Designing a Crisis Liquidity Facility with Nonbank Counterparties: Lessons from the Term Asset-Backed Securities Loan Facility[1]

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[1] The views expressed here are those of the author and do not necessarily reflect the views of the Board of Governors, Federal Reserve Bank of Chicago, or staff of the Federal Reserve System.

How to design a Liquidity Facility with Nonbanks?

Central bank liquidity Provision during crisis times

- The nonbank financial sector is large and susceptible to freezing during financial crisis.
- Central bank liquidity facilities target banks or nonbank financial markets (CP, bonds)

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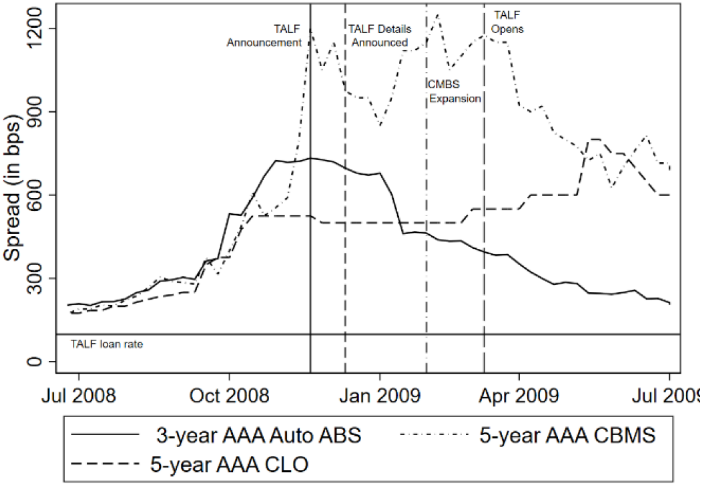
Our contribution

- New microdata: Borrowers and collateral in TALF loans
- Findings:
  1. Funding conditions and investment parameters of nonbanks matter for participation
  2. Tradeoff between participation and risk-taking incentives
  3. Incentives of different types of investors are better aligned with different central bank goals

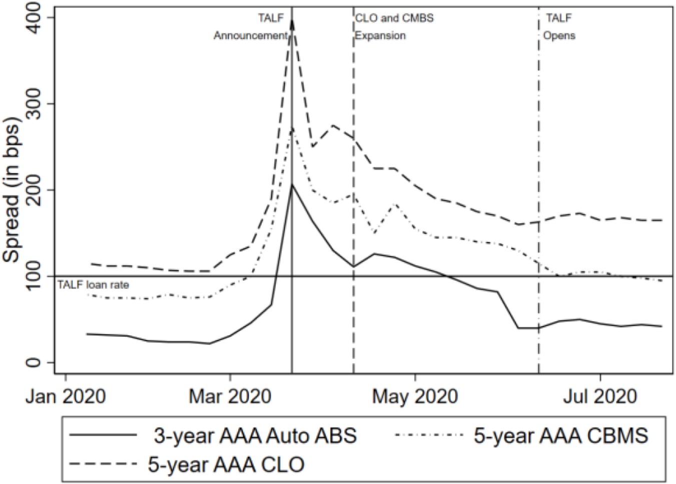
Motivation

ABS Spreads blew out in 2008...



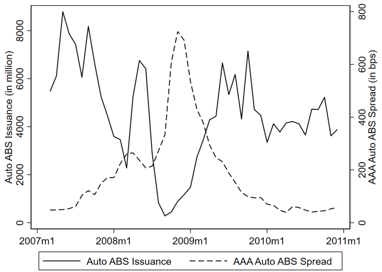
Motivation

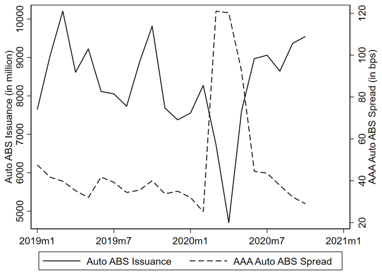
...and in 2020.



