STRATEGIC OUTLOOK

David Goerz
Strategic Frontier Management
Second Quarter 2018

A LITTLE BIT LOUDER NOW

- Increased consumer, business, and investment activity have responded to U.S. pro-growth policies, which is *A Little Bit Louder Now* and reinforcing confidence, as well as national income. Improving economic growth trends and levels of leading indicators are robust and strengthening, so rising equity volatility in February was triggered by higher bond yields, which were likely a consequence of improving potential growth prospects. This adverse response to good news should moderate over time.

- The S&P 500 index is not yet extended, even as global equity valuations relative to interest rates are approaching fair value, in our opinion. An increase in earnings growth expectations to 19.6% this year and 10.1% next year can yield strong equity returns, even if returns may not exceed earnings growth. Improving earnings expectations suggests our 2018 S&P 500 target: 2950 looks more likely, even as valuations become more compelling (i.e., lower P/E)

- Global interest rates are rising now, led by steady quarterly hikes to normalize U.S. interest rates at a rate of four hikes or 1%/year. Rising interest rate expectations are consistent with need to normalize monetary policy, as long as recession is unlikely. We suggest a correction in global bonds is a risk, as well as safe havens and interest rate sensitive holdings (dividend yield, low volatility, and gold).

- Differences in monetary, fiscal, trade and regulatory policy drive economic divergences between countries and continuation of an *Asynchronous Global Expansion*. As return correlation declines, global tactical asset allocation opportunities should increase across countries and risk factors in response to changes in these government policies.

- Geopolitical risks persist, but concerns tend to come and go without sustained market impact as we abandon our policy of *strategic patience.* February's rise in equity volatility can be attributed to misbehaving hedging strategies. March uncertainty focused on shifting trade policy and potential technology regulation, but these concerns will likely prove transitory. Equity volatility should average 13-17% over 2018, rather than 8-10% recently. Currency and bond volatility remain low, but should rise as economic volatility increases.

- Concerns about changes to negotiating trade policy increased uncertainty in the short-run, but should help rebalance free and fair trade in the long-run. Imposing tariffs risk a trade war, but has gotten the attention of leaders to start tough negotiations. Improving our trade deficit bolsters export growth, as well as secures greater fairness with more respect for intellectual property rights.

- The path toward BREXIT (Britain's withdrawal from the European Union) is coming into focus. Feared dislocation and turmoil have not materialized, but can have constructive consequences for trade, foreign policy, and security. We think British long-term potential growth could increase with improved global competitiveness and independence yielding eventual regulatory and fiscal reform.

- Our tactical models still suggest global equities will outperform bonds by a wide margin. High U.S. profit margins and accelerating revenue drive exceptional earnings growth as consumption, construction, and trade increase. Foreign earnings repatriation should boost buybacks and investment, but there is no historical comparison to quantify this. S&P 500 earnings estimates surpassed our forecast of 16% in 2018 and 10% in 2019. We updated our long-term asset class return and risk expectations yielding updated strategic policy allocations.

- Risk factors such as low volatility, dividend yield, and interest rate sensitivity should disappoint with rising rates, but conditions are favorable for value and small-cap tilts. U.S. and Japanese government bonds are extremely overvalued, whereas foreign currency exposure (Euro, Yen) may be a risk as repatriation accelerates. As U.S. competitiveness increases and other economies muddle along, foreign direct investment could be redirected toward the U.S. at the expense of most other regions.

Shifting Policy of Asynchronous Global Expansion

The Administration's new economic, fiscal, and trade policies seek to restore 2.8% potential growth versus 2.1% observed since 2009 through greater productivity and restored global competitiveness. U.S. tax and regulatory reforms have bolstered potential growth, giving U.S. business a new competitive edge in global trade. We anticipate tax and regulatory reform should add at least 0.7% to annual potential economic growth and over 2% to potential earnings growth compounded over the next decade as monetary policy tightens.

We believe constructive trends are driving stronger U.S. economic and earnings growth--our above trend real growth exceeding 3% through 2019 is noteworthy, with upside risk to our earnings. Repatriation of foreign income and lower tax rates should increase investment, hiring, research and development, as well dividends and buybacks. Tax revenue can increase with corporate earnings and household income growth despite lower tax rates. However, Congress also needs to follow through with difficult spending reform.

The economic expansion is one of the longest of the post-war era, but also one of shallowest in cumulative growth. U.S. expansions have averaged about five years, even as we approach nine years since the June 2009 trough. Economic clocks seem useful illustrations of the business cycle, yet fundamental economic forces drive economic activity, and thus earnings and inflation. Many suggest the economic state must be "late cycle", but we don't observe slowing economic and earnings growth, rising unemployment, or high real interest rates. Instead, given robust economic conditions, a recession is unlikely in the foreseeable future. Fundamentals tend to get extended over time, but time can't define the state of the cycle. Tax and regulatory reform likely rolled-back or reset the "clock".

