STRATEGIC OUTLOOK

Strategic Frontier Management

Third Quarter 2019

Myths That Conceal Reality

- US economic and earnings growth accelerated over the last two years, particularly after tax and regulatory reforms. US potential growth has risen from below 2% to over 2.7% with increasing global competitiveness. Other countries have languished, including Europe, Japan and China. Global uncertainty regarding fiscal, trade, and monetary policies can undermine fragile investor and business sentiment, but central banks should focus on real domestic economic conditions.
- US growth has settled into a new and more favorable range after tax and regulatory reforms. Potential upside remains as the New Order in Global Trade and increased investment with earnings repatriation takes hold. Higher productivity supports still high US profit margins, yet malcontents forecasting peak earnings, peak growth, and peak margins have missed much of the S&P 500's remarkable 360% return from a trough on 03/06/09 at 666. Earnings growth of 23% in 2018 supports constructive US equity valuations. Yet, global bond valuations remain extended due to global central bank manipulation of rates to currency markets by forward guidance, asset purchases, and low interest rates for an extended period, reinforcing explicit moral hazard for investors and businesses.
- We continue believing a more typical *Asynchronous Global Expansion* describes the current regime. In this context, *risk-on/risk-off* is a silly notion, too often confused with increased volatility-of-volatility that reflects more fragile sentiment we've highlighted. Divergent monetary and fiscal policies cause cyclical economic differences globally. Asynchronous policies yield greater international diversification, not just among equity markets, but currencies, interest rates, earnings estimates, and economic variables.
- Monetary manipulation failed to boost inflation as hoped, yet financial imbalances increased. US inflation can revert toward 3% with rising wage and housing costs, although the Fed's long-run forecasts for inflation and interest rates declined since 2013. Adoption of the PCE price index also presumes ½% higher real interest rates. Normalizing inflation and growth expectations should drive 10-yr Treasury yields toward 5%, despite global relativism of $13T in bonds yielding 0% or less.
- US interest rates were expected to rise over 3% a year ago, yet the 4Q/2018 correction in equities, ongoing trade disputes, and US yield curve flattening has encouraged adoption of recession forecasts. The Federal Reserve Open Market Committee (FOMC) now expects interest rates to peak at a lower r* or equilibrium policy rate of 2½% vs. r* > 4% just a few years ago. Pursuing rate cuts for "insurance" against global weakness or trade tensions is inconsistent with US economic conditions. FOMC's recent pivot toward monetary easing may need to soon be reversed.
- We are surprised Treasury yields declined this year, and seems peculiar given US economic conditions. A flattening yield curve appears to be a function of unusual exogenous forces that bias unrealistic rate cut probabilities to over 90%. Rate cuts of ½-¾% are now discounted for 2019, plus another ¼% cut in 2020, but low inflation is not sufficient, nor warrants maintaining such stimulative monetary policy. *Price stability* seeks a *stable level of prices* to sustain the value of money, rather than a *Myth That Conceals Reality* implying a sufficient *inflation rate target* to provide a margin of error versus deflation, particularly a misguided *symmetric* target. We believe monetary normalization should continue, unless or until evidence of a US recession emerges.
- We expect forces inducing our constructive secular disinflation thesis to begin moderating finally after more than a decade, although our work on Global Future Themes supports still strong potential growth and productivity. Better understanding of secular disinflation might otherwise have limited adjustment of inflation expectations, rather than assuming disinflation was a symptom of weak demand. Central banks should abandon *symmetric* inflation targeting and it is a fools' errand to attempt increasing inflation.
- Our Global Tactical Asset Allocation return forecasts suggest global equities remain compelling and U.S. equity returns should significantly exceed bonds. We favor a tilt toward small-cap and modest bias toward value. S&P 500 valuations remain constructive with at least 6% earnings growth, sufficient to yield 8-10% US equity return in 2019. Avoid safe havens and rate sensitive exposures, and underweight global bonds.

More GNP: Gross Necessary Prosperity

Gross Necessary Prosperity (GNP) is scarce globally these days—like more Cow Bell, we need more GNP. Policymakers are deeply concerned about weak or below potential growth with tax revenue coming up short (except US tax revenues, of course). Central bankers still seem to believe they are the last best hope to save us from depression (or ourselves)—keeping interest rates low also limits interest on government debt. We reiterate the difference between *secular disinflation* resulting from rapid innovation and creative destruction (force for good), *cyclical disinflation* resulting from bad policy decisions (uncomfortable) and *deflation*--symptomatic of recession or depression (dreadful). Whichever is correct has material fiscal and monetary policy implications.

We have often written about *Myths That Conceal Reality*, hoping to highlight behavioral biases and what we believe to be misguided investment or economic beliefs. A guiding principle in our forecasting developed over three decades is to rationalize how economics and finance logically govern market econometric and market relationships. This is prevalent in discussion of the *New Order in Global Trade* and transition from *Synchronized Recovery* to Global *Asynchronous Expansion* in 2012. Normalization is required to unwind low interest rates and reduce bon holdings of the Federal Reserve. Lower interest rates won't boost growth or inflation if long-term financing rates can't decline much more or without spending to pull forward anymore. The Fed need not focus so much on *mythical* global growth dependency given US exports were just 9-12% of GDP since 1990. Mythical concern about low inflation expectations conceal unintended consequences of decade-long forward guidance, rather than a dysfunctional economy needing monetary support. We resurrected various charts and historical data to support our claim there are unusual forces in play, but *need not be different this time*.

Economic Forecasts	**2015**	**2016**	**2017**	**2018**	**2019e**	**2020e**	**2021e**
GDP Growth (Y/Y Real)	2.0	**1.9**	**2.6**	**3.0**	**3.1**	**3.0**	**3.0**
S&P500 Earnings (Y/Y)	-1.1	**0.5**	**11.8**	**22.5**	**6.2**	**7.6**	**7.1**
CPI Inflation (Y/Y)	0.7	**2.3**	**2.1**	**1.9**	**2.5**	**2.5**	**2.5**
Unemployment	5.0	**4.7**	**4.1**	**3.9**	**4.0**	**4.2**	**4.2**
Fiscal Deficit (vs.GDP%)	-2.5	**-3.1**	**-3.5**	**-4.5**	**-4.3**	**-5.0**	**-5.0**
Fed Funds Target[1]	0.50	**0.75**	**1.50**	**2.50**	**2.75**	**3.00**	**3.25**
10y Treasury Notes	2.27	**2.45**	**2.41**	**2.69**	**3.00**	**3.50**	**4.00**
S&P 500 Target	2044	**2239**	**2674**	**2507**	**2950**	**3200**	**3400**

Source: Strategic Frontier Management

US economic growth settled into a higher potential growth range over 2.7% in the last year, although geopolitical challenges have undermined investor and business sentiment. Market volatility coincided with news on various geopolitical issues, plus weaker growth in Europe and Japan. We expect geopolitical uncertainties should recede by year-end with progress on US trade deals, immigration, and improving foreign relations. We also believe inferences about a flattening US yield curve (long-short maturity yield) were deceiving, as is a global synchronized slowdown.

Expectations that the FOMC might cut interest rates drove 10-year Treasury yields toward 2.00%, rather than rising as we expected, but the S&P 500 closed within 8.3 points of our year-end 2950 target. The S&P 500 has returned 18.5% through June 2019, consistent with our US stock-bond return expectation, as Value and Small-cap stocks lagged. We expect rising net exports and investment (earnings repatriation) should boost US growth, beyond benefits of 2018 tax and regulatory reforms. We expect negative real return for Treasuries over the next 5-10 years given overvalued global bond markets. A bond market correction with worsening illiquidity is more likely to trigger a financial crisis, than housing or equity valuations. Spiraling bond losses compounded by high convexity and extended duration can trigger an asset allocation rotation from bonds.

Eventually, there will be another recession and serious recessions result in destructive portfolio losses. They are also very rare and often limited to individual countries or regions (asynchronous), but many believe a recession is overdue. In the last three decades, we experienced two recessions, plus one that was revised away (2001). They all coincided with at least a 20% market decline, although other equity corrections were false alarms (ex: Oct. 1987—no recession). It would be a shame if a recession was caused by a tipping point in confidence or liquidity. We don't expect a recession for at least two years, and likely a shallow one at that. Our 6.2% earnings growth and Treasury yield forecasts diverge from consensus, but 20% swings in energy and material sector forecasts can increase uncertainty about earnings growth.

Risk factor premiums, correlations and volatilities are evolving more rapidly, even as a 10-year calendar outlier (Q4/2008-Q1/2009) has rolled off. Many robo-advisors and risk model methodologies hard-wired this calculation horizon into their analysis, notwithstanding 10 years is a common evaluation period. Low market volatility reflects reassurance central banks will *do whatever it takes* to limit downside risk, providing implicit risk insurance, which may skew correlations. Falling currency volatility is not a surprise, but equity and bond volatility declined too. We've highlighted rising volatility-of-volatility, which reinforced abnormal risk distributions. This may also cause risk methodologies to underestimate portfolio risk.

Risk factor investing opened up many new dimensions in asset allocation, but we also observed many unusual upside-down factor divergences were observed. These risk premiums can be reinforced by trading algorithms or behavioral biases, but may be the result of extended monetary policy intervention causing imbalances. Consider equity returns to value vs. growth, large vs. small-cap, or high vs. low volatility, as well still much to learn about ETF-related flash crashes since 2010.