ABS fund a large share of U.S. economic activity

- In 2008, ABS funded 45 percent of credit card and auto loans
- ABS issuance came to a near halt in 2008 and 2020





Direct vs Intermediary Model

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- Intermediary Model - Pros
    1. Retains market participants in role of assessment of risk
    2. Provides an exit strategy

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  2. Provides an exit strategy
- Intermediary Model - Cons
  1. Federal Reserve has less experience with nonbank counterparties

Our Approach - TALF as Case Study

- TALF is a close-to-ideal case study because of broad range of nonbank investors:
  1. Traditional Investors: Pension funds, insurance companies, mutual funds, REITs, banks

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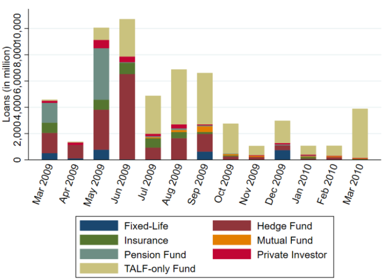
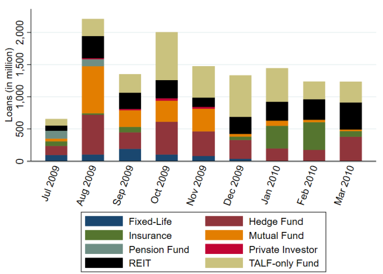
- Explore how the incentives and constraints of nonbank ABS investors shaped their participation in TALF.

TALF 1.0 investors

ABS

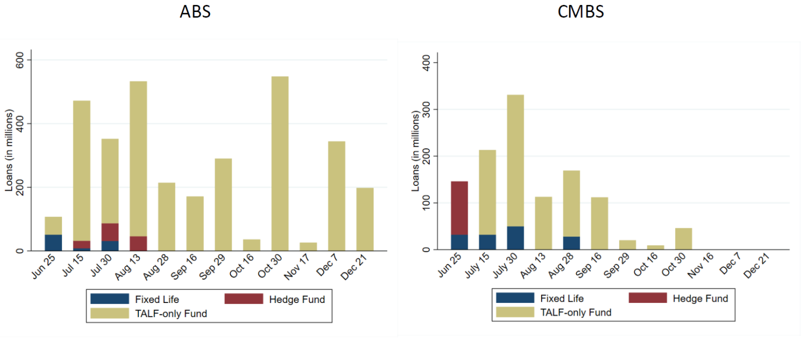


CMBS



1. Borrowers: 175
2. Loans Requests: 1,919
3. Total Amount: $72bn

TALF 2.0 investors



1. Borrowers: 21
2. Loans Requests: 220
3. Total Amount: $4.4bn

Framework

Study whether nonbank investor and Federal Reserve incentives are aligned in the context of four central bank goals

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1. Stabilize markets quickly
2. Exit intervention when market conditions normalize
3. Protect the government from losses
4. Provide liquidity to a broad range of securities

Key TALF design features

TALF Terms and Conditions

- Three- or five-year loans to purchase newly issued ABS and legacy CMBS

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- Collateral had to be rated triple-A by at least two rating agencies (and could not be rated below triple-A by any rating agency)

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- No prepayment penalty

TALF Collateral Review

- New-issue ABS
  1. TALF borrowers took out loan at same time as ABS was issued
  2. Originally had no collateral review beyond rating agencies
  3. Starting November 2009, FRBNY reviewed new-issue ABS for credit quality
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- Legacy CMBS
  1. TALF borrower purchased CMBS in advance and submitted it as loan collateral
  2. FRBNY published accepted and rejected CUSIPs for each subscription
  3. If CUSIP was rejected, borrower had to sell security or line up other financing

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- Contractual Constraints: Strict investment parameters (fixed-life, TALF-only funds)

Stabilize Market Quickly

Which investors respond nimbly?

- Early Entrants (active in first subscription)
  1. Existing entities with flexible investment parameters and/or starved for funding
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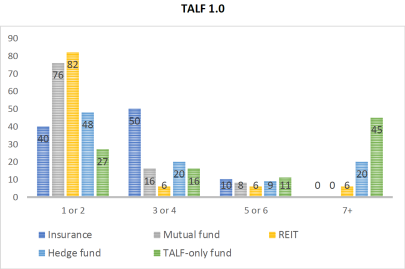
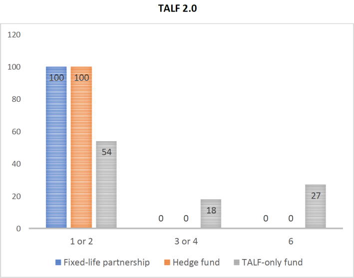
- Late Entrants, TALF 1.0 only (active in fifth subscription)
  1. Mutual funds (Needed SEC relief to participate)