Long-term investor expectations for key variables such as potential growth, productivity, profit margins, risk premiums, inflation, and normalized interest rates imply deep scarring due to effects of the financial crisis and recent observations (recency bias). Such evolution in these variables usually takes decades in response to secular changes—consider the Fed's reduction in long-term interest rates from 3.9% in 2013 to 2.9% recently. Any meaningful equity correction should provide a buying or at least rebalancing opportunity.

Global Economic and Market Outlook

Variables of U.S. economic activity are rarely as decisive and *A Little Bit Louder Now*. It typically takes several quarters for fiscal and regulatory changes to flow through to the economy, but confidence improved as anticipated reforms were embraced. Trends in leading indicators, such as the ISM survey (59.3), including New Orders (61.9), suggest above average real growth over the next 12-18 months. Recessions emerge slowly and take several quarters to develop, but there is no evidence of recession in the foreseeable future given retail sales, industrial production, or business sales with a 4.1% unemployment rate.

Economic Forecasts	**2013**	**2014**	**2015**	**2016**	**2017e**	**2018e**	**2019e**
GDP Growth (Y/Y Real)	2.7	2.7	2.0	**1.9**	**2.6**	**3.2**	**3.3**
S&P500 Earnings	5.7	8.3	-1.1	**0.5**	**11.3**	**15.9**	**9.8**
CPI Inflation (Y/Y)	1.8	0.7	0.7	**2.3**	**2.5**	**2.7**	**3.0**
Unemployment	6.7	5.6	5.0	**4.7**	**4.1**	**4.2**	**4.5**
Fiscal Deficit	-3.3	-2.7	-2.5	**-3.1**	**-3.5**	**-3.0**	**-2.5**
Fed Funds Target*	0.25	0.25	0.50	**0.75**	**1.50**	**2.50**	**3.50**
10y Treasury Notes	3.00	2.17	2.27	**2.45**	**2.41**	**3.50**	**4.50**
S&P 500 Target	1848.	2059.	2044.	**2239.**	**2674.**	**2950.**	**3100.**

Global economic growth has accelerated as we expected, but suggesting worldwide economies are *synchronized* is misleading, as forces driving growth vary widely, implying higher economic and market correlation. Today, we describe growth conditions as an *Asynchronous Global Expansion* with divergences in monetary and fiscal policies, as we have since 2013's transition from a *Global Synchronous Recovery*. Economic growth, earnings and inflation under this new regime will be critical to growth, interest rates, bond yields, and stock returns. The interesting question is how trade flows evolve with shifting U.S. foreign policy of increased engagement and negotiation.

Our earnings estimates appeared aggressive, but now even 16% earnings growth looks conservative relative to consensus of 19.7%. Strong operating earnings growth has limited the S&P 500 P/E increase from 19.1 to 21.0x (reported P/E: 24.0x), but is still below extremes of 1929, 1987 or 2000. Thus, U.S. equity valuation doesn't appear stretched relative to interest rates, and can support a 10.3% rise in the S&P500 without stretching valuation further. Non-U.S. equity valuations don't appear stretched in most countries, but weaker growth in Europe and Japan increase risk of a value trap. Margins in Emerging Markets are finally rising after being depressed by rising wages, but if inflation takes hold, global margins may struggle.

Earnings	**2019e**	**2018e**	**2017**	**2016**	**2015**
IBES Consensus	$ 173.97	$ 157.99	$ 131.98	$ 118.10	$ 117.46
IBES Growth	10.1%	19.7%	11.8%	0.5%	-1.1%
Strategic Frontier	$ 168.00	$ 153.00	$ 131.98	$ 118.10	
Growth	9.8%	15.9%	11.8%	0.5%	
S&P 500 @18x	$ 3,024	$2,754	$2,376	$2,126	

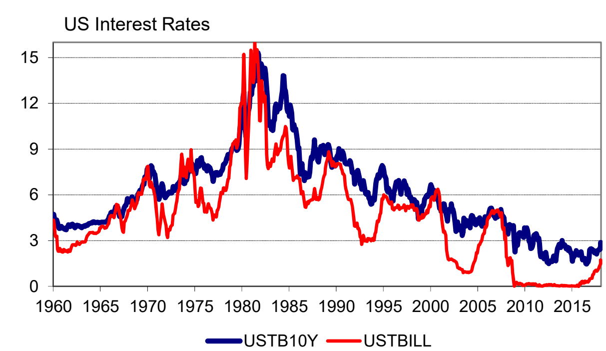
In 2018, energy, financials (inc., banks), materials and industrials are expected to lead earnings higher. Earnings estimates for basic materials and technology improved most recently. Leadership in cyclical sectors with a notable a value tilt, which has lagged, and higher exposure to foreign earnings, given earnings repatriation tax law changes, seems intuitively right. On the other hand, higher yield and stable growth sectors, including consumer staples, health care, utilities, and real estate are lagging in terms of earnings growth.

