

Discussion of **Financing the Global Shift to Electric Mobility**

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What's the Basic Idea?



Stylized fact: loans for electric vehicles (EV) have higher rates than loans for comparable internal combustion engine (ICE) vehicles. Why?

Comments Outline

- I think the execution is good - I found the paper clearly written and economically interesting.
- Outline for my thoughts (tinkering at the edges - nothing catastrophic):
 - Pushing on the spread
 - Ruling out alternative mechanisms
 - Smaller Thoughts

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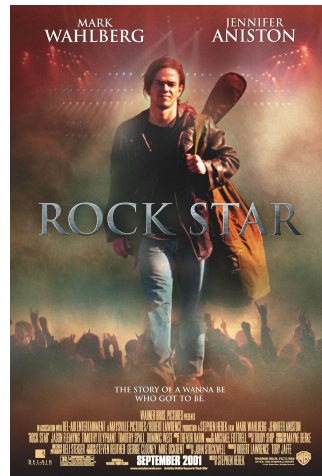
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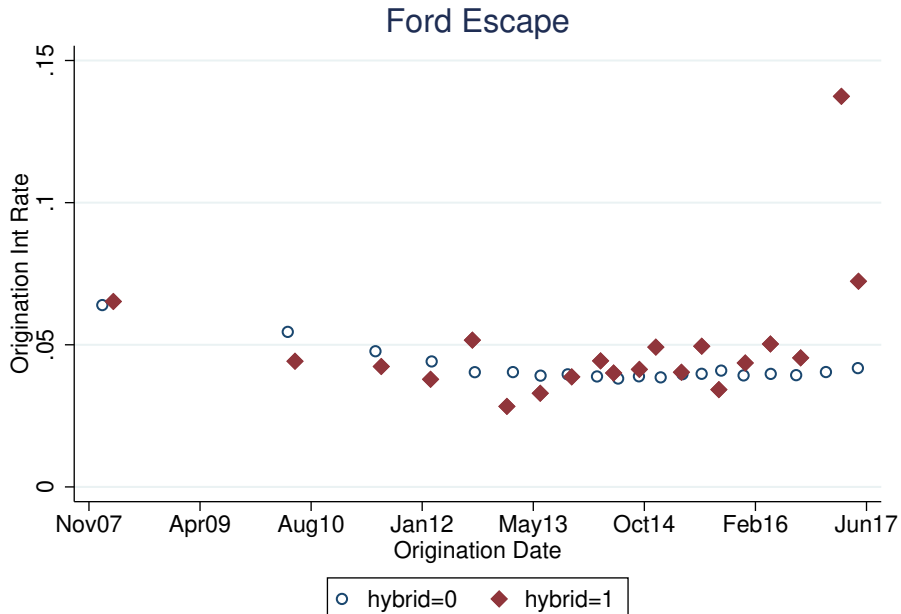
- I poked around in the auto loan data from our papers (≤ 2018) with mixed results. Average rates for the only three vehicles that I looked at:

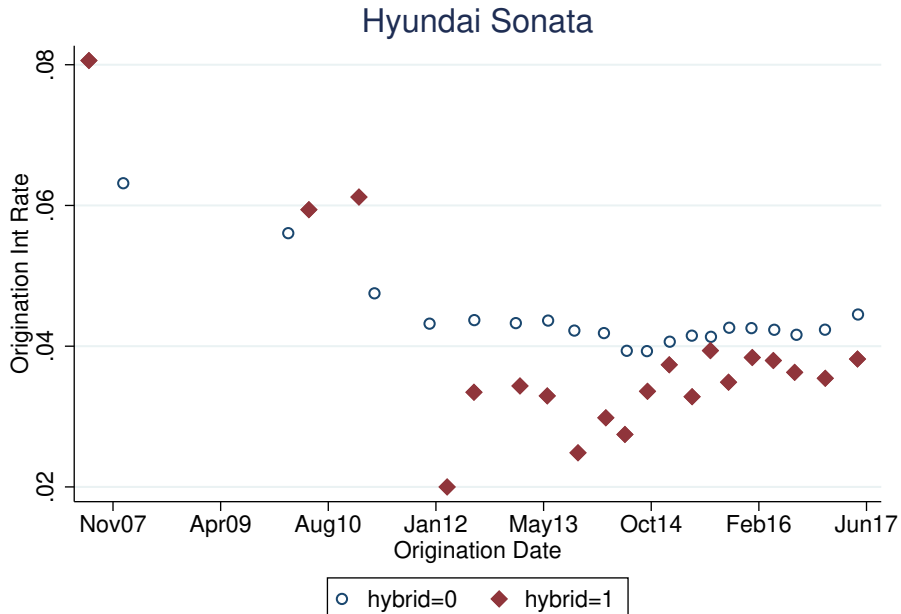
	<u>ICE</u>	<u>Hybrid</u>
Ford Escape:	4.2%	4.59%
Hyundai Sonata:	4.41%	3.49%
GMC Yukon:	4.91%	3.33%

