Comparison Of Market Risk Across European Exchange-Listed Football Clubs

Prigge, Stefan[1]; Tegtmeier, Lars[2]

[1]Hamburg School of Business Administration and IMF Institute for Mittelstand and Family Firms, Germany; [2]Hochschule Merseburg University of Applied Sciences, Germany

E-mail: stefan.prigge@hsba.de

Aim of the research

Professional football has become big business. Professionalization and commercialization could be identified in many different fields. One of which is that it has become possible to be the owner of a football company and that some of these football companies even went public so that investing in professional football nowadays could be realized rather simple, just by trading shares of listed football companies at the stock exchange. One consequence is that risk-return analyses typically conducted for listed stocks could be applied to football stocks as well. The analyses provided in this paper explores for a sample of listed European football companies whether they are correctly priced, how closely their returns are correlated with the general stock market development, and the relative importance of systematic and idiosyncratic risk as return drivers.

Theoretical background

Beginning with conventional criteria, football could be considered as an industry that exhibits high operating and high financial leverage. These features increase covariance risk (Ross, Westerfield & Jaffe, 2006), leading to the expectation of a strong link to the business cycle which in turn implies a β higher than one for an industry with these risk properties. However, it is also well known that football is not a conventional industry. Depending on the national tradition, football companies often dispose of a colorful set of stakeholders that might have different, partly even conflicting, ideas about the goals the football company should achieve (Senaux, 2008). This translates into football company objective functions (Madden, 2012) that might include conventional market value maximization, but also maximization of on-field success or maximization of member welfare, e.g., via member involvement in club/company policy. These influence factors make the football industry special and might yield a genuine risk-return profile of football company stocks.

Methodology, research design, and data analysis

The study applies the approach that Kavussanos, Juell-Skielse and Forrest (2003) established for the analysis of the risk-return profiles of shipping stocks. It is based on the following CAPM equation:

$$R_{it} - R_{ft} = \alpha_i + \beta_i(R_{Mt}) + \varepsilon_{it}$$

Excess return of stock i in period t over the risk-free rate is driven by systematic risk, represented by the return of the market portfolio, and idiosyncratic risk, captured in the error term. ß measures the stock return's general market sensitivity. α indicates whether the stock is overpriced ($\alpha < 0$) or underpriced ($\alpha > 0$). Zeller's (1962) seemingly unrelated regression (SUR) is applied to obtain estimates for α and ß for each stock. The sample is mainly based on the STOXX Europe Football Index. The final sample includes 19 stocks; for all of which monthly observations from January 2010 to December 2016 are available. Market portfolio is represented by the MSCI European Stock Market Index, risk-free rate by one-month Euro LIBOR.

Results, discussion, and implications/conclusions

α is negative for 17 out of the 19 sample clubs, in two cases even statistically significantly at the 5% and 10% level, resp. This indicates that football stocks tend to be overpriced. The average α of all clubs differs from zero at the 5% level. Overpricing might be the result of a demand for these shares that is not only driven by business fundamentals but also by emotional factors.

ß is below one for 17 out of the 19 sample clubs, in most cases the difference from one is significant at the 1% level. The Wald test shows that the average ß of all clubs is different from one at the 10% level. That is against the hypothesis made above in favor of ß larger than one. It seems that there are further links between general market development and football stock returns than those put forward above which loosen the relation with general economic development. Possibly, emotional attachment of fans and supporters is so strong that consumption of football and related goods and services have the character of basic supply goods and services, being only weakly linked to the business cycle.

R^2 falls into the range between 0.03 and 0.33, but is generally quite small as it is below 0.1 for ten out of 19 sample clubs. Thus, only a small part of football stocks returns can be explained by general market developments. Instead, idiosyncratic risk is a prominent driver of football stocks returns. This means that

investors interested in investments in football stocks could profit very much from setting up a diversified portfolio of football stocks.

Generally, results show that football stocks returns display some particular characteristics. This might raise interest of investors looking for non-mainstream industries and assets for diversification purposes.

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