Case study presentation

VISUALIZING TIME SERIES DATA IN R

Arnaud Amsellem

Quantitative Trader and creator of the R Trader blog

Your savings

Invested in a portfolio with 3 stocks

- Microsoft
- Yahoo
- Apple

Your savings

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You have some spare cash to inve

Role of correlation

Microsoft

+

YAHOO!

+

+

Role of correlation

Microsoft

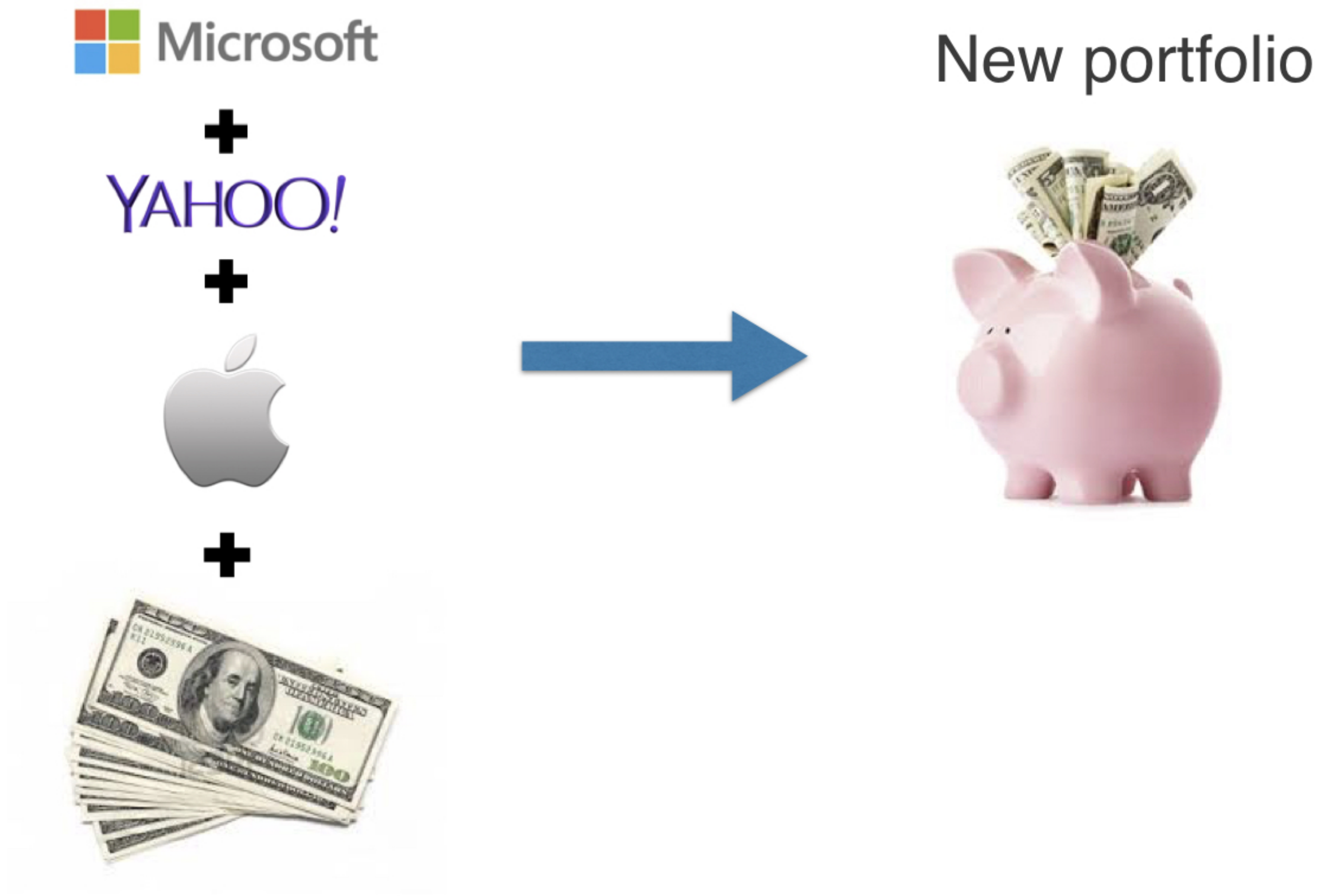
+

YAHOO!

