



# Excel for Investment Banking and Your First VBA Macro

How to Get Results Without Reading 500 Pages of VBA Books First



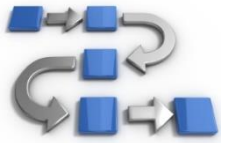
# Our Top Questions About VBA and Macros...

“Do I really need to know VBA and Macros? How useful are they? What about R, Python, and other programming languages?”

“How much **time** should I spend learning these before my internship or full-time job begins?”

# Short Answers to These Questions:

- **Yes**, it helps to be familiar with VBA and macros – but you don't need to be an expert or have super-advanced knowledge
- You won't be tested on them in IB interviews, but they can make your **on-the-job life** easier
- **Other languages**, such as R and Python, are not useful for the roles we focus on (IB, PE, CD, ER) – they're more for trading, portfolio management, or jobs with heavier statistical analysis
- **Time to Spend:** If you spend ~2 months learning/practicing Excel, maybe take 1 week to learn some VBA; it's “icing on the cake”



# How to Learn VBA Syntax

- **Best Method:** Start by **recording macros** (sequences of actions) in Excel, and then review and modify the code
- **Most Excel constructs** also carry over to VBA – IF statements, functions like INDEX and MATCH, ranges of cells, formatting, etc.
- **The difference** is that you can do more with these constructs, such as “looping” through a specific range, or “saving” data for use in some other function or directly on the spreadsheet
- Think of VBA as a way to **automate** your work and save time; don't think of it as “learning a new language” (intimidating)



# Your First VBA Macro

- **Here:** You'll start by recording your first **macro** to create an "Input Box" in Excel – very simple, and it shows the basic steps
- **Why:** Creating an input box doesn't require tons of logic or error checking, but it's annoying and repetitive without a macro
- **Why:** It requires you to change the borders, fill color, and font color, and there's no way to do all of that at once in a single key stroke (and it's even more annoying in Mac Excel)
- **And:** We can't just use Copy and Paste Special → Formats because we do *not* want to copy the Number Formats!



# Your First VBA Macro

- **How:** We can create a macro for this by recording completion of these actions in Excel, and then tweaking the code a bit
- **Basic Macro:** It works, but there are some issues...
- **Issue #1:** Way too much code → don't need separate "With" statements for the borders, interior, etc. (group them together)
- **Issue #2:** It's not very readable because there are too many useless commands, and it's hard to tell what the colors are
- **Issue #3:** We should skip empty cells to make it more efficient



# Your First VBA Macro

- **Most Issues:** Can be fixed with simple reorganization of the code and RGB values for the colors
- **More Complicated:** Skipping empty cells and formatting Input Boxes with constants vs. formulas differently (blue vs. black)
- **Solution:** We can “intersect” the user’s selected range (single cell or multiple cells), with the “Used Range” of the spreadsheet and the Formulas or Constants in the selected range
- **Then:** Set the font colors for these Formulas or Constants *first*, and then do the border/fill/font/alignment formatting if cells exist



# Recap and Summary

- **Is VBA Useful?** Yes, but you don't need to be an expert
- **Best Methods to Learn:** Record macros, then go to the VBA Editor and review and edit the code
- **Our Approach:** Simple, highly useful macros focused on automating repetitive tasks in Excel, with some tweaking
- **First Macro:** “Input Box” creation in any financial model or valuation spreadsheet
- **More:** Skip empty cells, format formulas vs. constants, etc.