High U.S. profit margins combined with accelerating growth yield stronger earnings growth than observed in other regions. A recent study[1] has revealed benefits of buybacks on total investor cash flow that drives return. Investors underappreciated this benefit, probably because buybacks were negligible prior to the mid-1980s and there wasn't enough data to study it until recently. Compounding effects increased earnings, contributing to higher growth since mid-1990s.

Interest Rates and the Federal Reserve

Global bond yields have been rising from record lows since mid-2016. The Federal Reserve began hiking rates in December 2015 and is finally winding down their balance sheet, ramping to $50 billion/month. Canada, Australia, and the U.K have also begun hiking interest rates. The European Central Bank (ECB) and Bank of Japan (BoJ) are also slowing bond purchases, as the Federal Reserve winds down its balance sheet holdings. This will increase supply of maturing bonds to be reissued and reduce \bond demand. Global growth should be resilient to tightening monetary conditions.

Poor bond performance can depress sentiment, further limiting bond demand as rising interest burdens undermine fiscal deficits. This should drive long bond yields higher, and may overshoot resulting in a bond risk premium yield by ¼ - ½%. More vigilance about interest rate sensitivity is needed, even within private markets and equities. Adoption of risk parity and LDI (liability-driven investing) strategies are vulnerable to rising rates, particularly those relying on leverage.

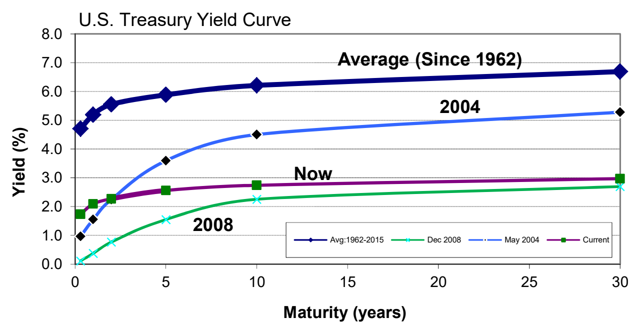


Central bank policy will be more difficult to predict with the Fed's Board of Governors under new management. Treasury yields need to rise toward 3.5% as inflation ratchets above 2.5%, as we expect the Fed will hike rates 1% in 2018 (4 x ¼%) as it reduces bond holdings by at least $50 billion/month. Bond refunding without reinvestment increases supply that will tend to drive up Treasury yields. Increasing fiscal deficits compounding higher interest costs is problematic when fiscal deficits exceed 100% of GDP, as many countries do today.

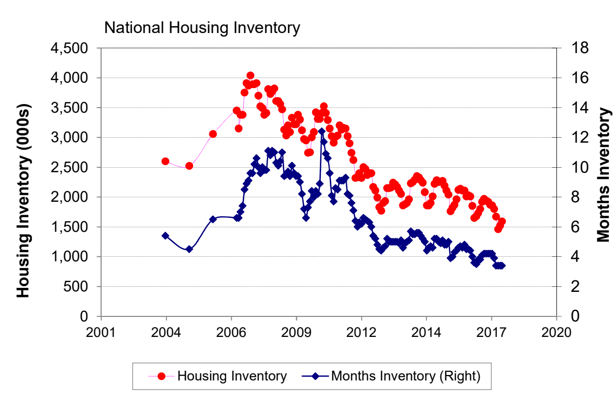
Interest Rates	2015	2016	2017	2018e	2019e	2020e	Longer Run
FOMC Avg.	0.25-0.5%	0.5-0.75%	1.38%	2.19%	2.92%	3.33%	2.87%
#Forecasts	17	17	16	15	15	15	14
SFM[1]	0.50%	0.75%	1.50%	2.50%	3.50%	3.50%	3.50%
SFM Hikes	0.25%	0.25%	0.75%	1.00%	1.00%	-	-

1. Top-end of indicated Fed Funds range
Source: U.S. Federal Reserve

The outlook for the yield curve is critical to interest rate risk. Central banks promoted explicit moral hazard in manipulating of interest rates for an extended period, causing global bond markets to become overvalued versus inflation. Rising bond yields expose central banks to potential losses on their holdings. Quantitative easing beyond 2010 failed to boost growth, increasing the difficulty unwinding holdings, particularly the BoJ. Rising bond yields expose central bank bond holdings to losses, as the chart below suggests normalizing interest rates has a long way to go. Treasury 10-year yields need to rise 1.7% to just get to May 2004 levels. Treasury yield is below its 55-year average, but yields can rise toward 5.0-5.5%, if we avoid recession



The need for normalization is a driving force for interest rates hikes and winding down bond holdings. Usually inflation is the critical factor, but as long as growth is sufficient, crisis yields levels is unnecessary. However, inflation is accelerating with stronger growth, rising wages, and housing demand. We observe a deficit of new homes and low inventories of existing homes. Housing costs are rising faster than inflation and continues to be significant as 35% of the CPI index.



