Markup Shocks and Asset Prices

Corhay, Li & Tong (2023)

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Overview

Research question

- What are the asset pricing implications of aggregate markup shocks?

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- Much macro, IO interest in rising markups over last twenty years

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- Quantitative macro model
- Test implications in cross section of equities

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Results

- Price of aggregate markup shock exposure is negative
- Markup exposure is priced in cross section

Agenda

Review theoretical mechanism for negative markup shock price

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Potential empirical extensions to bolster main point

Mechanism for Negative Price of Markup Shocks

Setup

- Firms in monopolistic competition
- Representative household with EZ utility

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Exogenous $\uparrow$ agg. markup level $\rightarrow\downarrow$ Level of output (profit max.)

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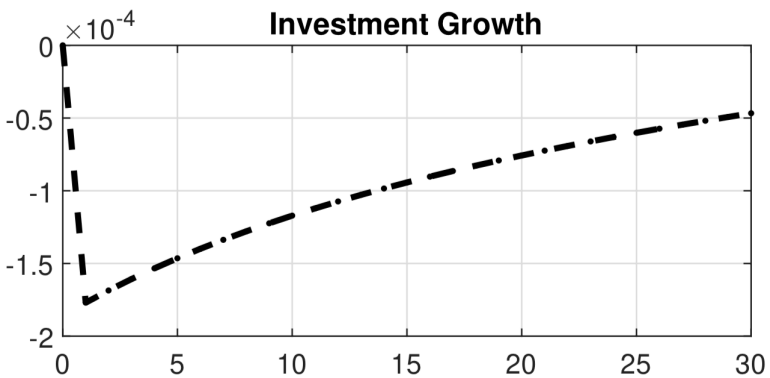
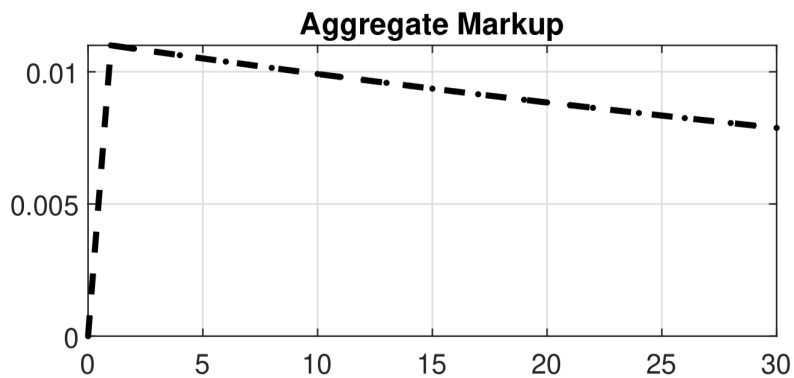
Exogenous ↑ agg. markup level →↓ Output level (profit max.)

→↓ Investment (shock is persistent)





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$\rightarrow\downarrow$ Productivity **growth** (depends on inv.)

$$\underbrace{\Delta z_t}_{\text{Prod. Gr.}} = \Delta\bar{z} + (1-\phi_x)\, x_t + \phi_x \underbrace{\hat{ik}_t}_{\text{Investment}}$$

$$x_t = \rho_x x_{t-1} + \sigma_x \epsilon_t^x$$

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$\therefore$ Firms positively exposed to shock have lower expected return

