

# How Do Business and Financial Cycles Interact?

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Discussion by  
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- The paper documents features of business cycles and “financial cycles” for 21 advanced countries (since 1960) and 23 emerging markets (since 1978).
- The paper constructs an atheoretical, simple, and reproducible measure of recessions and recoveries (for output) and downturns and upturns for financial variables (a measure of credit, stock prices, housing prices, and exchange rates.)
- This paper is full of interesting facts that policymakers and economists will find useful.
- It is sort of the Burns and Mitchell for the 21<sup>st</sup> century.

## What are the main findings?

- Financial cycles are longer and sharper than business cycles
- Business cycles are more synchronized with credit and housing cycles than equity prices or exchange rates
- Recessions associated with severe housing downturns are longer and deeper than other recessions.
- Recoveries associated with strong upturns in credit and house prices are stronger.

What is the methodology for measuring a cycle?

A downturn or recession starts (i.e., there is a cyclical peak) when there are at least two straight quarters of negative growth in the variable that follow two straight quarters of positive growth. (A financial downturn can start with one quarter of negative growth greater than 20%.)

An upturn starts (i.e., a cyclical trough) if there is positive growth for two quarters after two quarters of negative growth.

The length of a recession or downturn is measured as the time between the peak and trough.

Recoveries are usually measured as the four quarters after a trough.

What could the problem be with this measure of a downturn?

The likelihood of a downturn will depend on

- How strong trend growth is. (The stronger is average growth, the less likely this measure will record a cyclical downturn.)
- Variance. (If the variance around trend is higher for a given trend, this method will record more downturns.)
- Levels or changes? Should the measure apply, for example, to the level of equity prices or their growth rate?
  - Does it matter whether we think the variable has a unit root?

A specific worry:

- This paper finds that recessions are more closely related to housing downturns and, to a lesser extent, credit downturns than to downturns in equity prices or exchange rates.
- Are housing prices less volatile around trend?
- If so, then when this measure determines there is a housing downturn, it is more likely to be a serious event. Equity prices are volatile and have frequent drops that are seemingly unrelated to fundamentals, so it may not be surprising that they are not closely related to the business cycle.
- But does this mean that housing recessions are somehow more likely to cause recessions (which I think is what the paper implies)?

## Second comment:

- In economic terms, what is an asset price cycle?
- In some cases, asset prices should follow a random walk, or nearly a random walk (Engel and West, JPE, 2005). The conditions of that theorem could be violated, but it is a useful benchmark.
  - Bad outcomes for the payoff to an asset don't result in a cycle in the asset's price (according to many asset pricing models), but instead to a drop followed by random movements.
- It would be helpful to know what the authors have in mind. If asset prices are simply a pure random walk, I don't think there is much sense in measuring an asset price cycle – but for sure there would be cycles using the measure in this paper.

What ultimately are we trying to ascertain?

For example, if we are trying to understand if the downturn in the output is larger when there is a financial market shock, there may be better ways to measure that, based on a little formal reasoning.

If we are trying to forecast the downturn, then we can ask if some asset prices have more predictive power for the business cycle than others,



What message is there for policymakers?

- a. Is the real estate cycle responsible for the downturn?
- b. Or are there underlying shocks that cause both the downturn in housing prices and output?
  - i. If the latter, then does the co-movement between housing and output depend on the source of the downturn?
  - ii. In other words, can we assume that all cycles are the same?

Other considerations:

Is there synchronization across types of financial cycles? Are business cycles different if all of the financial cycles are in synch?

Are there other financial variables we can consider?

These lead back to the question: Can we say something about the underlying causes?

Reduced form relationships may not be that revealing.

## Conclusions:

My discussion has not done justice in any way to the wealth of interesting facts and relationships uncovered in this paper. It is important to use the wealth of data we have from many countries on the interaction of financial variables and output.

But it would be helpful to pose a specific question, and then to develop statistics that are best suited to answering that question.