

OmniFunds v3

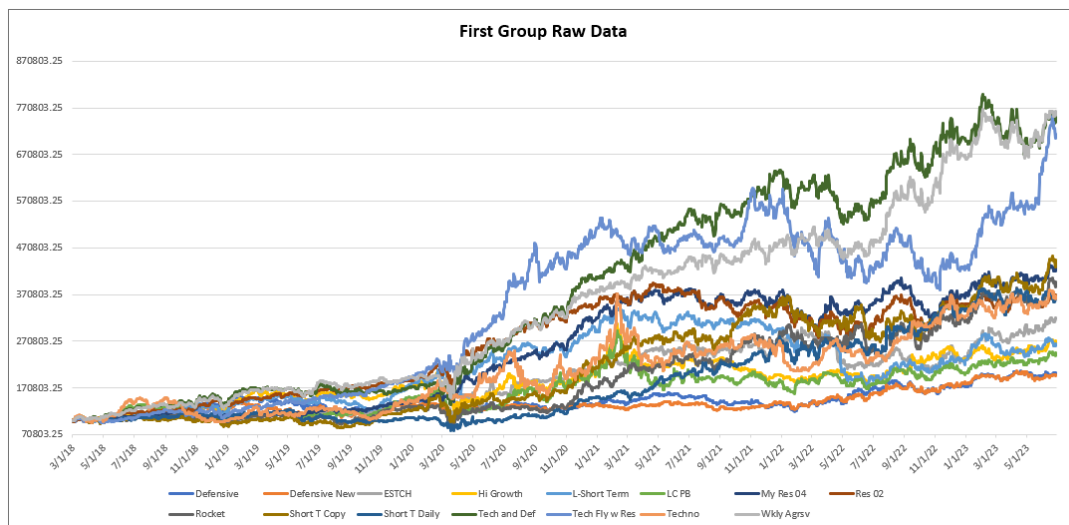
Functional Specification v1.1

Overview

OmniFunds is comprised of Portfolios, which are Trading Methods that have a List, Filtering, Ranking and Allocation defined. Two Portfolios are combined to define an OmniFund. Exits occur on the switching interval, when new Symbols pass the Filter AND have a higher Rank than existing trades within a Portfolio.

Historical Trading Observations:

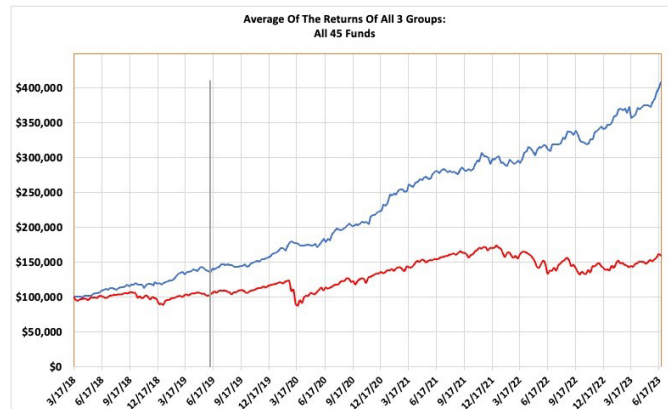
Studying historical Portfolio curves since 2018, it has been determined that a consistent return can be achieved by switching into the best Portfolios based on an analysis of recent returns. Here is a graph showing 15 “randomly” selected Portfolios from Omnifunds, showing tremendous variability of returns. This leads to losses and draw downs if only 2 Portfolios are chosen and left to run.



This one trades the middle 5 ranked Portfolios each week using Standard Deviation of Returns as the ranking function. **30%/year w 5% MDD**

| Average Of All Groups (45 Funds) | | |
|----------------------------------|--------------|-----------|
| Equity \$ | \$408,044.23 | MDD Date: |
| MDD | -6.55% | 6/8/19 |
| CAGR | 30.59% | |
| CALMAR | 4.67 | |
| Longest DD in Wks | 20 | 4/2/22 |
| Avg DD in Wks | 2.5 | |
| % Wks Profitable | 62.5% | |

62.5% (of the 275 weeks in the data) were profitable week to week



Implementation

Overall Goal:

Reconfigure OmnFunds to allow users to select the N Portfolios they want considered for trading in the future, to be selected using the algorithm.

Primary Changes:

1. N Portfolios: Rather than “Conservative” and “Aggressive”, OmniFunds v3 will use N Portfolios for each OmniFund. Check boxes are used on the list to select those considered.
2. Switching: On a common switching interval (typically weekly), select M Portfolios (out of the N available) based on an analysis of recent past performance (Standard Deviation of Returns, per Holstius) to achieve a ranked order. Start from point R. That is, if R=5, then select Portfolio R, R+1, ... R+M-1.

Secondary Changes

1. Preserve History: Preserve Trade History after a Fund is “published” regardless of changes made to the Fund after that point. Any trades that are available at the Open on any day are kept. Changes do NOT affect prior Trade History.
2. Speed of Analysis: Defer analysis of any Portfolios that are “dormant” – i.e., not being used in actual or simulated trading. Run analysis on dormant Portfolios after the Open each day. Consider archiving if unused for more than X Months.

Interface Changes

1. Add CALMAR Metric: Portfolio List shows CALMAR metric (Avg APR/ Avg MDD) which can be used for sorting.
2. Select N Portfolios: Remove the Aggressive/Conservative control. Add check boxes to the List of Portfolios for the user’s selections.

Important Additional Changes

1. Add Exit on Condition: If Flag is set, Exit when the Filter for any in-trade Symbol becomes False (in addition to the switching interval). This helps OmniFunds take profits on positions that have significantly advanced.

Existing Pages

Existing Portfolio List Page

omnifunds | How it Works | About Us | Products | FAQ | Blog | Explore | Lab | My Omnifunds | Logout | Haskell Downs

OmniFunds | Portfolios | Library | Experiments

Portfolios Lab

Mine All Owners Nirvana Published

| ID | Owner | Portfolio Name | YTD | 1Y | 3Y | 5Y | Start Date | End Date | Action |
|------|------------|-------------------------------------|-------|----------|-------|-------|------------------------|-----------------------|------------|
| 4228 | Jeff Drake | Tech Flyers w/ Resilient | 37.5% | 37405.6% | 41.1% | 15.9% | 9/17/2022 4:03:53 PM | 8/12/2023 11:06:01 PM | view debug |
| 4229 | Jeff Drake | Tech Flyers w/ Resilient 2 DAYS MOO | 38.3% | 41886.7% | 36.2% | 14.0% | 10/26/2020 12:57:33 PM | 8/12/2023 11:06:46 PM | view debug |
| 238 | Jeff Drake | US Industry ETFs | 8.6% | 363.9% | 37.3% | 14.0% | 12/1/2017 5:29:46 PM | 8/12/2023 10:00:50 PM | view |
| 224 | Jeff Drake | US Stocks ETFs 02 | 8.7% | 372.0% | 41.1% | 15.5% | 12/1/2017 5:29:48 PM | 8/12/2023 10:00:34 PM | view |

Add Portfolio

Historical Performance: Tech Flyers w/ Resilient 2 DAYS MOO

Nas100, WDAY, Workday, Inc, ASML, Asml Holdings NV, WLTW, Willis Towers Watson Public Ltd Co, ADSK, AUTODESK, NVDA, NVIDIA, GILD, GILEAD SCIENCES, ALXN, ALEXION PHARMACEUTICALS, GOOG, ALPHABET INC CL C, COST, COSTCO WHOLESALE, SIRI, SIRIUS XM HOLDINGS INC, COMMON

Compare: U.S. Stocks, U.S. Bonds, U.S. Robos

\$100k to \$40M

'05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19 '20 '21 '22 '23

01 Month 03 Months 06 Months 01 Year 05 Year All

Log Scale

Equity Curve Stop Level: 20

Stop re-entry type: No Stop

- No Stop
- Stop Percent
- Stop Percent - Re-enter on Monthly Boundary only
- High Watermark
- SMA(3)>SMA(21)
- SMA(7)>SMA(55)
- SMA(3)>SMA(21) Trade SMA Crossover
- SMA(7)>SMA(55) Trade SMA Crossover

Notes on the current implementation:

1. Columns can be sorted but headers do not stay at top.
2. A percent stop level is defined here.
3. A re-entry condition is also specified here.

Existing Page to View Portfolio (from right side of Portfolio List)




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OmniFunds Portfolios Library Experiments

Portfolio

Details

Title: Tech Flyers w/ Resilient 2 DAYS MOO
Internal Comment:
Long Description:
Last Calculated: 8/12/2023 11:06:46 PM (1 minute)

Allocation Method: Fixed Allocation
Switching Method: Market-on-Open: Formula: Close at end of interval using MOC
Flat Formula: C >50 
Flat Symbol: \$VIX 
Interval: 2 Days
Minimum Avg Volume: 0
Invest Fully: Allow Cash 
Classification: Aggressive
R&D: Debug Dump Enabled

Sectors

| Sector | Filter | Ranking | MarketState | actions |
|-----------|--------|---------|-------------|---------|
| Nas100 | V | V | V | |
| Resilient | | V | | |

Sector

Symbols:

Filter: EMA(100)>EMA(100)[2] AND C>EMA(20)
Rank: -1*(AVG(V,60) * AVG(C,60))
MarketState: QQQ: C > SMA(20)
Max Concurrent Positions: 2
Max Allocation: 100

- AAL
- AAPL
- ADBE
- ADI
- ADP
- ADSK
- ALGN
- ALXN
- AMAT
- AMD
- AMGN
- AMZN
- ASML
- ATVI
- AVGO
- BIDU
- BIIB
- BKNG

Notes:

1. Verify that “Flat Formula” and “Flat Symbol” create a Market State on the entire Portfolio. (Each sector has its own MS as well).
2. For “Invest Fully” selected, what is the behavior if “Allow Cash” is selected?

Existing Page to Create an OmniFund

Selecting “Add OmniFund” from OmniFunds List shows this screen.

The screenshot displays the "OmniFund Setup" window, which is divided into two main sections: "Conservative Portfolios" and "Aggressive Portfolios".

| Conservative Portfolios | | | | Aggressive Portfolios | | | | | |
|----------------------------------|------|----------------------|---------|-----------------------|----------------------------------|--------|-------------------------------------|----------|-------|
| ID | Name | Return | MDD | ID | Name | Return | MDD | | |
| <input type="radio"/> | 138 | Cash | 0.0% | 0.0% | <input type="radio"/> | 2913 | Resilient US | 3242.0% | 38.1% |
| <input type="radio"/> | 145 | Conservative ETFs | 172.2% | 15.5% | <input type="radio"/> | 4228 | Tech Flyers w/ Resilient | 37405.6% | 41.1% |
| <input checked="" type="radio"/> | 175 | Defensive Stocks NEW | 4221.0% | 32.1% | <input checked="" type="radio"/> | 4229 | Tech Flyers w/ Resilient 2 DAYS MOO | 41886.7% | 36.2% |
| <input type="radio"/> | 224 | US Stocks ETFs 02 | 372.0% | 41.1% | <input type="radio"/> | 4817 | Resilient V2 | 4460.4% | 34.9% |
| <input type="radio"/> | 231 | Global Market ETFs | 338.4% | 42.5% | <input type="radio"/> | 4818 | Tech Flyers w/ Resilient V2 | 28555.5% | 48.0% |
| <input type="radio"/> | 233 | Bear Market ETFs | 177.8% | 22.7% | <input type="radio"/> | 5535 | Tech and Defense | 37524.9% | 32.1% |

Below the portfolio lists is a performance chart showing two lines: a black line for "Conservative" and a blue line for "Aggressive". The y-axis represents value from \$100k to \$50M, and the x-axis shows years from '05 to '23. The chart shows the aggressive portfolio significantly outperforming the conservative one over the period.

At the bottom of the window, there are input fields for "Name:", "Internal Comment:", and "Long Description:". A blue callout box labeled "Conservative" points to the "Name:" field, and another blue callout box labeled "Aggressive" points to the "Internal Comment:" field. There is also a checkbox for "Allocation Adj:" with "Invest Fully" selected. "Cancel" and "Create" buttons are located at the bottom right.

