

# Macroeconomic variables and initial public offerings in Sri Lanka: a principal component analysis approach

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## Abstract

**Purpose** – This study aims to comprehensively examine the relationship between initial public offering (IPO) activities and macroeconomic factors in Sri Lanka.

**Design/methodology/approach** – This study uses principal component analysis (PCA) and autoregressive distributed lag (ARDL) techniques to examine the relationship between IPO activities and macroeconomic factors. Ten macroeconomic variables are transformed into principal components (factors) using PCA. Then, ARDL is applied to investigate the long- and short-term relationships between IPO activities and the transformed macroeconomic factors.

**Findings** – The empirical investigation identifies three principal factors from the ten macroeconomic variables, of which two factors have a significant long-run association with IPO activities: “return on investment (RTOI)” and “economic and market development (ECMD).” In the short run, “trade openness and banking sector development (TOBD)” and RTOI are significantly associated with IPO activities.

**Research limitations/implications** – The study was based on 30 years of observations, which passed all diagnostic tests but may be insufficient for generalizing the findings. Future studies could use high-frequency data (monthly or quarterly) to increase the number of observations and repeat the method and analysis. Also, while the symmetrical ARDL method was used in this study, an asymmetrical ARDL method may provide more insightful results and interpretations.

**Practical implications** – The study highlights the importance of considering both long- and short-term associations when analyzing the impact of macroeconomic variables on IPO activities.

**Originality/value** – This study is the first to comprehensively examine the relationship between IPO activities and macroeconomic variables using PCA and the ARDL technique. The study provides insight into the macroeconomic factors that influence IPO activities in Sri Lanka and highlights the importance of considering long- and short-term associations.

**Keywords** ARDL, Factor analysis, Going public, IPO, Macroeconomic, PCA, Sri Lanka

**Paper type** Research paper

## 1. Introduction

The IPO activity and the IPO markets worldwide have experienced changes in activity levels and geographical distributions over the years. Notably, the first half of 2024 revealed a

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