THE OHIO STATE UNIVERSITY
FISHER COLLEGE OF BUSINESS

Financial Intermediaries and Demand for Duration

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Discussant: **Andrei S. Gonçalves**

2024 MFA

Outline

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- Literature: there is a Short Duration Premium
- Reason: LT investors have high demand for LT cash flows

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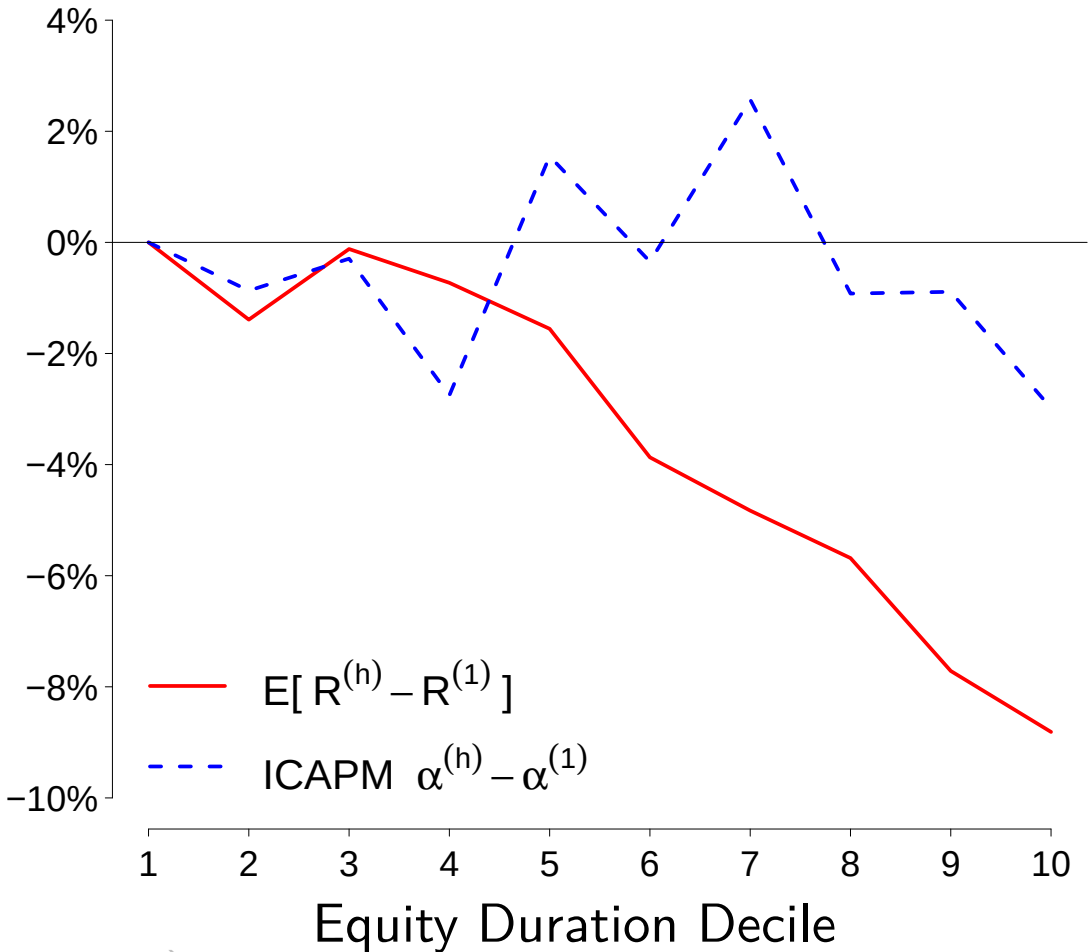

