Fragility in the U.S. Investment Grade Corporate Bond Market: The Exorbitant Privilege of BBB-Rated Firms

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Credit Risk and Bankruptcy – Guest Lecture
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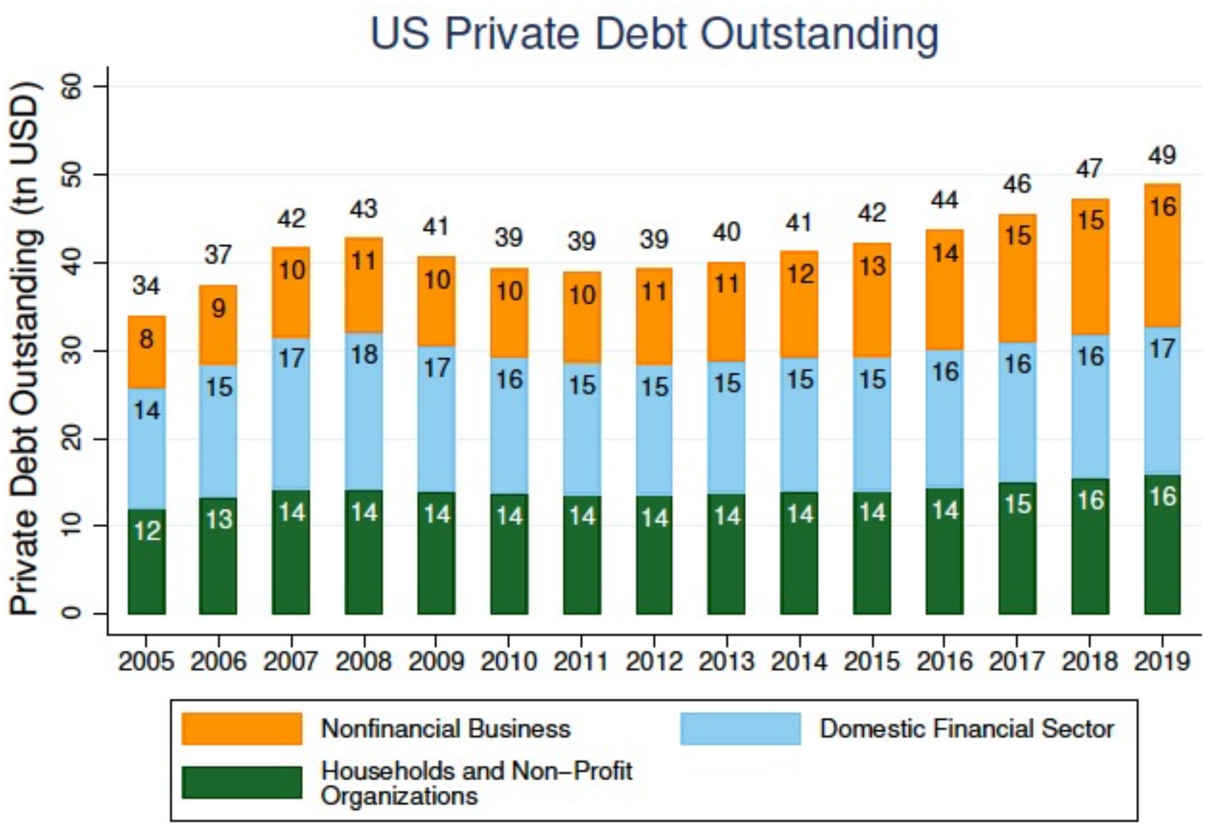
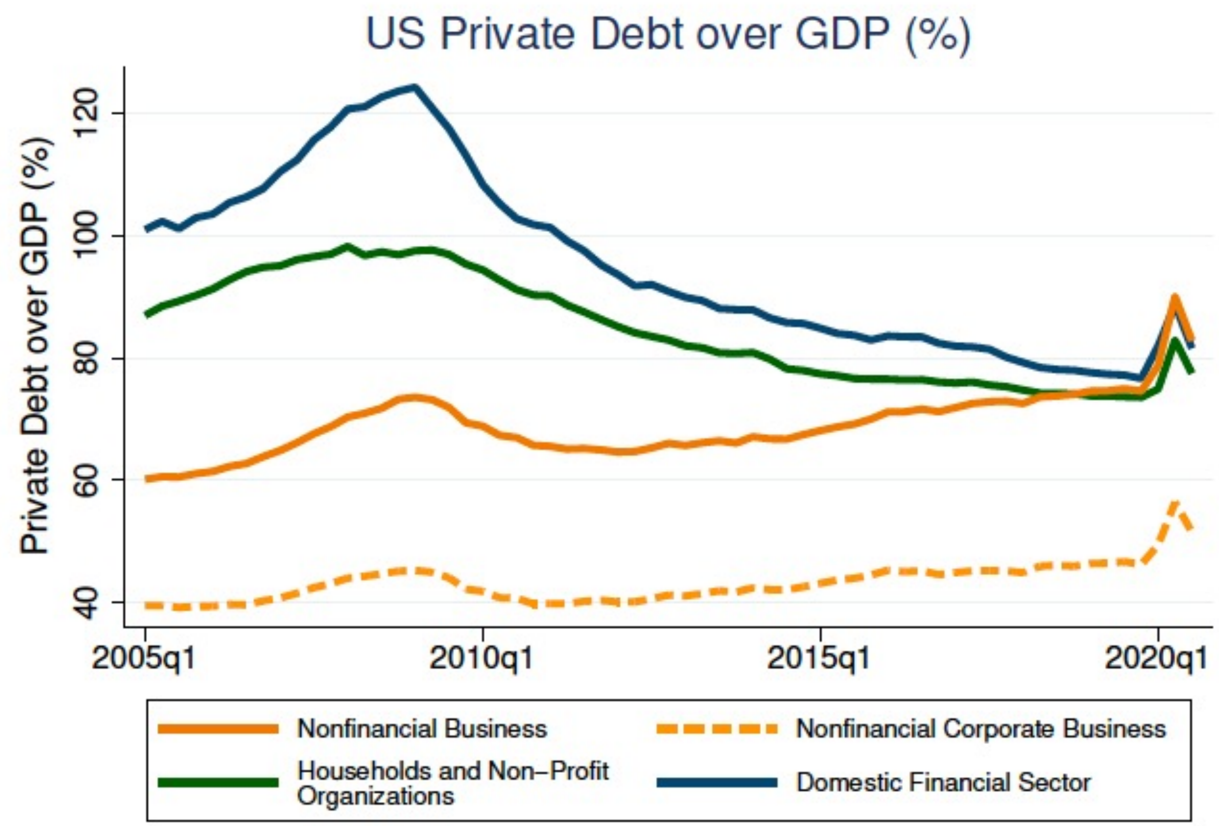
Private debt after the global financial crisis

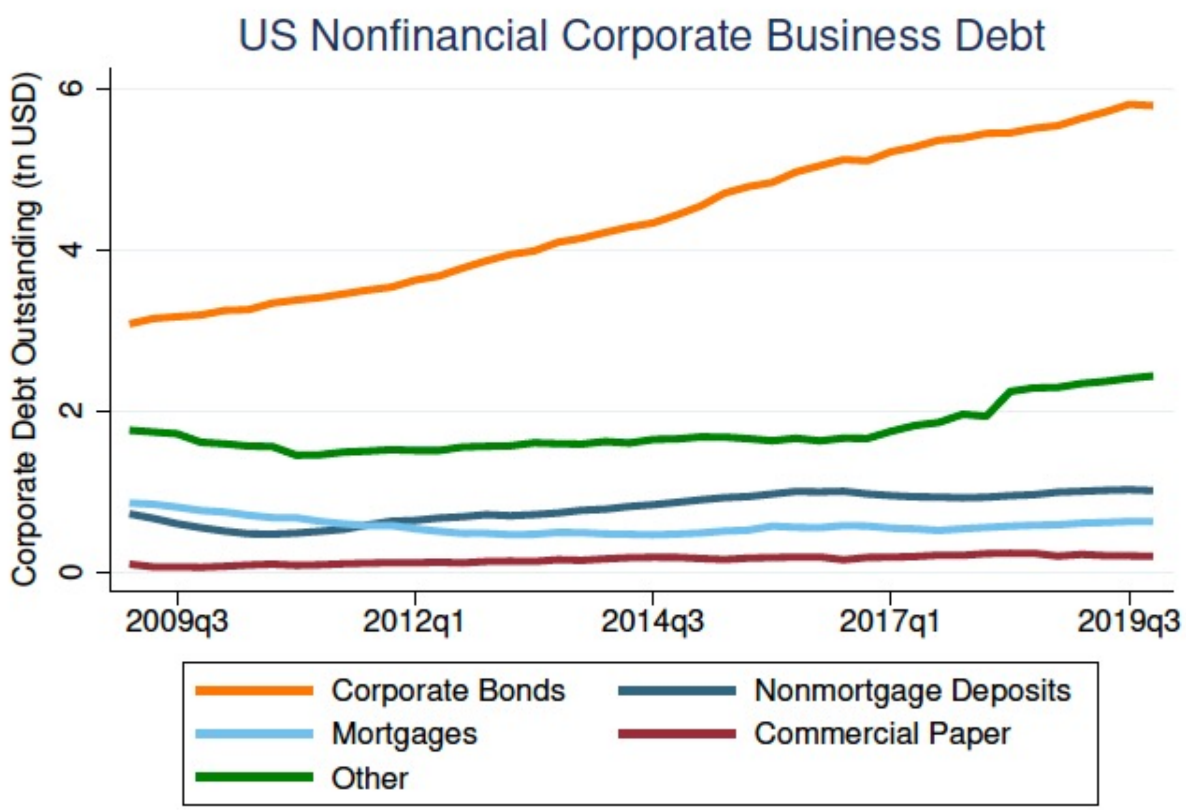


Source: Estimated bottom up using data of the Board of Governors of the Federal Reserve System (US)

