



NEPC, LLC

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Higher Education Investing Seminar 2017 Market Outlook

March 29, 2017

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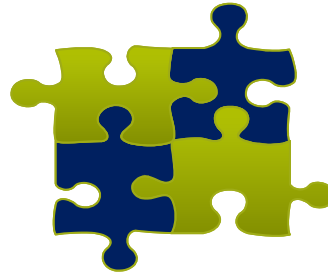
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NEPC Business Overview



Independent consulting firm since 1986



NEPC's business model is aligned with client interests



Successful and ongoing ownership transition creates stability

The NEPC Difference



LARGE ENOUGH
to have significant research and consulting resources



SMALL ENOUGH
to focus solely on client needs

NEPC Awards

2016 *CIO World's 25 Most Influential Investment Consultants*

2015 *Wealth & Finance International Alternative Investment Awards*

2014 *CIO World's 25 Most Influential Investment Consultants*

2013 *2013 CIO Industry Innovation Consultant Awards*

2013 *E&F Consultant of the Year Nomination*

Dedicated Consulting and Research Teams

NEPC employs 49 dedicated research professionals¹

Traditional manager research is a cornerstone of our efforts

One of the largest alternative asset research groups in the industry



Client Commitment



Selective growth

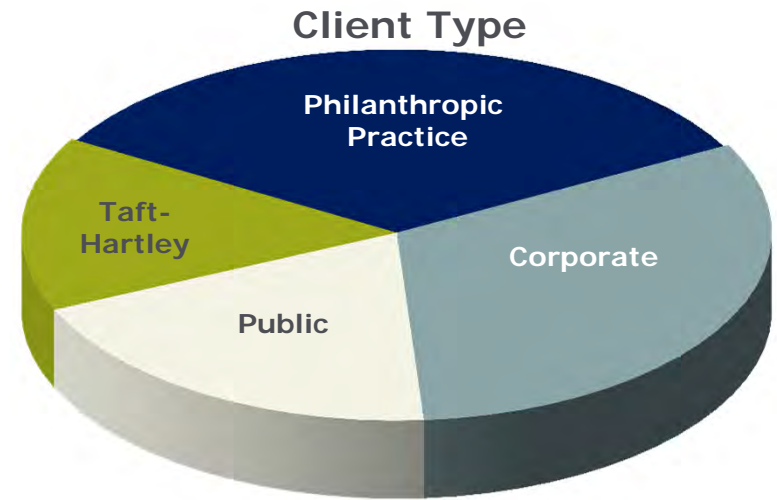
Balance resources, product and services

Recognize increased servicing requirements

Representative Clients

Not-for-Profit/Charitable Clients

- America for Bulgaria Foundation
- Babson College
- Barnabas Foundation
- Bradley University
- Buffalo Fine Arts Academy
- Calvin Theological Seminary
- Central Michigan University
- City of Boston - Trust Funds
- Colorado State University Foundation
- Community Foundation for SE Michigan
- Crusade for Family Prayer
- Diocese of Buffalo
- Eastern Michigan University
- Father Flanagan's Boys' Home
- Fairfield County's Community Foundation
- Fordham University
- GAVI Alliance
- Geneseo Foundation
- Greater Rochester Area Health Foundation
- Hebrew Immigrant Aid Society (HIAS)
- Hudson-Webber Foundation
- KnowledgeWorks Foundation
- Lesley University
- Masonic Education and Charity Trust
- Northwest Area Foundation
- NYC Foundation for Cerebral Palsy
- Northwest Area Foundation
- Oklahoma Tobacco Settlement Endowment Trust Fund
- Peabody Essex Museum
- Rotary International
- Society of Jesus
- Texas A&M Foundation
- The Jewish Federations of North America
- The Viscardi Center
- Unitarian Universalist Association of Congregations
- United Way of Massachusetts Bay
- University of Maine System
- Wayne State University
- Wisconsin Alumni Research Foundation



Fund Type	Retainer Funds	Total Assets	Average Fund Size	Median Fund Size
Endowments	53	\$45 billion	\$859 million	\$124 million
Foundations	60	\$12 billion	\$195 million	\$88 million

The above client list is only a sample. The clients listed were not selected for inclusion based on performance. It is not known whether or not the clients approve of the services received. It should not be considered an endorsement by any individual client listed. As of 9/30/2016.

NEPC Key Market Themes

Current Opportunities

Asset Class Assumptions

Key Market Themes



Key Market Themes

Key Market Themes are factors that define global markets and can be expected to both evolve and remain relevant without a clear timeline of conclusion. At times, themes may be challenged. Disruption of a theme will likely produce significant volatility and change market dynamics. For 2017, our Key Market Themes are:

- 1. Extended US Economic Cycle**
- 2. Federal Reserve Gradualism**
- 3. China Transitions**
- 4. Globalization Backlash**

Extended US Economic Cycle

Economic cycles don't die of old age

We believe the US economy is in an extended expansionary cycle despite being eight years removed from the last recession

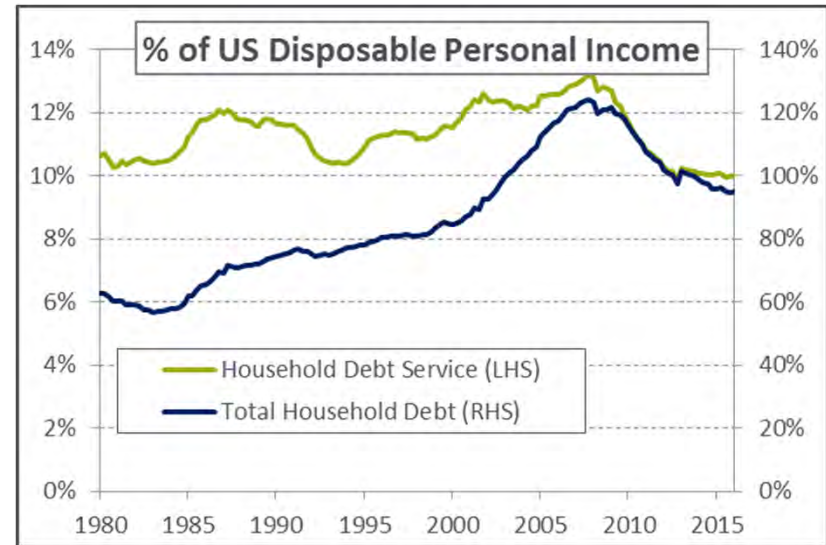
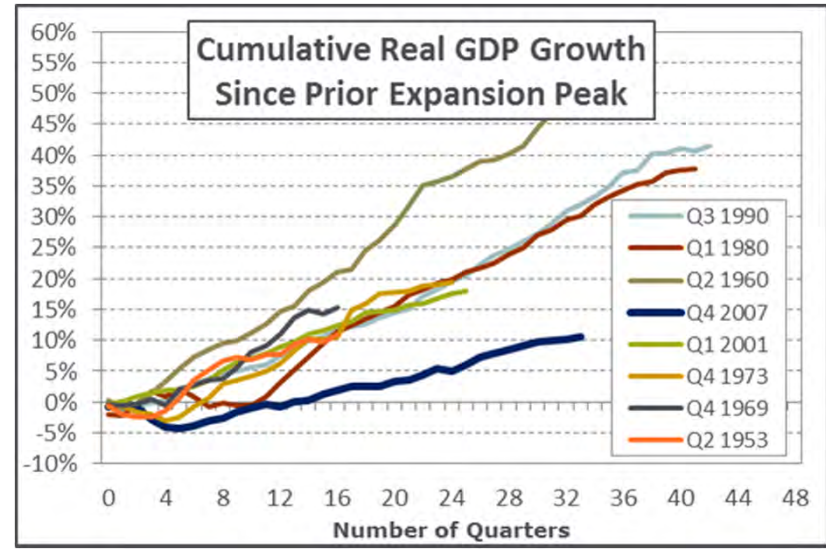
The health of US consumers continue to drive economic growth given relatively low debt levels

