

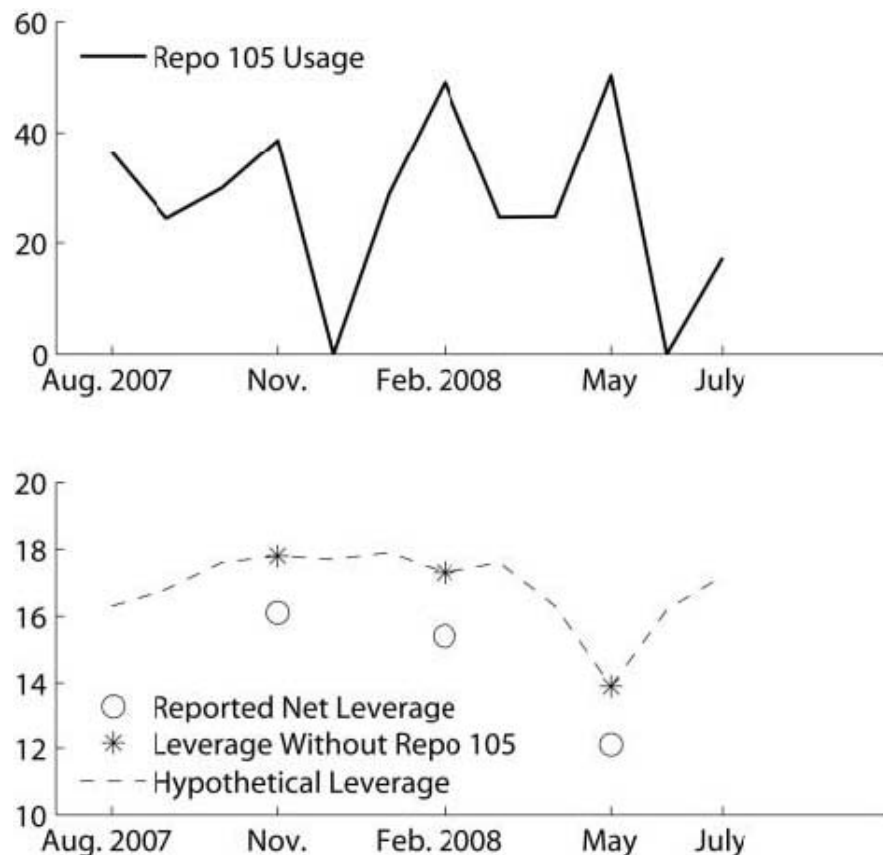
Buchbesprechungen / Book Reviews

Winkler, Othmar W. *Interpreting Economic and Social Data – A Foundation of Descriptive Statistics*. Berlin (Springer) 2009, pp. 265, 3 96,25, ISBN 978-3-540-68720-7.

Starting a book review with a discussion of actual data depicted in a graph as in Figure 1 does not conform to standards. However, an exception might be admissible in this case for two reasons. First, Othmar W. Winkler's book is also far from providing the usual type of content of a monograph in statistics, but rather challenges conventions by providing alternative views on the nature of data and how to analyze them. Second, about the time when reading through Chapter 5 of his book, I came across first reports on the now famous "Repo 105" at Lehman Brothers, which might be considered as a realization of the risk of interpreting inventory data as time series information described on page 67. The incidence is striking and a short discussion of this example might provide the best argument on why one should be interested in a book subtitled "the foundation of descriptive statistics" after all.

The upper panel of Figure 1 depicts the amount of cash Lehman Brothers gained by "selling" assets to other banks. This cash was used to pay back outstanding debt resulting in a decrease of the reported net leverage ratio (circles in the lower panel of the figure). However, the specificity of the agreement labeled "Repo 105" was that both counter parties agreed that the assets will be bought back after the end of the reporting period. Consequently, the usage of the instrument was highest just before the reporting periods ended in November 2007, February 2008, and May 2008. The stars in the lower panel of the figure show net leverage corrected for the effects of Repo 105.

Figure 1 Repo 105 Source: Data from Valukas (2010, p. 742ff).



The focus of banking supervision on specific reporting dates made such accounting tricks attractive. As a result of this and other (dubious) accounting methods, net leverage might have been kept low, at least for the reporting period. Actual exposure measured by net leverage over the whole period, however, might have looked like the dashed line in the lower panel presenting hypothetical values of net leverage. It becomes apparent that the seemingly reduced risk according to reported net leverage might not reflect the actual development in the reporting periods.

For this particular case, the warning expressed by Winkler is relevant, namely that point in time observations like (financial) inventory data do not provide valid information on the actual development of the quantity of interest, e.g., the risk of a bank. Things might look even worse when taking into account that net leverage is measured as a ratio of aggregates. The difficulties in constructing and interpreting ratios are the subject of Chapter 4, while the issues linked to aggregates are covered in Chapter 3.

Winkler's book is not about applications in risk management, but covers general issues in the field of economic and social data. The author starts discussing the reasons that led to the current situation in socio-economic statistics which is characterized by low interest in dealing with the different nature of data in this field as compared to measurement in the natural sciences. Chapter 2 and 3 provide valuable insights in the link between facts and data. Hereby, the author not only stresses the context of specific observations, e. g., time and geographical location, but also that a large part of data is self-reported rather than obtained by "measurement". Winkler also addresses the often neglected effects of the aggregation procedure. The specific problems of constructing meaningful ratios are discussed in Chapter 4, while Chapters 5 to 7 deal with aspects of time series analysis. Among other issues, Winkler challenges the conventional idea to consider longitudinal data as a random sample from an underlying time series process. It is in this context he mentions that for building price indices, the actual object of observations should not be a specific good or service, but the actual business transaction. I guess that he would welcome the increasing use of scanner data for price measurement. One of the major contributions of this book is in challenging the standard approaches. This takes the form of pointed criticism in Chapters 8 and 9, which look at cross sectional analysis and linear regression, and becomes even more obvious in Chapter 10, where Winkler attacks what he calls the "stochastic worldview". Probability theory might be helpful when analyzing data generated by random sampling. However, when applying methods like significance tests to data which represent populations, he recommends at the very least to add a statement like, "if these data were a random sample" (p. 190). Chapter 11 about statistics and accounting looks at cases other than Repo 105. The author suggests that there are close connections between the two fields once one agrees with the author that statistics in socio-economics has to be much more than just applied probability theory. The last Chapter 12 stresses the importance of geographical aspects in statistical analysis.

Having provided a short overview of the content of the book, it is no surprise that the author states in the Preface, that his work "is not meant as an introduction to statistics". Instead of being just another textbook in statistics for economists, the book rather targets all experienced statisticians and econometricians who find it relevant to think carefully about the origin and properties of the data they use. In fact, the ideas presented in the book are the result of several decades of teaching statistics and providing statistical consultancy by the author. Undoubtedly, the reader will find many examples to challenge the current mainstream methodological approach to statistics in both micro-and macroeconomics. Possibly, after having read the book, some might be inspired to contribute in improving our understanding of the nature of socio-economic data and the consequences for further statistical modelling.

References

A. R. Valukas (2010), Report: Chapter 11 Case No. 08-13555 (JMP) – In re LEHMAN BROTHERS HOLDINGS INC., et al., Debtors, Jenner & Block, Chicago, IL.

Gießen, 14.4.2010 Peter Winker