[1] *The Long-Run Drivers of Stock Returns: Total Payouts and The Real Economy* by Roger Ibbotson and Philip Straehl. FAJ - 2017

Few investors have the tools to fully appreciate significance of interest rate sensitivity, which was costly in 2004 and 1994. Many equity managers are oblivious to unintended interest rate sensitivity without a risk model designed to isolate such econometric risks (i.e., growth, inflation, currency, interest rates, commodities, etc.). These are lessons gained from experience and highlight insufficiency of VaR for asset managers, particularly with longer time horizons.

A *debt inferno* might be a better description of investor fears slow to gather momentum, but difficult to extinguish. The U.S. interest debt burden will rise on over $20 trillion in Treasury debt with higher interest rates, increasing the fiscal deficit. We suggested tax reform needed to be coupled with spending reform, but the budget passed plunged us further into debt. Thus, we expect Congress, with a simple majority of both chambers, to impose *rescission*, cancelling specific program spending by up to $100 billion for FY18. This austerity could change budgeting negotiation for years.

The global monetary inflection point should result in evolving asset class return, volatility, and correlation, which are critical inputs to long-term strategic asset allocation studies. Long-term imbalances will resolve over time, but the yield curve could still steepen quickly at any time. Investors should appreciate the effect of high bond convexity[2], which increases interest rate sensitivity at lower yields. Leverage and extended bond duration further amplify losses as yields rise.

Increased Equity Volatility

Several factors have limited equity volatility, including low macroeconomic volatility, increasing indexing, and transparency of predictable monetary policymakers that pinned down and manipulated interest rates for an extended period. Thus, it's not surprising that an inflation surprise in wages and recent changes in Federal Reserve leadership coincided with increasing equity volatility and higher variance-of-volatility.

Despite the market turbulence during February and continuing into March, the S&P 500 declined just 0.8%, similar to the U.S. Aggregate Bond Index (-0.9%). The correction began in the U.S., but international markets (MSCI World: -2.0%), tumbled further even as the U.S dollar was weak. With increased volatility, Investors might be surprised by outperformance of growth-value (4.25%), small-large (0.7%), or expect low volatility (-1.1%) to perform better. S&P REIT (-8.15%) and Alerian MLP (-11.1%) declines were uncharacteristic for a volatile quarter, as well.

The speed of the equity correction exceeding 10% from record highs was unnerving, beginning February 5th. It was triggered by stronger wage growth during the prior Friday's employment report, which drove up Treasury yields. Stronger growth may be resulting in a tighter labor market. Unemployment claims continue to decline with steady employment growth at 4.1% unemployment. U.S. Bond yields rising faster than observed may unsettle equity markets for a period of adjustment, but S&P 500 volatility averaging 13-17% is consistent with history, rather than 8-9% observed in 2017. Greater economic volatility should also increase bond, commodity, and currency volatility. As interest rates rise, global asset allocation opportunities should expand. We think that relative fundamentals will become more important and emphasize that *Countries Still Matter*, as will sector and risk factor exposures.

Many opinions were offered up to explain February's correction, but low equity volatility and compounding positive returns caused investors to seek ways to hedge rising equity exposures. Frequent rebalancing can be a nuisance, and routinely buying put options or selling futures can also be costly over longer periods. So, using stop-loss limit orders with ETFs has grown in popularity, particularly among institutions. Downside limits are often tightened (ex: 10% to 5%) with lower volatility, which triggers more frequent market declines.

Trading order velocity sped up and fragmented (less shares per trade) in the last decade with computer-assisted and algorithmic trading, so declines on February 5th and 8th reminds us of ETF Flash Crash of 2:45pm on May 6, 2010, which generated sell orders at an accelerating rate. Portfolio insurance had similar market effect in 1987. High trading volumes interrupted access to leading Robo-advisors, including Wealthfront and Betterment, as well as accounts at Fidelity, Vanguard, Schwab, TD Ameritrade, and T. Rowe Price consistent with the hypothesis that stop-loss orders flooded exchanges after breeching limits.

