



Global economic activity as an explicator of emerging market equity returns[☆]



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ABSTRACT

This paper evaluates whether global economic activity, measured by the maritime index and commodity index, is a distinct common factor in explaining equity returns in emerging markets. We document two important features of global equity markets that show that emerging market equities are a segregated part of the global stock market. First, our results show that increases in global economic activity are associated with higher emerging market equity returns. Second, companies in developed markets that have a significant exposure in emerging markets have incremental exposure to commodity returns. By allocating more capital to emerging market equities, an investor increases portfolio exposure to changes in global economic activity.

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1. Introduction

Theoretical models, as espoused by the efficient market theory and rational expectations asset pricing theory (see e.g., Merton, 1973; Ross, 1976), posit that country equity returns are contingent on their exposure to systematic country economic state variables. This exposition is supported by the extant empirical literature which shows that economic state variables, such as industrial production growth and default and term premiums, are valuable explicators of equity returns (see e.g., Fama, 1981; Huang and Kracaw, 1984; Chen et al., 1986; Chen, 1991; Vassalou, 2003; Petkova, 2006).¹

The signals from the real economy that impact on investors' decision function are, however, not limited to country economic state variables. For example, Harvey (1995) suggests that global economic state variables may be important in explaining equity returns in emerging markets. International factors have also been shown to be important in explaining cross-section of average returns for a sample of developed markets (Cho et al., 1986). Additionally, the empirical literature offers some evidence on the importance of global industry factors as explicators of cross-section of equity returns (see, for example, Heston and Rouwenhorst, 1995; Griffin and Karolyi, 1998; Tessitore and Usmen, 2005). This thread of research brings to the fore the importance of global factors as common explicators of equity returns. Given that the understanding of common factors that drive stock returns is still a challenge for both portfolio managers and academics, more evidence on

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¹ Yet, this line of research is, in general, research-provoking and puzzling, of which the cross-country disconnection between equity returns and real gross domestic product (GDP), as shown by Ritter (2005), is representative.

global factors as common explicators of stock returns should enhance the discussion on whether equity pricing factors are global.

In this paper we evaluate whether two (2) price-based variables of global economic activity, the commodity index and the maritime index, are common factors in explaining equity returns in emerging markets.² We focus on emerging markets equity returns because emerging economies currently make up 10 of the 20 largest economies of the world and are recognized, as a group, as an important segment of the global investment opportunity set, while the understanding of common factor exposure of these markets in investor portfolios is in dispute.³ Thus conceptualization of the dynamics of this segment of global financial markets is essential in order to understand their role as a source of equity premium from a strategic perspective. Our choice of proxies is influenced by [Cooper and Priestley \(2013\)](#) who extol the merits of examining the relationship between expected returns and production based measures. The two proxies of global economic activity both relate to world production. Commodities react to economic conditions and emerging markets are the world's largest producers of some strategic commodities (see e.g., [Mensi et al., 2014](#)), making commodity prices natural explicators of emerging market equity returns. The maritime index, on the other hand, correlates with the expected global growth through the expectations of trade volume (through international trade).

The commodity and maritime indexes both relate to the utilization of production capacity in global production-driven economic growth, variations of which should affect equity performance. Put together, they represent an important set of global business information related to the global economy and capture business variations through time. Moreover as publicly available and continuous information, these price-based indexes embody a significant information set that investors use in making investment decisions. Thus they are more likely to contain forward-looking explicatory information and would inform on practical global portfolio management.⁴ In contrast, traditional economic information, such as GDP growth, is neither continuously quoted nor always initially accurate (i.e. they can be revised). As such price-based financial variables can be said to be enhanced predictors of equity returns relative to quantity-based macroeconomic indicators (see e.g., [Da et al., 2015](#)). Our hypothesis is that measures of global economic activity should be prominent candidates for discerning the explicators of emerging market equity returns since external factors induce relatively more important variations in emerging market economies' growth.

Using data from 1997 to 2013, we show that our two global economic state variables, the commodity index (proxied by the S&P GSCI[®]) and the maritime index (proxied by the Baltic Dry Index⁵) are important explicators of equity returns in emerging markets as we document a positive and statistically significant effect of both indexes. In contrast, the two global economic activity variables negatively impact on US equity returns and also show no statistically measurable effect on developed markets (ex US) equity returns. Thus there is variability in response to variations in world production between emerging and developed markets. Our empirical analyses also indicate that emerging markets outperform benchmark factors when there are positive changes in the S&P GSCI[®] and the BDI indexes. Additionally our analyses show that global economic activity factors significantly impact companies in developed market regions with significant exposure to emerging market regions. We show that such companies have an incremental exposure to commodity returns. Moreover companies in developed markets (Europe) with such significant exposure have an incremental exposure changes in the BDI index relative to other firms (this result does not hold for the US and EAFE).

This study contributes to the literature in three respects. First, the empirical literature is replete with evidence that firm characteristics and country economic state variables explain the average equity returns. For emerging markets, [Harvey \(1995\)](#) argues that emerging market returns are more likely than developed markets to be influenced by local information. However, economic liberalization of these economies may have altered the importance of global versus local factors in these markets ([Serra, 2003](#)). We thus add to this literature and show that global economic activity is an important common factor to consider in explaining equity returns in emerging markets which could explain long-term divergences between emerging and developed equity market returns. This result also extends the work of [Ladepkarl and Peters \(2013\)](#) who find that emerging market currencies is a common risk factor for emerging market equity returns. An additional novel feature of this paper is that we consider factor exposures to global economic activity as an element of the segregated role of emerging markets from developed markets (e.g. [Bekaert and Harvey, 2014](#)). We argue that changes in the unused global production capacity, i.e. global slack, should reflect in equity returns for emerging market different from developed markets being a ground for the segregation, but this feature can also be seen as a strategic aspect for global asset allocation. Third, we contribute to

² We do not examine predictability of equity returns in this paper. Readers interested in predictability of equity returns may refer to [Harvey \(1991, 1995\)](#), [Dumas and Solnik \(1995\)](#), [Ang and Bekaert \(2007\)](#), [Rangvid \(2006\)](#), [Cooper and Priestley \(2009, 2013\)](#) and the references contained therein.

³ Emerging markets are relatively more risky and have different characteristics than equities from developed capital markets including higher average returns, higher volatility, and low correlations with developed market returns (see e.g., [Bekaert and Harvey, 1997](#)). Also see <http://www.dailyreckoning.com.au/emerging-markets-are-still-a-buy/2010/02/26/>; <http://www.forbes.com/pictures/eglg45gdjd/why-invest-in-emerging-markets-2/>; and <http://www.thestar.com.my/Business/Business-News/2015/01/06/2015-Investment-Outlook-Emerging-Markets-Still-Global-Growth-Drivers/?style=biz> (both accessed on 08.08.15).

⁴ The related literature has independently examined co-movement between stock and maritime markets (see e.g., [Erdogan et al., 2013](#)), and stock and commodity markets (see e.g., [Graham et al., 2013](#)).

⁵ The Baltic Dry Index (BDI) is keenly followed by market participants as well as the financial press that reports on it as a gauge of the state of the global economy (see for example, February 3, 2012 issue of the Wall Street Journal; January 10, 2014 issue of Financial Times; and July 18, 2014 issue of the Economic Times of India). In the recent literature, there is evidence that the BDI predicts growth in global economic activity ([Bakshi et al., 2014](#)) and that the BDI has predictive capacity for both financial assets and industrial production ([Aspergis and Payne, 2013](#)).

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