

How has Elevated Uncertainty Affected Corporate Investment, Dividend Payouts and Cash Holding?

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Investment in the new monetary and financial environment
Paris, 6 July 2018

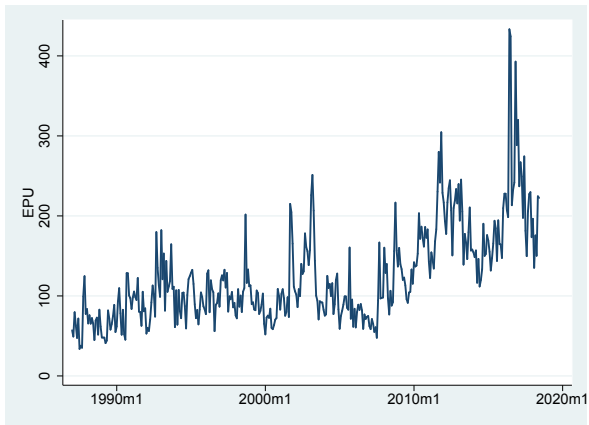
Summary

- Does uncertainty affects corporate investment, cash holdings and dividends?
- Three contributions:
 - provide an new measure of subjective economic uncertainty
 - use this measure to assess how economic uncertainty affects investment, cash holdings and dividends
 - quantify the effects of Great Financial Crisis and Brexit on these variables separately

Results

- The paper shows that the proposed subjective uncertainty measure about GDP, based on surveys of professional forecasters, is close to other available measures derived from CFOs surveys (*Decision maker panel*)
- Using UK corporate level panel data the paper finds that uncertainty reduces investment and dividends and increases cash holdings
- Based on regression coefficients, the effects of the increase in uncertainty due to the Great Financial Crisis are stronger than those of Brexit

Uncertainty is important (in Europe)



Discussion

- The paper tackles two very important issues:
 - how to measure economic uncertainty, in particular "subjective" one (i.e. based on actual expectations)?
 - does economic uncertainty affects corporate decisions? (little empirical evidence)
- Even if still preliminary, this paper shows the potential to make an important step forward
- My discussion will deal with two main points:
 1. the proposed measure of economic uncertainty
 2. what is it that the uncertainty measure is capturing in the regressions ?

The proposed measure of economic uncertainty

- Measuring uncertainty is a difficult task (but Economic Policy Uncertainty, Baker et al, 2016)...
- ... in particular the uncertainty perceived by firms/entrepreneurs
- Few exceptions:
 - the Bank of Italy Survey of Industrial and Service Firms (see e.g. Guiso and Parigi, 1998; Bond et al. 2015)
 - recent surveys by Bloom and coauthors for US and UK (including the *Decision maker panel* that surveys CFOs expectations about GDP four years ahead)
- This paper proposes a new one, based on surveys by the Bank of England of professional forecasters about quarterly predictions of real GDP growth (for 8 quarters ahead)...
- ... it shows it has a similar distribution to the micro one based on survey of CFOs

Advantages

- It asks about not just about central moment but on the whole distribution (probability distribution over bins)
- It elicits expectations of economic agents, but not of the firms's managers like CFOs one (that's why comparison is important)
- With respect to CFOs survey it has a longer time span, but it can not be matched to specific firms (i.e. it is time varying only)

Issues

- More rigorous comparison/validation of the measure would help:
 - the proposed comparison is somewhat heuristic (average expected rate of GDP growth 0.8% vs. 1.1%, the probability of growth less than -1% is 5% vs 16%, see Table 3)
 - there are different time horizons (8 quarters for professional forecasters, 4 years for CFO's)
 - how does it compare with economic events (from Figure 1 it seems that Brexit does not affect uncertainty, is this plausible?) and with other indexes (e.g. VIX?)
- There are some econometric issues in using a time-varying uncertainty measure to analyse firm decisions

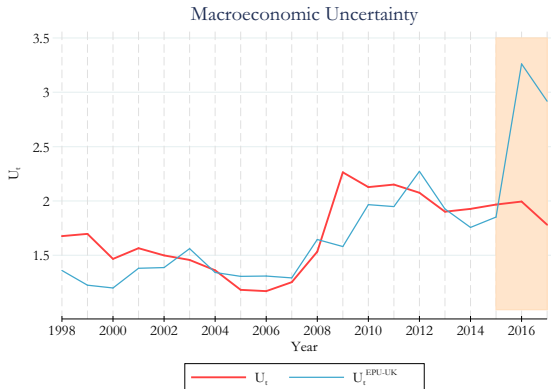
Subjective uncertainty and firm decisions

