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Real Possibilities in
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Aligning Wilmington to better serve and capitalize on the growing boomer community
Will the Good Times Roll On?

Thomas D. Simpson, Ph.D.
Cameron School of Business
University of North Carolina Wilmington
2018 Pickup in Growth

• Growth in 2018 has been 3-1/4 percent
• Up from growth in this expansion of 2-1/4 percent
• Exceeds sustainable (potential) growth of 1.9 percent
• Propelled by consumption, BFI (at least until very recently), and government spending
Has Brought Unemployment to Historical Lows
Symptom of a Tight Jobs Market: More Openings than Unemployed
Concern: Inflation May Be Firing Up

- **Core PCE Inflation**
- **Unemployment**
- **Fed Target**

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• But growing reports of nonwage compensation - bonuses and flex hours
• Also incurring costs of training lesser-skilled workers
Longer-Term Inflation Expectations Still Anchored
Looking Ahead, Consumers Will Keep on Spending

- Household wealth positions very comfortable
- Strong job growth and upbeat sentiment
Mixed Picture for Business Spending

- Cut in corporate tax rate and expensing provision raised returns
- Regulatory rollback also improving incentives to invest
- Financing conditions remain favorable
- Optimism generally high, especially among smaller businesses
- But trade war leading to uncertainty and caution
Orders for Capital Goods Have Flattened

Manufacturers New Orders

Billions of $
Soft Spot: Housing

Single Family Permits

Number


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Looking Ahead, Growth Slows

- But still exceeds growth in potential output (sustainable growth)
- Will lower unemployment rate further and intensify use of other resources
- Firming of labor costs and impact of tariffs will push inflation above the Fed’s 2 percent target

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3-1/4 percent</td>
<td>2-1/2 percent</td>
<td>2 percent</td>
</tr>
</tbody>
</table>
Challenges for the Fed

- Striking the right balance between containing inflation and keeping the expansion going—a soft landing
- Situation calls for more increases in short-term interest rates

<table>
<thead>
<tr>
<th>Year-end federal funds rate</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fed</td>
<td>2.4 percent</td>
<td>3.1 percent</td>
<td>3.4 percent</td>
</tr>
<tr>
<td>Market</td>
<td>2.4 percent</td>
<td>2.9 percent</td>
<td>3.0 percent</td>
</tr>
</tbody>
</table>

- Also boosting long-term rates: Run-offs of Fed’s balance sheet—unwinding of QE—that are raising term premiums
Derailing a Soft Landing

• Full blown trade war - pushing inflation still higher, raising inflation expectations, and bringing on a recession

• Intensification of WH criticism of Fed rate hikes blowing the Fed off course or raising inflation expectations
Should We Fear an Inverted Yield Curve?

• Yield curve moving toward inversion
• Previous inversions preceded recessions
• Under well-executed policy, this should not happen

10 yr minus 2 yr Treasury
Thank you.
It’s Morning in Wilmington

Adam T. Jones, Ph.D.
Swain Center
Cameron School of Business - UNCW
A few brief comments

• Pre-storm we were on track
• Storm disruptions
• Post-storm outlook is clear – for a little while
Growth Was Settling In

Gross Domestic Product Growth

- 2013: Wilmington MSA (Current Series)
- 2013: Wilmington MSA (Prior Release)
- 2014
- 2015
- 2016
- 2017

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Employment Gap Closed

Employment

Estimated Full Employment

Regional Employment

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Retail Sales Growth Normalizing

Sales Tax Collections

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Wage Growth was Showing Signs of an Upswing...

Separations and Wage Growth

Wage Growth (6m MA)

Separations (6m MA)
...Early Next Year

Separations and Wage Growth

Wage Growth
18 Months in the Future
(6m MA)

Separations
(6m MA)
Home Prices Showing Signs of Break Out

FHFA Home Price Index
Home Prices Showing Signs of Break Out

Home Price Increases

How Fast is too Fast?
Increases reasonable compared to income

Home Price Index / Income Index

Watching: No Alarms Yet
The Outlook was Sunny...

...Then it Went Dark

Source: wtkr.com
Hurricane Florence

- Property Damage
  - Mostly due to water damage

- Business Disruptions
  - Low intensity strikes ~1% of regional GDP
  - Likely closer to 2% for Florence

- Outside Perceptions
  - Home prices suffer after multiple strikes
  - Recover quickly after last in series
What to expect going forward

• Other Storms
  • Houston – Hurricane Harvey, August 2017
    • Upwards of 60 inches of rain
  • Baton Rouge – Flooding, August 2016
    • Upwards of 20 inches of rain
  • New Orleans – Hurricane Katrina, August 2005
    • Upwards of 10 inches of rain, levy breaches, winds
  • Atlantic City – Hurricane Sandy, October 2012
    • Upwards of 12 inches of rain
Unemployment Recovers Quickly

Local Rate - National Rate

Months Pre and Post Storm

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Nonfarm Employment Resilient

Total Employment

Employment Index

Months Pre and Post Storm

- Houston
- Baton Rouge
- Atlantic City
- New Orleans

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Retail Employment Likely to Hold Up
Manufacturing Employment Largely Unaffected

Manufacturing Employment

Employment Index

Months Pre and Post Storm

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Construction Employment is Likely to Rise

Construction Employment

Index

Months Pre and Post Storm

Houston
Baton Rouge
New Orleans

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Housing Permits Will Increase as Well

Housing Permits

Index

Months Pre and Post Storm

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Home Prices Likely to Increase and then Normalize Again

Home Prices

Index (1995 = 100)

Years:
- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017

Months Pre and Post Storm

City:
- Houston
- New Orleans
- Baton Rouge

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Looking Forward

• Likely to see a boost to “measured” gross domestic product for 2019

• Expect:
  • Home prices to rise over the next year, then slow
  • Construction employment to increase, on the order of 20%
  • Tourism sector to continue moderate growth*

• Loss of wealth, time, and leisure not in traditional economic statistics

• Risks of “hard landing” and policy uncertainty
Good Morning!

Thank you.
Misc. References

• Burrus, Dumas, Farrell and Hall
  • “Impact of Low-Intensity Hurricanes on Regional Economic Activity”
  • *Natural Hazards Review*

• Texas Comptroller
  • “A Storm to Remember: Hurricane Harvey and the Texas Economy”
Aligning Wilmington to better serve and capitalize on the growing boomer community
Market Outlook
Chief Investment Office
This material was prepared by the Chief Investment Office (CIO) and is not a publication of BofA Merrill Lynch Global Research. The views expressed are those of the CIO only and are subject to change. This information should not be construed as investment advice. It is presented for information purposes only and is not intended to be either a specific offer by any Merrill Lynch or U.S. Trust entity to sell or provide, or a specific invitation for a consumer to apply for, any particular retail financial product or service that may be available.

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Investment products:

<table>
<thead>
<tr>
<th>Are Not FDIC Insured</th>
<th>Are Not Bank Guaranteed</th>
<th>May Lose Value</th>
</tr>
</thead>
</table>

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Global Growth Peaks as Fed Approaches Neutral

A moderation in economic growth (from robust levels) has been taking place outside the U.S.

Despite moderation, Purchasing Managers’ Indexes (PMIs) still signal economic growth.

The Global Wave peaking does not necessarily mean a significant slowdown is imminent. It may be a pause in a longer-term uptrend.