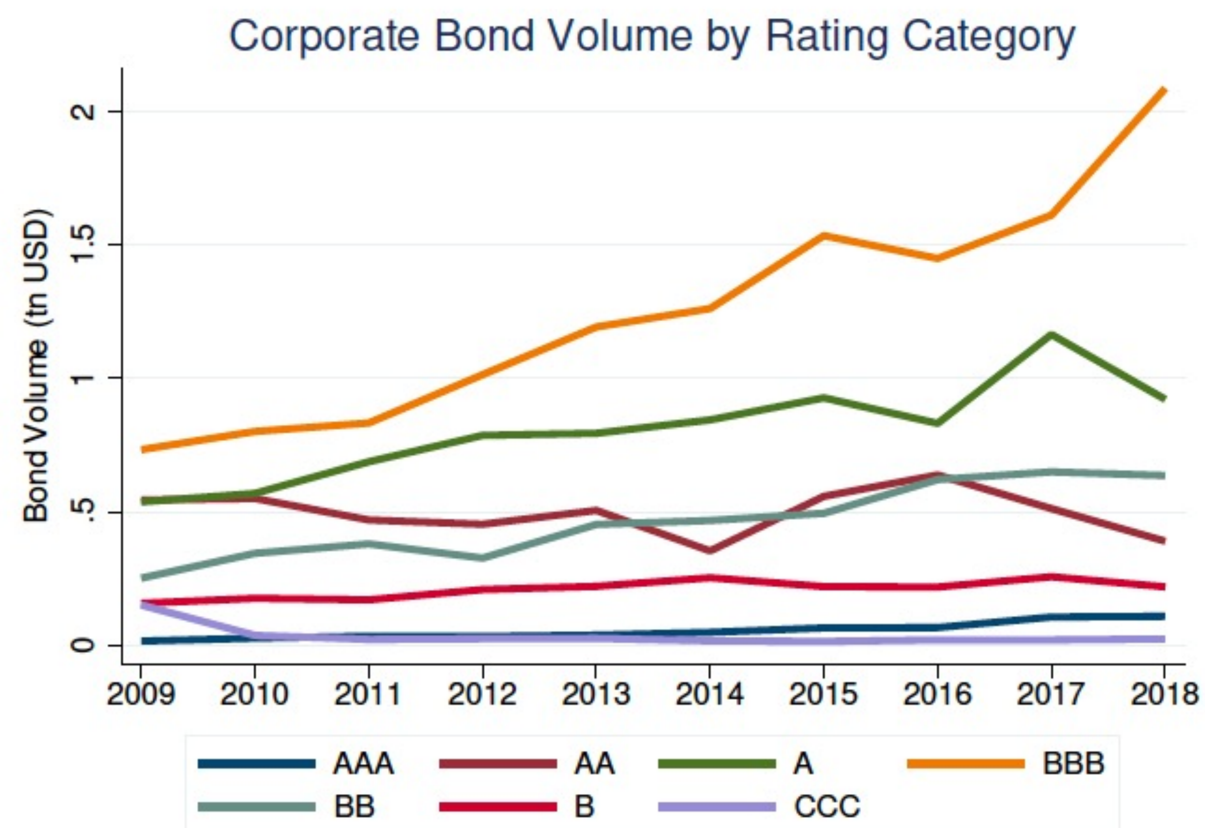


Source: Using data of the Board of Governors of the Federal Reserve System (US)

A substantial rise in corporate bonds outstanding



Source: Using data of the Board of Governors of the Federal Reserve System (US)



What’s so special about BBB-rated issuers?

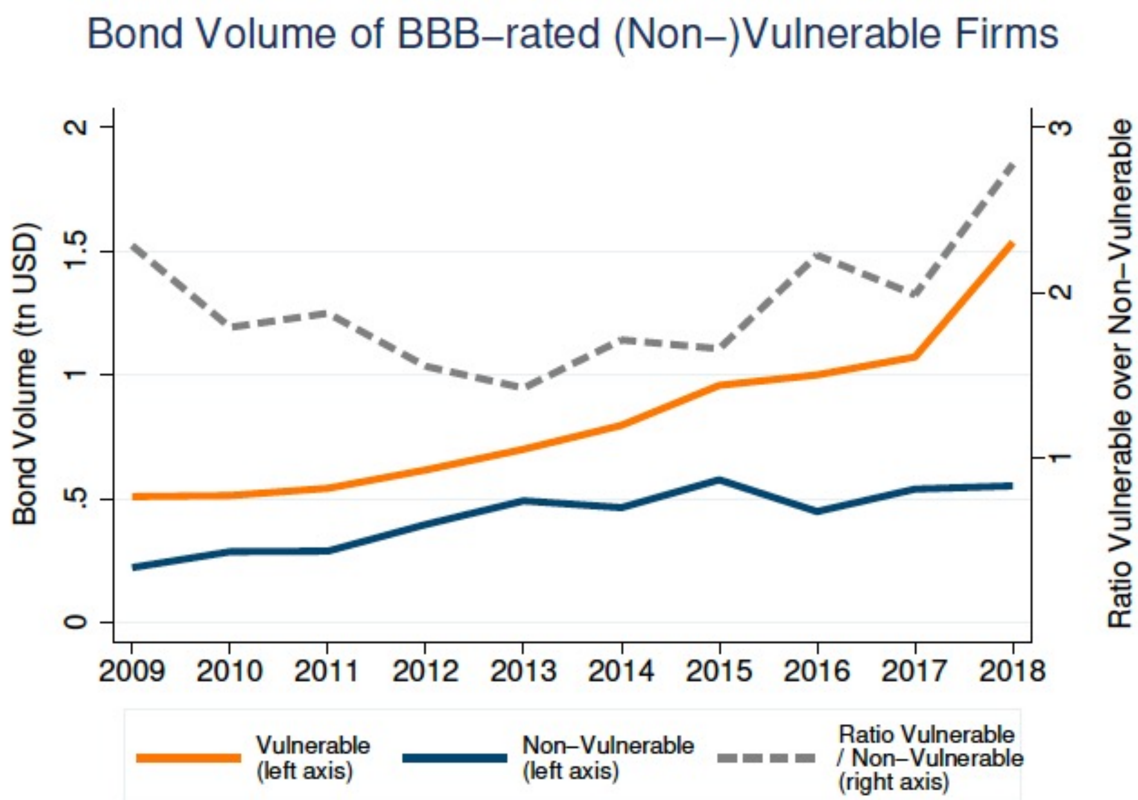
Declining quality of BBB-rated issuers

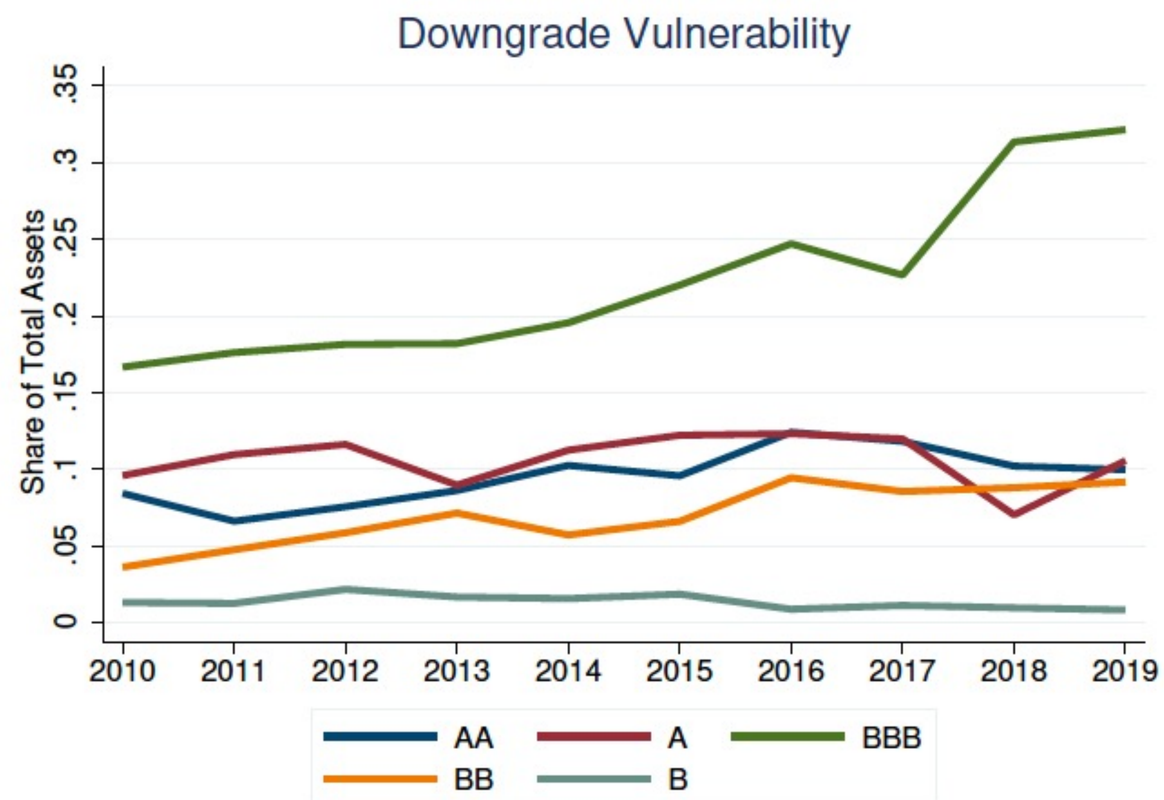
- The financial press and research pieces from both credit rating agencies and investment managers have raised concerns about the credit quality of BBB-rated issuers
  - e.g., the required reading for this class by JPM
  - Risk of becoming a "fallen angel"
- Let's see ourselves… How? We need a measure of firm risk coming from fundamentals

- Altman Z''-score, namely a function of:
  1. Current assets and current liabilities
  2. Retained earnings
  3. EBIT
  4. Book leverage

