

## zoo reference card

### Creation

`zoo(x, order.by)` creation of a "zoo" object from the observations `x` (a vector or a matrix) and an index `order.by` by which the observations are ordered. For computations on arbitrary index classes, methods to the following generic functions are assumed to work: combining `c()`, querying length `length()`, subsetting `[],` ordering `ORDER()` and value matching `MATCH()`.

### Standard methods

`plot` plotting  
`lines` adding a "zoo" series to a plot  
`print` printing  
`summary` summarizing (column-wise)  
`str` displaying structure of "zoo" objects  
`head, tail` head and tail of "zoo" objects

### Coercion

`as.zoo` coercion to "zoo" is available for objects of class "ts", "its", "irts" (plus a default method).  
`as.class.zoo` coercion from "zoo" to other classes. Currently available for *class* in "matrix", "vector", "data.frame", "list", "irts" and "its".  
`is.zoo` querying whether an object is of class "zoo"

### Merging and binding

`merge` union, intersection, left join, right join along indexes  
`cbind` column binding along the intersection of the index  
`rbind` row binding (indexes may not overlap)  
`aggregate` compute summary statistics along a coarser grid of indexes

### Mathematical operations

`Ops` group generic functions performed along the intersection of indexes  
`t` transposing (coerces to "matrix" before)  
`cumsum` compute (columnwise) cumulative quantities: sums `cumsum()`, products `cumprod()`, maximum `cummax()`, minimum `cummin()`.

### Extracting and replacing data and index

`index, time` extract the index of a series  
`index<-, time<-` replace the index of a series  
`coredata, coredata<-` extract and replace the data associated with a "zoo" object  
`lag` lagged observations  
`diff` arithmetic and geometric differences  
`start, end` querying start and end of a series  
`window, window<-` subsetting of "zoo" objects using their index

### NA handling

`na.omit` omit NAs  
`na.contiguous` compute longest sequence of non-NA observations  
`na.locf` impute NAs by carrying forward the last observation  
`na.approx` impute NAs by interpolation