A prolonged US economic expansion can support a continued rally for US equities despite elevated valuation levels

We anticipate inflation will shift marginally higher in the coming years

Improvements in wage growth and the ongoing recovery in housing further support modest upticks in inflation

The strength of the US dollar is likely to restrain inflationary pressures and offset the potential impact of fiscal stimulus in the US



Source: (Top) Federal Reserve Bank of St. Louis
Source: (Bottom) FRED

Extended US Economic Cycle

US recession concerns are muted

The US economy is likely to experience slow and steady growth as excess capacity is gradually absorbed by the economy

The labor market recovery has been robust but excess capacity remains as many have yet to return to the workforce

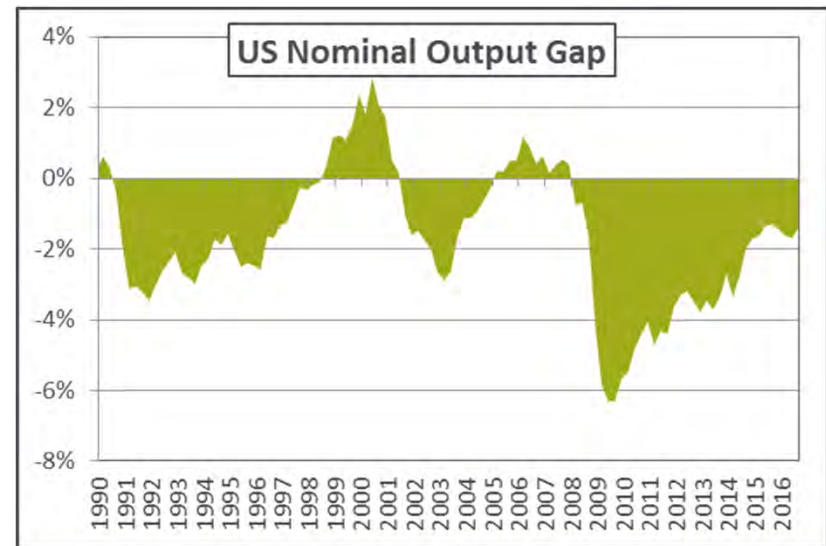
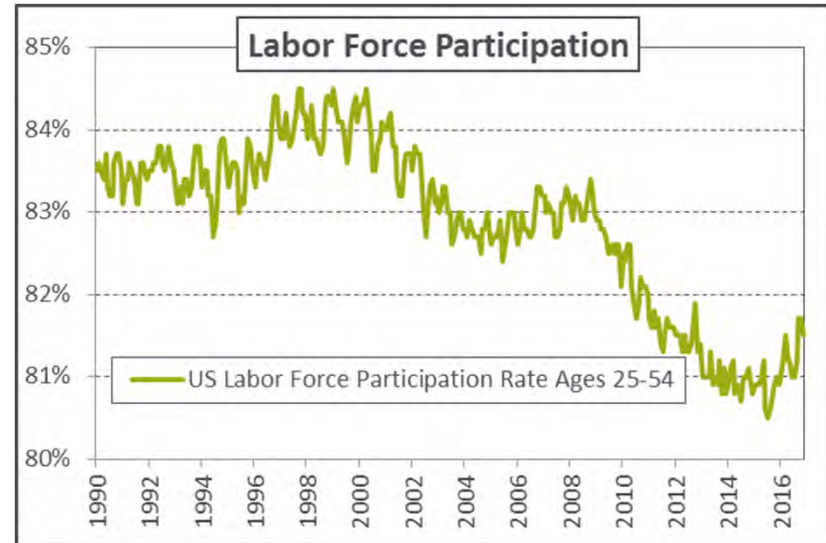
US dollar strength and corporate profitability trends are the primary sources of concern for potential weakness

Fiscal stimulus unlikely to push economic growth into a higher gear

Tax cuts and infrastructure spending modestly improve the US growth profile

The potential of higher US growth is likely muted by corresponding dollar strength

US stimulus may benefit non-US developed economies as marginally higher US growth weakens their currencies and improves competitiveness



Source: (Top) FRED
Source: (Bottom) Congressional Budget Office, Bloomberg

Federal Reserve Gradualism

The Federal Reserve is expected to slowly increase interest rates

Expected path of Fed policy through 2019 matters more than timing of the next hike

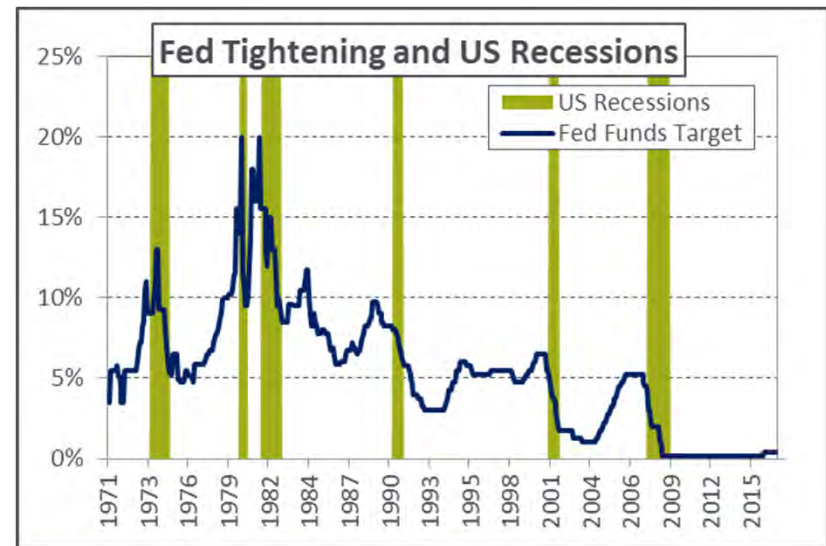
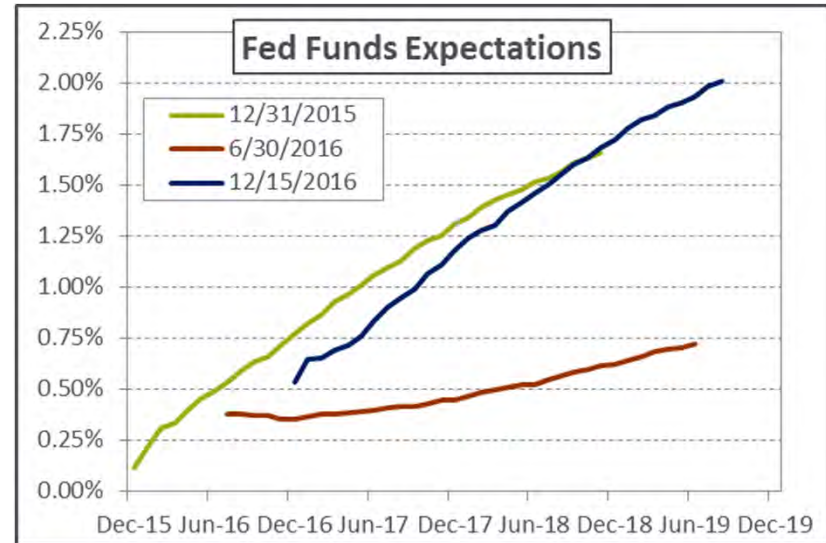
Fed has stated a willingness to let the economy “run hot” and accept some inflation to repair the deflationary effects of the past eight years

A relatively accommodative Fed is likely to continue, unless there is a dramatic acceleration in inflation

Historically, rapid tightening of Fed policy precedes a US recession

Tighter monetary policy slows inflation by decreasing economic activity

The Fed’s monetary policy statements are closely scrutinized and deviations from “lower for longer” can materially impact the market outlook



Source: (Top) Federal Reserve, Bloomberg
 Source: (Bottom) Federal Reserve, NBER, Bloomberg

Federal Reserve Gradualism

US dollar strength is interconnected with Federal Reserve policy

The US dollar is sensitive to changes in Fed rate expectations and interest rate differentials relative to the rest of the world

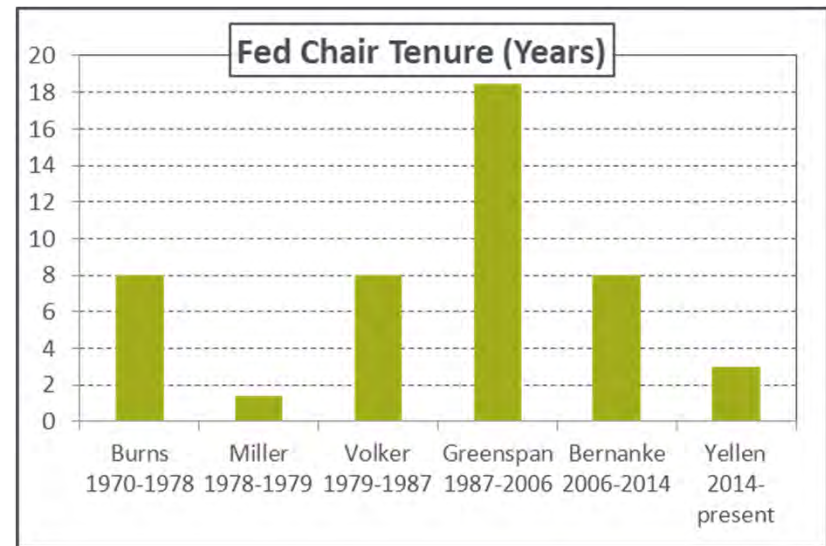
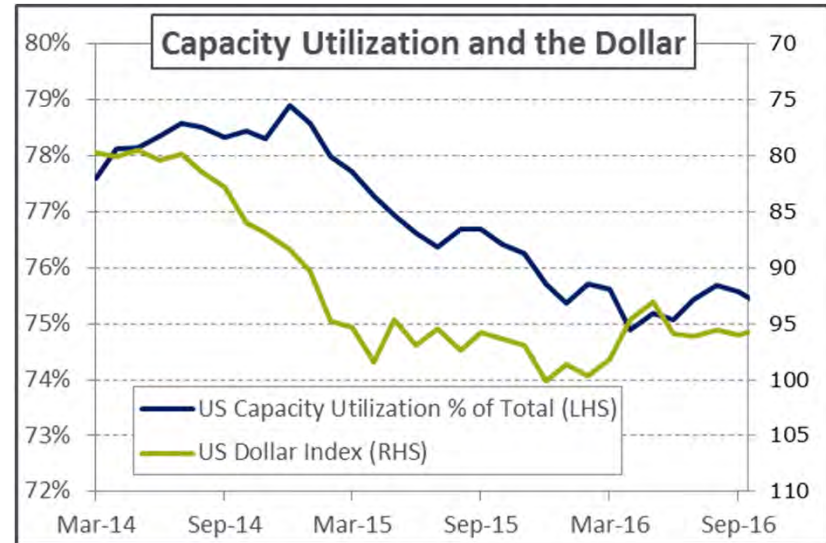
Fed must balance the path of future interest rate increases with the disruptive effects of a strong dollar on global markets

Dollar strength weakens the outlook for US corporate earnings and rapid dollar appreciation likely strains US profit margins

2017 is likely to be a year for greater uncertainty regarding Fed policy

Politics could intersect with Fed policy due to more vocal executive branch and conclusion of Janet Yellen's term in February 2018

The path of Fed rate hikes in 2017 and beyond is less clear due to the potential impact of fiscal stimulus



Source: (Top) Federal Reserve, Bloomberg
Source: (Bottom) Federal Reserve

China Transitions

China is the global growth engine but faces fundamental transitions

Economic evolution: Intrinsic need to evolve from focus on manufacturing – long the driver of growth – to services and innovation

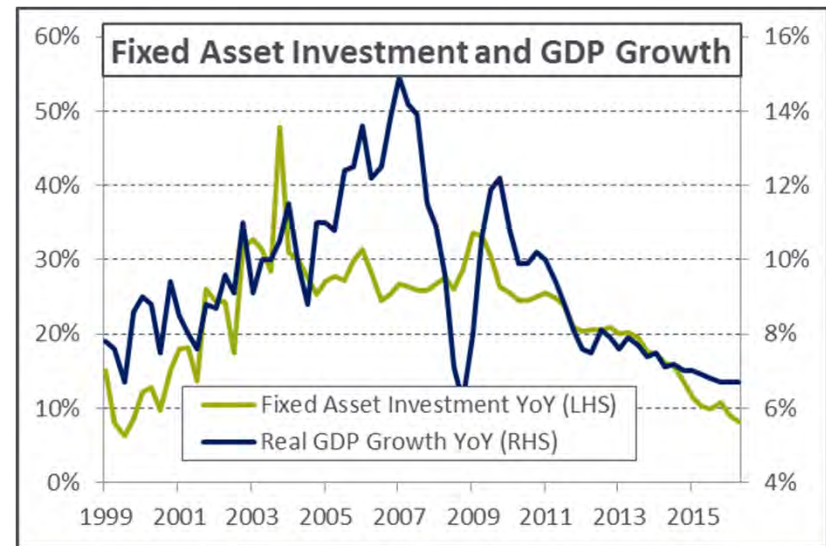
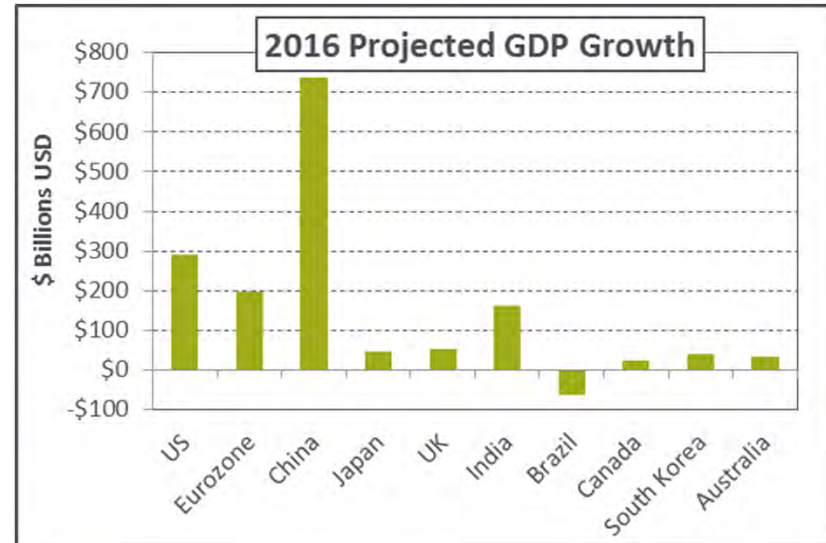
Monetary policy progression: Pressure on the People’s Bank of China (PBOC) to balance the status quo and encourage free market reforms

Any disruption to these transitions will have global repercussions due to China’s size and role in the global economy

China must manage competing social goals in attempting to sustain growth

Production based economy requires fixed investment to support employment as the rural population moves to urban centers

Future growth in a services based economy requires advancement in productivity, technology, and a more skilled labor force



Source: (Top) IMF, Bloomberg
Source: (Bottom) National Bureau of Statistics of China, Bloomberg

China Transitions

The PBOC is tasked with straddling a delicate path as the economy evolves

China maintains control of its currency and monetary policy but would have to make concessions to open its capital account and allow the free movement of capital