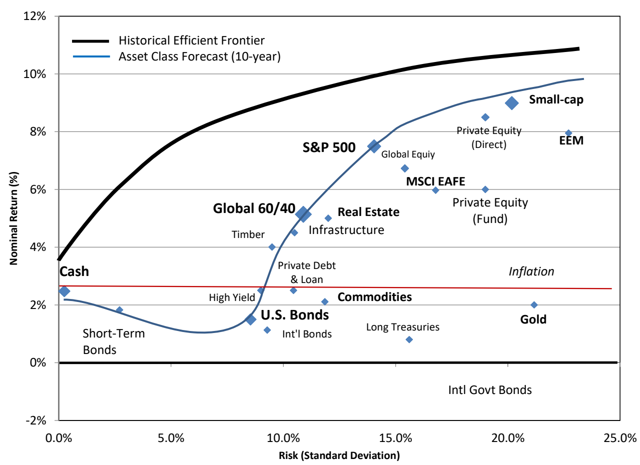
Inverse volatility funds (i.e., short VIX or implied equity volatility) were another casualty in February, which were popular with advisors seeking "uncorrelated" liquid alternative exposure. Declining volatility provided an illusion of consistent income with limited downside, but 1.35% is a high expense ratio (typical of "liquid alts") for passive exposure to the VIX. The correction wiped out various multi-billion dollar ETFs/ETNs in a day. Credit Suisse terminated their VelocityShares Inverse VIX ETN (XIV) that plunged from $99 to $4.22 after the first *no good, very bad day* (Feb. 5th). Short VIX funds sponsored by Proshares and VelocityShares enjoyed subscriptions totalling $2.2 billion since year-end, which doubled assets to over $4 billion, but most of this money is now lost.

Global Investment Outlook

Our long-term forecasts represent annualized expected returns over the next decade for benchmark market

[2] Bond convexity is a measure of changing return sensitivity with levels of interest rates, specifically the second derivative of bond price with respect to interest rate changes.

indices, and do not include costs or potential variation due to active management or tracking error. The heavy black line below traces historical asset class returns over the last 50 years and the lighter blue line highlight current forecasts. Our greater concern depends on overvalued global bonds and high cost of private funds, rather than more typical concern about equities.



	10-year Returns[1]		1900-2017[2]	1973-2007 (44 yrs)		Expected 10-Year			
Annualized	Return	Risk	LT Return	Return	Risk	E[Return]	Risk	2017	2016
U.S. Stocks	8.5%	15.1%	9.4%	10.7%	14.0%	7.5%	14.0%	21.8%	12.0%
World (ex-US)	2.4%	18.5%	n.a.	6.0%	16.8%	6.0%	16.8%	25.6%	1.5%
Emerg. Mkt Eqty	2.0%	22.8%	n.a.	11.4%	22.7%	8.0%	22.7%	37.8%	11.6%
U.S. 10Y Tres	4.5%	7.5%	4.9%	6.3%	7.1%	1.1%	8.5%	11.5%	0.9%
US BC Agg Bond	4.0%	3.2%	n.a.	n.a.	3.7%	1.4%	4.5%	0.0%	38.8%
Cash	0.3%	0.0%	4.1%	3.1%	0.2%	2.5%	0.2%	0.9%	0.3%
Inflation	1.6%	1.1%	2.9%	4.0%	0.9%	2.5%	0.9%	2.0%	2.1%
Commodities	-1.2%	15.8%	2.6%	2.6%	11.9%	2.1%	11.9%	1.6%	-16.8%
Risk Premium									
Stock-Bond	4.0%		4.5%	4.4%		**6.4%**		10.4%	11.1%
Bond-Cash	4.2%		0.8%	3.2%		**-1.3%**		11.5%	-37.9%

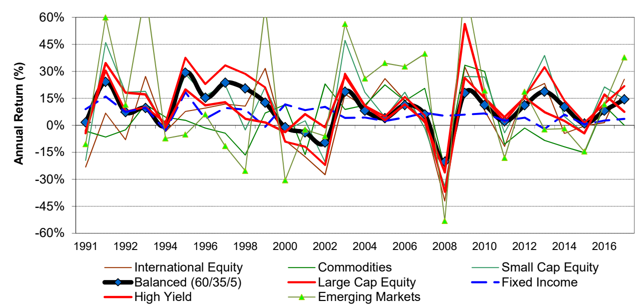
(1) Trailing 10-year Data as of December 31, 2017
(2) Data from *Credit Suisse Global Investment Returns 2018 Yearbook*
(3) **Stocks:** S&P 500, **Bonds:** Barclay's Aggregate Bond, **Cash:** 3m T-Bill, **Commodity:** CRB
(4) Bond volatility based on 1973-Present vs. 1987 given 30 year decline in yields skewed risk lower
(5) Gold had a real return of 0.7% (3.6% nominal) since 1900. Risk of $\sigma = 23\%$ since 1973

Source: Strategic Frontier Management

Divergences from historical average returns and risk are a function of current asset class valuations, economic forecasts, currency effects, and earnings. Our expected returns are lower than average with the greatest impact on bonds due to overvaluation and normalization that we expect will drive up interest rates by 1.5-2.0% over the next two years. Given the wide differential return, a smaller change in the stock-bond allocation can have greater than normal incremental impact on the expected balanced return.