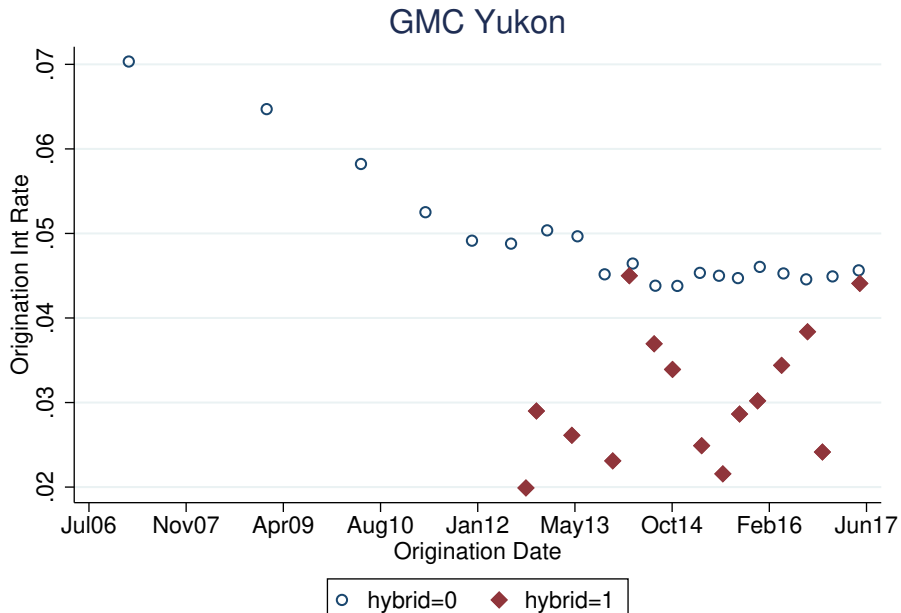
- Trim levels?

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 - Suggestion: explore the CS of EV loans to better explore the space (e.g., manufacturer tenure, hybrid vs. plugin, Tesla vs. ~Tesla)

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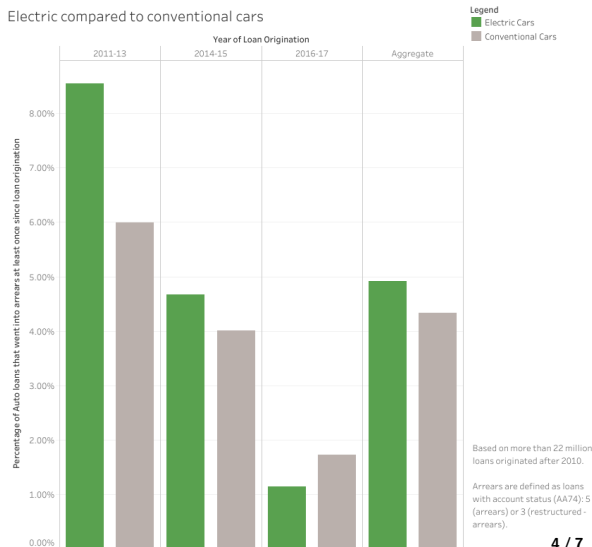
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Electric compared to conventional cars



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- Is the EV-ICE spread for performance really that small (Table 6)? Given the base levels, the point estimates seem sizable to me.
 - non-performing EV coefficient is -0.006 on a base of 0.041.
- Not significant, so I probably shouldn't fixate so much on point estimates...

...but why It Matters a Lot

- I think the performance is so important because a nonresult for performance helps rule out unobservable differences in EV-ICE buyers, e.g. different indirect utility of virtue signaling?
- Can we rule out that buyers are paying more for a vehicle (which they are) and paying more for an accompanying loan (which they are) for the signaling value?
 - The ideal experiment would change, say, ICE to EV, **with the knowledge of the lender**, but **without the knowledge of the borrower** — something toward the realm of a reverse VW experiment, but this will be hard to overcome given the unsegmented market for information, i.e. neither borrowers nor lenders knew about VW.

Smaller Thoughts

- Aren't EV car buyers also exposed to technological obsolescence? Is this priced into the car?
- Tax subsidies that lower the effective interest rate
- binscatter the figures
- show multivariate result in Table 7
- Which FE flips the EV sign?
- Show me control coefficients in an appendix table
- Look at other account statuses - repurchasing by seller for other reasons...
- Any data on captives vs. non-captive lenders?
- Data difference with Benetton et al. (2020) that also use EDW data (rates, maturity, LTVs). Many of their filters seem sensible
- I did not understand why the number of observations changed so much across the various tables
- Prices really responds that quickly to patents on batteries or is this just capturing the general state of the sector?

Conclusion

- This is a really cool paper looking to identify and examine a straight forward stylized fact that there is a difference in the financing terms for electric vs non-electric vehicles.
- Tightening on some of the paper's building blocks will make it that much better.