

Disentangling Economic Recessions and Depressions

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The paper

- Are depressions/booms intrinsically different from recessions/expansions?
- Properties: duration, amplitude, cumulated movements, and excess cumulated movements
- A four-regimes business cycle model
- Estimation method: nonparametric outlier detection
- Extension: predictive ability of financial and macroeconomic variables?
 - multinomial logit
 - real output growth, inflation, and stock market preserve predictive power
 - term spreads only for recessions

Overview

- Indeed a question of interest: what defines a depression?
- A clever approach
- Depression as a surprise to financial markets?
 - market expectations do not foresee them.
 - does this matter for what causes depressions?
- Paper not just restricted to depressions but interesting results on predictive power of macro/financial variables for recessions & expansions.

Questions

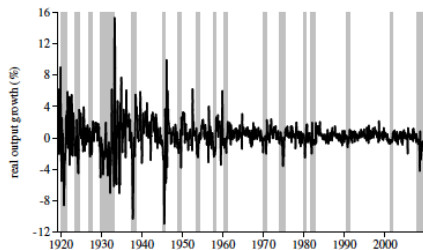
1 Outlier detection by bootstrap

- an outlier is only defined at a given probability (tail distribution)
- **Question:** *is the 1929 Depression the only depression, or just more severe than in 2007?*
- does it not somewhat implicitly prespecify the number of outliers when setting critical values?
 - 17 cycles, outlier detection with p -values of 0.2-0.3: 4 detected outlying phases
 - impact of k (and critical bandwidth) on outlier detection in the mean-trimmed mean (MTM).
- The empirical method is interesting but
 - It may help to provide some idea about the tail probabilities a normal would give these outliers.
 - comparison with alternative simple techniques?

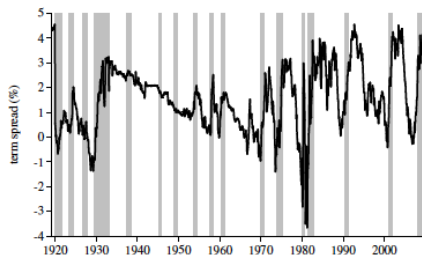
2 No exceptional periods detected after WWII:

- break in volatility? // Great moderation
- can we compare financial markets pre and post WWII? (yield curve expectations...)

Business Cycles



(d) Real output growth



(a) Term spread

Suggestions for extensions

- In multinomial model, use current state as part of information \mathcal{I}_t
- Reduce the number of regimes?
 - two or three regimes by disregarding the sign of movements?
 - i.e. focus on $|\Delta y_t|$, like APARCH/EGARCH – maybe only in exceptional periods
- Robustness to the outlier detection method?
 - trimmed mean: GARCH in mean.
 - four regime Markov switching
 - Autometrics (M-estimator) or LASSO for outlier detection?
- NBER dating:
 - quarterly measures only
 - financial variables may require higher frequency
 - alternative measures (HP filter...)