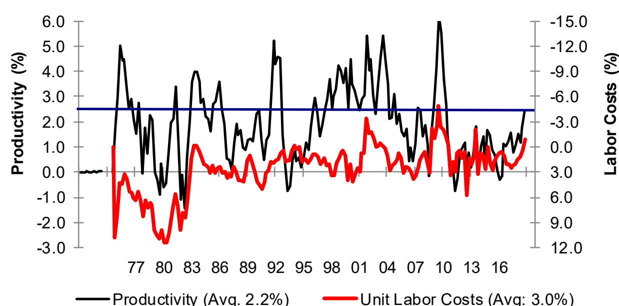
Returns	1-year	5-year	10-year	20year	Index
US Large-cap Eqty	-4.38	8.49	13.12	5.62	U.S. S&P 500
US Small-cap Eqty	-11.01	10.44	11.97	7.40	Russell 2000
Value-Growth	-6.77	-3.97	-4.11	1.11	Russell 1K Value-Growth
International Equity	-14.09	4.56	6.24	3.68	MSCI World (ex-US)
Emerging Markets	-14.58	1.65	8.02	8.06	MSCI Emg. Market
US Broad Bond	0.01	2.52	3.48	4.55	Bloomberg BC US Agg
Commodities	-7.09	-5.11	0.74	3.64	CRB Index
Cash	1.88	0.62	0.36	1.77	US T-Bill (3m)

Source: Refinitiv DataStream & Strategic Frontier Management (2018)

Investors remain fixated on equity risk, rather than overvalued global bonds. Cheaper access to data and analytical tools reinforces reliance on empirically-derived correlations that can be spurious or fuel behavioral confirmation bias. Resurging global multi-asset strategies has focused investor attention on significance of global asset allocation strategies and diversification. Unusual global exogenous forces remain in play alongside fundamental forces resulting in unusual market results, including inverted yield curves, as well as underperformance of value-growth and large-small tilts.

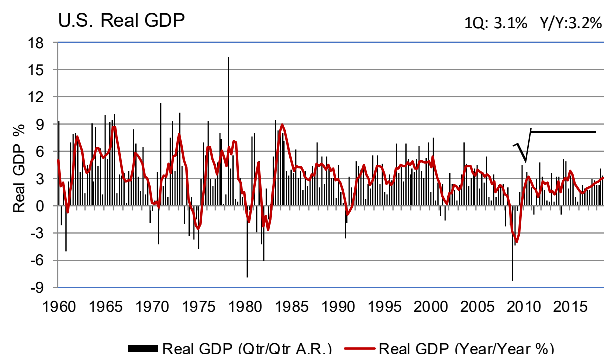
Economic Outlook

We don't believe that a US recession is likely in the foreseeable future Tax and regulatory reforms are having a sustained impact lifting potential growth = productivity + workforce growth. This will be key to maintaining high US profit margins, which is indeed the envy of the world. It also highlights the global asynchronous cycle increasing country dispersion—US growth is stronger than the rest, including 3.1% growth in Q1, although expected to be much weaker due to global growth concerns. Unemployment of 3.7% is at its lowest since 1968 with record low unemployment claims adjusted for workforce size. Labor costs declined including benefits, despite rising wages, even as productivity picked up below, but we expect unit labor costs to rise into 2020, as well.



Source: Refinitiv DataStream & Strategic Frontier Management

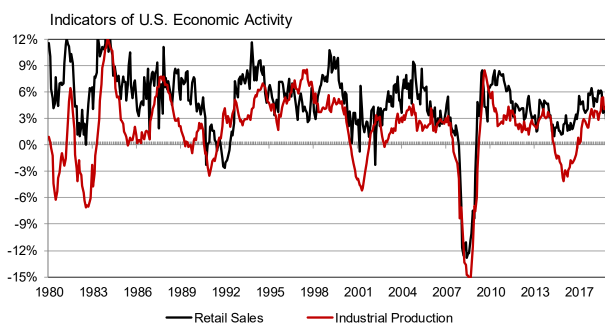
The US expansion has extended beyond a decade, but recession is no more likely tomorrow than three years ago. Geopolitical risks with global growth fears have done little more than defer a few 1/10ths off US growth, increased earnings forecast volatility, and restrained investor sentiment. Favorable equity valuations after strong 2018 earnings growth (+23%) should not limit US equity returns. We believe there is greater upside risk to our 6.2% earnings in 2019. Equity corrections in May and Q4 appeared to be overreactions to global growth and geopolitical concerns, but provided meaningful tactical opportunities. Otherwise, not much changed since September to justify *patience* in monetary normalization or plunging Treasury yields.



Source: Refinitiv DataStream & Strategic Frontier Management

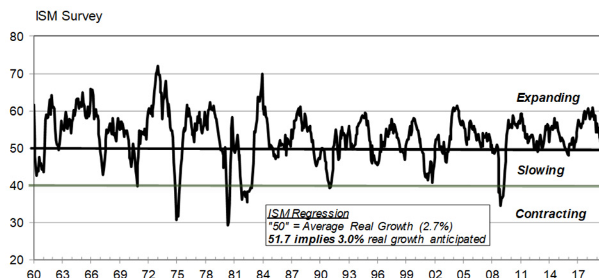
Fiscal and monetary coordination reinforced a global synchronous recovery through 2012 and higher asset class correlations that inspired "risk-on/risk-off". Yet few seem to recognize a more typical *Asynchronous Global Expansion* since 2013 with far less fiscal and monetary coordination, as well as greater dispersion between countries, sectors, and risk factors. Focus on global synchronized trends overlooks tactical opportunities, including re-emerging international diversification.

There is no evidence of recession in the foreseeable future. Housing, retail sales, and employment remain stable with positive growth, while investment and free trade deals drive net exports to boost potential growth further. The mythical fiscal cliff of sunsetting tax reform also failed to materialize, but most cycles stall because central banks hike interest rates faster and/or further than necessary—real rates (T-Bill – CPI inflation) are still well below normal of 1%. Poor fiscal and regulatory policy decisions also can limit potential growth, as observed since the Financial Crisis, but in stark contrast to higher US potential growth since 2017 policy reforms.



Source: Refinitiv DataStream & Strategic Frontier Management

Recent decline in the ISM Purchasing Managers Survey is concerning, but still correlates with real growth of about 3% over the next year. Commentators often refer to a *myth* of "contraction" below 50, implying recession, reflecting an equal number of survey responses that say business conditions are improving as deteriorating. We prefer to characterize 50 as a break-point between *slowing* vs. *accelerating* growth, rather than confusion *expansion* vs. contraction. Economic growth may be disappointing, but it doesn't justify excessive stimulus of low interest rates that keeps zombies afloat and encourages bond leverage. As a survey, the ISM can rebound quickly once geopolitical concerns fade.



Source: Refinitiv DataStream & Strategic Frontier Management

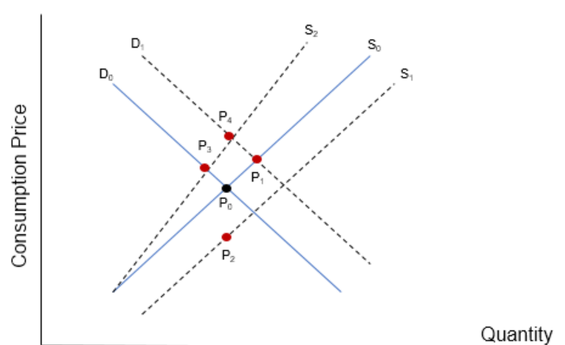
Inflation: Sources and Methods

Milton Friedman's often quoted insight is that: *inflation is always and everywhere a monetary phenomenon*. Investors and policymakers have embraced this notion over 4-5 decades, particularly during the *good fight* to crush high inflation in 1968-1981. While central banks slowed demand (growth) enough to reduce inflation by raising interest rates, there is no evidence that central banks were similarly able to ever increase growth enough to boost inflation. Monetary stimulus never achieved anything more than arrest recessions or crises.

Monetary stimulus can cause inflation (i.e., necessary), but may no be sufficient to cause ***inflation, which is always and everywhere a consequence of shifts in supply versus demand for goods and services.*** In other words, changes in monetary policy must transmit through the *Law of Supply and Demand* to affect growth and inflation. If the yield curve flattens, then lowering interest rates further, particularly near the zero-bound, surely has diminishing marginal return. We believe this is why forward guidance, persistent low rates, QE-II & QE-III, Operation Twist, etc. has failed central bankers.

Supply-Demand charts are powerful tools to understand these and other economic relationships. Consider supply vs. demand in the context of how labor quantity affects wages (price)—as unemployment rises, slack tends to limit wage growth as the *Phillips Curve* suggests, so wage growth boosts inflation with lower unemployment. We should not be too quick to abandon this theory. The employment-inflation relationship is evident in wage growth accelerating faster than inflation, even if it hasn't lifted CPI inflation much with the unemployment rate below 4%. Statistical rules don't always work as precise historical averages suggest, and unusual economic forces are interacting with labor. This brings us back to first principles to understand why supply and demand curves evolve. Its hard to imagine that supply-demand interactions between labor and inflation wouldn't be affected by exceptionally low interest rates encouraging investment (i.e., substitution of capital for labor in a paradigm of accelerating innovation), even as services expanded faster than manufacturing. Monetary policy stimulus has been ineffective increasing inflation or boosting growth, but intuition suggests less reliance on manufacturing should flatten labor's demand curve to resolve questions about relevance of the Phillips Curve.

Inflation: Function of Supply vs. Demand Curve Changes



Source: Strategic Frontier Management

S_1 = Innovation lowers prices for a given quantity ($P_0 \rightarrow P_2$: Secular disinflation, productivity)

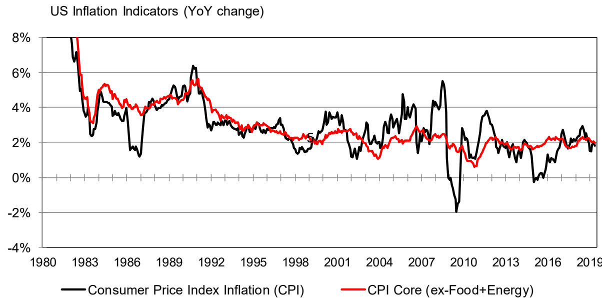
S_2 = Inelastic prices result in greater rise in prices ($P_0 \rightarrow P_4$)

D_1 = Increasing demand drives price increases ($P_0 \rightarrow P_1$: Consumption and wage inflation)

- Cutting interest rates lowers financing costs, pulling forward demand of business and household consumption ($D_0 \rightarrow D_1$)
- Increasing productivity allows companies to increase supply at a lower price ($S_0 \rightarrow S_1$)
- Increasing barriers to entry (resource scarcity, patents/IP, regulation, tight labor conditions, etc.) or monopolistic conditions, prices become more price inelastic ($S_0 \rightarrow S_2$)
- Similarly, a flatter slope of S_0 realizes benefit from competition or increased price transparency (Amazon, secular disinflation)

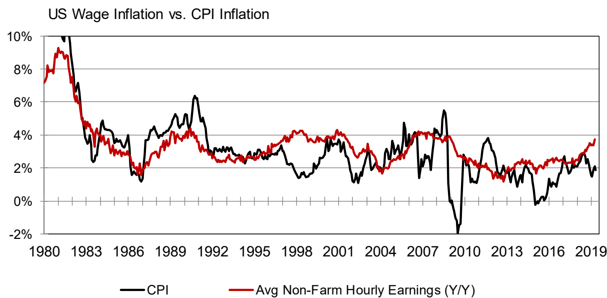
Secular changes in productivity, innovation, competitive advantage, profit margins, and secular disinflation of creative destruction should impact shifts and slopes of supply and demand curves that govern changes in consumption prices or inflation. The *mythical* obsession with boosting inflation in Japan and the Eurozone is only increasing financial imbalances without visible economic benefit. Pursuing fiscal or regulatory reforms instead of monetary stimulus might actually boost potential growth.

