Private Debt: An Alternative in the Search for Yield

Shai Vichness, CFA
TIAA Global Asset Management
TIAA has allocated across the alternatives spectrum

$882 billion assets under management, including $161 billion in alternative assets, as of December 31, 2016

- Equity
- Municipal Fixed Income
- Taxable Fixed Income
- Other(*)
- Real Assets
- Private Capital
- Real Estate

1st Largest global farmland investor
2nd Largest grower of wine grapes by acreage in the U.S.
3rd Largest commercial real estate manager in the world

1st Largest manager of U.S. institutional tax-exempt real estate assets

1st Largest manager of timberland assets

Over 40 years as an active private capital investor

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1 Pensions & Investments, October 3, 2016. Rankings based on TIAA Global Real Assets institutional tax-exempt assets under management as of June 30, 2016 reported by each responding asset manager. TGRA has nearly $100 billion in AUM consisting of mandates covering timber, agriculture, energy, infrastructure, real estate and related financing investments.

2 Source: American/Western Fruit Grower’s annual Top 100 Growers report, September 13, 2014. Rankings are according to 2013 acreage; farms must be owned or leased by one company that is responsible for maintaining it. Acreage information is compiled based on grower feedback, industry analysis, and estimates based on past production.

3 TIAA began investing in leveraged buyouts in 1969.

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Market challenges spark demand for private debt’s “illiquidity premium”

- Investors are confronting low yields and structural changes in fixed-income markets
- Investors are turning to alternative credit in search of higher yield, better diversification, and lower risk than offered by traditional asset classes
- Despite growing interest and investment in the asset class, institutional investors remain underinvested in private debt
Private debt defined

- Private debt encompasses mostly non-investment grade loans ranging across the capital structure and risk spectrum.

- Borrowers of private debt are mostly private companies requiring capital for leveraged buyouts, acquisitions, balance sheet recapitalization and organic growth.

- A small but growing niche, private debt in closed end funds totaled $594B as of 30 June 2016.

### Private debt capital in closed end funds

$Billions as of 30 June 2016

Total AUM: $593.8 billion

- Direct Lending
- Distressed Debt
- Mezzanine
- Special Situations
- Venture Debt

Includes only closed-end fund assets tracked by Preqin. Source: Preqin Private Debt Research, 2016.

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Audience Questions

• What percentage of U.S. companies are publicly traded?
  A) <1%
  B) 4%
  C) 19%

• The U.S. Middle Market is comprised of how many companies?
  A) 100,000
  B) 200,000
  C) 350,000

• If it were viewed as a standalone country, the U.S. Middle Market would be the;
  A) 4th largest GDP in the world
  B) 7th largest GDP in the world
  C) 10th largest GDP in the world
US Non-investment grade corporate debt market

- **Seniority**
  - **Small + Senior** = Middle Market Senior Loans
    - Market participants: Limited Number of Lenders...the "Club"
    - Yields = 6% to 8%, Floating Rate
  - **Small + Junior** = Mezzanine + Second Lien
    - Market participants: Mezzanine Funds, BDCs, Credit Opportunities Funds
    - Yields = 9%+, Typically Fixed Rate
  - **Large + Senior** = Broadly Syndicated Loans
    - Market participants: CLOs, Mutual Funds, Insurance Companies, Asset Managers
    - Yields = 4% to 5%, Floating Rate
  - **Large + Junior** = High Yield Bonds
    - Market participants: Mutual Funds, Insurance Companies, Asset Managers
    - Yields = 6% to 7%, Fixed Rate

- **Size**
  - **Small**
  - **Large**
Private debt offers attractive risk and return characteristics

- Yields significantly higher than offered by similarly-rated public debt to compensate for illiquidity
- Lower default and loss rates historically compared to public debt due to strict covenants, management oversight, and other safeguards
- Diversification benefits based on generally low correlations with traditional assets
- Lower interest-rate risk for leveraged loans using floating-rate structures with lower duration
Middle market direct senior loans: The sweet spot for private debt

• Middle market generally includes loan facilities up to $250 million, below the facility sizes found in the broadly syndicated loan market

