

# Recommended Asset Allocation ghoozie — 11/20/2020

FRONTIER CURVE OPTIMAL PORTFOLIO ANALYSIS

MONTE CARLO SIMULATION OF RETURNS

CORRELATION MATRIX

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## 1 Statistical Terminology & Asset Class Descriptions

**Expected Return** - Of an investing strategy is the amount of money you are expected to get back from your investment. For example, if 90 dollars is invested for 1 year with an expected return of 100 dollars, then in the average case the investment will yield back 100 dollars.

 $\mathbf{Risk}$  - Or standard deviation of an investing strategy is a measure of how much the return of an investment strategy will vary from it's expected return. For example, an investment strategy with an expected return of 20% and a risk of 8% will yield 112% to 128% return with a probability of 68.2%, and 104% to 136% return with a probability of 94.4%

The 18 Asset Classes:

| Asset Class        | Index     | Description                                 |
|--------------------|-----------|---|
| Large Cap Growth   | FSPGX     | Fastly growing stocks from big companies.   |
| Large Cap Value    | SVX       | Undervalued stocks from big companies.      |
| Small Cap Growth   | RUT       | Fastly growing stocks from small companies. |
| Small Cap Value    | RUJ       | Undervalued stocks from small companies.    |
| Mid Cap            | SP400     | Stocks from mid sized companies.            |
| International      | VTIAX     | Stocks not traded in U.S.A. exchanges.      |
| Emerging Mkt.      | VEMAX     | Stocks from emerging Mkt. countries.        |
| Real Estate        | DJUSRE    | Land and buildings.                         |
| Venture Capital    | AMZX      | New and innovative companies.               |
| Inter. Govt. Bonds | GVI       | Govt. bonds that mature in 5-10 years.      |
| Long Govt. Bonds   | ILTB      | Govt. bonds mature in more than 10 years.   |
| Corporate Bonds    | SPDBDACPT | Bonds issued by a corporation.              |
| High Yield Bond    | HYG       | Lower credit rating higher return bonds.    |
| Municipal Bond     | MUB       | Bonds Issued by local government.           |
| Foreign Bonds      | BNDX      | Bonds issued in other countries.            |
| Emerging Mkt. Debt | JEDAX     | Bonds issued by emerging countries.         |
| Commodities        | DJCI      | Basic goods used in commerce.               |
| Cash               | BIL       | Currencies, Foreign Currencies              |

## 2 Investment Profile — Prescribed Allocation Changes

#### **Investment Profile:**

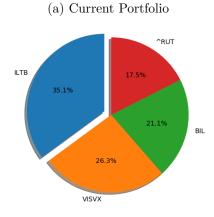
Name: ghoozie

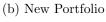
Birthday : 11/20/1960Time Frame : 9 Years

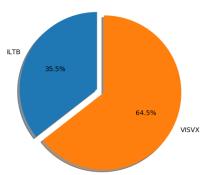
Available Funds : \$1,232,683.45Preferred Risk :  $(\pm 8\% \text{ Yearly})$ 

#### Preffered Asset Classes:

- Large Cap Growth Stocks
- Large Cap Value Stocks
- High Yield Bonds
- Emerging Mkt. Stocks
- Venture Capital
- Cash







