Portfolio Analytics
with
Stock Rover

January 2nd, 2014

PRESENTATION NOTES

1. **At** http://www.stockrover.com/webinar-outline.html
2. **Select In-Depth Portfolio Analytics PDF download**

StockROVER

WEBINAR GAME PLAN

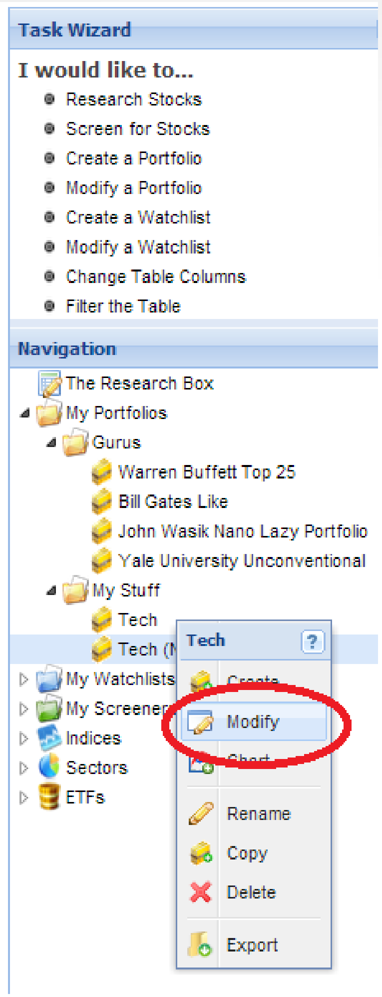
1. Look At Stock Rover Portfolio Model
2. Work with a sample “Tech” Portfolio (contains key tech stocks)
3. Chart portfolios (how charting works with portfolio history)
4. Look at table based returns with portfolios
5. Look at portfolio allocation pie charts in the Insight Panel
6. Deep dive into the Reporting Facility
7. Some ins and outs of managing your portfolio
8. Questions at end

Stock ROVER

STOCK ROVER PORTFOLIO MODEL

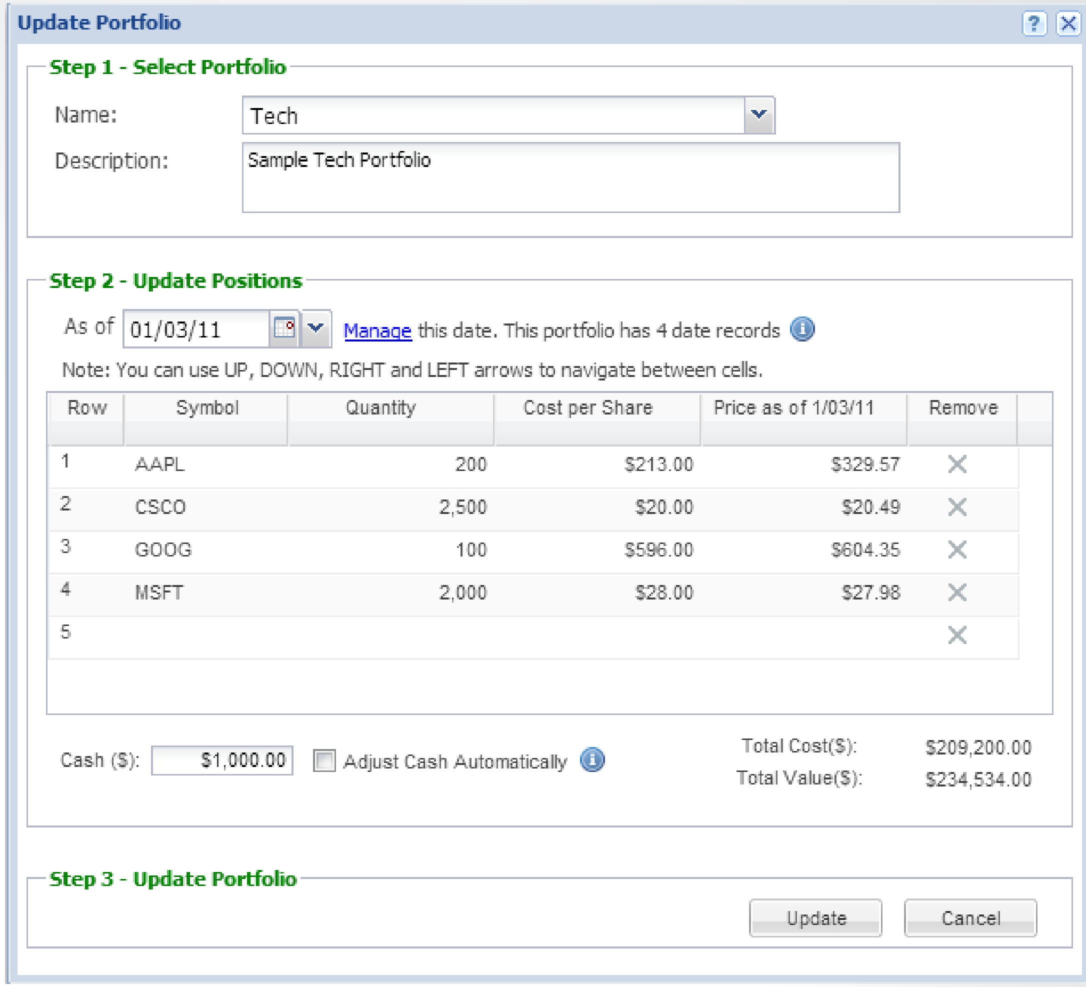
- Stock Rover is a “Position Based” Model
- Positions are maintained over time (a date and the positions on that date)
- Trades (individual buys and sells) are not maintained
  - Trades are used only to change positions
- Benefits
  - Simpler to maintain
  - Faster performance
- Drawbacks
  - It is not exact, it is approximate
  - How approximate depends on how often you trade and how often you update Stock Rover
    - Day trades and trades between position updates are seen as inflows

