A Historical Perspective on Medium-Term Cycles and Asset Pricing*

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Abstract

It is now widely recognized that a standard view of economic fluctuations as largely explained at business-cycle frequencies is insufficient (Comin and Gertler, 2006). In fact, much of economic fluctuations can be described as the interaction of forces that operate at different cycle lengths. For instance, economic downturns can be the result of a temporary shortfall of demand, but might be ameliorated through a productivity-driven medium-term upswing in supply. Standard trend-cycle decompositions of time series can miss this aspect and therefore give a false impression of economic regularities. In this paper we evaluate the importance of medium-term cycles for the U.S. economy using long historical time series from the 1880s on which allows us to identify longer-term economic fluctuations. We collect historical time series of key macroeconomic aggregates and financial variables of various frequencies. We first establish the presence and importance of medium-term cycles in these data using a variety of statistical techniques. We estimate a TVP-VAR with stochastic volatility to characterize the behavior, comovement and driving forces of the variables under consideration over a long sample period. In a second step, we study the ability of a production model with asset pricing to explain these facts over the business and medium-term cycle. To this end we build a model in the vein of Comin and Gertler (2006) which we augment with Epstein-Zin preferences and stochastic volatility. The latter allows us to model and capture asset pricing in our estimation. Asset prices contain information about the key component of knowledge-driven medium-term cycle model, namely the arrival and exploitation of novel ideas as a source of endogenous productivity movements.

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