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Joy Zheng joined New Frontier in 2018 as a Research Analyst after graduating from Boston University with a M.S. in Mathematical Finance. She is a member of the Investment Committee and her responsibilities include supporting the Investment and Research teams. Her interests include computational finance, quantitative analysis, and risk management.

2020: A Case Study in Investing Under Uncertainty

February 10, 2021

Global markets found themselves in tumult in 2020, and many strategic investors struggled to keep pace with rapid dislocations in economic conditions and risk sentiment. Where others may have floundered, New Frontier succeeded – with both our [optimized method of building diversified portfolios](#) across the range of risk tolerance profiles, and our statistical rebalance test that signals when a portfolio needs to be traded. Amidst a once-in-a-century pandemic whose containment varied widely across countries, risky bond Exchange Traded Funds (ETFs) trading at historic discounts to Net Asset Value (NAV), Treasury yields plunging to all-time lows, and a dramatic U.S. election season, New Frontier stuck with our proven approach and emerged well ahead of benchmarks while mitigating volatility for our clients. Let’s take a closer look at the investing and trading decisions which drove this exceptional performance.

New Frontier closely monitors capital market movements and portfolio drifts, and every night assesses the optimality of all portfolios using our patented [Michaud-Esch Rebalancing Test](#). The procedure calculates a “need-to-trade” score that measures the degree to which the invested portfolio and current estimated Michaud-optimal portfolio are statistically dissimilar – providing a rigorous metric that avoids trading in noise while indicating when trading may be desirable. When the combination of portfolio drift from price movements and changes to the optimal portfolio from updated market information are sufficient to produce a strong “need-to-trade” signal, New Frontier rebalances to the risk-targeted optimal portfolio.

The following graph shows New Frontier’s Global Institutional Index- NFGBI (60% stock/ 40% bond) in 2020 (starting at a price level of 100). New Frontier rebalanced our global core portfolios four times (indicated by the green vertical lines) during 2020, more than during any of the fifteen previous years of its history – reflecting not only the high volatility that pushed stock/bond allocations out of balance, but also the rapid evolution of global capital markets.



To get a better idea of how rebalancing helped our performance during 2020, we calculated the effect of letting our global indices drift from 12/31/2019 to 12/31/2020 without any rebalancing and compared the hypothetical performance of these non-rebalanced indices with actual index performance.

Comparison of 2020 Annual Performance of New Frontier Global Indices

	NFGII 20/80	NFGBII 40/60	NFGBI 60/40	NFGBGI 75/25	NFGGI 90/10	NFGEI 100/0
Actual Rebalancing*	8.08%	12.49%	14.53%	15.14%	15.59%	16.77%
No Rebalancing [†]	7.23%	10.59%	12.85%	14.16%	15.18%	16.72%
Value of Rebalancing	0.86%	1.91%	1.68%	0.98%	0.41%	0.05%

Data as of 12/31/2020

*The New Frontier index returns are calculated and verified by S&P Dow Jones Indices.

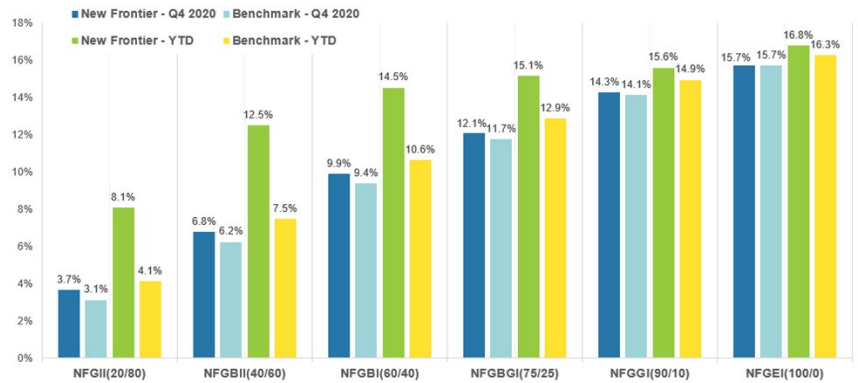
[†]Hypothetical. For illustrative purposes only.

The table above shows the 2020 performance of the six New Frontier Global Indices with our actual rebalancing (four times) versus no rebalancing, along with the associated value of the rebalancing. The data demonstrate that rebalancing provided meaningful return enhancement across the risk spectrum, with a range of improvements depending upon the composition of the indices.