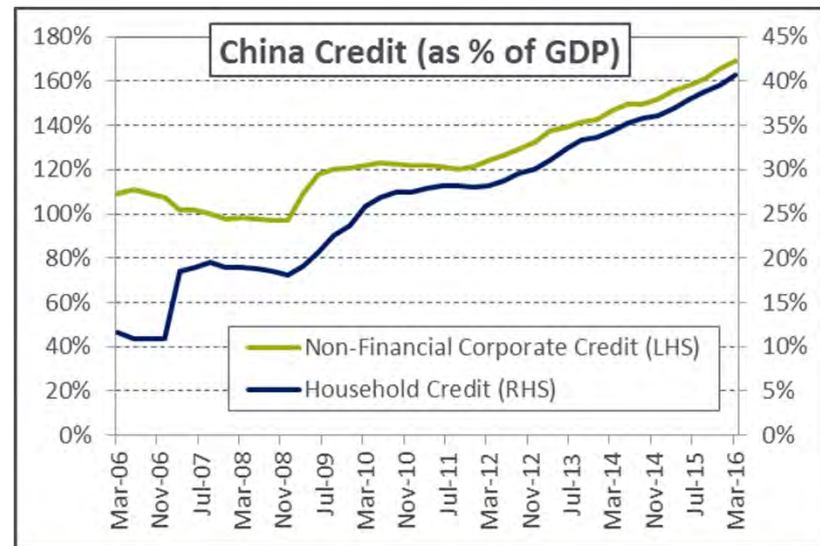
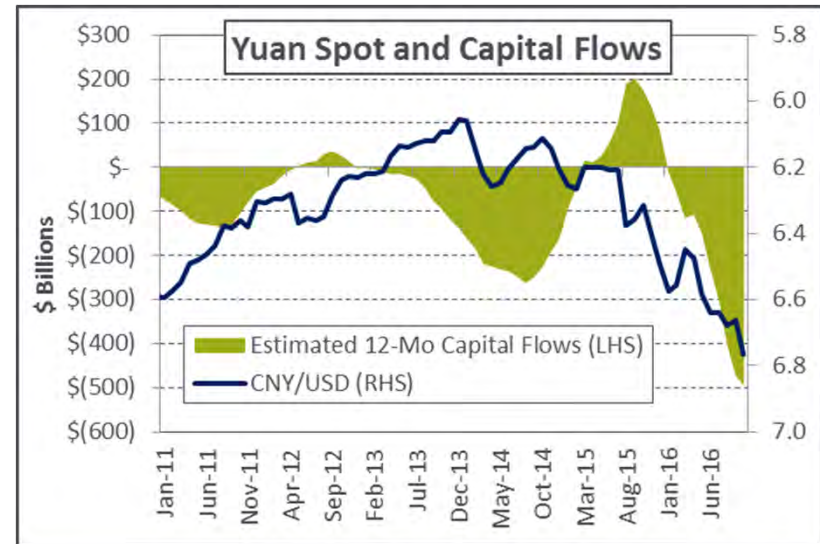
Restrictions on capital markets are slowly being eased, with an eye towards limiting social disruption

Concerns of a rapid currency devaluation have forced a more managed transition process that likely delays the opening of equity and bond markets to global investors

Managed policy transitions come with significant risks which require balance

Fiscal policy: Consequences of unsustainable credit growth if too accommodative or a hard economic landing if too austere

Monetary policy: Potential for asset price bubbles in real estate and capital markets if policy changes slowly or move rapidly and spur capital flight



Source: (Top) SAFE, Bloomberg
Source: (Bottom) Bank for International Settlements

Globalization Backlash

Weak economic growth and uneven wage gains over the last decade have fueled political discontent in the West

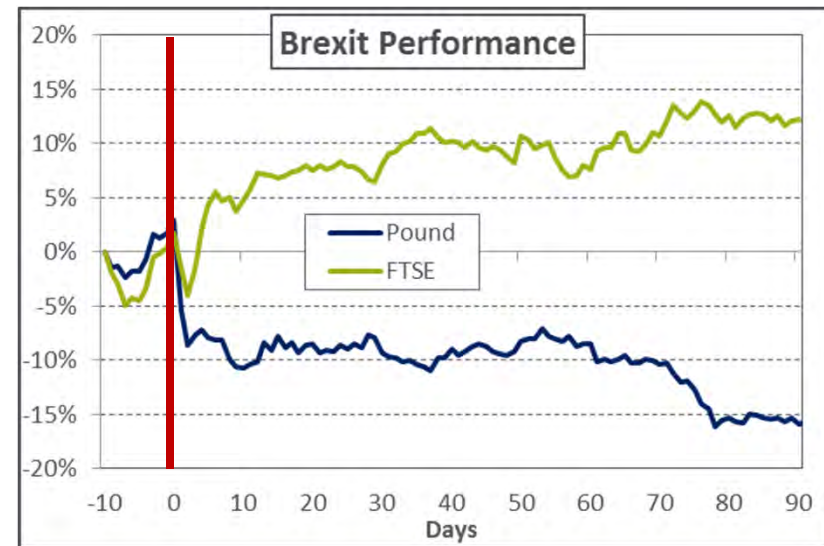
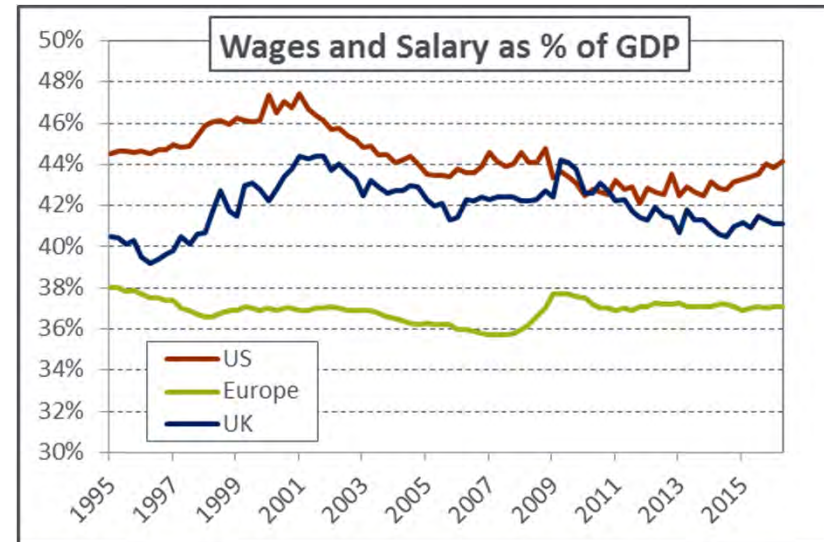
The backlash against globalization does not materially alter the fundamentals of the global capital markets, but does increase economic and market uncertainty

Populist movements destabilize the established political order but are not inevitably bearish for equity markets

Political uncertainty intensifies currency volatility and in cases of depreciation may stimulate local equity markets (e.g. UK)

May bring increased fiscal spending and higher inflation, a welcome benefit for developed market economies

However, a shift away from political orthodoxy heightens low probability political tail-risks such as a US-China trade war or a dissolution of the euro



Source: (Top) Bureau of Economic Analysis, Eurostat, Bloomberg
Source: (Bottom) Bloomberg

Globalization Backlash

Have we reached “Peak Trade”?

