INVESTMENT OUTLOOK

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Fourth Quarter 2015

CHASING SHADOWS AND GHOSTS

- With so many emerging products and investment solutions, it is not surprising that some investors succumb to *Chasing Shadows and Ghosts*. In the *shadows* are substantive, but still underdeveloped and unproven ideas, whereas the *ghosts* are naïve or misguided hypotheses with high costs, greater complexity, and disappointing risk-adjusted returns. It is an exciting time for innovation and evolution in asset management, as rapid changes in markets, trading, and products reshape competition. Emerging thought leaders have taken share from incumbents, while mutual funds give way to Separately Managed Accounts and Exchange Traded Funds. Investors are pulled in many directions, some that seem very compelling, while others impair wealth.

- It is intriguing that global markets and economies are at the threshold of various key inflection points, as many opportunities emerge between asset classes, sectors, styles, risk factors, and countries. This is not the time to be passive with opportunities across an expanding number of dimensions. Diverse *rational beliefs* cause markets to be no more efficient than a decade ago despite better analytical tools, more data, and greater investible breadth across new dimensions. Assuming *this time is different* usually never works out well, thus healthy skepticism is warranted when considering “low risk” strategies with exceptional returns. Active investors with long-term patience and discipline can benefit if trading and management costs are administered prudently.

- Conventional Modern Portfolio Theory (MPT) has been challenged by a variety of new allocation schemes. Risk-adjusted expected return is still the dominant intuitive investment objective, and portfolio optimization can quantify practical constraints, unlike any other scheme. MPT remains a dynamic and adaptive framework for decision-making under uncertainty, reflecting tactical and strategic investor beliefs about risk and expected return. Quantifying these inputs is difficult, yet critical to applying this time-tested methodology. Innovation is desirable, but solutions in search of a problem may not yield better results. *Objective Driven Investing* is a dynamic discipline that can adapt to unique evolving client needs and market opportunities with ingenuity in portfolio implementation rooted in MPT.

- The unthinkable has become routine after an extended period of negative real interest rates, but the Fed should begin normalizing interest rates soon. Yield curve normalization is long overdue with emergency levels no longer needed. Preoccupation with inflation targets is a fool’s errand, and rising interest rates will be followed by reducing the Fed’s bond holdings. Global economic divergences are a precursor to increasing capital market volatility and return dispersion. Periodic spikes in volatility provide dynamic opportunities to rebalance, reposition, and hedge. Illiquidity is the most underappreciated risk, yet it is difficult to measure and challenging to hedge.

- The recent global economic summer slowdown was more moderate than expected. U.S. earnings benefit from still robust profit margins, but declining energy sector earnings and a stronger U.S. dollar have undermined growth. Both forces are transitory, lifting prospects for 2016 growth, as cyclical economic drivers firm. Focus on relative valuations should increase, as global equities have room to run with still low interest rates and reasonable valuations. Asynchronous economic expansion yielded wider differences in economic conditions. Investors should avoid over-extrapolating trends and influence of behavioral biases in *Chasing Shadows and Ghosts*.

- Given the monetary and fiscal stimulus since 2009, the economy should have grown faster, if not for the third leg of increasing regulation offsetting formidable policy contributions. Although consumers still feel the economy is underperforming, U.S. economic growth remains resilient with pent-up demand in housing and capital investment. Government spending has contracted since 2011 after a $900 billion spending binge on ARRA in 2009, but the contribution to GDP growth should turn positive in 2016 adding 0.3-0.5%. Tax and regulatory reform hold marvellous potential.

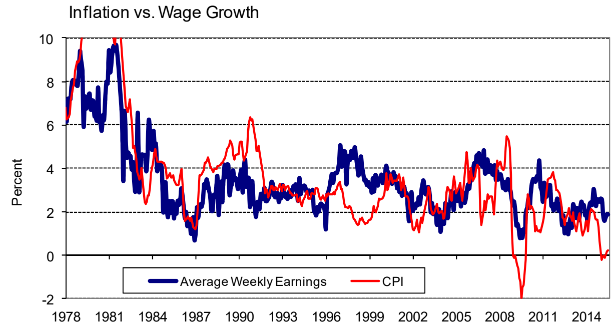
Economic Conditions

The global economy is likely to expand 3.0% this year and accelerate to 3.5% in 2016. Economic growth is no longer synchronized with divergence in monetary and fiscal policy, although global growth continues to benefit from stronger activity in developing economies and a resilient U.S. expansion. The global expansion has exceeded six years, but business cycles don't run on a clock and a recession is unlikely before 2018. Disappointing U.S. economic growth has weighed on consumers despite significant monetary and fiscal stimulus, yet oil prices plunged freeing up disposable income, unemployment fell to 5%, housing prices recovered, and fiscal drag has moderated. Corporations refinanced into low cost debt, retired significant equity, kept inventories lean, and deferred investment that can now be unleashed, particularly if repatriation of offshore earnings was encouraged by rational tax reform. Thus, resilient U.S. economic growth should firm and could exceed 3% in 2016.