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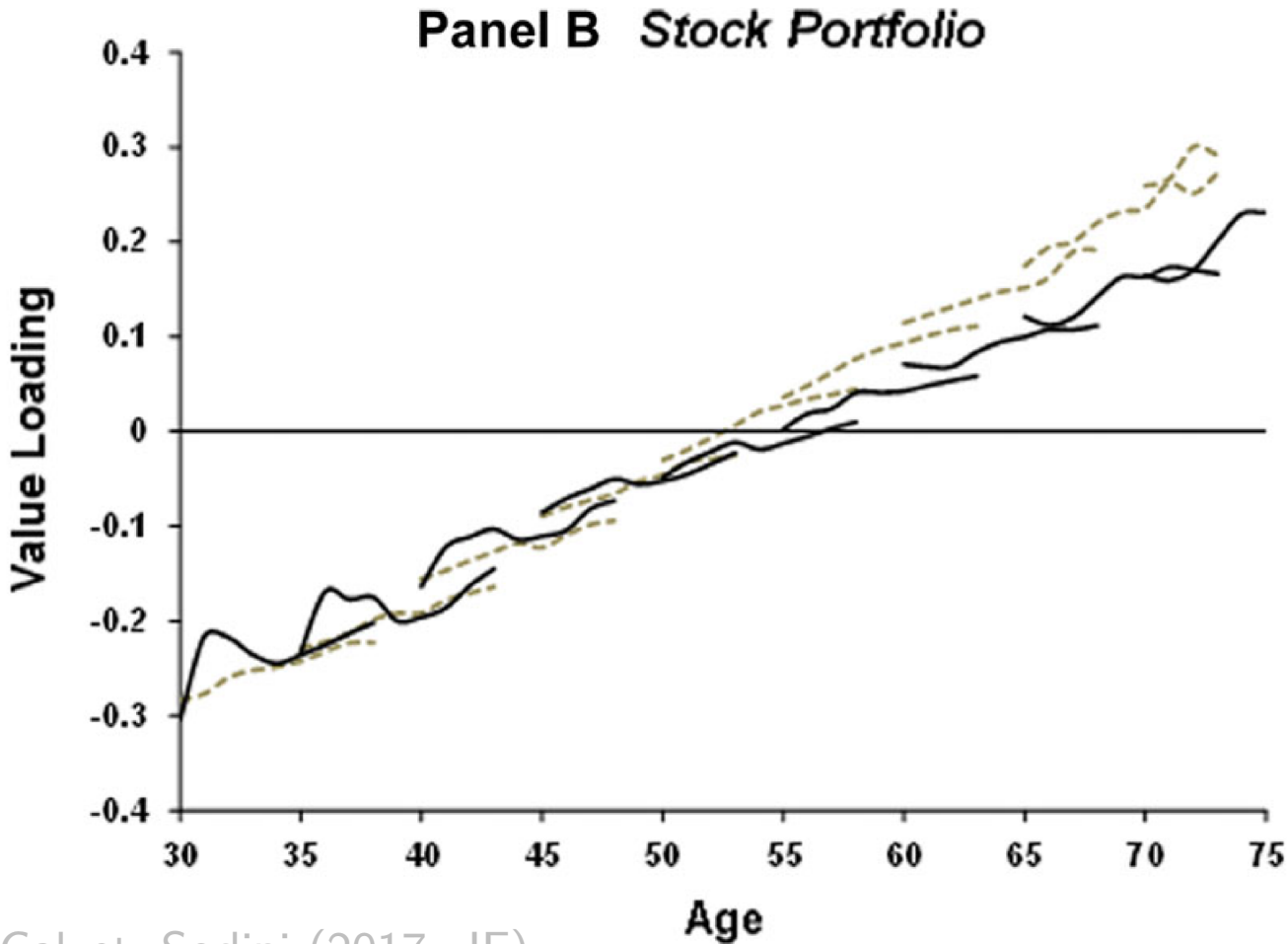

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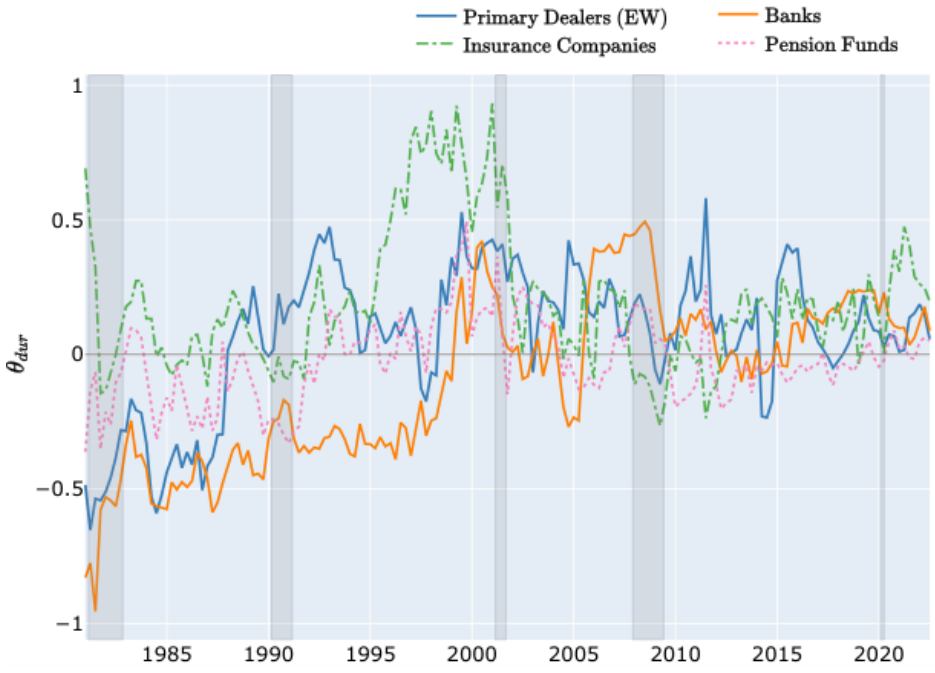
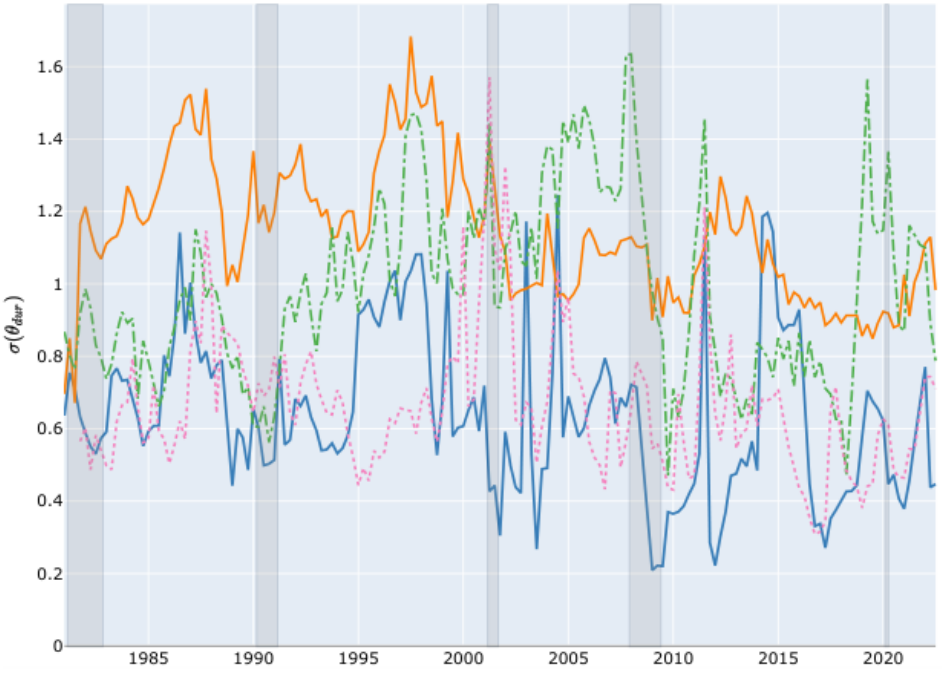
The *Dur* Demand

