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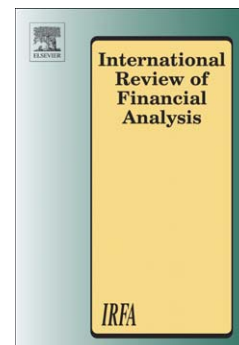
Editorial: The 20th Anniversary of Econophysics: Where we are and where we are going

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PII: S1057-5219(16)30124-7  
DOI: doi: [10.1016/j.irfa.2016.09.001](https://doi.org/10.1016/j.irfa.2016.09.001)  
Reference: FINANA 1026

To appear in: *International Review of Financial Analysis*

Received date: 30 August 2016  
Accepted date: 3 September 2016



Please cite this article as: McCauley, J., Stanley, H.E., Roehner, B. & Schinckus, C., Editorial: The 20th Anniversary of Econophysics: Where we are and where we are going, *International Review of Financial Analysis* (2016), doi: [10.1016/j.irfa.2016.09.001](https://doi.org/10.1016/j.irfa.2016.09.001)

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## **Editorial: The 20<sup>th</sup> Anniversary of Econophysics: Where we are and where we are going.**

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### **1. Disciplinary rapprochement between physics and finance**

Econophysics is an area of knowledge that deals with the application of physics to economic and financial issues. As the name suggests, econophysics is a hybrid discipline that can roughly be defined as “a quantitative approach using ideas, models, conceptual and computational methods of statistical physics” applied to economic and financial phenomena (Gopikrishnan et al., 2002). Although the term “econophysics” was first coined twenty years ago by physicists (Stanley et al., 1996), the influence of physics on economics is an old story, and a number of writers have studied this “attraction” economists have to physics (Mirowski, 1989; Shabas, 1990). In this context, we may ask to what extent does econophysics differ from these previous interactions? Several authors (McCauley, 2006; Stanley et al. 2000; Stanley et al. 2008; Roehner, 2007) have explained how econophysics represents a fundamentally new approach. In contrast to previous links between economics and physics, econophysicists are not economists who take their inspiration from the work of physicists to develop their discipline but physicists who are moving beyond their disciplinary boundaries and using the lens of their models to study various problems raised by the social sciences<sup>1</sup>.

The hybrid nature of econophysics opens room for debate, as a quick look at the existing literature will show. While some authors (McCauley, 2006; Stanley, 2006; Schinckus 2010a, 2010b) emphasize the methodological dissimilarities between the two fields, others (Wallis, 2010; Jovanovic and Schinckus, 2013; 2016) explain that there exist a plethora of common conceptual features between these two areas of knowledge. Despite the existence of several conceptual and historical similarities<sup>2</sup> and some institutional bridges between econophysics and financial economics (e.g., conferences and special issues), the dialogue between the two

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<sup>1</sup>During past decades, many physics models have been used in economics but these were mainly used for their mathematical description of physical phenomena. Over time these imported models have become mainstream (see Black & Scholes model, for example). This trend is not seen in econophysics. From this perspective, econophysicists do not attempt to connect their work with pre-existing economic theory. For an epistemological analysis of this attitude, see Gingras and Schinckus (2012).

<sup>2</sup> We refer here to the works developed by Mandelbrot in the 1960s (see Mandelbrot, 2004 or Jovanovic and Schinckus, 2013 for further details on this point).

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