The Hidden Cost of Corporate Bond ETFs

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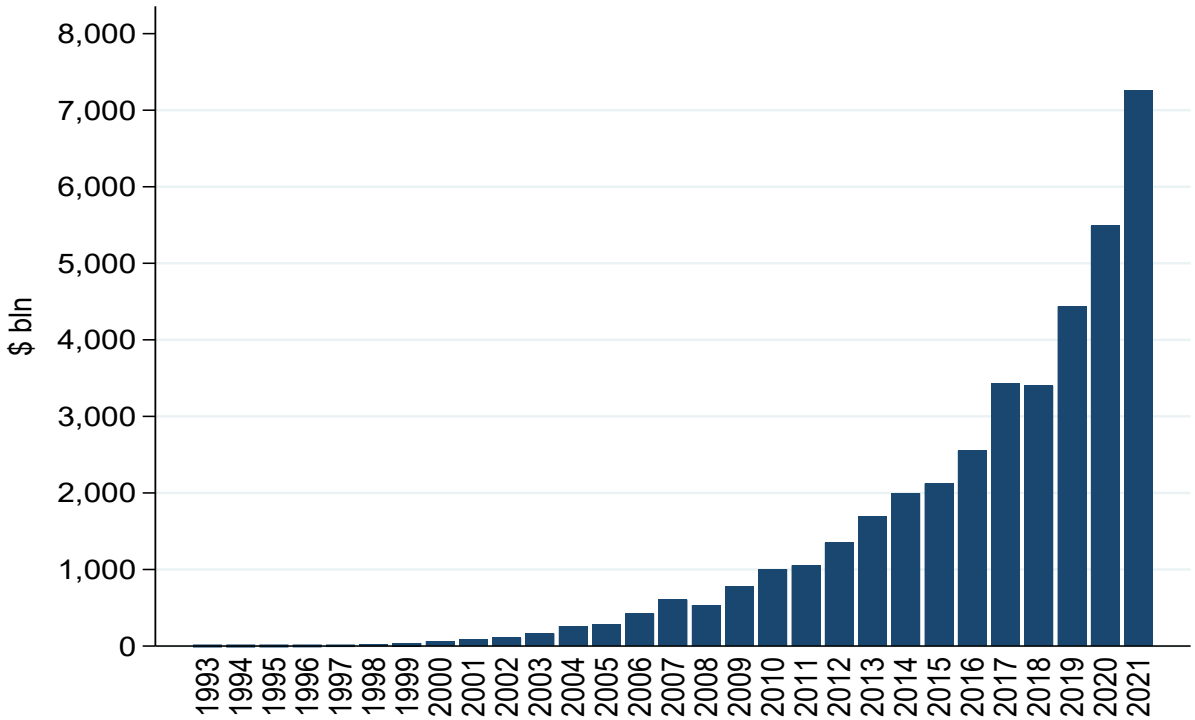
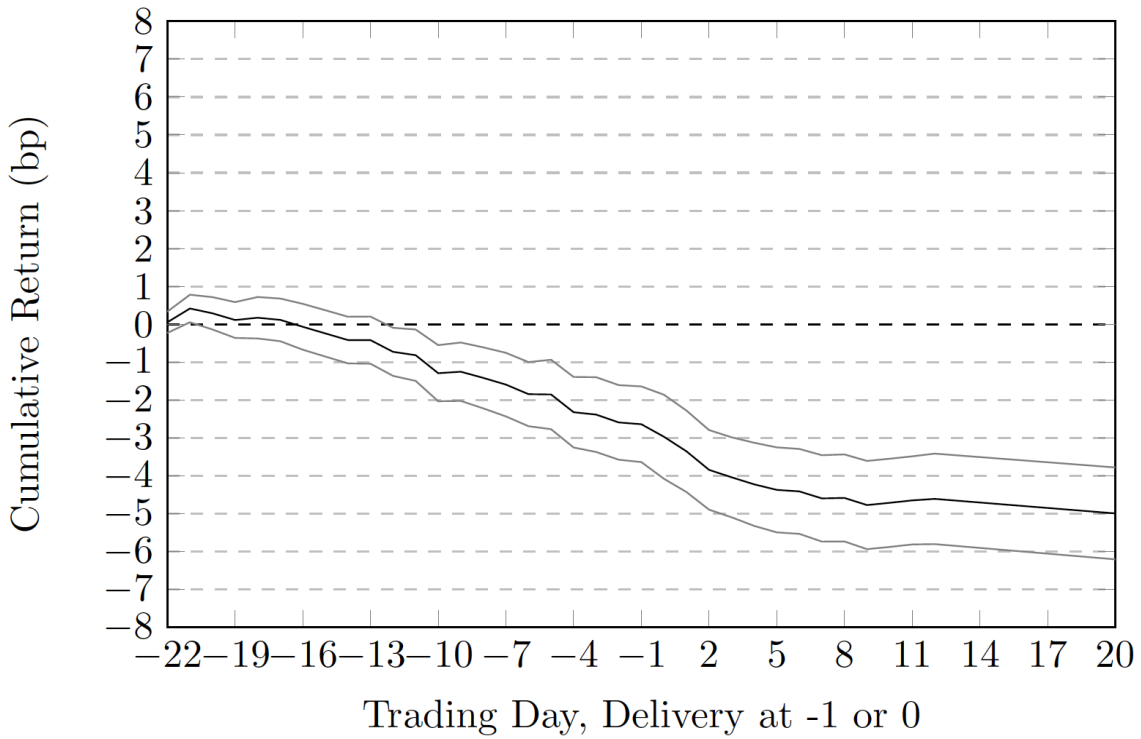
Motivation