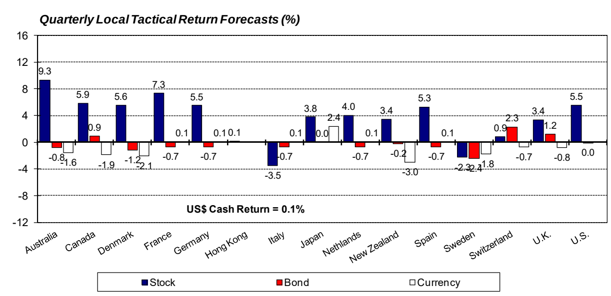
Economic Forecasts	**2012**	**2013**	**2014**	**2015e**	**2016e**	**2017e**
U.S. GDP (Y/Y Real)	2.3	2.2	2.5	**2.3**	**2.8**	**3.0**
S&P500 Earnings	6.0	5.7	8.3	**2.0**	**10.0**	**10.0**
U.S. CPI Inflation (Y/Y)	1.8	1.8	0.7	**1.0**	**2.5**	**2.7**
U.S. Unemployment	7.8	6.7	5.6	**5.1**	**4.8**	**5.0**
Fed Funds Target	0.25	0.25	0.25	**0.50**	**2.00**	**3.25**
10y Treasury Notes	1.85	3.00	2.17	**2.50**	**3.50**	**4.50**
S&P 500 Target	1426	1848.	2059.	**2150.**	**2300.**	**2450**

There isn't much concern about inflation, but low inflation was depressed by a plunge in oil prices and strong U.S. dollar reducing costs of imports. Core CPI is trending higher above 2%, so mathematical reversal will surprise many that argued for delaying hiking interest rates even as the oil price decline a year ago sunsets. Rising inflation is not required to normalize rates, although it seems that gathering strength of inflationary forces are underestimated, reinforced by the rising cost of housing and wages. CPI inflation includes a 32% weight to housing costs, so as rental vacancies decline and home prices rise, rent must rise. Commodity prices declined with increased supply benefiting from extraction productivity and innovation.

Economic uncertainty has been rooted in concerns about wage growth, lower employment participation, as well as rising cost of increasingly complex regulation. Wage growth has been highly correlated with inflation, so 4.0% average wage growth tracked CPI inflation of 4.2% over the last 50 years. Similarly, wages increased 2.3% over the last five years, which is less than the average over the last 50 years, but still exceeded CPI inflation of 1.8%. Declining wage growth was a function of moderating inflation, and lower participation rates reflect shifting demographics, thus these factors should not be misconstrued to justify causality. Wage growth exceeded inflation even as income dispersion increased, thus causality is at best inconsequential, if not contrary to the income inequality hypothesis. Past policy responses to crises often gave rise to reactive misguided legislative and regulatory decisions that reduced competition, conflicted with free markets, undermined economic growth, and exacerbated too-big-to-fail. Efforts to regulate wages and compensation have never fostered better measurable outcomes.



Strengthening economic growth and rising interest rates favor technology, industrial, and financial sectors, despite a stronger U.S. dollar. Global bond markets are significantly overvalued, even if central banks hope to maintain low interest rates. Our outlook reflects the need for normalization of global interest rates. Thus, we expect persistent and disappointingly negative real bond returns with much greater risk over at least the next five years, than observed historically over the last 30 years. Bond yields may increase less in the Eurozone as long as growth lags, but rising interest rates will increase fiscal concerns. Global TAA model forecasts below suggest a broad global preference for equities over bonds, and imply continued appreciation of the U.S. dollar, even before hiking rates. Within U.S. equity styles, small-cap and growth tilts are favored.



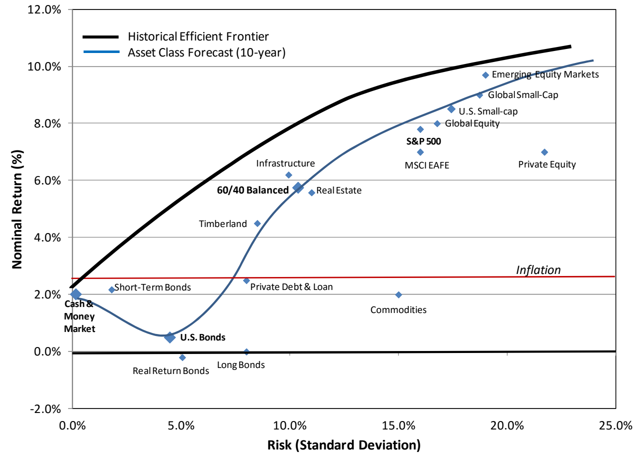
Real economic growth in China has slowed steadily from 10.6% in 2010 to less than 6.5%, and is on a glide path to 4-5% real growth by 2020, as it matures. China is transitioning to a more mature economy with less reliance on exports, but remains a key contributor globally with 6.5% growth expected in 2016. Financial liberalization and global integration will promote increased stability in China, but rising labor costs vs. competition from smart robotic automation has undermined productivity and profit margins of high labor cost manufacturers in developing economies.

Although investors obsessed over the “modest” Yuan devaluation, financial liberalization is visible in relaxing share ownership and floating exchange rates to encourage foreign investment. Maturing emerging markets need to focus on bolstering productivity by following the lead of U.S. companies that drove profit margins in the last five years. Concerns about slowing Emerging Market growth seem exaggerated for most countries, and have provided investment opportunities for those seeking growth in China, Korea, and India.

