and the time-weighted return calculation. And we know this approach works from institutional use of the NCREIF-NPI to evaluate real estate equity performance. The portfolio construction protocols for the CDLI are identical to those used for the popular NPI.

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