

The Value of a Free Lunch: Comparative Evidence from Emerging and Developed Market Banking Sectors

Dr. Sharif Mozumder¹, M. Humayun Kabir², Bakhtear Talukdar³, Bart Frijns⁴

¹Professor of Mathematics, Department of Mathematics, University of Dhaka

²Associate Professor in Finance, Massey University Business School, New Zealand

³Associate Professor of Finance, Department of Finance and Business Law, University of Wisconsin Whitewater, USA

⁴Professor of Finance Open Universiteit, the Netherlands

Abstract

Risk managers in banks, especially in resource constrained emerging markets, face a dilemma in choosing between standard and sophisticated models in estimating financial risk. Using a sample of four local banks from an emerging market and four international banks, we examine ten backtesting tests on forecasting risk. The tests include the highly parametric Markov Regime Switching-GARCH (MRS-GARCH) model as an alternative to more popular and user-friendly two-parametric Gaussian risk model of Black-Scholes or the one-parametric RiskMetricsTM benchmark model. The results show that a heavily parameterized risk model may not perform better than the popular models with fewer or no parameters at all, especially during crisis periods of Black Swan events, such as the subprime mortgage and COVID-19. There is also no discernible difference in either single or multi-period ahead forecasts.

Keywords: Value-at-Risk, expected shortfall, MRS-GARCH, backtest, COVID-19.