Flight to "Futures" During the Financial Crisis
: Deliverability Through Central Counterparties

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Abstract

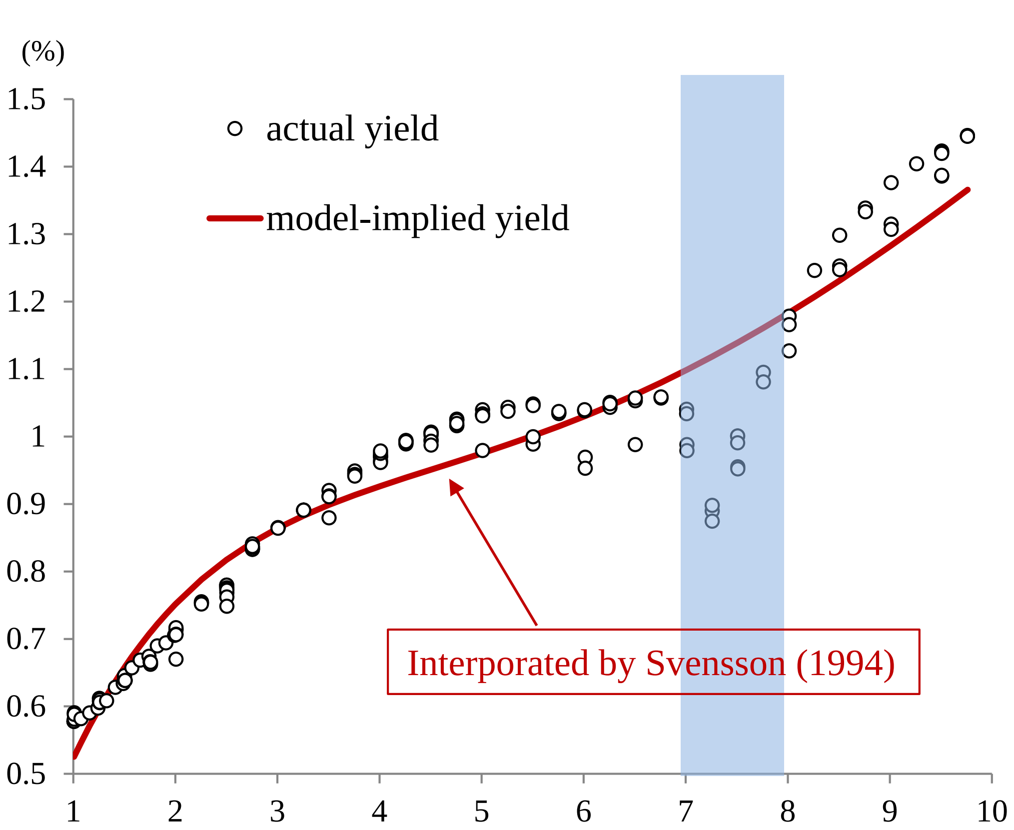
1. **First paper to empirically evaluate the central counterparties (CCPs) during financial crisis**
2. **Taking advantage of the physical settlement of JGB futures through CCPs**
3. **Compare 7- and 6.75-year JGBs to identify the premium on the settlements through CCPs**
4. **Special premium of settlement through CCPs emerged only during financial crisis**
5. **Special premium is significantly related to physical settlements through CCPs**

What is central counterparties(CCPs)?

1. CCPs is a financial institution that takes on counterparty risk between parties to a transaction and provides clearing/settlement services
2. The recent regulation reforms require standardized derivatives should be cleared through CCPs

The term structure of JGB just after the failure of Lehman Brothers

1. The higher premium for the 7-year sector emerged during the crisis
2. The emergence of this special premium coincided with the timing when investors recognized the counterparty risk in the OTC market.

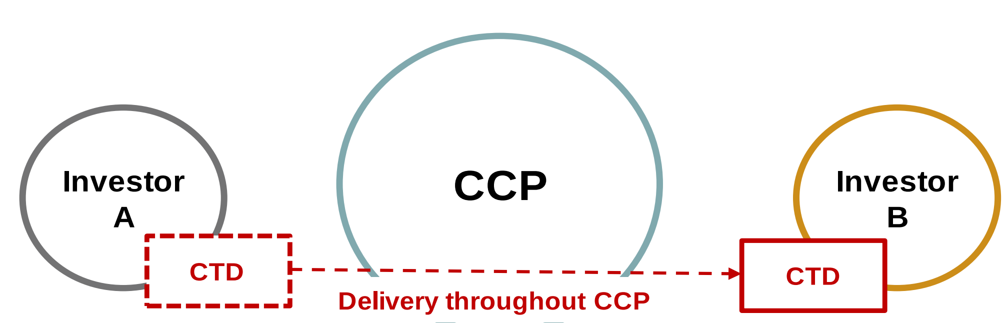


The empirical method

1. Under 10 year-JGB futures, the JGBs with 7～11 years are eligible for delivery, where 7-year JGB (the shortest bonds) basically becomes the CTD (Cheapest to Deliver) bonds.
2. Investors can settle the CTD through CCPs using JGB futures.
3. We compare 7-year JGB, which is in the deliverable basket, with 6.75-year JGB, which is not in the basket.
4. No other institutional feature that makes 7-year JGBs special except for their linkage with JGB futures.
5. We consider this as an ideal situation for extracting the premium on linkages to futures. This is the same idea as on-the-run/off-the-run premium.
6. To confirm the linkage between CTD premium and the settlement through CCPs, we regress the premium on the actual bonds delivered through CCPs.

