

Financial Intermediaries and Demand for Duration  
by  
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## Summary of the paper

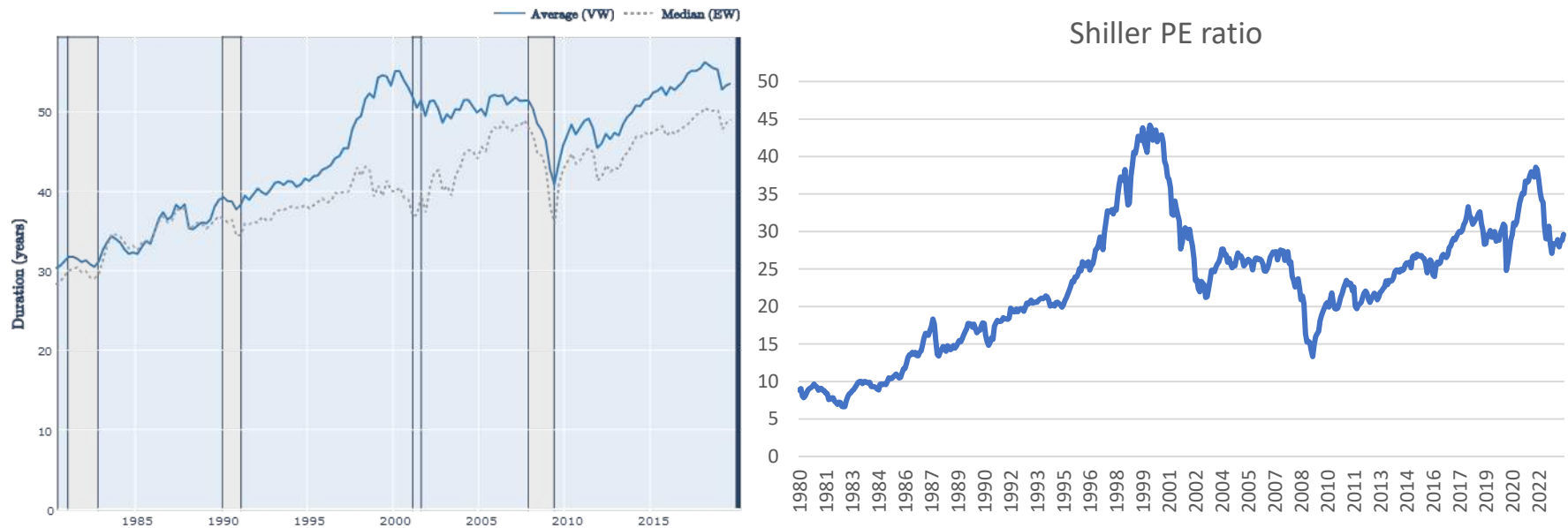
- Institutional investors hold large amounts of equity
- However, their investment horizons can differ substantially
- This may affect their demand for specific assets
  - E.g. pension funds may prefer equities with long-dated cash flows
- This paper studies the demand for long duration equity, through the lens of the recent literature on demand-based asset pricing
- Main findings:
  - Insurance companies have higher demand for duration; Banks and dealers sell duration
  - Confirming the theory, target date funds with long horizon have higher demand for duration
  - The demand for duration fluctuates a lot over time, and is positively related to the sector's capital ratio

## Equity Duration

- Equity duration is defined as the present-value weighted time to receiving the cash flows on a share
- The paper uses the procedure of Gonçalves (2021) to estimate the duration
- Some features of the method:
  - Duration is predicted from a VAR and a function of firm characteristics
  - Cash flows include share repurchases and new issuance
    - I'm not sure this is fully correct
  - Average estimated duration is about 40 years; that seems rather long
- Can you try other methods to calculate duration, like the ones used by Dechow et al. (2004), Weber (2018) and Baele, Driessen and Jankauskas (2021), who use earnings and expected earnings growth per firm to calculate equity discount rates and duration?

## Equity Duration (2)

- The resulting aggregate duration series looks a lot like a valuation ratio



- How does the duration measure correlate with say Market-to-Book, both over time and in the cross section of firms?

## Demand for duration

- Theory predicts that institutions with long investment horizon have higher demand for equity duration
  - Please report average duration of the equity portfolio per investor category (this is missing from Table 2)
- But they can also hold more equity (of similar duration); what matters for hedging is the portfolio (dollar) duration, not each asset's duration
- However, the institutions in your data hold surprisingly little equity:

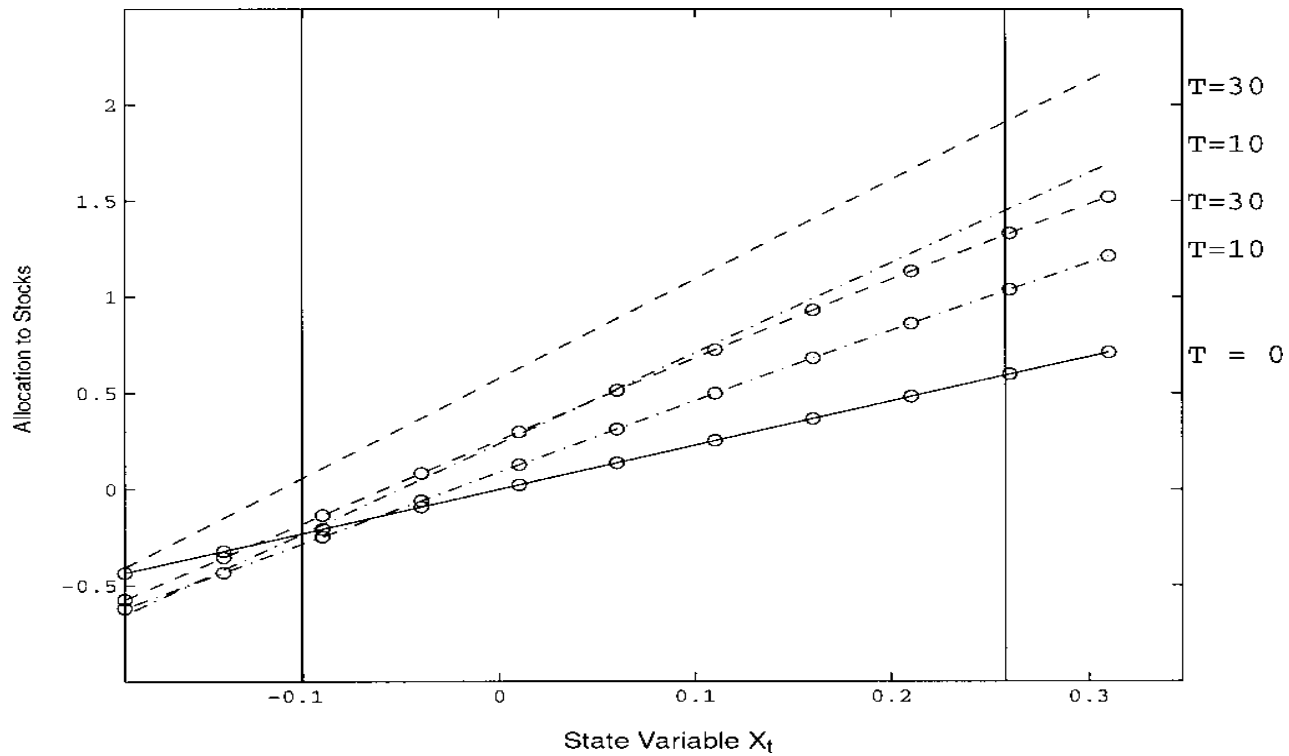
Table 2, Panel A: Portfolio weights (in %)

	$w_i$					$w_0$	
	mean	std	p10	p50	p90	mean	std
Primary Dealers	0.18	1.02	0.00	0.00	0.39	26.93	10.24
Banks	0.19	1.19	0.00	0.01	0.40	27.62	10.32
Insurances	0.12	0.74	0.00	0.01	0.23	27.18	10.06
<b>Pension Funds</b>	<b>0.05</b>	0.34	0.00	0.00	0.08	30.52	8.49

## Demand for duration: Theory

- Literature on *Strategic Asset Allocation* (Campbell and Viceira's book)
  - Demand for long-term bonds originates from long investment horizon; long-term bonds hedge against changes in interest rates
- Similarly, long duration equity can hedge against changes in the equity risk premium (Wachter, 2002 JFQA)
- Prediction (see figure on next slide): asset holdings of institutions with longer investment horizon are more sensitive to fluctuations in the equity risk premium
  - Does this contrast with your finding that the holdings of *short* horizon investors fluctuate most with financial constraints?
- Explore theory on SAA to see if you can get some testable predictions

### WACHTER (2002) FIGURE 3 Stock Allocation as a Function of the Sharpe Ratio



## Outside asset

- The outside asset is defined as “all stocks for which we cannot derive the measure of equity duration introduced in section A.1.” This seems to be the case for a large fraction of the stocks!
  - Why can’t you derive the duration of those stocks?
- In the setting of long-term strategic asset allocation, it also seems more natural to use cash and short maturity bonds as the outside asset, rather than stocks



## Asset Pricing Implications

- Asset pricing implications: can your results explain the recent empirical findings that short duration equities have higher expected returns than long duration equities?
- Market equilibrium with short horizon, risk-averse banks and long-horizon, hedging insurance companies:
  - If long-term investors are willing to pay for their hedge, it may explain why equilibrium expected returns on long duration stocks are lower than those on short duration stocks

## Conclusion and summary of suggestions

- Very nice paper, novel idea
- Relate the setting to the theory on long-term asset allocation
- Robustness to the specific duration measure
- Choice of the outside asset
- Explore the asset pricing implications of your findings