xts: Extensible Time Series

Jeffrey A. Ryan and Joshua M. Ulrich
jeff.a.ryan@gmail.com josh.m.ulrich@gmail.com

January 26, 2008

Contents

1 Introduction

R offers the time series analyst a variety of mechanisms to both store and manage time-indexed data. Native classes suitable for time series data include data frames, matricies, vectors, and ts objects. Over time, additional classes have been introduced to handle the shortcomings of the native R functions within specific domains. These include irts from the tseries package[1], timeSeries from the Rmetrics bundle[2], and its [3] and zoo [4] from respective packages. Each of these contributed classes provide solutions to many of the issues related to working with time series in R, though often in incompatible ways.

At present, one of the most used formats to manage time-series data is the zoo class. zoo

2 The technical side of xts

3 Using xts

This should contain subsections on: 1. creating xts objects with xts and as.xts 2. an explanation of reclass - why and how to use as an end-user including limitations

3.1 Creating data objects: xts and as.xts

3.2 xts methods

3.3 Restoring the original class - reclass

4 Developing with xts

5 Extending xts for your own purposes

5.1 xtsAttributes

5.2 Subsetting xts

6 Conclusion

References

[1] author: *tseries:*, R package version v, CCYY

[2] DW: *Rmetrics:*,

[3] : *its: Irregular Time Series*,

[4] DW: *zoo: Z's Ordered Observations*,

[5] R Development Core Team: *R: A Language and Environment for Statistical Computing*, R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL http://www.R-project.org

[6] Jeffrey A. Ryan: *Defaults: Create Global Function Defaults*, R package version 1.1-0, 2007