Countercyclical Income Risk and Portfolio Choices: Evidence from Sweden

By Sylvain Catherine, Paolo Sodini and Yapei Zhang

Discussion:

Abhiroop Mukherjee

Summary

Do workers who face higher income crash risk in bad market states have lower equity holdings?

- Quantitative models with cyclical income risk can perhaps help solve important puzzles in finance including
  - Equity premium puzzle
  - Why the young do not participate in equity markets

Summary

Do workers who face higher income crash risk in bad market states have lower equity holdings?

- Data and identification are key barriers to studying this seriously
  - People typically find that labor income risk is uncorrelated with stock returns, but higher moments could matter
  - Higher moments like skew impossible to estimate without lots of data
  - For a full picture on asset pricing implications we need to consider not the average household but the marginal investor
    - i.e., we need a sense of investor behaviour across the wealth distribution

Summary

- This paper: set-up
  - Fantastic data from Swedish Wealth and Income Registry
    - All assets owned worldwide by each resident
      - Mutual funds
      - Direct equity holdings
      - Banks accounts
      - Loans, mortgages, etc….
  - Theoretically-motivated measurement possible because data can be linked to education, labor income, industry, family,…
    - E.g., twins, spouse's

Summary

- This paper: main findings
    - Workers facing higher left-tail income risk when equity markets perform poorly do indeed have lower equity shares
        - Effect comes mostly from the extensive margin, i.e., lack of participation, rather than holding less stocks conditional on participation

Thoughts

- Overall
  - Very nice paper making good use of a fantastic dataset
  - Takes estimation seriously; unleash the full potential of the data
  - Very nice evidence from:
    - How ratio of human capital to financial wealth matters
    - Twins: Lots of things similar, but differences in portfolio choice depending on differences in cyclical income skew
    - Spouses: If spouse's income is less skewed then equity share higher

Thoughts

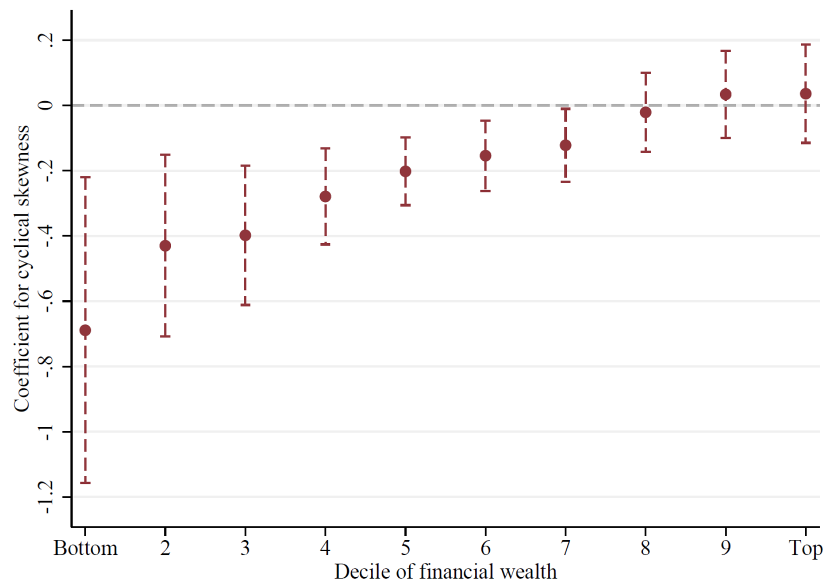
- Comments
  - Magnitudes
  - Interpretation in context
  - Predictions: A different puzzle?
  - Wealth shocks

Thoughts

- Economic magnitudes
  - One standard deviation increase in cyclical skew reduces equity share by 1%.
  - Baseline equity share from summary table: 25%.
  - How should we interpret these magnitudes?
  - Can the authors calibrate a model like Catherine (2021) and show us how these estimated magnitudes tally up with magnitudes required?

Thoughts

- Overall interpretation
  - Hope for models explaining portfolio choice puzzles, e.g., why young don't participate
  - No hope to explain asset prices
    - Relation between cyclical skew and equity share disappears for wealthy (88% of financial wealth-owning population)



Thoughts

- Overall interpretation
  - Lots of hedging in the writing about this:
    Entrepreneurs, skewness of businesses can be higher, etc.
  - Doesn't make sense to me –
  - You are looking at the entire population: their wealth does sum to aggregate wealth. This includes the richest entrepreneurs.
  - You have the data to nail these alternatives: Why not look at the entrepreneurs directly if you believe you need more granularity?

Thoughts

- One issue with this
  - Is Sweden a good place to measure consumption crash risk?
  - Consumption crash risk depends on all the essential stuff I need to consume – e.g., health, schools, basic living, etc. – when I might get a large negative income shock
  - But Sweden is a strong welfare state: many essentials provided by the state – the state itself is hedging a bunch of downside risk
  - In this case, are the estimates "too low" because th etail-risk you're measuring here is capped – relative to other countries where state doesn't provide such insurance?

Thoughts

- Extensive vs intensive margins
  - Should people with higher cyclical skew not hold stocks, or should they hold defensive (i.e., low-beta) stocks
  - Theory of course wont predict people holding individual stocks
  - But they do, in the data
    - Sometimes large undiversified positions

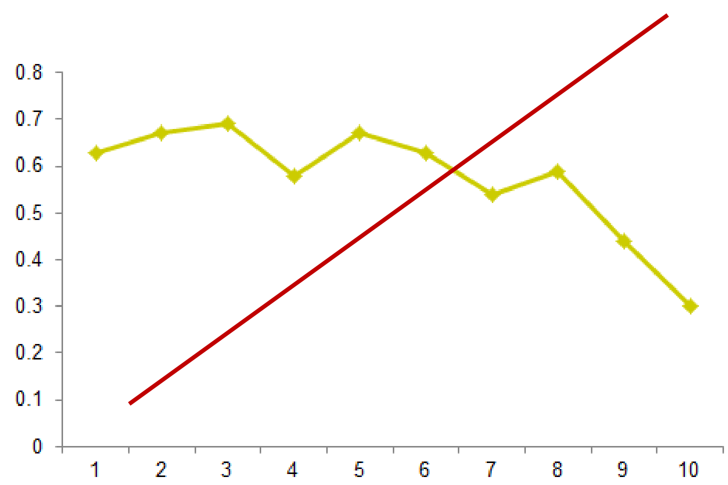
Thoughts

- Extensive vs intensive margins

  - Should people with higher cyclical skew not hold stocks, or should they hold defensive (i.e., low-beta) stocks

  - Low-beta stocks can provide a hedge, while still allowing people to get equity premium

  - On top, we know that the capital market line is flat, so you can enjoy an even better deal than the equity premium itself



Thoughts

- A different puzzle
  - Paying participation costs is not worthwhile because incomes can crash when market crashes
  - But there are ways to keep money in stocks that won't crash as much as market
  - Suggestion: Test this directly
    - You have individual stock holdings: Does cyclical skew relate to beta of equity portfolio?
    - 'Limits to rationality'

Thoughts

- Wealth shocks
  - While evidence on twins useful, it still runs into the issue that even within a pair, occupational choice and portfolio choice could be jointly determined
  - Examining wealth shocks in a smaller sample could be useful
  - E.g., lottery winnings, keep H constant raise W
  - People should be willing to invest a lot more in equities

Conclusion

- Interesting and well-done paper on an important topic
  - Thought provoking:
    - Evidence brings new challenges to theory on asset prices and income risk
    - Seems consistent directionally with models looking at portfolio choice in the life-cycle, but more on quantitative match could be useful
  - All the best!