Market Perspectives: 4th Quarter 2017

Enhanced Return ▪ Effective Diversification ▪ Managed Risk

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The Volatility Enigma

Markets

The fourth quarter of 2017 closely resembled much of the first three quarters – global markets continued to grow steadily, resulting in positive returns for many strategic domestic and global equity investors. All major domestic large cap indices are up for the quarter and the year: S&P 500 is up 6.1% for the quarter and 19.4% for the year; Dow is up 10.3% for the quarter and 25.1% for the year, and NASDAQ is up 6.3% for the quarter and 28.2% for the year. On the other hand, domestic small cap underperformed large and mid-cap with the Russell 2000 gaining only 3.0% for the quarter and 13.1% for the year. Diversified global equity performed well: ACWI gained 5.7% for the quarter and 24.0% for the year, and the ACWI ex-US gained 5.0% for the quarter and 27.2% for the year. International developed markets were mostly positive. One exception, STOXX 50, returned -2.5% for the quarter and 6.5% for the year. The Nikkei 225 grew impressively, returning a stellar 11.8% for the quarter and 19.1% for the year. Emerging market indices were good performers with the MSCI EM index gaining 7.4% for the quarter and 37.3% for the year. The SSE Composite returned -1.3% for the quarter but is still up 6.6% for the year. Hang Seng, on the other hand, is up 8.6% for the quarter and up 36.0% for the year.

Bonds and equity alternatives posted mixed results. The US AGG returned 0.4% for the quarter and is up 3.5% for the year. Dow Jones US Select REIT index is up 1.0% for the quarter, but returned -0.1% for the year. The US Dollar posted mixed results against major global currencies declining 0.8% for the quarter and declining 9.7% for the year against the Pound; gaining 0.2% for the quarter but still decreasing 3.7% for the year against the Japanese Yen; and against the Euro declining 1.6% for the quarter and decreasing by 12.3% for the year. Gold, likely due to international geopolitical tensions, is up 1.7% for the quarter and up 12.8% for the year. Oil, on the other hand, rebounded from its earlier decline, settling at $59.84 per barrel. VIX is at 11.04, continuing to remain below historical volatility levels. The 10-year T-Bill is at 2.40%.

New Frontier portfolios have performed very well this year. The new NFGBI (New Frontier Global Balanced Index), which is defined with a 60/40 benchmark, was up 3.84% for the quarter and 16.83% for the year. Model performance for our investable 60/40 global balanced portfolio was 3.74% for Q4 and 16.26% for the year. In comparison, a 60% ACWI IMI NR USD/ 40% 3mo T-Bill Blend was up 3.40% in Q4 and 14.06% for the year. (No fees are subtracted from the non-investable indices/ benchmarks. The investable returns are partially based on publicly available ETF prices; for details about this calculation, please see the Disclosures section at the end of this report. More details about portfolio performance are available at www.frontieradvisor.com.)

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About New Frontier

New Frontier is a Boston-based institutional research and investment advisory firm specializing in the development and application of state-of-the-art investment technology. Founded in 1998 by the inventors of the world's first broad spectrum, patented, provably effective portfolio optimization process, the firm continues to pioneer new developments in asset allocation and portfolio selection. Based on practical investment theory, New Frontier's services help institutional investors across the globe to select and maintain more effective portfolios.

More information is available at www.newfrontieradvisors.com.

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Perspectives

It was a very good year for many equity investors. Domestic and many global equity indices often marched in lock-step to record levels. While the total return of the S&P 500 index rose more than 20% in 2017, not a single day did it rise or fall by 2% and only eight days did it move by 1%. How should investors parse the amazing lack of volatility and synchronicity that characterized many global indices?

The most likely major factor is the coordination of monetary stimulus programs by major central banks for the last eight years. The continuous monthly effort to encourage economic growth with massive bond purchases resulted in predictably low interest rates. Monetary theory had never been applied in such massive and globally synchronized ways. The result has been a stunning validation of basic tenets of Keynes-Samuelson macroeconomic theory in practice. Of course, the trillions of dollars of piled up balance sheet debt will have to be sold off with great care in order not to disrupt the economy in the easing phase.

It is worth noting that the increased popularity of ETF investing may also have a significant role in reduced market volatility. A well-diversified equity index such as the S&P 500 typically exhibits half the volatility of the average stock in it. Marketing programs for "buying the market" or for "buying a sector" with a single stock reduce investor focus on individual stock characteristics and overall capital market volatility.

There are a number of investment strategies that have evolved in this eight year low volatility environment. For example, an ETF that shorted the VIX index returned 170% in 2017. Also, a number of hedge funds key off volatility indices creating a feedback loop of low interest rates, debt expansion, asset volatility, and trading algorithms. Some have called such algorithms the new "portfolio insurance," raising fears of October 1987-like instability. While the specifics are different, the general issue of highly leveraging small changes in volatility can result in market eruptions when unforecastable economic or geopolitical risks emerge.