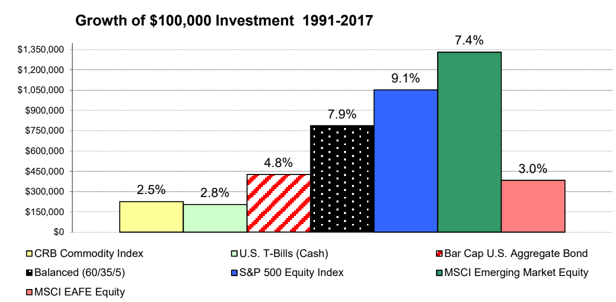
Our growth, inflation, and interest rate forecasts reflect gradual normalization of global monetary policy after an extended period of central bank intervention that skewed higher returns and lower volatility for bonds. Thus, bond return forecasts starting from a low yield are well below historical averages, while equity returns are only moderately below historical averages. We also expect higher bond and currency volatility, as well as meaningful changes in asset class return correlations, which impact portfolio risk and diversification.

Portfolio diversification or allocating exposures across different asset classes, sectors, counties, or risk factors buffers volatility in turbulent times. Less volatile portfolios help investors stick to their long-term strategy. Market correlations may increase during turbulent periods, but this doesn't reduce the value of diversification. Well-diversified investors are no worse off when correlations increase, but are better off in the long-run as diversification with regular rebalancing should improve risk-adjusted performance. In the chart below, a well-diversified balanced portfolio participates on the upside, while loses are limited to the downside.



Source: Strategic Frontier Management

Equities generally have higher volatility than bonds, but equities also tend to outperform by a wide margin. International markets also should keep pace with local markets, but over the last 25 years we observe that MSCI EAFE Equity has lagged both the S&P 500 and Emerging Market equities by a wide margin. This can be the result of currency effects or relative growth—the latter has been more critical related to chosen policies.



Asset managers suggest alternative investments provide portfolio diversification that improves risk-adjusted return, but if they provide insufficient net return or are more risky than assumed (lack daily pricing), then their addition doesn't enhance return. High fees aren't compensated for by markets, so alternative funds may provide insufficient net total return, and are often well below or inferior to the efficient frontier. A correction in private markets is unlikely without daily pricing. Asset class forecasts are more critical now than usual and affected most by relative valuations.

Efforts that increase portfolio complexity such as adding alternative investments and de-risking solutions from risk parity to low volatility solutions have increased management costs and reduced transparency, yet haven't added much value, even on a risk-adjusted basis. Private market funds remain very expensive with high transaction costs and management fees. Illiquidity risk premiums declined as offering valuations richened on locked-up investments. Liquid alternative products remain expensive, while returns and portfolio diversification (higher correlation and volatility than anticipated) disappoint investors.

Foreign Policy and Trade

There is urgency in negotiating changes to address unfair trade practices and currency manipulation that drove our trade deficit to over $800 billion per year. Reducing trade deficits boost potential growth. Besides ourselves, many are conflicted between belief in free trade and unrestricted market competition of an integrated global economy versus protecting national interests from chronic trade violators. While tariffs are a tool for protecting national interests, they also can provide leverage encouraging negotiation. No tariffs have been imposed yet, only threats of what could happen if trade relationships don't improve.

China has failed to abide by World Trade Organization (WTO)[3] international trading rules since it joined in 2001. China failed to respect for intellectual property rights and forced technology transfer for market access, as well as manipulated its currency and subsidized losses of lower selling prices. We have observed China's low and declining profit margins over the last decade, highlighting this issue.

Free trade and unrestricted market competition seeks exchange of goods and services between countries without tariffs, quotas, manipulating currency rates, unfair subsidies, or other restrictions being applied. Global growth is maximized when each country is able to pursue its comparative advantage with free trade and unimpeded market access. Countries with a comparative advantage in cost, quality, or efficiency can produce more of a good or service at which they excel. Comparative advantages can be the result of labor or resource cost differences, intellectual property advantage, infrastructure, labor specialization, geography, or currency exchange rates. Efforts to revisit our trade agreements recognize practical consequences of a world that evolved more quickly in an age of increased globalization and technological innovation as labor and energy intensity diminish. Information is a new precious commodity and analytical processes are critical to the new industrial revolution.

Decades long efforts to address trade barriers have failed to reverse our increasing trade deficit. In a perfect world, free trade would be pervasive, and separate trade agreements would be unnecessary. Yet, with little leverage other than access to world's largest consumer market despite natural comparative advantages, investors were rattled by threats to impose tariffs. The first indication of shifting trade policy threatened tariffs on steel and aluminum. This seems an attempt to spur NAFTA negotiations over the finish line and open trade dialogue with China. Public statements were initially hostile, but more conciliatory rhetoric suggests negotiations can result in fairer trade.

NAFTA was signed more than 30 years ago, but the economic drivers for each country have evolved, resulting in differences in each country's objectives. Progress renegotiating NAFTA and a new bilateral agreement with South Korea illustrate the advantages of this new foreign policy approach to negotiate simpler bilateral vs. complex and often compromised multi-lateral trade agreements, such as the Trans-Pacific Partnership (TPP) Trade Agreement that was never ratified by Congress. The U.S. is better off signing bilateral agreements with a few remaining countries without trade agreements already---in other words, TPP was redundant, with the notable exception of Japan. Increased dialogue with Japan over security concerns opened the door to a bilateral agreement.

We suggested that Congress will have to adapt to a President that prefers to deal with many issues in parallel, meaning the *circus* would have to learn to juggle multiple issues at once. The notion of political capital has less relevance, and hardly ever mentioned. Fundamental changes in national policies can bolster potential growth, competitiveness, and long-term prosperity. Diplomacy must address nuclear threats of Iran and North Korea, as well as counter expanding Russian influence. Policies with regard to foreign aid and international relations are under review. Global equity, commodity, and currency volatility increased with uncertainty about changes in U.S. trade policy and fear of triggering a trade war, but volatility with regard to these issues can provide opportunities for investors.

BREXIT Transition into Focus

We published *British Independence Day* in June 2016 (www.StrategicCAPM.com/commentary) after British citizens voted to leave the European Union (EU). Voters identified with several key issues, namely: (1) restore economic productivity, (2) reassert sovereignty, and (3) reverse political deterioration. These issues reflect anxiety of underperforming economic potential evident among voters. We suggested the decision to leave the EU could bolster potential growth and competitiveness by declaring independence from an unaccountable regime that has failed its members.

[3] The WTO is a multilateral organization that regulates global trade spanning 164 counties and 23 observers to promote fair and free trade, seeking international economic cooperation.

The one year countdown to March 29, 2019 has been set for the UK to leave the EU, but maintains single market free trade and the customs union through 2020. Further EU independence referendums are more likely as the UK blazes a new trail. Economic and currency uncertainty may persist until new agreements fall into place, but not much will change for at least another year. Investors should be interested about how this evolves as it affects growth in Europe and the U.K.

Declaring EU independence re-establishes sovereign control over British laws, defense, and immigration to promote greater regulatory, fiscal, trade, and security policy freedom. Our outlook assumes government should take advantage of this once in a millennium opportunity to re-shape British law for the future, without compromise of other countries' interests. Uncertainty may slow foreign investment, but the U.K. financial sector and other industries should benefit from improved potential growth with greater competitiveness and simplified regulatory environment—without risk of imposing a financial transaction tax that the U.K. has opposed. A more favorable business climate might actually encourage companies to relocate to the U.K., but this will depend on U.K. policy, legislative, and tax reforms, yet to be determined. British independence should encourage EU reform, but EU members risk further widening of their global competitiveness gap.

Britain's withdrawal provides an opportunity to reset trade policy and develop a mutually beneficial bilateral trade agreement with the U.S., likely before a US-EU deal is signed, even if implementation can't take effect until the transition is completed. We think the UK will be better off long-term, just as it is with the decision to remain independent of the European Monetary Union. A successful BREXIT may increase likelihood of other departures, particularly if the EU fails to reform itself.

Discarding a 40-year multilateral treaty is not without consequences, but long-term benefits of regaining sovereign control of regulation, immigration, defense, and fiscal policy are apparent. Eliminating EU membership expense for a one-time exit fee of £40 billion seems a little steep, but is less than most expected. There are still many significant issues to resolve, including residency of non-British workers, final trade agreement (Canada just signed a treaty with the EU), and the Northern Ireland border.

Economic drag was less material than initial fears of recession or declining growth. Instead, the economy grew 1.7% in 2017, unemployment is unchanged, hovering around 4.3%, and the Bank of England is likely to raise interest rates again in May. Frankfurt and London will still compete, but importance of geography in financial services has declined for 20 years with innovation and technology that reduced labor intensity. London remained a leading financial center even when it opted out of joining EMU. Despite efforts to shift financial services away from London, we expect little change in relative trading volumes or staffing. The EU can't reverse increasing automation, plunging trading costs, or declining management fees.

NATO commitments have been neglected as defense spending diminished as a share of GDP. The U.K. might pivot toward increased NATO commitment by redirecting its support of the EU's European Defense Agency (EDA), stitching together $220 billion/year spent by 28 countries. Spending just 1/3rd of the U.S. defense budget, EU nations can only muster 15% of comparative operational defense capability. Germany and France without Britain may re-evaluate EDA's usefulness and duplicity. BREXIT provides an opportunity to reset national defense objectives and reallocate resources more effectively to play a greater role in revitalizing NATO, as the alliance seeks to modernize its mission. This could be Russia's worst nightmare, while more responsive to terrorism, as well.

Crush on Free or Cheap Services May Be Costly

Someone always has to pay: The question is at what or who's cost? It began with free trials, free financing (90 days same as cash), and free internet search in the '90s. Consider popular free services today, such as Google, Skype or Facetime, Travelocity or Expedia, Facebook or Twitter, MapQuest, Wikipedia, iTunes, Pandora, Dropbox, Gmail, OpenTable, OpenOffice, Coursera,, and news content. A quick survey of "free" apps on your PC, iPad, or smartphone is revealing.

