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**FORECASTING CURRENCY IN CIRCULATION IN SRI LANKA**

**A PROJECT REPORT PRESENTED BY**

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## FORECASTING CURRENCY IN CIRCULATION IN SRI LANKA

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The total amount of paper currency, coins, and demand deposits held by consumers and businesses other than by financial institutions and the Central Bank. Currency in Circulation (CIC) is thus the sum of currency held by the public, and is a component of a bank's reserves. Narrow money supply ( $M_1$ ) consists of currency held by the public and the demand deposits held by the public with commercial banks. In addition Broad money supply ( $M_2$ ) consists of narrow money supply with saving and fixed deposits held by public with commercial banks.

CIC is one of the more important factors that absorb or supply member bank reserves. Changes in the amount of CIC affect the reserve positions of member banks, because their accounts with the Central Bank (CB) are debited when they withdraw currency from the CB and credited when they return it.

A CB's liquidity forecast is important in ensuring that it supplies the banking system's need for CB money. CIC is the largest and for some CB the most variable component of the liquidity forecast. Accurate forecasting of CIC is essential in ensuring an accurate liquidity forecast and in turn effective monetary policy implementation. CB and the commercial bank, a systematic study of the short run variation in currency demand is extremely important. Net injection or absorption of liquidity in an economy is crucially dependent on the public's demand for currency. And yet this is the variable on which neither the CB nor the banking system has full control. A systematic study enables the banking system to anticipate the payment needs in the economy correctly, leading to an improvement in its cash flow management.

Over the last few of years, the Central Bank of Sri Lanka has found it difficult to forecast accurately currency in circulation. Therefore the main concern of this report is to model the daily, weekly and monthly forecasting of CIC for the Sri Lanka. The time series of daily observations of the CIC is

expected to display marked seasonal and cyclical patterns daily, weekly or even monthly basis. We have forecasted CIC using the seasonal ARIMA model on daily, weekly and monthly basis. Seasonal ARIMA model performs better in forecasting CIC, particularly for short term horizons.