

European Union enlargement and equity markets in accession countries[☆]

Tomáš Dvořák^{a,*}, Richard Podpiera^b

^a *Union College, Schenectady, NY 12308, United States*

^b *International Monetary Fund, Monetary and Financial Systems Department, Washington, D.C. 20431, United States*

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Abstract

The announcement of the European Union enlargement coincided with a dramatic rise in stock prices in accession countries. This paper investigates the hypothesis that the rise in stock prices was a result of the repricing of systematic risk due to the integration of accession countries into the world market. We found that firm-level stock price changes are positively related to the difference between a firm's local and world market betas. This result is robust to controlling for changes in expected earnings, country effects and other controls, although the magnitude of the effect is not very large. The differences between local and world betas explain nearly 22% of the stock price increase.

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1. Introduction

The announcement of the European Union (EU) enlargement coincided with the beginning of a dramatic rise in stock prices in candidate countries. Between November 2001, when the

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* Corresponding author.

E-mail addresses: dvorakt@union.edu (T. Dvořák), rpodpiera@imf.org (R. Podpiera).

European Commission outlined the timing and named countries involved in the enlargement, and July 2004, stock prices in the eight Central and Eastern European candidate countries increased on average by over 90% in dollar terms.¹ In comparison, the world market index returned about 8% during the same time period. This paper investigates whether the rise in stock prices in the accession countries was a result of repricing of systematic risk due to the integration of local stock markets into the world market. In a segmented market, the source of systematic risk of each firm is the covariance of its returns with the local market. By contrast, in an integrated market, the source of systematic risk is the covariance of a firm's returns with the world market. The covariance of individual firm returns with the world market is likely to be smaller than the covariance with a local market. Thus, a move from a segmented to an integrated market should lead to a fall in systematic risk and to a permanent price increase.

It is possible that a credible announcement of the EU enlargement led to an integration of the previously segmented Central and Eastern European stock markets with the rest of the world. Although foreign investors were allowed to invest in the accession countries for some time prior to the enlargement announcement, some foreigners may have refrained from investing in legally open markets because of real or perceived political, liquidity, and corporate governance risks. Clear prospects for the EU accession may have alleviated these risks and increased the integration of local markets with the world market. Such integration would have led to a fall in systematic risk and a rise in stock prices.

Repricing of systematic risk following market integration was tested on stock market liberalizations in Asia and Latin America in the late 1980s and early 1990s. At the aggregate level, [Henry \(2000\)](#) and [Bekaert and Harvey \(2000\)](#) find that market integration leads to a permanent increase in the stock market index. This finding is consistent with shares being priced according to the market's covariance with world returns rather than according to the much larger variance of local market returns. Using firm level data, [Errunza and Miller \(2000\)](#) find that firms which offer American Depositary Receipts (ADRs) experience abnormal returns following the ADR announcement and that these returns are related to the diversification potential of each firm. [Chari and Henry \(2004\)](#) also examine the repricing effects of market integration at the firm level. They find that firms that experience larger changes in systematic risk upon integration also experience larger repricing. The change in systematic risk explains about 40% of the stock price increases upon integration. Our paper follows a similar strategy. It uses firm level data to calculate the changes in systematic risk for each firm, and examines whether changes in systematic risk are proportional to stock price changes while controlling for other simultaneous events, mainly the changes in expected future earnings. As a control group we include three Eastern European countries that were not part of the first wave of the EU enlargement. If the EU enlargement is responsible for the integration, repricing should occur only in the eight countries included in the enlargement.

Understanding whether repricing of systematic risk took place in the EU accession countries is important for at least three reasons. First, it allows us to evaluate the benefits of the EU integration. Integrated capital markets should deliver a lower cost of capital leading to higher investment and growth. The lower cost of capital should come from the reduction in the risk-free interest rate as well as the reduction in systematic risk. The reduction in systematic risk will benefit firms only if this risk is correctly priced by the market. If it is, then the benefits of the EU integration extend beyond access to larger markets. In this sense, this paper complements a

¹ The average return in terms of local currency was 65%. The eight Central and Eastern European accession countries include the Czech Republic, Hungary, Poland, Slovakia, Slovenia, Lithuania, Latvia, and Estonia. [Fig. 1](#) shows the stock price developments.

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