Accepted Manuscript

The peer performance ratios of hedge funds

David Ardia, Kris Boudt

PII: S0378-4266(17)30266-2
DOI: 10.1016/j.jbankfin.2017.10.014
Reference: JBF 5241

To appear in: *Journal of Banking and Finance*

Received date: 16 September 2016
Revised date: 21 August 2017
Accepted date: 24 October 2017

Please cite this article as: David Ardia, Kris Boudt, The peer performance ratios of hedge funds, *Journal of Banking and Finance* (2017), doi: 10.1016/j.jbankfin.2017.10.014

The peer performance ratios of hedge funds☆

David Ardia[a,b,*], Kris Boudt[c,d]

[a] *Institute of Financial Analysis, University of Neuchâtel, Neuchâtel, Switzerland*
[b] *Department of Finance, Insurance and Real Estate, Laval University, Québec City, Canada*
[c] *Solvay Business School, Vrije Universiteit Brussel, Belgium*
[d] *Faculty of Economics and Business, Vrije Universiteit Amsterdam, The Netherlands*

Abstract

We define the outperformance (resp. underperformance) of an investment fund as the percentage of funds in the peer universe for which the *true* performance of the focal fund is higher (resp. lower). We show that the p–values of the pairwise tests of equal performance can be used to obtain estimates of the out– and underperformance ratio that are robust to false discoveries – estimated alpha differentials for which the significance test has a low p–value while the true alpha is identical. When applied to hedge funds, we find that ranking funds on the outperformance ratio leads to a top quintile portfolio with a higher absolute and risk–adjusted performance than when the estimated alpha is used.

Keywords: False discoveries, hedge fund, multiple hypothesis testing, peer performance, performance measurement

☆We are grateful to the Editor, the Associate Editor, two anonymous referees, Marie-Claude Beaulieu, Guido Bolliger, Peter Carl, Philippe Cogneau, Serge Darolles, Geert Dhaene, Ignace De Vos, William Doehler, Michel Dubois, Ivan Guidotti, Lennart Hoogerheide, Simon Keel, Gaëlle Le Fol, Richard Luger, Doug Martin, Philippe Masset, Attilio Meucci, Stefan Nagel, Mikael Petitjean, Gabriel Power, Olivier Scaillet, Enrico Schumann, Jan Tille, Martin Wallmeier, and seminar participants at aeris CAPITAL AG (2011), the R/Finance conference in Chicago (2012), the Computational and Financial Econometrics Conference in London (2013), the 3L conference in Brussels (2013), the Amsterdam-Bonn workshop in Econometrics (2013), the Swiss Economists Abroad conference in St. Gallen (2013), the VU University of Amsterdam (2013), the KU Leuven (2014), the Mathematical Finance Days in Montréal (2014), the Federal Reserve Bank of Saint Louis (2014), Laval University (2015), the 35th International Symposium on Forecasting in Riverside (2015), AFFI (2016), EHL (2016) and Paris Dauphine (2017). Financial support from aeris CAPITAL AG, the Dutch Science Foundation, IFM2 Montréal, and the R/Finance committee (Best Paper Award in 2012) is gratefully acknowledged. The views expressed in this paper are the sole responsibility of the authors. Any remaining errors or shortcomings are those of the authors.

*Corresponding author. University of Neuchâtel, Rue A.-L. Breguet 2, CH-2000 Neuchâtel, Switzerland. Phone: +41 32 718 1365.

Email addresses: david.ardia@unine.ch (David Ardia), kris.boudt@vub.be (Kris Boudt)