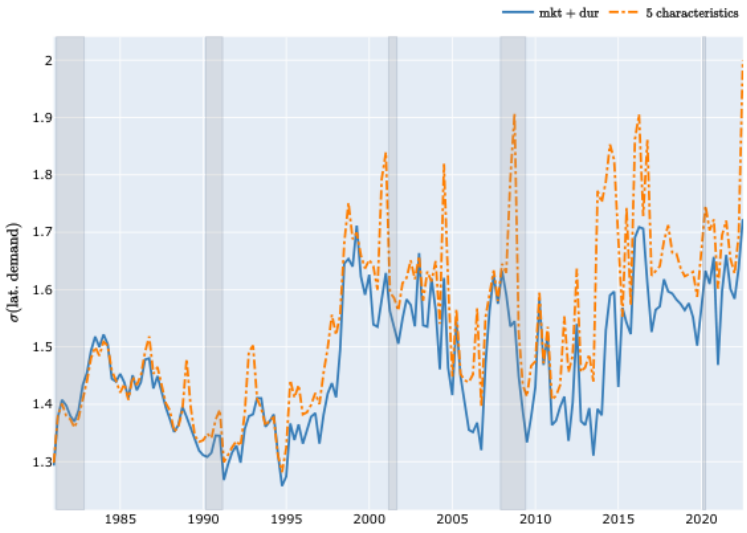


A: Average Demand for Duration.

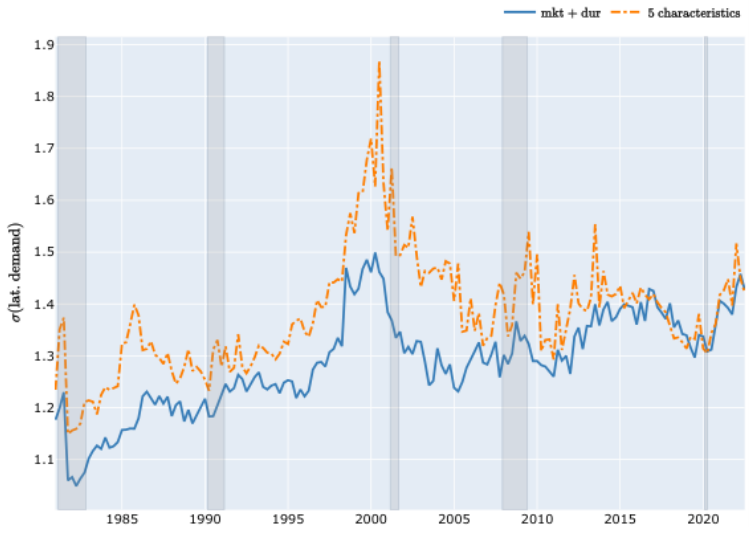


B: Cross-Sectional Standard Deviation in Demand for Duration

The Relevance of *Dur* Demand



A: Primary Dealers.



