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**EXPLORING LONG-RUN AND SHORT-RUN EFFECTS
OF MACROECONOMIC VARIABLES ON EXCHANGE
RATE OF SRI LANKA**

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Master of Science in Business Statistics

Department of Mathematics
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DECLARATION

I declare that this is my own work and this Dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or Institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text. I retain the right to use this content in whole or part in future works (such as articles or books).

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The above candidate has carried out research for the Name of the Degree Dissertation under my supervision. I confirm that the declaration made above by the student is true and correct.

Name of Supervisor: Dr. A.L.A.R.R. Thanuja

Signature of the Supervisor:

Date: 2025-01-20

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ABSTRACT

This study explores the short-run and long-run effects of macroeconomic variables on the exchange rate of Sri Lanka using the Autoregressive Distributed Lag (ARDL) model with monthly data from 2010 to 2022. The research investigates how interest rates, trade balances, inflation rates, money supply and Net Foreign Assets (NFA) impact the exchange rate, providing a comprehensive analysis of these relationships over the given period of time. This study uniquely incorporates NFA into the analysis of exchange rate dynamics using the ARDL model with recent high-frequency monthly data from Sri Lanka, providing novel insights and addressing empirical gaps in the Sri Lankan context. The use of ARDL enables a robust analysis of both immediate and delayed effects, shedding light on the sensitivity of Sri Lanka's exchange rate to various economic shocks and changes. By distinguishing between short-term and long-term dynamics, the study offers a nuanced understanding of how macroeconomic factors influence the exchange rate. The findings highlighted that higher interest rates in Sri Lanka could weaken the currency by eroding investor confidence. A long-term negative association between inflation and exchange rates, with higher inflation leading to currency appreciation. Additionally, money supply exhibited a positive long-term association with exchange rates, whereas trade balance and net foreign assets showed no significant impact.

Keywords: Exchange rate, ARDL model, Macroeconomic variables

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LIST OF ABBREVIATIONS

Abbreviation	Description
ARCH	Autoregressive Conditional Heteroskedasticity
ARDL	Autoregressive Distributed Lag
ARIMA	Autoregressive Integrated Moving Average
BOP	Balance of Payments
CPI	Consumer Price Index
CUSUM	Cumulative SUM
ECM	Error Correction Model
FDI	Foreign Direct Investment
GARCH	Generalized Autoregressive Conditional Heteroskedasticity
GDP	Gross Domestic Product
LKR	Sri Lankan Rupee
NFA	Net Foreign Assets
PPP	Purchasing Power Parity
USD	United States Dollar