- By shifting out of fixed income and into equity near the bottom of the market in March and effectively reversing some of those trades during the course of the recovery, rebalancing added nearly 200 basis points of return to the 2020 performance of our 40/60 index.
- 40/60 New Frontier Global Balanced Income Index (NFGBII) and 60/40 New Frontier Global Institutional Index (NFGBI), with the broadest exposure to both fixed income and equity asset classes, benefited most from our rebalances in 2020.

Keeping in mind the benefits accrued from rebalancing, let's take a look at how our indices performed overall, both throughout 2020 and in the last quarter. The following two charts showing the performance of the [New Frontier Indices](#) in Q4 and 2020, with six Global and six U.S. optimized indices spanning the risk spectrum. **New Frontier indices describe the performance of New Frontier's investment strategies in index form** and can be compared directly to other publicly available indices.

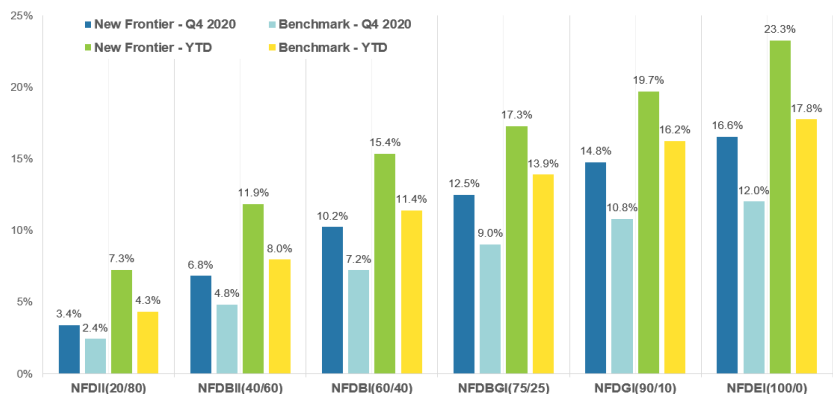
New Frontier Global Index Performance



Data as of 12/31/2020
 The New Frontier Global Index returns are calculated and verified by S&P Dow Jones Indices.
 The indices are not investable securities. Any investable security would have performance reduced by fees.
 Benchmark is comprised of stock/bond ratio blend of MSCI ACWI IMI NR and FTSE Treasury Bill 3 Month USD

- Our indices finished 2020 at **all-time highs**, with all indices delivering strong annual returns that ranged from 8.1% for the 20/80 New Frontier Global Income Index (NFGII) to 16.8% for the 100/0 New Frontier Global Equity Index (NFGEI).
- The strongest relative performance for the year came from our 40/60 New Frontier Global Balanced Income Index (NFGBII) and 60/40 New Frontier Global Institutional Index (NFGBI), **outpacing corresponding indices by nearly 5% and 4% respectively**.
- Our 100/0 New Frontier Global Equity Index (NFGEI) was **up 72.3% from the low** (March 23, 2020), and up 13.8% from the pre-pandemic high (February 19, 2020).

New Frontier U.S. Index Performance



Data as of 12/31/2020
 The New Frontier U.S. Index returns are calculated and verified by S&P Dow Jones Indices.
 The indices are not investable securities. Any investable security would have performance reduced by fees.
 Benchmark is comprised of stock/bond ratio blend of S&P 500 NR USD index and FTSE Treasury Bill 3 Month USD

- Similar to our global Indices, our U.S. indices ended 2020 at record-highs and **outperformed corresponding indices by a large margin**, averaging outperformance of more than 3% across the board.
- Our 60/40 New Frontier U.S. Institutional Index (NFDBI) gained 10.2% this quarter and 15.4% for the year, **exceeding the benchmark by 4%**.
- Our 100/0 New Frontier U.S. Equity Index (NFDEI) **advanced 5.5% ahead of S&P 500** for the year. It held up well during the bear market and notably outperformed in the subsequent recovery, up 75.7% from the March low and up 17% from the pre-pandemic high.

Beyond the benefits attributable to our rebalancing procedure, 2020 served as a testament to the benefits of effective diversification in portfolio management. New Frontier's expertise in optimization allows our portfolios to benefit from efficient exposure to all sources of risk and return via an array of different asset classes. The following section covers the performance of a variety of the assets we currently invest in.

Fixed Income:

U.S. Aggregate Bonds returned less than 1% for the quarter and 7.5% for the year, not far below the 8.7% return in 2019.