Sample "Tech" Portfolio – Getting to the Modify Dialog



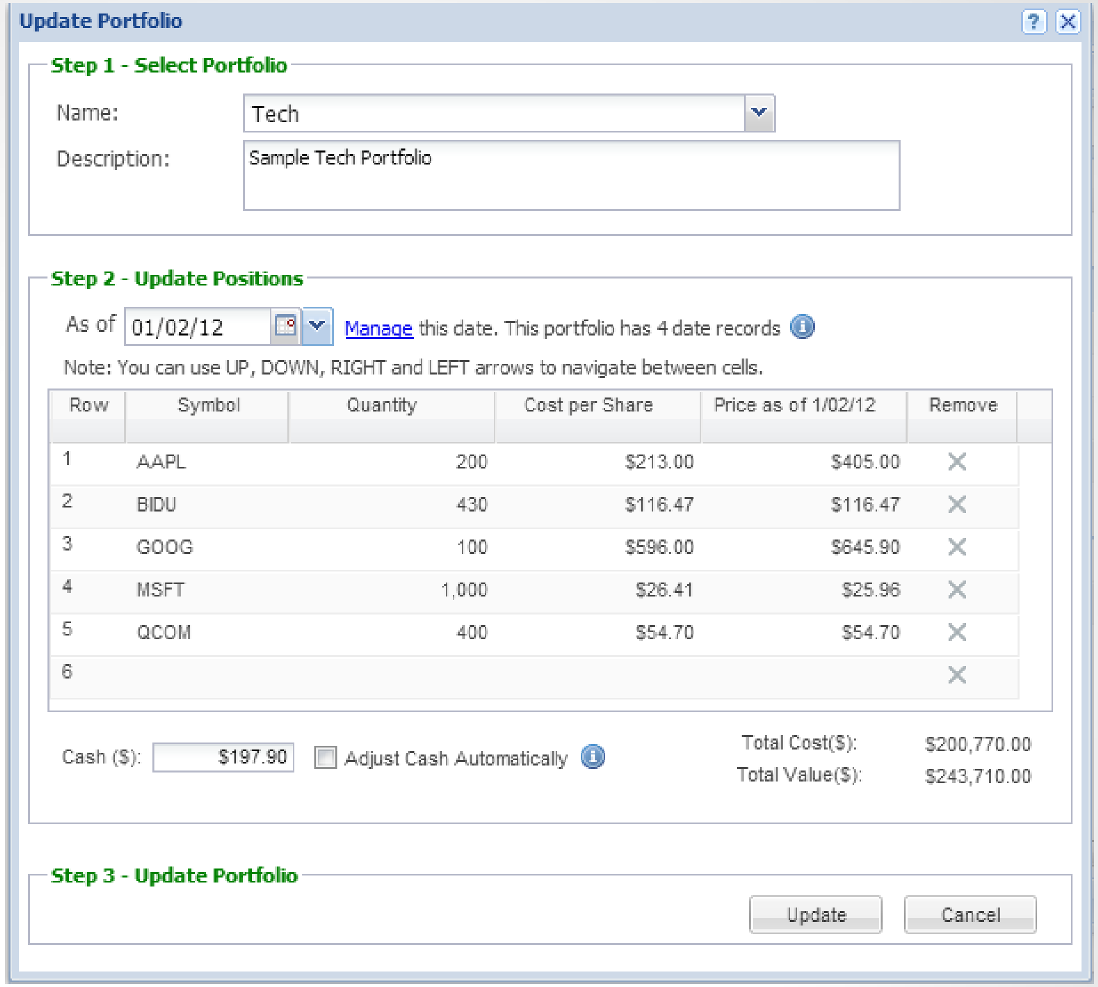
Sample “Tech” Portfolio initiated on January 3rd, 2011

- Buy 100 AAPL
- Buy 2,500 CSCO
- Buy 100 GOOG
- Buy 2000 MSFT
- $1000 in Cash



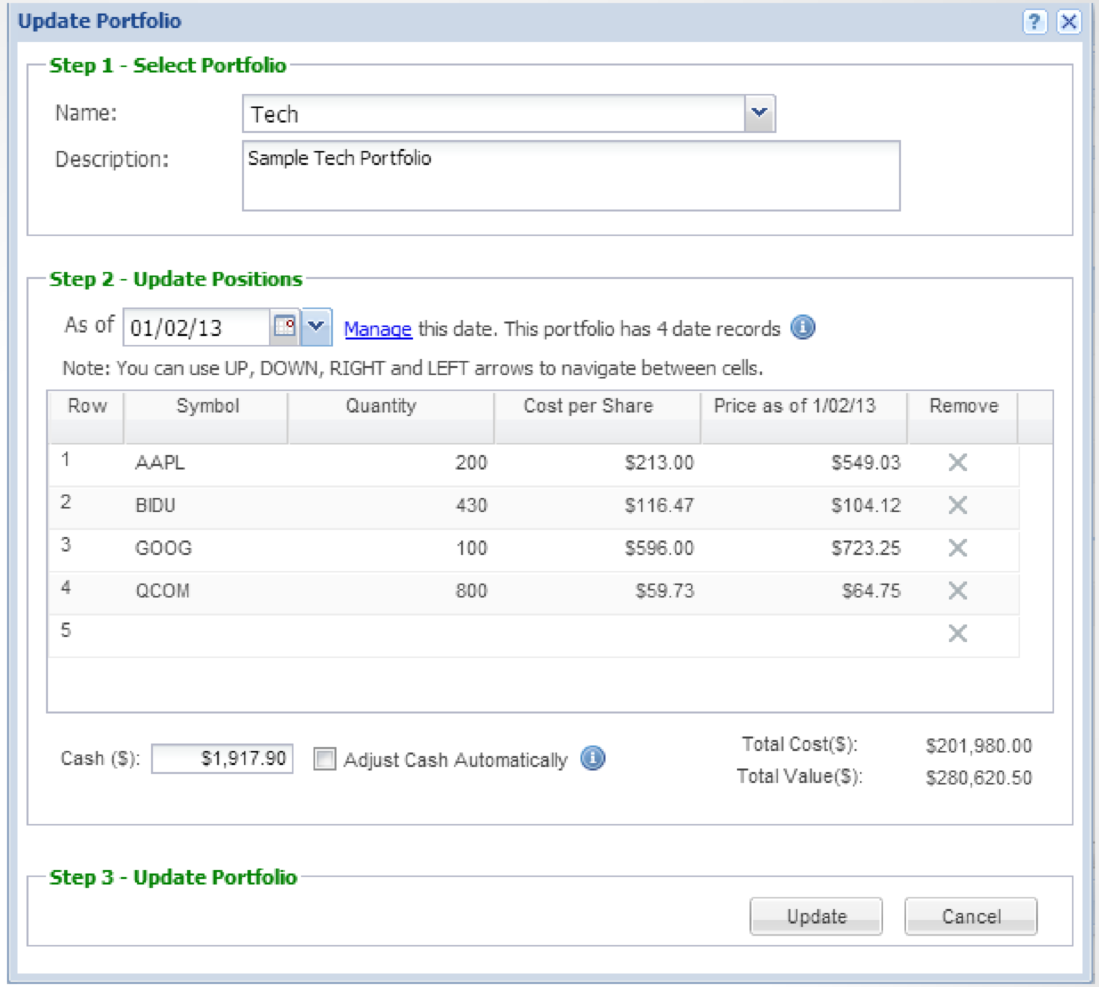
Sample "Tech" Portfolio updated on January 2rd, 2012

- Sell 2500 CSCO (all)
- Sell 1000 MSFT (half)
- Buy 430 BIDU
- Buy 400 QCOM
- Cash reduced to $197.90



Sample “Tech” Portfolio updated on January 2rd, 2013

- Sell 1000 MSFT (all)
- Buy 400 QCOM
- Cash increases to $1917.90


Update Portfolio

Step 1 - Select Portfolio

Name: Tech

Description: Sample Tech Portfolio

Step 2 - Update Positions

As of 01/02/13 Manage this date. This portfolio has 4 date records

Note: You can use UP, DOWN, RIGHT and LEFT arrows to navigate between cells.

Row	Symbol	Quantity	Cost per Share	Price as of 1/02/13	Remove
1	AAPL	200	$213.00	$549.03	×
2	BIDU	430	$116.47	$104.12	×
3	GOOG	100	$596.00	$723.25	×
4	QCOM	800	$59.73	$64.75	×
5					×

Cash ($): $1,917.90 Adjust Cash Automatically

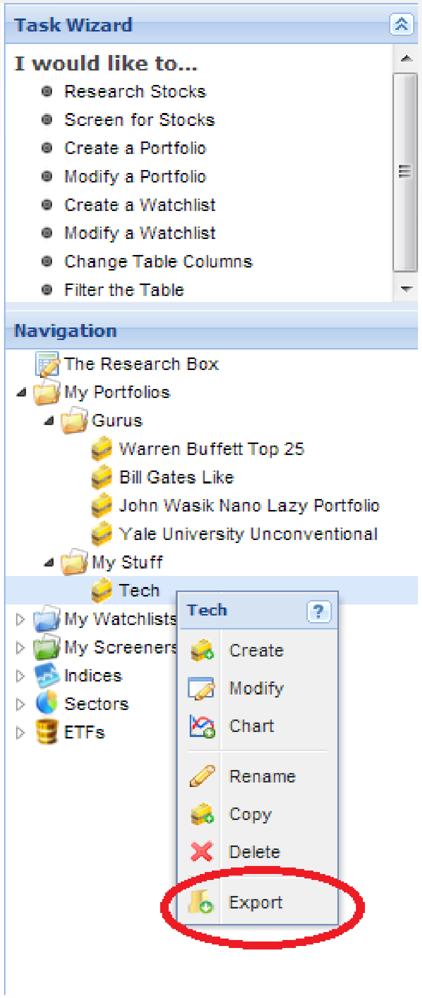
Total Cost($): $201,980.00

Total Value($): $280,620.50

Step 3 - Update Portfolio

Update Cancel

Sample “Tech” Portfolio – Creating Export File



Sample “Tech” Portfolio - Export File Format

Stock Rover Portfolio 2.0

Tech

{"description":"Sample Tech Portfolio"}

As of date, data

01/03/11,{"id"=>nil, "name"=>"Tech", "description"=>"Sample Tech Portfolio", "activity_dates"=>[], "portfolio_folder_id"=>nil, "rows"=>[{"ticker"=>"AAPL", "quantity"=>200, "buyPrice"=>213, "buyDate"=>"01/03/11"}, {"ticker"=>"CSCO", "quantity"=>2500, "buyPrice"=>20, "buyDate"=>"01/03/11"}, {"ticker"=>"GOOG", "quantity"=>100, "buyPrice"=>596, "buyDate"=>"01/03/11"}, {"ticker"=>"MSFT", "quantity"=>2000, "buyPrice"=>28, "buyDate"=>"01/03/11"}, {"ticker"=>"CASH$", "quantity"=>1000.0, "buyPrice"=>1, "buyDate"=>"2011-01-03"}], "activity_type"=>1}

01/02/12,{"id"=>nil, "name"=>"Tech", "description"=>"Sample Tech Portfolio", "activity_dates"=>[], "portfolio_folder_id"=>nil, "rows"=>[{"ticker"=>"AAPL", "quantity"=>200, "buyPrice"=>213, "buyDate"=>"01/03/11"}, {"ticker"=>"GOOG", "quantity"=>100, "buyPrice"=>596, "buyDate"=>"01/03/11"}, {"ticker"=>"MSFT", "quantity"=>1000.0, "buyPrice"=>26.4133333333333, "buyDate"=>"2012-01-02"}, {"ticker"=>"QCOM", "quantity"=>400.0, "buyPrice"=>54.7, "buyDate"=>"2012-01-02"}, {"ticker"=>"BIDU", "quantity"=>430.0, "buyPrice"=>116.47, "buyDate"=>"2012-01-02"}, {"ticker"=>"CASH$", "quantity"=>197.900000000002, "buyPrice"=>1.0, "buyDate"=>"2011-01-03"}], "activity_type"=>1}

01/02/13,{"id"=>nil,"name"=>"Tech", "description"=>"Sample Tech Portfolio", "activity_dates"=>[], "portfolio_folder_id"=>nil, "rows"=>[{"ticker"=>"AAPL", "quantity"=>200, "buyPrice"=>213, "buyDate"=>"01/03/11"}, {"ticker"=>"GOOG", "quantity"=>100, "buyPrice"=>596, "buyDate"=>"01/03/11"}, {"ticker"=>"QCOM", "quantity"=>800.0, "buyPrice"=>59.725, "buyDate"=>"2013-01-02"}, {"ticker"=>"BIDU", "quantity"=>430.0, "buyPrice"=>116.47, "buyDate"=>"2012-01-02"}, {"ticker"=>"CASH$", "quantity"=>1917.9, "buyPrice"=>1.0, "buyDate"=>"2011-01-03"}], "activity_type"=>1}