Global PMIs May Have Peaked, But Still Signal Strong Growth

Markit Manufacturing PMI

- 2017 Average
- 2018 Average
- August 2018

Global PMIs: 53.1, 53.3, 53.6, 54.7, 57.4, 56.4
United States: 57.4, 54.7, 54.6
Euro Area: 54.6, 51.3, 50.8
Emerging Markets: 53.6, 51.2, 50.8

The Global Wave quantifies trends in global economic activity and is an amalgamation of seven macroeconomic and market components.**

Source: (Left) Markit; Haver Analytics, Data as of August 2018. (Right): BofA Merrill Lynch Global Quantitative Strategy, MSCI, IBES, Bloomberg, OECD, IMF. Data as of September 2018. **Components of Global Wave: Global Industrial Confidence (Output), Global Consumer Confidence (Demand), Global Capacity Utilization (Investment), Global Unemployment Labor (Market), Global Producer Prices (Prices), Global Credit Spreads (Bond Market) and Global Earnings Revision Ratio (Equity Market). Past performance is no guarantee of future results. There can be no assurance that the forecasts will be achieved. Economic or financial forecasts are inherently limited and should not be relied on as indicators of future investment performance. Please refer to appendix for asset class disclosures and index definitions.
U.S. Business Cycle Indicator Dashboard

The CIO tracks various metrics (below), which currently indicate that the U.S. economy remains on an expansionary course. This underlines our expectations for strong growth in the near term. There are, however, several data points in extended territory that we are watching for any shift towards a recessionary trend.

**Business Cycle Dashboard**

- ↑ Indicates expansionary
- ↑ Indicates expansionary, but in extended territory
- ↓ Indicates recessionary

### Current readings of Business Cycle Indicators

<table>
<thead>
<tr>
<th>Inflation</th>
<th>Labor Market</th>
<th>Yield Curve</th>
<th>U.S. Consumer</th>
<th>Business Conditions</th>
<th>Housing Market</th>
<th>Credit Conditions</th>
<th>Equity Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>↑ Price inflation, wage inflation</td>
<td>↑ Jobs created, UE claims, avg. weekly hours, wage inflation</td>
<td>↑ Yield curve (10-yr-Fed Funds)</td>
<td>↑ Consumer confidence</td>
<td>↑ ISM manufacturing, capacity utilization, small bus. optimism</td>
<td>↑ Housing starts, new building permits</td>
<td>↑ Corporate debt spread, bank lending</td>
<td>↑ Profit margins, equity valuation (P/E)</td>
</tr>
</tbody>
</table>

### September 2018

<table>
<thead>
<tr>
<th>Inflation</th>
<th>Labor Market</th>
<th>Yield Curve</th>
<th>U.S. Consumer</th>
<th>Business Conditions</th>
<th>Housing Market</th>
<th>Credit Conditions</th>
<th>Equity Market</th>
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</tbody>
</table>

### Historical Business Cycle Indicators at the Beginning of Recession

<table>
<thead>
<tr>
<th>Inflation</th>
<th>Labor Market</th>
<th>Yield Curve</th>
<th>U.S. Consumer</th>
<th>Business Conditions</th>
<th>Housing Market</th>
<th>Credit Conditions</th>
<th>Equity Market</th>
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<td>↓</td>
<td>↓</td>
</tr>
</tbody>
</table>

### December 2007

<table>
<thead>
<tr>
<th>Inflation</th>
<th>Labor Market</th>
<th>Yield Curve</th>
<th>U.S. Consumer</th>
<th>Business Conditions</th>
<th>Housing Market</th>
<th>Credit Conditions</th>
<th>Equity Market</th>
</tr>
</thead>
<tbody>
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<td>↓</td>
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<td>↓</td>
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</tr>
</tbody>
</table>

### March 2001

<table>
<thead>
<tr>
<th>Inflation</th>
<th>Labor Market</th>
<th>Yield Curve</th>
<th>U.S. Consumer</th>
<th>Business Conditions</th>
<th>Housing Market</th>
<th>Credit Conditions</th>
<th>Equity Market</th>
</tr>
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<tbody>
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</tr>
</tbody>
</table>

Indicator is in extended territory if majority of data tracked in that category is outside the bounds of what we consider to be moderate levels. Source: Bloomberg; Haver Analytics; Federal Reserve Bank of St. Louis; Chief Investment Office. Data as of September 2018. Past performance is no guarantee of future results. The economic and market forecasts presented are for informational purposes as of the date of this report. There can be no assurance that the forecasts will be achieved. Please refer to appendix for asset class proxies and index definitions.
Recession Risk Currently at Low Levels

In addition to the dashboard of business cycle indicators we track, changes in economic gauges tracked by the CIO U.S. Recession Indicator suggest in aggregate that the risk of recession in the U.S. is currently low.

In the U.S., There’s High Confidence in the Outlook

Under the current administration, business and consumer confidence have surged, providing a positive outlook for consumer spending and capital expenditures.

Small businesses feel now is good time to expand.

NFIB Survey: "Now is a Good Time to Expand"
Index Value

Tax reform and a strong jobs market has consumer confidence close to an all-time high.

Consumer Confidence Approaching an All-Time High
Index Value

Consumer confidence is at its highest level since 2000, as measured by The Conference Board.

Monetary Policy Passing the Baton to Fiscal Policy

Firms are responding to pro-growth fiscal policies with more capital spending. A robust capital expenditure cycle should contribute to stronger productivity growth.

U.S. capital spending should remain resilient on pro-business tax and regulatory policies.

Manufacturers’ Shipments of Nondefense Capital Goods ex Aircraft
Year-over-year % Change

We expect recent passage of tax reform to prompt businesses to expand capital expenditures, leading to an acceleration in productivity.

Percent Change

<table>
<thead>
<tr>
<th></th>
<th>Productivity Growth (20-quarter % change annualized)</th>
<th>U.S. Trust Estimate Leading 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated through</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019-Q4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: (Left) Census Bureau/Haver Analytics. Data as of July 2018. (Right) Bureau of Labor Statistics, Chief Investment Office. Data as of Q2 2018. **Stagflation: economic environment characterized by slower to stagnating growth and higher inflation. **Secular Stagnation: Time period during which economic growth on a broad basis was slower than historical growth rates. Past performance is no guarantee of future results. Please refer to appendix for asset class disclosures and index definitions.
Fiscal Stimulus in the U.S. Driving Growth

Pro-business fiscal and regulatory policy in the U.S. have helped to fuel growth.

U.S. manufacturing is thriving following a boost from pro-growth fiscal policy.

In our view, the dollar will be key to watch amid global trade tension, Fed rate hikes, and accelerating U.S. growth.

Fiscal stimulus has led to increased cash for consumers. Investor cash balances are also elevated, a contrarian buy signal for equities.

**Increased Cash from Fiscal Stimulus**

U.S. companies brought back approximately $465 billion in repatriated profits in 1H 2018. But it’s not just corporations with growing access to cash: According to Strategas, last year’s tax reform reduces personal income tax rates for an estimated 90-95% of the population in the amount of $120 billion – roughly equivalent to giving nearly every worker in America a raise of 3%.

Sources: (Top Left) Institute for Supply Management; Haver Analytics. Data as of August 2018. (Top Right) Federal Reserve Board; Haver Analytics. Data as of August 2018. Shaded are recessions. (Bottom Left) Strategas, Data as of September 2018. (Bottom Right) BofAML Global Research. Data as of September 2018. Past performance is no guarantee of future results. Please refer to appendix for asset class disclosures and index definitions.
U.S. Inflation Expectations and Rates

A strong labor market and the recent pickup in growth have pushed inflation expectations higher, contributing to an increase in interest rates.

Market data indicate rising inflation expectations...

... which have helped to push U.S. 10-year Treasury yields higher.

