Does CLO Rhyme With CDO?
What Borrowing Binge?
Net U.S. corporate-debt burden is less than excessive, Deutsche Bank says

Source: Federal Reserve, Bloomberg
Iffy Loan Dollar Volume Looks Bad....

Source: IMF
.....But Actually It’s Much Worse

<table>
<thead>
<tr>
<th>US Leveraged Loan Market Characteristics</th>
<th>Level 2007</th>
<th>Level 2018</th>
<th>Percentile Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding Leveraged Loans ($ billions)</td>
<td>554</td>
<td>1,147</td>
<td></td>
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<tr>
<td>US Issuance (percent of global issuance)</td>
<td>66.9</td>
<td>75.8</td>
<td></td>
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<tr>
<td>Covenant Quality Index</td>
<td>2.6</td>
<td>4.1</td>
<td></td>
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<tr>
<td>Covenant-Lite Share (percent of new issuance)</td>
<td>29.2</td>
<td>84.7</td>
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<tr>
<td>B-Rated (percent of new issuance)</td>
<td>22.6</td>
<td>58.0</td>
<td></td>
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<tr>
<td>Total Debt/EBITDA (times)</td>
<td>4.9</td>
<td>5.3</td>
<td></td>
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<tr>
<td>First Lien Debt/EBITDA (times)</td>
<td>3.5</td>
<td>4.3</td>
<td></td>
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<tr>
<td>Other Debt/EBITDA (times)</td>
<td>1.4</td>
<td>1.0</td>
<td></td>
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<tr>
<td>Deals with EBITDA Add-Backs (percent of new issuance)</td>
<td>8.4</td>
<td>27.1</td>
<td></td>
</tr>
</tbody>
</table>

Source: IMF
CLOs and Leveraged Loans Up 70% Since 2013

Collateralised loan obligations (CLOs) and loan funds facilitate demand

USD bn

USD bn

13 14 15 16 17 18

Assets under management:
Lhs: Europe CLOs
US CLOs
Rhs: Loan funds

Source: BIS
UnFun With Numbers

• US Bank loans to non-bank lenders have doubled from about 5% to 10% of loans between 2014 - 2018

• Global private equity firm AUM $3.4T AUM, including $1.2T dry powder.

• Gundlach: Debt-financed share buybacks have turned the stock market into a high-risk 'CDO residual'
The Model

• Builds on previous literature – CRE cap rates are driven by capital flows and broader debt market

• Cap rates determined by 10 Yr. Treasury, BBB corporate bond spreads, CDO/CLO issuance (proxy for risky capital flows) and NOI growth
Apartment Cap Rates Are “Right”

Source: Does CLO Rhyme With CDO? Buschbom, Diosdado and Nordby, 2019
Office Caps Need To Move Up This Week

Panel A: Office

Source: Does CLO Rhyme With CDO? Buschbom, Diosdado and Nordby, 2019
Not The End Of The World….But Not Much Fun Either

Increase in Cap Rates Following A 100bps Increase in BBB Spreads

Source: Does CLO Rhyme With CDO? Buschbom, Diosdado and Nordby, 2019
Discuss!

- Could a credit crunch happen without a recession?
- Outside of CRE – how do covenant lite loans to PE firms roll (roll?) out through borrowers in a recession? Credit spreads? The economy?
Discuss!

• Is the CRE model right for each property type?

• In a regular recession, does BBB spread expansion equal CRE cap rate expansion?
  • For a two quarters or two years?

• Where does a BBB-blowout hurt CRE
  • Most
  • Least