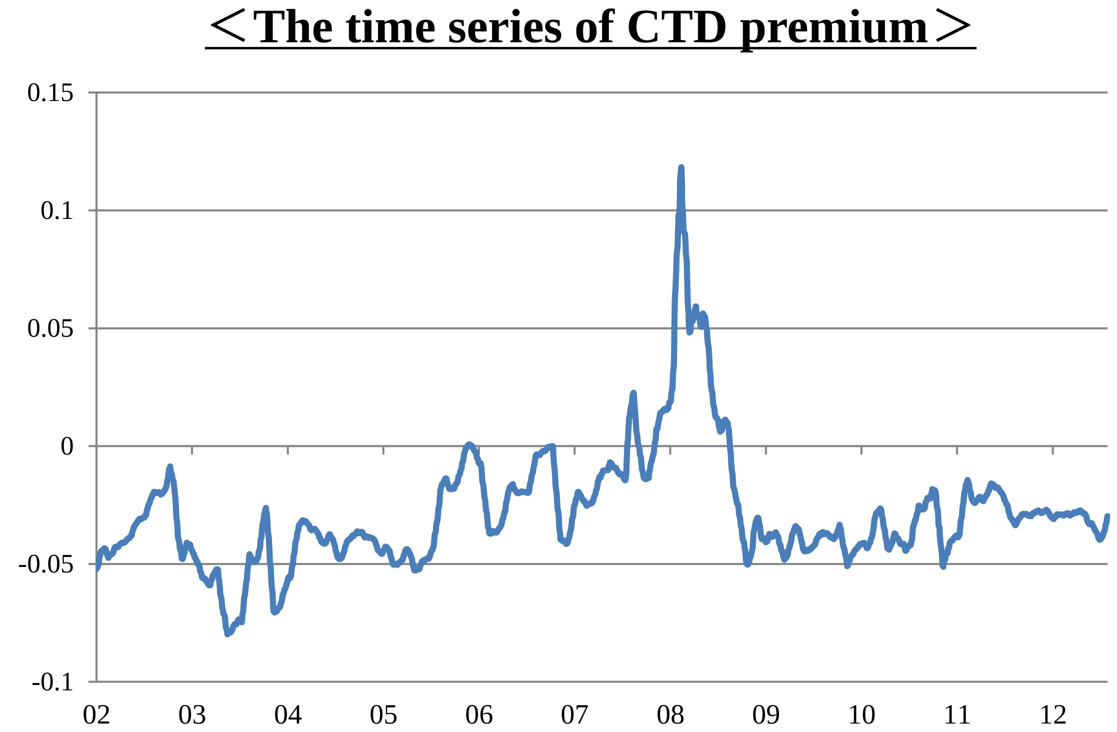
＜Settlement of CTD and non-CTD with and without linking to JGB futures＞

1. CTD (7-year JGB) with JGB Futures

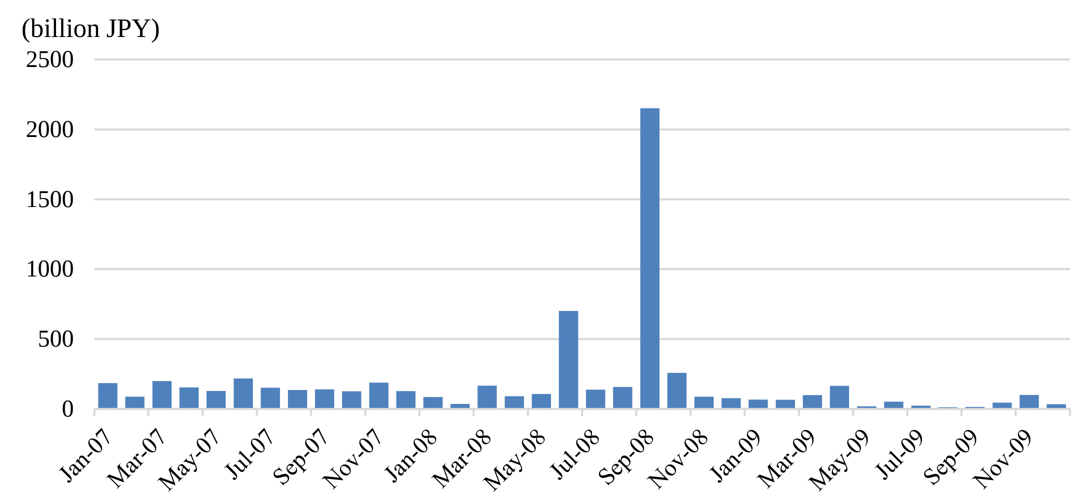


2. Non CTD (6.75-year JGB) without JGB Futures

＜The time series of CTD premium＞



＜Settlement Fails in the JGB Market＞



Results

- The actual amount of the delivered JGBs has a positively significant relationship with the special premium with 5% significant level.

	(1)	(2)
Delivery	0.022**	0.018***
	(0.010)	(0.005)
bid ask spread		1.644***
		(0.454)
R-squared	0.180	0.279
Observations	43	43

Note: The robust standard error with Newey–West is in parentheses (*** p<0.01, ** p<0.05).

The Possibility of Squeeze?

- No possibility of "Squeeze" during the financial crisis for three reasons.
  - A) Existence of Liquidity Enhancement Auction.
  - B) We cannot find the potential squeeze proposed by Merrick et al. (2005) *JFE* during the crisis.
  - C) The market participants made a comment about few possibilities of squeeze during the crisis.

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