The Federal Reserve is in the process of winding down their eight year stimulus policies. Three short-term interest rate increases have been voted on this year, and the balance sheet is being slowly sold off. But, elections can matter. With the presidency and congress in the control of the Republican Party, the lack of interest in fiscal policy has reversed. The most notable event is the end-of-year tax cut law, signed without a single bipartisan vote.

Tax cut legislation can be welcomed for many reasons, particularly when some regulations seem perverse. From a global perspective, the business tax corporate rate at 35% seemed out of balance relative to many other countries. The new 21% rate should provide some positive benefit for economic growth in 2018. However, since the average effective corporate rate for companies in the S&P index was about 26%, any expected jump in corporate earnings may be relatively modest.

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New Frontier Portfolios

New Frontier develops and manages a broad range of ETF asset allocation portfolios for advisors and their clients, and currently oversees nearly $3 billion in global ETF asset allocation portfolios.

We can expect some significant market volatility as tax law winners and losers in 2018 are sorted out. REITs will likely benefit from the new law since pass-through businesses will have an enhanced tax deduction. But the new law will likely curb the appeal of home ownership in high tax rate states with the cap on the home ownership tax deduction.

Unfortunately, the law has many longer-term flaws, such as limited benefit for the middle class, while highest income percentiles will experience the bulk of tax relief on a percentage basis. In addition, corporate legislation is permanent while tax reduction benefits to individuals will be scaled back to current levels. In effect, except for the first year, individuals can expect a tax increase for the next nine years if the law is not amended.

The lack of market volatility has not been kind to many hedge fund managers. There have been an increasing number of pension funds and financial intermediaries who have terminated hedge fund strategies, and hedge fund managers who have terminated their practices this year. It is also not possible to ignore at least a mention of the recent astronomical rise in value of cryptocurrencies, particularly Bitcoin. Many past manias can be rationalized in hindsight as some fundamental technological innovation that would, however, need some passage of time to properly value. There is no doubt that Bitcoin represents a significant transformation of market exchange technology at the global level. Gold is, in many ways, Bitcoin's closest competitor from a conceptual point of view. The start of futures trading at the Chicago Mercantile Exchange is a welcome step toward ultimate normalization. For the moment, it is not an asset that belongs in a strategy for reliable long-term risk-managed investing. In the meantime, don't lose your password.

Look Ahead

A general economic consensus exists that the U.S. economy is in robust health. The passage of the new tax law has reduced some uncertainty that the Republican Party is able to govern. In addition, the tax law should provide some positive stimulus for economic growth near term. But continuing partisan political dysfunction can take a toll in subtle ways. The decline of the dollar with respect to the euro, one of the few assets that lost value this year, is a reflection of economic power sentiment tilting towards Europe and Asia.

Another concern for 2018, however, is that American economic policy is currently self-inconsistent. While the Fed is tapping on the brakes, the new tax law is adding fuel to the economic engine. The result may be a sugar high. If the objective is to create jobs, given robust GDP growth and the current nearly full employment 4.1% rate, the net effect may be to fuel inflation and weaken U.S. competitiveness relative to some global economies. In this scenario, any surge in the market may reflect a long-term hollow center.

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A potential hollowing out of the recovery will be no friend to the bond market. With tax cuts favoring equities, a flattening yield curve, the Fed trimming the balance sheet, and tighter monetary policy ahead, there are good reasons to carefully manage bond risk in the New Year. One side effect of the listless market has been that it is very difficult for bond traders to make money. Revenue from banks' fixed income sales and trading units have been falling all year. Bond traders, often the most heavily compensated in the financial community, may be facing limited or donut-hole bonuses this year.

In its single year, the Trump administration has reversed an unusually long list of long-standing American policies and principles, many going back to the Revolutionary War. While North Korean nuclear threats were inherited by the Trump administration, bluster from both sides has unnerved much of the world's geopolitics. More generally, the long-term impact of "America First" immigration, military, economic, and trade policies has yet to be measured. From a domestic perspective, Russian meddling and tough talk about the Mueller investigation from Fox News adherents creates a great deal of uncertainty for governance and economic value. However, against this widespread backdrop of political and economic policy uncertainty, the markets have remained almost preternaturally calm.

Risk Factor Independent Strategies

New Frontier (NF) multi-asset ETF portfolios are sometimes mischaracterized and misunderstood as passive "value" strategies. One reason is that value and NF strategies are low-turnover. But NF investment philosophy and process are very different.

Value managers (VMs) typically believe investors make systematic mistakes and have investing biases. Consequently, managers wait for the market to return to its senses and value securities correctly. They often estimate the return or value of a security by computing the internal rate of return of current price relative to estimates of future earnings, dividends, etc. The result is the notion of "undervalued" or "ignored" securities which presumably takes time to be recognized by the market.