China’s currency linkage to the U.S. dollar has caused significant imbalances over the last decade. A poor, developing, and predominately centrally planned economy should not be linked with an advanced free market economy. A currency peg or crawling peg versus the U.S. dollar was a common denominator of the significant currency crises of the last 20 years, including Mexico (1994), East Asia (1997), Russia (1998), Brazil (1999), and Ecuador (2000). Yet, the risk to China is different as debt is just 1/3rd that of the U.S., as the economy is growing faster with significant and increasing foreign reserves. China’s real estate boom, which some mistakenly draw parallels to the U.S. and Spain, differ in critical ways from household leverage to overall debt exposure, while housing isn’t oversupplied. China’s economy is more dependent on commodities, so inflationary effects of quantitative easing passed through the US$/Yuan. Currency linkages and pegs tend to cause imbalances and competitive distortions, as observed between Germany and the rest of Europe.

Equity returns exceeding 7-9% will be more difficult with valuations closer to normal and slowing earnings growth. Global equities, including the U.S., are still reasonably priced based on relative earnings yield (earnings/price – bond yield). Europe is marginally cheaper, and although growing more slowly than the U.S., their economy is finally accelerating. Low volatility and high dividend yield equities have become more expensive. Global interest rates near record lows are more likely to rise and result in persistent losses over the next couple years. U.S. and Japanese bonds are particularly overvalued versus inflation, as well as relative to other countries. Infrastructure, private debt, and private equity valuations are stretched.

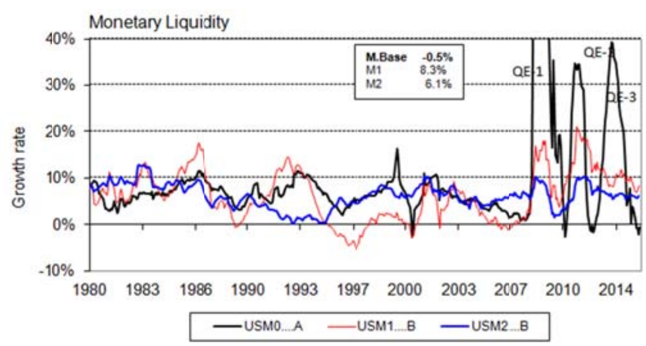
In the chart below, we summarize our asset return forecasts over the next decade. This annual exercise reflects long-term risk premiums and current valuations to the extent they diverge significantly from equilibrium. Manipulation of interest rates resulted in overvaluation of bond markets, particularly relative to equities, resulting in the “kinked” efficient frontier illustrated below. Private Equity and Commodities are notable risk-adjusted outliers considering net returns.



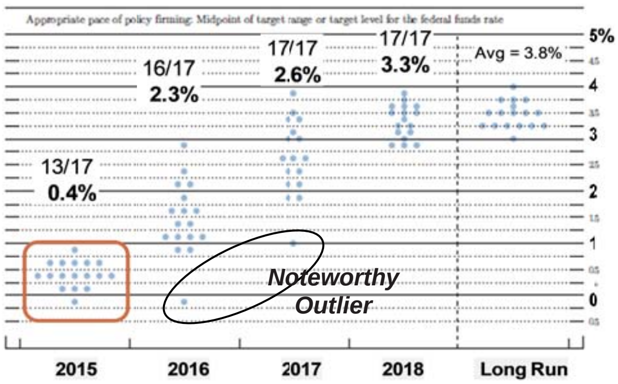
The World Out of Balance

Global imbalances were exaggerated by persistent low interest rates and explicit manipulation of yield curves by forward guidance and quantitative easing. Economic and market volatility due to increased uncertainly should moderate after yield curves normalize. This will coincide with perceived lack of productivity growth and adverse demographics that have undermined potential growth, most significantly in Japan, but also Europe.

The Federal Reserve sought to promote growth by rapidly expanding money supply, which historically grew 6%, similar to nominal GDP growth. Money growth has recently propagated unevenly through the economy, but money supply must eventually contract for an extended period to reduce the balance sheet to an acceptable level. Refunding maturing bonds will cause a drag on economic growth. Unusual monetary policy over extended periods has consequences.

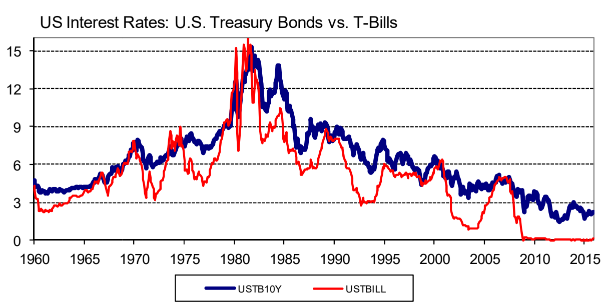


The Federal Reserve remained on hold in September with concerns about global economic developments, missing an opportunity to begin normalization as emergency monetary stimulus is no longer needed. Some economists believe the economy is too fragile and inflation too low to raise rates, but interest rates rising to 2% in our opinion would still be economically stimulative. Richmond Fed President Lacker dissented favoring a hike in September, but most FOMC members still expect the first interest rate increase by December 2015. The consensus also suggests a 2¼% rate next year, implying a ¼% increase at each of their eight meetings in 2016.



Source: Federal Reserve

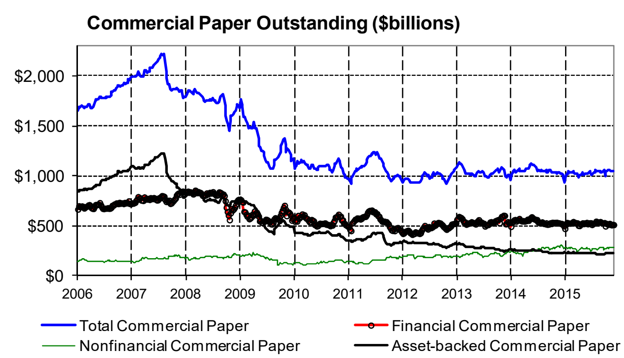
A long-term normalized interest rate of 3.8% is consistent with the four decade Fed Funds average of 4.0% relative to 3.0% CPI inflation over this period. The FOMC has finally recognized a need for normalization versus the myth of some chasing the *ghost* of an inflation target. A noteworthy outlier above is believed to be Minneapolis President Kocherlakota retiring at year-end, who will be replaced by Neel Kashkari. His interest rate forecast is likely to be more in-line with the average as emergency stimulus is no longer required.



Needed monetary policy normalization begins by hiking interest rates, followed by winding down the Fed's balance sheet as bonds mature. The critical factor is no longer "when", but how fast will interest rates normalize. Central bank policy has begun to diverge led by the U.S., followed by the U.K, while European and Japanese central banks just extended quantitative easing. Global investors should be vigilant about the global impact of rising U.S. interest rates and how bond demand will likely react to persistent losses.

The decline in primary dealer inventory relative to U.S. corporate bonds outstanding is a relevant measure of how bond liquidity was affected by financial reform. The corporate bond market increased five-fold in less than 10 years, but dealer inventories fell to 20% of peak 2007 levels and half of 2009 levels. Regulators and legislators seem confused about the critical roles of broker-dealers and credit markets. This is particularly acute in fixed income at a critical time that interest rates are expected to rise.

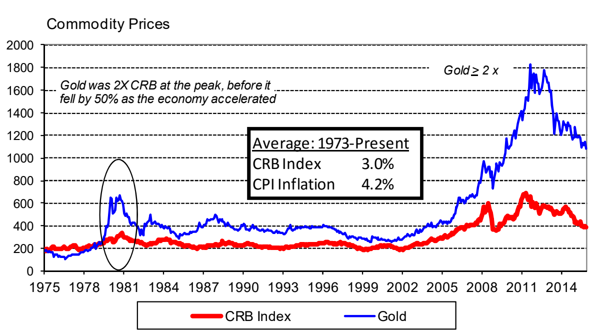
Excess corporate cash reflects the increased difficulty and cost of issuing short-term commercial paper, which collapsed from over $2 trillion outstanding in 2008 to just over $1 trillion today. Credit helps companies finance inventory, bridge contracts, purchase assets, and satisfy other periodic short-term financing needs. A 50% contraction reflects consequences of financial reform, new regulations, and increased capital requirements. It is a consequential loss to short-term financing capacity that burdens banks without this natural cash equivalent available for investors like mutual funds (inc. money market), insurance companies, asset owners, and asset managers.



Economic and financial market cycles are driven by dozens of variables. *Big Data* plus sophisticated analytical tools make it possible to uncover relationships that are more likely coincidental, rather than fundamental and predictive of future returns. Investors must differentiate what matters most and likely to rationally persist. The opportunity to add value across public and private markets hasn't diminished. Increasingly asynchronous global expansion results in greater international diversification and opportunity to add value through global tactical asset allocation, exploiting differential market returns.

Readers are familiar with our negative outlook for commodities, particularly gold. Just as the WTI oil price plunged well below our equilibrium $50-60 range, capitulation may finally take hold as gold threatens to fall below $1000. Gold likely has further downside risk to its $800 marginal cost of production. Investors encouraged to purchase gold, sought low correlation with stocks and bonds and a safe haven from monetary-driven inflation. Buyers of GLD, the largest Gold ETF, have suffered a 45% loss, which seemed inconceivable at over $1900 in September 2011. Gold price volatility illustrates the high risk of commodities, which historically yielded return less than inflation, but with risk exceeding equities.

Commodity allocations began to increase a little over a decade ago in various new funds and derivative strategies. Investor holdings now rival the influence of producers and consumers that are natural owners of raw materials. However, change in input costs can't exceed output costs, therefore commodity returns can't exceed inflation. Commodities have no cash flow, produce no earnings, nor pay any interest. A pound of lead is always just a pound of lead. Thus, commodities remain an inefficient strategic policy allocation with positive correlation to equities and modestly negative correlation with bonds. Despite limited supply of raw materials, technology and innovation helped reduce mining costs and increase extraction yields from oil to industrial metals and gold. Over the last 115 years, commodities returned inflation less holding costs of about 0.5%. Assuming 3% CPI inflation, long-term commodity returns should not exceed 2.5%, but still exhibit high risk in excess of equities. The same relationship is observed for gold.



Emerging Market regions and countries should increasingly be evaluated individually as their economies diverge due to vastly different public policy decisions. Many developing economies relied on lower labor costs to compete in manufacturing, but profit margins declined as wages increased following government directed salary and entitlement increases. Brazil and Russia have lagged growth of emerging markets for years, and tipped into recession expected to extend well into 2016. Productivity faltered and growth disappointed with higher wages and weaker currencies. Without the tailwind of oil demand, Middle East/North Africa (MENA) will remain dysfunctional and unable to compensate for its still high geopolitical risk. Overall, dependency on raw material exports has suffered, as demand slowed and investment "securitization" of commodities ran its course.

A political earthquake rocked Latin America with the overthrow of Argentina's authoritarian leadership. More than 12 years of failed Socialist policies ignited inflation, undermined competitiveness, and stagnated economic growth. President-elect Mauricio Macri could bolster confidence by stabilizing the peso and lifting capital controls, while reforming taxes and regulation. Argentina also could benefit trading membership in the MERCOSUR Bloc for the Pacific Alliance, including Chile, Mexico, Columbia, and Peru. If Argentina can turn the corner, Brazilians may be similarly inspired.

Household vs. Individual Income

Household income is a measure of the combined incomes of all people sharing a place of residence, and includes all forms of personal income and government transfers before effects of taxes. This measure is often used as a proxy for income equality.

Household net worth increased 43% to $85.7 trillion in rebounding from the 2009 trough of the Financial Crisis. Assets also increased 7.9% over the last year through Q2/2015, with $10 trillion in cash deposits available to power investment. Retirement assets have increased with shifting reliance on defined contribution. Savings plus asset growth have bolstered net worth, while deleveraged liabilities are almost unchanged since 2009. Financial holdings have been mythically deemed speculative, but the only danger of robust nest eggs is to politicians who fear self-reliance displacing entitlement dependency. How else should individuals supplement fading access to pension plans and reduce anxiety about Social Security?

Household Balance Sheet ($Bs)	*2009*	*2013*	*2014*	*2015-Q2*	vs. 2007	*1-Year*
Total Assets	72,331	93,054	97,589	99,990	2.7%	4.3%
Tangible Assets	23,677	27,702	29,118	30,217	0.5%	6.5%
Households: Real Estate	18,721	22,329	23,635	24,618	0.1%	7.3%
Financial Assets (inc. retirement)	**48,654**	**65,352**	**68,471**	**69,774**	3.8%	4.2%
Deposits (Bank deposit + Money Funds)	8,098	9,600	10,127	10,194	4.4%	3.5%
Change in Assets%	2.2%	11.9%	11.6%	7.9%		
Liabilities	**14,050**	**13,793**	**14,163**	**14,278**	-0.1%	2.4%
Credit Market	13,546	13,170	13,653	13,768	0.0%	3.7%
Home Mortgages	10,418	9,406	9,403	9,413	-1.7%	0.5%
Consumer Credit	2,553	3,099	3,312	3,383	4.1%	6.7%
Household Net Worth	**58,269**	**79,262**	**83,426**	**85,712**	3.2%	5.3%
Growth Rate (y/y)	1.9%	14.0%	13.0%	8.7%		
Disposable personal income (NIPA)	10,943	12,396	13,117	13,294	3.3%	3.4%
Growth Rate (y/y)	-0.5%	-0.1%	5.2%	6.3%		

Source: Federal Reserve Flow of Funds

A seismic shift in retirement savings from dependency on pensions and social security to defined contribution, profit sharing, business ownership, and home equity has been underway for over 30 years. Yet, retirement savings are still insufficient as longevity increased. This is mostly caused by an insufficient savings rate and poor asset management decisions lacking access to financial advice, rather than an inherent flaw in defined contribution. Nonetheless, financial savings growth to support household self-sufficiency has contributed to wealth dispersion. Politicians have proposed increasing spending on programs paid for with additional taxes levied on nest eggs and means testing of Social Security. Voters should be wary of unconstitutional efforts targeting wealth redistribution. Society should not be misled that income distribution is a zero-sum game where winners take losers' share.

Technological innovation has expanded national income through increased productivity and higher profit margins, but labor redundancy caused by a faceless villain is difficult to accept. Wrenching evolution in labor markets began with globalization embracing low cost labor, but shifted to creative destruction through technological adaptation. Computers, robots, and process innovations are driving productivity as the *machines* acquire skills of repetitive automation and numerically oriented jobs. Adoption of smart robotics further undercut countries with labor cost advantages as on-shoring production, led by the U.S., shortens supply lines and improves quality control. Labor disintermediation is not unlike that observed during the last industrial revolution of the early 20th Century.

A new division of labor has reduced manual and routine jobs available in manufacturing to services with digitization and advanced sensors to see. Comparative advantages in consistency, reliability, and cost reinforce misdirected blame for lackluster wage growth and job loss on income inequality. Demand for new workforce skills will leave doubters behind, enriching adapters and creators. Righteous objectives of liberty and equal opportunity should not be misconstrued into legislating outcome equality.

