Original article

The dynamics of BRICS's country risk ratings and domestic stock markets, U.S. stock market and oil price

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Abstract

BRICS (Brazil, Russia, India, China and South Africa) are viewed currently as pillars of relative political, economic and financial stability, with the prospect of a major shift in future world power. The paper aims at investigating the relationships among the economic, financial and political country risk ratings of the BRICS and relating those risk factors to their respective national stock markets in the presence of representatives of the world's major stock markets and oil market. It also examines the interrelationships among the national country financial risk ratings factors to discern transmission of the risk spectrum among the countries of this group because of the relevance of this information to investors, traders and policy makers. The results demonstrate that only the Chinese stock market is sensitive to all the factors. Financial risk ratings generally demonstrate more sensitivity than economic and political risk ratings, and political risk is sensitive to both financial and economic risk ratings. Among the five BRICS, Brazil shows special sensitivity to economic and financial risks, while Russia and China hold strong sensitivity to political risk and India demonstrates special sensitivity to higher oil prices. Among the global factors, oil price is more sensitive to economic than financial risk, while the S&P 500 reverses this relationship. The two American quantitative easings (QEs) affect BRICS differently.
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1. Introduction

Among the political, economic and financial turbulences that plague the world, the five BRICS (Brazil, Russia, India, China and South Africa) appear as pillars of relative political stability and economic prosperity.[1] These countries project political stability in terms of governments capable to carry out declared programs and able to stay in office. Their economic strengths outweigh their weaknesses, presenting relatively reasonable economic risks. The BRICS also seem to finance their official, commercial and trade debt obligations, thus demonstrating relatively moderate financial risks.

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[1] The BRICS acronym was coined by Goldman Sachs chief economist Jim O'Neill in a 2001 paper titled "Building Better Global Economic BRICs".

They are committed to advance "the reform of international financial institutions", have pledged to work together on "political and economic issues such as energy and food security" and to cooperate to promote "fundamental research and the development of advanced technologies." The presence or lack of these characteristics has a strong bearing on the BRICS's overall performance, and the relevant information about this performance is valued by scholars, banks, multinational organizations, importers, exporters, foreign exchange traders, ratings agencies, portfolio managers and institutional investors.

The BRICS together currently account for more than a quarter of the world's land area, more than 40% of the world's population and about 15% of global GDP. These countries are deemed to be at a similar stage of newly advanced economic development. China's GDP is expected to pass that of the U.S. by 2026. Goldman Sachs expects the BRICS' total nominal GDP (excluding South Africa) to exceed $128 trillion in 2050, compared to $66 trillion for the G7 countries together at the corresponding time. It also expects the four BRICS countries (excluding South Africa) to account for 41% of the world's market capitalization by 2030. China might overtake the United States in equity market capitalization terms by 2030 and turn to be the largest equity market in the world. Politically, BRICS is a symbol of the shift in global economic power away from the developed G7 economies towards the developing world.

The objectives of this paper are fourfold: (1) to assist domestic and international investors, multinational corporations, ratings agencies, etc. understand the relationships among the political, economic and financial country risk factors of the BRICS; (2) to examine the interrelations between the BRICS risk factors and their domestic stock markets, U.S. S&P 500 index and crude oil price for each country; (3) to investigate how U.S. quantitative easing QE1 and QE2 impact each of those BRICS countries which suffer from asset inflation and exchange rate revaluation; and (4) to explore within a BRICS system that groups together the most sensitive same risk ratings exposure of each of the five countries in order to discern how these countries behave as a group when it comes to country risk ratings.

This study employs the autoregressive distributed lags (ADRL) methodology, developed by Pesaran and Pesaran [26] and Pesaran et al. [27], to analyze the dynamic relationships between the BRICS's three major political, economic and financial components of its country risk ratings, their stock market performance and the interrelations with major global stock markets represented by the S&P 500 index and the oil market. It also analyzes the relationships among the financial risk ratings of the five breaks in one group as this risk ratings factor shows the most sensitivity to the variables in each BRICS country. This approach is appropriate for such survey-based risk indexes that are likely to have different degrees of integration [26]. It is now well known that traditional cointegration techniques may not be appropriate when the sample size is too small (see [21]). It has also other advantages over the traditional cointegration and VEC techniques as will be explained later.[2]

Since the responsiveness of the stock markets to these ratings has already been observed for developed countries and some emerging economies [4,18,24], it is conceivable and desirable to think of possible relationships between stock and oil markets' movements and country risk ratings for the fastest growing economies like the BRICS. To our knowledge, this major task has not been undertaken in the literature.

The remaining parts of the paper are organized as follows: Section 2 provides a brief review of the relevant literature and Section 3 describes the data. Section 4 presents the ARDL procedure and discusses the empirical results. Finally, Section 5 provides the conclusions and implications.

2. Overview of country risk ratings

The International Country Risk Guide (ICRG) of Political Risk Services (PRS) creates the country risk rating Composite which includes 22 indicators or ratings comprised of three risk ratings sub categories or groups: political risk (PR) ratings; financial risk (FR) ratings and economic risk (ER) ratings. The political risk ratings accounts for 50% of the composite, while each of the other two ratings stands for 25% of the composite. It is worth noting that the greater the number of points assigned for a risk ratings factor, the lower the risk represented by that factor. Thus, an ascending number means a descending level of risk.

The PR rating group identifies 12 political risk indicators ranging from government stability to conflict, corruption, democracy and bureaucracy. The five indicators with the highest weight are assigned 12 points each and encompass:

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[2] The ARDL approach has been a popular technique and has many applications in several areas such as exchange rates [22], energy consumption (Narayan, 2005), economic development [23], migration [19], among others. It suits developing countries well because of their small sample data.