+

+

Role of correlation



Role of correlation

- Rule number one in investment: capital protection
- Low correlation = protection from severe losses
- You will use the PerformanceAnalytics-package

Let's practice!

New stocks

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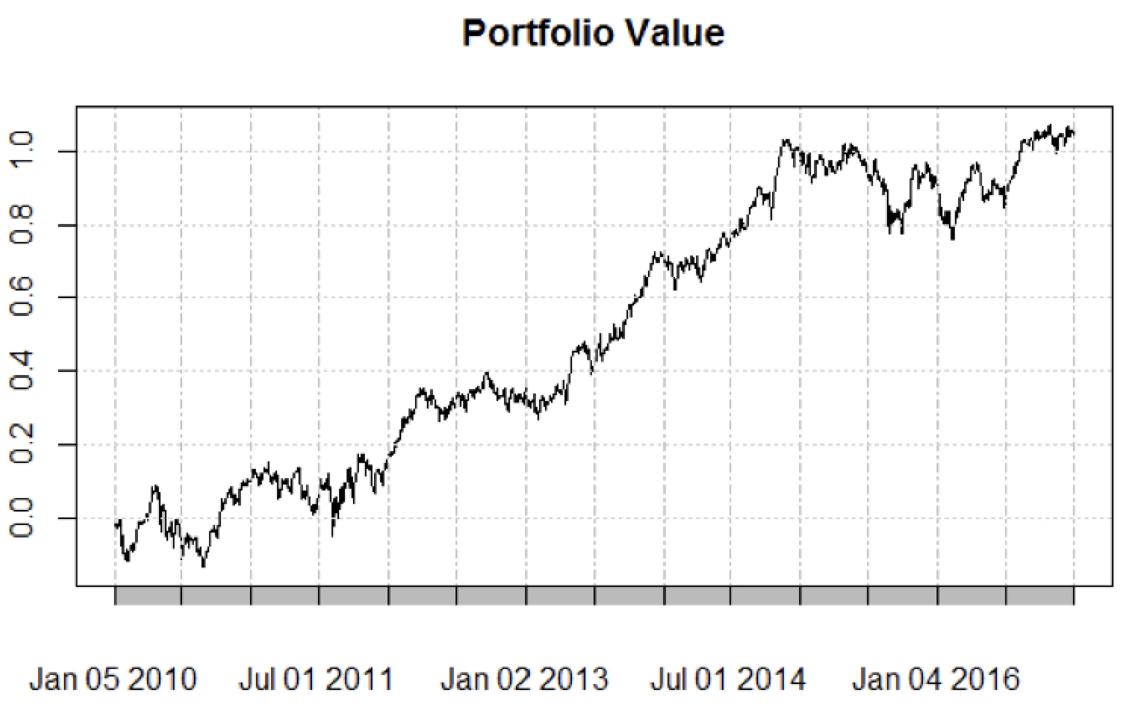
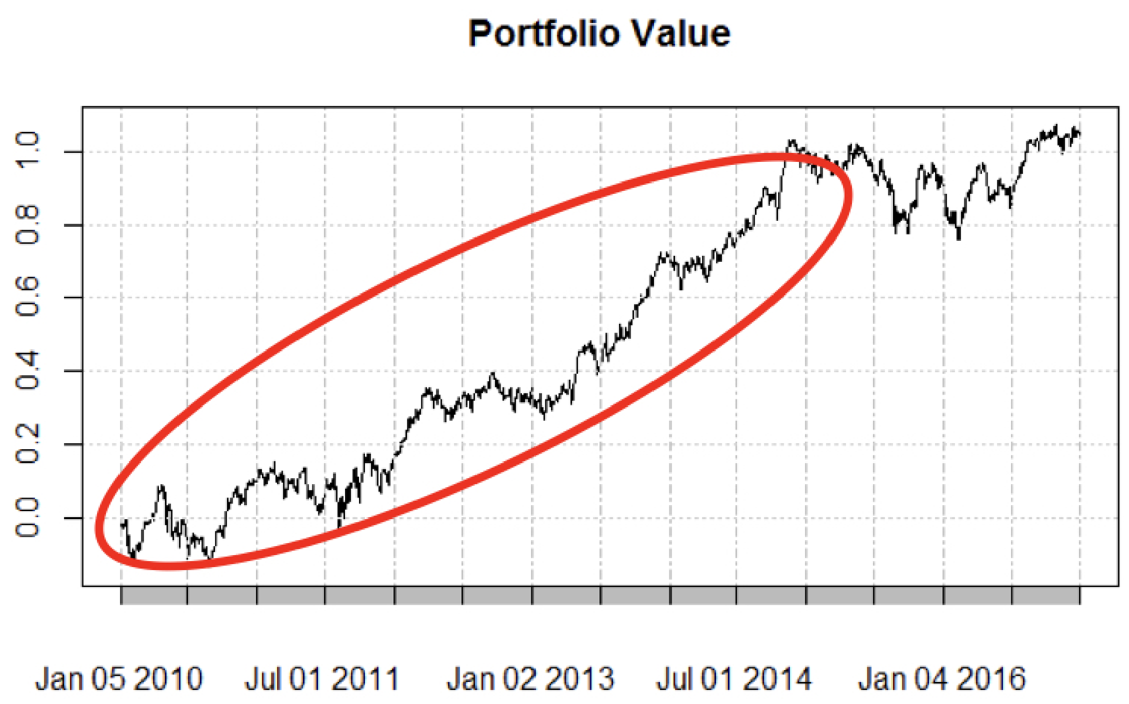
Conclusions so far