CPI inflation converged toward the core rate (x-food and energy) as expected following the oil price and US dollar shock of 2015, but its effect on inflation expectations remains. Core inflation has been stable, hovering around 2% since 2016. Innovation-led creative destruction has limited cyclical inflation given our thesis of secular disinflation, and why we shouldn't fear *mythical* deflation.



Source: Refinitiv DataStream & Strategic Frontier Management

Wage growth has accelerated and is approaching 4%. Minimum wage increases also are flowing through rising labor costs, but workers enjoyed rising wages tracking inflation over 40 years, and even exceeded CPI inflation over the last 7 years. Wage growth has tracked core inflation more consistently, yet exceeded CPI inflation since 2008. Cost-of-living adjustments were greater when inflation was higher in the 1970s, but to presume wage growth should exceed inflation is peculiar.

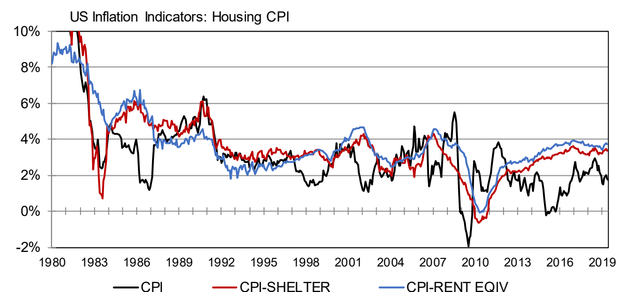


Source: Refinitiv DataStream & Strategic Frontier Management

The myth of income stagnation hinges on a single flawed measure of real household income (Dept. of Census), which ignores transfer payments, tax credits, and noncash benefits, as well as capital gains. It is skewed by demographic changes, including more single income households with rising divorce rates, more children leaving parent's homes, and more contract (gig) workers that underreport income. The Census Bureau knows this series is being misused, so it offers an alternative income measure that is more useful. The inconvenient truth is that this broader income methodology suggests more equal income distribution between income groups.

Sustainable economic prosperity seeks higher growth and productivity that benefits from stable prices or limited inflation, without risk of recession, depression, or deflation. Inflation of 1% is more desirable than 3%, and central banks managing inflation is a means to an end, rather than a governing objective for sustainable prosperity. When an economy flirts with recession, only then is the prescription for a sick economy well understood—specifically, lower interest rates to pull forward consumption and increase financial or asset liquidity. Intervention for a prolonged period diminishes ability to *pull forward demand*, particularly if the yield curve flattened already or rates are near their presumed lower bound of 0%. The invisible hand can exploit natural devaluation to advantage underperforming countries, thus naturally free-floating currencies help maintain global economic order. However, intentional currency devaluation by monetary means is insidious and chaotic—so, devaluation efforts are negated when more than one country purses similar competitive strategies. It gets worse when many countries pursing individual objectives are tethered to one currency (Eurozone) as the central bank implicitly weakens its currency.

We believe increasing cyclical inflation will be driven by housing costs (+3.6%), wages (3.4%), and service costs rising faster than inflation of 2%. Importers may cut prices to offset imposed tariffs, but they won't absorb the full price difference vs. competing alternative products. Recent volatility in CPI is attributable to fluctuating oil prices and currency, including a wide spread versus core inflation during 2015-2016 due to plunging oil prices.

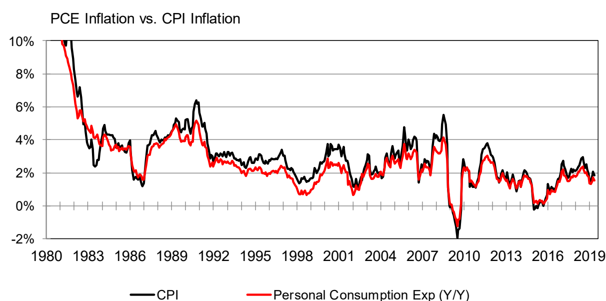


Source: Refinitiv DataStream & Strategic Frontier Management

PCE inflation hasn't been adopted for any other real purpose than by the FOMC for setting interest rate policy with correlation nearly indistinguishable from CPI inflation, albeit 0.5% lower on average (see chart below). PCE inflation was introduced because Chairman Greenspan was concerned CPI might overstate inflation, but didn't enter monetary policy consideration until recently in 2012. Many now believe CPI might be too low given *hedonic adjustments* of deflating prices of consumer goods. Dr. Greenspan didn't contemplate that.

When the Federal Reserve changed its definition of inflation to suit their desired policy design, that hole in your pocket (purchasing power) remained quite real to pay for higher cost of gas, groceries, utilities, repairs, service fees, education, and housing. The big SWAG in PCE divided Goods (35%) and Services (65%) into

scientifically-derived round numbers. Weightings of 7% to financial services (fees and trading costs plunged) and 6% on vacation hotels seem to exceed household use, whereas just a 17% weighting to housing[1] is half of what it should be. Housing affordability can't be ignored and remains a key source of accelerating inflation. Core CPI hovered around 2.0% for eight years, although the FOMC remains obsessed with low PCE inflation, which lagged CPI by 0.7% over the last year.



Source: Refinitiv DataStream & Strategic Frontier Management

Dept of Labor (BLS) calculates a variety of economic statistics, including CPI, but the PCE Price Index is calculated by the Dallas Federal Reserve. Calculating inflation itself used to set monetary policy undermines credibility. Greater flexibility adjusting weightings for the PCE Index is apparently a reason the Staff prefers it, but ad hoc changes to expenditure weights undermine historical consistency and comparability. PCE isn't distinguishable or proven to be any better than CPI, nor available long enough to understand its cyclical behavior over decades. If the two measures are so highly correlated, why is PCE better for policy decisions? The FOMC already has tremendous interpretive discretion.

We prefer CPI for global comparability, consistency, and its longer available history (1913) to understand business cycle relationships. CPI is used for contracts (annual price adjustment) and cost of living increases from employee wages to Social Security and other government benefits. We understand the relationship of real interest rates in the context of CPI, yet FOMC policy seems to just apply CPI-related inflation premiums to judge real interest rates—real interest rates are higher using PCE inflation. Using PCE inflation to set interest rate policy is deceiving, if only to justify a ½% lower Fed Funds rate. This lowers government interest burdens across the yield curve, but is this a conflict of interest?

Our thesis of secular disinflation, if better understood, might have limited evolving equilibrium expectations, including in the FOMC forecast or dot-plot. Secular disinflation has benefited from innovation and efficiency gains that reduced labor, energy, and basic material intensity. *Conservation, Substitution, and Innovation* not only reduced demand for resources, but supply of labor, energy, and basic materials increased. Exploration, mining, and drilling are more efficient and productive, as well as environmentally cleaner. Additive manufacturing (3-D printing) minimizes production waste and accelerates prototyping in product development. Time, effort, and cost to bring new products to market declined with computer-aided design (CAD-CAM) and simulation to efficiently optimize designs. We expect disinflationary forces to moderate, but cyclical forces in labor, housing, and basic material costs still can push inflation higher.

Improving potential growth takes patience and requires fundamental regulatory, legislative, or fiscal changes to incentivize business creation, investment, innovation, productivity, research and development. Failures of monetary intervention to bolster growth or increase inflation should cause us to reconsider unconventional monetary policies over extended periods that risk unintended financial imbalances or overvalued bond markets suffering with illiquidity. Exceptional monetary stimulus should be reserved for real and present danger of recessions, not fine-tuning disinflation that can be symptomatic of good and bad causes.

FOMC members have cited global concerns regarding potential deflationary shocks. Increased US trade tariffs are more likely to be inflationary rather than deflationary, which resolved should bolster US real growth. US net exports likely will rise as domestically produced goods become more price competitive. Even if retaliatory action is taken, net exports might not rise as much, but the US trade deficit should still narrow, boosting US real growth at China's expense. If the *New Order* helps improve terms of trade, we can evolve toward freer trade worldwide that results in rising global growth benefiting Canada, Australia, Japan, Europe, and other countries.

Interest Rates Should Normalize Further

Under current conditions of low unemployment, near potential real growth of 3%, and high profit margins, there is no reason for the FOMC to maintain such low interest rates or bloated balance sheet, let alone cut interest rates. When FOMC Chairman Powell said the central bank in adopting a more *patient stance* will "act as appropriate to sustain the expansion", investors seem to misinterpret his comment to imply it was prepared to cut interest rates, rather than reiterating reliance on data dependency. The FOMC is concerned about cross-currents of weaker global growth and geopolitical issues, including US trade tensions, but for now we think it is a mistake for monetary normalization to stall or even cut rates. Longer maturity mortgage and financing rates won't decline much even if interest rates are cut with a flat yield curve, and there is little demand to *pull forward.*

[1] BLS-2018: 37% average spending on housing actually exceeds CPI's 32% weighting—30% considered prudent

Its understandable Presidents want interest rates as low as possible, but blustering politicians have sought to influence the FOMC for decades. Independent policy decisions are determined by committee consensus, generally free of political interference by design (i.e., FRB 14-year terms). Any belief that bullying the FOMC or replacing Chairman Powell might change the course of monetary policy is hopefully ridiculous.