Charting

- Everything charts correctly with position history records
- Only strangeness is if you chart before initiation date of portfolio, charting will chart backwards based on the stocks owned at portfolio initiation
- Shows you how stocks performed before you “bought” them
- Next version of Stock Rover will have an “events” that shows you when portfolio initiated and when it changed
- For now an aggressive use of imagination works best

Charting

5 Year Chart of our Tech Portfolio

100 AAPL   2,500 CSCO   100 GOOG   2,000 MSFT

Charting

3 Year Chart of our Tech Portfolio – Reflecting trading activity

Charting vs. The Table - Beware

For return the table only looks at stocks owned currently and looks backwards

Portfolios within Folder "My Stuff" (2 rows)

Profile | Portfolio Performance | Current Returns | **Historical Returns** | Valuation | Momentum | Returns vs. Su0026P 500 | Historical Valuation | Dividends | Profitability | Gro

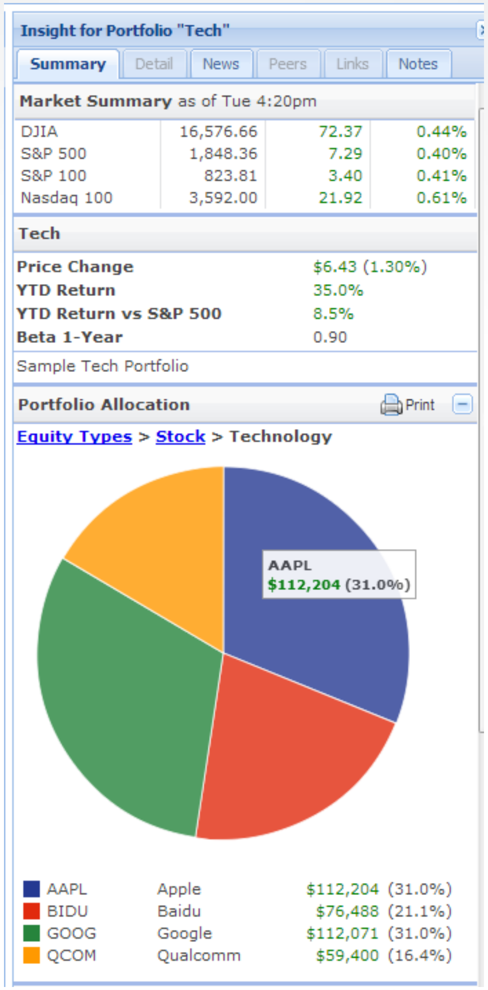
Add Column | Filter | Save | Print

Name	5-Year Price Range	Return (1 Year)		1-Day Return	5-Day Return	1-Month Return	3-Month Return	1-Year Return	2-Year Return	3-Year Return	5-Year Return
Tech	$365.41 … $580.47	35.0%		1.3%	0.6%	3.6%	18.9%	35.0%	52.8%	78.6%	346.8%
Tech (No Trades)	$379.05 … $566.92	29.5%		0.9%	0.8%	2.6%	16.0%	29.5%	51.1%	60.9%	195.4%
Summary		**32.2%**		**1.1%**	**0.7%**	**3.1%**	**17.4%**	**32.2%**	**52.0%**	**69.4%**	**256.3%**

Chart for Tech

Portfolio Allocation Pie Chart

Sector and stock within sector allocation on clickable pie chart



ON TO THE REPORTING FACILITY…

Reporting Facility Key Capabilities

- Detachable window
- Date Controls – Along top (very flexible)
- Print icon – upper right
- Portfolio Selection - on left side
- Tabbed Reporting – Main Panel
    - Value Over Time
    - Risk and Reward
    - Holdings Detail

Reporting Facility – Value Over Time

- Inflows
  - From cash changes
  - From position changes without a corresponding change in cash or another position
  - Trades not seen (day trades or trades between position updates)
- Dividends
  - Over the reporting period
- Annualized dividend yield
  - The yield (dividends / average portfolio value in period) annualized

Reporting Facility – Risk and Reward

- Total Return
  - Acts as if dividends immediately reinvested
  - Weights days with more capital higher
- S&P 500 Return
  - Also includes dividends
- Correlation
  - Looks at the strength of the regression line drawn between the daily percentage price changes of the portfolio and the S&P when charted together
  - Ranges between -1 and 1 where
    - -1 perfect inverse correlation
    - 0 no relationship
    - 1 perfectly correlated
  - Equals the Covariance (Portfolio, S&P 500) / (Std Dev S&P 500 x Std Dev Portfolio)

Reporting Facility – Risk and Reward (continued)

- Beta
  - How much the price changes vs. the market (S&P 500 is the proxy)
  - 1.5 means if the market changes by 1.0%, our portfolio on average changes by 1.5%
  - Negative beta means portfolio moves opposite market (rare)
- Max Drawdown
  - The % difference between the biggest peak-to-trough decline in reporting period
- Volatility
  - Shows how much variation there is in the price of a financial asset
  - Volatility recipe
    - Compute the Standard Deviation of the daily price change percentage over the reporting period
    - Multiply by the square root of 252 (trading days in a year) for an annualized volatility
  - Number not meaningful on its own, best to compare vs. something else
    - Another portfolio
    - Same portfolio with different reporting period (is volatility increasing?)

