INTRODUCTION / MOTIVATION

- Financial crises and associated bank failures are a common but unwelcome feature of economic life. While individual banks can fail for idiosyncratic reasons at any time, common bank failures are associated with problems in the banking system or in the whole economy.
- Existing literature suggests that models are capable of picking up half of the potential failures a year in advance (see Mønnasson and Mayes (2009), Mayes and Stremler (2014)). However, the recent experience showed that supervisor have ignored signals (Garcia, 2013).
- Moreover, a feature of the global financial crisis was that it illustrated a major swing in the financial cycle. One might, therefore, expect the cycle to lie at the heart of predictive models. However, prior early-warning models have placed less weight on variables relating to the financial cycle. In this paper, we seek to expand the strand of literature by adding financial cycle indicators to the traditional model.
- The high costs of the recent crisis have focused attention on both reducing the chance of future crises and reducing their costs if a crisis does occur. Action has taken place on a number of fronts such as on individual banking level (capital buffers, liquidity provisions, increasing resilience) and on the institutional set-up (recovery and resolution plans).
- This paper touches on the ability to detect problems in individual banks and act upon them before the problems and their associated losses mount. An early intervention in banks is likely to reduce the losses as well as increasing the chance to recover a bank and hence avoiding the costs of resolution will be higher. Of course there is always a chance that some failures will be missed and some banks will be mistakenly described as being at risk.

APPROACH

- We characterize the individual banking problems with the dependent variable and use a wide set of explanatory variables to explain the state of the individual bank.

Dependent Variables

- Previous research tends to use some form of binary models to explain bank failures or distress. Unlike in the US, there have not been many clear bank failures in Europe and this creates a difficulty in using a binary variable for explaining failure in Europe. Thus, using a continuous variable thatproxes bank problems seems to be more appropriate.

- 2-scores are accounting-based measures, obtained from balance sheet and income statements of listed and unlisted institutions under investigation.
- In essence, a 2-sche number of standard deviations that a bank’s rate of return on assets can fall in a single ore shows tperiod before it becomes insolvent. Thus, a higher z-score signals a fall in a single ore shows tperiod before it becomes insolvent. Thus, a higher z-score signals a failure in a single ore shows tperiod before it becomes insolvent. Thus, a higher z-score signals a high-risk operation.

Independent Variables

- Our basic approach is straightforward. Banking problems tend to be a function of various influences such as:
  - Bank-specific (drawn from accounting data; CAMELS variables and size.
  - Banking sector: national market concentration, aggregate banking sector z-score.
  - Macro-economic: GDP growth and inflation.
  - Macro-financial: debt service ratio of non-financial corporations and households, market capitalization to GDP ratio and nominal M3 money supply to GDP ratio.
  - Financial cycle phase: dummy (1 if cycle moves down and 0 otherwise) based on the phase of the financial cycle metric by Stremler (2015).

CONCLUSIONS / IMPLICATIONS

- We find a modest ability of our model to explain banks’ individual z-score in Europe – country and time fixed effects are important.
- In detail, bank-specific and banking system variables have the expected signs and plausible magnitudes. The model offers a clear impact of the financial cycle phase but the role of macro-economic variables appears to be rather limited.
- The impact of the indicators tends to vary throughout the financial cycle phases. This can be interpreted that banks become asymmetrically weak in the down phase.
- We conduct a number of robustness exercises and checks (Euro/non-Euro; listed/non-listed; size). Our model suggests that listed banks are better explained but less influenced by the financial cycle; our explanatory power is best for large banks.

REFERENCES

- TABLES 1 and 2...