- ETFs have been coined as the financial innovation of the decade
  - Transform illiquid assets into liquid and tradable shares
  - Without stale-pricing of open-ended mutual funds
  - While being more tax-efficient than open-ended mutual funds
- Rising popularity, $7.2 trillion at the end of 2021



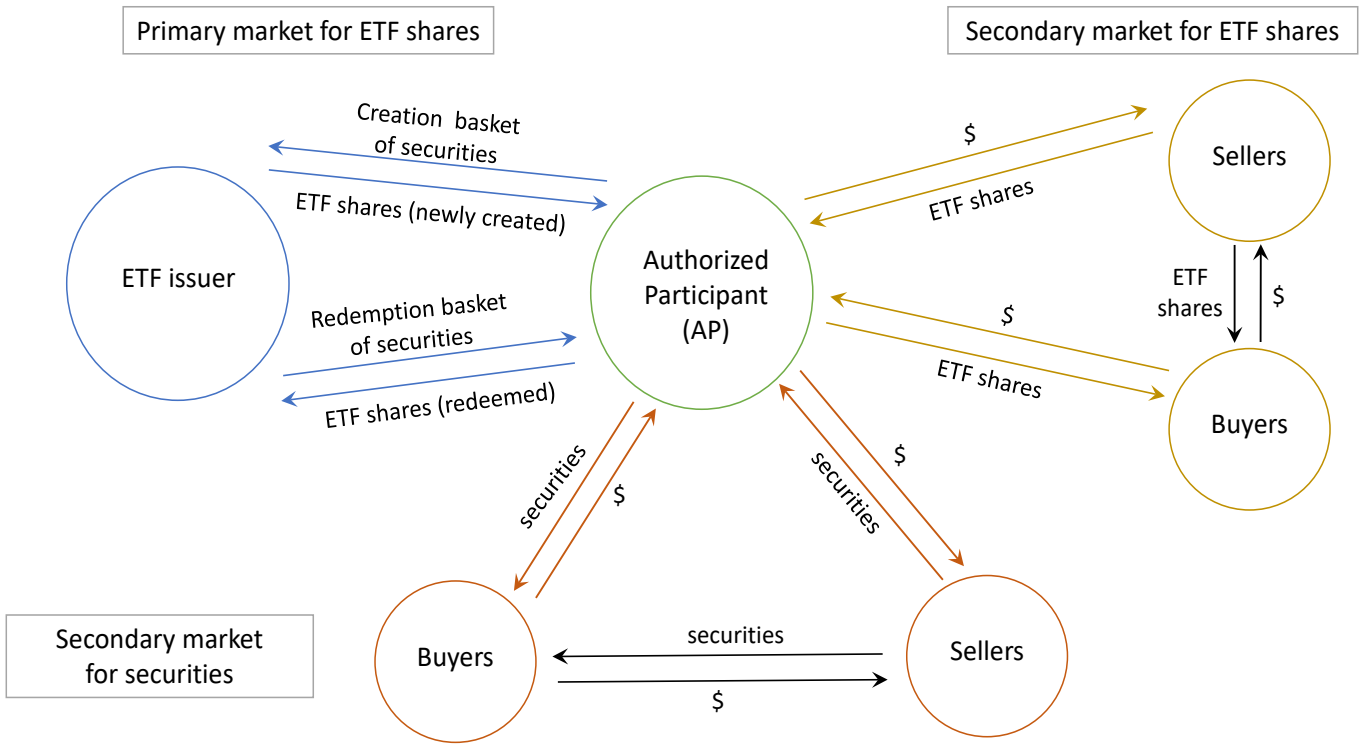
This Paper

- However, is there really a free lunch? Maybe we just have not understood the true cost of the lunch!
- This paper makes an important step in understanding the costs of corporate bond ETFs: **APs deliver bonds to ETFs that subsequently underperform**



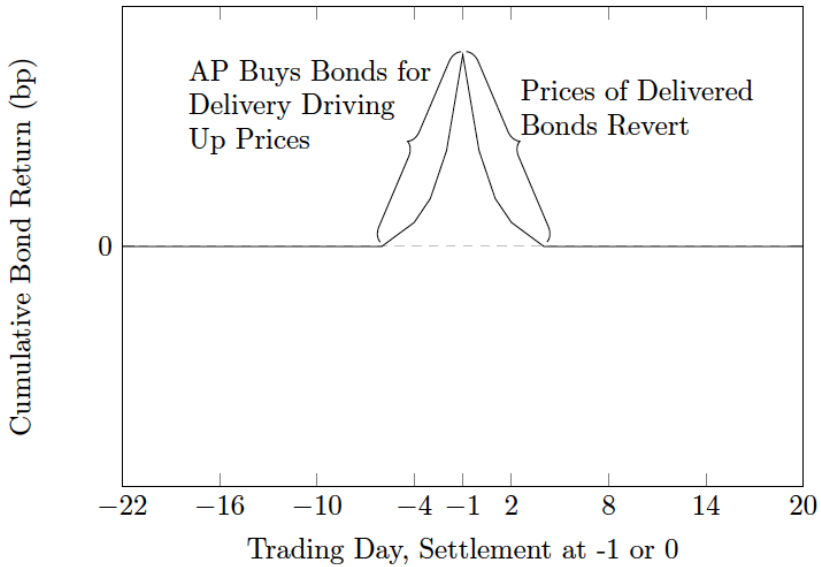
This is an Important Finding!

