Insurance companies and the growth of corporate loans' securitization

Fulvia Fringuellotti & João A.C. Santos

Discussion by Dominik Damast (LUISS)

Conference on "Banking, Insurance and Financial Stability", Rome

6 December 2024

Summary

- **Main RQ(s):** What role did insurance companies play in the growth of CLOs?

Summary

- **Main RQ(s):** What role did insurance companies play in the growth of CLOs?
- Studies insurers' CLO demand and traces its effects on credit markets

Summary

- **Main RQ(s):** What role did insurance companies play in the growth of CLOs?
- Studies insurers' CLO demand and traces its effects on credit markets
  - (Coarse) capital regulation incentivized insurers' CLO investments

  ⇒ "Reaching for yield" à la Becker and Ivashina (2015)

Summary

- **Main RQ(s):** What role did insurance companies play in the growth of CLOs?
- Studies insurers' CLO demand and traces its effects on credit markets
  - (Coarse) capital regulation incentivized insurers' CLO investments

  $\Rightarrow$ "Reaching for yield" à la Becker and Ivashina (2015)
  - Insurers' demand transmitted via CLO markets to credit markets

Summary

- **Main RQ(s):** What role did insurance companies play in the growth of CLOs?
- Studies insurers' CLO demand and traces its effects on credit markets
  - (Coarse) capital regulation incentivized insurers' CLO investments
  - $\Rightarrow$ "Reaching for yield" à la Becker and Ivashina (2015)
  - Insurers' demand transmitted via CLO markets to credit markets
- Plan for today:
  - Relevance and contribution
  - Another angle on the story
  - (Welfare) consequences

Relevance & Contribution

- **Broader RQ:** What explains the rise of CLO markets?
  - **Relevant:** CLOs developed into an important market (≈$ 1 trillion in 2023)
  - A key source of financing for the leveraged loan market

Relevance & Contribution

- **Broader RQ:** What explains the rise of CLO markets?
  - **Relevant:** CLOs developed into an important market (≈$ 1 trillion in 2023)
  - A key source of financing for the leveraged loan market

- *This paper:* Insurance regulation sparked (a part of) the growth
  - ⇒ Backs up current concerns of regulators
  - NAIC (very recently): "*it is currently possible to materially (and artificially) reduce C1 capital requirements just by securitizing a pool of assets*" (NAIC, 16 April 2024)

Relevance & Contribution

- **Broader RQ:** What explains the rise of CLO markets?
  - **Relevant:** CLOs developed into an important market (≈$ 1 trillion in 2023)
  - A key source of financing for the leveraged loan market
- *This paper:* Insurance regulation sparked (a part of) the growth
  - ⇒ Backs up current concerns of regulators
  - NAIC (very recently): "*it is currently possible to materially (and artificially) reduce C1 capital requirements just by securitizing a pool of assets*" (NAIC, 16 April 2024)
- Contributes to understanding...
  - How regulation spills over in financial markets
  - How and why insurance companies become shadow banks (Foley-Fisher et al., 2023)

The changing landscape of insurance

- **Step 1 of the analysis:** Why did insurers spark the growth of CLOs?

The changing landscape of insurance

- **Step 1 of the analysis:** Why did insurers spark the growth of CLOs?
  - *Paper's answer:* Higher yield on CLOs + regulatory arbitrage
  - **BUT:** There might be additional facets to the story

The changing landscape of insurance

- **Step 1 of the analysis:** Why did insurers spark the growth of CLOs?
  - *Paper's answer:* Higher yield on CLOs + regulatory arbitrage
  - **BUT:** There might be additional facets to the story
- The post-GFC era featured two additional trends:
  - The entry of private equity (Kirti and Sarin, 2023)
  - The rise of shadow banking (Foley-Fisher et al., 2023)

The changing landscape of insurance

- **Step 1 of the analysis:** Why did insurers spark the growth of CLOs?
  - *Paper's answer:* Higher yield on CLOs + regulatory arbitrage
  - **BUT:** There might be additional facets to the story
- The post-GFC era featured two additional trends:
  - The entry of private equity (Kirti and Sarin, 2023)
  - The rise of shadow banking (Foley-Fisher et al., 2023)
- These trends seem connected:
  - Insurers provide a stable source of funding for PE
  - Insurers buy the debt tranches of CLOs; the PE firm the equity tranches
  - Banks refocussed on commercial banking, leaving a gap for shadow banks

The changing landscape of insurance

Bond portfolio by asset class (2014)

	PE	Non-PE	t-stat
General account bonds/Total assets	63.3	62.6	0.20
Corporate	48.1	52.4	−1.43
Fed Govt	16.6	25.9	−3.52
State Govt	2.7	4.7	−3.34
Foreign Govt	0.4	0.5	−0.60
Private-label ABS	22.3	7.4	4.90
Agency ABS	8.2	6.1	1.25
NAIC 1	72.5	73.4	−0.35
NAIC 2	24.6	23.2	0.65
NAIC 3	1.5	1.9	−1.57
NAIC 4	0.7	0.6	0.84
NAIC 5	0.1	0.1	0.71
NAIC 6	0.1	0.0	1.50
Insurers	709		

Figure: PE vs non-PE insurers' bond portfolio allocation. Source: Table 1 in Kirti and Sarin (2023).

