Wine as an alternative asset class
Price evolution over the period 1996-2007, market segmentation and portfolio diversification

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Abstract

With this paper, we aim at filling part of the gap that exists between wine connoisseurs and wine investors on the one hand and finance academics on the other hand. During the last few years, wines have indeed been increasingly considered as an alternative investment class. Using a very large dataset that spans the period 1996 to 2007 and contains transaction prices for all reported auctions at the Chicago Wine Company, we analyze how the prices of high-end wines have evolved over the last decade. We characterize the returns for different wine categories and verify if it might be more profitable to invest in particular wines rather than in a diversified wine portfolio. We then check whether there is a common trend that drives the wine market as a whole or if there are different segments that have their own dynamics. Prior evidence concerning the profitability of an investment in wine as compared to an investment in equity is mixed. Nevertheless, even if wine per se does not deliver an attractive risk-return profile, it might still improve an equity portfolio through a diversification effect. In order to address this issue, we consider a realistic setting that accounts for covariance between equities and wines and also for coskewness and cokurtosis. Focusing on the first two moments of the joint distribution as in the mean-variance framework of Markowitz (1952) disregards important aspects of the investor preferences and utility function. Furthermore wines and equities might have a complex joint distribution. We therefore employ a polynomial goal programming (PGP) model to investigate how investor preferences affect the portfolio allocation and the distribution of its returns.

Our results indicate that characteristics like vintage, rating and ranking have an impact not only on the pricing of wines but also on their subsequent returns. The best wines according to these characteristics earn higher returns and tend to have either a lower or a similar variance than less good wines. On the basis of a cointegration analysis, we cannot reject the null that there is a common trend on the wine market. As wines are only slightly correlated with other assets, they help reducing the risk of an equity portfolio. The allocation in the optimal portfolio contains a large part of the most reputable wines because of their high expected returns. This result is robust to various specifications and holds even after taking into account the costs inherent to wine trading. Wines look even more attractive when the investor also has concerns about the skewness of his portfolio. However, the part to be

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invested in wines is reduced if we include the kurtosis into the analysis. Finally, it seems advisable to diversify across the range of wine categories as their moves in the short-run are partially independent of each other. Wines rated as outstanding or extraordinary by Robert Parker deliver the best tradeoff in terms of portfolio expected returns, variance, skewness and kurtosis for most investor preference settings.

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