

# The cost of capital in international financial markets: local or global?

Kees G. Koedijk <sup>a,\*</sup>, Clemens J.M. Kool <sup>b</sup>, Peter C. Schotman <sup>b</sup>,  
Mathijs A. van Dijk <sup>a</sup>

<sup>a</sup> *Department of Financial Management, Erasmus University Rotterdam, P.O. Box 1738, 3000 DR Rotterdam, The Netherlands*

<sup>b</sup> *Maastricht University, Maastricht, The Netherlands*

---

## Abstract

This paper analyzes to what extent international and domestic asset pricing models lead to a different estimate of the cost of capital for an individual firm under the maintained assumption of perfect international financial integration. We distinguish between (i) the multifactor Solnik–Sercu ICAPM including both the global market portfolio and exchange rate risk premia, and (ii) the single factor domestic CAPM. We use a sample of 3,293 stocks from nine countries in the period 1980–1999. The domestic CAPM yields a significantly different estimate of the cost of capital from the multifactor ICAPM for only five percent of the firms in our sample. We attribute the close correspondence between local and global pricing to strong country factors in individual stock returns, which are probably due to lack of real integration. Our results reinforce the home bias puzzle.

© 2002 Elsevier Science Ltd. All rights reserved.

---

## 1. Introduction

Theory suggests the use of an international CAPM (ICAPM) for computing a firm's cost of capital in a financially integrated world. In practice, however, a wide variety of asset pricing models that ignore the international dimension is used to compute the cost of capital.<sup>1</sup> This may, among other things, be related to the fact

---

\* Corresponding author. Tel.: +31-10-408-2748; fax: +31-10-408-9017.

*E-mail address:* c.koedijk@fbk.eur.nl (K.G. Koedijk).

<sup>1</sup> A survey by Keck et al. (1998) indicates that practitioners often perform cost of capital computations in a way that is inconsistent with the theoretical foundations of international valuation.

that even though the ICAPM is theoretically preferable to the domestic CAPM, a firm's beta calculated using the domestic CAPM does not necessarily provide an incorrect estimate of the cost of capital. The two asset pricing models could lead to the same cost of capital if the local stock market portfolio contains all the information that is relevant in order to price domestic assets internationally.<sup>2</sup>

The purpose of this paper is to empirically examine whether international and domestic asset pricing models really lead to a different estimate of the cost of capital. A partial answer is given by Stulz (1995b), who derives an expression for the difference in the estimation of a firm's beta when computed with the domestic CAPM as compared to the single factor ICAPM of Grauer et al. (1976). Stulz refers to this difference as the pricing error, which is linearly related to the computed cost of capital differential. Stulz uses data on the Swiss multinational Nestlé and finds a substantial pricing error.

We generalize the analysis of Stulz (1995b) in three ways. First, we employ the multifactor ICAPM of Solnik (1983) and Sercu (1980) including both the global market portfolio and exchange rate risk premia.<sup>3</sup> Second, we derive statistical tests for the significance of the pricing error. Third, we use data on 3,293 stocks from nine different countries to investigate the difference between each of these models empirically.<sup>4</sup> We analyze the sample period 1980:02–1999:06.

We find that the pricing error in terms of the cost of capital computed with either the domestic CAPM or the multifactor ICAPM of Solnik–Sercu is marginal. Only for about 5 percent of all firms in our sample the domestic CAPM yields a significantly different cost of capital than the multifactor ICAPM at the 95% confidence level. We show that the absolute difference in the cost of capital amounts to about 50 basis points for the US, about 75 basis points for Germany and Japan, and similar amounts for the other countries in our sample. We argue that our findings may be attributed to strong country factors in the individual stock returns, consistent with the evidence of Heston and Rouwenhorst (1994) and Griffin and Karolyi (1998). A tentative explanation of this finding is a lack of *real* capital market integration, due to both cyclical and structural, and institutional country-specific factors. These closely tie together the fortunes of all firms operating in the same country. The observed differences between countries can and should be used by individual investors for the purpose of portfolio diversification. Diversification across industries within one country is insufficient to cope with a country's systemic risk according to our results. Our evidence reinforces the home bias puzzle.

Testing for a pricing error turns out to be very similar to testing for foreign

---

<sup>2</sup> See Stulz (1998) for an overview of the literature on globalization, asset pricing, and the cost of capital. We refer to Karolyi and Stulz (2002) for an alternative exposition of the conditions under which local and global asset pricing lead to the same result.

<sup>3</sup> In the benchmark ICAPM that Stulz (1995b) uses, exchange rate factors are omitted, since PPP is assumed to hold. However, evidence abounds that substantial PPP deviations exist at a monthly horizon, see e.g. Abuaf and Jorion (1990) and Frankel and Rose (1996).

<sup>4</sup> Such wide coverage of firms and countries stands in contrast to most of the empirical literature, see for example Harvey (1991), Ferson and Harvey (1993), and Dumas and Solnik (1995).

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات