Highline Excel 2016 Class 24: Finance Functions in Excel

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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 =

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• 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.


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.