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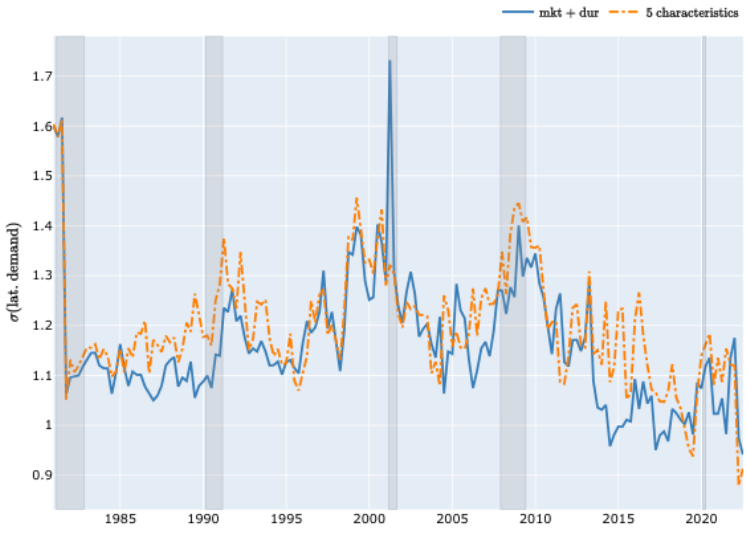
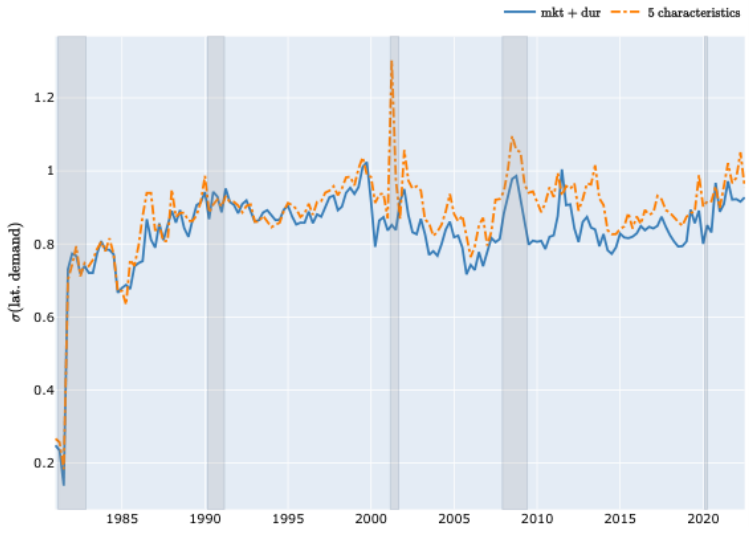
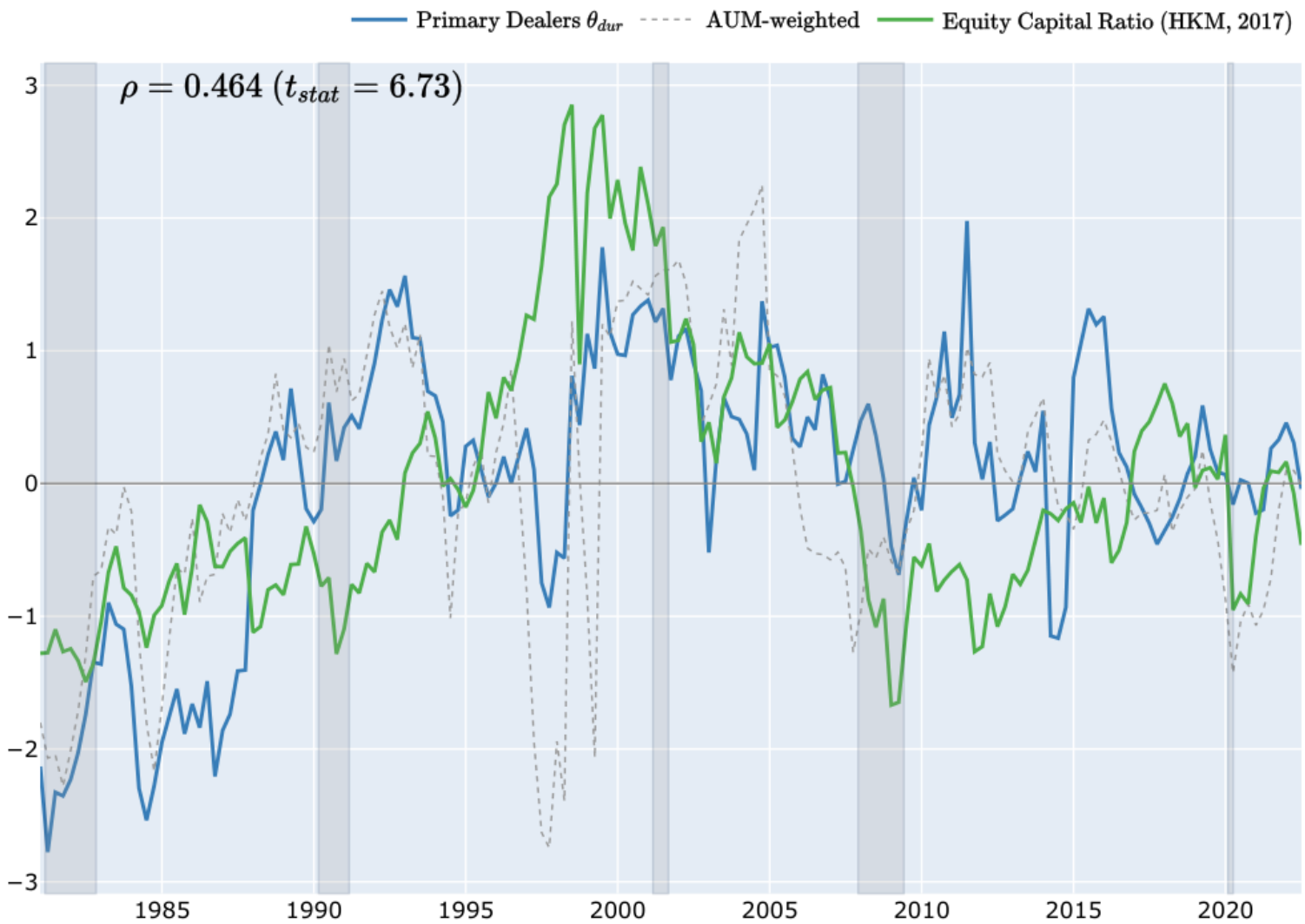