A secular transition is underway and a shift from free trade policies in the West may reduce long-term economic growth rates

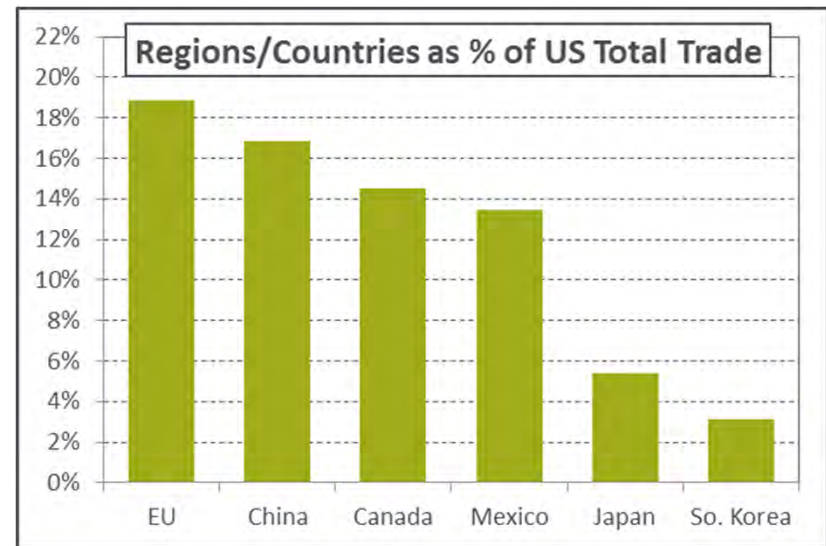
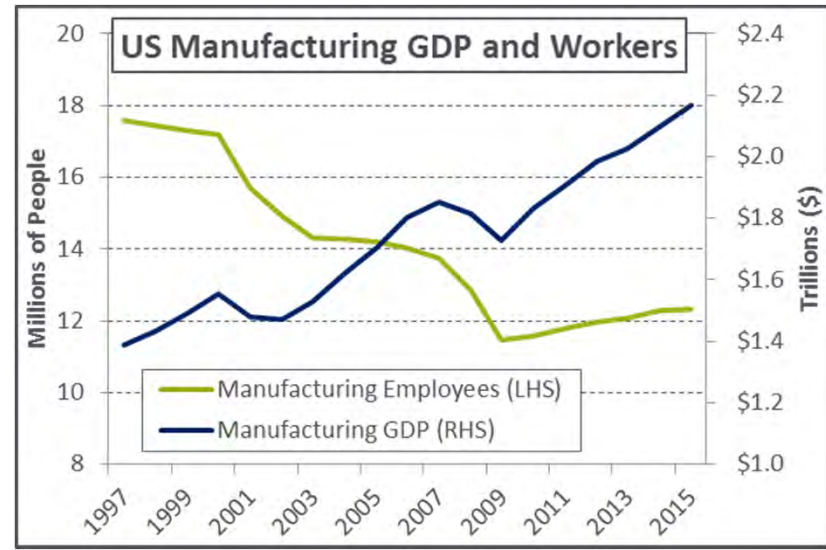
Free trade is blamed but automation is perhaps a greater source of social disruption and job losses

A strong US pivot away from global trade is a tail-risk for the global economy and would likely impact capital markets negatively in the emerging world

For many nations, a turn inward is associated with globalization fatigue

Greater expression of nationalism often translates to increased geopolitical risks as multilateral relationships are reassessed

Anti-establishment political parties reflect the economic unease of voters but are unlikely to initiate the structural economic reforms required in the developed world



Source: (Top) Bureau of Labor Statistics, Bloomberg
Source: (Bottom) IMF, Bloomberg

Current Opportunities



Current Opportunities

Current Opportunities are investment ideas that represent an action with the goal of improving investment outcomes. These investment ideas are likely to change more frequently as market dynamics and valuations shift over time. Our 2017 Current Opportunities:

1. **Trim US Equity Gains**
2. **Overweight Non-US Developed Market Equities**
3. **Emerging Market Equities Remain Attractive**
4. **Allocate to TIPS from Core Bonds**
5. **Reduce High Yield for Other Credit Strategies**
6. **Fund Emerging Local Debt from Risk Assets**
7. **Add Macro Hedge Fund Strategies**

Trim US Equity Gains

US markets have rallied significantly with low levels of earnings growth

A prolonged US economic expansion can support a continued rally for US equities despite elevated valuation levels

Expanding valuations have driven recent returns while corporate earnings weakness has been largely overlooked

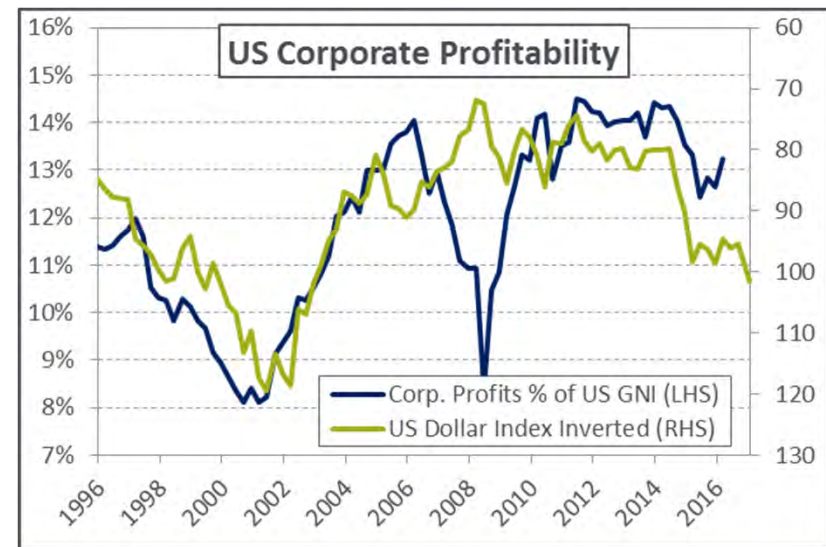
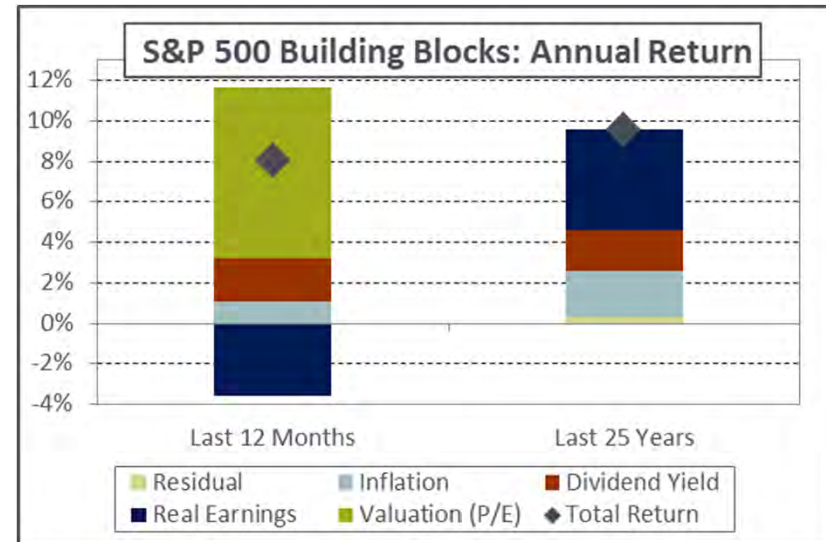
Corporate earnings are under pressure from a strong US dollar but profit margin declines could be offset by a reduction in tax rates

Look to reduce US equity exposure to fund global equity strategies

Investors with less benchmark sensitivity could use US equities as a funding source for emerging market local debt

US equities remain a viable funding source for private market commitments

Should US equity markets decline materially, look to rebalance to exploit market volatility



Source: (Top) Standard & Poors, Bloomberg, NEPC
Source: (Bottom) Bloomberg, FRED

Overweight Non-US Developed Market Equities

Europe and Japan carry risks but offer a meaningful return opportunity

Catalysts for outperformance are present with shareholder friendly actions in Japan and macroeconomic improvement in Europe

Central bank support and US dollar strength provide a positive economic backdrop as both the ECB and BoJ are likely to maintain accommodative monetary policies