Traditional investors participated less than opportunistic investors

Number of subscriptions a borrower participated by borrower type





Exit When Markets Normalize

Loan Repayment by Investor Type

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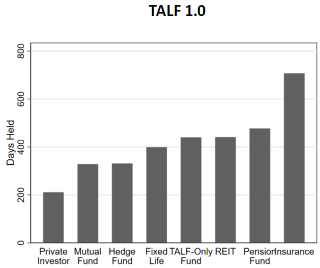
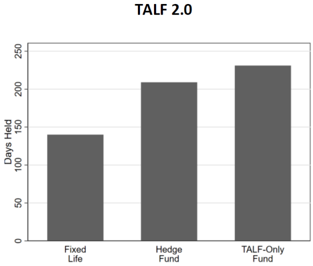
- Robust to various regression specifications





Protect Government from Losses

Collateral Review Reduced CMBS Requests

- Total ABS loan requests: $58B; total CMBS requests, $13B
- Many (about 1350) CMBS were eligible compared with new-issue ABS (about 100)
- Spreads on legacy CMBS were wide throughout the program
- BUT CMBS underwent an undisclosed NYFED stress test

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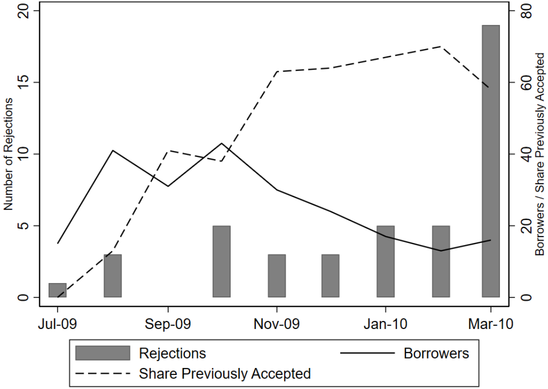
	Accepted	Rejected
Share Delinquent	2.36%	3.54%
Median WAL (Years)	2.80	5.68
Downgraded later	2.64%	14.63%

Rejection was costly

Rejections over time



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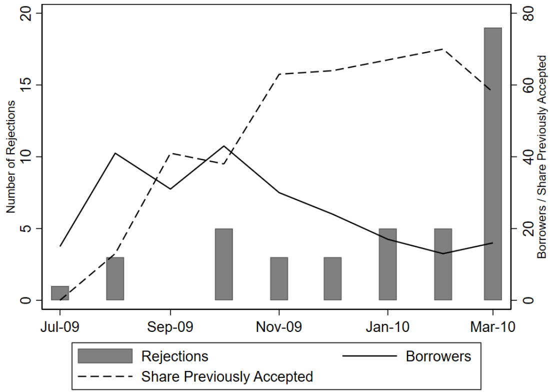

Bond buyers said it was hard to determine a pattern behind the decisions: "Several investors have started to compare the TALF rejection process to a random number generator." CM Alert, October 30, 2009.

Consequences of October Rejections

	Borrowers		CUSIP accepted before	
	Oct 09	Nov 09	Oct 09	Nov 09
Mutual Fund	7	7	60	76
Hedge Fund	11	8	35	71
REIT	4	1	21	56
TALF-only Fund	16	11	48	65
TALF-only (allows rejection)	3	3	44	43
TALF-only (no rejection)	8	4	44	100

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- TALF-only funds with PPMs that didn't envision rejection risk also pulled back

REIT Behavior Highlights Funding Constraints and Risk Appetite

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- CMBS spreads fell from 350 bps in 2009:Q4 to 290 bps in 2010:Q1, which would spur some additional risk taking, but still well above TALF loan rate of 100 bps

CMBS Spreads Rose after Rejection

- Estimate the effect of rejections in a panel
- LHS: Spreads changes over a five-day window

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	7-day window Subscriptions	9-day window Subscriptions	11-day window Subscriptions
Rejected	13.71***	22.50***	23.11***
	(4.09)	(6.89)	(8.02)
Time FE	Yes	Yes	Yes
CUSIP FE	Yes	Yes	Yes
Observations	106,196	106,180	106,164
R2	0.40	0.40	0.39

1. Effects are concentrated in the first subscriptions and decline over time.
2. Effect on last subscription still sizeable (18 bps).