- A firm is vulnerable if its estimated Z''-score is lower than the benchmark Z''-score of the next lowest rating category

Vulnerable BBB-rated issuers drive the increase in the BBB market



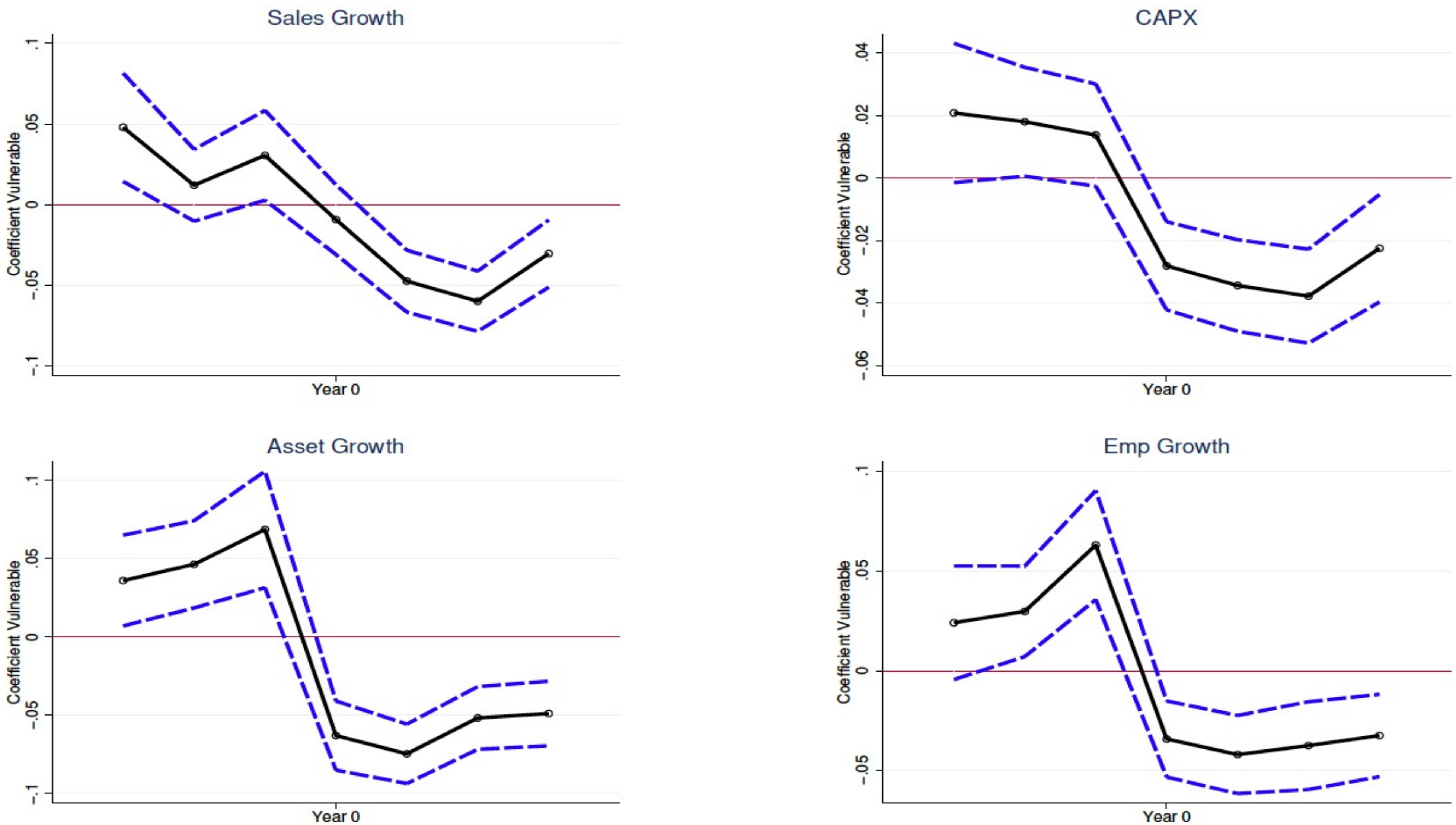


Does our measure of vulnerability actually “work”?

Vulnerable firms are weaker along all key dimensions

	(1) Vulnerable	(2) Non-Vulnerable	(1) - (2) Difference
Total Assets	24114	10988	13126***
Leverage	0.403	0.354	0.049***
EBITDA/Assets	0.104	0.132	-0.028***
Interest Coverage	7.747	13.114	-5.367***
Sales Growth	0.038	0.056	-0.017***
CAPX	0.188	0.225	-0.037***
Emp Growth	0.008	0.036	-0.027***
Net Worth	0.183	0.248	-0.066***

Firm performance deteriorates after becoming "vulnerable"



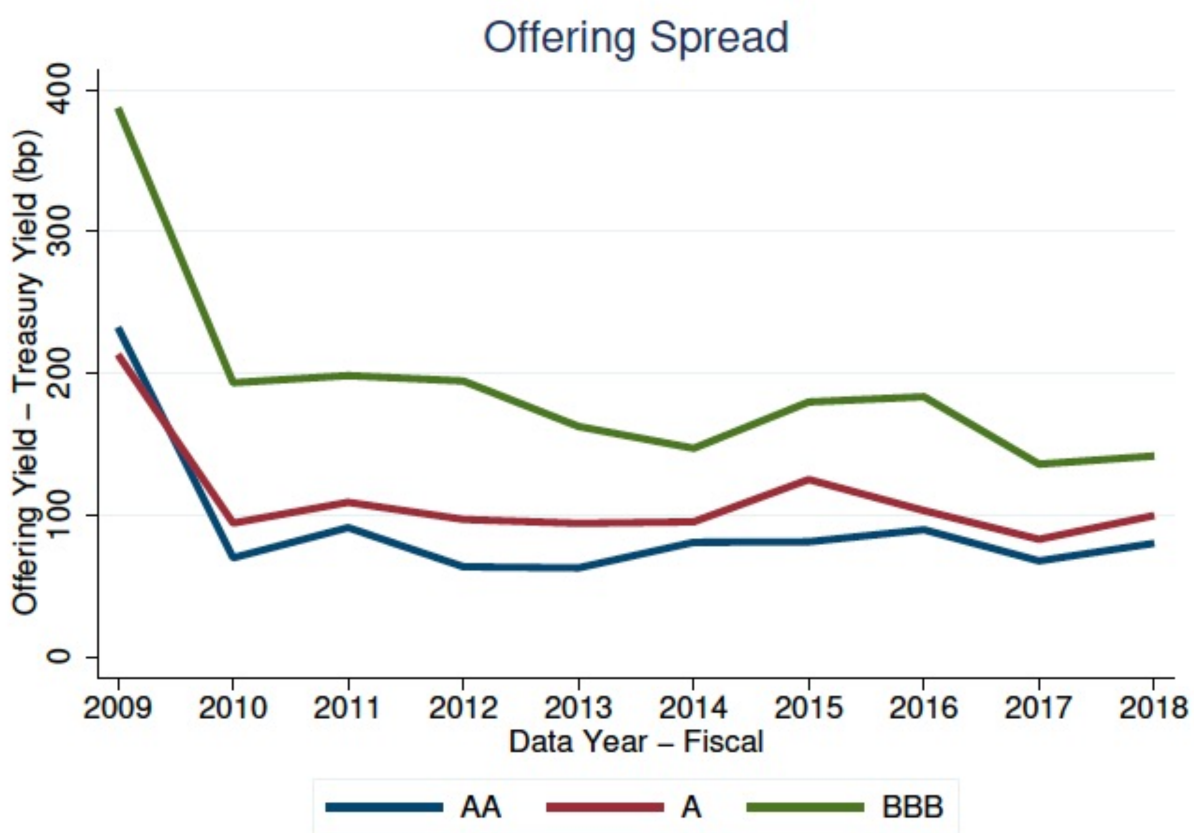
Two additional tests…

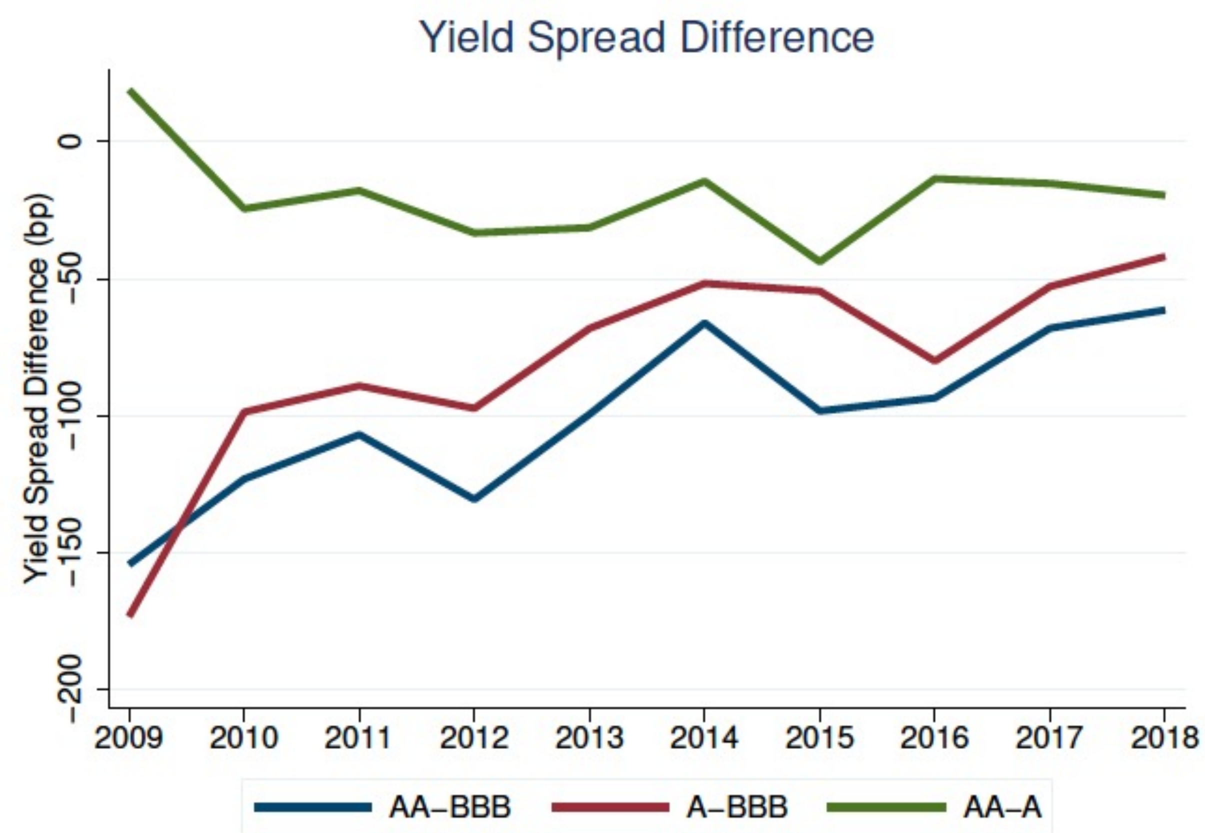
When a company is vulnerable in year t:

1. It is more likely to have a negative “watch event” in year t or t + 1
2. It has a higher probability to be downgraded in year t + 1

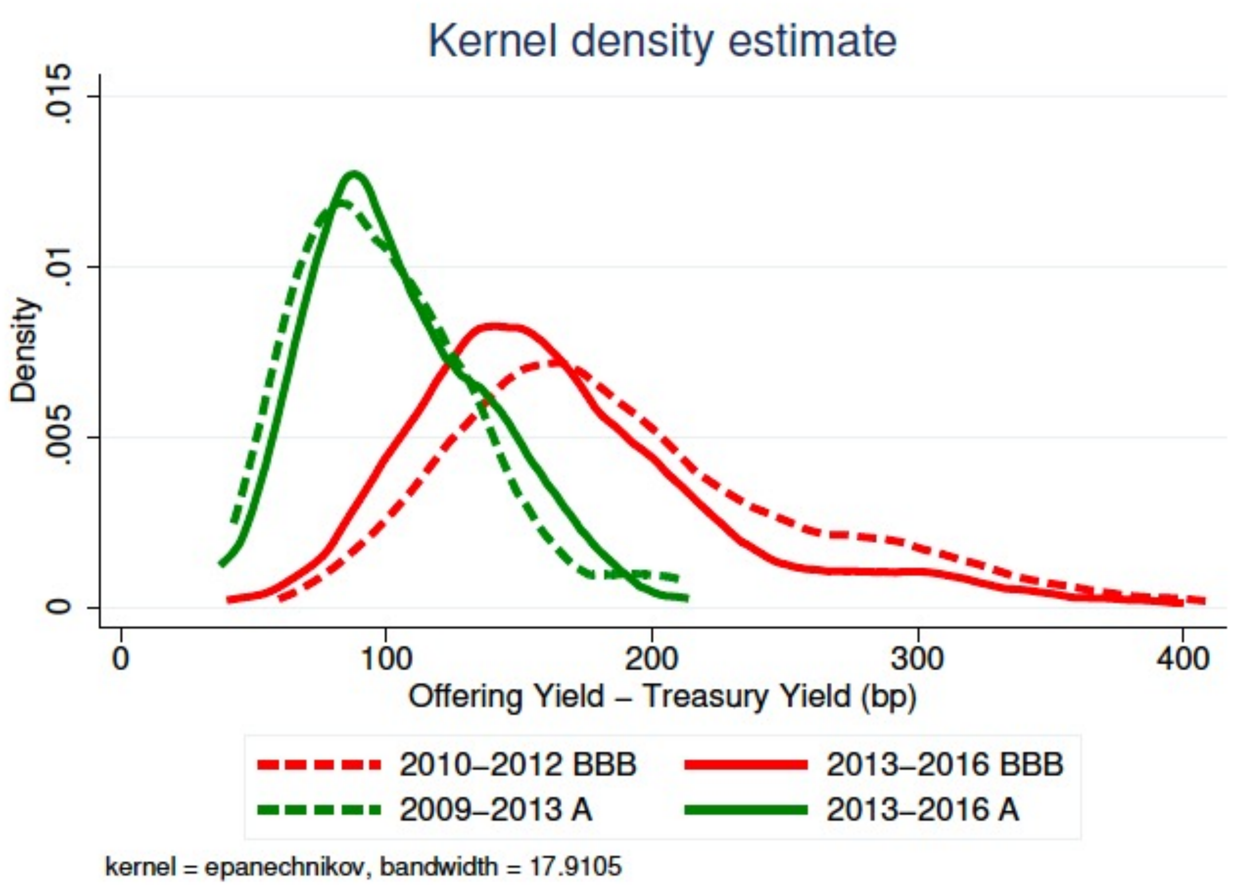
The exorbitant privilege

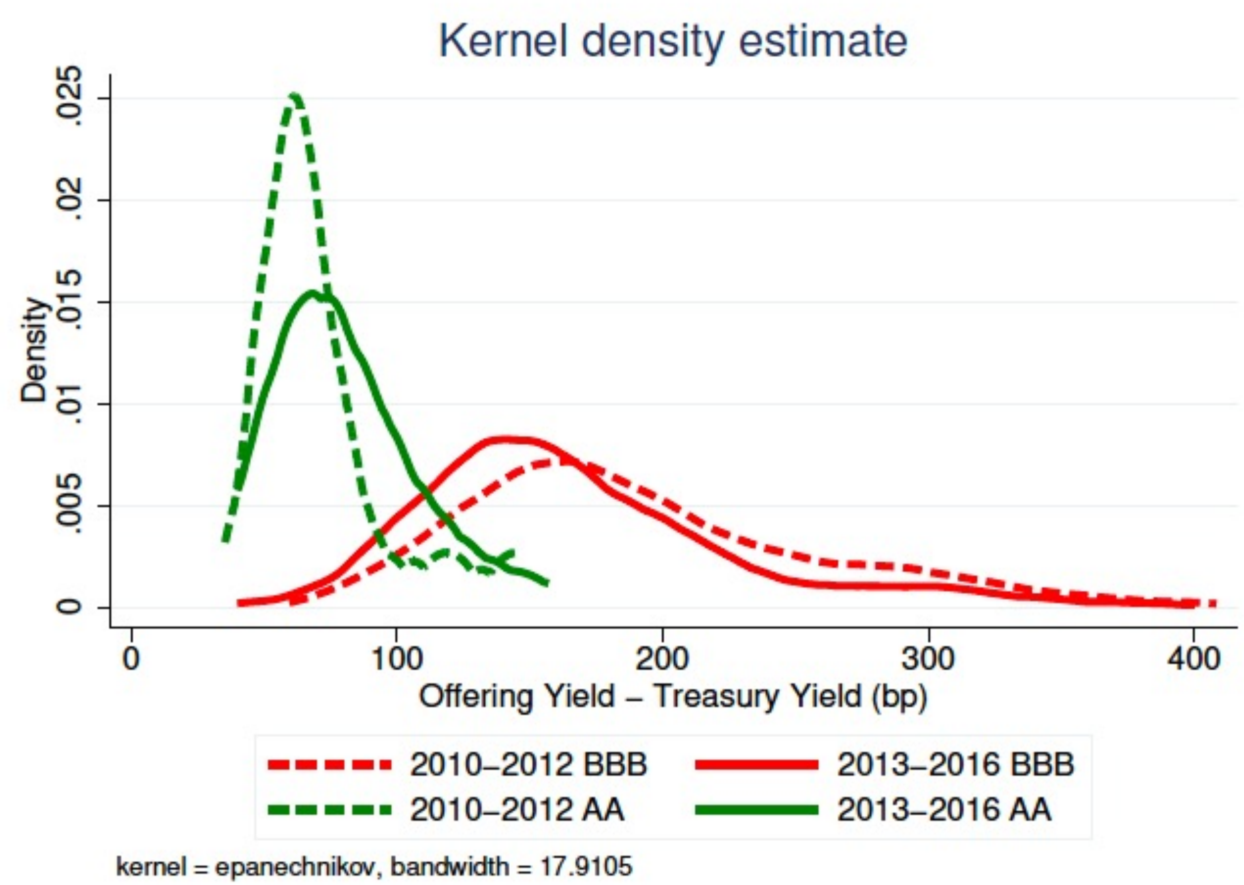
Offering spread at issuance by firm rating