Growth in financial wealth to support self-sufficiency is observed in household savings, but also contributes to significant wealth dispersion that is a function of savings rates and wealth management ability. Political allure of growing nest eggs seeks to leverage populist envy to justify redistribution and pay for new benefit programs. Means testing of Social Security is another considered source of revenue. Why should households that worked harder and sacrificed have promised benefits funded by payroll withholding be reduced? Average retirement savings are insufficient as longevity increases and pensions fade, but increasing self-sufficiency is America's strength, not a sinister or immoral asset needing correction or redistribution.

Simplifying Asset Allocation Strategies

A simple prudent balanced strategy of 60% equity and 40% fixed income continues to be a challenging benchmark to beat on a risk-adjusted basis. Investors might consider returning to a simpler approach to managing their investment portfolios that will result in lower cost, greater liquidity, and higher realization of net active return. Markets have grown more complex and fragmented, but offer an increasing number of investable opportunities. Complexity introduced by alternative asset allocation methodologies has been disappointing, from risk parity and de-risking to maximum risk diversification. Some innovations have yielded investor benefits, but others are just burdened by high management and transaction costs. Broader mandates are more liquid, simpler to measure risk, easier to rebalance, more transparent, lower cost, and less complex to hedge.

Investors might consider simplifying portfolio holdings with broader mandates that increase potential value added at lower cost with greater transparency and increased liquidity. Do investors need to span nine narrow equity style boxes or would U.S. Large-cap and U.S. Small-cap Core Equity complemented with non-U.S. Developed and Emerging Market Equity be sufficient? Have underperforming and complex alternative investments actually improved risk-adjusted returns? Have investors become too obsessed with reducing imprecise risk estimates at the expense of real returns? These are key questions, but strategic allocations of less than 5-8% appear mathematically insignificant. The challenge is to sort out what is really useful and what is just expensive complexity.

Attention has refocused on the importance of asset allocation, as reflected in resource investment and investor flows into multi-asset and asset allocation strategies. Derivative overlay strategies applied in parallel can add value, manage asset mix, or protect capital without leveraging assets or displacing underlying active management. Many dismiss attempts to forecast investment returns, but only a fraction has ever actually tried, let alone practiced Tactical Asset Allocation for over 25 years. Active alpha hunters help correct imbalances and exploit market inefficiencies. In a world out of balance, there are greater opportunities across public and private markets in more exploitable dimensions. Investors must exercise discipline and fundamental judgement to achieve compelling returns in a world where fundamentals and valuations matter.

Investors need to recognize asset class volatility and correlation measures are evolving more quickly now, which is a consequence of the imminent inflection point in U.S. interest rates. Shifting toward emphasizing risk allocation (i.e., de-risking, risk parity, low volatility, maximum diversification, etc.) seems ill-advised, particularly when risk parameters are unstable and more uncertain. Protecting against downside risk is different than price volatility, but the rich variety of securities to manage risk is increasing, including the breadth of derivatives, including options. Greater country and risk factor dispersion is expected to rise globally, resulting in increased tactical opportunities and opening for creative derivative hedging strategies.

However, unsettling trends have emerged in increased use of standing stop-loss orders by large institutions to provide cheap market hedging for risk management. This practice can be automated at lower cost through electronic trading and algorithm usage. Yet, intraday volatility has increased as declines accelerate with these cascading dependencies. Such dynamic hedging strategies behave similarly to *Portfolio Insurance*, which triggered the 1987 Crash, but have not yet reached similar scale, nor are equities as overvalued. With declining fixed income liquidity and rising rates, bond ETFs are at risk to difficulty arbitraging fair value.

Risk Factor Investing (RFI) is gaining traction among institutional investors such as the Norwegian Sovereign Wealth Fund and Harvard's endowment. It promises a complementary description for multi-asset risk and new dimensions for tactical asset allocation, but it still leverages the familiar objective framework of MPT. RFI provides a parallel structure for robust multi-asset risk analysis to complement traditional risk management analysis, which for global balanced mandates was limited to statistical value-at-risk or VaR. Many newly identified and familiar risk factors have yielded a range of unique indices and complementary listing of ETFs.

Breadth of new risk factor and other indices have provided a new layer of accessible strategies, many which are available as ETFs that are also a basis for OTC derivatives in a regulatory capital constrained world. High expense ratios for more specialized indices and arbitrage inefficiency of ETF trading gaps remain a concern to investors. Separately Managed Accounts are growing rapidly in popularity with financial advisors as a lower cost, flexible, and more tax efficient product solution, providing greater control versus mutual funds, but surprisingly have yet to penetrate plan sponsors, endowments, and family offices. SMA platforms provide model portfolios of strategies purchased from asset managers at low cost that can be invested in directly by asset owners or client advisors. Accelerating adoption is broadening to encompass fixed income, derivative, alternative index, and risk factor strategies.

The most difficult to isolate but notable risk premium is illiquidity, most associated with private market assets. It is available to patient, flexible, and disciplined investors able to execute efficiently persists, but varies over time. Private market risk premiums have compressed, thus are limited in buffering much volatility. Investors hoping to benefit from certain risk premiums and enhanced portfolio diversification have been disappointed by illiquidity, lack of transparency, and underperformance versus public market benchmarks due to high costs. Steep price discounts for unlisted illiquid private assets during the 2008 Financial Crisis forewarns those that might need to raise cash for margin calls, capital calls, and operating needs. Thus, alternative allocations should be limited to 20% for individuals and 30% for sophisticated institutions with less than 10% annual liquidity demand based on research and experience.