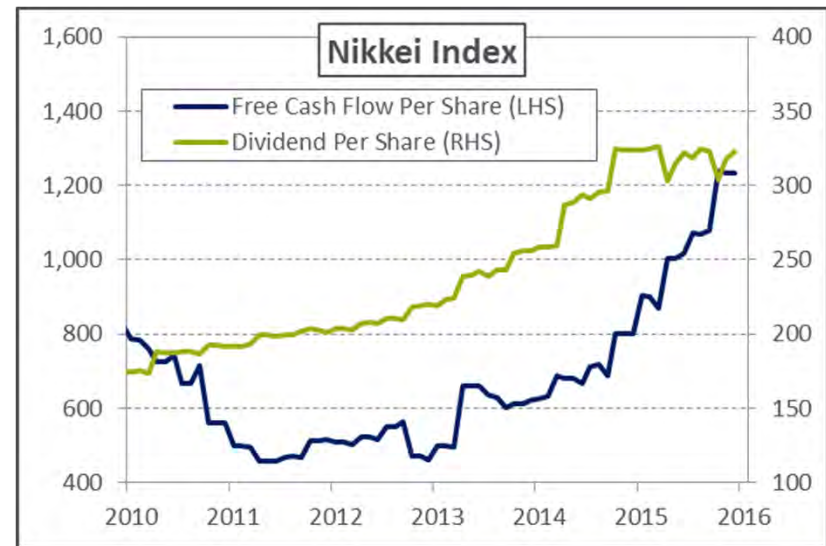
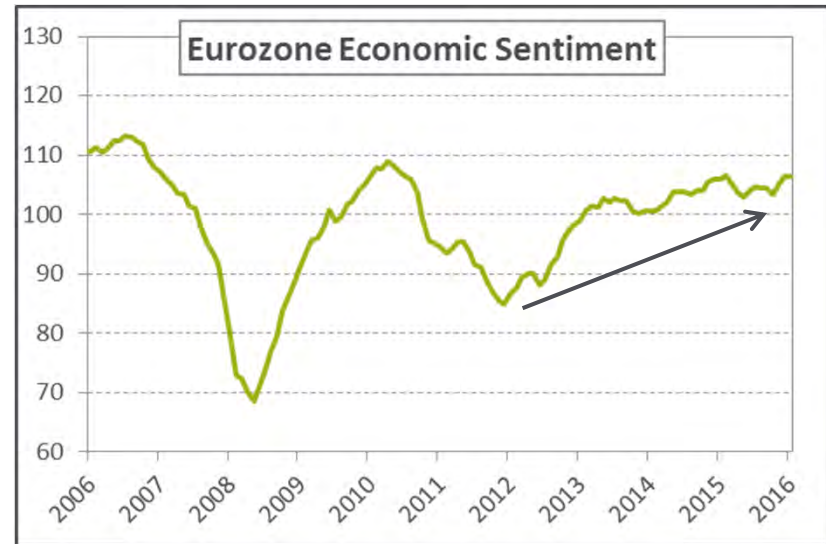
Anti-establishment political parties represent a tail-risk for the stability of the Eurozone with major elections across Europe in 2017

Recommend a gradual shift from the US to non-US equities as European elections are likely to generate volatility

Small-cap equity and global equity are preferred implementation approaches

These strategies offer the best opportunity to exploit valuation discrepancies among stocks across countries and sectors

Hedging a portion of non-US developed currency exposure remains a strategic goal



Source: (Top) European Commission, Bloomberg
Source: (Bottom) Bloomberg

Emerging Market Equities Remain Attractive

Emerging equities offer the highest total return potential for investors

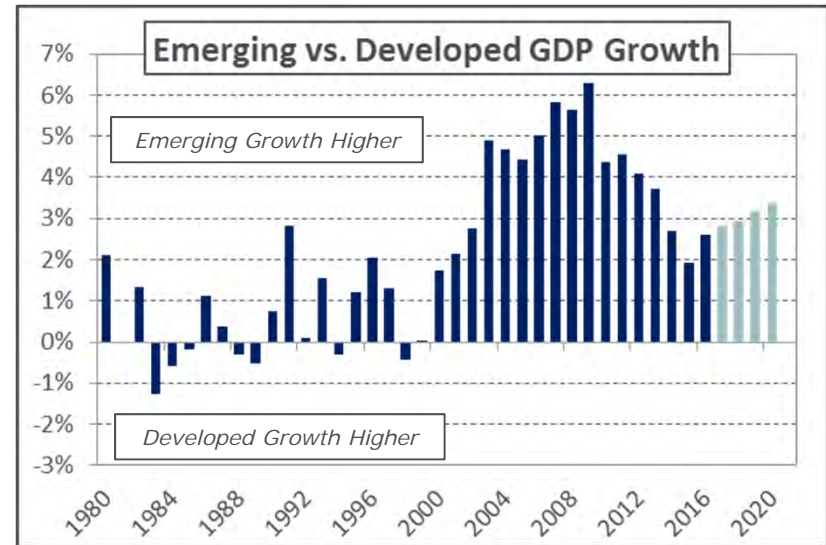
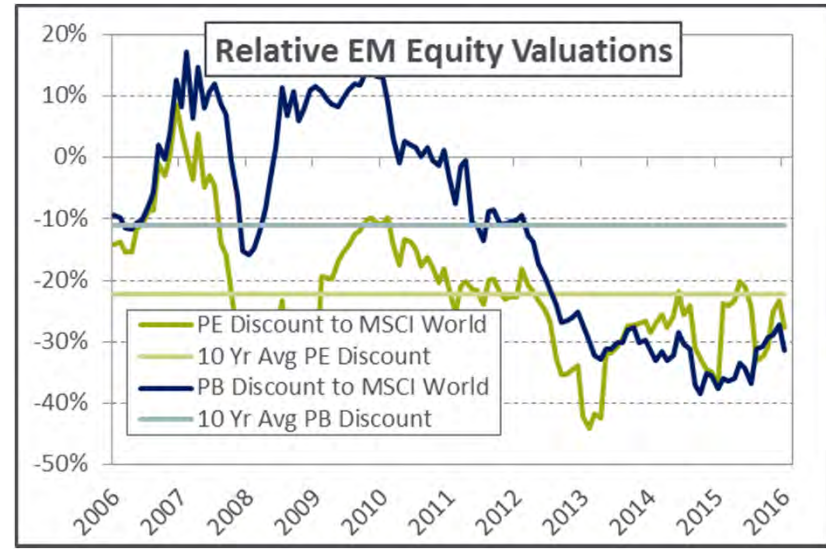
Valuation levels and long-term fundamentals suggest an overweight relative to global market cap weights (e.g. 15% to 20%)

China's depreciating currency, broad US dollar strength and US-Asia trade policy concerns temper our excitement

Growth premium relative to the developed world is advancing as emerging market economic conditions improve off fiscal and currency adjustments of recent years

Overweight small-cap and consumer focused strategies relative to broad benchmark mandates

Small-cap and emerging market consumer strategies offer a structural bias away from commodity exposures and state owned enterprises



Source: (Top) MSCI, Bloomberg
Source: (Bottom) IMF

Allocate to TIPS from Core Bonds

Preserve US duration exposure with a bias towards TIPS over core bonds

TIPS offer safe haven exposure with an explicit hedge for realized inflation and can be sourced with a low cost passive strategy

A meaningful allocation to TIPS diversifies core bond exposure and improves risk balance across economic environments

