Too Big to Diversify

A Stress Test on Collateralized Loan Obligations

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CLO SPVs often sell loans that are downgraded to CCC

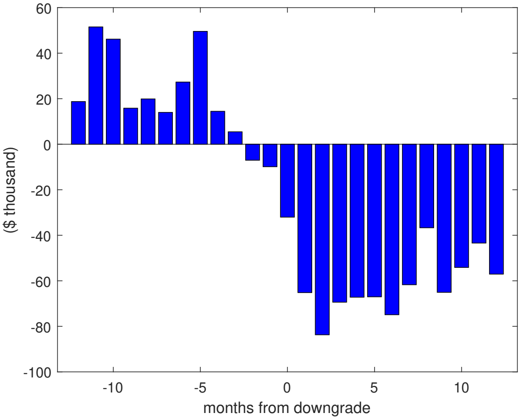


Figure: Difference between the total purchases and sales of the loans that are rated BB or above, and downgraded to CCC or below in month 0. For each downgraded loan, the sum of purchase and sales by all CLOs from months -12 to $+12$, averaged across loans. Source: Elkamhiy and Nozawaza.

The main ideas of the paper

1. CLO contracts require the sale of collateral loans as needed to maintain over-collateralization (OC) ratios.
2. For OC measurement:
   - loans rated above CCC are book valued.
   - loans rated CCC or lower, in excess of 7.5% of assets, are market valued.
3. When loans are downgraded to CCC or lower, OC ratios are stressed. CLO downgrades could follow.
4. CLO SPVs react quickly, selling loans to recover OC buffers.
5. There is often an incentive to sell the downgraded loans, because other loans are book valued.
6. Price impacts are higher if loans to the downgraded borrower are held by multiple OC-stressed SPVs.
7. This is a source of systemic risk.

Fewer constrained SPVs: less price impact on downgrade

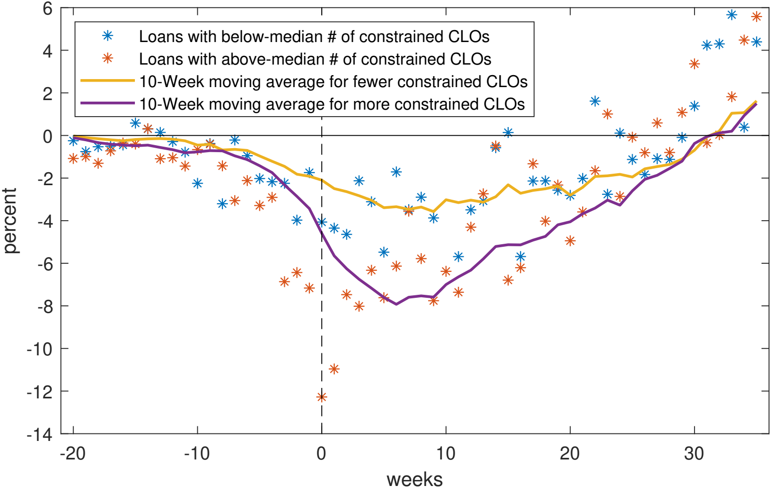


Figure: Cumulative abnormal returns of liquidated loans. Source: Elkamhiy and Nozawaza, based on CAR model of Ellul, Jotikasthira, and Lundblad (2011).

Price impacts and market presence of loan mutual funds

Putting more loans into mutual funds is better or worse for financial stability?

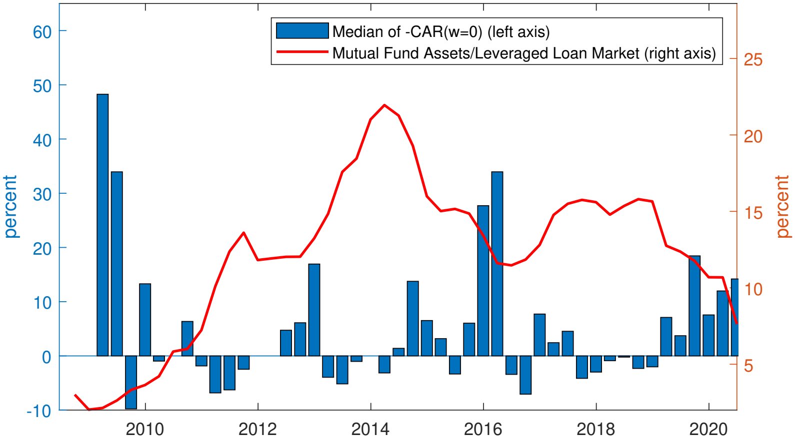
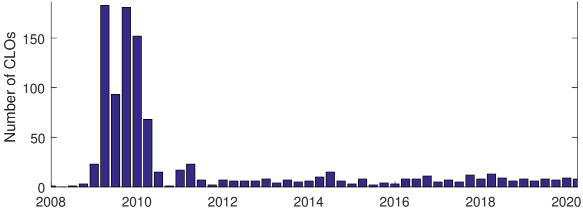
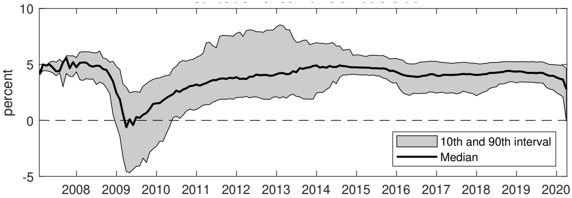


Figure: Source: Elkamhiy and Nozawaza

Are the high OCs of CLO 2.0 better or worse for financial stability?



(a) Total downgrades of all CLO tranches. Source: Elkamhiy and Nozawaza.



(b) Junior slack overcollateralization. Source: Elkamhiy and Nozawaza

Implications for systemic risk

1. Ivashina and Harmon (2020):
   - \$1.2 trillion of leveraged loans, 71% funded by CLOs, 70% B-rated.
   - By April 15, LL prices were down 9%, year to date. CCC-rated LLs were down 21%.
   - Price pressure caused by CLO liquidations could impair primary market lending.

2. My view:

   Despite these concerns, CLO 2.0 SPVs are a systemically safer place for leveraged loans than (a) U.S. banks, which have \$110 billion (Partnoy, 2020), or (b) mutual funds.