Source: (Left) Federal Reserve. Data as of September 21, 2018. (Right) Bloomberg. Data as of September 21, 2018. Past performance is no guarantee of future results. There can be no assurance that the forecasts will be achieved. Economic or financial forecasts are inherently limited and should not be relied on as indicators of future investment performance. Performance results are short term and may not provide an adequate basis for evaluating performance potential over varying market conditions or economic cycles. Please refer to appendix for asset class disclosures and index definitions.
How are Companies Spending the Fiscal Windfall?

Record buyback trends, more than 20% growth in capital expenditures (CapEx), highlight how companies are using the windfall. We expect companies to also use extra funds on debt reduction.

After the second quarter reporting season for the S&P 500, share buybacks are on pace to set a record.

The percent of small businesses planning to expand CapEx has reached its highest level in over a decade.

Source: (Left) Bloomberg; Chief Investment Office. Data as of September 14, 2018. (Right) Haver Analytics; NFF; Chief Investment Office. Data as of September 14, 2018. Past performance is no guarantee of future results. Please refer to appendix for asset class proxies and index definitions.
U.S. Midterms – A Guardrail of Sorts

Historically, equities and other risk assets have rallied after midterm elections, a trend we expect to continue on solid U.S. economic growth and robust earnings into 2019. Meanwhile, a potential Democratic win of one of the Houses of Congress may place a guardrail on Trump’s trade policy.

Risk assets, led by technology have outperformed on average after midterm elections.

On watch: S&P 500 average returns under a split Congress with a Republican president have lagged versus today’s pre-midterm setup. Worries over continuation of pro-business policy may become a headwind should this scenario materialize.

See black boxed scenarios

S&P 500 Average Annual Performance Under Partisan Control Scenarios

<table>
<thead>
<tr>
<th>Political Scenarios</th>
<th>1933 - 2017 % Change</th>
<th>Years</th>
<th>1945 - 2017 % Change</th>
<th>Years</th>
<th>1965 - 2017 % Change</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unified Government</td>
<td>10.4%</td>
<td>41</td>
<td>11.2%</td>
<td>29</td>
<td>9.7%</td>
<td>17</td>
</tr>
<tr>
<td>&gt; Democratic President</td>
<td>9.3%</td>
<td>34</td>
<td>9.8%</td>
<td>22</td>
<td>7.8%</td>
<td>12</td>
</tr>
<tr>
<td>&gt; Republican President</td>
<td>15.7%</td>
<td>7</td>
<td>15.7%</td>
<td>7</td>
<td>14.3%</td>
<td>5</td>
</tr>
<tr>
<td>Unified Congress</td>
<td>7.4%</td>
<td>32</td>
<td>7.4%</td>
<td>32</td>
<td>7.5%</td>
<td>24</td>
</tr>
<tr>
<td>&gt; Democratic President</td>
<td>13.0%</td>
<td>10</td>
<td>13.0%</td>
<td>10</td>
<td>16.3%</td>
<td>8</td>
</tr>
<tr>
<td>&gt; Republican President</td>
<td>4.9%</td>
<td>22</td>
<td>4.9%</td>
<td>22</td>
<td>3.1%</td>
<td>16</td>
</tr>
<tr>
<td>Split Congress</td>
<td>8.7%</td>
<td>11</td>
<td>8.7%</td>
<td>11</td>
<td>8.7%</td>
<td>1</td>
</tr>
<tr>
<td>&gt; Democratic President</td>
<td>13.6%</td>
<td>4</td>
<td>13.6%</td>
<td>4</td>
<td>13.6%</td>
<td>4</td>
</tr>
<tr>
<td>&gt; Republican President</td>
<td>5.9%</td>
<td>7</td>
<td>5.9%</td>
<td>7</td>
<td>5.9%</td>
<td>7</td>
</tr>
<tr>
<td>All Years</td>
<td>9.1%</td>
<td>84</td>
<td>9.1%</td>
<td>72</td>
<td>8.5%</td>
<td>52</td>
</tr>
</tbody>
</table>

*Data excludes 2001 due to Rep Jeffords changing party mid-year.
Lack of Yield Curve Inversion Suggests Continued Economic Growth

Recessions and Market Peaks come with substantial lags after the inversion takes place.

At its current position, the yield curve has not yet inverted, suggesting monetary policy remains generally accommodative.

Regardless of whether an investor looks at the 10 Year – Fed Funds curve, the 2 Year – Fed Funds curve, or the 10 – 2 Year curve, the results are largely consistent. Markets tend to peak about a year after inversion occurs, and there remains ample time prior to a recession. This time period, from when the yield curve inverts to the market peak date, prior to a recession, has yielded a strong positive return, historically.

Source: Bloomberg, Chief Investment Office, Data as of September 25, 2018. Please refer to appendix for asset class proxies and index definitions. Note: Yield curve data points must have a minimum of five consecutive business days of inversion to be considered. Market return calculated on a prior return basis, from yield curve inversion date to market peak date. Shaded region indicates recession.
Trump’s Trade Policy in Context

An updated trilateral trade agreement between the U.S., Canada, and Mexico is a step in the right direction. Meanwhile, despite accumulating tariffs, cooler heads should prevail in negotiations between the U.S. and China. The stakes are high and there’s too much to lose from a trade war, in our view.

---

President Trump’s long-term aim
Paired with supply-side fiscal stimulus, a rebalancing of the U.S. trade relationship would help boost demand for the country’s exports, aiding growth of capex, which has already grown over 20% YoY YTD.

The USMCA has been presented as an updated trilateral agreement between the three countries. Eventually all legislatures must approve the accord. Voting is expected to occur in 2019.

---

The U.S. – China Relationship
Our perspective is that the economic implications of a trade war would be a lose-lose for the U.S., China, and the global economy. We expect bumpy negotiations to eventually yield an agreement. On watch is how national security concerns of both countries shape these negotiations.

---

Notable features of the U.S., Mexico, Canada Agreement (USMCA)

- A raising of the rules of origin requirement from 62.5% to 75%
- At least 40% of auto content must be produced by workers earning at least $16 / hour
- A sunset clause of 16 years with a 6th year review
- Preserves the main chapters on investment protection (Chapters 19 and 20)
- Requirement of enforcement authorities to make efforts to cease the creation of pirated goods
- Tariffs on agricultural products traded zeroed out between the U.S. and Mexico
- Canadian agreement to marginally raise access to its dairy market
- Freer flow of digital trade and better protections for intellectual property

---

Fiscal initiatives from the Trump administration are larger than the size of recent tariffs implemented and announced, which could sustain positive momentum in the U.S. economy.

---

![Tariffs Estimated = $133-213BN](chart.png)

**Tariffs Estimated = $133-213BN**

[Additional Chinese Tariff Range](#)

* See footnote

---

**Fiscal Policy = $1000BN**

---

Source: (Top table) BofA Merrill Global Research. Data as of September 2018. (Bottom) Strategies. *For illustrative purposes the blue boxes represent the increment added by raising the duty on Section 301 tariffs from 10% to 25% in line with recent rhetoric from President Trump. As a result, a range is now presented for the estimated total tariff amount. Past performance is no guarantee of future results. Please refer to appendix for asset class disclosures and index definitions.
On Watch: The Impact of Trade Skirmishes

In our opinion, tariff announcements, while unlikely to directly impact economic growth significantly, are fostering business uncertainty, which if prolonged may impact future business plans and investment.

Mentions of “tariffs,” “NAFTA,” “policy uncertainty,” and “China” in the Federal Reserve’s Beige Book survey have risen significantly.

Orders for exports have shown signs of stalling. Continued uncertainty may result in hard data confirming later.

The Eurozone is particularly vulnerable, given the bloc’s exposure to global trade.

On Watch: Rising U.S. Rates + U.S. Dollar and Emerging Markets

A strengthening U.S. dollar makes Emerging Market U.S.-dollar denominated debt loads harder to service.

Emerging Markets expanded their use of credit...

...and have taken on a greater share of U.S. dollar denominated debt.

The market has been pricing in an increasing number of Federal Reserve rate hikes this year.

Versus history, EM currencies remain strong versus the U.S.-Dollar; however, the latter’s recent strength has become more of a headwind.


Past performance is no guarantee of future results. Please refer to appendix for asset class disclosures and index definitions.
How Have Rising Rates Affected Equities in the Past?

History indicates that cyclical equities can still outperform in a late cycle, rising rate environment.

On average during the past eight periods of rising interest rates, cyclical equity sectors have tended to outperform defensive and fixed income assets. These trends support our overweight equity allocation, even in a late cycle environment.

Sources: Strategas; Bloomberg, Data as of September 21, 2018. Past performance is no guarantee of future results. Please refer to appendix for asset class proxies and index definitions.
Global Profit Outlook

Corporate earnings growth has continued to exceed expectations and signals point to momentum rolling into 2019. Emerging Market equities appear primed to deliver greater earnings growth moving forward after a relatively sluggish year.

S&P 500 earnings momentum has not let up.


Note: Specified (E) is the consensus expectation, an average of analysts’ forecasts surveyed by First Call.

Source: (Both) BofA Merrill Lynch US Equity & US Quant Strategy. (Left) Source: BofA Merrill Lynch Global Research; Chief Investment Office. (Right) FactSet consensus estimates. Data as of September 12, 2018. E = estimate. Past performance is no guarantee of future results. The economic and market forecasts presented are for informational purposes as of the date of this report. There can be no assurance that the forecasts will be achieved. Please refer to appendix for asset class proxies and index definitions.
Rising Rates Not Necessarily Bad For Equities

Over the long-term U.S. equities have exhibited an inconsistent correlation with interest rates.

Equities performed well over the long-term during a secular period of rising rates from the early 1950s to the late 1970s.

The S&P 500 has fared well in 2018 as yields have continued to grind higher. The cause of rising rates appears to have greater implications for equities than the absolute direction of yields.

<table>
<thead>
<tr>
<th>Year</th>
<th>S&amp;P 500 Total Return (%)</th>
<th>Change in 10 Year Treasury Yield (BPs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>26</td>
<td>160</td>
</tr>
<tr>
<td>2010</td>
<td>15</td>
<td>-55</td>
</tr>
<tr>
<td>2011</td>
<td>2</td>
<td>-141</td>
</tr>
<tr>
<td>2012</td>
<td>16</td>
<td>-11</td>
</tr>
<tr>
<td>2013</td>
<td>32</td>
<td>126</td>
</tr>
<tr>
<td>2014</td>
<td>14</td>
<td>-87</td>
</tr>
<tr>
<td>2015</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2016</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>2017</td>
<td>22</td>
<td>-5</td>
</tr>
<tr>
<td>YTD</td>
<td>11</td>
<td>66</td>
</tr>
</tbody>
</table>

Fixed Income Market Trends

U.S. rates have moved higher since the beginning of the year due to strong economic data, higher growth expectations, and Federal Reserve activity.

Market expectations are in-line with the Fed-implied rate path for the next 3-4 hikes, but will diverge thereafter. We still expect three to four hikes, consistent with the Fed’s recent commentary.

Europe’s and Japan’s less aggressive initial response to the financial crisis means they are several years behind the Fed. In our view

In our view, rates will continue to move gradually higher, but balanced over time with periods of flight to-quality. While inflation, growth, Treasury supply, and fiscal stimulus push rates higher, the anchor of low global rates continues to weigh them down. As long as both the European Central Bank and the Bank of Japan maintain accommodative policies and keep euro and yen longer-term rates under control, it is unlikely for 10-year U.S. rates to move significantly higher in an unbalanced fashion.

Sources: Bloomberg, Chief Investment Office. (Left) Data as of September 12, 2018. (Right) Data as of September 11, 2018. The economic and market forecasts presented are for informational purposes as of the date of this report. There can be no assurances that the forecasts will be achieved. Past performance is no guarantee of future results. Please refer to appendix for asset class proxies and index definitions.
Fixed Income Market Trends

Breakout in 2-year yields led to a narrower spread between 2-year Treasury and 10-year Treasury yield, but this is not a large concern – financial conditions are very accommodative and leading indicators are positive.

Short- and intermediate-dated Treasurys have broken out to multi-year highs. This breakout reflects the market’s optimism about tax reform, the continuing economic expansion, and renewed faith that the Fed will likely be able to continue its rate hike campaign with multiple hikes this year.

The 2s/10s curve has continued to flatten along with the unemployment rate, much as we anticipated. This flattening has been exacerbated by the sharp move higher in 2-year Treasury yields. The Fed-Funds-to-10-year curve is a better leading indicator. It is currently still accommodative and nowhere near inverted, so the flattening 2s/10s curve is not a large concern at this point, in our view.

Source: Bloomberg, Chief Investment Office. Data as of September 28, 2018. Performance results are short-term and may not provide an adequate basis for evaluating performance potential over varying market conditions or economic cycles. Past performance is no guarantee of future results. Please refer to appendix for asset class proxies and index definitions.

FIXED INCOME SUMMARY & CHARTS
Spreads are tight, but based on history they can stay at these tighter levels as long as economic strength continues.

**5 Year View**

- HY OAS (LHS)
- IG OAS (RHS)

**Historical Context**

- HY OAS (LHS)
- IG OAS (RHS)

Investment grade spreads have underperformed high yield spreads since February’s volatility. Given that high yield has not sold off, there are mitigating factors including repatriation flows and higher short-term rates. Our economic outlook is intact. We are not overly concerned about the underperformance and see reasonable value at these levels.

The macro environment will likely remain supportive to credit risk appetite overall. Spreads are still at lower-end of long-term range, but can stay there for a multi-year period as long as the economy is strong. Elevated leverage metrics remain a concern when the credit cycle ultimately turns.


Past performance is no guarantee of future results. Please refer to appendix for asset class proxies and index definitions.
Glossary

3 Month London Interbank Offered Rate (LIBOR): A 3-month average of the LIBOR, which is a variable rate based on the interest rates that the leading banks charge each other for short-term loans.

3 Month Treasury Bill (T-Bill): Treasury Bond maturing within 90 days.

Alpha: A measure of risk-adjusted performance relative to a comparative benchmark, aka residual return.

After Tax Yield Ratio: Compares the after-tax corporate bond yield to the after-tax yield from municipal bonds.

Beta: A measure of the sensitivity of the returns of the Asset to the comparative benchmark.

Consumer Price Index (CPI) Level: Base Year 1982-84 = 100. The CPI represents changes in prices of all good and services purchased for consumption by urban households. User fees and sales and excise taxes paid by the consumer are also included. Income taxes and investment items are not included.

CPI Core Index Level: Base year 1982-84; it excludes food and energy items from the Consumer Price Index Level.

Current Account Deficit: Occurs when a country's total import of goods, services and transfers is greater than the total export; this situation makes a country a net debtor to the rest of the world.

Developed Market: A country that is most developed in terms of its economy and capital markets. The country must be high-income, but this also includes openness to foreign ownership, ease of capital movement, and efficiency of market institutions.

Emerging Market: A country that is progressing toward becoming advanced, as shown by some liquidity in local debt and equity markets and the existence of some form of market exchange and regulatory body.

GDP - Nominal: Gross Domestic Product (GDP) equals the total income of everyone in the economy or the total expenditure on the economy's goods and services. GDP includes only the value of final goods and services. Nominal GDP measures the value of goods and services at current dollar prices.

GDP - Real: The chain-weighted GDP measure of goods and services at constant dollar prices. The base year changes continuously over time (e.g., 1995, process measures real growth from 1995 to 1996). The figures are then linked to a chain that can compare goods and services in any two years. Chain-weighted figures never let prices get too far out of date.

High Yield OAS: Option-adjusted spread (OAS) is the yield spread which has to be added to a benchmark yield curve to discount a security's payments to match its market price, using a dynamic pricing model that accounts for embedded options.

HY Leverage Ratio: Net Debt divided by last 12 months' earnings before interest, taxes and amortization (EBITDA).

Investment Grade OAS: Option-adjusted spread (OAS) is the yield spread which has to be added to a benchmark yield curve to discount a security's payments to match its market price, using a dynamic pricing model that accounts for embedded options.

Jobless Claims: Average weekly initial claims for unemployment insurance; measures the average number of new claims for unemployment compensation per week.

Standard Deviation: Annualized Standard Deviation is a statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution.

Spread: The difference between the bid and ask price or between the high and low price. For securities, it refers to the difference in yield on different securities.

U.S. Employees Non-Farm Private Payrolls: A statistic that represents the total number of paid U.S. workers except for farm workers, general government employees, employees of nonprofit organizations that provide assistance to individuals and private household employees. The Non-Farm Private Payroll represents about 80% of the workers who produce the U.S. Gross Domestic Product.
# U.S. Trust Asset Class Proxies

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Index</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>IA SSB/ US 30 Day T-Bill TR USD &amp; ICE BofAML U.S. 3-Month Treasury Bill Index</td>
<td>For the IA SSB/ U.S. Treasury Bill Index, the CRSP U.S. Government Bond File is the source from 1935 to 1976. Each month a one-bill portfolio containing the shortest-term bill having not less than one month to maturity is constructed. (The bill's original term to maturity is not relevant). The ICE BofAML US 3-Month Treasury Bill Index is comprised of a single issue purchased at the beginning of the month and held for a full month. At the end of the month that issue is sold and rolled into a newly selected issue. The issue selected at each month-end rebalancing is the outstanding Treasury Bill that matures closest to, but not beyond, three months from the rebalancing date.</td>
</tr>
<tr>
<td>U.S. Large Cap Equity</td>
<td>Russell Top 200 TR Index</td>
<td>The Russell Top 200 Index measures the performance of the largest cap segment of the U.S. equity universe. The Russell Top 200 Index is a subset of the Russell 3000 Index. It includes approximately 200 of the largest securities based on a combination of their market cap and current index membership and represents approximately 65% of the U.S. market. The Russell Top 200 Index is constructed to provide a comprehensive and unbiased benchmark for this very large cap segment and is completely reconstituted annually to ensure new and gaining equities are reflected.</td>
</tr>
<tr>
<td>U.S. Mid Cap Equity</td>
<td>Russell Midcap TR Index</td>
<td>The Russell Midcap Index measures the performance of the mid-cap segment of the U.S. equity universe. The Russell Midcap Index is a subset of the Russell 1000 Index. It includes approximately 500 securities based on a combination of their market cap and current index membership. The Russell Midcap Index represents approximately 27% of the total market capitalization of the Russell 1000 companies. The Russell Midcap Index is constructed to provide a comprehensive and unbiased benchmark for the mid-cap segment. The index is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true mid-cap opportunity set.</td>
</tr>
<tr>
<td>U.S. Small Cap Equity</td>
<td>Russell 2000 TR Index</td>
<td>The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 Index is a subset of the Russell 3000 Index representing approximately 9% of the total market capitalization of the Index. It includes approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership. The Russell 2000 Index is constructed to provide a comprehensive and unbiased small-cap benchmark and is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true small-cap opportunity set.</td>
</tr>
<tr>
<td>International Developed Equity</td>
<td>MSCI Daily TR Net World Ex USA USD</td>
<td>The MSCI World ex USA Index captures large and mid-cap representation across 22 of 23 developed Markets (DM) countries – excluding the United States. The index covers approximately 85% of the free float-adjusted market capitalization in each country.</td>
</tr>
<tr>
<td>Emerging Market Equity</td>
<td>MSCI Emerging Markets Net Index</td>
<td>The Morgan Stanley Capital International Emerging Markets (MSCI EM) net (USD) Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. The MSCI Emerging Markets Index consists of emerging markets in Europe, Latin America, and the Pacific Basin.</td>
</tr>
<tr>
<td>Investment-Grade Fixed Income</td>
<td>Bloomberg Barclays Capital U.S. Aggregate Bond Index</td>
<td>The Bloomberg Barclays Capital U.S. Aggregate Bond Index represents securities that are US domestic, taxable, and dollar-denominated. The index covers the U.S. investment-grade fixed-rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indexes that are calculated and reported on a regular basis.</td>
</tr>
<tr>
<td>Investment-Grade Tax-Exempt Fixed Income</td>
<td>Bloomberg Barclays Capital Municipal Bond Index</td>
<td>The Bloomberg Barclays Capital Municipal Bond Index is a rules-based, market-value-weighted index engineered for the long-term tax-exempt bond market.</td>
</tr>
<tr>
<td>Asset Class</td>
<td>Index</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>International Fixed Income</td>
<td>ICE BofAML Global Broad Market TR ex USD (Hedged USD)</td>
<td>The ICE BofAML Global Broad Market Excluding US Dollar Index tracks the performance of investment grade debt publicly issued in the major domestic and eurobond markets, including sovereign, quasi-government, corporate, securitized and collateralized securities, excluding all securities denominated in US dollars.</td>
</tr>
<tr>
<td>High Yield Fixed Income</td>
<td>Bloomberg Barclays Capital Global High Yield Bond Index</td>
<td>The Bloomberg Barclays Capital Global High Yield Bond Index provides a broad-based measure of the global high-yield fixed income markets. The Index represents the union of the U.S. High Yield, Pan-European High Yield, U.S. Emerging Markets High Yield, EMBI+ High Yield, and Pan-European Emerging Markets High Yield Indices. The Index is a component of the Barclays Multiverse Index, along with the Barclays Global Aggregate Bond Index. The Global High Yield Index was created on January 1, 1999, with index history backfilled to January 1, 1990.</td>
</tr>
<tr>
<td>High Yield Tax-Exempt Fixed Income</td>
<td>Bloomberg Barclays Capital High Yield Municipal Bond Index</td>
<td>The Bloomberg Barclays Capital High Yield Municipal Bond Index is an unmanaged index made up of municipal bonds that are non-investment-grade, unrated, or rated below Baa1.</td>
</tr>
<tr>
<td>Hedge Funds</td>
<td>Hedge Fund Research HFRI Fund Weighted Composite</td>
<td>The HFRI Fund Weighted Composite Index is a global, equal-weighted index of over 2,000 single-manager funds that report to HFRI Datastream. Constituent funds report monthly net of all fees performance in USD and have a minimum of $50 million under management or a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.</td>
</tr>
<tr>
<td>Private Equity</td>
<td>Merrill Lynch Small Cap Research Private Equity/Micro Cap Index</td>
<td>Merrill Lynch Small Cap Research Private Equity/Micro Cap Index is a customized proprietary market capitalization weighted index provided by Merrill Lynch. It captures the performance of the microcap segment of the U.S. equity market. It includes 1,000 of the smallest securities in the small-cap Russell 2000® Index based on a combination of their market capitalization and current index membership and it includes the next 1,000 securities.</td>
</tr>
<tr>
<td>Real Estate</td>
<td>50/50 NCREIF Property/ NCREIF Transaction Based</td>
<td>□ Produced quarterly, the NCREIF Property Index (NPI) shows real estate performance returns using data submitted by its Data Contributing Members. The NPI is used as an industry benchmark to compare an investor's own returns against the industry average. □ The NCREIF Transaction-Based Index (TBI) is an index based on properties that were in the NCREIF Property Index and were sold that quarter. The TBI does not replace the NPI. It is a complementary index to the appraisal-based NPI. A transaction-based Index is often considered to be more comparable to stock and bond indices that are transaction-based.</td>
</tr>
<tr>
<td>Tangible Assets</td>
<td>Bloomberg Commodity TR Index</td>
<td>The Bloomberg Commodity Index is calculated on an ex-dividend basis and composed of futures contracts on 22 physical commodities. It reflects the return of underlying commodity futures price movements.</td>
</tr>
<tr>
<td>US Trust Balanced Return Portfolio</td>
<td>US Balanced Return Portfolio</td>
<td>This objective is designed to offer long-term return opportunities through an allocation to both equity and fixed income investments. This is a non-trust, low tax portfolio that utilizes both mutual funds and ETFs. The portfolio will seek to dynamically allocate between a mix of active and passive solutions, depending on the environment for active management identified by U.S. Trust.</td>
</tr>
</tbody>
</table>
Index Definitions

AAII Investor Sentiment: The sentiment survey measures the percentage of individual investors who are bullish, bearish, and neutral on the stock market short term; individuals are polled from the AAII Website on a weekly basis.

Alerian MLP Index is a composite of the 50 most prominent energy master limited partnerships and is calculated by Standard & Poor’s using a float-adjusted, market capitalization-weighted methodology. The total return index is calculated on an end-of-day basis and is disseminated daily through its ticker symbol, AMZCJ, on the New York Stock Exchange.

BAML Financial Stress Index: See BofA Merrill Lynch Global Financial Stress Index definition.

Bloomberg Agriculture Subindex: The index is composed of futures contracts on coffee, corn, cotton, soybeans, soybean oil, soybean meal, sugar, and wheat. It reflects the return on underlying commodity futures price movements only and is quoted in USD.

Bloomberg Barclays US Aggregate Bond Index is a market capitalization-weighted index, meaning the securities in the index are weighted according to the market size of each bond type. Most U.S. traded investment-grade bonds are represented.

Bloomberg Commodity Index is made up of 22 exchange-traded futures on physical commodities, which are weighted to account for economic significance and market liquidity.

Bloomberg Copper Subindex TR: Bloomberg Copper Subindex Total Return Index.

Bloomberg Energy Subindex TR: The index is composed of futures contracts on crude oil, heating oil, unleaded gasoline, and natural gas. It reflects the return on fully collateralized futures positions and is quoted in USD.

Bloomberg Industrial Metals Subindex Total Return: The index is composed of longer-dated futures contracts on aluminum, copper, nickel, and zinc. It reflects the return on fully collateralized positions and is quoted in USD.

Bloomberg Livestock Subindex: The index is composed of futures contracts on live cattle and lean hogs. It reflects the return of underlying commodity futures price movements only. It is quoted in USD.

BofA Merrill Lynch 5-7 Year US Corporate Index: is a subset of The BofA Merrill Lynch US Corporate Index including all securities with a remaining term to final maturity greater than or equal to 5 years and less than 7 years.

BofA Merrill Lynch 5-7 Year US Municipal Securities Index: is a subset of The BofA Merrill Lynch US Municipal Securities Index including all securities with a remaining term to final maturity between 5-7 years.

BofA Merrill Lynch 5-7 Year US Treasury Index: is a subset of The BofA Merrill Lynch US Treasury Index including all securities with a remaining term to final maturity greater than or equal to 5 years and less than 7 years.

BofA Merrill Lynch All Maturity All Euro Government Index: The BofA Merrill Lynch All Maturity All Euro Government Index tracks the performance of EUR denominated sovereign debt publicly issued by Euro member countries in either the eurobond market or the issuer’s own domestic market.

BofA Merrill Lynch Global Broad Market Index: The BofA Merrill Lynch Global Broad Market Index tracks the performance of investment grade debt publicly issued in the major domestic and eurobond markets, including sovereign, quasi-government, corporate, securitized and collateralized securities.
Index Definitions (continued)

BofA Merrill Lynch Global Emerging Markets Sovereign Index tracks the performance of U.S. dollar-denominated debt of sovereign issuers domiciled in countries with a BB or lower foreign currency long-term sovereign debt rating.

BofA Merrill Lynch Global Financial Stress Index is a Bank of America Merrill Lynch calculated, cross-market measure of risk, hedging demand and investor flows in the global financial system. Levels greater/less than 0 indicate more/less financial market stress than normal. Apart from the headline GFSI, there are three sub-indices, RISK, FLOW and SKEW.

BofA Merrill Lynch Global Sovereign Broad Market Index tracks the performance of local currency-denominated debt of Investment Grade-rated sovereign issuers.

BofA Merrill Lynch High Yield Master Index tracks the performance of below Investment Grade U.S. dollar-denominated corporate bonds publicly issued in the U.S. domestic market. “Yankee” bonds (debt of foreign issuers issued in the U.S. domestic market) are included in the index provided the issuer is domiciled in a country having an Investment Grade foreign currency long-term debt rating (based on a composite of Moody’s and S&P).

BofA Merrill Lynch Municipal Masters Index tracks the performance of the Investment Grade U.S. tax-exempt bond market.

BofA Merrill Lynch U.S. Broad Market Index tracks the performance of U.S. dollar-denominated Investment Grade government and corporate public debt issued in the U.S. domestic bond market, including collateralized products such as mortgage pass-through and asset-backed securities.

BofA Merrill Lynch U.S. Corporate Master Index tracks the performance of U.S. dollar-denominated Investment Grade corporate public debt issued in the U.S. domestic bond market. Qualifying bonds must have at least one year remaining term to maturity, a fixed coupon schedule and a minimum amount outstanding of $150 million. Bonds must be rated Investment Grade based on a composite of Moody’s and S&P.

BofA Merrill Lynch US Agency Index tracks the performance of U.S. dollar denominated U.S. agency senior debt issued in the U.S. domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody’s, S&P and Fitch).


BofAML U.S. Treasury Index tracks the performance of U.S. dollar denominated sovereign debt publicly issued by the U.S. government in its domestic market.

Cambridge Associates Private Equity U.S. Total Return: Performance data is calculated quarterly by Cambridge Associates and published by Thomson Reuters Venture Economics’ Private Equity Performance Database, which tracks the performance of thousands of U.S. and European venture capital and buyout funds formed since 1969. Sources are financial documents and schedules from Limited Partners, investors and General Partners. All returns are calculated net to investors (net of fees and carried interest) by Thomson Venture Economics from the underlying financial cash flows using both cash on cash returns (distributions and capital calls) and the unrealized net asset value of funds as reported by private equity fund managers. The “U.S.” category includes only U.S. funds.

Cleveland Fed Financial Stress Index: The CSFI is designed to track distress in the U.S. financial system on a continuous basis.

Conference Board U.S. Leading Credit Index: This index is composed of six financial indicators: 2 years Swap Spread (real time), LIBOR 3 month less 3 month Treasury Bill yield spread (real time), Debit balances at margin account at broker dealer (monthly), AAI Investors Sentiment Bullish (%) less Bearish (%) (weekly), Senior Loan Officers C&I loan survey — Bank tightening Credit to Large and Medium Firms (quarterly), and Security Repurchases (quarterly) from the Total Finance Liabilities section of Federal Reserve’s flow of fund report.

APPENDIX
DJ Credit Suisse AllHedge Equity Market Neutral Index measures the aggregate performance of equity market neutral funds. Equity market neutral funds typically take both long and short positions in stocks while seeking to reduce exposure to the systemic risk of the market (i.e., a beta of zero is desired).