The changing landscape of insurance

- In particular, PE insurers are at the forefront of CLO investments
  - $\Rightarrow$ Regulation made insurers a favorable target for PE (and still does)

The changing landscape of insurance

- In particular, PE insurers are at the forefront of CLO investments
  - $\Rightarrow$ Regulation made insurers a favorable target for PE (and still does)
  - PE held $53 billion (≈21.4%) of insurers' CLOs in 2022 (Carelus et al., 2023)

The changing landscape of insurance

- In particular, PE insurers are at the forefront of CLO investments
  - $\Rightarrow$ Regulation made insurers a favorable target for PE (and still does)
  - PE held \$53 billion ($\approx$21.4%) of insurers' CLOs in 2022 (Carelus et al., 2023)

- *Suggestion:* Connect these trends in the empirical analysis
  - Private equity as a spark ignited insurers' (overall) CLO demand?

The changing landscape of insurance

- In particular, PE insurers are at the forefront of CLO investments
  - ⇒ Regulation made insurers a favorable target for PE (and still does)
  - PE held \$53 billion (≈21.4%) of insurers' CLOs in 2022 (Carelus et al., 2023)
- *Suggestion:* Connect these trends in the empirical analysis
  - Private equity as a spark ignited insurers' (overall) CLO demand?
- The results can motivate additional tests for CLO and credit markets:
  - Connect equity investors and/or CLO managers with insurance companies
  - ⇒ Do connections to insurance owners shape CLOs (after acquisition)?
  - ⇒ Do borrowers profit from insurance owners (after acquisition)?

Consequences of insurers' CLO investments

- Regulatory arbitrage drives insurers' CLO investments
  - **Should we be worried?**

Consequences of insurers' CLO investments

- Regulatory arbitrage drives insurers' CLO investments
  - **Should we be worried?**

(+) CLOs = lower default rates & higher returns (Cordell et al., 2023)

$\Rightarrow$ Policyholders benefit through lower prices (Knox and Sørensen, 2024)?

Consequences of insurers' CLO investments

- Regulatory arbitrage drives insurers' CLO investments
  - **Should we be worried?**

(+) CLOs = lower default rates & higher returns (Cordell et al., 2023)

⇒ Policyholders benefit through lower prices (Knox and Sørensen, 2024)?

(–) However, CLOs are more exposed to systematic risk (Cordell et al., 2023)

Consequences of insurers' CLO investments

- Regulatory arbitrage drives insurers' CLO investments
  - **Should we be worried?**

(+) CLOs = lower default rates & higher returns (Cordell et al., 2023)

$\Rightarrow$ Policyholders benefit through lower prices (Knox and Sørensen, 2024)?

(−) However, CLOs are more exposed to systematic risk (Cordell et al., 2023)
  - Life insurers offered "systematic risk insurance" with minimum return guarantees
  - Substantial legacy liabilities on insurers' balance sheets (Koijen and Yogo, 2021)

Consequences of insurers' CLO investments

- Regulatory arbitrage drives insurers' CLO investments
  - **Should we be worried?**

(+) CLOs = lower default rates & higher returns (Cordell et al., 2023)

$\Rightarrow$ Policyholders benefit through lower prices (Knox and Sørensen, 2024)?

(−) However, CLOs are more exposed to systematic risk (Cordell et al., 2023)

  - Life insurers offered "systematic risk insurance" with minimum return guarantees
  - Substantial legacy liabilities on insurers' balance sheets (Koijen and Yogo, 2021)

$\Rightarrow$ CLOs aggravate life insurers' exposure to systematic risk? (Foley-Fisher et al., 2023)

Consequences of insurers' CLO investments

- Regulatory arbitrage drives insurers' CLO investments
  - **Should we be worried?**

(+) CLOs = lower default rates & higher returns (Cordell et al., 2023)

⇒ Policyholders benefit through lower prices (Knox and Sørensen, 2024)?

