

# Highline Excel 2016 Class 24: Finance Functions in Excel

## Table of Contents

Periodic PMT Definition: .....	2
PMT function:.....	2
PMT function arguments: .....	2
Cash Flow matters in Finance. ....	2
Be consistent with your unit of time! .....	2
FV function:.....	2
FV arguments:.....	2
RATE function:.....	3
RATE arguments:.....	3
NPER function: .....	3
NPER arguments: .....	3
Cumulative List of Keyboards Throughout Class:.....	4

## Periodic PMT Definition:

- Each pmt must be the same.
- Time period between each pmt must be the same.

## PMT function:

- PMT function calculates the period payment for a loan (For the Borrower or the Lender).
- Each pmt must be the same.
- Time period between each pmt must be the same.
- Interest rate must remain constant.

## PMT function arguments:

- rate = period rate (month, quarter, yearly, etc.)
- nper = total number of periods
- pv = amount of loan on the day it is issued (present value of future cash flows)
- fv = value of loan on last day (balloon payment)
- type =
- End = omitted = 1 = payment at end of period
- Begin = 0 = payment at beginning of period

## Cash Flow matters in Finance.

- Cash going out of the wallet is negative.
- Cash coming into the wallet is positive.
- PMT function Cash Flows:
- For the borrow the PV is positive, the PMT is negative, and the FV is negative.
- For the Lender the PV is negative, the PMT is positive, and the FV is positive.

## Be consistent with your unit of time!

- If you are calculating monthly payment, you need monthly interest rate and total number of months!
- The period can be monthly, quarterly, yearly or any other length.

## FV function:

- Calculates the future value of an investment, for either a lump sum or a savings plan
- Interest rate must remain constant.
- Each pmt must be the same.
- Time period between each pmt must be the same.

## FV arguments:

- rate = period rate (month, quarter, yearly, etc.)
- nper = total number of periods
- pmt = equal periodic payments
- pv = amount of loan on the day it is issued (present value of future cash flows)
- type =

- End = omitted = 1 = payment at end of period
- Begin = 0 = payment at beginning of period

### RATE function:

- Calculates the period rate
- Each pmt must be the same.
- Time period between each pmt must be the same.
- Interest rate will remain constant.

### RATE arguments:

- nper = total number of periods
- pmt = equal periodic payments
- pv = amount of loan on the day it is issued (present value of future cash flows)
- fv = value of loan on last day (balloon payment)
- type =
- End = omitted = 1 = payment at end of period
- Begin = 0 = payment at beginning of period

### NPER function:

- Calculates the total number of periods
- Each pmt must be the same.
- Time period between each PMT must be the same.
- Interest rate must remain constant.

### NPER arguments:

- rate = period rate (month, quarter, yearly, etc.)
- pmt = equal periodic payments
- pv = amount of loan on the day it is issued (present value of future cash flows)
- fv = value of loan on last day (balloon payment)
- type =
- End = omitted = 1 = payment at end of period
- Begin = 0 = payment at beginning of period

## Cumulative List of Keyboards Throughout Class:

- 1) **Esc Key:**
  - i. Closes Backstage View (like Print Preview).
  - ii. Closes most dialog boxes.
  - iii. If you are in Edit mode in a Cell, Esc will revert back to what you had in the cell before you put the Cell in Edit mode.
- 2) **F2 Key** = Puts formula in Edit Mode and shows the rainbow colored Range Finder.
- 3) **SUM Function: Alt + =**
- 4) **Ctrl + Shift + Arrow** = Highlight column (Current Region).
- 5) **Ctrl + Backspace** = Jumps back to Active Cell
- 6) **Ctrl + Z** = Undo.
- 7) **Ctrl + Y** = Undo the Undo.
- 8) **Ctrl + C** = Copy.
- 9) **Ctrl + X** = Cut.
- 10) **Ctrl + V** = Paste.
- 11) **Ctrl + PageDown** = expose next sheet to right.
- 12) **Ctrl + PageUp** = expose next sheet to left.
- 13) **Ctrl + 1** = Format Cells dialog box, or in a chart it opens Format Chart Element Task Pane.
- 14) **Ctrl + Arrow:** jumps to the bottom of the "**Current Region**", which means it jumps to the last cell that has data, right before the first empty cell.
- 15) **Ctrl + Home** = Go to Cell A1.
- 16) **Ctrl + End** = Go to last cell used.
- 17) Alt keyboards are keys that you hit in succession. Alt keyboards are keyboards you can teach yourself by hitting the Alt key and looking at the screen tips.
  - i. Create PivotTable dialog box: **Alt, N, V**
  - ii. Page Setup dialog box: **Alt, P, S, P**
  - iii. Keyboard to open Sort dialog box: **Alt, D, S**
- 18) **ENTER** = When you are in Edit Mode in a Cell, it will put thing in cell and move selected cell DOWN.
- 19) **CTRL + ENTER** = When you are in Edit Mode in a Cell, it will put thing in cell and keep cell selected.
- 20) **TAB** = When you are in Edit Mode in a Cell, it will put thing in cell and move selected cell RIGHT.
- 21) **SHIFT + ENTER** = When you are in Edit Mode in a Cell, it will put thing in cell and move selected cell UP.
- 22) **SHIFT + TAB** = When you are in Edit Mode in a Cell, it will put thing in cell and move selected cell LEFT.
- 23) **Ctrl + T** = Create Excel Table (with dynamic ranges) from a Proper Data Set.
  - i. Keyboard to name Excel Table: **Alt, J, T, A**
  - ii. **Tab** = Enter Raw Data into an Excel Table.
- 24) **Ctrl + Shift + ~ ( ` )** = General Number Formatting Keyboard.
- 25) **Ctrl + ;** = Keyboard for hardcoding today's date.
- 26) **Ctrl + Shift + ;** = Keyboard for hardcoding current time.
- 27) **Arrow Key** = If you are making a formula, Arrow key will "hunt" for Cell Reference.
- 28) **Ctrl + B** = Bold the Font
- 29) **Ctrl + \* (on Number Pad) or Ctrl + Shift + 8** = Highlight Current Table.
- 30) **Alt + Enter** = Add Manual Line Break (Word Wrap)
- 31) **Ctrl + P** = Print dialog Backstage View and Print Preview
- 32) **F4 Key** = If you are in Edit mode while making a formula AND your cursor is touching a particular Cell Reference, F4 key will toggle through the different Cell References:
  - i. **A1** = Relative
  - ii. **\$A\$1** = Absolute or "Locked"