C: Insurance Companies.

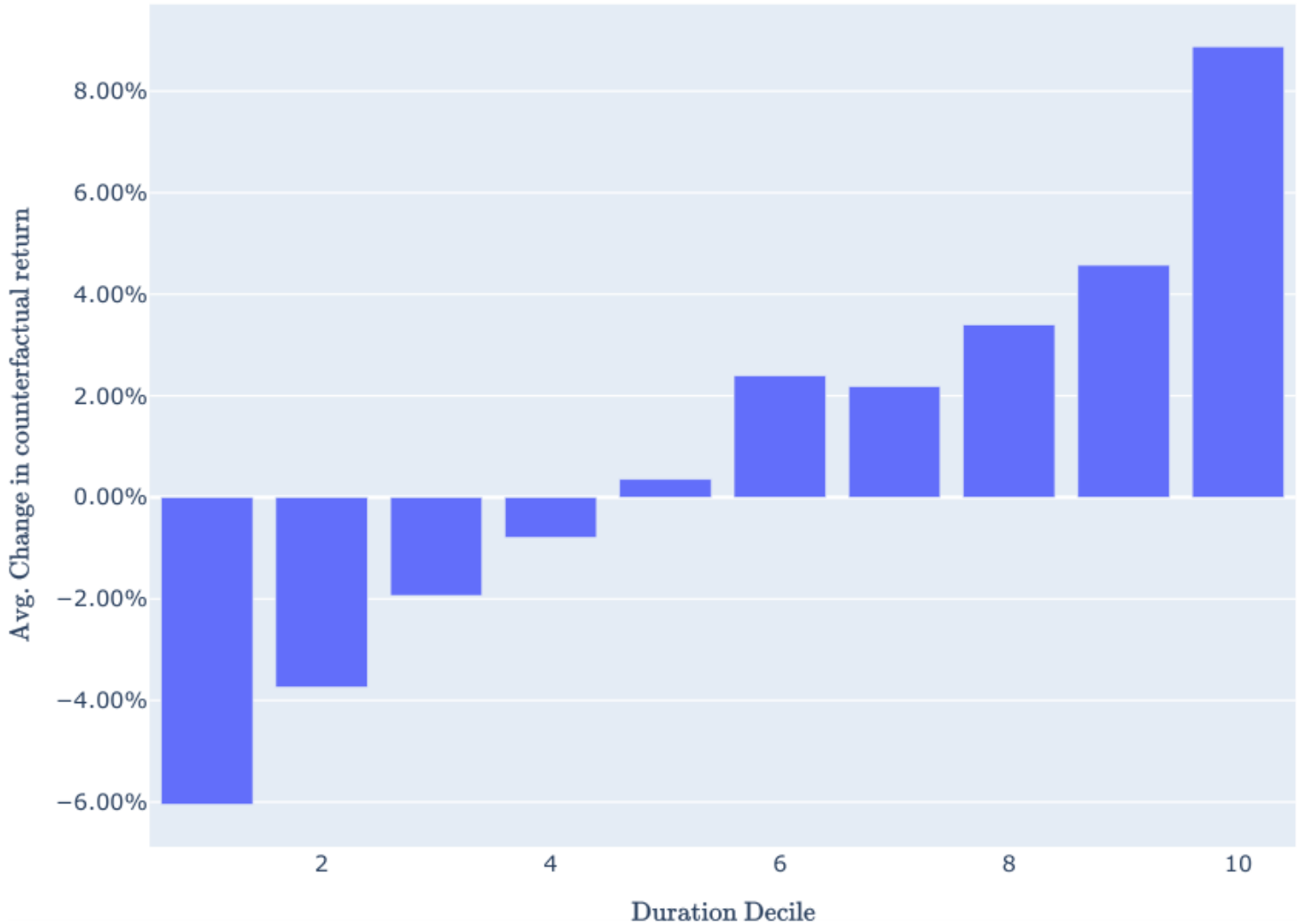


D: Pension Funds.

