J.P. AWMC / Proposal for Tony by A-TEEN

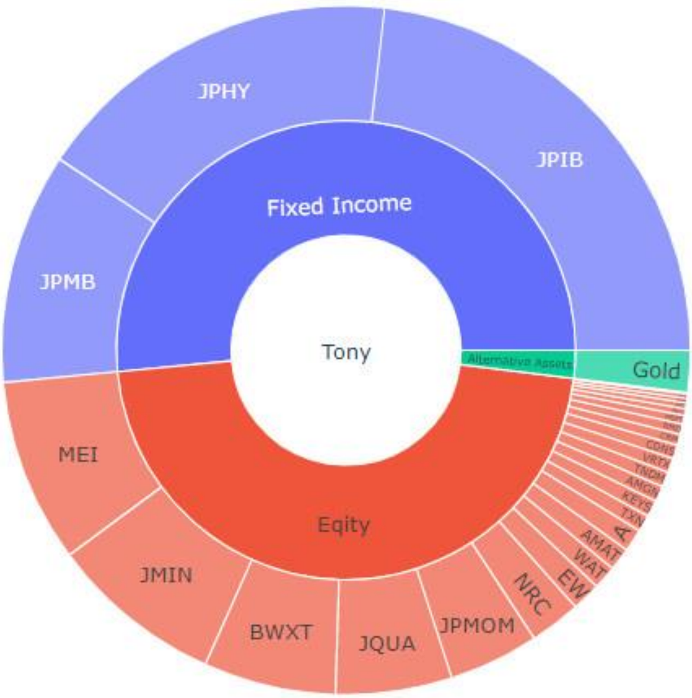
Executive Summary

Overview

Proposed a portfolio hedge the risk of uncertainty by leveraging risk parity model and smart beta ETF in a macro view.

The Solution

Firstly, we prefer public ETF because it spreads portfolio in different regions and industries, which reducing risks and creating liquidity. Secondly, our firm is sensitive to geopolitics and global markets. Based on the business indicator, we choose the Smart Beta factor with generating a higher return. We have a positive outlook for 2021 and bull market is around the corner. Therefore, we choose Smart Beta ETF of momentum, quality and low-volatility. Even when the bearish market comes, we change the factors we chose to go through the downturn market. Our team dynamically revises assets allocation and monitors the macro data in order to hedge the risks. Moreover, we suggest Tony's portfolio contain ESG- integrated bonds ETFs to generate cash flow for daily use and devotion to the charity. Finally, we use the Risk Parity model to optimize the weights of individual assets. Two percent of gold is also included. We recommend 50/50 equities to bonds ratio for Tony's retirement.



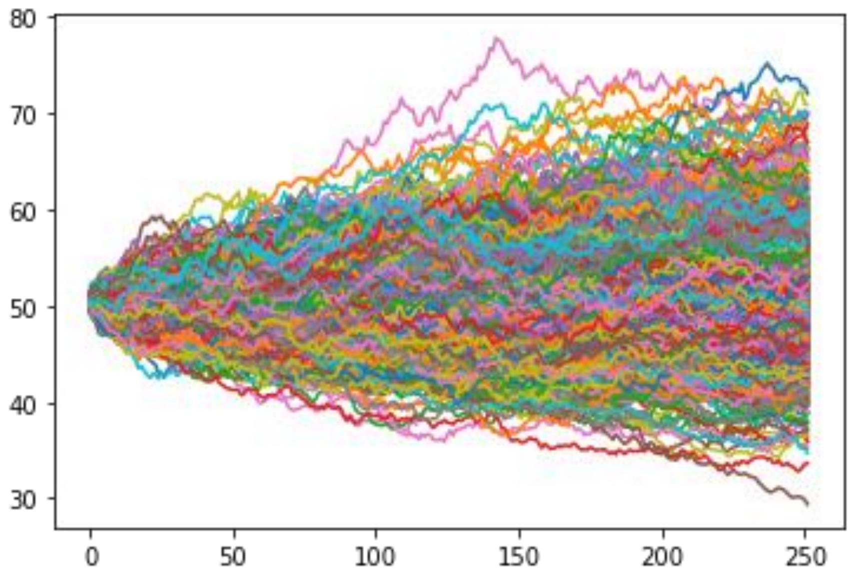
Return Rate	9.7
Volatility	13.1%
Sharp Ratio	0.63
Beta	0.54
Cash Flow	695K

-Risk Parity/Risk Budgeting Portfolio in Python

$$J(x) = \sum_{i}^{n} (w_i (V * w)_i - w_{target\_i} \sqrt{(w * V * w')})^2$$

-Simulate Asset Price using Geometric Brownian motion in python

$$S_t = e^{Y_t} = e^{Y_0 + \left(\mu - \frac{1}{2}\sigma^2\right)t + \sigma(X_t - X_0)} = S_0 e^{\left(\mu - \frac{1}{2}\sigma^2\right)t + \sigma\sqrt{t}\epsilon_t}$$



One year period simulation by certain volatility

Analyzing the situation of the 2021 global market, the biggest impact on our portfolio is the control and recovery of the coronavirus pandemic. In addition, after Biden took office, he slowed down the trade war with China. Then, the fed lowered the federal fund rate and may also re-launch fiscal stimulus plans in the future. Both of these factors will significantly contribute to global economic growth in 2021. After assessing through a scenario analysis, we get the following table:

Scenario	Best case	Base case	Worst case
What Triggers	• Well Pandemic Control • Tension Easing	• Stable Vaccines Distribution • Gradual Economic Growth	• Pandemic Outrageous • Tension Deteriorating
Bond Yields	Rise	Limited Growth	Plunge
Inflation Rate	High	Gradually Rise	Low
Federal Fund Rate	Adjust Up	Moderate Limitation	Revise Down
U.S. Dollars	Accelerated Depreciation	Gradual Depreciation	Appreciation

To respond to these Global economic changes, we adopt three tactical strategies. First, high-yield bond, driven by the tendency to risky assets, the overall high-yield bond spreads decline rapidly. However, the yields of high-yield bonds are still higher than other bonds. They are negatively correlated with the current low yields of US Treasury bonds, so they are suitable during the economic recovery next year. Second, emerging market debt, the decline in government bond yields and the government's quantitative easing policy has led to the switch of investors' preference to risky assets. Also, the foreign exchange spreads have fallen. These factors referred above have caused the depreciation of U.S. dollar. Hence, International capital persists in flowing back to emerging markets, resulting in the rapid growth of the region. Therefore, we allocate emerging market fixed income to leverage yield spreads, which getting excess returns. Third, smart beta, in accordance with macro economic changes, we modify the factors of smart beta to optimize the allocation.

Because of Covid-19, many climate change conferences have been postponed. Also, economic activities are recovering, which leads to more severe damage to our environment. Furthermore, the pandemic causes a greater social inequality. As the vaccines rolling out, the public care more about health and safety. More and more firms, investors and government are raising awareness of ESG. Hence, it proves that it isn't just a fad. Since we know Tony puts emphasis on social issues, looks forward to giving back to society, along with the prospect of ESG, we integrate this idea in equities and most of the fixed income. The integration helps adjust risks. Plus, as the society focalizes ESG, the ties between ESG performance and financial performance will become more obvious, and many statistics show they are having positive correlation.

Highlights

-Dynamic Assets Allocation
-Stabilization-First
-Diversified portfolio
-Quantitative risk control