



# Modelling Emerging Market Risk Premia Using Higher Moments

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The purpose of this paper is to assess the incremental value of higher moments in modelling capital asset pricing models (CAPMs) of emerging markets. Whilst it is recognized that emerging markets are unlikely to yield sensible results in a mean-variance world, the high skewness and kurtosis present in emerging markets returns make our assessment potentially interesting. Generalized method of moments (GMM) is used for the estimation. We also present new versions of higher-moment market models of the data-generating process of the individual emerging markets and use these to identify model parameters. We find some evidence that emerging markets are better explained with additional systematic risks, such as co-skewness and co-kurtosis, than the conventional mean-variance CAPM. Copyright © 1999 John Wiley & Sons, Ltd.

**KEY WORDS:** CAPM; data generating process; emerging markets; higher moments; kurtosis; skewness

## SUMMARY

Many empirical studies on emerging markets suggest that methods of conventional finance, such as the mean-variance CAPM, are highly misleading when applied to pricing assets. There are many explanations given: non-stationarity resulting from evolving degrees of market integration; the importance of non-economic factors, such as political risk; the presence of survivorship and re-emerging bias in emerging markets data; country selection

bias; and the evolution from an emerging market to a mature one.

In this study, we focus on the highly significant skewness and kurtosis prevalent in emerging markets data. The question we explore in this study is whether emerging markets could be better explained with additional risk factors such as higher moments, e.g. skewness and kurtosis. We develop higher-moment CAPMs, and test them using generalized method of moment (GMM) because the distribution function of emerging markets return is not known. Our empirical results show that emerging markets are better explained with higher moment CAPMs. Also, co-kurtosis has at least as much explanatory power as co-skewness for the countries used in this study.

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