The *Federal Reserve Act* sought to promote a safer, more flexible, and stable banking and financial system that encourages maximum sustainable economic growth. The *dual mandate* is unique in its objective of promoting *maximum employment* and *stable prices*, while managing interest rates. The mandate's flexibility to promote maximum sustainable growth is effectively managed with traditional monetary tools, and differs from mandates of other central banks targeting 2% consumer price inflation (inc.: Bank of England, European Central Bank, Bank of Canada, Bank of Japan, or Royal Bank of Australia: actually 2-3%). While true that central banks wish to avoid flirting with deflation with a margin of safety, *symmetric inflation targeting* is a novel post-Financial Crisis idea that conceals extension of inflation stability, misconstruing secular disinflation and *mythically* presuming central banks can increase inflation as easily as they limit it. Experience suggests otherwise.

The FOMC has embraced *data dependency* in pursuing its dual mandate objective to reassure investors and reinforce confidence. Since the Federal Reserve has no explicit inflation target, pursuit of *symmetric inflation targeting* is problematic. Monetary tools such as changes in interest rates, required reserves, and balance sheet holdings proved far more effective limiting inflation, than boosting inflation. Reversing rate cuts or restarting run-off of bond holding is likely to increase market volatility. Monetary stimulus is warranted in recession, but only policy surprises can boost demand growth or inflation. Low inflation is necessary, but not sufficient to justify cutting interest rates, and alone does not justify lowering interest rates—nor does global rate differences. It is a fools' errand seeking to increase inflation and central banks should abandon *symmetric inflation targeting*.

Federal Reserve Forecasts

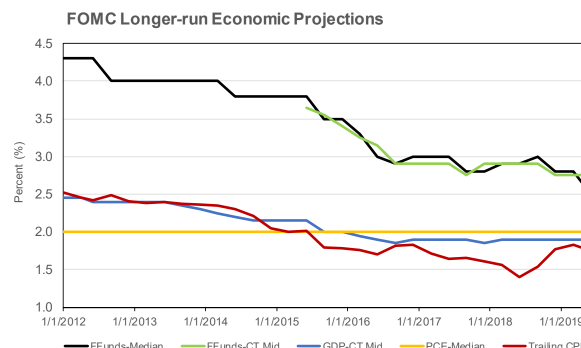
Central Tendency (midpoint)							LongRun Forecast	
U.S. Fed %	2016	2017	2018	2019e	2020e	2021e	Fed	SFM
GDP	1.90	2.45	3.05	2.10	2.00	1.90	1.90	2.70
U.Rate	4.70	4.10	3.70	3.65	3.70	3.80	4.20	5.00
PCE	1.50	1.65	1.85	1.55	1.95	2.05	2.00	2.30
Core PCE	1.70	1.50	1.85	1.75	1.95	2.05	2.00	2.30
Implied CPI	1.70	2.15	2.35	2.05	2.45	2.55	2.50	2.80
Federal Funds	0.35	1.38	2.38	2.17	2.21	2.32	2.70	3.50

Interest Rates	2016	2017	2018	2019e	2020e	2021e	Longer Run
FOMC Avg.	0.5-0.75%	1.38%	2.38%	2.17%	2.21%	2.32%	2.70%
SFM[1]	0.75%	1.50%	2.50%	2.75%	3.00%	3.25%	3.50%
SFM Hikes	0.25%	0.75%	1.00%	0.25%	0.25%	0.25%	-

1. Top-end of indicated Fed Funds range

Source: Federal Reserve and Strategic Frontier Management

The FOMC began publishing *Economic Projections* in 2012 and introduced their new preferred inflation measure, namely the PCE Index, to replace the long-accepted CPI. The FOMC's long-term inflation and interest rate expectations declined significantly since 2013, particularly the previous equilibrium interest rate of r*=4.25%. US CPI inflation has averaged 3.0-3.3% since 1980 with a normal real interest rate of 1%. The period since 2000 overlapped two recessions dragging inflation lower, but forecasted normal interest rates remained relatively unchanged until oil prices collapsed 50%.

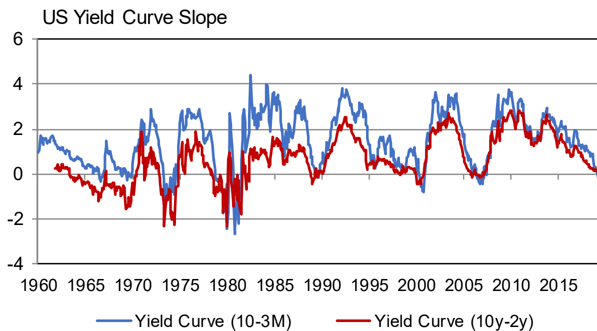


Source: Federal Reserve Board & Strategic Frontier Management

The evolution of the FOMC's long-run forecasts above brings into focus divergence from historical averages, and once accepted wisdom in this regard. The FOMC's r* or Federal Funds interest rate expectation declined from over 4.0% to 2.8% in just four years—we'd suggest inflation expectations declined since 2015 in part due to cyclical forces of collapsing oil prices and a strong dollar. Market effects should not affect secular equilibriums so significantly in a short time, so we expect interest rate forecasts will eventually revert back toward r*=3.5% as inflation rises. The current FOMC forecast suggests they believe a 2¼-2½% interest rate is approaching r*, rather than the 3¼-3½% rate we assume. US normalization has stalled and unnecessary rate cuts of ½-¾% are now expected in 2019, but the Taylor Rule output of 4% (ref.: Federal Reserve Bank of Atlanta) still exceeds current interest rates even assuming 2.5% normal inflation.

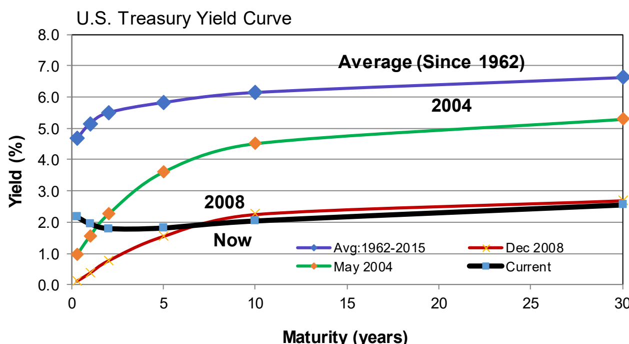
If Treasury Bill yields should exceed CPI inflation by 1% and 10-year Treasury yields should exceed T-Bill rates by 1.5% based on historical averages, then if CPI inflation is 2.5%, 10-year Treasury yields can eventually double to 4.5-5.0%. With high convexity (low bond yields increase sensitivity), bond losses compound more quickly for a given rise in yield. In 1994, Treasury yields rose 2%, returning -12% with lower convexity than today. It also drove Orange County into bankruptcy with a 1.5x leveraged Treasury portfolio. We are concerned about extended duration and leverage of bond portfolios, particularly in risk parity strategies and LDI objectives. Patience in normalization can trigger market volatility when necessary to restart normalization, as in 2015.

Flattening or inverted yield curves can be symptomatic of weak growth or declining inflation expectations, most often from hiking rates too far or too fast. If inverted yield curves tend to coincide with recessions, but economic growth is constructively stable, then unusual forces must be in play. The slow progression of yield curve flattening since 2013 is unusual and provides our first clue the yield curve isn't reacting to normal precursors of recession. Yield curve flattening or inversion doesn't cause a recession, but can forestall one with lower bond yields.



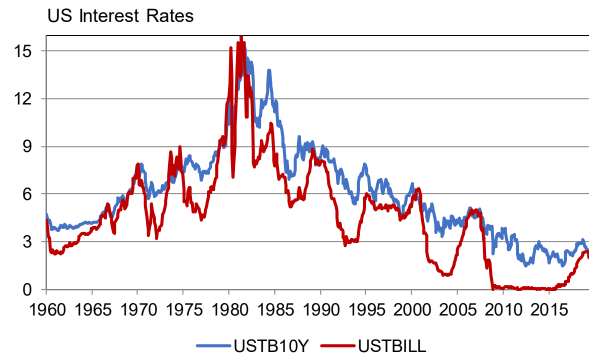
Source: Refinitiv DataStream & Strategic Frontier Management

Several external factors were key to driving lower bond yields and a flatter yield curve, including negative bond yields in Europe and Japan given a strong US dollar. This encouraged foreign investment from countries with negative bond yields. A strong US dollar and low currency volatility reduces value-at-risk (VaR) for foreign investors buying unhedged Treasuries. Interacting yields between countries causes Eurobond and JGB yields to rise and fall with Treasury yields until the US dollar weakens sufficiently or inflation rises.



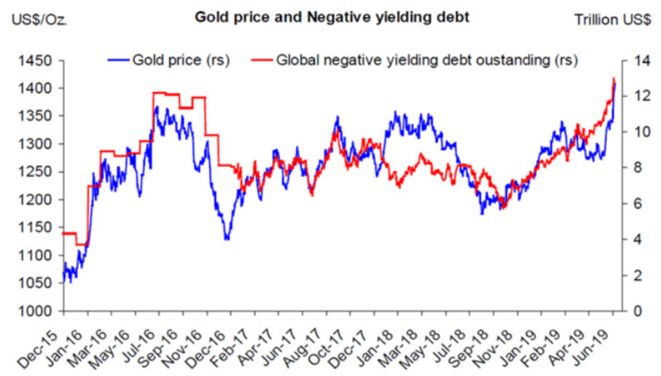
Source: Refinitiv DataStream & Strategic Frontier Management

US growth is not as fragile as some mythically suggest, and fears that raising interest rates further might plunge the economy into recession are misguided. Instead, the yield curve should steepen with stronger potential growth, full employment, and refunding central bank holdings. If the FOMC defers or walks back rate cut expectations, tactical opportunities may be significant. However, this unusual yield curve must eventually succumb to mean reversion, if only to 2004 levels. Treasury yields rising 2½% would result in loses greater than -12% observed in 1994 starting from lower yields.



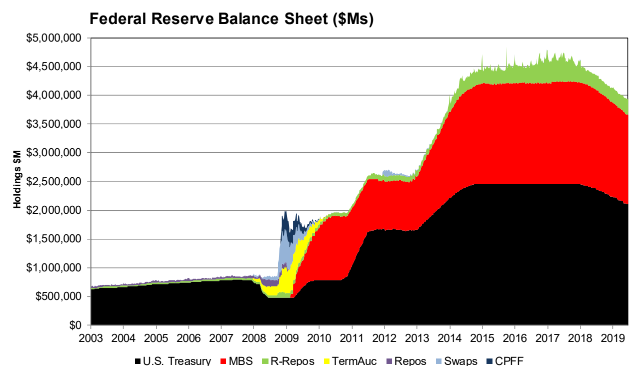
Source: Refinitiv DataStream and Strategic Frontier Management

With US$13 trillion in negative yielding global bonds, global investors will favor higher yielding US Treasuries, or even gold and cryptocurrencies with no yield. The risk has increased that unusual flows reverse, relative bond yields narrow versus Treasuries, or US dollar weakens. Economic stability and low volatility provide opportunities to normalize monetary policies and extend debt maturity.