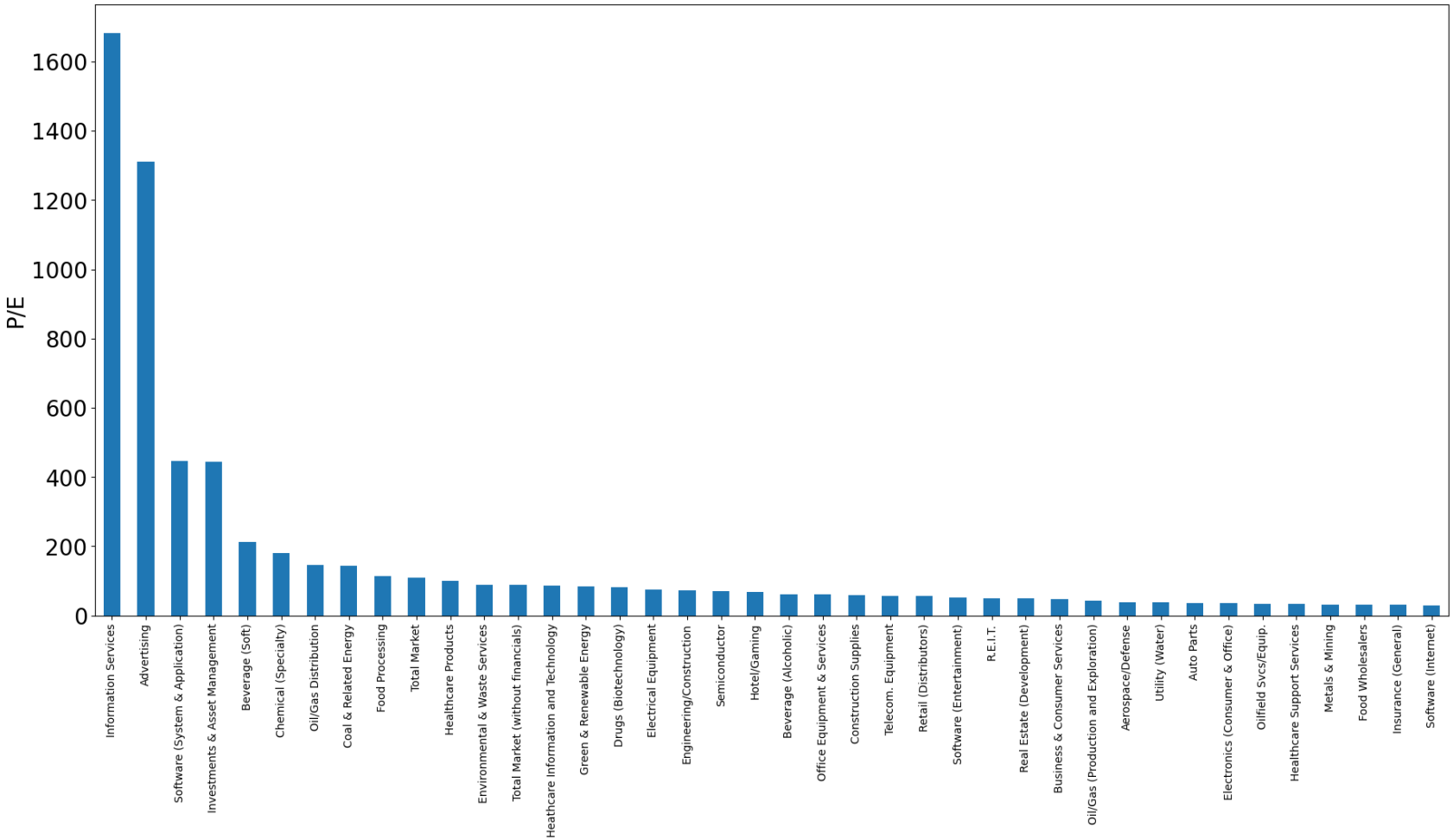
- Measure aggregate markups & validate with standard CX tests

Overall Suggestion: More to Establish Economic Significance

Two extensions to bolster core claim

- "Markup risk is an important source of aggregate risk that is priced in the cross-section of stock returns."

