The (more than) 100 Ways to Measure Portfolio Performance

Part 1: Standardized Risk-Adjusted Measures

This paper performs a census of the 107 performance measures for portfolios that have been proposed so far in the scientific literature. The authors discuss their main strengths and weaknesses and provide a classification based on their objectives, properties, and degree of generalization. The measures are categorized based on the general way they are computed: asset selection vs. market timing, standardized vs. individualized, absolute vs. relative, and excess return vs. gain measure. They show that several categories have been exhausted while others feature very heterogeneous ways to assess performance within the same sets of objectives. The census is divided into two parts Part 1 introduces the general taxonomy and presents the 75 standardized risk-adjusted measures.

Philippe Cogneau is a Ph.D. candidate in finance at the HEC – Management School of the University of Liege. He’s a graduate in mathematics, computer science and financial risks management. He has almost twenty years experience in the banking sector in the areas of information technology, ALM, accounting, finance, legal & internal reporting, credit risk, and market risk.

Georges Hübner, Ph.D.
is the Deloitte Professor of Financial Management and co-chair of the Finance Department at HEC – Management School of the University of Liege. He is an Associate Professor of Finance at Maastricht University, and Affiliate Professor of Finance at EDHEC and Solvay Business School. He is also the founder and CEO of Gambit Financial Solutions, a financial software spin-off company of the University of Liege. Georges Hübner has taught at the executive and postgraduate levels in several countries in Europe, North America, Africa and Asia. He regularly provides executive training seminars for the preparation of the FRM (Financial Risk Manager) and CAIA (Chartered Alternative Investment Analyst) certifications. His research articles have been published in leading scientific journals including Journal of Banking and Finance, Journal of Empirical Finance, Review of Finance, Financial Management and Journal of Portfolio Management. Georges Hübner was the recipient of the prestigious 2002 Iddo Sarnat Award for the best paper published in the Journal of Banking and Finance in 2001. He is also the inventor of the Generalized Treynor Ratio as the multi-factor extension of the popular Treynor performance measure.

INTRODUCTION

Since the introduction of the Sharpe Ratio in 1966, many different measures of portfolio performance have been introduced in scientific as well as practitioner literature. Yet, there exists no census of all of them. The most complete study so far is due to Le Sourd [2007], but it mentions about fifty different measures.1

From an exhaustive review of the relevant literature, we have identified more than one hundred portfolio performance measures.2 The main purpose of this set of two papers is to provide a taxonomy of them. It naturally involves the identification of categories, in which we gather those measures that display common characteristics. Hence, we not only provide an exhaustive list, but also a partition of the performance measurement area in homogeneous categories.3

The second objective of this article is to identify, among the categories, those that can be considered as “dead-ends” in terms of further investigations. Whenever there exists a performance measure that provides a proper generalization of any measure within the same category, then common sense dictates the usage of this particular measure and the abandonment of any other attempt to research further in that direction. In this paper, we present the general classification scheme of all identified measures, and develop those measures that belong to the category of standardized risk-adjust-