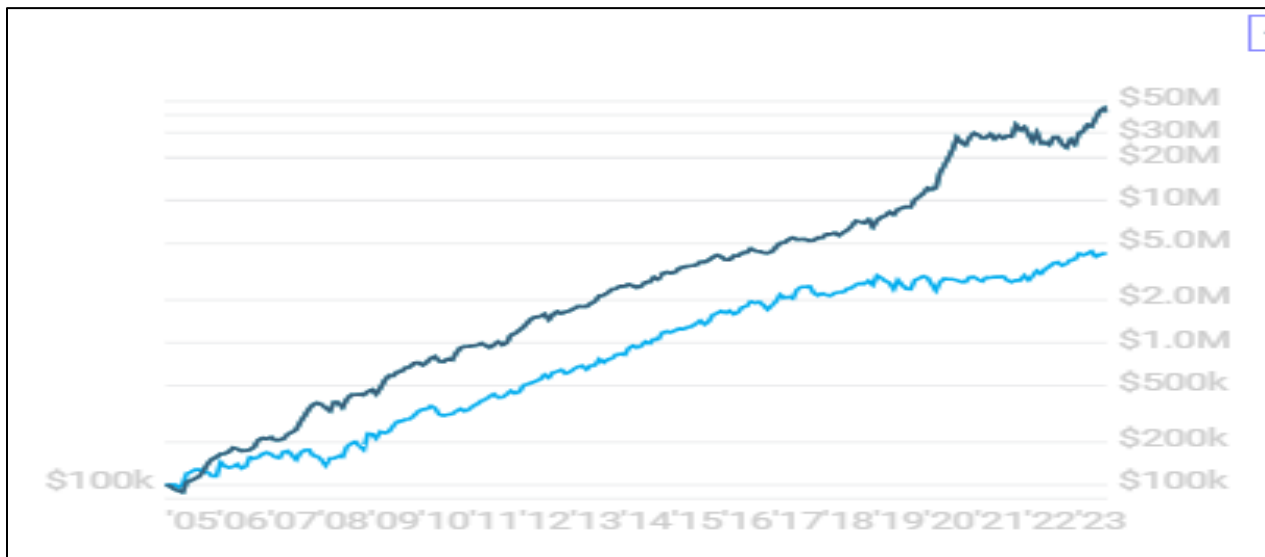
Notes:

1. Cannot Sort on the Portfolio Columns. Need to add CALMAR column and allow sorting with fixed header.
2. Investigate where the “Internal Comment” is used
4. The Symbol List for each Portfolio takes up a lot of space, and the fields (symbol, name) are staggered because there isn't enough space

The NEW OmniFunds Creation Page

Show Portfolio List with Statistics and Check Boxes

OmniFund Name:



Data: (o) All () 10 years () 5 Years () 1 Year () 6 months () 3 Months () 1 Month () YTD
Curves: (o) Individual Portfolios () Composite Curve [] Stock Market

Available Portfolios (2 selected):

Filter: Average Return > Average Draw Down < Calmar >

| S | ID | Portfolio | APR | AMD | Calmar |
|-------------------------------------|-----|-------------------|-----|-----|--------|
| <input type="checkbox"/> | 138 | Conservative ETFs | 72 | 10 | 7.2 |
| <input checked="" type="checkbox"/> | 145 | Defensive Stocks | 35 | 6 | 5.8 |
| <input type="checkbox"/> | 175 | US Stocks | 125 | 16 | 7.8 |
| <input type="checkbox"/> | 132 | Global ETFs | 72 | 10 | 7.2 |
| <input type="checkbox"/> | 231 | Bear Market ETFs | 102 | 23 | 4.4 |
| <input checked="" type="checkbox"/> | 102 | Tech Stocks | 65 | 5 | 13.0 |
| <input type="checkbox"/> | 271 | Consumer Stocks | 40 | 10 | 4.0 |

Switching Method:

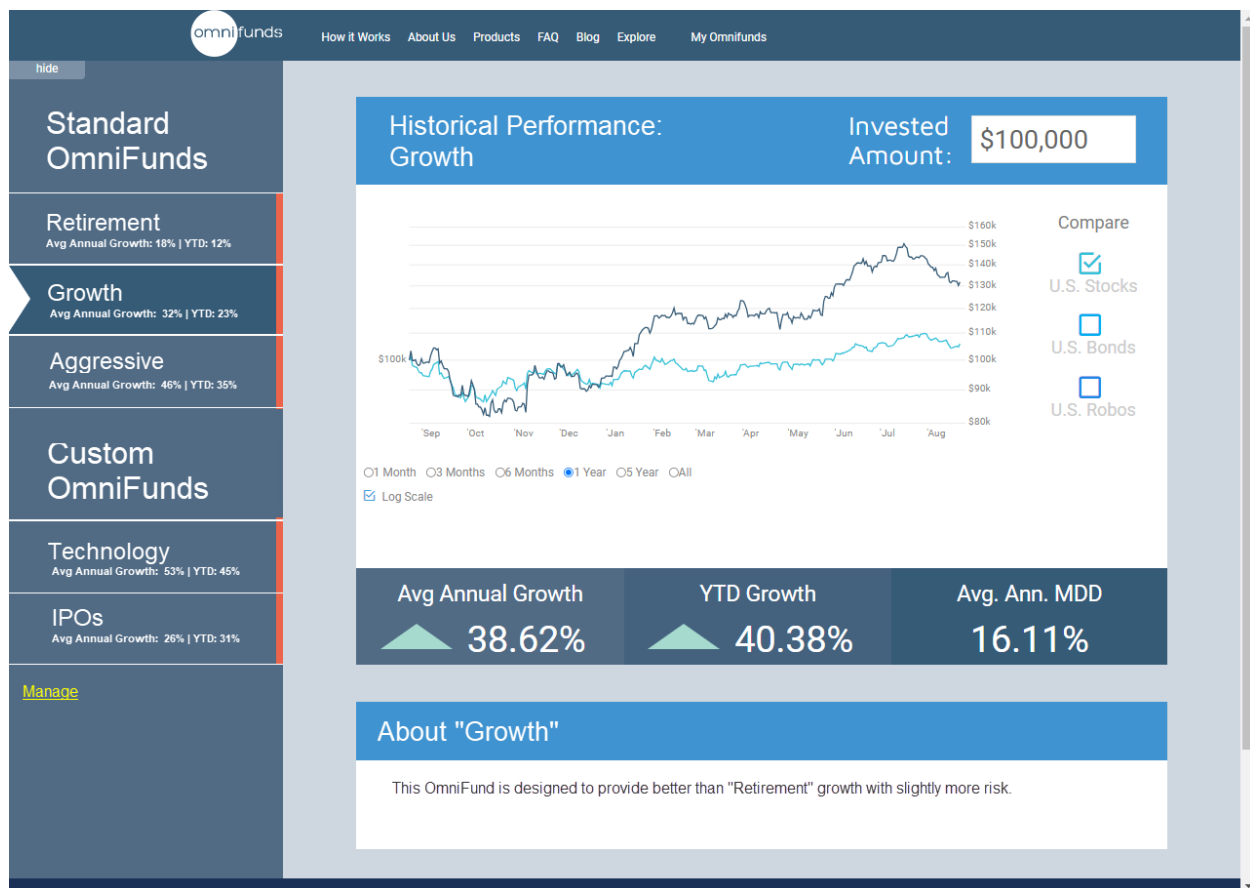
[x] Automatic

Max Portfolios to Trade:

Max Positions:

Clicking any Portfolio shows its curve in the main window or in a pop-up.

OmniFunds Catalog Changes



- Remove Conservative-Aggressive Control.
- Provide a list of Standard OmniFunds
 - Retirement (Target 20% Return, 5% MDD)
 - Growth (Target 30% Return, 8% MDD)
 - Aggressive (Target 40%+ Return, 12% MDD)
- User (Custom) Portfolios
 - Users can select their own Portfolio mix in the Lab (as shown in the Spec), save and use them for a custom solution.

API Project

This will be specified after we ascertain whether the target market wants to connect through an API or send users to our portal.