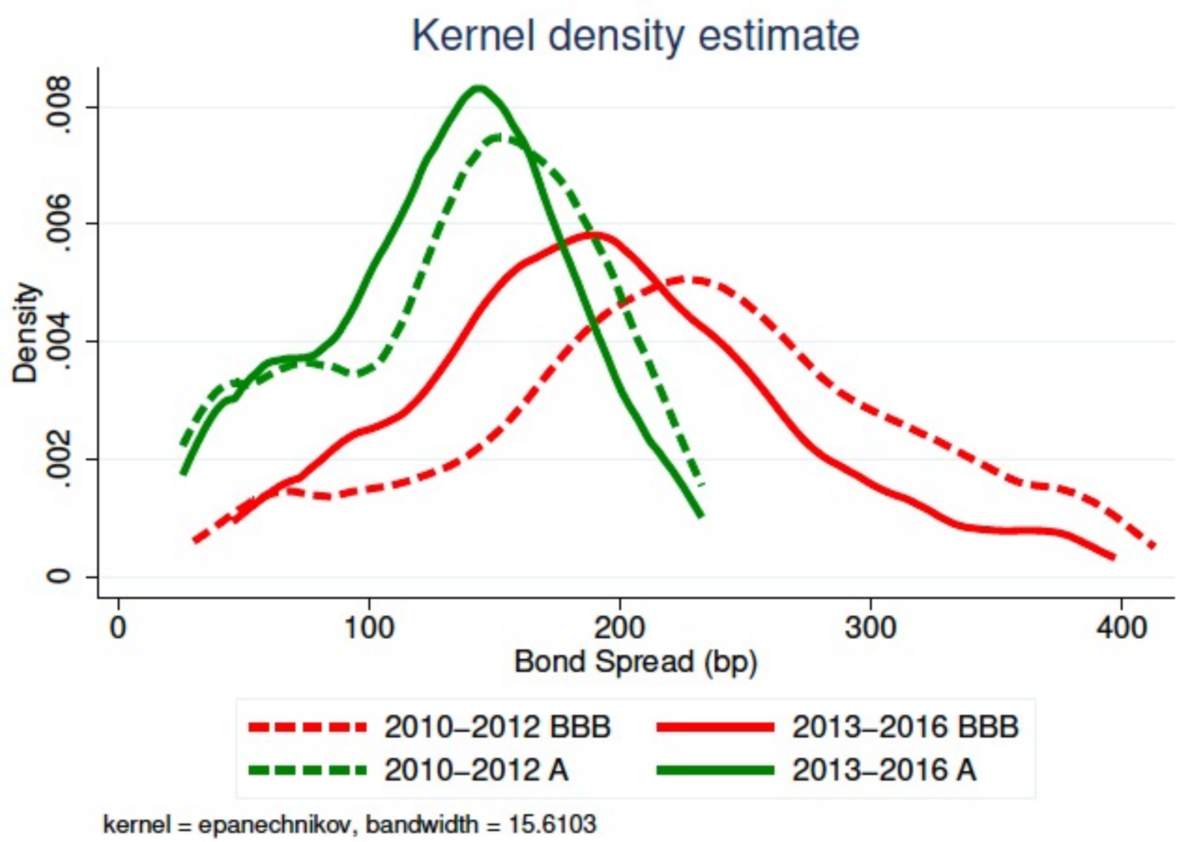


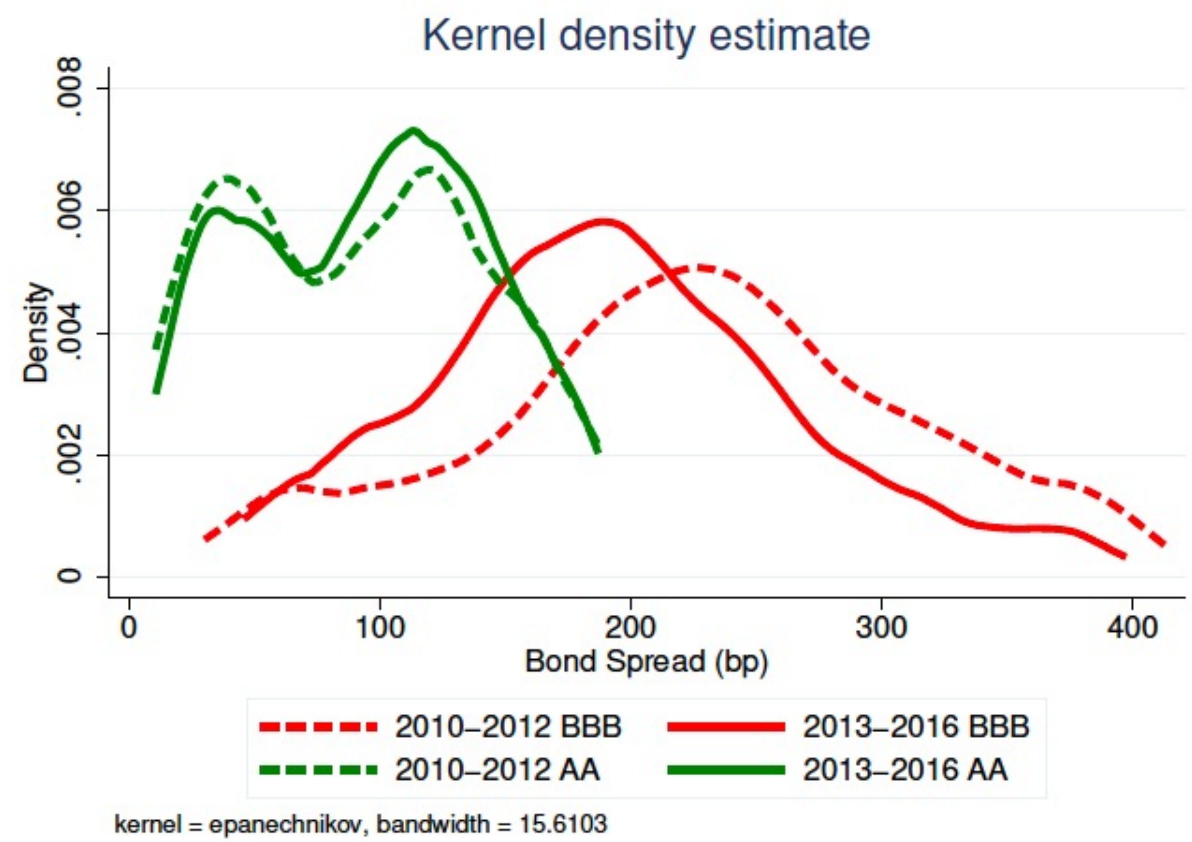
Offering spreads



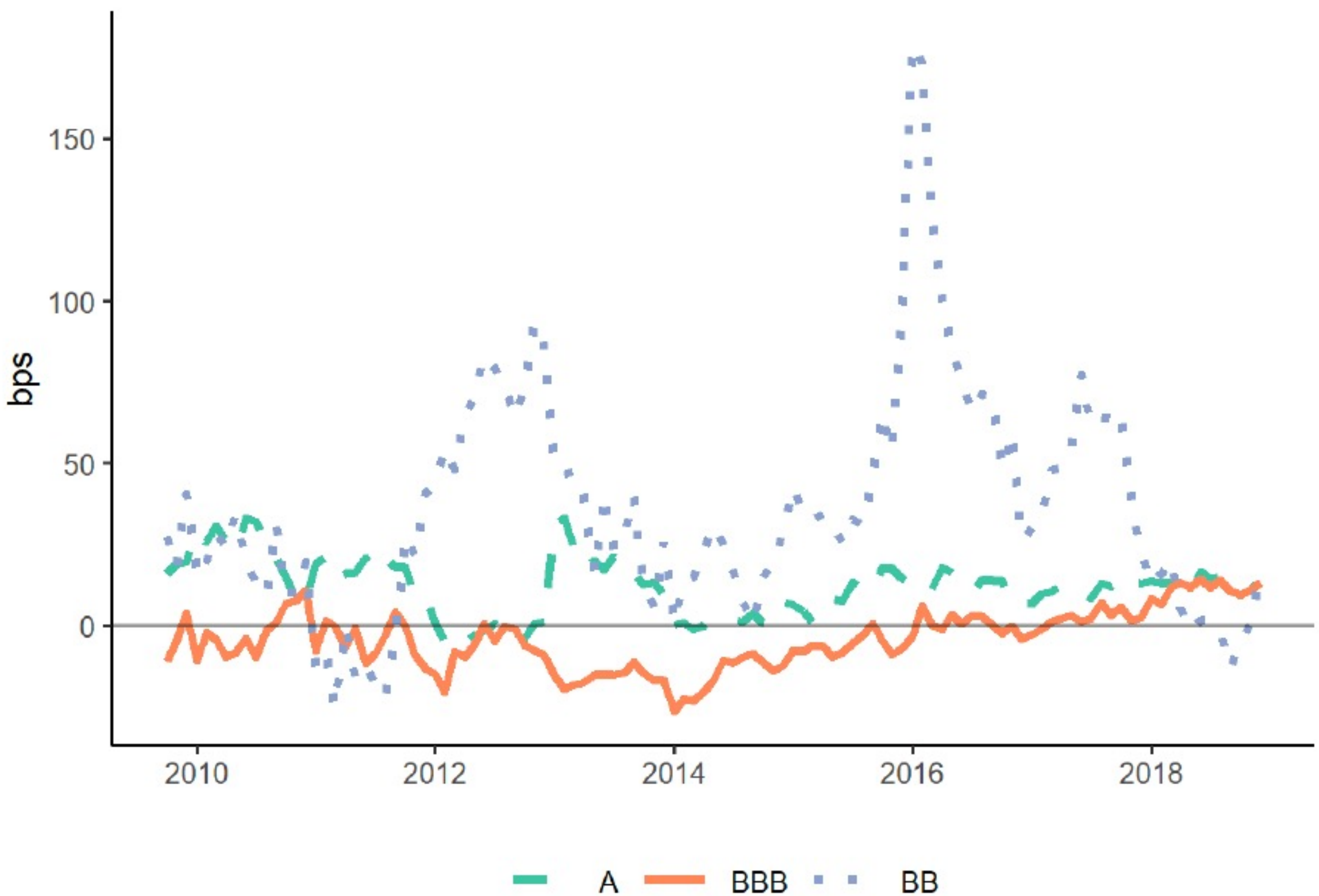


Secondary market spreads

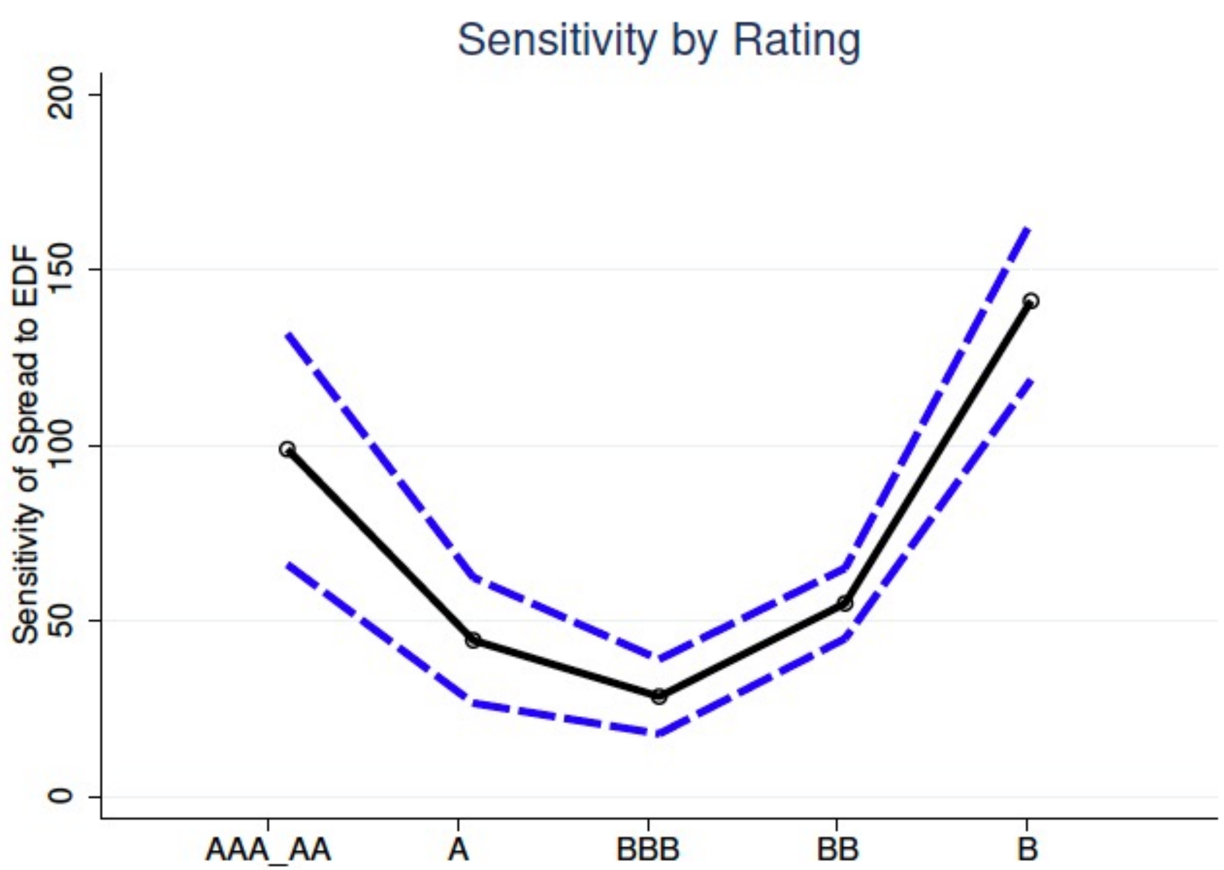


