The Pricing Implications of the Oligopolistic Securities Lending Market: A Beneficial Owner Perspective

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Research question
- Examine the securities lending market dynamics of the European benchmark safe assets, the German government bonds.
- Test market inefficiencies that may arise in the opaque and oligopolistic sec-lending market:
  - Is there evidence of price (lending fee) inelasticity and discriminatory pricing behavior towards less connected lenders?
  - In the long maturity segment, where the lenders are most likely wealth preservation agents, test whether sec-lending can provide much needed additional income in the protracted interest environment.

The Oligopolistic Sec-Lending Market
- Sec-lending contracts are fully collateralized tri-party contracts with temporary transfer of ownership.
- The market operates as an OTC market globally
  - Hence it is non-transparent with a dozen key prime broker-agents with market power and information advantage over lenders (beneficial owners).

Revenue Sources in the Oligopolistic Sec-Lending Market
- Sec-lending is important for collateral swaps and derivative settlement, where the demand for specific assets drives these transactions:
  - Consequently, the benchmark safe asset should earn high fees
  - We document that despite the high utilization rates, lending fees are small <<1%:

Empirical Results on Sec-lending Market Inefficiencies
- Market efficiency implies that the lending fees instantaneously capture information:
  - Fees (prices) are established as the intersection of demand and supply, and they proxy for liquidity.

- Test pricing efficiency and elasticity in the HQLA lending market
  - By testing the price response to endogenous demand shocks (top 2% shock to lending demand (on loan)) and anticipated demand shocks around bank reporting dates (lock in HQLA to decrease regulatory capital buffer):
    - Even after controlling for lending market demand and supply, large positive demand shocks increase lending fees.
    - The effect of the large demand shocks incorporates into fees with a delay of up to three days. This fee response in the long maturity segment (TTM>10yrs) takes longer.
    - Fees increase around reporting dates, especially after 2010, but not in the long maturity segment. Despite the demand pressure, CSIs cannot capitalize from lending.

- Test agents’ discriminatory pricing behavior
  - The dispersion in lending terms is measured by the fee spread: the difference between the highest and lowest fees on a given bond, on a given day.
  - The spread increases with demand and lending fees, which indicates price discrimination. The spreads are even larger in the long maturity segment, which is indirect evidence of misrepresentation of less connected borrowers.

Policy Recommendations
- Policy recommendation
  - CSIs should lobby for regulatory oversight to increase transparency and reduce market inefficiencies. This is taking place in Europe, where the SFTR, a post-trade transparency regulation for lending and repo, will soon come to effect in 2020.
  - Smaller funds could establish a lending cooperative to share the costs of a lending desk, while increasing bargaining power.

Contractual Savings Institutions (CSIs) as Beneficial Owners
- CSIs are pension funds, life insurers and investment funds. These institutions are responsible for the wealth preservation of the average European citizen.
  - Their asset allocation and risk mgmt. practices are heavily regulated (e.g., Solvency II).
  - They hold large amounts of long maturity government bonds, to minimize the duration gap between their asset and liability portfolios.

Data and sample
- Germany is the issuer of the most liquid and safest treasuries in Europe:
  - German Bunds of 2, 5, 10 and 30 years, capturing 90% of the total German tradable federal debt.
- Data sources
  - IHS Markit Securities Financing Transactions data: daily ISIN level aggregate lending fees, supply and demand, utilizations, fee spread
  - Bloomberg for bond yields and characteristics.

Average lending fees (in basis point) --- Average utilization rates (per. Right Axis)

Data sources
- Sample period:
- Transactions data:
  - Daily ISIN level aggregate lending fees, supply and demand, utilizations, fee spread
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The oligopolistic and non-transparent market structure may distort pricing dynamics, especially in long-term HQLA segment:
- CSIs often do not have their internal lending desk and operate through intermediaries and broker-agents instead
- This makes them less informed and less connected in the OTC network, and thus more prone to be misrepresented.