The Link Between *Dur* Demand and Capital Constraints



The Asset Pricing Impact of *Dur* Demand



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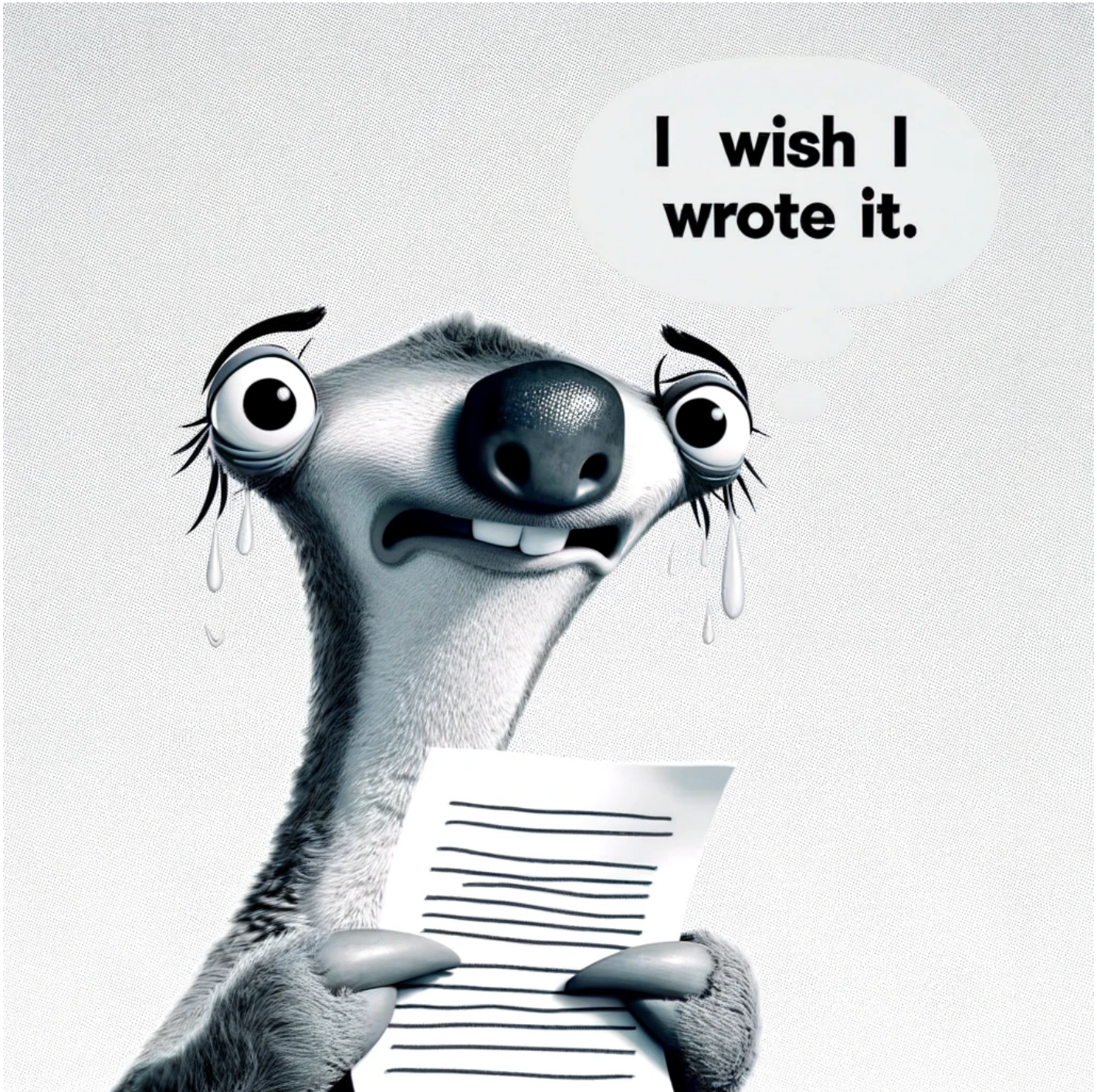
I wish I
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- $\sigma(Dur)$ does not capture the reinvestment risk effect on θ_{Dur}:

- Directly consider the reinvestment risk hedging demand:

- Model the value-wealth ratio as $vw_{t+1} = a_t + s_{t+1}/(\gamma_t - 1)$, so Gonçalves (2021, JF)

