Cashflow news, the value premium and an asset pricing view on European stock market integration

Thomas Nitschka*

Financial Stability Unit, Swiss National Bank, Bundesplatz 1, 3003 Bern, Switzerland

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ABSTRACT

The decomposition of national CAPM market betas of European countries’ value and growth portfolio returns into cashflow and discount rate news driven components reveals that i) high average returns on value portfolios are associated with disproportionately high sensitivity to national cashflow news which corroborates recent evidence for the U.S. and ii) two-beta variants of national CAPMs capture the cross-sectional dispersion in European stock returns. The latter finding is suggestive of relatively well integrated stock markets among the core European countries and reflects basic asset pricing theory. One (national) discount factor should price any (international) asset.

1. Introduction

If stock markets are perfectly integrated, then they should be driven by the same factors. Harvey (1991), Campbell and Hamao (1992) and Ferson and Harvey (1993) document the importance of global risk factors for the predictability of national stock market returns and explanations of their cross-sectional differences. However, if capital markets are sufficiently integrated, then cross-sectional dispersion in international asset returns should be explained by national risk factors as well. It is this latter line of thought that this paper pursues. This argument follows immediately from the basic pricing equation for asset returns.

\[ 1 = E_t\left(M_{t+1}R_{t+1}^f\right) \]
with $M_{t-1}$ the stochastic discount factor and $R^*_t$ the gross return on asset or portfolio $i$. In words, an expected asset return should be constant once discounted with the stochastic discount factor (SDF) that is the same for all assets. Since equation (1) should hold for any asset from a national investor’s point of view, it requires sufficiently integrated financial markets when confronted with foreign asset returns. It is natural to test these implications for European countries which experienced a convergence process in terms of monetary and fiscal policy in the course of the establishment of a common currency area. The empirical exercises conducted in this paper could thus be interpreted as an assessment of the integration of the core European stock markets in the sample period from the first quarter of 1975 to the fourth quarter of 2007.

From an asset pricing perspective, the choice of European countries is guided by two additional considerations. First, I would like to minimize the impact of exchange rate risk and focus on purely stock market based explanations of cross-sectional differences in stock returns. Various versions of international asset pricing models show that exchange rate risks are an important factor in explaining the cross-sectional dispersion in international stock market returns (e.g. Dumas and Solnik, 1995; de Santis and Gerard, 1997; Harvey, 1991; Solnik, 1974). Since this paper concentrates on the core EMU countries plus Switzerland, the impact of foreign exchange risks on cross-sectional stock returns is likely to be relatively small. Secondly, Lane and Milesi-Ferretti (2005) show that European investors predominantly invest into euro-area equity.

This paper applies equation (1) from a national investor’s point of view to explain the cross-sectional dispersion in European stock returns. Of course, the empirical analysis conducted in this paper relies on the choice of the stochastic discount factor, i.e. the asset pricing model. I focus on the two-beta variant of the Sharpe (1964) and Lintner (1965) capital asset pricing model (CAPM), recently proposed by Campbell and Vuolteenaho (2004) to explain the value premium on U.S. stock markets. Given this choice of the pricing kernel, it is natural to additionally examine the value premium in the European context.

Value stocks, defined as stocks with high book value relative to market value (B/M), high earnings-to-price ratio (E/P), high cashflow-to-price ratio (C/P) and high dividend-to-price ratio (D/P) receive a lot of attention by practitioners as well as academics since they offer higher average returns than expected from their market betas in a Sharpe and Lintner CAPM. Conversely, growth stocks (stocks with e.g. low book-to-market value ratio) promise lower returns than predicted by the CAPM. This finding is not a unique observation on U.S. stock markets but by now well documented in international data (e.g. Capaul et al., 1993; Chan et al., 1991; Fama and French, 1998).

The Sharpe–Lintner CAPM assumes the existence of a so-called market portfolio comprising all risky assets. The excess return on this market portfolio is a measure of all systematic sources of risk. Differences in the sensitivity to the market return (“betas”) should thus explain differences in average asset returns. In empirical work the market return is typically proxied by broad stock market indexes. While this practice can be criticized on various grounds (e.g. Roll, 1977; Campbell, 1996; Jagannathan and Wang, 1996; Lettau and Ludvigson, 2001b), Davis et al. (2000) show that the CAPM works well when confronted with U.S. value and growth stock data in the sample period from 1929 to 1963 but works poorly in the modern time period from 1963 to the present.

Campbell and Vuolteenaho (2004) explain the difference in the performance of the CAPM in the two sample periods by decomposing CAPM market betas into a cashflow (“bad”) and discount rate (“good”) variety. Intuitively, bad news about the market’s future cashflows reflect a decrease of wealth and hence lead to a fall in the value of the market but leave future investment opportunities unaffected. The value of the market portfolio could also decline because investors increase the discount rate applied to cashflows, which at the same time mirrors better future investment opportunities. Furthermore, the intertemporal CAPM of Merton (1973) suggests that the receptiveness to innovations in dividends (cashflows) should be rewarded with a higher price of risk than sensitivity to discount rate news. Campbell and Vuolteenaho (2004) show that value stocks’ market betas in U.S. post-war data contain a substantially higher cashflow component than growth stocks’ market betas which explains seemingly abnormally high average returns on value portfolios.

This paper shows that European value stocks offer higher excess returns than their growth portfolio counterparts. In line with the findings of Campbell and Vuolteenaho (2004), Cohen et al. (2008) and Campbell et al. (2009), high average returns are associated with disproportionately high cashflow betas. From the perspective of a national investor, differences in the exposures to the cashflow...
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