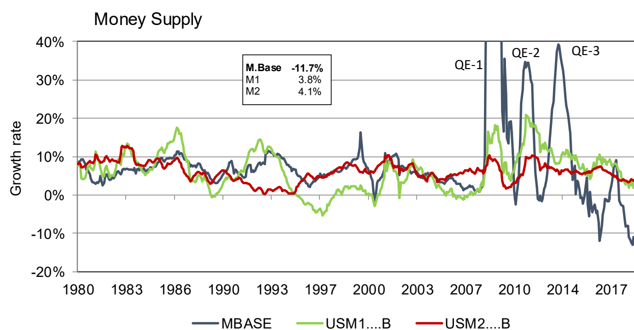
Source: Bloomberg (BNYDMVU Index) and Refinitiv DataStream

We believe the US balance sheet shouldn't exceed $1.7T vs. $3.8T today, thus bond holdings should be reduced by $1T over the next 12-18 months, although the FOMC indicated it likely will soon suspend refunding.



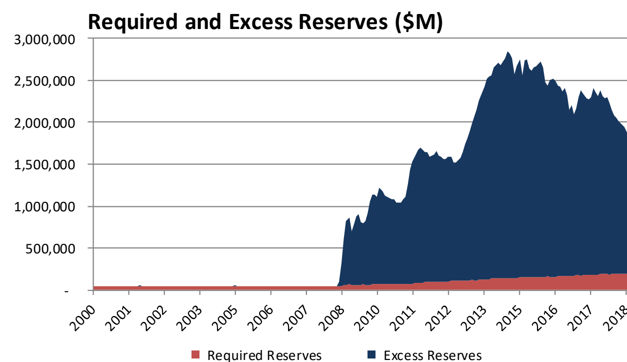
Source: Federal Reserve & Strategic Frontier Management

Forecasting markets should focus on enduring and intuitively rational ideas (*Rational Beliefs*), rather than *Myths That Conceal Reality* assumed in Rational Expectations or behavioral bias in simply “don’t fight the Fed”. Overreliance on monetary policy stimulus has left little room to address a potential global debt crisis. Since the Financial Crisis, buying bonds (QE: Quantitative Easing) increased the monetary base. QE forced long bond yields lower, although neither QE-II nor QE-III appears to have bolstered growth. Normalizing the balance sheet was always going to be difficult, particularly less liquid mortgage bonds (MBS), as non-Treasury holdings should be eliminated by now. Money supply needs to expand with the desired nominal growth rate of 5.5-6.0%, but reducing holdings results in lower or even negative money supply growth. Normalization should drive bond yields higher as Treasury supply increases, but the yield curve flattened as M2 slowed.



Source: Refinitiv DataStream & Strategic Frontier Management

Interest on Excess Reserves (IOER) helped manage the effective Federal Funds rate below 1% and increased bank interest income at taxpayer expense. When interest on bank reserves was 0%, excess reserves were negligible. We have advocated eliminating paying interest on any reserves or limiting it to required reserves of about $300B. Thus, we are pleased that the FOMC finally began to lower the IOER rate, which was rising lockstep with the Fed Funds rate. This can accelerate decline of excess bank reserves, thereby increasing bank lending and money velocity, and reduce Taxpayers’ interest expense on over $1.5T of reserves.



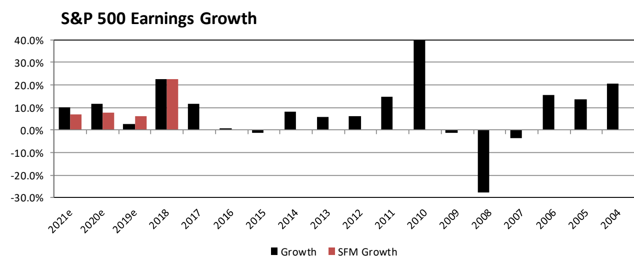
Source: Refinitiv DataStream & Strategic Frontier Management

Moral hazard to global investors is acutely problematic in Japan, where the BoJ purchased equity ETFs on a massive scale (ref: 80% of ETF equity shares or 5% of market capitalization), seeking wealth effects to bolster consumption. Japan’s bond holdings have increased to about 50% of government debt as Debt/GDP exceeds 250%. We see no current pathway to normalize BoJ holdings, increasing risk that Japan simple cancels its BoJ bond holdings. This would undermine credibility of all central banks and fractional reserve banking. Global cost of capital would soar, particularly for Japan. That event thought inconceivable actually materialized—to think this is delusional, imagine a decade ago thinking bond yields could be negative? A collapse in security prices for assets owned by pension funds (inc. GPIF), Postal Savings, and life insurance companies would devastate savings and pensions in Japan. Continued market manipulation is increasingly unlikely to end well for Japan, still struggling to achieve even 1% real growth.

Earnings

Economic growth translates into earnings growth through profit margins. Simply put, profit margins determine what share of revenue yields earnings. Increases in productivity and lower tax rates can drive up profit margins, as productivity increases with investment, research, and product development. In 2018, earnings forecasts climbed every quarter. It is again popular to reference “peak earnings”, but this often confuses level with growth rates. Growth rates may peak, but earnings have no upper bound, just as equity indices.

Stronger revenue growth and still high profit margins translated into 23% S&P 500 operating earnings growth in 2018, with help from energy and basic materials still recovering from 2015 (see yearly earnings growth below). Thus, US equity valuations improved as broad market averages declined last year, but support stronger equity returns in 2019-2020.

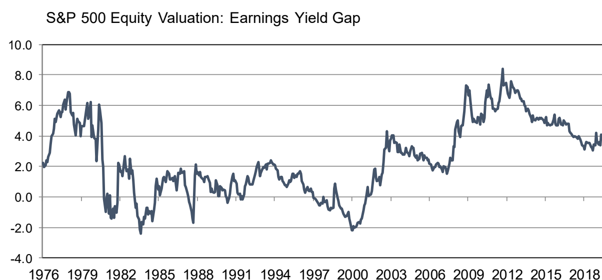


Operating Earnings	2021e	2020e	2019e	2018	2017	2016
IBES Consensus	204.91	185.95	166.44	161.93	132.00	118.10
Growth	10.2%	11.7%	2.8%	22.7%	11.8%	0.5%
Strategic Frontier	198.00	185.00	172.00	161.93		
Growth	7.0%	7.6%	6.2%	22.7%		
S&P 500 @17x	3366.00	3145.00	2924.00	2752.81	2244.00	2007.70

Source: I/B/E/S and Strategic Frontier Management

Analysts now expect just 3% earnings growth in 2019, if not a *mythical* perceived earnings recession. We still

expect earnings will increase 6% in 2019, led by Industrials, Financials, and Consumer Discretionary sectors, suggesting upside risk to our 2950 S&P 500 index target. Share buybacks have offset increased share issuance of accelerating IPOs, so after years of declining share counts, some large stock offerings are adding to US market cap. Unfortunately, many of these companies have little to no earnings, thus tend to boost the average P/E ratio. We still don't believe US equities are overvalued, although valuations could be more constructive elsewhere globally.



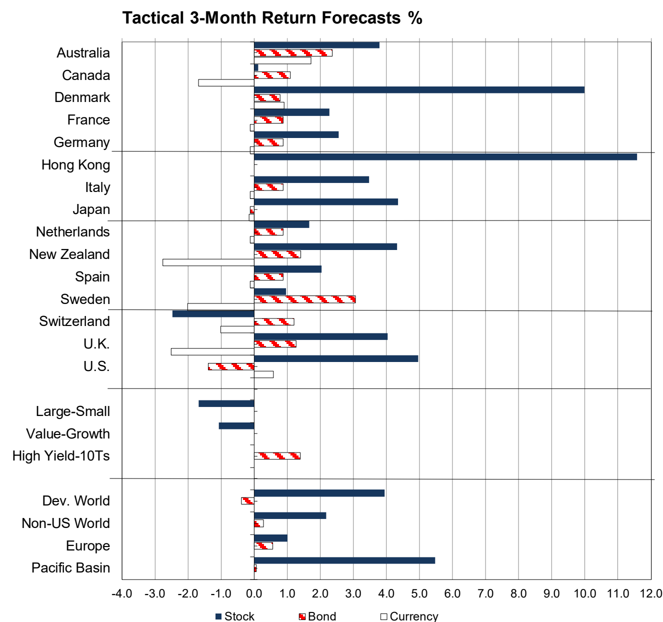
Source: Strategic Frontier Management

S&P 500 profit margins remain near record highs. This highlights an important difference in country (11% for S&P 500 vs. 6% for Europe & Japan) or factor return potential. Differences in relative profit margins seem to be a meaningful source of earnings disagreement among strategists, so investors misunderstanding why strong economic growth hasn't translated into better outperformance of a country or sector is not surprising. Japan is a potential value trap for this reason. Lagging equity performance of Emerging Markets (6.5% margin) and small-cap stocks are other recent examples.

While investors are preoccupied about the *mythical* extended duration of this economic expansion and equity bull market, not every equity correction is the result of recession, and not every recession tends to result in a correction—prior to Global Financial Crisis of 2008, the US Savings and Loan Crisis of 1991-92 yielded no correction in the S&P 500 (1991: +30.5%, 1992: +7.6%). Our Tactical Asset Allocation models with equity risk premium factors (earnings/price – bond yield) routinely identified overvalued markets, including Aug. 2000–Sept. 2002 and October 1987 Crash. The mythical valuation use of Market Capitalization/GDP or Shiller's CAPE ratio is misguided if they were unable to discern these periods of overvalued equity indices. Suggesting the equity market is overvalued, we must just cringe.