- Direct implication: ETF performance is reduced by 48 bps per annum
- More broadly: APs allow ETFs to transform liquidity but they also extract surplus from investors

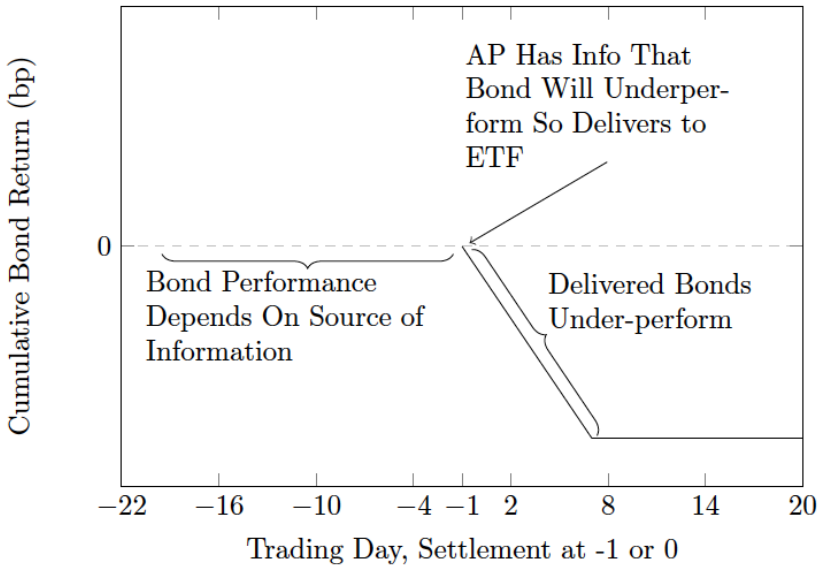


Interpretation of Results

- The big question: why is this happening?



(a) Bond Dynamics if APs Temporarily Impact Bonds' Prices around Delivery



(b) Bond Dynamics if APs Utilize Information About Future Returns

- Findings consistent with AP private information
  - Bond FE, Fund-time FE, prior-month bond illiquidity

Interpretation of Results

- What does AP private information really mean?
  1. AP knows something about bond returns that ETF issuers do not
  2. There are time-varying changes in fundamentals of the bond around basket inclusion $\rightarrow$ changes in returns reflects fair compensation
