

Of Stocks and Flows: Measuring the Stock of Money

By Logan J. Kelly

Date Defended: April 9 2007

Date Approved: April 9 2007

Abstract

The principal problem of this project is to measure the capital stock of money implied by the Divisia monetary aggregate service flow. It will focus on two distinct definitions of the capital stock of money: the economic stock of money derived by Barnett (1991) and a new definition that we shall call the current stock of money. These measures differ significantly from the official measures, which use the usual simple sum aggregation methodology, in both magnitude and volatility. This difference originates from monetary assets providing both monetary and investment services; thus, to measure the capital stock of money, the monetary and investment service flows must be separated. Barnett et al. (2005) demonstrated the importance of properly untangling the monetary service from the investment service provided by a portfolio of monetary assets. They calculated that the official measures of M3 consistently overestimate the true capital stock of money by an average of 42 percent. Moreover, the official measures confound the present value of the investment yield provided by current portfolio monetary assets and the current stock of money. This confounding tends to smooth out the dynamics of both stock measures, and may explain the poor performance of the official monetary aggregates in forecasting and policy applications.

We found that the use of diffusion index forecasting methods improve the accuracy of the calculation of the economic stock of money slightly, but because distant future service flows are heavily discounted, we confirm the robustness result of Barnett et al. (Forthcoming). We also found that while the systematic bias relative to the economic stock of money found in the currency equivalent index cannot be easily removed, we show that the currency equivalent index is an appropriate measure of the current stock of money.