- The value increased by 100% over the course of 7 years

Conclusions so far



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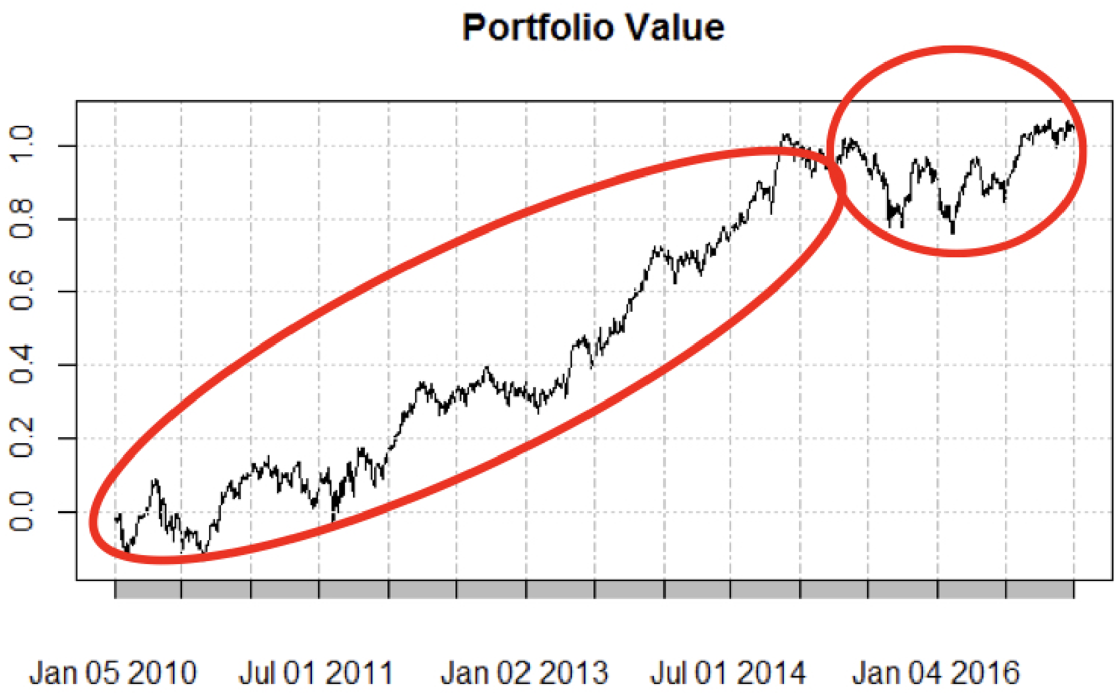
- Really good performance between 2010 and 2014

Conclusions so far



- The value increased by 100% over the course of 7 years
- Really good performance between 2010 and 2014
- No performance since end of 2014

In what follows...