• The illiquidity premium for middle market senior loans over broadly syndicated loans ranges between 100 and 200 basis points

• Banks pulling back creates opportunity in direct lending

• Private equity dry powder suggests a backlog of demand for direct loans
Mezzanine debt: A specialized category of private loans

• Mezzanine loans are structured as either unsecured subordinated debt, or second lien term debt

• Typically used in leveraged buyout transactions to bridge the gap between the equity capital and optimal senior debt levels

• Several factors contribute to mezzanine debt’s attractive risk return profile
  • Support from equity investors
  • Illiquidity premiums
  • Performance sweeteners / potential for equity upside
Portfolio Considerations

Allocations to both senior middle market loans and mezzanine debt have the potential to improve risk-adjusted performance.

Mean-variance optimization (MVO) is a technique for determining the set of asset allocations designed to provide the maximum return for a given level of risk. Our analysis is based on historical performance for indexes representing private and public asset classes for the 17-year period, 1999 through 2015. Reliance on historical returns for a relatively short time period requires tempering conclusions because MVO is highly sensitive to data inputs for the time period selected. As a result, our optimization results should be considered broadly illustrative and directional, rather than predictive or precise.

Impact of leveraged loans versus high-yield bonds

<table>
<thead>
<tr>
<th>Portfolio Considerations</th>
<th>100% Traditional Portfolio</th>
<th>Adding Broadly Syndicated Loans</th>
<th>Adding Middle Market Loans</th>
<th>Adding High-Yield Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Mean Return</td>
<td>4.28%</td>
<td>4.30%</td>
<td>4.69%</td>
<td>4.39%</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>2.40</td>
<td>2.12</td>
<td>2.17</td>
<td>2.35</td>
</tr>
<tr>
<td>Sharpe Ratio</td>
<td>1.78</td>
<td>2.03</td>
<td>2.16</td>
<td>1.87</td>
</tr>
</tbody>
</table>

Mean-variance optimization generated a range of portfolios representing an efficient frontier for four different asset class combinations. The pie charts represent portfolios with the highest risk-adjusted returns (Sharpe Ratio) among portfolios on the frontier. Performance is based on quarterly returns for the period January 1, 1999 through December 31, 2015. Data reflect index returns for S&P 500 Index, BoA Merrill Lynch US High Yield Index, BoA Merrill Lynch US Corporate Bond Index, BoA Merrill Lynch 10yr US Treasury Index, S&P/LSTA Leveraged Loan Index. Middle market loans represent loans to companies with EBITDA of $50 million or less within the index. Sources: S&P LCD, Morningstar, TIAA Global Asset Management.
Portfolio Considerations

Allocations to both senior middle market loans and mezzanine debt have the potential to improve risk-adjusted performance.

Comparing the impact of adding mezzanine debt versus high-yield bonds

<table>
<thead>
<tr>
<th></th>
<th>1999-2015</th>
<th>Adding 20% High-Yield Bonds</th>
<th>Adding 20% Mezzanine Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traditional 60/40 Portfolio of Stocks and Bonds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Mean return</td>
<td>5.03%</td>
<td>5.29%</td>
<td>6.04%</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>9.94</td>
<td>10.00</td>
<td>8.62</td>
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<tr>
<td>Sharpe Ratio</td>
<td>0.51</td>
<td>0.53</td>
<td>0.70</td>
</tr>
</tbody>
</table>

Sources: Cambridge Associates, Morningstar, TIAA Global Asset Management.

Fixed Income Indices used:
S&P/LSTA Leveraged Loan Index includes broadly syndicated loans—mostly large loans greater than $200 million and a smaller portion of syndicated middle market loans of $200 million or less. The index was used as a proxy for larger, broadly syndicated loans, while middle market loan data represents only smaller loans in the index.
Cambridge Associates, Private Investment Benchmarks: Mezzanine debt index of quarterly internal rate of return (IRR).
BoA Merrill Lynch US High Yield Index: High yield bonds.
Risks of investing in private debt

• Credit risk

• Illiquidity

• Interest rate risk
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