ELSEVIER

Pacific-Basin Finance Journal 9 (2001) 401–426

PACIFIC-BASIN
FINANCE
JOURNAL

www.elsevier.com/locate/econbase

Selecting macroeconomic variables as explanatory factors of emerging stock market returns

Christopher M. Bilson [a,*], Timothy J. Brailsford [a], Vincent J. Hooper [b]

[a] *School of Finance and Applied Statistics, Australian National University, Canberra, ACT 0200, Australia*

[b] *School of Banking and Finance, University of New South Wales, Sydney, NSW 2052, Australia*

Abstract

Emerging stock markets have been identified as being at least partially segmented from global capital markets. As a consequence, it has been argued that local factors rather than global factors are the primary source of equity return variation in these markets. This paper seeks to address the question of whether local macroeconomic variables have explanatory power over stock returns in emerging markets. Moderate evidence is found to support this contention. Furthermore, using a principal components approach, two types of commonality in returns are examined. Evidence is found that supports commonality in the factors that drive return variation across emerging markets. A test is also conducted for identical sensitivity to a common set of extracted factors. While little evidence of common sensitivities is found when emerging markets are considered collectively, considerable commonality is found at the regional level. These results have implications for international investors as they suggest that the benefits from diversification are enhanced when the allocation of funds is spread across, rather than within, regions.

JEL classification: G15

Keywords: Emerging stock markets; Macroeconomic variables; Multifactor models

* Corresponding author.

PII: S0927-538X(01)00020-8

1. Introduction

A number of studies document that a relationship exists between macroeconomic variables and equity market returns. Furthermore, studies concerning multifactor models frequently incorporate macroeconomic variables as explanatory factors of the variation in equity returns. However, these studies have typically focused on developed markets. This paper extends this literature by considering the relationship in an emerging markets context. To date, the literature on multifactor models in emerging markets has focused primarily on either microeconomic effects such as dividend yields and price-to-earnings ratios or the impact of world influences such as the world equity portfolio. Generally, the literature has not examined the potential impact that macroeconomic variables may have on emerging stock market returns.

Interest in emerging markets has grown considerably over the past decade. Given political and economic structures that previously existed, little was known about these markets and international investment levels were low, in part due to costly barriers to entry. However, since the 1980s, there have been substantial changes in political and economic environments in many regions, such as China, Eastern Europe, Latin America and Russia. As a result, emerging markets now represent a feasible investment alternative for international investors and the last decade has witnessed massive capital flows in and out of emerging stock markets.[1]

Emerging stock markets (ESMs) appear to have features that distinguish them from other stock markets. Returns and risks in ESMs have been found to be higher relative to developed markets[2] (Errunza, 1983; Claessens et al., 1993; Harvey, 1995a). Furthermore, the returns achievable from emerging stock markets appear more predictable than developed markets and exhibit stronger mean reversion properties (Bekaert, 1995; Bekaert and Harvey, 1995; Harvey, 1995a), with a higher degree of autocorrelation. There is evidence to suggest that emerging stock markets are segmented from world capital markets. Moreover, Bekaert and Harvey (1995) suggest that some emerging markets exhibit time-varying integration, as they appear to be more integrated than expected based on prior knowledge of investment restrictions. Other markets appear to be quite segmented even though foreigners have relatively free access to their capital markets. Recent evidence by Goetzmann and Jorion (1999) shows that emerging markets may go through

[1] To illustrate, in 1999, the International Finance reported that the aggregate market value of emerging stock markets totalled US$2.143 billion.

[2] However, it is questionable as to whether these high and somewhat predictable returns are transitory in nature as evidenced by the substantial declines in market capitalisation in emerging markets that occurred during 1997 and 1998. In 1997, the International Finance Corporation Investable (IFCI) index fell 16%, the sharpest 1-year decline in the index's 10-year history. The IFCI Asia Index fell by 57% [Emerging Stock Markets Factbook, 1997].