(−) However, CLOs are more exposed to systematic risk (Cordell et al., 2023)

- Life insurers offered "systematic risk insurance" with minimum return guarantees
- Substantial legacy liabilities on insurers' balance sheets (Koijen and Yogo, 2021)

⇒ CLOs aggravate life insurers' exposure to systematic risk? (Foley-Fisher et al., 2023)

⇒ *Suggestion:* Explore (welfare) consequences of insurers' CLO investments

Assessment

- **Short assessment:** Examines a key factor of the growth of CLOs
  - Regulatory arbitrage shaped insurers' CLO demand...

Assessment

- **Short assessment:** Examines a key factor of the growth of CLOs
  - Regulatory arbitrage shaped insurers' CLO demand...
  - ...which explains (a part of) a bigger trend in the financial system

Assessment

- **Short assessment:** Examines a key factor of the growth of CLOs
  - Regulatory arbitrage shaped insurers' CLO demand...
  - ...which explains (a part of) a bigger trend in the financial system
- Constructs a comprehensive story offering a clean analysis on every step

Assessment

- **Short assessment:** Examines a key factor of the growth of CLOs
  - Regulatory arbitrage shaped insurers' CLO demand...
  - ...which explains (a part of) a bigger trend in the financial system
- Constructs a comprehensive story offering a clean analysis on every step
- **Potential further evidence:**
  - Connect recent trends in insurance markets
  - Assess (some) consequences for insurance markets

Assessment

- **Short assessment:** Examines a key factor of the growth of CLOs
  - Regulatory arbitrage shaped insurers' CLO demand...
  - ...which explains (a part of) a bigger trend in the financial system
- Constructs a comprehensive story offering a clean analysis on every step
- **Potential further evidence:**
  - Connect recent trends in insurance markets
  - Assess (some) consequences for insurance markets
- **Thank you for the presentation, and good luck with the paper!**

Minor comments

- Although I theoretically support the argument that insurers who benefited from the reform should have a special taste for CLOs, the empirical test seems weak. Considering the size of insurers' CLO holdings in 2009/2010, the importance of the reform seems very limited. Capital reliefs on holdings of less than $20 billion for an industry multiple trillions large do probably not produce a substantial effect, i.e., an empirical test needs more power.

- I have additional doubts regarding the suitability of the reform as a source of exogenous variation arising in Table 8. Although the interaction terms go in the expected direction, reliable statistical significance exists only for the mezzanine tranches. Moreover, the overall effect of insurance companies' CLO shares might still go in the opposite direction if the share of a CLO held by insurance companies that benefited from the reform is small, which is likely the case for the majority of CLO deals. Additionally, I cannot imagine that the share of insurance companies that benefited from the reform is relevant for CLO deals issued in later years, as the reform was already in place for some time.

Minor comments

- The calculated increase in insurers' holdings concerning a security's yield seems scaled by 100. If the median outstanding amount of securities in the sample corresponds to \$650 million, then a 14 basis points increase in the holding share of an insurer would correspond to an additional investment of \$650 million $\times$ 0.14% = \$910,000. Of course, this number is still substantial as the median holding share corresponds to 0.12% of the outstanding amount.
- Taking the first end-of-year holdings for insurers is standard practice in the literature. However, as you rely on "self-reported" holdings, I suggest including the constraint that the insurers' first investment in a security must be at the end of the security's issuance year - at least in a robustness check. I think this restriction will not gravely reduce the sample size; however, it solidifies the argument against any doubts stemming from insurers also having a preference to buy low-price securities, see, e.g., Chodorow-Reich et al. (2021).

Literature I

Becker, B. and Ivashina, V. (2015). Reaching for Yield in the Bond Market. *Journal of Finance*, 70(5):1863–1902.

Carelus, J.-B., Johnson, J., Lee, G., and Lee, H. (2023). Continued Double-Digit Increase in U.S. Insurers' Collateralized Loan Obligation Exposure in 2022. Technical report, NAIC Capital Markets Bureau.

Chodorow-Reich, G., Ghent, A., and Haddad, V. (2021). Asset Insulators. *Review of Financial Studies*, 34(3):1509–1539.

Cordell, L., Roberts, M. R., and Schwert, M. (2023). CLO Performance. *Journal of Finance*, 78(3):1235–1278.

Foley-Fisher, N., Heinrich, N., and Verani, S. (2023). Are US Life Insurers the New Shadow Banks? *Working Paper*.

Kirti, D. and Sarin, N. (2023). What Private Equity Does Differently: Evidence from Life Insurance. *The Review of Financial Studies*, 37(1):201–230.

Knox, B. and Sørensen, J. A. (2024). Insurers' Investments and Insurance Prices. *Working Paper*.

Koijen, R. S. and Yogo, M. (2021). The Evolution from Life Insurance to Financial Engineering. *Working Paper*.