#### Prescribed Allocation Changes

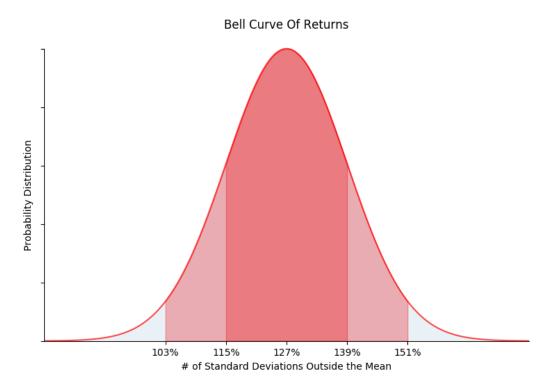
| Asset Class         | Current     | Suggested   | Change       |  |
|---------------------|-------------|-------------|--------------|--|
| Large Cap Growth    | \$54,441.73 | \$43,210.22 | +\$34,321.34 |  |
| Large Cap Value     | \$54,441.73 | \$43,210.22 | +\$34,321.34 |  |
| Small Cap Growth    | \$54,441.73 | \$43,210.22 | +\$34,321.34 |  |
| Small Cap Value     | \$54,441.73 | \$43,210.22 | +\$34,321.34 |  |
| Mid Cap             | \$54,441.73 | \$43,210.22 | +\$34,321.34 |  |
| International Stock | \$54,441.73 | \$43,210.22 | +\$34,321.34 |  |
| Emerging Mkt Stock  | \$54,441.73 | \$43,210.22 | +\$34,321.34 |  |
| Real Estate         | \$54,441.73 | \$43,210.22 | +\$34,321.34 |  |
| Venture Capital     | \$54,441.73 | \$43,210.22 | +\$34,321.34 |  |

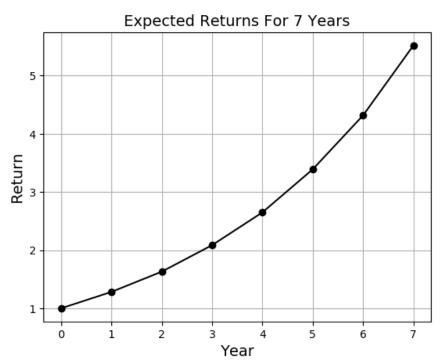
# 3 Performance Improvements Of Prescribed Portfolio

Below are 7 year simulation results of your current investing strategy versus the investment strategy prescribed in this report.

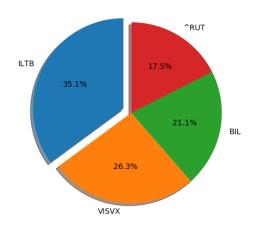
Change In Expected Return: \$124,432.23

Change in Risk : ( -3% )

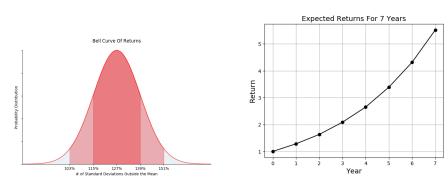




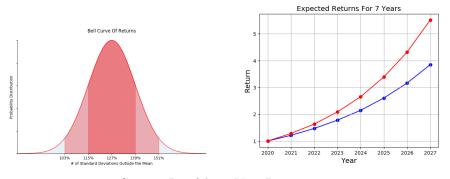
## 4 Current Portfolio Overview - Statistical Analysis



Portfolio Breakdown



Current Portfolio 1 Year Projections



Current Portfolio 7 Year Projections

1 Year Expected Return (\\$) :  $\$343{,}203.20$  (33.3%)

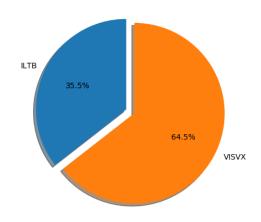
1 Year Risk (Standard Deviation %) :  $\pm$  3.54%

7 Year Expected Return (\$): \$343,203.20 (33.3%)

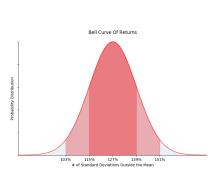
7 Year Risk (Standard Deviation %) :  $\pm$  3.54%

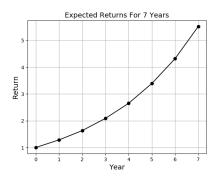
Sharpe Ratio: .37

## 5 Prescribed Portfolio Overview - Statistical Analysis

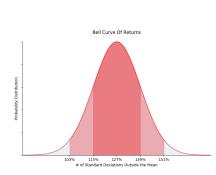


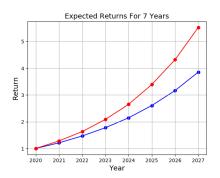
Portfolio Breakdown





Prescribed Portfolio 1 Year Projections





Prescribed Portfolio 7 Year Projections

1 Year Expected Return (\$): \$343,203.20 (33.3%)

1 Year Risk (Standard Deviation %) :  $\pm$  3.54%

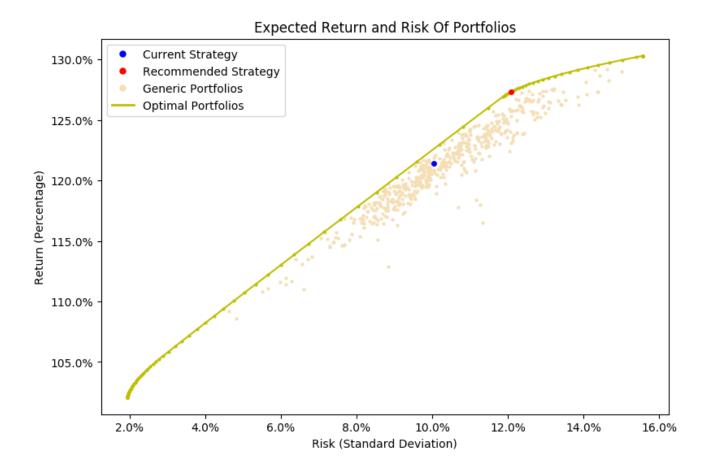
7 Year Expected Return (\$): \$343,203.20 (33.3%)

7 Year Risk (Standard Deviation %) :  $\pm~3.54\%$ 

Sharpe Ratio: .37

### 6 Frontier Curve

In 1990, Harry Markowitz won a nobel prize for his contributions to portfolio balancing theory. Markowitz discovered that given assets to buy from and funds to buy with, all of the optimal portfolios formed on a curved line called the "Frontier Curve."



Risk (Std. Deviation) :  $\pm$  0.12 % Expected Return (%): + 1.3 % Adjustment of Risk (%): + 0.02 % Improvement in Return (%): + 0.1 %

## 7 Correlation Matrices

| Corr. | MSFT   | NTFX   | HULU   | RUS   | BP    | TR     | SOCK   |
|-------|--------|--------|--------|-------|-------|--------|--------|
| MSFT  | 16.128 | +8.872 | 16.128 | 1.402 | 1.373 | -146.6 | -137.6 |
| NTFX  | 3.442  | -2.509 | 3.442  | 0.299 | 0.343 | 133.2  | 152.4  |
| HULU  | 1.826  | -0.363 | 1.826  | 0.159 | 0.119 | 168.5  | -161.1 |
| RUS   | 0.993  | -0.429 | 0.993  | 0.086 | 0.08  | 25.6   | 90     |
| ВР    | 1.29   | +0.099 | 1.29   | 0.112 | 0.097 | -175.6 | -114.7 |
| TR    | 0.483  | -0.183 | 0.483  | 0.042 | 0.063 | 22.3   | 122.5  |
| SOCK  | 0.766  | -0.475 | 0.766  | 0.067 | 0.039 | 141.6  | -122   |

Above is the Semantic Correlation Matrix of the selected Asset Classes. It shows how each asset class is correlated to one another

| Return | MSFT   | NTFX   | HULU   | RUS   | BP    | TR     | SOCK   |
|--------|--------|--------|--------|-------|-------|--------|--------|
| 1      | 16.128 | +8.872 | 16.128 | 1.402 | 1.373 | -146.6 | -137.6 |
| 2      | 3.442  | -2.509 | 3.442  | 0.299 | 0.343 | 133.2  | 152.4  |

Above is the ranking of the selected asset classes by risk

| Risk | MSFT   | NTFX   | HULU   | RUS   | BP    | TR     | SOCK   |
|------|--------|--------|--------|-------|-------|--------|--------|
| 1    | 16.128 | +8.872 | 16.128 | 1.402 | 1.373 | -146.6 | -137.6 |
| 2    | 3.442  | -2.509 | 3.442  | 0.299 | 0.343 | 133.2  | 152.4  |

Above is the ranking of the selected asset classes by return