

Note: If you just want to view workbooks in the project folder without the intention to update, refresh or edit them, you don't have to follow instructions below. Otherwise, you need to have Thinkorswim app with active Charles Schwab account to refresh data in Excel workbooks.

Downloading CSV Files

Raw data is downloaded from the Thinkorswim (TOS) scanner as 11 CSV files and stored in **Downloaded CSV Files** folder. Each file is named according to the sector (e.g., Technology.csv, Healthcare.csv).

Follow these steps to update raw data:

1. Log in to Thinkorswim → main window → **Scan** tab → **Stock Hacker**
2. Third ribbon:
Scan in: All Listed Stock (in **Category**)
Intersect with: By Industry → Choose an industry → **Select All** <industry>
Exclude: All OTC Stocks
3. Use the following filters:
 - **Stock:** Market cap, \$M → min: 250M, no max value is specified
 - **Fundamental:** Choose any fundamental metric, and leave min and max values empty. This step is done to make sure OTC stocks are excluded just in case sometimes **Exclude** condition does not work properly.
4. Make sure required columns are set up in the right order:
 - Use the **Table Design** document in the project folder to see the required columns and correct order of columns for TOS tables.
 - Click the little **settings wheel** below the Scan button to customize columns.
5. Click **Scan button** on the right: It may take a while for data to fully load.
6. At the top right corner, under **On Demand**: click drop-down menu → **Export** → **To file...** → Navigate to **Downloaded CSV Files** folder which is a subfolder of **Undervalued Stock Scanner** → Replace the CSV file of the current industry

Workbooks in the Results Folder

Note: For **.xlsm** files in the **Results** folder: Make sure **Thinkorswim** is logged in when a workbook is open.

Do the following steps to refresh data:

1. In any of the result sheets (**Result_L**, **Result_M**, **Result_S**), click “**Refresh All Data**” button. Click **OK** in the popup box. After around 40 seconds, you will see “**Data has been refreshed.**” message, click **OK**.
2. For each of the **Mean_L**, **Mean_M**, **Mean_S** sheets: Make sure **Outlier filters** are set to “**No**”. If the mean tables show errors, right-click on any cell in any mean table in each sheet → Choose **Refresh**.

Using Watch List Workbook

After comparing stocks in result workbooks, user may want to pick out a few favorite stocks and put them in a watch list.

1. Make sure all the result workbooks in **Results** folder are updated.
2. Open **Watch List.xlsx**
3. Refresh data: **Data** tab → **Refresh All**
4. Navigate to **Watch List** sheet and enter stock symbol in **Symbol** column.

Using Builder Workbook

The **Builder.xlsm** workbook is typically used to examine different sectors' CSV files and generate result workbooks in **Results** folder. The following steps provide guide on how to switch between different CSV files.

To switch to a sector's dataset, apply the following steps:

1. **Data** tab → **Get Data** → **Launch Power Query Editor**
2. **Queries** pane (on the left) → **PARAMETERS** → Make sure to choose appropriate **FileName** corresponding to the desired sector
3. Close Power Query → click **Keep** on the popup
4. Apply Data Refresh steps
 - In any of the result sheets (**Result_L**, **Result_M**, **Result_S**), click “**Refresh All Data**” button. Click **OK** in the popup. After around 40 seconds, you will see “**Data has been refreshed.**” message, click **OK**.
 - For each of the **Mean_L**, **Mean_M**, **Mean_S** sheets: Make sure **Outlier filters** are set to “**No**”. If the mean tables show errors, right-click on any cell in any mean table in each sheet → Click **Refresh**.