- The empirical is based on variations of the following:

$$y_{it} = \beta_0 + \beta_1' X_{it} + \beta_2 U_t + \eta_i + \text{crisis}_t + u_{it}$$

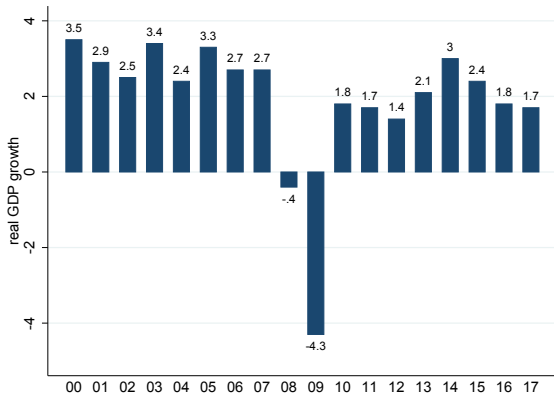
- y_{it} dependent variable (investment ratio, cash-to-asset ratio, dividend to earnings ratio) of firm i in year t
- X_{it} firm-year controls, changing with dependent variable, possibly including lagged dependent variables
 - for investment they include first and second lag of investment ratio, current and lagged Tobin's Q, cash flow ratios, sales growth rate and a firm-specific measure of past volatility
- U_t the proposed measure of subjective uncertainty
- η_i firm fixed effects
- crisis_t a dummy equal to 1 for the year 2008 (also 2009?)

The subjective uncertainty variable



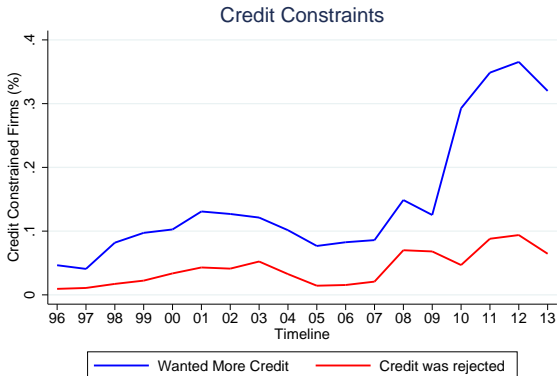
- The uncertainty variable U_t looks like a post-crisis dummy (or given $crisis_t$ dummy a "post 2008/9" dummy)
- A lot happens post 2008/2009...

Real GDP growth in UK



- real GDP growth in 2000-2007: 2.9%
- real GDP growth in 2010-2017: 1.9%

Credit constraints (at least in Italy)



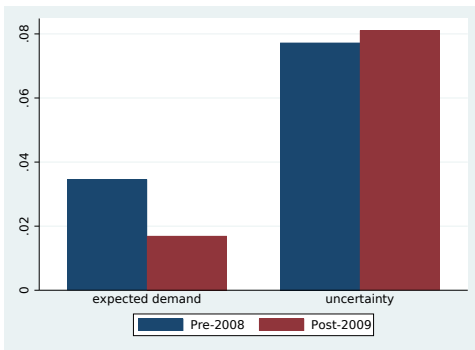
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Issue

- All these changes might affect corporate decisions as well.
- What is the uncertainty variable U_t capturing?
- Since there are no time fixed effects (and given U_t there can't be), isn't the effect of any unobserved macro (time varying) factor that changes before and after the crisis loaded upon U_t (i.e. β_2)?

Tackling the issue I

- Add additional controls: what happens when you add first moment of subjective expectations?



- strong negative correlation between average expected demand and uncertainty over time (-0.78, much lower excluding crisis period)

Tackling the issue II

- Try to differentiate across sectors (more or less affected by uncertainty, similar to Baker et al, 2016 or Alfaro et. al 2018)
- Maybe exploit differences between the two shocks: Great Financial Crisis and Brexit might have different effects on uncertainty in different sectors
 - this would also make the quantitative comparison of the two crisis (the third contribution of the paper) more interesting than those based on an unique regression
- Use the micro (CFO's) uncertainty measure directly (if you can match it with firm level data) with time dummies