Investing in Agribusiness Stocks: What Lies Ahead!

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Abstract

The relative price of various combinations of a stock index to a commodity-related index is filtered using a Christiano-Fitzgerald (CF) filter. We find that the market is still bull for commodity-related stocks as of June 2012. The business cycles obtained from the CF filters and the NBER do not coincide.

Background and Objectives

The recent sharp price increase in commodities amid the financial turmoil after the subprime mortgage crisis has posed a question about potential importance of commodities as an asset class. Investors have observed the negative price co-movements between stocks and commodities (Rogers 2004: *Hot Commodities*; Bannister and Forward 2002: "The Inflation Cycle of 2002 to 2015"), projecting that the commodity bull is coming to an end after 2008 (Bannister and Forward).

In light of these observations, Zapata, Detre, and Hanabuchi (2012 in JAAE) find the pairwise alternated price leadership with 29-32 years between S&P 500 and several components of PPI's (All Components, Farm, Foods, Fuels, Metals) from annual data by estimating the cyclical and trend components from the relative price using a filter that allows data to have a unit root process and asymmetric cycles (Christiano and Fitzgerald, 2003 in IER). Their portfolio analysis from quarterly data for the period after 2006, given the down phase for stocks relative to commodities, finds the advantage in investing in agribusiness stocks.

The main question we wish to ask in this research is whether the performance of agribusiness stocks is highlighted by the cyclical phases estimated from the relative prices that include agribusiness stocks in addition to commodities. In order to be able to discuss this, this research examines the existence of the cyclical relationship between broad markets and agribusiness stocks, paying attention to the difference from the one between stocks and commodities. Second, this research examines the performance of indices by phases of the estimated cycles.

Methods and Data

Zapata, Detre, and Hanabuchi's study does not include findings about agribusiness cycles. In order to examine how the cycles from agribusiness stocks differ from those from commodities, this study utilizes the same method as Zapata, Detre, and Hanabuchi. We utilize monthly data in order to explore the potential dynamics in the performance of indices. Then, the performance of empirical distributions of returns from indices for longer data periods is examined by the estimated cyclical phases and NBER cycles. This allows us to discuss the rationale to introduce business cycles for investment.

Stock indices are used from the Dow Jones Industrial Average, NASDAQ Composite, Russell 1000, Russell 2000, Russell 3000, AMEX Composite, and S&P 500. Commodity-related indices are used from S&P Global Agribusiness, S&P Global Agribusiness Composite, S&P Goldman Sachs Commodity, Dow Jones-UBS Commodity, Rogers International Commodity, Thomson Reuters/Jefferies CRB, Corn Futures (CBOT), Wild Rice Futures (CBOT), Soybean Futures (CBOT), Wheat Futures (KCB), PPI's (All Components, Farm, Foods, Fuels, Metals), Gorton-Rouwenhorst Commodity, and Kramer-Schnitkey Agribusiness Index (Schnitkey and Kramer, 2012 in JAAE).

The views expressed are solely of the author. Representative results are presented. A complete analysis in full-fledged paper is to be ready soon.

