

"Sticky Discount Rates"

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General impression

- A very carefully executed piece of research; a lot of thought is put into how the paper is structured
- It is a pleasure to read it; it feels as if the authors have perfect foresight and the second a concern pops into my mind, they immediately address it
- Unlike many (many!) papers that immediately start with a theoretical model and finish with its calibration, this paper starts with empirical data, justifying and laying the foundation for their model
- Overall, an excellent paper which is a pleasure to read (no "but"s!).

Overview of the paper

- Discount rate - the required nominal rate of return firms seek on their investment projects.
- In standard textbook models, expected inflation and discount rates co-move because smart investors think in "real," not nominal, terms.
- In reality, 95% of discount rates are not adjusted for inflation, meaning that high inflation decreases the real discount rate on a project. This leads to over-investment in projects that would not have been accepted otherwise.
- The end result is that expected inflation has a real effect on the economy; when discount rates are sticky, it becomes a strong monetary policy tool.

What is done really well

- **Compelling empirical evidence shows that firms rarely revise discount rates following changes in expected inflation**
 - The authors use a novel dataset on firms' discount rates, assembled by two of the authors of this paper; the data are based on corporate conference calls.
 - Breakeven investment and cost of capital (COC) comove; the discount rate countermoves (Fig. 1).
 - Investments increase with breakeven inflation, especially in firms that maintain the discount rate.
- **This model provides an easy explanation for the co-movement between C and I, and G and I, in response to demand shocks.**
 - In classical models, when consumption (C) increases, investment (I) falls.
 - Similarly, an increase in G raises the interest rate (r) and crowds out investment.
 - Here, an increase in C or G increases expected inflation, lowers real discount rates, and increases I.
- **Provides evidence that an inflation target could be a very effective instrument.**
 - A small change in the target can lead to a fiftyfold change in actual inflation.

What could be improved

Heterogeneity between companies

- You look at US and non-US data (Japan, France, Germany, etc); some are likely multinationals
- There could be some fundamental differences between companies that decide update and not to update their discount rates (Lepetit, JMCB 2021).
- In most of those countries, bank loans are the main source of financing.
- If a company has an open credit line with a fixed interest rate, then inflation is a blessing as it lowers the real COC, which could explain a subsequent increase in investment.
 - Perhaps, it's worth breaking down companies that do/do not update discount rates by country.
 - Maybe there's also some indication of what type of financing they typically use.

What could be improved

Accounting for lower real interest rates in the US

- From the data, we see that the real discount rate has been decreasing lately, which we attribute to changes in inflation or expected inflation.
- However, it could be that businesses now generally a lower expected return on investment, which needs to be controlled for.
- For instance, Laubach-Williams and Holston-Laubach-Williams estimates of real interest rates have been trending down since 1985.

What could be improved

Additional explanation for the change in specification

- Table 3 shows that discount rates don't get adjusted for inflation, you use firm level FE there
- In Table 4, you use country FE. That table shows that investment increase with inflation for companies that keep discount rates unchanged
 - Country-level fixed effects might not be enough to account for important time-invariant heterogeneity between companies
 - Also, a lot has been happening at the country level that might have affected the LHS variable
 - Also, it might be a good idea to add a measure of risk to the regressions; it's (generally positively) correlated with inflation

What could be improved

Accounting for possible biases

- Expected/breakeven inflation is based on treasuries and TIPS, but treasuries often offered negative real interest rates in the 2020s
- Everyone have underestimated future inflation, which is probably important for the model as there was not a perfect foresight
 - More robustness checks including/excluding "weird" periods such as COVID and high-inflation 2021-2023 period