

Supporting materials for teaching Corporate Finance

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Objective: without having any knowledge of R, instructors/students/readers learn Corporate Finance by using many good features, shown below, offered by our pre-written R programs. The adopted textbook is written by Prof. Welch (4th ed., 2017) and the computational tool is Excel.

Features:

- 1) 15-week lectures
- 2) Many explanations for each chapter
- 3) Several YouTube videos for each chapter
- 4) Several reference links for each chapter
- 5) Paper-less mid-Terms and final exams
- 6) Over 500 data sets
- 7) Several efficient ways to download data for get data to Excel (about 3 second)
- 8) Three dozen topics for term projects
- 9) Over 60 in-class exercises
- 10) A free financial calculator
- 11) Mimic Excel
- 12) About 100 VBA and Macros (copy-and-paste)

Step 1: download and install R

Go to <http://www.r-project.org>
Click "CRAN" under "Download" (left-hand side)
Choose a mirror address
Choose appropriate software (PC, Mac)
Click "base"

Step 2: for 15 weeks, we have following 15 links

```
source("http://datayyy.com/cfe/week1.R")
source("http://datayyy.com/cfe/week2.R")
...
source("http://datayyy.com/cfe/week14.R")
source("http://datayyy.com/cfe/week15.R")
```

For example, for week 1, after launching R, we copy-and-paste the first line to the R console. The following image would appear.

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```

*-----*
* Corporate Finance (supporting materials by Yan) *
*-----*
* .c1 Introduction *
* .c2 Present value *
*-----*
* >.c1 # go to chapter 1 (a dot in front of c1) *
* >.uu # go to the utility menu *
* >.cf # back to this menu *
*-----*

```

Alternatively, just give students one line. Using my teaching as an example. The following line is given to my students.

```
source("http://datayyy.com/cfe.R")
```

For the first week, it contains just one line: `source("http://datayyy.com/cfe/week1.R")`. Then every week, I change the week number.

If an instructor wants to download 15 weeks' R data sets, she/he could download them according to the following links.

<http://datayyy.com/cfe/w1.RData>
<http://datayyy.com/cfe/w2.RData>
<http://datayyy.com/cfe/w3a.RData>
<http://datayyy.com/cfe/w4g.RData>
<http://datayyy.com/cfe/w5r.RData>
<http://datayyy.com/cfe/w6e.RData>
<http://datayyy.com/cfe/w7a.RData>
<http://datayyy.com/cfe/w8t.RData>
<http://datayyy.com/cfe/w9c.RData>
<http://datayyy.com/cfe/w10o.RData>
<http://datayyy.com/cfe/w11u.RData>
<http://datayyy.com/cfe/w11r.RData>
<http://datayyy.com/cfe/w12c.RData>
<http://datayyy.com/cfe/w13e.RData>
<http://datayyy.com/cfe/w14s.RData>
<http://datayyy.com/cfe/w15a.RData>

Assume that we have downloaded `w7a.RData` and it is saved under `c:/temp/`. Then, we could run the following lines to activate all programs contained in the R data set.

```
load("c://temp/w7a.RData")
.cf()
```

The following menu would appear:

```
*-----*
* Corporate Finance      (supporting materials by Yan) *
*-----*
* .c1  Introduction      *
* .c2  Present value     *
* .c3  Stock & Bond valuation: Annuities/perpetuities *
* .c14 Financial Statements/cash flows *
* .c15 Ratio analysis    *
* .c4  Capital budgeting *
* .c5  Interest rate and yield curve *
* .c6  Uncertainty, default and risk *
* .c30 Term Projects     *
*-----*
* >.c6      # go to chapter 6 *
* >.uu      # go to the utility menu *
* >.cf      # back to this menu *
*-----*
```