In an age of technological disruption and ubiquitous computing, any service that can be delivered over the internet tends to have low or no marginal cost for each new consumer. Yet, profit motive is necessary to support, maintain, and drive new product development. So where does needed revenue come from and what are the consequences of our reliance on so many "free" services? Nontraditional revenue models began with simple banner advertising---watch an ad and get free access to a desired service, but founders of Google, Facebook, Twitter, and others loathed the idea. How else do you create a viable company, yet *do no harm*? Google's home page is still simple and ad-free, but high FAANG valuations are only possible with revenue growth. If it isn't obvious, maybe free-riding consumers and their private data is the product.

In March, investor concerns turned to data security, privacy lapses, and censorship bias revealed by social media companies, such as Facebook and Twitter, as well as anti-trust concerns at Amazon and Google. Market volatility rose with whether these concerns could compel Congress to impose regulation. Casual attitudes about individual privacy in social media belie concerns about escalating identity theft and account hacking. A return to the naïve status quo is unlikely and it would not surprise us to observe the rationalization of user growth. Other free services might be impacted, such as Twitter, Google, SnapChat, Instagram, and LinkedIn. Users will be more attuned to alternative revenue sources, because free isn't really no cost. Technology earnings growth may come under pressure as the government scrutinizes privacy and anti-trust concerns or possible regulation of "free" services among Facebook, Twitter, Amazon, and Google.

Navigating a Mad, Mad World (Q1, 2018) discussed the media's evolution and declining trust. With so much free content, quality, breadth, and credibility suffered with falling barriers to entry, unconventional sources, and expansion of social media. Users of Facebook and other free services accepted user agreements that were too long and complicated. In an idealistic world, there isn't fear of identity theft or concerns about privacy, but that perception changed in 2018 with dark revelations exposing revenue models that distribute or enable access to personal non-public data to favored sources or the highest bidder, unbeknownst to users.

It seems that the fastest way to create an oligopoly is to offer a product for free, undermining competition. *Convergence to Zero* has unique market effects that discourage new entrants, unable to compete for any reasonable profit. Internet search was the first notable example, but this business model repeatedly limited competition by extinguishing motive in many industries. Limiting completion restricts investment and innovation.

We have similar concerns about the ETF and index business, given alternative revenue sources such as stock lending, licensing, or platform leverage. Schwab, Vanguard, Fidelity, Blackrock, and State Street are the largest index fund providers, yet have been engaged in blood sport competition to lower ETF expense ratios. Expense ratios plunging toward zero limits competition and coincided with platform concentration of assets. We cheered declining ETF expense ratios, but converging to zero has undesirable consequences to competition and innovation. Fidelity recently filed to register an international index fund available with no expense ratio (free or 0 bps) for select investors that purchase other services or products. Lower fees are beneficial, but when do markets cease to function well?

Concluding Thoughts

It's *A Little Bit Louder Now* with strengthening U.S. economic and earnings growth that we expect equities will continue to outperform bonds by a wide margin. Our global tactical equity forecasts (12-18 month horizon) have moderated over the last year as stock markets and interest rates rose. However, global bonds remain a growing concern as inflation gathers momentum, stubborn fiscal deficits persist, and total debt burden rises with higher interest rates.

Not only are long-term expected returns unusual, we are observing significant differences in the behavior of volatility and correlation transitioning through the great inflection point in interest rates (monetary policy). It culminated with an *extended period of global interest rate suppression*---broader in scope than financial repression or efforts to reduce government liabilities.

Advisors are fortunate when are entrusted to manage *Other Peoples' Money* in a prudent manner, seeking to achieve or exceed investors' objectives. We welcome debate about enhancing fiduciary standards, even if the court has nullified the *Fiduciary Rule*. It is likely the SEC will take the lead, which seems more appropriate than the Department of Labor, in this regard. It is time to move away from high fees and complex products that failed to achieve investors' objectives.

Value added and advice should be rewarded, but investors still pay too much for market exposure, including in costly private funds. Active management and tactical asset allocation can be novel *alternative investments* with lower cost, greater liquidity, more transparency, superior attribution, and better likelihood of adding value on a net risk-adjusted basis. Robo-advisors and rule-based algorithms are squeezing advisory fees, although we've expressed concern that advice can be naïve, even potentially misguided (poor data assumptions) among those we considered. Unfortunately, misleading advice can be as problematic for non-systematic asset management, which may be further subject to various cognitive biases, as well.

A three decade long bond bull market has come to an end, but led investors to assume unrealistic returns, as well as risk inputs of volatility and correlation. Forward guidance and manipulating interest rates biased expectations. Global interest rates are now rising, led by quarterly hikes to normalize U.S. rates. The FOMC skipped hiking in September, but it used the opportunity to begin winding down their balance sheet. It will ramp to divesting $50 billion/month in 2018, which adds to supply of normal Treasury issuance.