

Portfolio Probe Version 1.04 Backward Compatibility Guide

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There are some changes in Version 1.04 that are not backward compatible with previous versions.

1 Linear Constraints

The most serious backward compatibility issue is that the default value of `lin.abs` has changed from `FALSE` to `TRUE`. The reason for this is the addition of the linear styles like "`varfraction`" and "`varvalue`". There may be less confusion thinking of these constraints being absolute rather than net (but really it is best to think of them as outside that dichotomy).

There is a warning in 1.04 when there is the possibility of this change impacting the results. This cure could become worse than the disease—the easiest way to get rid of the warning is to specify `lin.abs` in the call.

The results of an optimization now include information on the linear constraints in a different way, though this is unlikely to be a compatibility problem. There is now a `lin.table` component in the results of `trade.optimizer` if there are linear constraints. An example is:

```
$lin.table
      style trade absolute levels direction rfloc riskfrac.col
Country  varfraction FALSE      TRUE      3         0      0          1
Sector   varfraction FALSE      TRUE      4         0      0          1
Country@2 weight FALSE      TRUE      3         0     -1          0
Sector@2 weight FALSE      TRUE      4         0     -1          0
```

So there is a succinct summary of the linear constraints imposed.

2 Valuation

The computed value for `cash` in `valuation` has changed. The new calculation is the gross value minus the net value. Previously it was just the gross value.

That was a bug in the sense that it didn't do as intended except for special cases; it was not a bug in the sense that it did what it was documented to do.

The default value of the `collapse` argument for the random portfolio method of `valuation` used to always be `FALSE`. Now it is `TRUE` if prices is a matrix.

Not really a backward compatibility problem, but the default and optimized portfolio methods of `valuation` didn't respect `weight=TRUE` when `collapse` was `TRUE`. The default value of `weight` has changed in this setting, but the default behavior remains the same.

3 Trading Costs

In long-short portfolios there is a complication with trading costs when a trade turns a long position into a short position or vice versa. The complication is that the cost on the long-side and the short-side are allowed to be different. Previously any trade that went past zero switched trading costs – as if there were two separate trades: one to get to zero, and the other to go the rest of the way.

That was too complicated, and arguably wrong.

The new scheme is:

- For linear costs (vector or single column costs and no `cost.par`) the switch is made as before.
- For all other cases there is just one cost evaluation done with the cost function for the side where the trade starts.

This change means that the `doubleconst` control argument is no longer used.