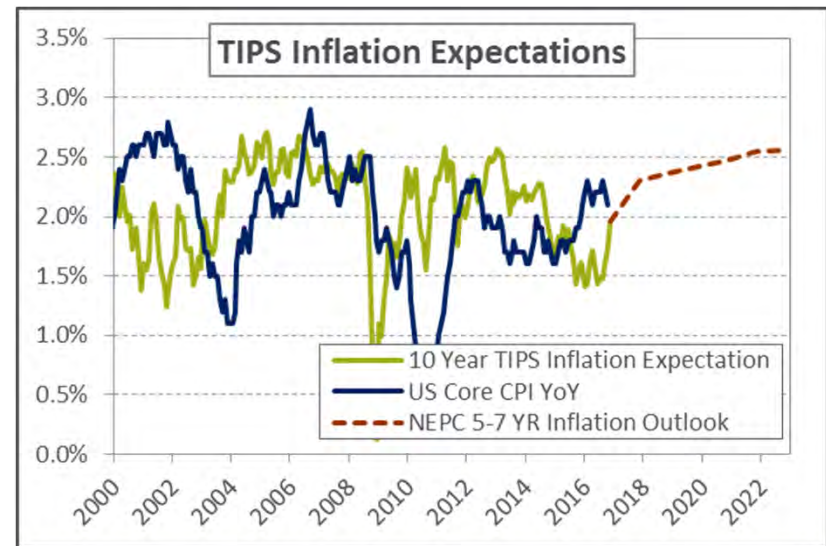
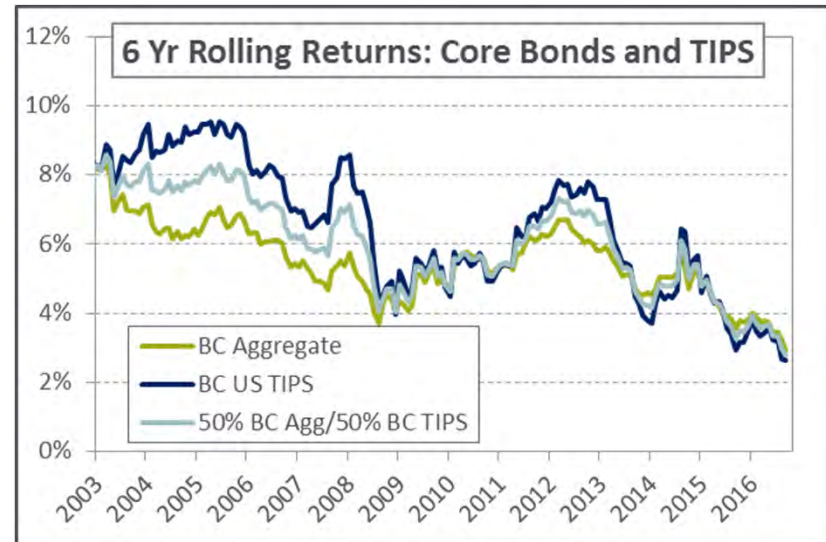
Despite concern of higher interest rates, duration exposure remains a critical asset allocation building block for a portfolio

Higher inflation expectations favor TIPS over nominal bonds

Rising inflation assumptions imbedded in fixed income markets are more likely to negatively impact nominal interest rates

TIPS yields are based on real rates and prices are sensitive to Fed tightening

Core bond yields include real rates and inflation expectations; prices are negatively impacted by increases in both



Source: (Top) Barclays, Bloomberg, NEPC
 Source: (Bottom) Bureau of Labor Statistics, Bloomberg, NEPC

Reduce High Yield for Other Credit Strategies

Index aware high yield strategies enjoyed exceptional returns in 2016

Outsized credit spreads fell to historic median levels as the energy market and economic outlook improved in 2016

Extended US economic growth cycle supports positive returns and can push credit spreads below long-term levels

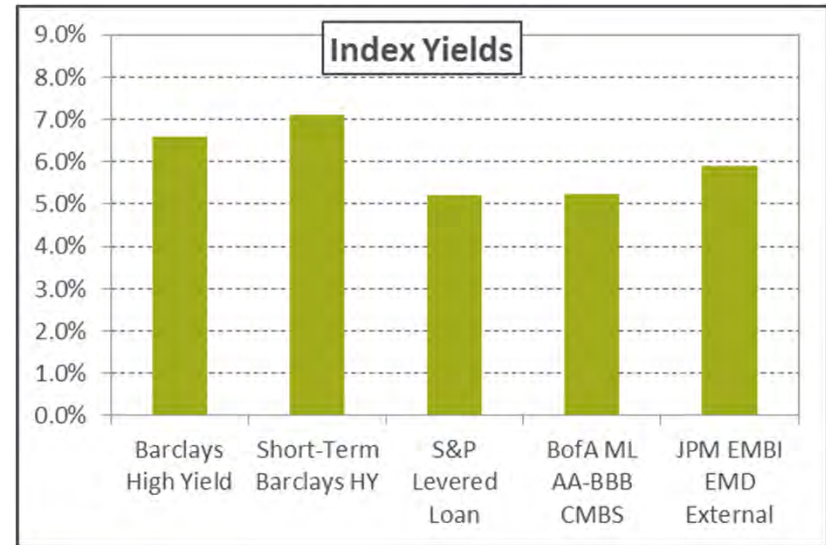
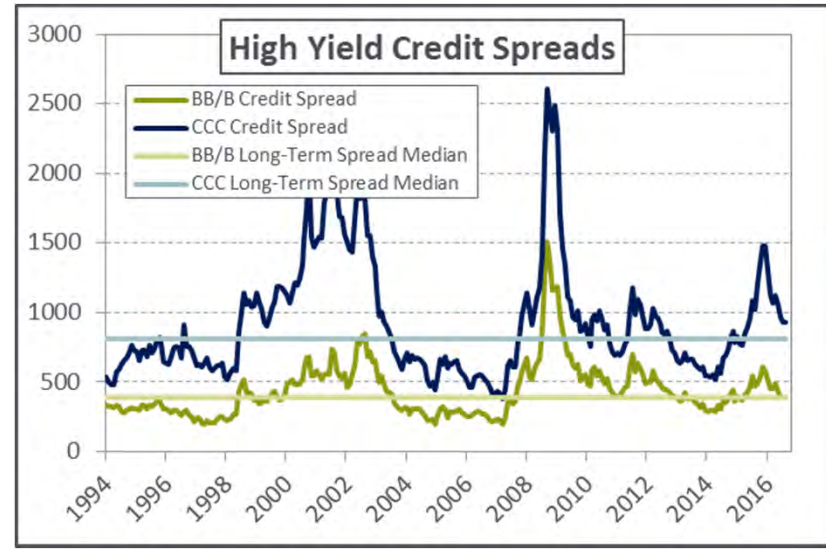
Credit markets continue to benefit from high demand in a low rate environment, but current spread levels are less compelling

Make use of other credit strategies to capture pockets of value

Bank loans and short duration high yield offer higher expected returns than high yield due to limited duration exposure

Security selection is critical as some credit sub-sectors such as structured credit provide a better return/risk profile

Credit focused multi-sector strategies can effectively allocate across credit markets to seek pockets of opportunity



Source: (Top) Barclays, Bloomberg
Source: (Bottom) Barclays, Standard & Poors, BofA/ML, JP Morgan, Bloomberg

Fund Emerging Local Debt from Risk Assets

Emerging market local debt offers a compelling total return opportunity

High index yield provides a cushion to offset potentially high currency volatility

Valuations for many emerging market currencies are attractive following significant adjustments over the last five years