Extension 1: Link to Cross Section of Valuations



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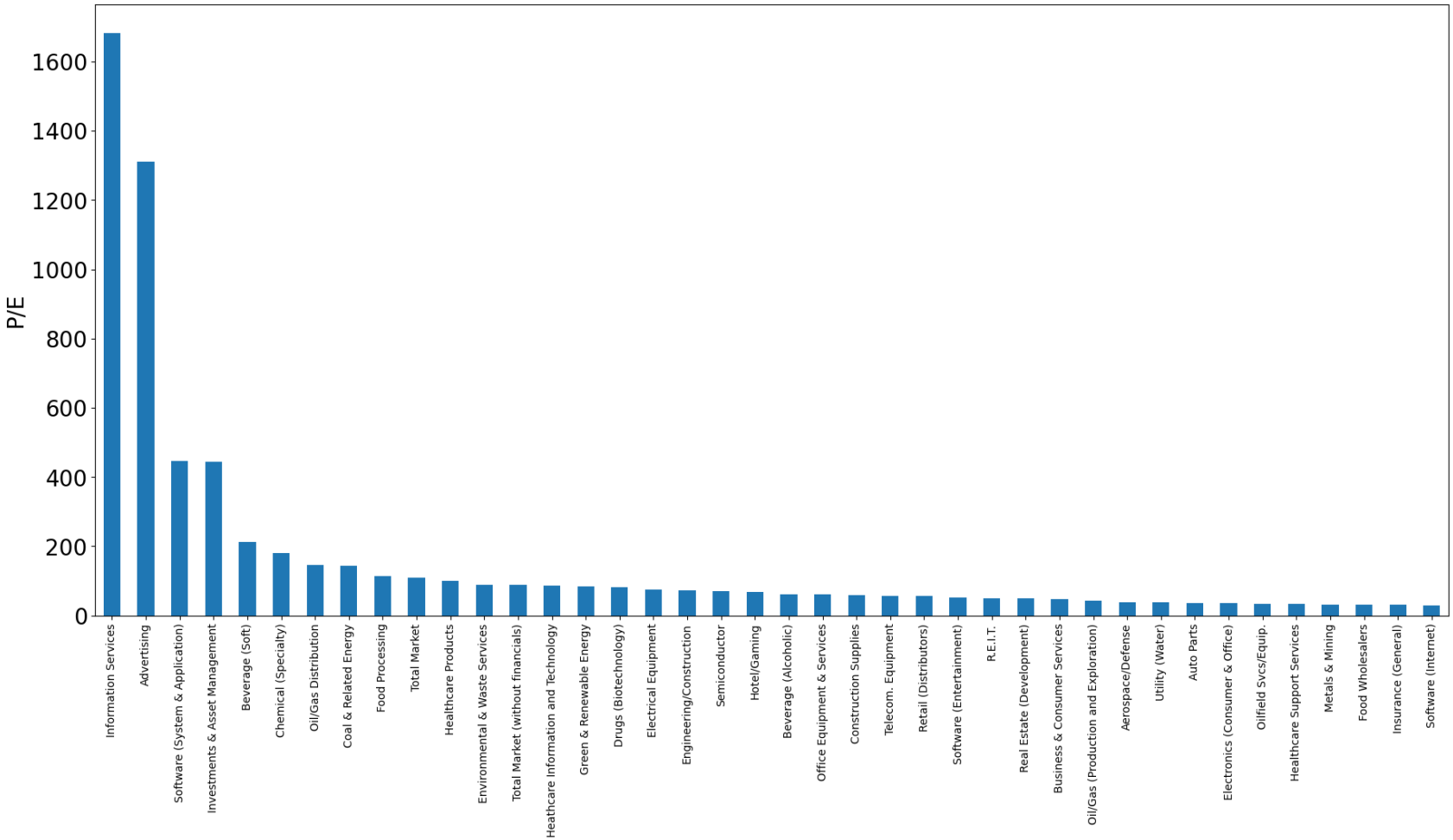
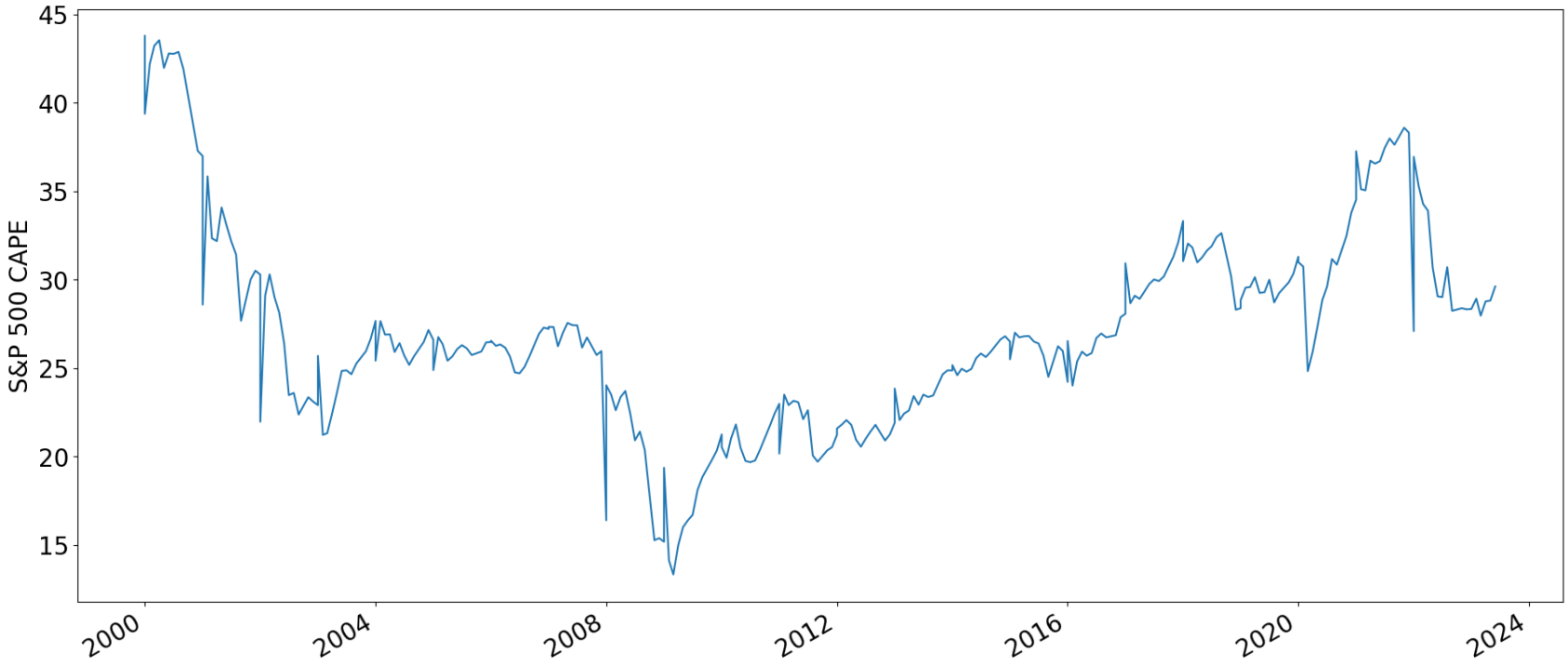