Results and Discussion

Figure 1: Cycles and Percent Deviation of Cycles, DJIA vs. Agribusiness Indices

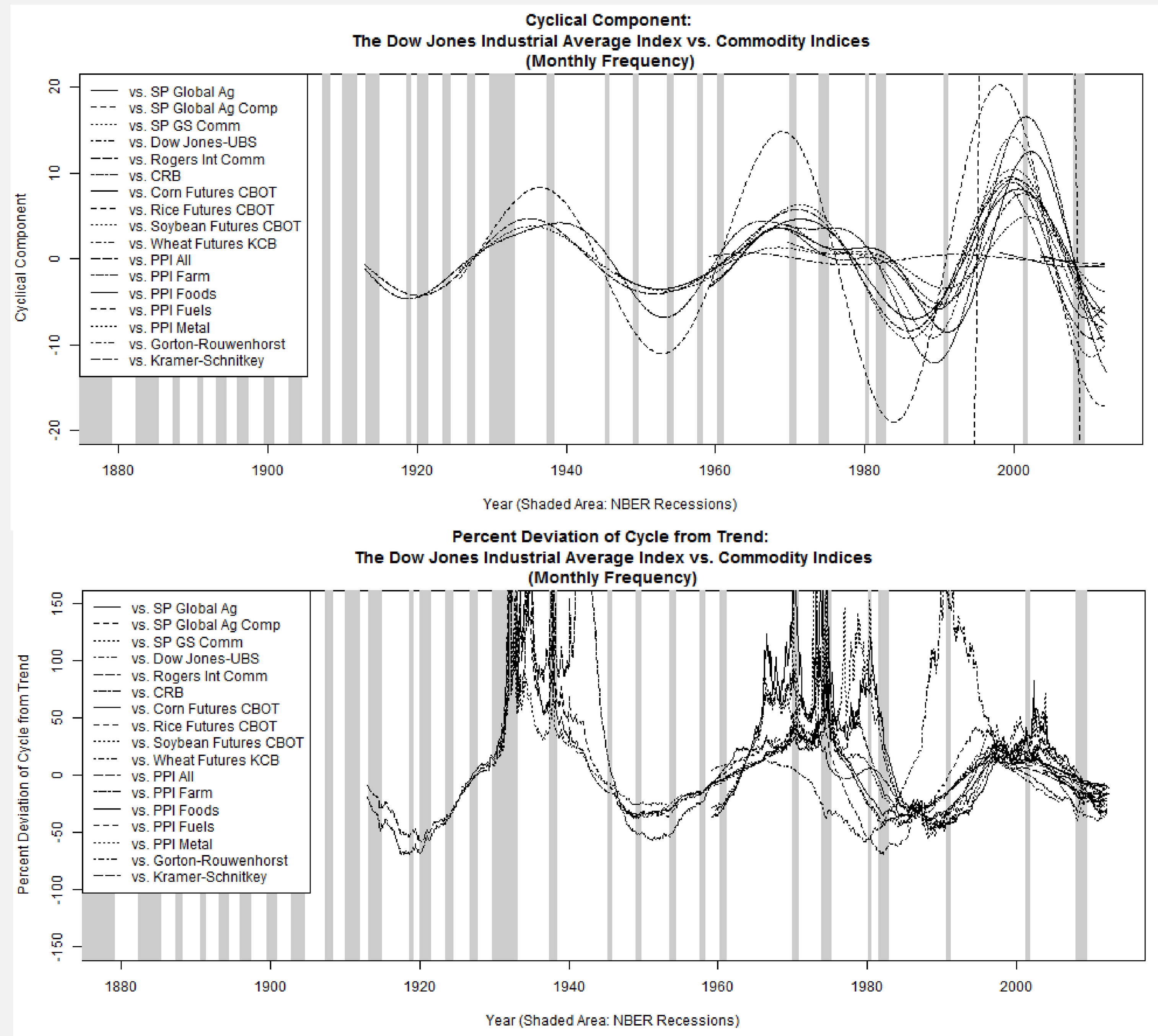


Figure 2: Cyclical Components, the Russell 3000 vs. Agribusiness Indices

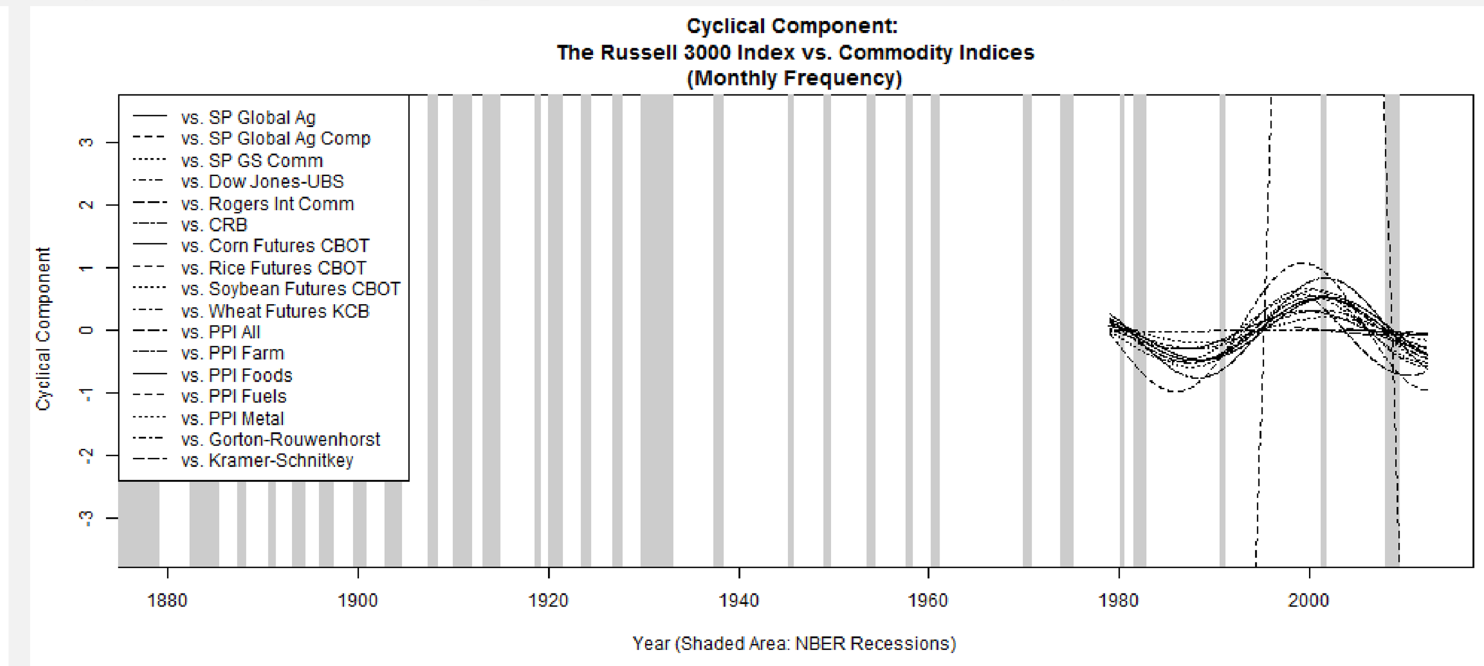


Figure 3: Empirical Distributions by Cyclical Phases according to the NBER

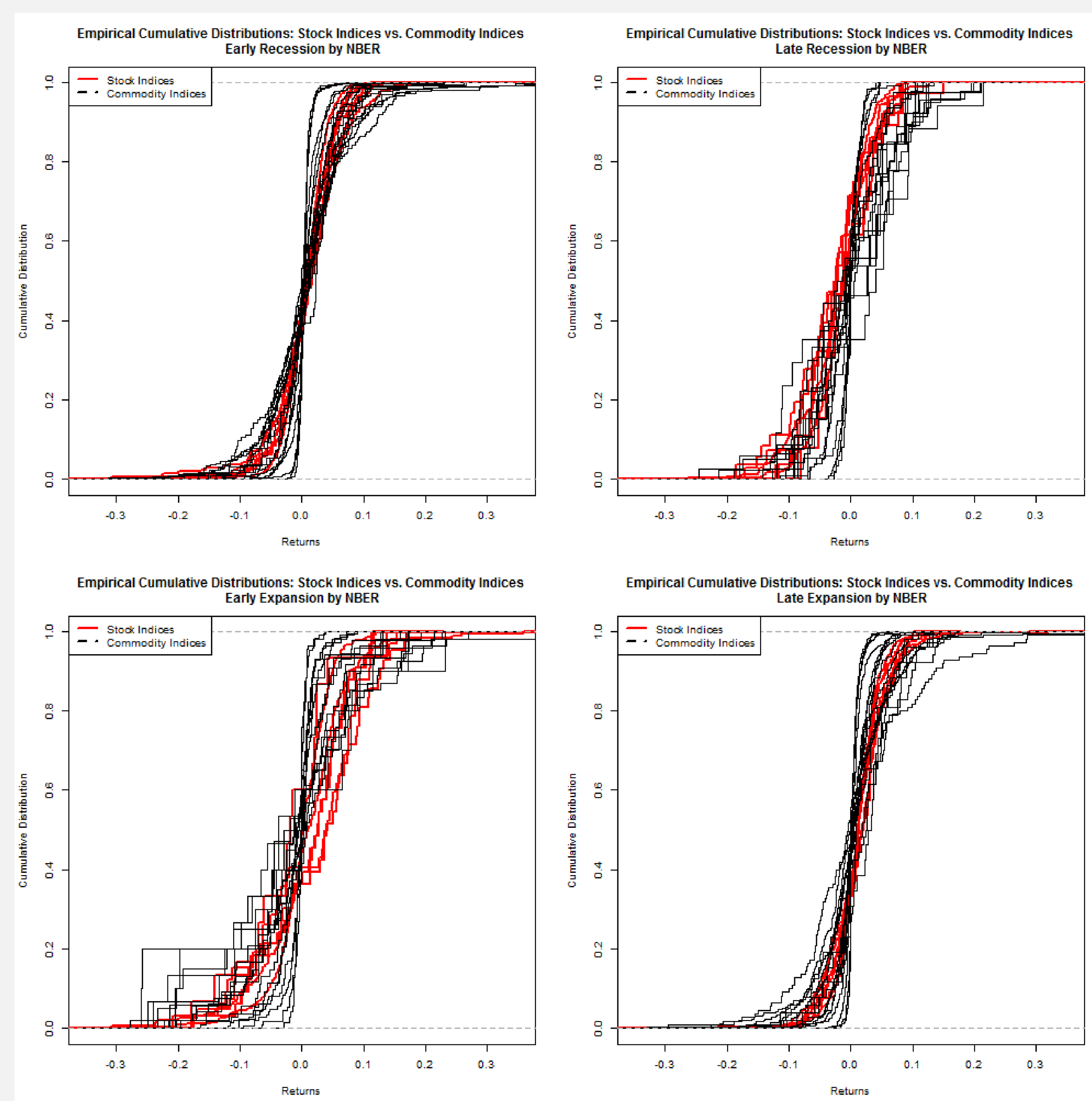
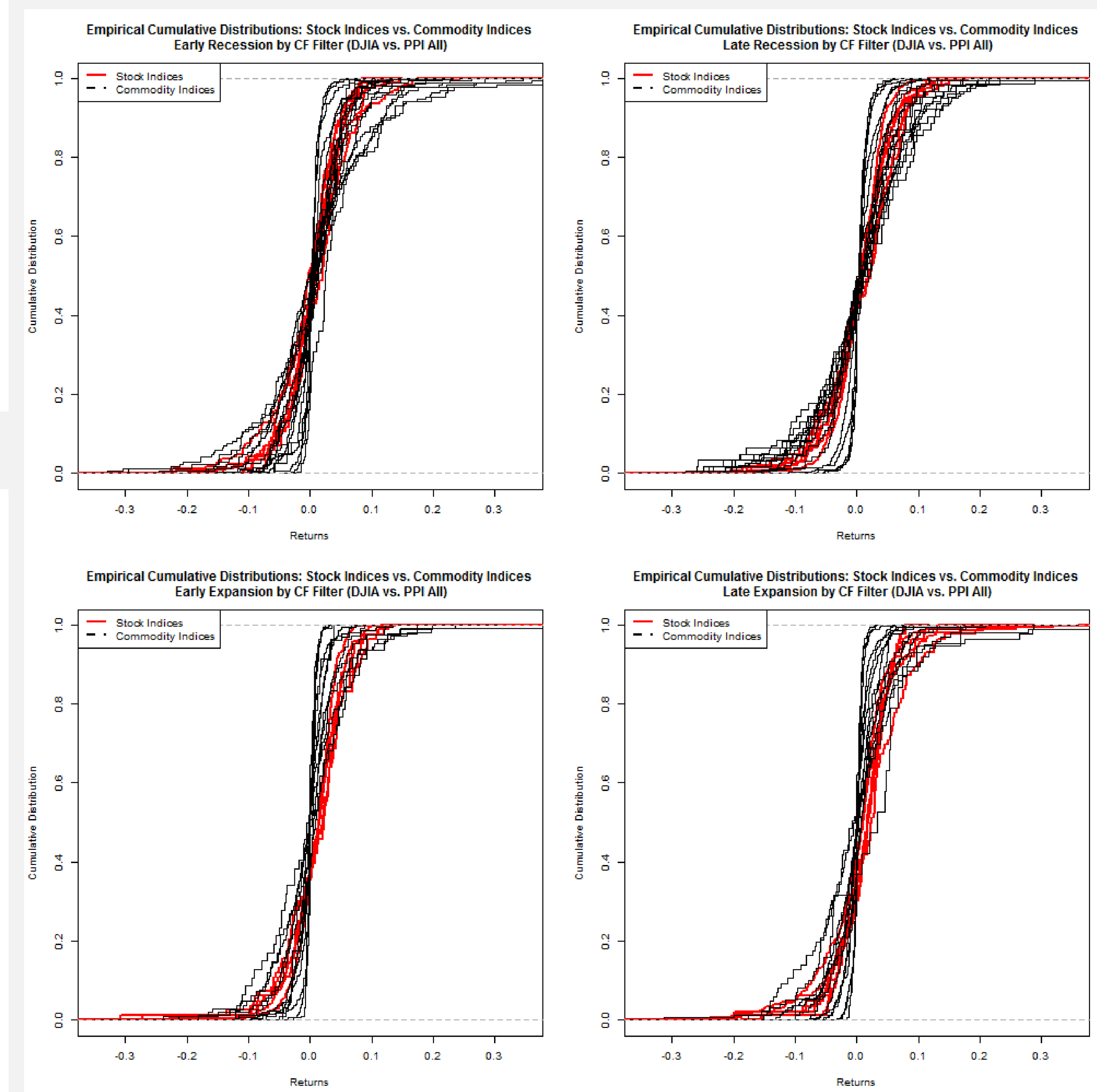


Figure 4: Empirical Distributions by Cyclical Phases according to DJIA vs. PPI All



- Common alternated price leadership in general.
- Being in a bull market for commodity-related stocks as of June 2012, turning into a bear market in July 2012.
- The average length of a cycle is about 30 years.
- The amplitude of cycles tends to be greater in the most current period.
- Percentage deviations of cycles from trends is smaller in later periods.
- Estimated cyclical phases do not coincide with those by the NBER.
- Monte-Carlo simulation analysis is in progress.

Conclusion

The estimated cycles, irrespective of the pairwise combinations, coincide with each other over historical time, implying the existence of common alternated price leadership in general between broad market and agribusiness stocks. The estimated cyclical phases indicate that the commodity-related stocks are still in a bull market as of June 2012, turning into a bear market in July. Estimated cyclical phases do not coincide with those by the NBER.

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