- Reasonable to say $\phi^s_{n,t} = -b \cdot Dur_{n,t}$, so

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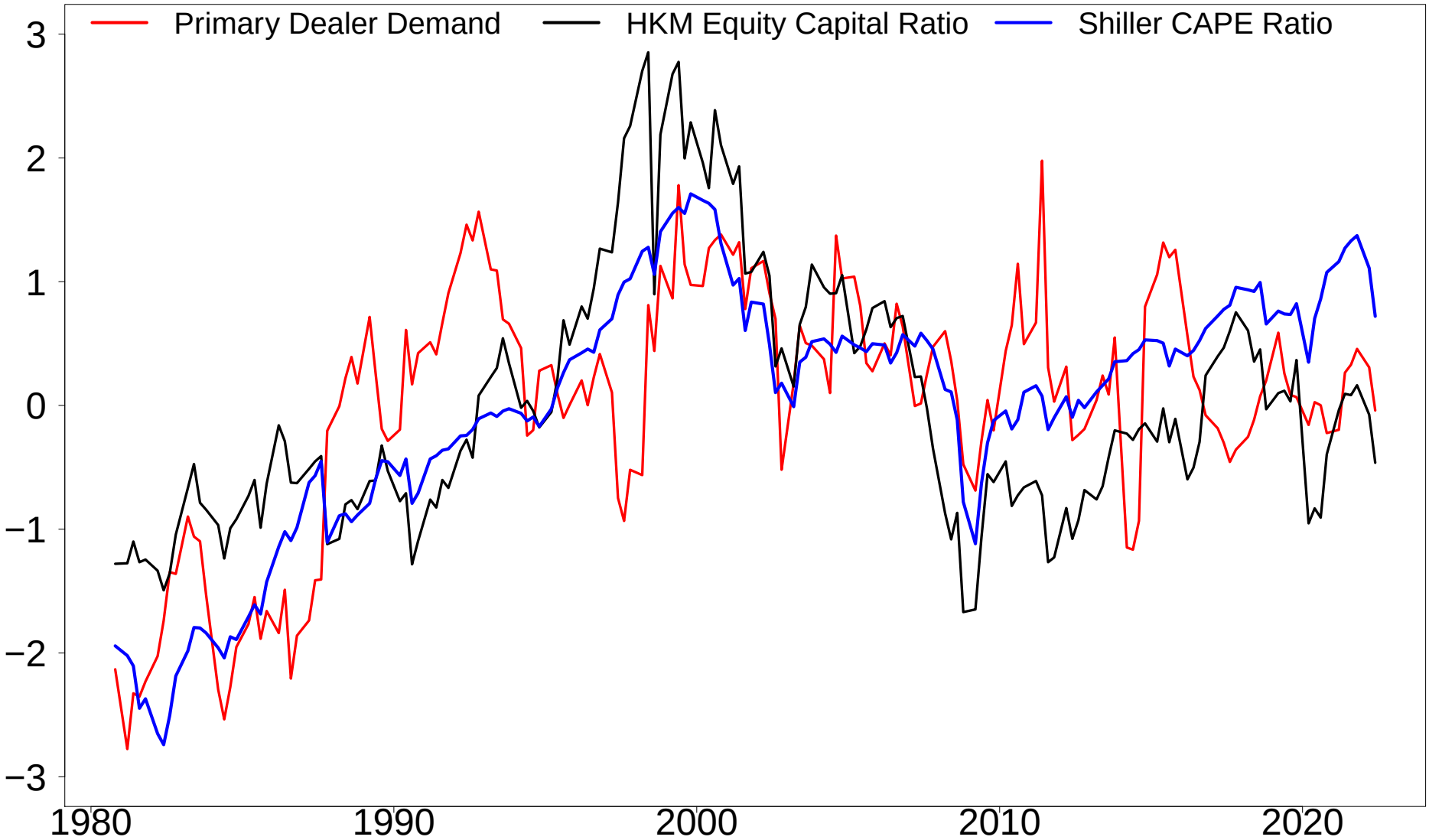

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$$\theta_{Dur,t+1}^{\text{Primary Dealer}} = a + b' x_t + \epsilon_{t+1}$$

HMK Equity Capital Ratio	
Shiller CAPE Ratio $(1/\gamma_t)$	
R^2_{adj}	

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HMK Equity Capital Ratio	0.118***
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R^2_{adj}	20.8%

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	[1]	[2]
HMK Equity Capital Ratio	0.118***	
Shiller CAPE Ratio ($1/\gamma_t$)		0.178***
R^2_{adj}	20.8%	47.7%

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	[1]	[2]	[3]
HMK Equity Capital Ratio	0.118***		-0.028
Shiller CAPE Ratio ($1/\gamma_t$)		0.178***	0.198***
R^2_{adj}	20.8%	47.7%	47.9%

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$$\theta_{Dur,t}^{\text{Primary Dealer}} = a + b' x_t + \epsilon_t$$