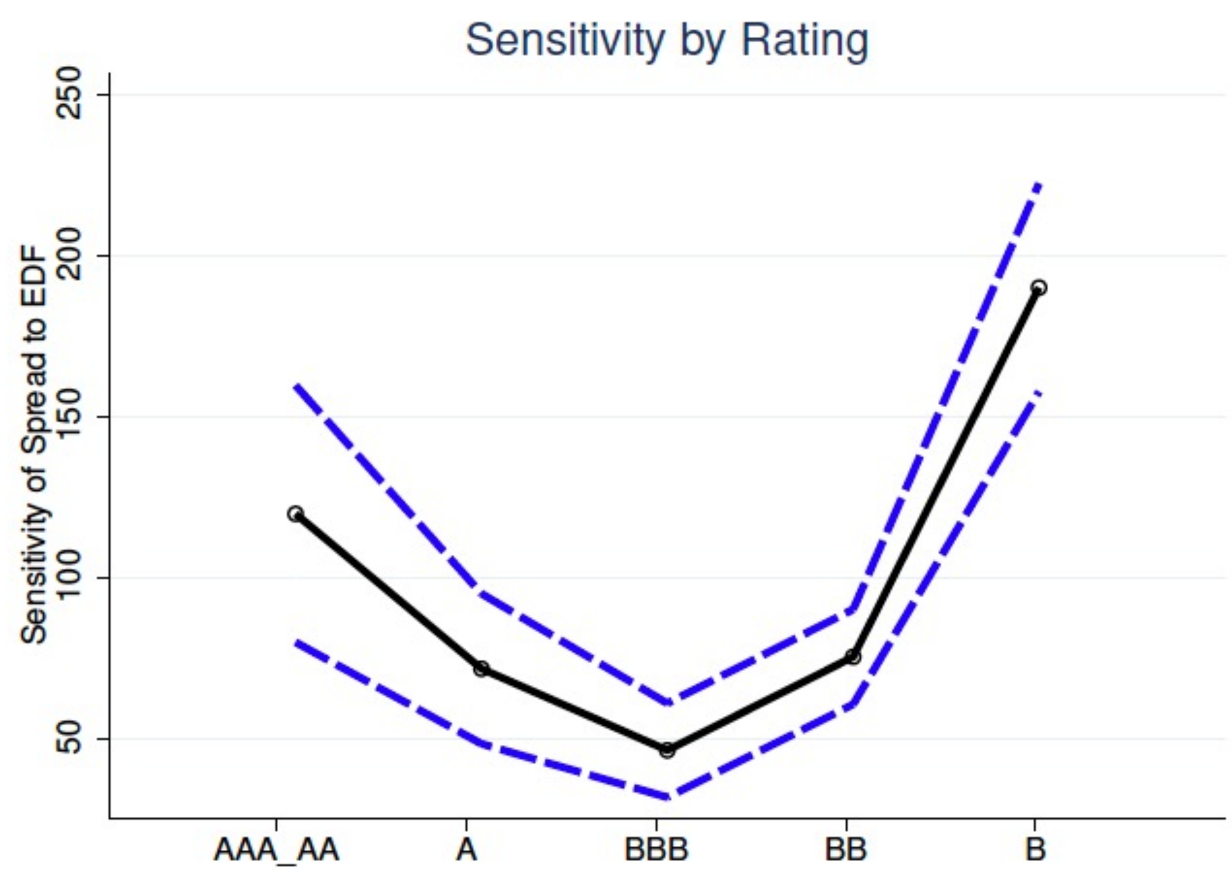


Secondary market spreads: vulnerable Vs non-vulnerable

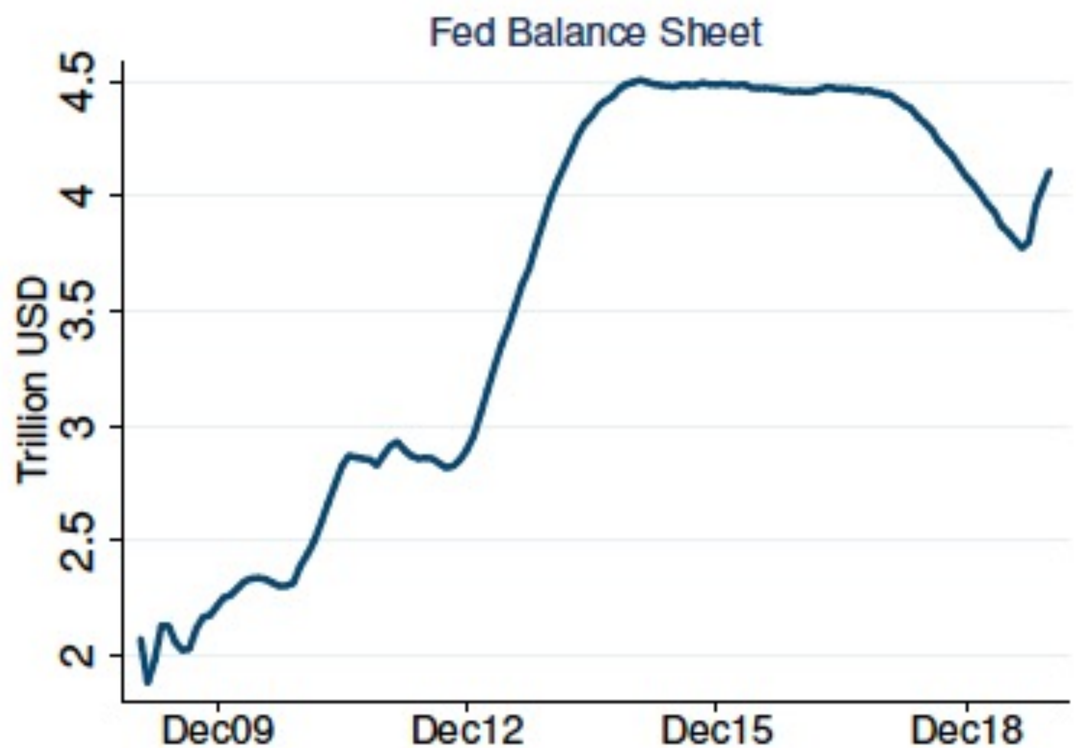


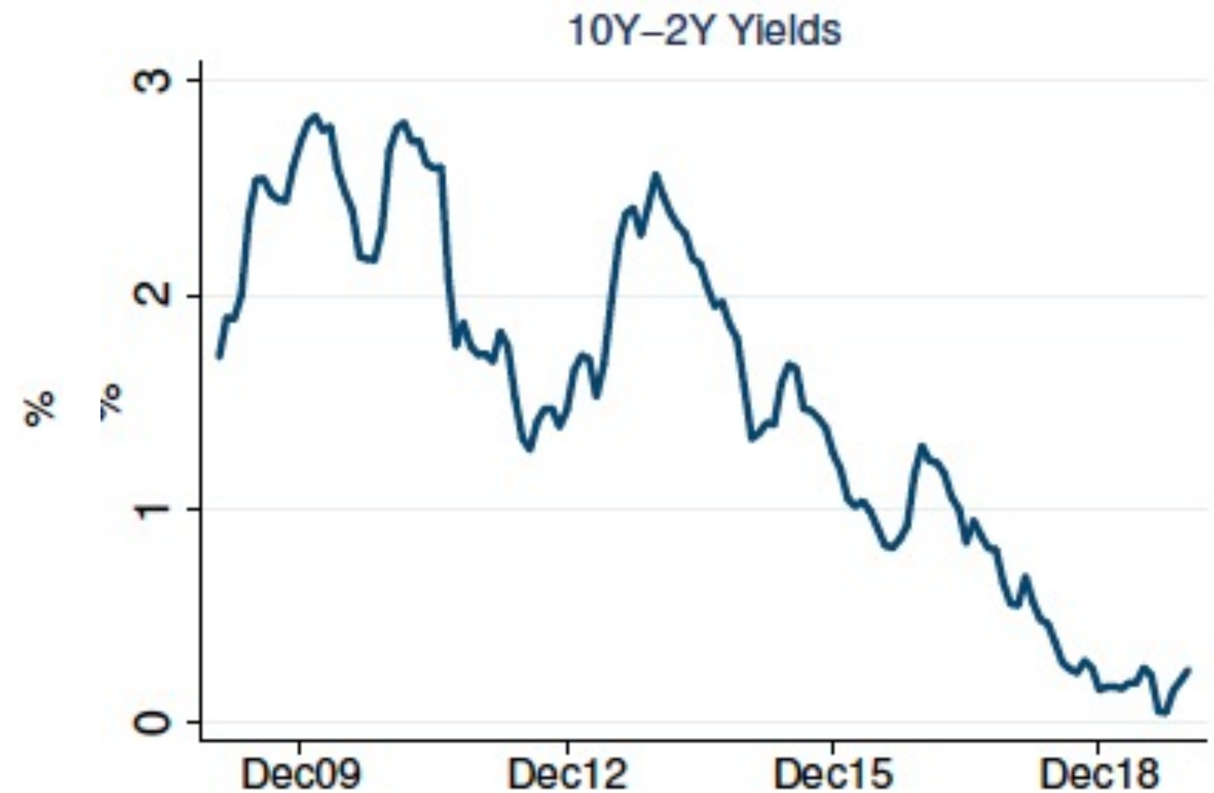
Sensitivity of bond spreads to 2Y- and 5Y-EDFs