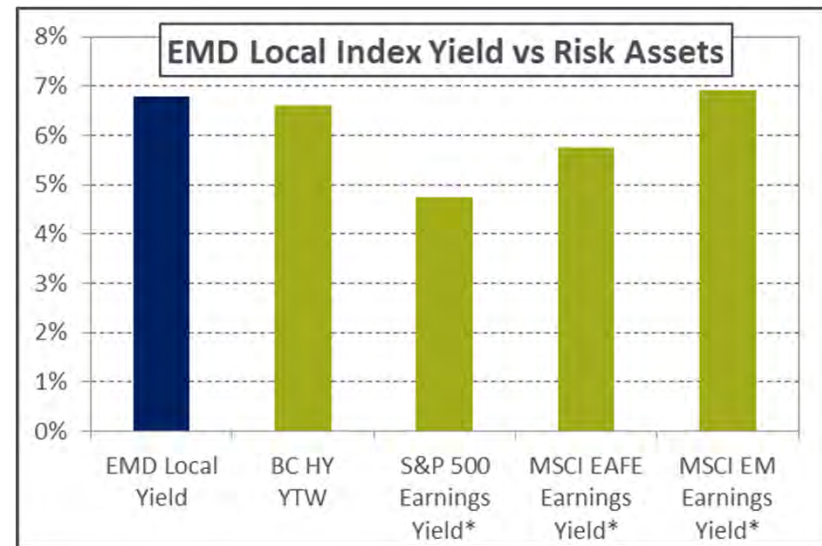
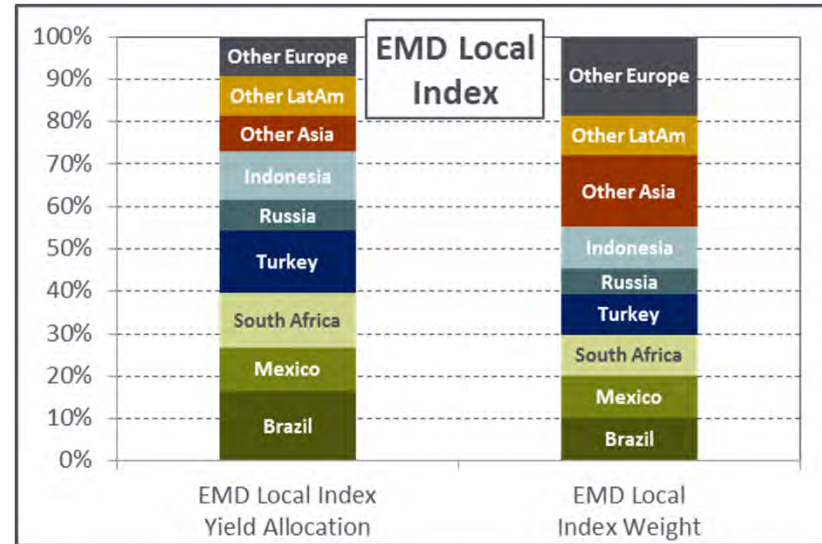
Country index weights in local debt are more globally distributed than in equity, mitigating regional risk concentrations

Shift a portion of risk assets exposure to emerging local debt

The volatility of EM local debt is equity-like due to the volatility of emerging currencies

Preferred implementation approach is a EM local debt strategy benchmarked to a global diversified index

Blended EMD strategies could be more appropriate for investors with a lower risk tolerance



Source: (Top) JP Morgan
*Earnings Yield measured as inverse of trailing 12M P/E; Source: (Bottom) NEPC, Bloomberg

Add Macro Hedge Fund Strategies

Global macro strategies can provide broad benefits to a total portfolio

Allocations of size (e.g. 5%) help to mitigate the left-tail of a portfolio return distribution

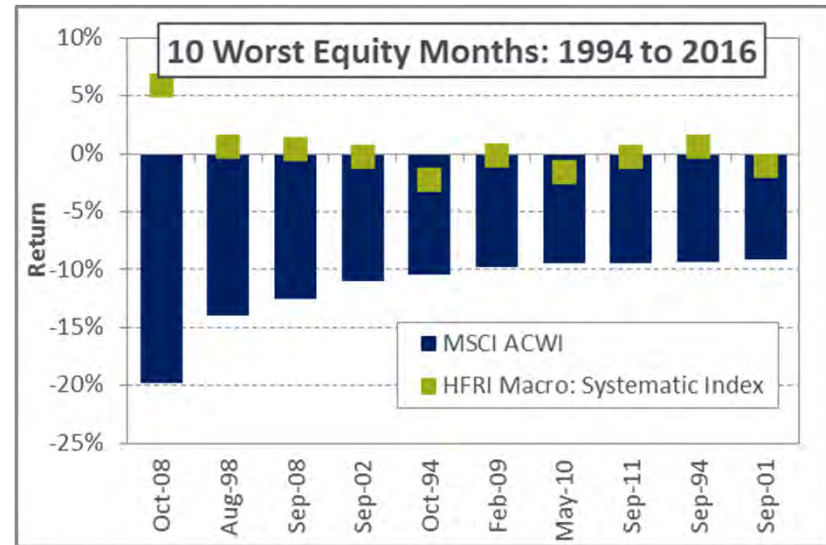
In times of uncertainty or elevated volatility, macro strategies are positioned to outperform beta-oriented approaches

Investors should be targeted in their approach to portfolio construction as manager selection is paramount

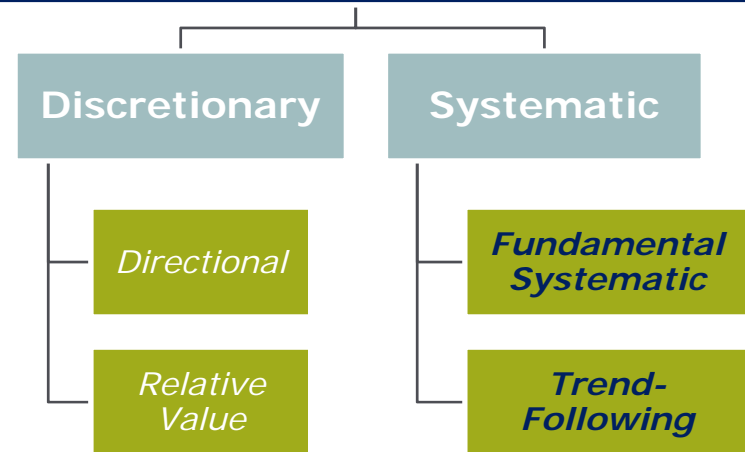
Fund systematic global macro from broad based GAA and hedge fund of fund strategies

Systematic strategies tend to exhibit low correlation to equity markets and are strong diversifiers within a total portfolio

Many systematic macro strategies exhibit "crisis alpha" or excess performance in risk-off periods



Global Macro Strategies*



Source: (Top) eVestment, HFRI
 *Not intended to be an all inclusive Macro sub-strategy list

Asset Class Assumptions



2017 5-to-7 Year Return Forecasts

Geometric Expected Return			
Asset Class	2016	2017	2017-2016
Cash	1.50%	1.75%	0.25%
Treasuries	1.75%	2.00%	0.25%
IG Corp Credit	3.75%	3.75%	-
MBS	2.00%	2.25%	0.25%
Core Bonds*	2.46%	2.65%	0.19%
TIPS	2.50%	3.00%	0.50%
High-Yield Bonds	5.25%	4.75%	-0.50%
Bank Loans	5.50%	5.25%	-0.25%
Global Bonds (Unhedged)	1.00%	1.00%	-
Global Bonds (Hedged)	1.09%	1.09%	-
EMD External	4.75%	4.75%	-
EMD Local Currency	6.50%	6.75%	0.25%
Large Cap Equities	6.00%	5.75%	-0.25%
Small/Mid Cap Equities	6.25%	6.00%	-0.25%
Int'l Equities (Unhedged)	7.25%	7.25%	-
Int'l Equities (Hedged)	7.57%	7.57%	-
Emerging Int'l Equities	9.75%	9.50%	-0.25%
Private Equity	8.50%	8.25%	-0.25%
Private Debt	7.50%	7.25%	-0.25%
Real Estate	6.50%	6.00%	-0.50%
Commodities	4.50%	4.75%	0.25%
Hedge Funds**	5.75%	5.95%	0.20%

* Core Bonds assumption based on market weighted blend of components of Aggregate Index (Treasuries, IG Corp Credit, and MBS).

** Hedge Funds is a calculated blend of 40% Equity, 40% Credit, 20% Macro-related strategies.

- **Past performance is no guarantee of future results.**
- **The goal of this report is to provide a basis for substantiating asset allocation recommendations. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.**
- **Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
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