Global Tactical Asset Allocation Forecasts

Our Global Tactical Asset Allocation discipline focuses on forecasting asset class and currency returns with an 18-24 month time horizon, although they are calculated to as a three month return. Global equity models are positive nearly across the board. The US has enjoyed better economic growth with low inflation supporting greater earnings growth, which kept valuations in check despite strong returns. European and Japanese growth has lagged, but interest rates remain low and currencies are weak. Only Hong Kong has a higher local equity market return forecast than the US. Many strategists are favoring Japanese equities again this year, but the risk of a value trap has increased. We also favor small-cap again, and still have a slight tilt toward growth.



Source: Strategic Frontier Management

Long-term relationships between markets, inflation, and interest rates are observed in the table below. We think normalized inflation should average over 2.5% and equilibrium interest rates should be 1% higher than CPI inflation. Treasury yields are 2.0-2.5% below normal adding the real interest rates of + 1% over CPI, plus the term risk premium for 10-year bonds ranging from 1-2%.

	10-year Returns		1900-2018[2]	30-Years		Long-run Forecast	
Asset Class	Return	Risk	LT Return	1989-2018	Risk	E[Return][1]	Risk
U.S. Stocks	13.1%	13.5%	9.4%	10.0%	14.0%	7.5%	13.3%
U.S. Small-cap	12.0%	18.4%	-.-	9.2%	18.5%	8.5%	17.6%
World (ex-US)	6.8%	16.1%	-.-	4.7%	16.7%	6.5%	15.8%
Emerg. Mkt Equity	8.4%	19.3%	-.-	9.5%	22.7%	8.0%	21.6%
U.S. 10Y Tres	2.5%	7.1%	4.9%	6.0%	7.0%	1.7%	7.8%
US BC Agg Bond	3.5%	3.0%	-.-	6.1%	3.7%	2.0%	4.1%
Cash	0.4%	0.2%	3.7%	2.9%	0.7%	3.0%	0.7%
Inflation	1.8%	1.1%	2.9%	2.5%	0.9%	2.6%	0.8%
Commodities (CRB)	0.7%	15.8%	2.6%	1.5%	11.7%	2.4%	10.5%
Risk Premium							
Small-cap Equity	-1.1%		-.-	-0.8%		1.0%	
Stock-Bond	10.6%		4.5%	4.0%		5.8%	
Stock-Cash	12.7%		5.7%	7.1%		4.5%	
Bond-Cash	2.1%		1.2%	3.1%		-1.3%	

(1) Expected return as of June 2019 refers to 10-year long-term return
(2) 1900-2018 from Credit Suisse Global Investment Returns Yearbook
(3) As of Dec. 31, 2018. Periods greater than 1-year are annualized.
(4) US Stocks: S&P 500, Bonds: BBG Aggregate, Cash: 3m T-Bill, Commodity: CRB

Source: Refinitiv DataStream, Credit-Suisse Yearbook, SFM

Gold, silver, and gems have provided poor returns, and were a poor inflation hedge since 1900 with returns less than US Treasury bills and high volatility exceeding equities. We've often noted that *input costs can't exceed output costs, therefore commodity returns can't exceed inflation*. This is both theoretical and empirical. Although inflation declined to 1.8% over the last decade, the CRB lagged inflation by 1.1% with 15.8% risk (σ).

The stock market doesn't always track the economy, and the economy doesn't always respond to policy changes as expected, even with a long lag. Much like the *Heisenberg Principle*, one can't be certain of both where (or what) and when at the same time. Yet, there is still value in trying to forecast asset returns and risk—the discipline of doing so is both instructive and insightful. Direction can be valuable, even if magnitude and timing are allusive. Forecasts attempting to convey path dependency (rise, then fall) are always precarious.

Households in Good Shape, Governments Are Not

Sen. Elizabeth Warren says "increasing household and corporate debt has left the economy on a precarious footing". The story highlights the breathtaking lack of financial, economic, and mathematical literacy. Lies and damn statistics are often misconstrued as indisputable facts—nominal debt levels are quoted, ignoring the asset side of balance sheets, or net worth, and corporate finance theory. Modigliani–Miller's theorem (1958) proposed the irrelevance of the debt-equity mix, which also earned a Nobel prize, thus its not an obscure theory. Trade-off Theory suggests a company chooses how much debt versus equity financing to use by rationally balancing cost and benefits.

The rise in debt-financed share buybacks is rational for companies observing low interest rates, particularly if their stock is trading at a discount. Share buybacks are the result of companies purchasing their shares in the open market, reducing cash and shares outstanding. Buybacks and dividends enable companies to return cash to investors, which is the objective of any investment, but buybacks are criticized for undermining investment or productive business activity, as well as lining the pockets of management. These mythical arguments overlook the point that returning cash to shareholders promotes more productive investment available elsewhere. It is also true that more companies delist (100% buyback) as the cost and scrutiny of remaining a public company increases.

It is rational that low interest rates encouraged financing equity buybacks. Similarly, very low interest rates have limited interest expense as a percentage of household income, and is now lower than ever in at least 40 years. Leverage in credit cards, mortgages, and lines-of-credit moderated since 2008, but student loan debt rose with rising cost of education. Rising debt levels are inconsequential if asset collateral far exceed debt and interest expense remains low. Banks, households, and businesses are far less leveraged than in 2008, but the real debt crisis remains global government leverage with still high fiscal deficits.

Household Balance Sheet ($Bs)	2015	2016	2017	2018	2019-Q1	Annualized vs. 2007	1-Year
Total Assets	104,144	110,063	118,905	119,997	124,694	3.7%	4.0%
Households: Real Estate	24,454	26,042	27,866	29,164	29,551	2.2%	4.5%
Financial Assets (inc. retirement)	74,132	78,294	85,135	84,657	88,894	4.4%	3.8%
Deposits (Bank Acct + Money Fund)	11,235	11,833	12,284	13,102	13,250	4.4%	5.3%
Change in Assets%	1.7%	5.6%	8.7%	4.2%	7.1%		
Liabilities	13,934	14,370	14,926	15,396	15,397	0.9%	2.9%
Home Mortgages	9,567	9,760	10,054	10,331	10,356	-0.2%	2.6%
Consumer Credit	3,411	3,644	3,828	4,009	4,000	3.9%	5.0%
Household Net Worth	89,617	95,086	103,350	103,952	108,643	4.2%	4.1%
Growth Rate (y/y)	3.1%	5.8%	8.2%	5.0%	7.4%		
Disposable personal income (NIPA)	13,925	14,367	15,032	15,774	15,876	3.6%	3.8%
Growth Rate (y/y)	3.4%	3.2%	4.6%	7.3%	6.9%		
						Change since 12/31/2008	
Owners' equity in real estate	12,052	13,255	14,524	15,500	15,764	Net Worth Chg	Fincl Assets
Owners' equity / real estate value %	55.7	57.6	59.1	60.0	60.4	$ 50,628	85%
Motgage/Equity	39%	37%	36%	35%	35%		

Source: Federal Reserve, Flow of Funds (Table B.101)

The key statistic in the table above is that household net worth has increased $50 trillion or 7.4% a.r. to $109 trillion since the end of 2008. Thus, household leverage is now a fraction of 2007 levels. Financial assets increased 85%, including over $13 trillion held in bank deposits and money market funds. Owners' equity in real estate, the Achilles'' heel in 2007 and which troughed at 38% in 2009, has risen to over 60%, as total liabilities/assets plunged from 19% to 12%. Repeating the politically expedient *myth* of income stagnation is the height of economic illiteracy, based on a single flawed measure of household income from the Department of Census. A dozen other national income statistics show that wage growth paced inflation in the post-war era, and even exceeding inflation over the last decade. A savings rate of over 6% well exceeds 4% observed in 2008. How would growth in household net worth or the savings rate be possible if consumers were "drowning in debt"?

Rising household financial assets reflects contributions to retirement savings and wealth appreciation from strong capital market returns. The S&P 500 returned 397% versus a 44% return for Treasuries, but just 6.5% for commodities since February 2009. Property prices recovered and mortgage leverage was reduced as household and corporate leverage declined. Yet, government debt more than doubled. We expect household confidence to be ever more reliant on capital markets. Household confidence will follow the changing mix in share of retirement savings versus home values. James Carville famously said it's the economy that matters most, but we'd suggest that now the stock market is more relevant than ever to political outcomes.

Which brings us to proposed policy suggesting imposing a financial securities transaction tax on Wall Street to pay for expensive progressive social programs—we believe transaction taxes are a terrible idea, but the *myth* will be discredited. Efforts to target Wall Street are misguided, since clearly only investors will pay such tax, including pension funds, retirement savings accounts, and households. Imposing a financial transaction tax would have a devastating effect on retirement savings and

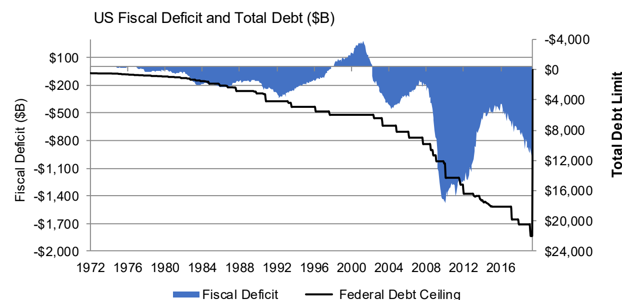
pension funding by reducing net returns. It is also redundant versus a capital gains tax, as well as likely to drive securities trading and exchange listing offshore. Past failures (ex: Sweden-1994, France and Italy-2012) demonstrate the illiterate foolishness of such tax proposals, and were soon abandoned after trading migrated to other countries. Transaction taxes reduced market liquidity and increased volatility, yet generated just a fraction of expected tax revenue. High frequency trading declined with increased exchange transparency compelled by regulators and investor activism, as well.

I became acutely concerned about individual retirement security and savings behavior with the cross-over from reliance on Defined Benefit (DB) pensions to Defined Contribution (DC) savings plans in 2002. Greater self-sufficiency is required for those born after 1960. Congress passed the Revenue Act of 1978, which included Section 401(k). Ted Benna was the first to see its retirement savings potential and act on it at Johnson Companies, on the heels of the Employee Retirement Income Security Act (ERISA) of 1974. Employees could avoid taxes by deferring compensation until retirement savings was withdrawn, including gains of compounded returns. This led the way to tax deferred 403(b), 457, and cash balance plans, as well as IRAs.