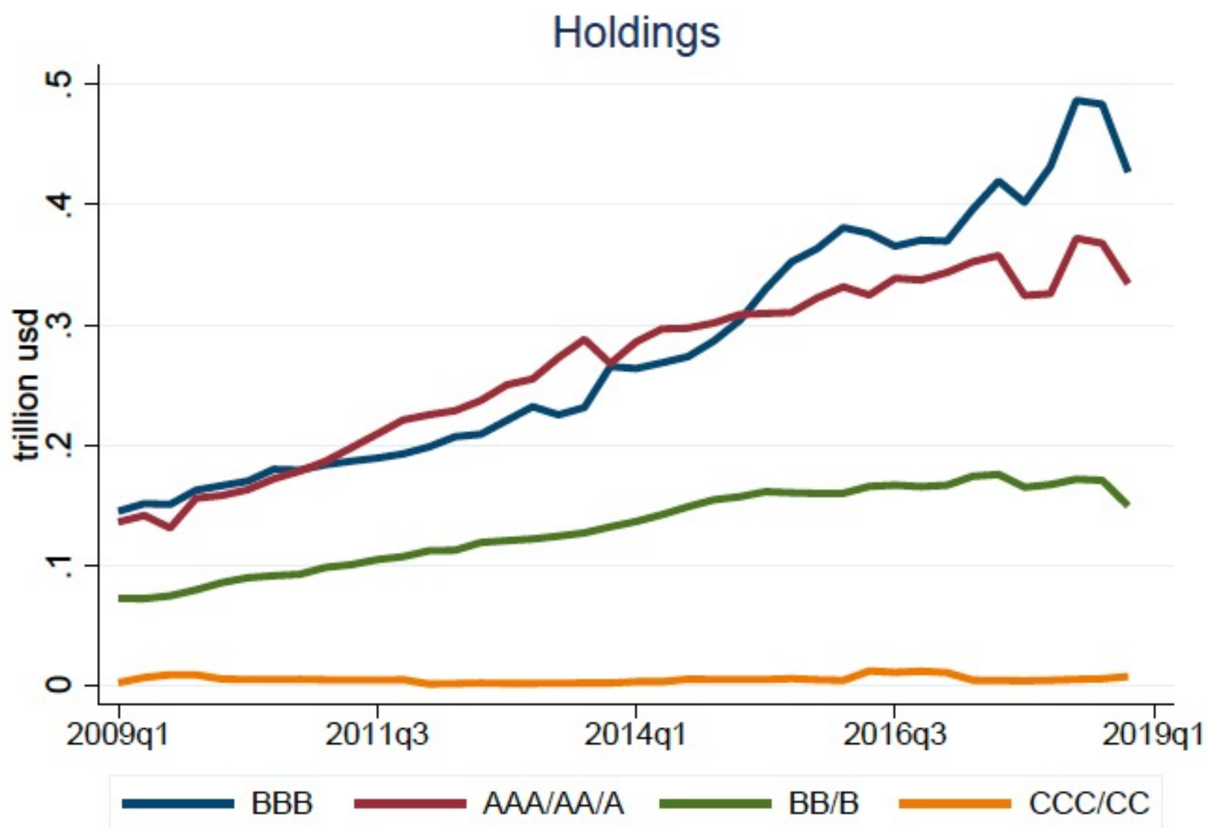
Monetary policy stance

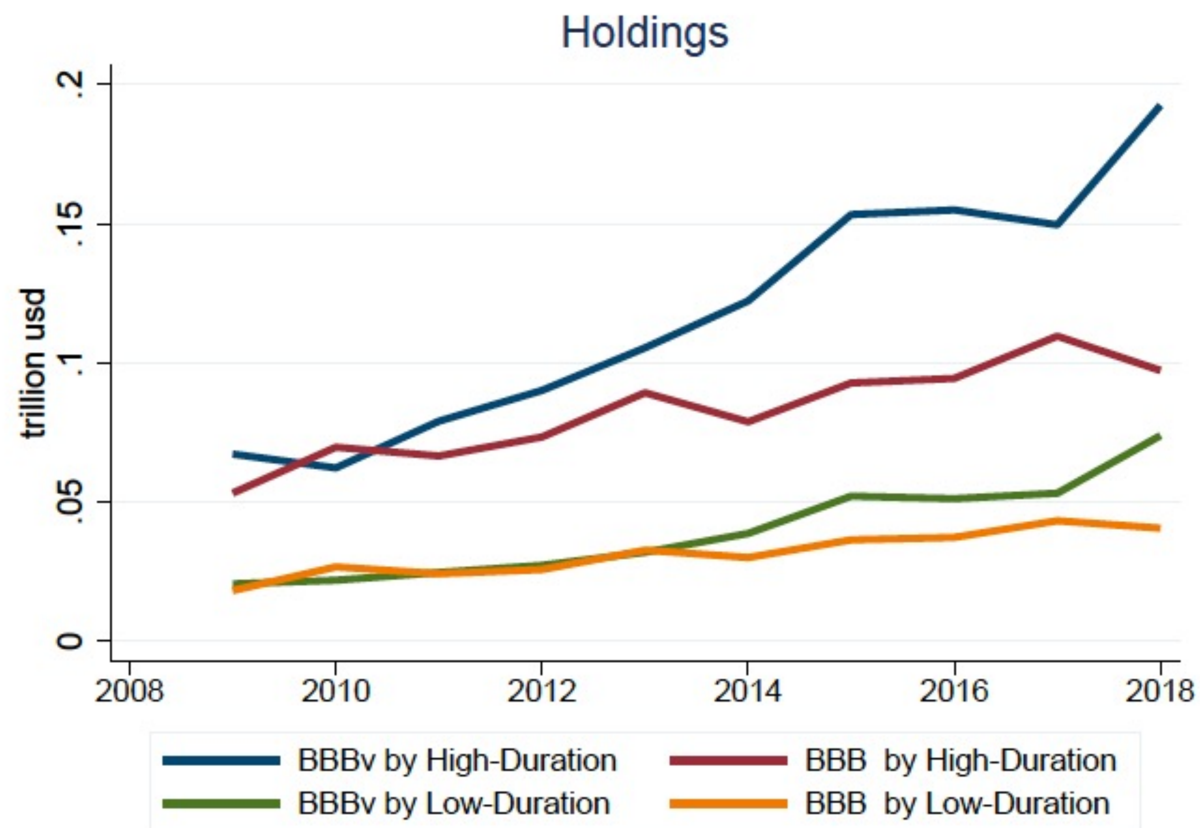




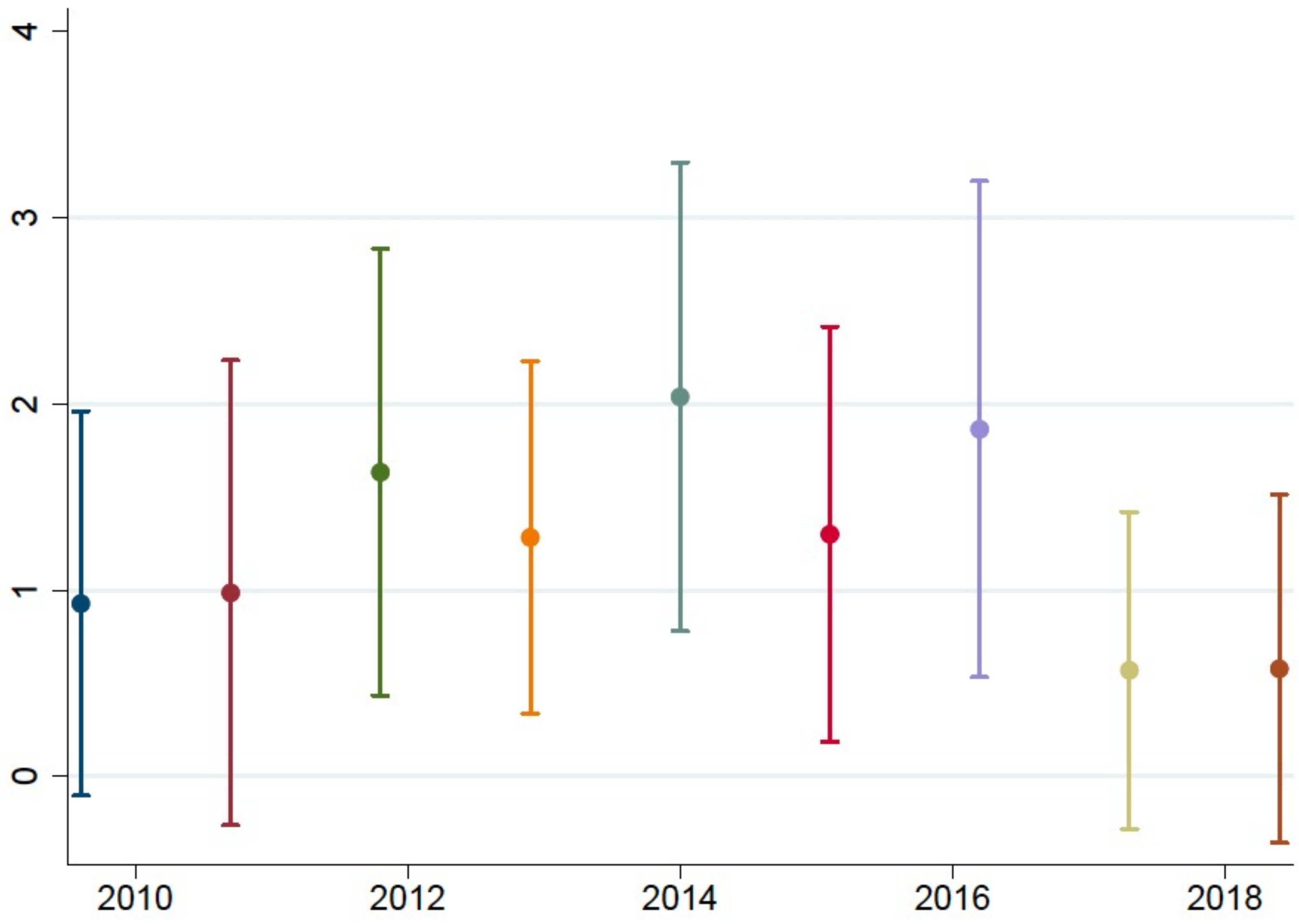
Why?

Demand for risky, yet high-yield, corporate bonds



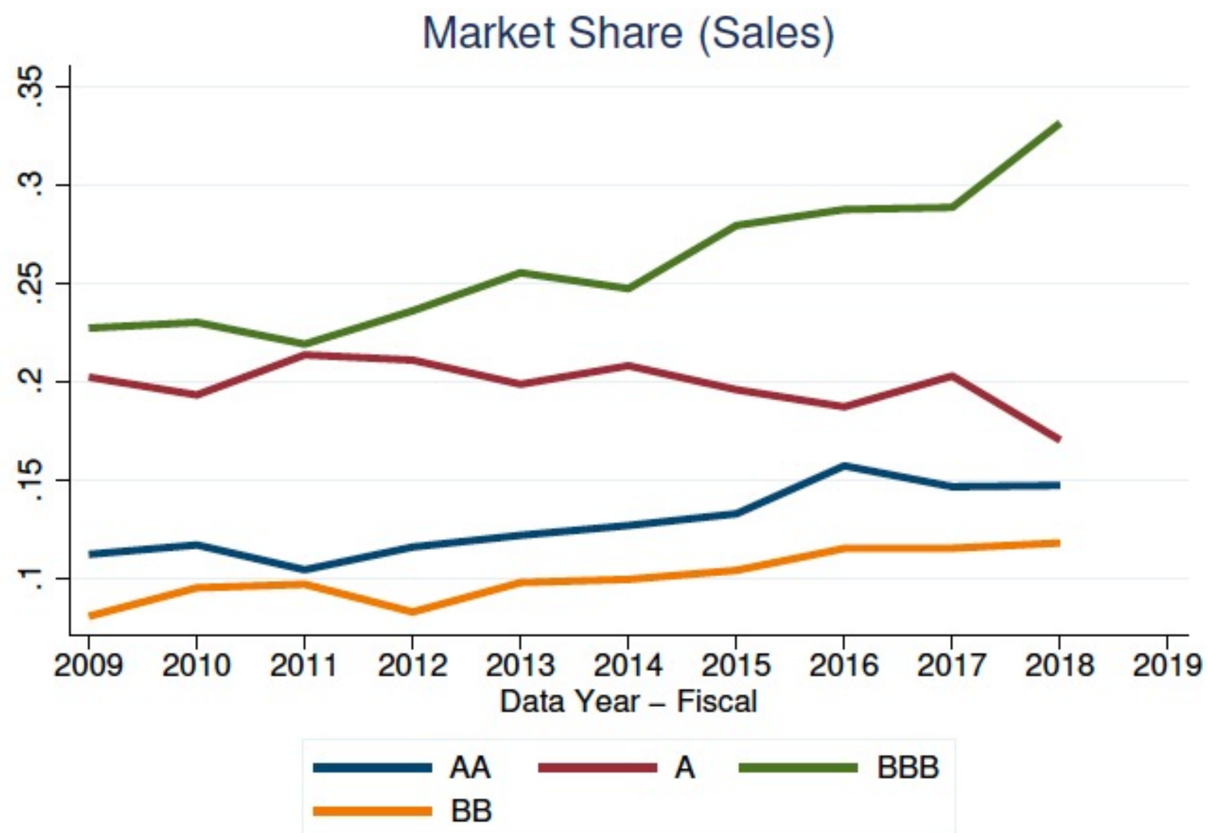


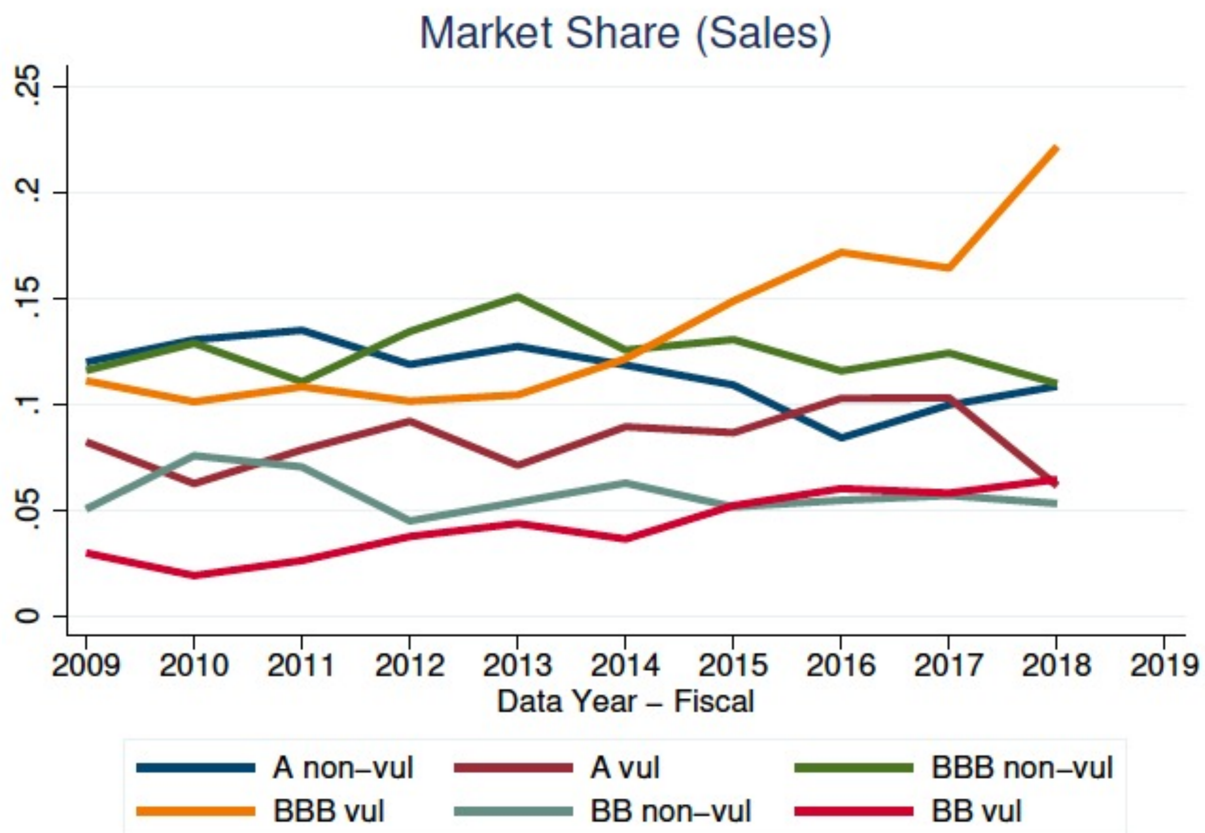
Time-variation in the strength of the demand for yield



Why do we care?

Market shares by ratings





Investments and employment

Vulnerable BBB firms do not invest more or have higher employment than other vulnerable firms

Vulnerable BBB firms have higher sales growth and lower markups than other vulnerable firms

Non-vulnerable IG firms are negatively affected by the presence of vulnerable BBB firms

- While non-vulnerable firms have on average higher employment growth rates and invest more, both employment and investment are impaired by the presence of vulnerable BBB firms
- These firms also face lower sales growth and lower markups, compared with firms that do not compete with a large share of vulnerable BBB firms in their industry