     - E.g. Bond liquidity improves $\rightarrow$ bond more likely added to basket + bond addeed to basket further improves liquidity $\rightarrow$ returns of included bonds are lower
- This matters!
  1. AP is ripping the issuer off using their info advantage
  2. May not necessarily "hurt" the issuer/investors
     - E.g. if more liquid bonds are easier to include in future baskets

Interpretation of Results

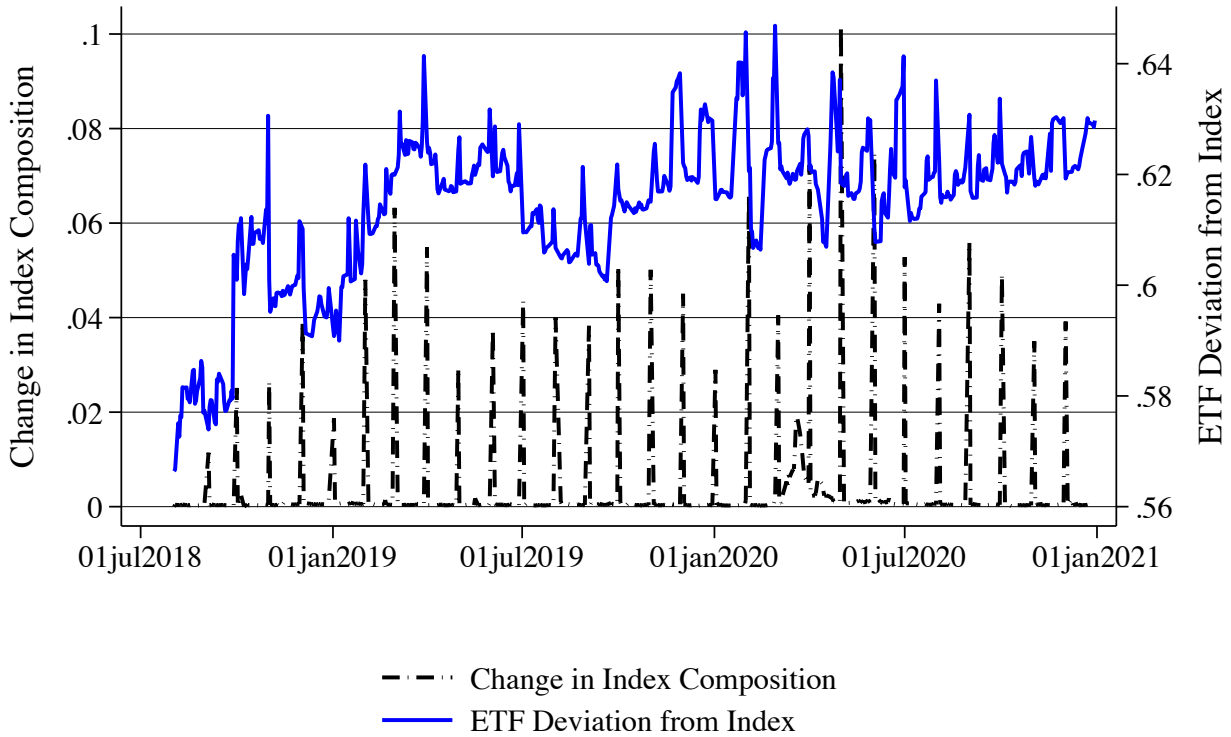
- Suggestion #1: Check time-varying fundamentals
  - liquidity-time FE (not lagged, not monthly)
  - Issuer-time FE, rating-time FE
  - Maturity-time FE
- Suggestion #2: Use shocks to basket inclusion
  - Check basket inclusions over which APs have more versus less control