DJ Credit Suisse AllHedge Equity Market Neutral Index measures the aggregate performance of equity market neutral funds. Equity market neutral funds typically take both long and short positions in stocks while seeking to reduce exposure to the systemic risk of the market (i.e., a beta of zero is desired).

DJ Credit Suisse AllHedge Fixed Income Arbitrage Index measures the aggregate performance of fixed income arbitrage funds. Fixed income arbitrage funds typically attempt to generate profits by exploiting inefficiencies and price anomalies between related fixed income securities. Fixed income arbitrage funds seek to limit volatility by hedging out exposure to the market and interest rate risk.

DJ Credit Suisse AllHedge Global Macro Index measures the aggregate performance of global macro funds. Global macro funds typically focus on identifying extreme price valuations and leverage is often applied on the anticipated price movements in equity, currency, interest rate and commodity markets.

DJ Credit Suisse AllHedge Index is an asset-weighted hedge fund index derived from the market leading Dow Jones Credit Suisse Hedge Fund Index. The Dow Jones Credit Suisse AllHedge Index provides a rules-based measure of an investable portfolio. Index performance data is published monthly and constituents are rebalanced semi-annually according to the sector weights of the Dow Jones Credit Suisse Hedge Fund Index.

DJ Credit Suisse AllHedge Long Short Equity Index measures the aggregate performance of long/short equity funds. Long/short equity funds typically invest in both long and short sides of equity markets, generally focusing on diversifying or hedging across particular sectors, regions or market capitalizations.

DJ Credit Suisse AllHedge Managed Futures Index measures the aggregate performance of managed futures funds. Managed futures funds (often referred to as CTAs or Commodity Trading Advisors) typically focus on investing in listed bond, equity, commodity futures and currency markets globally.

DJ Credit Suisse AllHedge Managed Futures Index measures the aggregate performance of managed futures funds. Managed futures funds (often referred to as CTAs or Commodity Trading Advisors) typically focus on investing in listed bond, equity, commodity futures and currency markets globally.

DXI Index indicates the general international value of the U.S. dollar. The Index does this by averaging the exchange rates between the dollar and major world currencies.

FTSE NAREIT U.S. Real Estate Index is a performance index based on publicly traded real estate investment trusts (REITs) that span commercial real estate space across the U.S. economy. The index series provides investors with exposure to all investment and property sectors. A REIT is a company that owns and, in most cases, operates income-producing real estate such as apartments, shopping centers, offices, hotels and warehouses. Some REITs also engage in financing real estate. To qualify as a REIT, a company must distribute at least 90% of its taxable income to its shareholders annually. A company that qualifies as a REIT is permitted to deduct dividends paid to its shareholders from its corporate taxable income. As a result, most REITs remit at least 100% of their taxable income to their shareholders and therefore owe no corporate tax.

FTSE® EPRA® NAREIT® Global Index is a float, market capitalization-weighted real estate index designed to represent publicly traded equity REITs and listed property companies globally.

Global Economic Policy Uncertainty Index: This concept tracks the general state of the economy as it relates to businesses. It can include broad economy-wide conditions or specific economic conditions of a particular industry. The GEPU Index is a GDP-weighted average of national EPU indices for 18 countries: Australia, Brazil, Canada, Chile, China, France, Germany, India, Ireland, Italy, Japan, the Netherlands, Russia, South Korea, Spain, Sweden, the United Kingdom, and the United States. Each national EPU index reflects the relative frequency of own-country newspaper articles that contain a trio of terms pertaining to the economy (E), policy (P) and uncertainty (U). In other words, each monthly national EPU index value is proportional to the share of own-country newspaper articles that discuss economic policy uncertainty in that month. For a detailed discussion of how we construct the country-level EPU indices, see Measuring Economic Policy Uncertainty.
Gold reflects the gold spot price and is quoted in U.S. dollars per Troy Ounce.

HFRI Equity Hedge (Total) Index: Investment Managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. LH managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.

HFRI Event Driven Index - Investment Managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. Event Driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment these are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

HFRI Fund Weighted Composite Index - A global, equal-weighted index of 2,000 single-manager funds that report to HFRI Database. Constituent funds report monthly net of all fees performance in U.S. Dollar and have a minimum of $50 Million under management or a twelve month track record of active performance. The HFRI Fund Weighted Composite Index does not include funds of hedge funds.

HFRI Macro: Systematic Diversified Index - Systematic: Diversified strategies have investment processes typically as function of mathematical, algorithmic and technical models, with little or no influence of individuals over the portfolio positioning. Strategies which employ an investment process designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes. Strategies typically employ quantitative process which focus on statistically robust or technical patterns in the return series of the asset, and typically focus on highly liquid instruments and maintain shorter holding periods than either discretionary or mean reverting strategies. Although some strategies seek to employ counter trend models, strategies benefit most from an environment characterized by persistent, discernable trending behavior. Systematic: Diversified strategies typically would expect to have no greater than 35% of portfolio in either dedicated currency or commodity exposures over a given market cycle.

HFRI Relative Value Index - Investment Managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. RV position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction. The constituent funds of the HFRI Relative Value (Total) Index are weighted according to the AUM reported by each fund for prior month.

HFRX Global Hedge Fund Index: The HFRX Global Hedge Fund Index is designed to be representative of the overall composition of the hedge fund universe. It is comprised of all eligible hedge fund strategies, including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage, and relative value arbitrage.

LPX50 TR USD Index: The LPX50 is an index that consists of the 50 largest liquid LPE companies covered by LPX Group.
MSCI ACWI ex USA Index captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries (excluding the US) and 23 Emerging Markets (EM) countries. With 1,854 constituents, the index covers approximately 85% of the global equity opportunity set outside the US.

MSCI ACWI Index captures large and mid cap representation across 23 Developed Markets (DM) and 23 Emerging Markets (EM) countries. With 2,484 constituents, the index covers approximately 85% of the global investable equity opportunity set.

MSCI Austria Net Total Return USD Index: The MSCI Austria Index is designed to measure the performance of the large and mid cap segments of the Austrian market. With 5 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Austria.

MSCI Brazil Net Total Return USD Index: The MSCI Brazil Index is designed to measure the performance of the large and mid cap segments of the Brazilian market. With 57 constituents, the index covers about 85% of the Brazilian equity universe.

MSCI China Index: The MSCI China Index captures large and mid cap representation across China H shares, B shares, Red chips, P chips and foreign listings (e.g., ADRs). With 150 constituents, the index covers about 85% of this China equity universe.

MSCI EAFE (Europe, Australasia, and Far East) Index comprises 21 MSCI country indices representing the Developed Markets outside of North America.

MSCI Emerging Asia Net Total Return USD Index: The MSCI Emerging Markets (EM) Asia Index captures large and mid cap representation across 9 Emerging Markets countries*. With 567 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI Emerging Latin America Net Total Return USD Index: The MSCI EM Latin America Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of emerging markets in Latin America.

MSCI Emerging Markets Index captures large and mid cap representation across 23 Emerging Markets (EM) countries. With 832 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. EM countries include: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Russia, Qatar, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

MSCI Europe non-U.K. Index is a free float-adjusted market capitalization index designed to measure Developed Market equity performance in Europe. As of July 2009, the index consisted of 15 Developed Market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, and Switzerland.

MSCI Japan Index is designed to measure the performance of the large and mid cap segments of the Japanese market. With 319 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.

MSCI Pacific ex Japan Index captures large and mid cap representation across 4 of 5 Developed Markets (DM) countries in the Pacific region (excluding Japan). With 150 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI Portugal Net Total Return USD Index: The MSCI Portugal Index is designed to measure the performance of the large and mid cap segments of the Portuguese market. With 3 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Portugal.