Private asset allocations are increasingly scrutinized due to lack of transparency with difficult to measure costs, complexity, and disappointing net performance. Expected private asset diversification benefits are exaggerated in absence of timely and consistent fair market valuation that understates volatility and correlation with other assets. It is dangerous to assume private asset holdings are less risky and uncorrelated with public markets relying on lagging fair values. Private market research into liquid proxy index construction suggests that unlisted assets are much more correlated with higher volatility than assumed compared to public market assets. Stretched private market valuations should be a greater concern.

Short supply of infrastructure investments should increase in order to retire soaring sovereign debt, particularly as global interest rates begin to rise. Greece, Japan, Italy, and other unsustainably indebted countries have considered, planned, or recently executed such transactions. The U.S. Government owns considerable land, real estate, enterprises, and other infrastructure assets that are not strategic and could be privatized. Treasury debt has increased by $7.5 trillion or 70% since 2009. When interest rates normalize, interest expense will likely increase at least $450 billion on this additional debt, equivalent to the entire U.S. discretionary budget, excluding Defense. Governments resist privatization although assets may be expensive to operate or manage. Asset owners can be better stewards incentivized to maximize return on investment. Retirement plans, sovereign wealth funds, and family offices are natural long-term holders of private assets seeking to deploy capital in compelling investments. Current global excess savings will likely bolster prices paid for these assets for a few years.

What is Objective Driven Investing (ODI)?

Optimal portfolio allocations are still intuitively dependent on risk and return assumptions. Different investors have uniquely rational objective preferences, goals, beliefs, forecasts, risk aversion, and constraints. After 40 years of reliance on Modern Portfolio Theory, certainly there must be alternative approaches, yet MPT remains elegant and intuitive reflecting a simple trade-off between return and risk aversion, even if quantifying risk tolerance and other inputs is difficult.

Every investor should have an investment policy objective with quantified return and risk goals, as well as specific investment constraints often unique to each client. Some clients are taxable, other clients are very interested in satisfying specific objectives, including excluding certain kinds of investments. Clients may have different time horizons, and therefore want to emphasize risk over return or vice-versa.

Portfolio allocation under *Objective Driven Investing* is a robust time-test generalized form of MPT that ensures disciplined alignment of client investment objectives. Adaptations accommodate a variety of specialized allocation schemes from risk parity or maximum risk diversification to minimizing shortfall risk. Portfolio engineering enables customizing investment objectives, architecting constraints, developing inputs, evaluating guidelines, and implementing strategies, from rebalancing rules to derivative utilization.

Specialized client objectives do not relinquish the need for an investment view, whether forecasting return or risk parameters. Should investors ignore intuitive nudges, including well-established risk premiums yielding more efficient portfolio outcomes? Zeroed-out return expectations implied by risk parity ignores the natural and intuitive upward sloping capital market risk-return frontier, reducing potential value added in equities and increasing asymmetric downside risk of characteristic levered bond portfolios.

Fundamentals drive economic cycles of growth, inflation and earnings, thus market returns. Greater reliance on active management and reducing management fees has never been more valuable in a low return world with erosion of the small size, control, quality, unlisted, credit, and illiquidity risk premiums. Well-defined investment disciplines provide confidence to implement difficult and complex decisions when most uncomfortable, yet compelling to do so.

Interesting developing applications include alternative beta and risk factor investing. Smart Beta was a clever marketing idea associated with Fundamental Indexing and is related to alternative beta. Factor investing is gaining in acceptance with investors attracted by long-term risk premia factor outperformance. Risk factor returns are cyclical and provide tactical opportunity with low correlation. Defining characteristic risk factors has the potential to revolutionize risk management by identifying exposures to cyclical forces, including econometric time series such as value, credit, growth, inflation, interest rates, currency, quality, and volatility.

Consequences of Economic Policy Choices

Inadequately considered regulation and rulemaking uncertainty in financial services have resulted in measurably higher consumer costs and strained resources that limit enforcement effectiveness of existing laws. Illogical proposals to impose SIFI requirements on money funds, asset managers, and asset owners are the latest example of financial illiteracy among policymakers. Legislators could benefit from better leveraging expert industry comments and staff analysis of pending legislation and rule-making.

Only the largest firms have adequate resources to absorb increasing costs efficiently, limiting competition from new or smaller companies. New regulations designed to protect consumers increase costs and promote consolidation and industry concentration. Systemically important banks becoming too-big-to-fail are a consequence of poor policy decisions and failure to provide adequate oversight, despite more than sufficient laws and regulation. Diversified banks weathered the Financial Crisis better with a variety of revenue sources like asset management to offset losses in impaired mortgages. Variable compensation declined with falling revenue, thereby increasing flexibility to reduce costs when needed. The Federal Reserve and SEC had legal authority and moral responsibility to better regulate non-bank financials that increased systemic financial risk, including origination of more than 2/3rds of subprime debt and trillions of dollars in credit default derivatives. Regulators failed to intercede as needed, yet Dodd-Frank rule-making still has only been partially implemented after six years.