Interpretation of Results

- Suggestion #2: Use shocks to basket inclusion
  - FI indices rebalance at the end of each month
  - Index issuer not APs decide index composition
  - Compare returns of bonds included in baskets
    - (more) due to index rebalancing $\rightarrow$ not AP private info
    - not due to index rebalancing $\rightarrow$ more likely AP private info
  - How to judge what is due to index rebalancing?

Interpretation of Results

- How to judge what is due to index rebalancing?
  - Jumps in overweighting of each bond around index-rebalancing
  - Regress basket inclusion against these jumps



(Koont, Ma, Pastor, Zeng 22)

Creation versus Redemption

- Paper currently focuses on creation baskets

> Unlike share creations, redemptions are much less likely to involve pro-rata settlements and thus do not embed the same cost as creations. It is much easier logistically for ETF managers to provide APs with portfolios that consist of all the assets that underlie an ETF rather just a subset as they do not have to enter the market and execute transactions to secure those assets. Additionally, APs may not need to sell those assets immediately, instead adding them to their balance sheets that they hold in their related market-making businesses. Thus, in practice, redemptions exert a far smaller distortionary effect on the portfolios of ETFs

Creation versus Redemption

- Redemption baskets are also quite concentrated!

Table: Percentage of Index Bonds

	Average		Distribution				
	EW	VW	p10	p25	p50	p75	p90
Realized CR baskets	24.56	18.13	4.22	10.21	19.44	37.44	52.75
Realized RD baskets	29.80	18.00	3.77	9.64	22.01	38.72	87.12
Portfolio holdings	81.28	91.39	45.64	64.76	88.03	96.70	102.39

(Koont, Ma, Pastor, Zeng 22)

- If APs have info advantage in forming creation baskets, they are likely to use their info advantage in forming redemption baskets as well

Creation versus Redemption

- Suggest to analyze redemptions alongside creations
  - Differences in results could be interesting
  - Fund performance is affected by both creations and redemptions
  - Creations were more prevalent in the past but that may change going forward e.g. high-inflation and high-interest-rates environment
- There is already some analysis in the appendix!
  - Suggest to explain what they mean
  - Suggest to reconcile them with the findings on creations

Conclusion

- This paper takes on a very important question: what are the hidden costs of ETFs?
- Striking result: bonds added to creation baskets underperform!
- Suggestions
  - Shed more light on the interpretation of the results
  - Jointly consider redemptions with creations