The seismic shift in funding retirement security 15 years ago would result in divergence of winners and losers based on individual savings behavior and investment success, increasing the wealth gap between prudent savers and conspicuous consumers. Piling up credit card, student, and mortgage debt to foregoing savings, redeeming lump-sum DB payouts or 401(k) plan borrowing became a way of life. It was even encouraged by the government seeking to pull forward demand by driving down interest rates, offering cash for klunkers, and easing loan requirements to increase affordability of housing and consumer goods.

Democratic candidates emphasize tax and spending policies to restore economic equality as a centerpiece of their platforms, yet there is no evidence that inequality is rising or even an important priority for Americans according to Gallup ("Inequality as a Voter Concern in 2020", July 2019). Indeed, "70% of Americans say they can achieve the American dream by working hard and playing by the rules, and this is about the same as 10 years ago when Gallup last updated this question". We don't believe a wealth tax is likely, particularly attached to retirement savings that will be an increasing source of wealth inequality. A wealth tax is also unconstitutional, requiring amendment to Article 1–Section 9 and Amendment XVI, which enabled a federal income tax. However, wealth taxes are not beyond reach for states, which already assess property taxes.

Treasury debt now exceeds $22 trillion, and the US government's non-discretionary spending liabilities exceed 65% of the budget, including entitlements and other promised liabilities that are growing faster than inflation with a fiscal deficit (spending >> tax revenues). This makes spending reform very difficult, as well as very necessary. Incumbent political desire to introduce and expand spending programs only reinforce shameless patronizing efforts to win-over voters with promises of debt forgiveness to providing basic income and free health care insurance. Expanding government programs are a burden and make spending reform more difficult.



Source: Refinitiv DataStream & Strategic Frontier Management

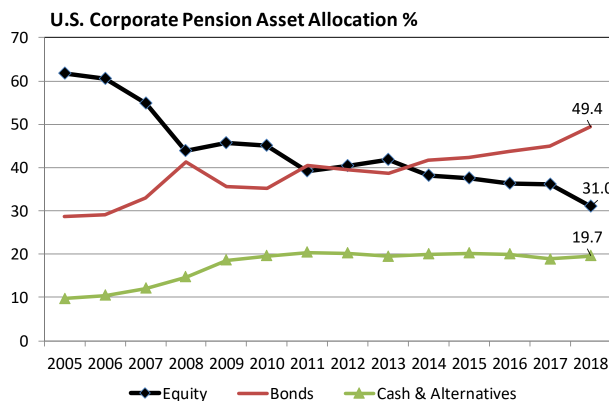
Office of Management and Budget expects US Federal interest costs to increase over 70% by 2020 versus a FY'2017 baseline of $200B, thus debt interest will become the fastest growing major budget liability. The fiscal deficit increased, although tax revenues grew faster than spending with increased business earnings and income. However, in spending-revenue deficit, tax revenues must grow much faster just to maintain the current deficit, and reinforces the need for fiscal spending reform. Congress' recent deal to increase the debt limit likely precludes any progress on spending reform until 2021.

The *myth* deficits don't matter ignores the turmoil experienced during the European Sovereign Debt Crisis. Fear among US bank and securities regulators during that period was obscured to the public, but my money market and liquidity fund managers were acutely aware of how fragile and illiquid government bonds of the "PIIGS" (Eurozone) had become, and still are today. Japan is an even greater concern. Fiscal budgets benefit from flat yield curves, but many forget how quickly higher interest rates compound fiscal deficits. Indulging on low rates for so long caused us to lose our fiscal discipline.

The average pension fund with 60% equity exposure before the Financial Crisis suffered as other similarly situated investors, except most public and corporate pension funds failed to rebalance back to their strategic range. Instead, pension plans changed their investment guidelines by lowering their equity ranges to align with newly realized exposures of 40-45% equity, locking in higher bond and alternative allocations. Public pension funding levels remain abysmal with 10 states below 60% (inc.: KY-34%, NJ-36%, IL-38%, CT-46%, CO-47%),

according Pew. Only 9 states exceed 90% funded, considered viable. Funding levels of many cities and counties also have declined without needed taxpayer funded contributions, nor sufficient investment returns.

Average public fund expected returns of 7% despite bond-heavy allocations are unrealistic, particularly where LDI and risk parity strategies were adopted, in some cases adding leverage. With a flat yield curve and tight credit spreads, consider the terrible predicament of a leveraged long bond investment were financing rates can exceed long yields, realizing negative cash flow—aren't you leveraging duration or credit risk for little to no benefit? This charade is becoming contentious given low Treasury bond yields imply negative real returns for 5-10 years. Equity returns are likely limited to 7% earnings growth, so composites of private market funds and hedge funds would be lucky to return between listed equities and bonds net of management fees and costs. The realized massive investment return shortfall due to reduced equity exposure, plus insufficient contributions, drove public plan funding ratios below 80%, leaving taxpayers on the hook. Pension reform is politically difficult, but the courts also have blocked needed reform.



Source: Milliman

Liabilities grow faster than inflation or even normal bond yields given wage growth, plus workforce growth, plus extending longevity. The US government can't make up a state or municipality shortfall, even as they hope to bail-out multi-employer plans. Public liabilities of combined government debt are compounded by fiscal deficits, benefit funding deficits (pension and health: assets > liabilities), and increasing interest rates. Pension staffs had pinned their hopes on *mythical* higher alternative investment returns (i.e. infrastructure, real estate, commodities, private equity, and private debt), assuming their low correlation increases diversification to lower risk, but this is an artifact of infrequent mark-to-market of unlisted or illiquid assets. The illusion of misleading return and risk assumptions is being exposed over time. Some pension plans extended maturity or leveraged bond exposures hoping to enhance fund returns, but as we know, this often doesn't end well.

State, county, and city taxpayers will have to make-up any pension liability shortfall. It is only a matter of time before legislators put the question to voters liable for their pension and health care benefit promises. This will require higher state and local taxes on individual and business income, real estate, gasoline, and merchant sales, as well as license and essential service fees. Some may be able to issue general obligation bonds to at least narrow the funding gap, but the liability remains and their return on assets will be burdened by added interest expense. In other words, the bill is due, and residents must choose whether they stay or go. This will affect local housing demand and prices.

Voters are aware of differences in tax rates and future liabilities. Tax reform's limitation on SALT (state and local taxes) deductions exposed failing states with the highest income and sales tax rates. Housing weakness emerged in regions experiencing accelerating migration of businesses and higher income households, including California, Connecticut, New Jersey, New York, and Illinois. Unfortunately, those with the highest tax rates also tend to provide the most deficient public education, welfare, infrastructure, and essential services. California's high-speed rail project was cancelled being deemed unviable after spending $50 billion. That money could have funded infrastructure needs or reversed tax increases as promised to reduce accelerating migration to Nevada, Arizona, and Texas. Politicians need to realize that higher tax rates and urban demise have consequences realizing expected tax revenues.

Meanwhile, Social Security funding has become more inadequate with extending life expectancy and cost-of-living. Mandatory contributions from individuals and their employers are levied as a payroll tax for Social Security and Medicare as a percentage of income over a lifetime. Those with higher incomes pay the most into the system, although everyone meeting the requirements gets a similar amount. Social Security and Medicare benefits are government managed retirement benefits, not entitlements. Despite contemplating means-tested benefits, nobody knows how to apply it. Retirees receive Social Security and Medicare, so there is no meaningful income to measure nor practical way to value total household assets.

Free market capitalism in the US is not a zero-sum game, so there is no wealth or income pie of social justice to divvy up—growth of one individual's income does not impede another's potential income or right to equal opportunity. In America, one person's gain, must be another person's loss is a *Myth That Conceals Realty*. Debate understanding differences between the right of *Equal Opportunity* vs. social justice of *Outcome Equality* (aka: income or wealth equality, hypothesized to restrict upward mobility, increase social instability, and cause secular stagnation), is emerging as a 2020 election issue. Only education reveals the reality.

Global Trade and That New Order

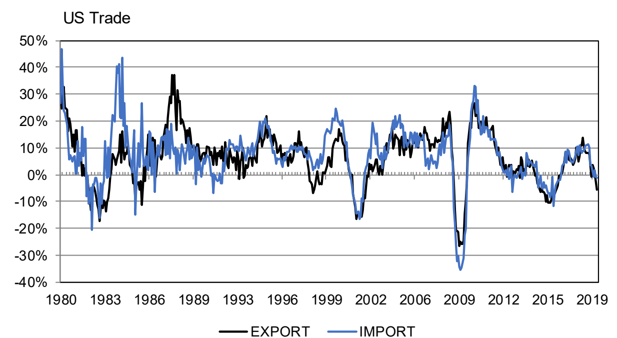
One of our themes in mid-2017 was that the Trump Administration would tackle many issues at once. We expected this could cause friction with Congress, if they were incapable of dealing with more than one big issue at a time. Limits on a President's so-called political capital haven't materialized either. The media also struggled to keep up with this new pace of government, which often misinterprets significance, intention, or consequence. If actions are misinterpreted by media, it is not surprising investors misjudge critical implications that can reinforce market volatility-of-volatility.

This Administration has been defined by Tax and Regulatory Reform already, but few expect the first term also might be defined by a *New Order in Global Trade*. The theory of *global comparative advantage* provides that goods and services must be produced in the most productive way, assuming a free market for goods and service. We support free trade, but observe the reality of existing trade barriers and tariffs worldwide with unprecedented currency and interest rate manipulation by governments. It is a shame the House has politized and delayed USMCA (aka: NAFTA 2.0) ratification. It begs the question how will it respond to other key negotiated deals with China, Japan, or the U.K.

Q4 volatility in global equity markets coincided with uncertainty in various geopolitical issues, particularly the US-China trade dispute. Whenever the U.S. threatens additional tariffs, the refrain of experts suggest world growth must be doomed. *Myths That Conceal Reality* mix up effects of volume and price relationships. Inflation is more likely to rise, than would business and consumer fall. Import tariffs increase selling prices, which force import manufacturers to lower wholesale prices. A little patience is needed to see through a *New Order in Trade*.