NF portfolios are neither "value" nor "growth" strategies. Our process focuses on efficient frontier portfolio risk management and not on individual security factors. The Michaud optimization process tends to place traditional "value" securities in the lower portion of the Michaud frontier because they tend to have lower levels of risk. Similarly, traditional "growth" securities tend to populate the upper portion of the Michaud frontier because they usually have higher risk levels all other things the same.

The reason NF is a low turnover portfolio strategist has nothing to do with patience, the market recognizing errors, or biases in market participants. The portfolio rebalancing decision is based on a patented probability measure regarding whether

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the current portfolio is statistically similar to or different from the current optimized portfolio. A statistical similarity framework for deciding when, or when not, to trade is an active management decision that can avoid trading in noise while enabling trading when likely to be effective independent of calendar considerations. For portfolio strategies with long-term well-diversified risk-managed objectives, such as NF's current multi-asset strategies, the Michaud-Esch rebalancing rule is tuned to trade conservatively by design.

The usual definitions of value or growth factors, or indeed most popular "smart beta" factors, are irrelevant to New Frontier's investment strategies. NF strategies avoid the episodic character of most factor based investment strategies. NF portfolios are unique due to patented and proprietary investment technology and as a consequence of holistic efficient frontier risk management.

The "New Frontier Global Balanced Index" (ticker: NFGBI)

New Frontier is pleased to announce the launch of the "New Frontier Global Balanced Index" (NFGBI) in December. NFGBI is an actively managed global 60/40 risk-targeted multi-asset ETF index portfolio suitable as a benchmark for many long-term institutional investors and individuals in well-defined investment programs. Unlike passive- or rule-based benchmarks, NFGBI is an active optimized index with New Frontier's multi-patented investment management technologies. NFGBI's thirteen year history is not a theoretical back test but model performance of New Frontier's actual thirteen year global portfolio performance history. A press release is available at:

https://www.newfrontieradvisors.com/media/1452/new-frontier-index-press-release_121417.pdf

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Disclosures:

New Frontier Advisors, LLC ("New Frontier") is retained as a portfolio strategist ("Strategist") by unaffiliated companies ("Sponsors") that offer investment platforms to registered investment advisors or broker-dealers ("Financial Advisors"). As Strategist, New Frontier provides model portfolios to the programs that are designed to satisfy a set of investment objectives established by the Sponsors. New Frontier provides no direct investment supervisory service, investment management, or other investment advice to the Financial Advisors or their clients. New Frontier only provides regular investment management services to the Sponsors, generally on a non-discretionary basis.

The model portfolios are implemented by the Sponsors. Changes to the model portfolios, including but not limited to changes to the portfolio weights of the selected assets, are communicated by New Frontier to the Sponsors as necessary. The Sponsors or Financial Advisors are responsible for making any changes in their clients' portfolios based upon the changes in the model portfolio.

Because New Frontier relies on Sponsor quarterly data to calculate actual account-level monthly performance used for our long-term performance calculations, we do not have real performance data until the end of the first month of the subsequent quarter. For example, January, February and March performance data using real performance would be available by the end of April. To include quarterly performance in our commentary in a timely fashion, we take the portfolio weights throughout the quarter and calculate the daily total return for each portfolio based on publicly available ETF closing prices and distributions. The annual performance relies on actual performance calculated for previous quarters and the publicly available information for the most recent quarter.

The reported performance is net of underlying ETF fees and trading fees, and we deducted estimated Strategist and Sponsor fees monthly at the expected highest fee rate. This includes reinvestment of income and deductions for transaction costs. Most Sponsors do not deduct custody fees before providing performance information, so custody fees are not generally deducted from the performance. The reported performance also does not include advisory fees that may be charged by individual Financial Advisors, which may range from 1-2% per year. Thus the reported performance does not reflect the compounding effect of any such custody and Financial Advisor fees.

Benchmark returns for the portfolio are blended returns of MSCI's ACWI IMI NR returns (stocks) and US Treasury Bills returns (bonds) according to the stock/bond ratio of the portfolio. This benchmark is used to reflect the global exposure of our portfolios while being denominated in U.S dollars.

The performance displayed here does not guarantee future results. As market conditions fluctuate, the investment return and principal value of any investment will change. Diversification may not protect against market risk. There are risks

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involved with investing, including possible loss of principal. Volatility represents the expected risk of the portfolio relative to major asset classes. Before investing in any investment portfolio, the Client and Financial Advisor should carefully consider the Client's investment objectives, time horizon, risk tolerance, and fees. The Financial Advisor assumes full responsibility for determining the suitability and fitness of each portfolio for their clients.

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