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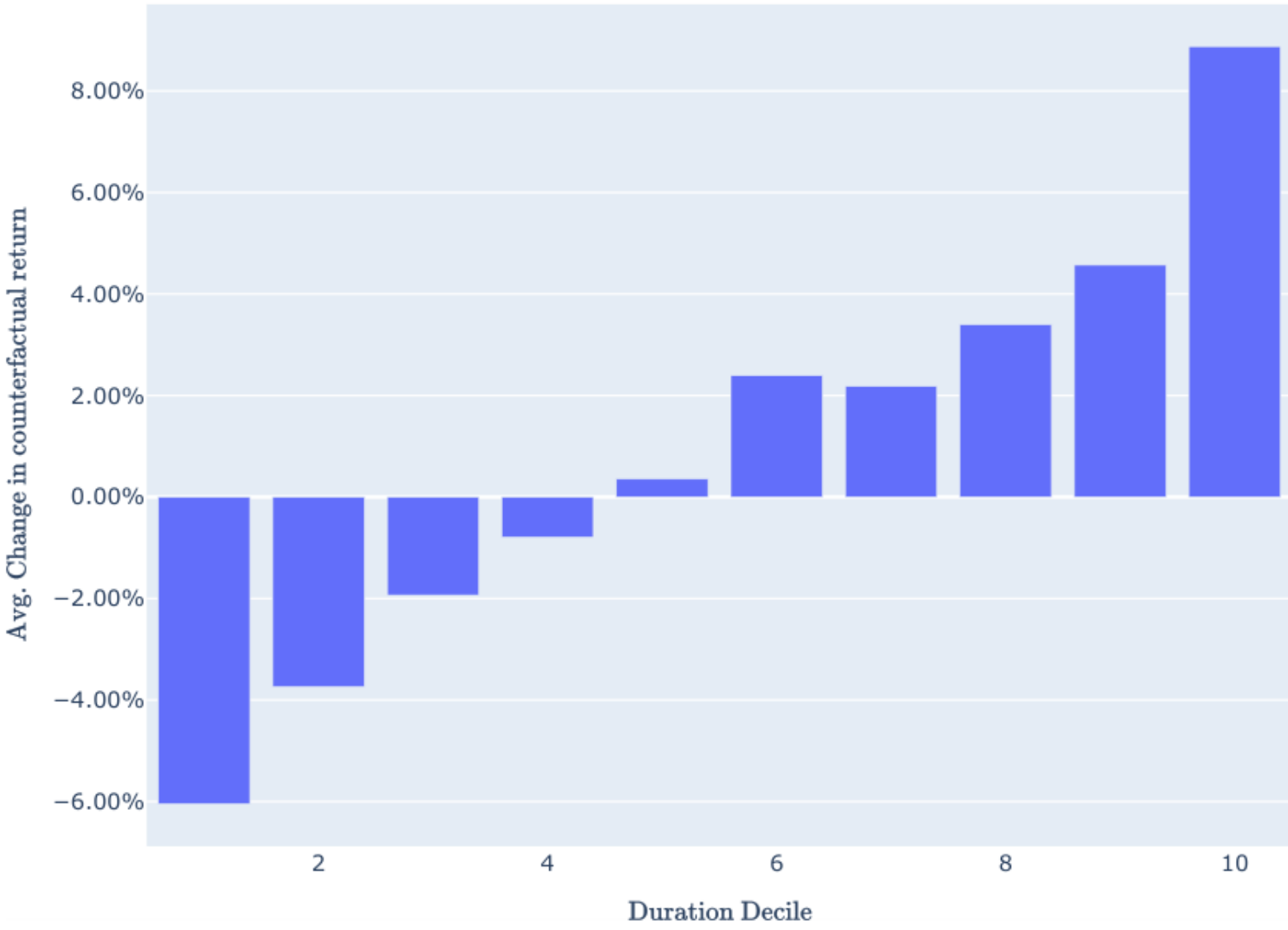
HMK Equity Capital Ratio	0.120***		-0.027
Shiller CAPE Ratio ($1/\gamma_t$)		0.181***	0.201***
R^2_{adj}	21.1%	48.4%	48.6%

2) ↑ θ_{Dur} Should Imply ↑ Short Duration Premium



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- "increased demand toward high duration [...] with companies at the long-end of the duration spectrum experiencing large capital gains at the expenses of companies with proximate cash-flows"
- So, this effect is about price impact not about equilibrium $\mathbb{E}[r]$
- A θ_{Dur} increase generates a price impact in the same period
- But (to me) the most interesting question is the effect on $\mathbb{E}[r]$
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  - Can $\theta_{Dur,t}$ explain the Short Duration Premium variation?

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- So, this effect is about price impact not about equilibrium $\mathbb{E}[r]$
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Some Other Comments

1) Frictions mechanism is very similar to Ge (2022, JF)
2) Equation 1 does not reflect the ICAPM demand equation
   - There is no demand for $\mathbb{E}[\widetilde{r}_{t+1\to t+H}]$
   - There is demand for $\mathbb{E}[\widetilde{r}_{t+1}]$ and covariance with $\mathbb{E}[r_{m,t\to t+H}]$
   - Replace it with demand equation I provided in comment (1)
3) Intermediaries overweighting low beta stocks
   - You argue intermediaries overweight low beta stocks
   - You argue this is consistent with Frazzini, Pedersen (2014, JFE)
   - But their point is intermediaries overweight high beta stocks
   - They want leverage and constraints bind on average
   - This overweighing decreases their $\mathbb{E}[r]$ (low beta anomaly)

Outline

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