Can markup risk exposure explain much CX variation in valuations?

Plausible given:

- Previous work: Intangible capital, data, etc.
- Large CX discount rate differences documented (2—5% annual)

Extension 2: Link to Time Series of Aggregate Valuations



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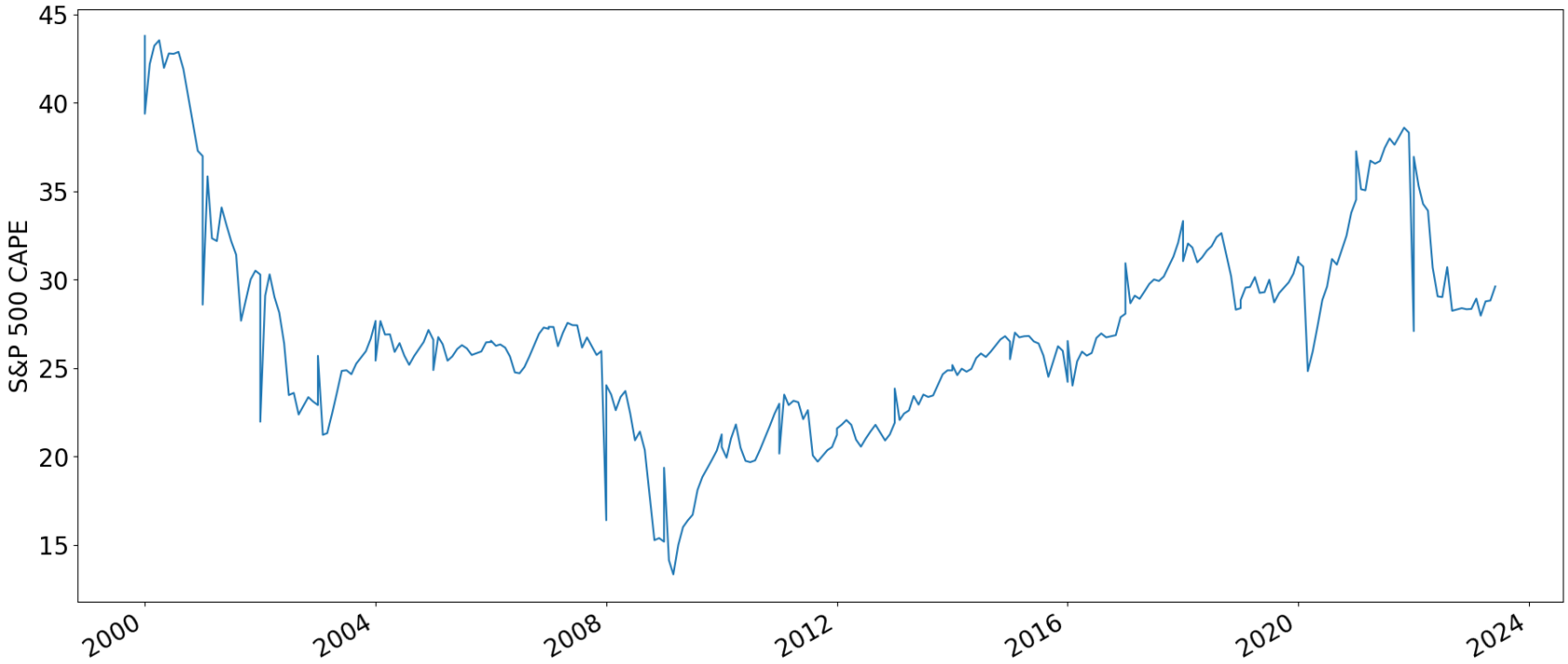

$$\text{Markup Risk Premium} = -\text{Markup Shock Exposure} \times \mathbb{V}[\text{Markup Shocks}]$$