Reporting Facility – Risk and Reward (continued)

- Risk Adjusted Return vs. S&P 500
  - Return vs. S&P 500 in period x (volatility / S&P 500 volatility)
  - Answers question how much risk did you take to achieve return
- Sharpe Ratio
  - Gives another measure of risk adjusted performance
  - The number by itself is not that meaningful (though the higher the better)
  - Like Volatility – use it in comparison to something (e.g. a portfolio to another portfolio)
  - (Portfolio Return – Risk Free Return) / Portfolio Price Standard Deviation
  - Risk Free Return is the 10 year treasury bill in our calculation

Reporting Facility – Holdings Detail

- Mouse over for holdings detail
- Columns are self-explanatory
  - Right click on column heading and select explain if more detail required
- Percent of Total Return – key column
  - The contribution of the stock to the overall portfolio return

SOME NOTES ON MANAGING PORTFOLIOS

Entering Positions

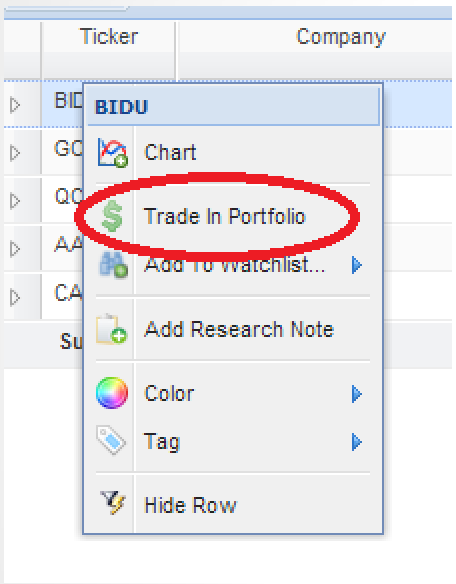
- Via Task Manager → Create A Portfolio
  - Can Enter or Import Positions (CSV, TXT, XLS, XLSX)
    - Enter brings up the Portfolio → Modify dialog
    - Import requires Ticker, Quantity and Cost Per Share columns in file
- Via right clicking on My Portfolio or Portfolio Folder → Import
- Via right clicking on a Portfolio → Modify

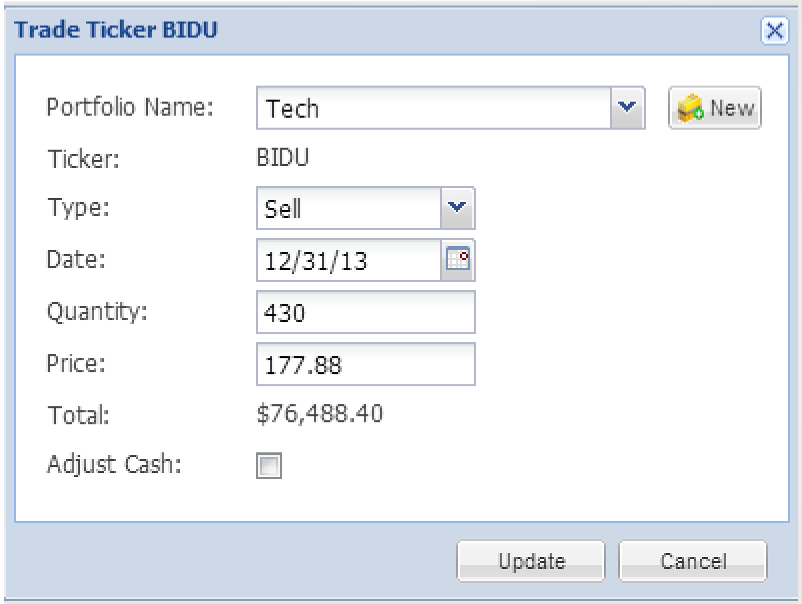
You can always a attach date to positions whether entered or imported (default is today or today is not a trading day, last trading day)

If date is earlier than existing position records, you can optionally bring the changes forward