- The yield curve has steepened further due to an upward trend in inflation and growing confidence in the economic outlook. However, bond yields remain at historically low levels. The yield on the 10-year U.S. Treasury finished 2020 nearly 1% down from its end-of-2019 level. Throughout the year, Long-Term Treasuries were up more than 18%, leading the broad bond market. It's important to highlight the role played by long-term treasury bonds in our portfolios as a risk management vehicle, given their strong negative correlations with stocks. **In March, when the majority of asset prices were moving downwards, long-term treasury bonds offered unique diversification benefits to the portfolios and reduced downside risk.**
- International Treasuries gained value against a weaker U.S. dollar. TIPs returned more than 10% in 2020 as the fear of deflation gradually ebbed away and inflation expectations rose over the year.
- Credit has been on a bumpy ride throughout the year. Investment-grade corporate bonds held up better than riskier high yield bonds in March, and bounced back quicker during the recovery. By the end of 2020, investment-grade corporate bonds returned roughly 11%, almost twice the return of high yield. **We increased our overall credit exposure during the March rebalance, with higher risk premium and elevated default risk assumptions informing our process, which proved to be beneficial to performance.**

Fixed Income Asset Class Returns:

	Return(%)	
	Q4 2020	YTD
U.S. Aggregate Bonds	0.67	7.51
Short Treasuries	0.02	3.03
Long Treasuries	-2.98	18.15
U.S. TIPS	1.69	10.86
Mortgage-Backed	0.28	4.08
Inv-Grade Corporates	3.4	10.97
Long Corporates	4.79	13.31
High Yield	6.45	6.18
Municipal	1.78	5.12
International Treasuries	5.57	9.5
Emerging Bonds	5.98	5.42

Source: Bloomberg

Equity:

After the U.S. stock market lost 33% from its February high to its March low, equities saw a steady rebound throughout the remainder of the year, with high dispersion of returns across asset classes. Value and small cap stocks bounced back strongly during the fourth quarter, amidst the optimism of economic recovery and a return to normal.

- This reversal was not enough to change the dominant narrative of 2020: large and growth-related companies still benefited most from the new normal, while smaller value companies lagged behind. Large cap growth gained 38%, outpacing large cap value by more than 35%, marking a record-high return gap between growth and value in a single calendar year.
- Gold was behind for the fourth quarter but was still strong for the year, with a 25% return. **Our allocation to gold cushioned our portfolios against volatility, particularly when most needed during March.**
- International and Emerging Markets stocks outperformed U.S. stocks during the fourth quarter. China, the first major economy to successfully contain the coronavirus, was up 28% for the year. Early in 2020, we re-evaluated the risk of China and for the first time added a small allocation to China into our conservative portfolio, extending our use of a standalone China allocation beyond our more aggressive strategies. **This was beneficial to the portfolios, serving as a powerful reminder of the advantage of effective diversification, especially during a volatile period.**

Equity Asset Class Returns:

	Returns(%)	
	Q4 2020	2020
Global Equity	14.68	16.25
Global ex-U.S. Equity	17.01	10.65
U.S. Large Cap Value	16.26	2.73
U.S. Large Cap Growth	11.36	38.25
U.S. Small Cap Value	33.31	4.66
U.S. Small Cap Growth	29.57	34.68
U.S. Low Vol	7.00	5.64
U.S. Dividends	18.99	-4.91
U.S. Real Estate	9.28	-4.68
Gold	0.74	25.10
Europe	15.82	5.30
Pacific	15.27	12.39
Emerging Markets	18.92	17.88
China	10.26	28.31
Intl. Small Cap	17.63	11.84

Source: Bloomberg

Q4 Attribution:

Contributors: In the fourth quarter, risky assets continued to recover from their March lows for the third consecutive quarter. Risky bonds, including high yield and Emerging Market debt, were the biggest contributors on the fixed income side. On the equity side, markets witnessed a substantial reversal, with small cap outperforming large cap, while value shares outpaced their growth counterparts. Exposure to small cap value contributed the most to our equity performance, followed by small cap growth stocks.

Detractors: With rising hopes of an economic recovery, markets saw a rotation out of safe havens and back into equities and other risky assets. Though they were an aid to performance and risk control in March, Treasuries – especially Long Treasuries – and gold, were the largest detractors from relative return performance in Q4.

Conclusion:

The year saw turbulent market shifts: from bull to bear and back to bull again, with various extreme conditions encountered along the way. Nevertheless, New Frontier continued to provide optimized, effectively diversified strategies via our multi-patented investment process. While many risks are unavoidable and frequently unforecastable, our time-tested process – using disciplined rebalancing to maintain optimally risk-controlled portfolios – provides an effective way for investors to weather a range of market environments, positioning them for whatever the future brings.