- iii. **A\$1** = Mixed with Row Locked (Relative as you copy across the columns AND Locked as you copy down the rows)
  - iv. **\$A1** = Mixed with Column Locked (Relative as you copy down the rows AND Locked as you across the columns)
- 33) **Ctrl + Shift + 4** = Apply Currency Number Formatting
- 34) **Tab key** = When you are selecting a Function from the Function Drop-down list, you can select the function that is highlighted in blue by using the Tab key.
- 35) **F9 Key** = To evaluate just a single part of formula while you are in edit mode, highlight part of formula and hit the F9 key.
- i. If you are creating an Array Constant in your formula: Hit F9.
  - ii. If you are evaluating the formula element just to see what that part of the formula looks like,  
REMEMBER: to Undo with Ctrl + Z.
- 36) **Alt, E, A, A** = Clear All (Content and Formatting)
- 37) Evaluate Formula One Step at a Time Keyboard: **Alt, M, V**
- 38) Keyboard to open Sort dialog box: **Alt, D, S**
- 39) **Ctrl + Shift + L** = Filter (or **Alt, D, F, F**) = Toggle key for Filter Drop-down Arrows
- 40) **Ctrl + N** = Open New File
- 41) **F12** = Save As (Change File Name, Location, File Type)
- 42) Import Excel Table into Power Query Editor: **Alt, A, P, T**
- 43) **Ctrl + 1 (When Chart element in selected)**: Open Task Pane for Chart Element
- 44) **F4 Key** = If you are in Edit mode while making a formula AND your cursor is touching a particular Cell Reference, F4 key will toggle through the different Cell References:
- i. **A1** = Relative
  - ii. **\$A\$1** = Absolute or "Locked"
  - iii. **A\$1** = Mixed with Row Locked (Relative as you copy across the columns AND Locked as you copy down the rows)
  - iv. **\$A1** = Mixed with Column Locked (Relative as you copy down the rows AND Locked as you across the columns)
- 45) Keyboard to open Scenario Manager = **Alt, T, E**
- 46) **Ctrl + Tab** = Toggle between Excel Workbook File Windows
- 47) **Ctrl + Shift + F3** = Create Names From Selection
- 48) **Ctrl + F3** = open Name Manager
- 49) **F3** = Paste Name or List of Names
- 50) **Alt + F4** = Close Active Window
- 51) **Window Key + Up Arrow** = Maximize Active Window
- 52) **Ctrl + Shift + Enter** = Keystroke to enter Array Formulas that: 1) have a function argument that requires it, or 2) whether or not you are entering the Resultant Array into multiple cells simultaneously.
- 53) **Ctrl + /** = Highlight current Array
- 54) Data Validation Dialog Box: **Alt, D, L**
- 55) **F11** = Create Chart on a new sheet
- 56) **Alt + F11** = Create Chart on currently selected sheet.
- 57) New Format Rule dialog box: **Alt, H, L, N**
- 58) Delete conditional Formatting Rule: **Alt, O, D, D**
- 59) Manage Rule dialog box keyboard: **Alt, O, D**
- 60) "Format values where this formula is true": **Alt, H, L, N, PageDown, Tab**
- 61) Shift + F11 = Insert a New Sheet
- 62) Ctrl + F1 = Toggle Ribbon Tabs on and off
- 63) Ctrl + Alt + F5 = Refresh All Data in Excel Workbook.

- 64) Zoom to Selection = **Alt, W, G**
- 65) Ctrl + F = Find
- 66) Ctrl + H = Find and Replace
- 67) Advanced Filter keyboard: Alt, A, Q or Alt, D, F, A
- 68) Alt + F11: opens VBA Editor Window so you can write code.
- 69) Alt + F8: Opens list of macros you can run.