Exposure higher (risk prem. lower) when high-exposure firms are big

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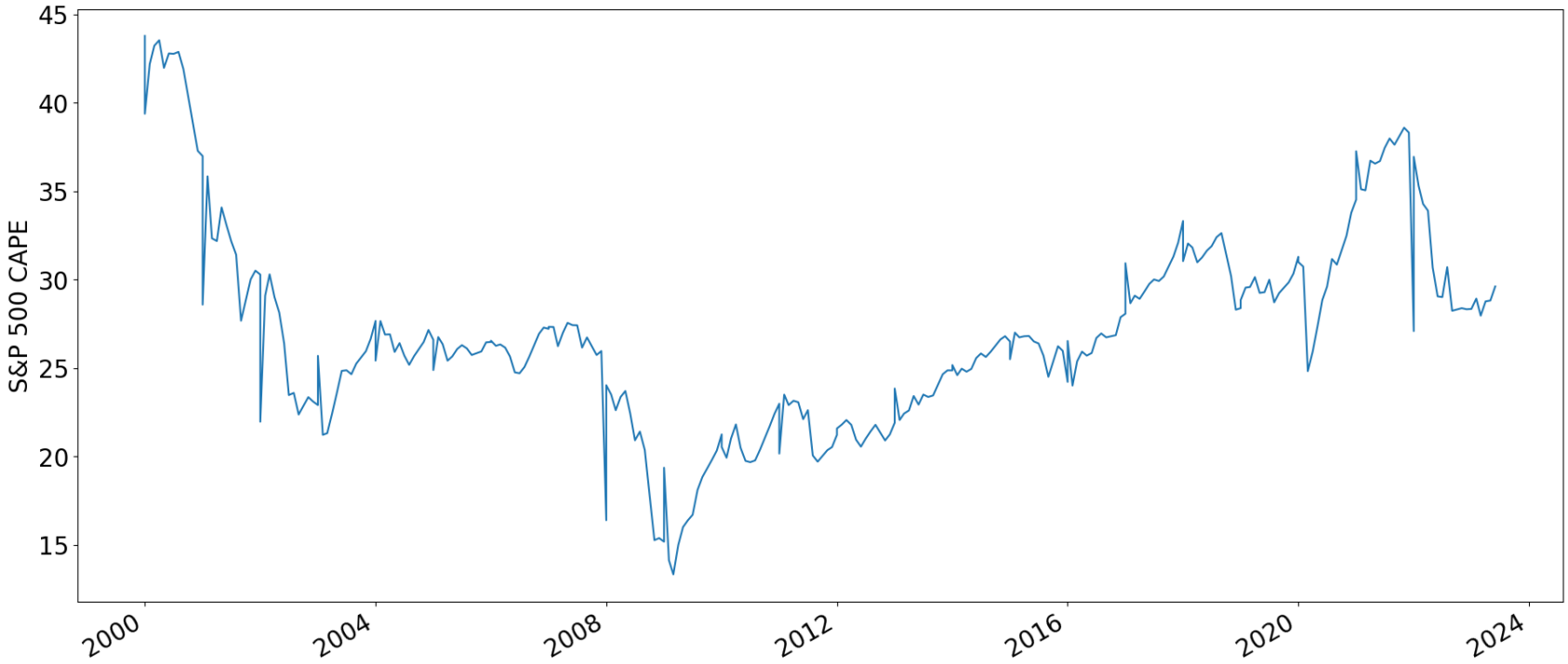

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How much of variation in valuation, equity premium explained?

Minor Comments/Questions

Provide more color on structural estimation

- Which firms/industries have the highest markups?
- Which firms/industries have high weight in aggregate markup & shock series?
- How have these patterns evolved over time?

Discuss how to microfound aggregate markup dynamics

- Equations (13) and (14)
- Full microfoundation maybe not neccessary for model
- Some discussion/justification of where these dynamics may come from could be helpful

How much of model equity premium comes from long-run-risk in productivity?

- As opposed to through loading of final goods firm on markup risk.

Conclusion

Aggregate markup shocks have negative risk price

- Quantitative macro model to explain why
- Cross-sectional asset pricing tests to document empirically

Authors can do more to push economic significance