Entering Trades

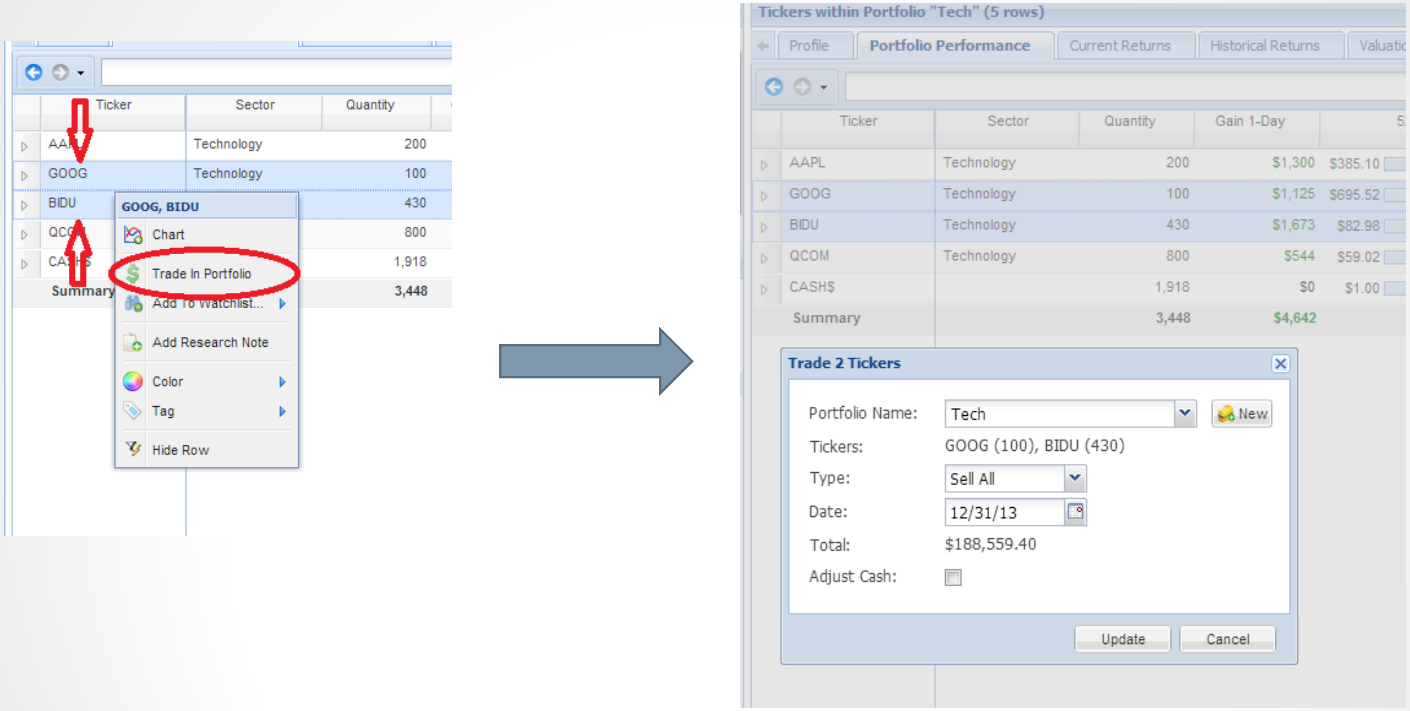
- Right click on one or more tickers in table and select “Trade in Portfolio”
- Adjust cash important if you want to track cash in the portfolio
- Simply updates the position for the date, doesn’t store the “transaction”