- **Goal:** Choose one stock to invest your spare cash
- A new dataset
- Choose only one stock
- Compare old and new portfolio

Let's practice!

Congratulations!

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Course wrap-up

- Chapter 1: `xts` , `plot()` etc...
- Chapter 2: Univariate time series
- Chapter 3: Multivariate time series
- Chapter 4: Case study

DataCamp courses

Manipulating Time Series Data in R with xts & zoo

The xts and zoo packages make the task of managing and manipulating ordered observations fast and mistake free.

JEFFREY RYAN
Creator of xts and quantmod

Introduction to Time Series Analysis

Learn the core techniques necessary to extract meaningful insights from time series data.

DAVID S. MATTESON
Assistant Professor at Cornell University

CRAN Task View

https://cran.r-project.org/web/views/TimeSeries.html

CRAN Task View: Time Series Analysis

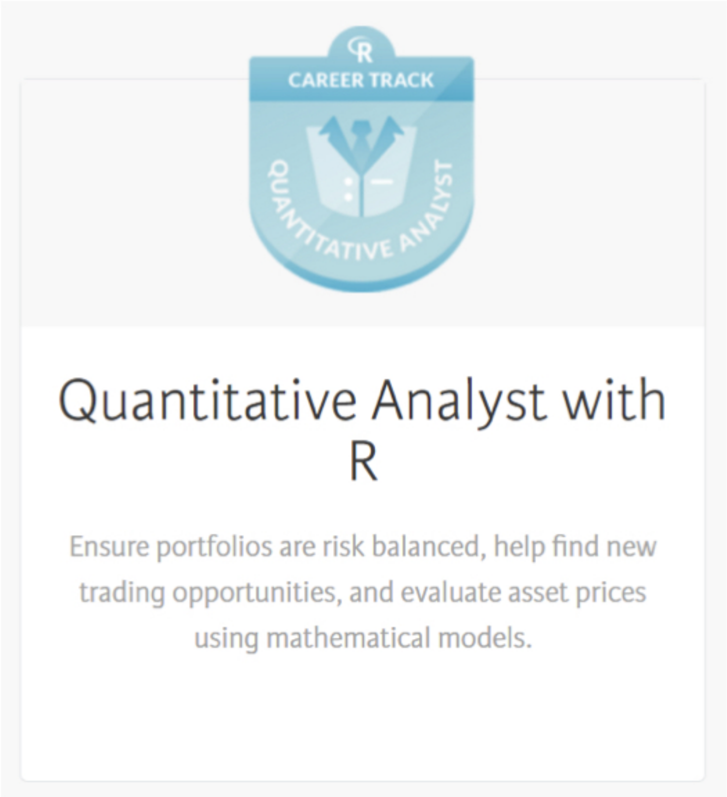
Maintainer:	Rob J Hyndman
Contact:	Rob.Hyndman at monash.edu
Version:	2017-03-26
URL:	https://CRAN.R-project.org/view=TimeSeries

Base R ships with a lot of functionality useful for time series, in particular in the stats packa
also a considerable overlap between the tools for time series and those in the Econometrics a
If you think that some package is missing from the list, please let us know.

Basics

- *Infrastructure* : Base R contains substantial infrastructure for representing and analyzi

quant career track



Empirical Finance CRAN Task View

https://cran.r-project.org/web/views/Finance.html

CRAN Task View: Empirical Finance

Maintainer: Dirk Eddelbuettel
Contact: Dirk.Eddelbuettel at R-project.org
Version: 2017-03-30
URL: https://CRAN.R-project.org/view=Finance

This CRAN Task View contains a list of packages useful for empirical work in Finance, gro

Besides these packages, a very wide variety of functions suitable for empirical work in Fina
of other packages on the Comprehensive R Archive Network (CRAN). Consequently, sever
Multivariate, Optimization, Robust, SocialSciences and TimeSeries Task Views.

The ctv package supports these Task Views. Its functions install.views and update.views

R-bloggers

https://www.r-bloggers.com/

Let's practice!

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