Now defunct non-bank financials like Countrywide and First Century originated most of the toxic mortgages. The U.S. Government induced Wells Fargo, JP Morgan, and Bank of America to absorb failing Wachovia, Washington Mutual, as well as Countrywide and Merrill Lynch respectively. These weakened banks were then targeted by U.S. Justice for underwriting issues in acquired loans. Regulators failed to uncover fraud at SEC and OTS (Thrift Supervisor) regulated firms from Bernie Madoff to credit rating agencies (i.e., Moody's, S&P, Fitch), and government sponsored enterprises (i.e., Freddie Mac, Fannie Mae). Large banks were not without fault, but asymmetric blame for economic losses should not overlook enforcement failures of existing laws and regulations.

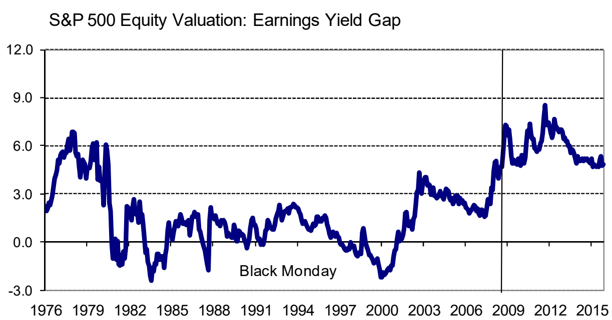
Regulation and rule of law are needed to keep financial markets operating equitably, efficiently, and effectively. New regulation should exhaustively weigh costs vs. benefits. Loss of financial flexibility for market intermediaries risks more extreme capital market corrections. Joseph Stiglitz suggested misguided policymakers' response to the financial crisis failed to address many obvious issues, even exacerbated them, and created new imbalances. Illogical proposals to impose SIFI requirements on money funds, asset managers, and asset owners are the latest example of financial illiteracy among policymakers. Legislators should better leverage expert industry comments and critical staff analysis of pending legislation, rule-making, and innovation causing disruptive change.

The cost of financial reform and increased regulation (inc. Basel III) is significant, including higher trading costs and difficult to measure bond market illiquidity. Liquidity is about more than turnover, but tends to evaporate abruptly when needed most as depth is limited, bid-ask spreads widen, latency extends, and market impact increases. High capital costs and paying banks interest on excess reserves reduced money velocity and lending capacity needed for growth.

Final Thoughts

"No space of regret can make amends for one life's opportunity misused" —**Charles Dickens**, *A Christmas Carol*

Global equity valuations are closer to equilibrium than a year ago, but remain compelling even as earnings growth slowed. Investors should keep in mind the transitory effects on earnings given the plunge in oil prices (energy sector) and a stronger U.S. dollar (foreign earnings) that had a significant effect on the S&P 500 earnings. Earnings growth should increase to 7-10% next year with accelerating economic growth and still strong profit margins. A tactical strategy reducing equity overweight exposures to neutral while extending the underweight to unattractive bonds requires boosting positions in cash and short-term or floating rate bonds. Expensive high dividend and low volatility equity exposures tend to underperform when rates rise. Anticipated volatility may provide a Q1 equity re-entry opportunity, particularly in Emerging Markets, but still avoiding Russia, Brazil, and MENA.



Interest rates near the 0% limit for an extended period have caused various imbalances due to an exceptionally low cost of capital and price for risk. Mortgage interest rates can only go so low (30-year fixed at 3¾%), limiting velocity of money and credit creation. Accumulated record corporate and household cash deposits provide high powered money for bolstering consumption and business investment.

Capital markets remain hostage to varying secular geopolitical and cyclical economic risks. Some suggest that investors are too complacent about fundamentals, yet risk adverse by over-diversifying their portfolios. Contentious upcoming elections are pivotal and span issues in public policy, political economy, and geopolitics. *Chasing Shadows and Ghosts* lately seems to overwhelm investor perspectives on fundamental variables. Asset allocation needs to be dynamic, tactical, and remains the most important decision driving long-term wealth. Generalizing an adaptive *Objective Driven Investing* approach is superior to other proposed schemes that accounts for investors' unique goals and constraints with discipline.

Increasing global savings from defined contribution and family offices to sovereign wealth funds has contributed to a reduction in credit, illiquidity, and quality risk premiums. Lower economic volatility and interest rate manipulation by central banks also has contributed, but this force is only transitory. As a result, current low bond yields must eventually normalize, resulting in a long workout of negative real returns. Valuation measures suggest global bonds are overvalued, but global equities still have upside as long as the economy continues to expand. Equity issuance slowed and buybacks increased, resulting in a decline of NYSE shares outstanding, funded by excess cash flow and increased corporate bond issuance.

Persistently recurring cognitive and emotional biases still provide systematically exploitable market inefficiencies, so we must remain true to our investment disciplines, while continuing to improve and innovate. Private markets risk premiums are no longer sufficient to compensate investors for high agency costs (i.e., commissions, management fees, etc.) that are more difficult to overcome. Management plus transaction costs must not exceed gross value added. This is a reason for underperformance of private equity funds that have recently come under intense scrutiny, resulting in significant turnover in the secondary market as pension funds unload fund holding. Simple long-only context helps conceptualize solutions, but the richness of hedging strategies can provide attractive approaches to preserve capital.