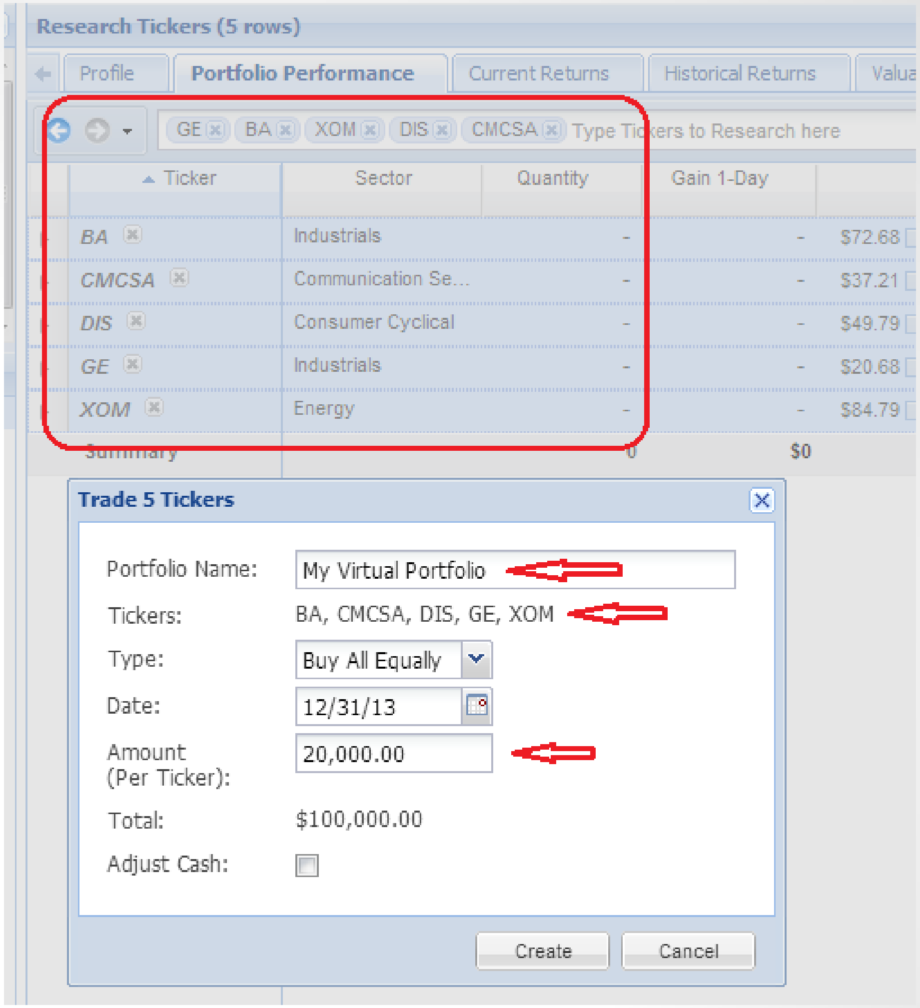
Selling Multiple Stocks at Once

- Control Click or Shift Click to select multiple stocks in table
- Right click on one of the selected tickers and select “Trade in Portfolio”



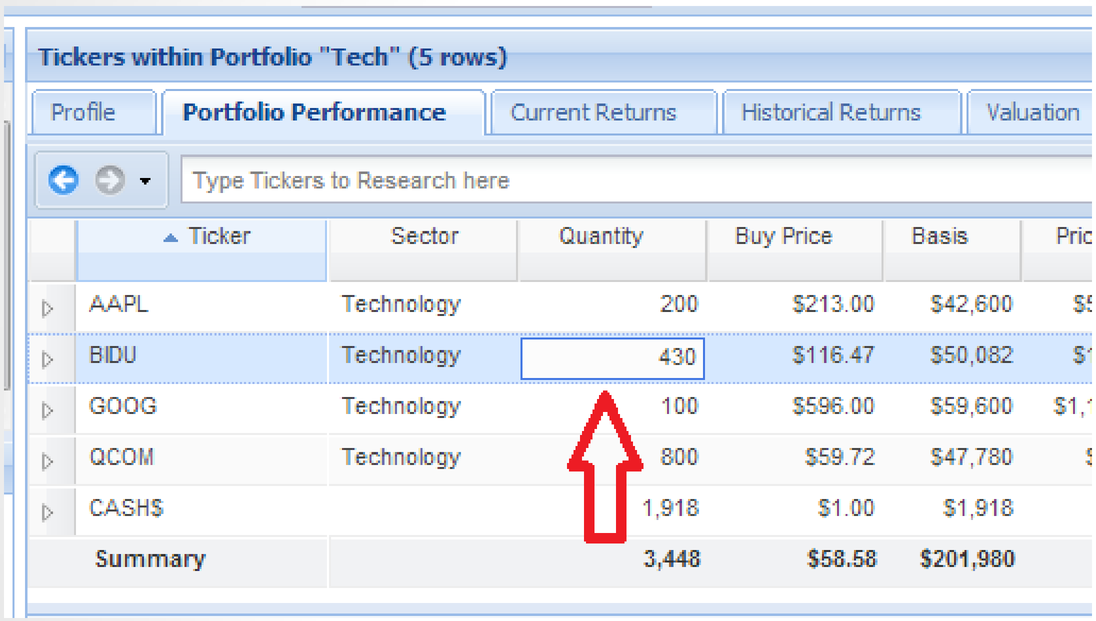
Creating A Virtual Portfolio

- Select desired stocks from table (may need to put them in research box)
- Right click on one of the selected tickers and select "Trade in Portfolio"
- Click the New button next to the Portfolio Name to add to a new portfolio
- Put in the amount per ticker



Updating Positions Directly in Table

- Select Portfolio in Nav panel
- Select a view with Quantity and Buy Price (e.g. Portfolio Performance)
- Click on Quantity or Buy Price cell – cell will become editable
- Type new value in cell followed by enter
- Position change is always as of today's date



Ticker	Sector	Quantity	Buy Price	Basis	Pric
AAPL	Technology	200	$213.00	$42,600	$5
BIDU	Technology	430	$116.47	$50,082	$1
GOOG	Technology	100	$596.00	$59,600	$1,
QCOM	Technology	800	$59.72	$47,780	$
CASH$		1,918	$1.00	$1,918	
Summary		3,448	$58.58	$201,980	

FINIS