Returning to supply-demand curves, depending on price elasticity, a consumer may choose to purchase a US-manufactured good at P*, rather than the Chinese-manufactured good for P. Thus, US GDP increases by P* = P + (P* - P), as China's GDP falls by P, assuming the domestic product is now cheaper than P + Tariff. In some cases, a Chinese manufacturer will reduce price to P + T < P*, in which case the US government collects T. Net export contribution to GDP increases by the new volume of domestically produced goods and services, but China's GDP falls by more. So, not only did growth not decline in the U.S. (China's loss, US gain), but inflation must increase as well by the difference in the new selling price: P* - P. In US vs. China, it should not matter who wins, only that a *new order in global trade* emerges to reduce barriers to international free trade. We believe the US has the upper hand and China can't wait two years to re-engage in a hypercompetitive world, hoping odds of a better deal improve under possible different US leadership—such a conclusion is senseless.

If the US imposes tariffs on imported goods, as the cost of those goods increase, consumption shifts to lower cost alternatives or substitutes that increases sales of domestically produced goods, while Treasury collects its tax. An increase in net exports necessarily increases growth, so dependency on international trade shouldn't be overexaggerated. Over the long-run, higher prices can reduce demand, but in the intermediate term, raising tariffs cause trade to shift between countries or result in substitution of products. Conservation of aggregate demand is reflected in respective net exports. Thus, market dynamics should absorb margin compression, as domestic sellers realize lower margin on higher volumes. In a bilateral trade dispute, retaliatory tariffs may be imposed, but the dynamics are just reversed and marginal domestic gains will be reduced. This is what we observe below in imports, although lower exports are as somewhat inexplicable. Tariffs are reflected generally in inflation, yet inflation is nobody's concern right now.



Source: Refinitiv and Strategic Frontier Management

David Ricardo was a British theoretical economist known for his influential theories on wages and profit, labor, rents, diminishing marginal return, and comparative advantage. It is among these theories developed more than 200 years ago, and still accepted today that we believe free market economies allocate scarce resources most efficiently and effectively. Tariffs and trade barriers limit global growth and market efficiency, subject to certain assumptions, including no pre-existing trade barriers or restriction on capital. So, export driven economies that used tariffs and currency manipulation to their advantage will suffer most from declining net exports as global free market competition increases. China is not a free market economy. If the basic assumptions of free flow of trade and capital is limited by trade barriers and capital restrictions, then imposing targeted tariffs for simple game theoretic, net exports may shift, but global growth is unchanged.

Items subject to higher recent tariffs include electronic circuit boards, computer chips, chemicals and other parts and business supplies, as well as a wide range of consumer products. Most seem to assume imposed tariffs on foreign goods are taxes that must be paid by American businesses and consumers, but that assumes

there is no market share shift. Countries generally impose tariffs or devalue currencies is to cause a shift in market share by tipping competitive advantage of pricing. Goods that are cheaper are substituted for those more expensive, therefore if the cost of Chinese goods increases, their wholesale prices must be reduced to remain competitive (price + tariff < original price). Thus, the inflationary impact should be some fraction of the tariff rate imposed. Reduced imports increase net exports, which boosts GDP. The effect is more than negligible, but less than assumed, so there will be transitory disruption with uncertainty as trade negotiations continue. We believe the U.S. maintains a stronger economic position while China's already weakening economy slows.

US exports are a smaller share of our total economy than for Japan, Germany, Canada, and China. For example, a 3% reduction in US export demand might result in just a 1/3% hit to growth. Total US consumption won't change much, but relative mix of trade does. The error is assuming this "tax" constrains consumption, but as targeted imports decline, net exports increase. Market share shifts toward untaxed substitutes. Tariff costs are likely absorbed in new higher selling prices of domestic products, which beget inflation. Finally, if retaliatory tariffs are imposed, net exports may not rise as much.

Free trade bolsters innovation and competition leading to better products, economic development, productivity, prosperity, and new markets. Turning to BREXIT, as a member of the European Union, the UK is party to about 40 trade agreements, including over 70 countries, but notably not the United States, Australia, New Zealand, China, or, until recently, Japan. The EU's total negotiated deals represent just 11% of UK trade, including Japan. This is less meaningful than many likely assume, but demonstrates the difficulty negotiating effectively multi-lateral trade deals with every country it engages. As the world awaits BREXIT negotiations, at least 10 countries signed "continuity" agreements with the UK to maintain relative status quo, including countries such as: Switzerland, Norway, Iceland, Israel, South Africa, and Chile for example. South Korea separately negotiated a UK free-trade deal, setting the stage for post-BREXIT trade deals with the U.S. and Japan (now ineligible for "continuity"). We suspect countries like Australia and New Zealand will be quicker to sign deals with the UK, than the EU. Even a Canadian free-trade deal might be fully implemented faster than CETA, signed in 2017. As terms of trade reset and currencies adjust, the UK will have a unique opportunity to seek more rational bilateral agreements, just as the US is pursing now. Surely, it should be easier to reach agreement than observed with many still languishing EU deals.

What matters most is that the US has finally established some negotiating leverage, which the WTO couldn't provide. The *New Order in Global Trade* will increase natural selection among freer traders, with each country benefiting to their comparative advantage---the post-war terms of trade support by the US for the benefit of developing economies will decline, and this will reduce the secular growth advantage enjoyed by emerging markets. This reinforces our case for China's decline from 6% potential growth toward 4% by 2025. Uncooperative and corrupt regimes will be among the first to feel the effects of reduced foreign aid and assistance with this pivot in foreign policy. After a little patience to work through trade disputes, US business confidence, investment, and hiring should accelerate, reinforced by increased US potential growth. Developed nations generally will benefit from US efforts to do what WTO couldn't or was unwilling to do.

Revealing Strategy Perspectives

Myths That Conceal Reality can eventually be exposed by inconvenient truths, or the things you think you know, which just aren't so. It is not surprising with the sophistication of data analytics and accessible volume of data misleading insights can linger upon torturing data enough or what Sam Savage calls *the flaw of averages*. The extended economic cycle is one example of how some enduring fundamental relationships have evolved, which others are stretched, such as. value and small-cap factors. Rising inflation and stronger growth are inconsistent with a flattening yield curve. Fiscal deficits persist, so interest burdens are rising with higher interest rates. Need to wind down QE programs will add refunding to excess debt supply and issuance, which could drive bond yields even higher, beyond equilibrium by as much as 0.5%.

We expect the US economy to remain resilient longer than consensus and don't expect a recession in the foreseeable future with potential growth trending toward 3% and unemployment below 4%. Investor sentiment was undermined by Q4 weakness. Growing fear of an global equity or real estate correction belie severely overvalued global bonds, after a decade of manipulation and explicit moral hazard. Increasing imbalances and liquidity concerns could exacerbate a global bond correction, as normalization needs to continue. Thus, we expect global equities will outperform global bonds by a wide margin, even as US Treasury yields compel foreign investment flows into Treasuries at the expense of government bonds with negative yields, supporting the US dollar. This headwind to rising Treasury yields remains as long as the US dollar is strong. Concepts of behavioral finance became more familiar to investors and provide context that otherwise might panic them--this may explain why average equity volatility declined, and market recoveries happen more quickly. Increasing stock ownership in retirement plans necessitated increased financial and investment literacy.

In this world turned upside-down, many long-term relationships seem out of kilter, suggesting to us greater volatility-of-volatility, lower correlations, asynchronous economies, and greater global tactical asset allocation opportunities as risk-on/risk-off behavior fades. Our view on emerging markets evolved recently. Since the mid-1990s, we embraced the secular theme of strong growth within Emerging Markets. Industrialization and urbanization combined with insatiable consumption, emerging culture of credit, and rapid income growth of an expanding workforce drove high potential growth. India and others may postpone or defer the erosion of their competitive advantages, but China's challenges are already at its doorstep and we expect potential growth to slow from over 6% toward 4%. Labor cost advantages in manufacturing have declined with adaptive automation reversing decades of offshoring. Secular disinflationary forces enjoyed by developed economies are receding too. So, Brazil may finally escape is death spiral into a Socialist abyss with new political leadership, India enjoys a higher birth rate while generally embracing free market capitalism, but Russia is the wildcard of the BRICs.

Investors tend to hold hedges for extended periods, including gold, low volatility, options/futures, or alternatives. Rarely do investors capitalize tactically by unwinding hedges, even when they are in-the-money, so they tend to be a drag on performance. Gold holdings increase portfolio volatility like other commodities, regardless of hoped for portfolio risk diversification, but return less than cash or even inflation. Portfolio diversification is desirable to reduce risk, but not at the expense of being a drag on performance. International diversification has been absent since the financial crisis, until recently with rising asynchronous country returns and currency volatility. Investors must be compensated for undiversifiable risk, as Modern Portfolio Theory suggests but neither management fees, nor trading costs are rewarded or diversify return.

Changes in average historical return statistics of mean, correlation, and volatility is being observed from asset classes to sectors and risk factors. Forecasting volatility and correlation has become more difficult given faster evolution after an inflection point in interest rates. This is similarly true for private market asset classes. Moreover, adoption of novel portfolio allocation schemes, such as risk parity or maximum diversification, highly depend on increasingly uncertain risk statistics of return.

Inability to mark-to-market illiquid or unlisted securities on a daily or monthly basis doesn't increase portfolio diversification or reduce risk. Private market assets are implicitly riskier than can be measured with small company, leverage, or illiquid/unlisted factor exposure. Cambridge composite performance for Q4/2018 of private equity (-1.7%) and venture capital (1.7%) funds surprisingly didn't reflect the stock market's decline for Russell 2000 Small-cap (-20.2%) or S&P 500 (-13.5%). Observations like this obscure dirty little secrets of the true risk involved with private market investing among investment committees of asset owners, including pension funds, sovereign wealth funds, family offices, wealth managers, and even their investment advisors.

In managing global tactical asset allocation strategies since 1990, I've learned that tracking business cycles and interest rates in at least 15 countries reveals persistent capital market dependencies on econometric fundamentals that can help forecast returns, and have been more reliable than a handful of event-driven studies of coincident yield curve observations. Revenues and profit margins are function of economic growth and inflation, which yield insight into earnings, currencies and interest rates. Yet, even accurate economic forecasts won't necessarily ensure good earnings forecasts given importance of operating costs, taxes, interest rates, competitive advantages, and investment from quarter to quarter. Market valuations can diverge significantly from presumed equilibrium, which is to say forecasting stock, bond, and currency market returns is hard.

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