Provide Liquidity to Broad Range of Securities

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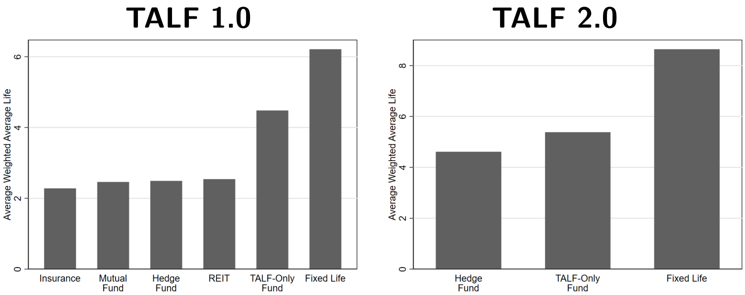
Rejection Risk and Funding Affect CMBS Market Liquidity

- Focus on CMBS market because of considerable heterogeneity within eligible securities
- In TALF 1.0, about 1350 securities were potentially eligible collateral at any subscription
- WALs ranged from 0.5 to 9.1 years (median: 3.1 years)
- Yields ranged from 2.4 to 14.1 percent (median: 6.9 percent)

Investors with locked-in funding take more risk

In the CMBS market, longer-WAL CUSIPs were generally riskier.



Risk-taking increased over time

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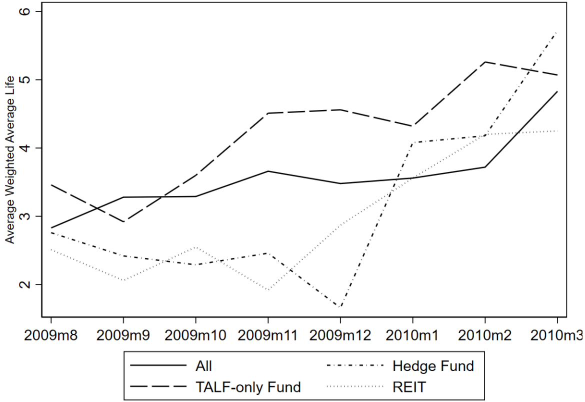

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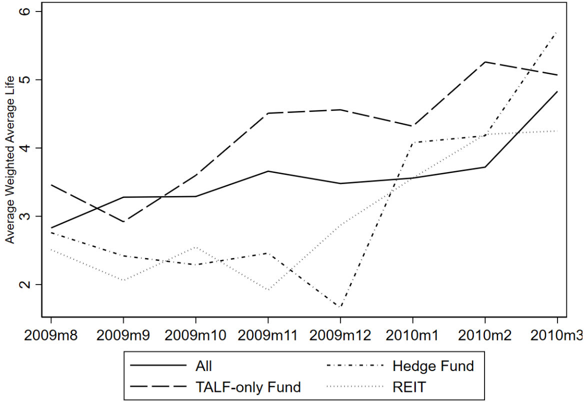

- Controlling for WAL, yields do not differ much by investor type
- Exception: fixed-life partnerships submitted CUSIPs with spreads about 50 basis points higher than other investors

Thoughts on TALF 2.0

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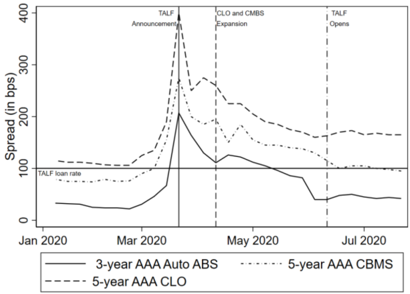
- Less disruption in funding markets for traditional ABS investors in 2020
- TALF loans were less attractive relative to private market alternative (relatively high interest rate, long maturity)

Was TALF 2.0 too successful?



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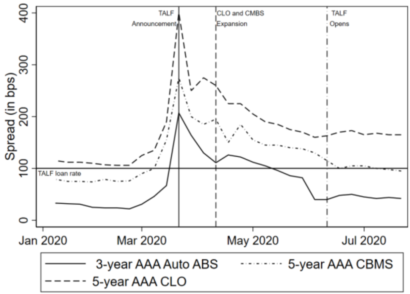

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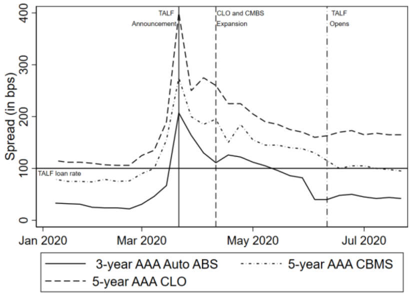

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- Highlights mismatch between market conditions in a crisis (volatile) and investors' preferred vehicle to borrow from TALF (inflexible and slow-moving)

Final Take-aways

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- Tradeoff between protecting central bank balance sheet and providing liquidity
  - Collateral review is important: otherwise investors have incentive to submit low-quality collateral
  - But funding uncertainty, at a time when investors face funding uncertainty of their own, will weigh on liquidity provision

Thank you!