MSCI USA Defensive Sectors Index is based on MSCI USA Index, its parent index and captures large and mid-cap segments of the US market. The index is designed to reflect the performance of the opportunity set of global defensive companies across various GICS® sectors. All constituent securities from Consumer Staples, Energy, Healthcare, Telecommunication Services and Utilities are included in the Index.

MSCI USA Defensive Sectors Index is based on MSCI USA Index, its parent index and captures large and mid-cap segments of the US market. The index is designed to reflect the performance of the opportunity set of global defensive companies across various GICS® sectors. All constituent securities from Consumer Staples, Energy, Healthcare, Telecommunication Services and Utilities are included in the Index.
MSCI USA Index is designed to measure the performance of the large and mid-cap segments of the US market. With 630 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the U.S.

MSCI USA Momentum Index is based on MSCI USA Index, its parent index, which captures large and mid-cap stocks of the US market. It is designed to reflect the performance of an equity momentum strategy by emphasizing stocks with high price momentum, while maintaining reasonably high trading liquidity, investment capacity and moderate index turnover.

MSCI USA Quality Index is based on the MSCI USA Index, its parent index, which includes large and mid cap stocks in the US equity market. The index aims to capture the performance of quality growth stocks by identifying stocks with high quality scores based on three main fundamental variables: high return on equity, stable year-over-year earnings growth and low financial leverage.

MSCI USA Size Index: Based on MSCI USA Index, its parent index, which captures large and mid cap stocks of the US market. It aims to reflect the performance of a low size strategy with relatively high investment capacity.

MSCI World ex USA Index captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries — excluding the United States. With 1,022 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI World Value Index captures large and mid cap securities exhibiting overall value style characteristics across 23 Developed Markets (DM) countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

NASDAQ Composite Index: A broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market and Capital Market. The index was developed with a base level of 100 as of February 5, 1971.

National Financial Conditions Index (NFCI) provides a comprehensive weekly update on U.S. financial conditions in money markets, credit and equity markets and the traditional and “shadow” banking systems. Positive values of the NFCI indicate financial conditions that are tighter than on average, while negative values indicate financial conditions that are looser than on average.

NCREIF Farmland: The NCREIF Farmland Index is a quarterly time series composite return measure of investment performance of a large pool of individual farmland properties acquired in the private market for investment purposes only.

NCREIF Property Index: The objective of the NPIs is to provide a historical measurement of property-level returns to increase the understanding of, and lend credibility to, real estate as an institutional investment asset class.

NCREIF Timberland: The NCREIF Timberland Index is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only.

NFIB U.S. Small-Business Optimism Index is compiled from a survey that is conducted each month by the National Federation of Independent Business (NFIB) of its members. The index is a composite of 10 seasonally adjusted components based on the following questions: plans to increase employment, plans to make capital outlays, plans to increase inventories, expect economy to improve, expect real sales higher, current inventory, current job openings, expected credit conditions, now a good time to expand and earnings trend.

Nikkei-225 Stock Average is a price-weighted average of 225 top-rated Japanese companies listed in the First Section of the Tokyo Stock Exchange.

Philadelphia Federal Index: A regional federal reserve bank index measuring changes in business growth. The index is constructed from a survey of participants who voluntarily answer questions regarding the direction of change in their overall business activities. The survey is a measure of regional manufacturing growth. When the index is above 0 it indicates factory sector growth, and when below 0 indicates contraction.

Russell 2000 Index® measures the performance of the 2,000 smallest companysin the Russell 3000 Index.

Russell 3000 Growth Index measures the performance of those Russell 3000 Index companies with higher price-to-book ratios and higher forecasted growth values.

Russell 3000 Index is composed of 3000 large U.S. companies, as determined by market capitalization.

Russell 3000 Value Index measures the performance of those Russell 3000 Index companies with lower price-to-book ratios and lower forecasted growth values.
Index Definitions (continued)

S&P 400 Mid Cap Index is representative of 400 stocks in the mid-range sector of the domestic stock market, representing all major industries.

S&P 500 Buyback Index measures the performance of the top 100 stocks with the highest buyback ratio (cash paid for common shares buyback in the last four calendar quarters divided by the total market capitalization of common shares) in the S&P 500.

S&P 500 Cyclical ex-financials is designed to reflect the performance of the opportunity set of U.S. cyclical companies across various GICS® sectors. All constituent securities from Consumer Discretionary, Industrials, Information Technology and Materials are included in the index.

S&P 500 Defensive is designed to reflect the performance of the opportunity set of U.S. cyclical companies across various GICS® sectors. All constituent securities from Consumer Staples, Energy, Healthcare, Telecommunication Services and Utilities are included in the index.

S&P 500 Dividend Aristocrats Index is designed to measure the performance of S&P 500 index constituents that have followed a policy of consistently increasing dividends every year for at least 25 consecutive years.

S&P 500 Financials Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® financials sector.

S&P 500 High Dividend Index serves as a benchmark for income seeking equity investors. The index is designed to measure the performance of 80 high yield companies within the S&P 500 and is equally weighted to best represent the performance of this group, regardless of constituent size.

S&P 500 Index, widely regarded as the best single gauge of the U.S. equities market, includes a representative sample of 500 leading companies in leading industries of the U.S. economy. Although the index focuses on the large-cap segment of the market, with approximately 75% coverage of U.S. equities, it is also an ideal proxy for the total market.

S&P 500 Information Technology Index comprises those companies included in the S&P 500 that are classified as members of the GICS® information technology sector.

S&P 500 Low Volatility Index measures performance of the 100 least volatile stocks in the S&P 500. The index benchmarks low volatility or low variance strategies for the U.S. stock market. Constituents are weighted relative to the inverse of their corresponding volatility, with the least volatile stocks receiving the highest weights.


Ten-Year Treasury rate is the yield on a security to its time to maturity and is based on the closing market bid yields on actively traded Treasury securities in the over-the-counter market.

Tokyo Stock Exchange Tokyo Price Index (TOPIX) is a capitalization-weighted index of all companies listed on the First Section of the Tokyo Stock Exchange. The index is supplemented by the subindices of the 33 industry sectors.

TOPIX Banks Index is a capitalization-weighted index of all the banks listed on the First Section of the Tokyo Stock Exchange and is one of the 33 industry sectors of the TOPIX Index (TPX).

U.S. Sry Sry Forward Breakeven: Yields are yield to maturity and pre-tax. The rates are comprised of Generic United States Breakeven forward rates: nominal forward 5 years minus US inflation-linked bonds forward 5 years.

University of Michigan Consumer Sentiment Index: Surveys of Consumers collects data on consumer attitudes and expectations summarized in the Consumer Sentiment, in order to determine the changes in consumers' willingness to buy and to predict their subsequent discretionary expenditures.

US Trade Weighted Real Broad Dollar: An effective exchange rate (also known as a trade-weighted exchange rate) is a weighted average of the individual exchange rates of a particular country with its main trading partners.

VIX Index: The Chicago Board Options Exchange Standard and Poor's Volatility Index, reflects a market estimate of future volatility, based on the weighted average of the implied volatilities for a wide range of strikes.

WTI crude oil reflects the Bloomberg West Texas Intermediate Crushing Crude Oil Spot Price. The price is derived by adding spot market spreads to the NYMEX contract. Units are in U.S. dollars per barrel and is traded intraday.
Disclosures

Reference to indices or other measures of relative market performance over a specified period of time (each an “index”) are provided for illustrative purposes only, do not represent a benchmark or proxy for the return or volatility of any particular product, portfolio, security holding, or AI. Indices are unmanaged. The figures for the index reflect the reinvestment of dividends but do not reflect the deduction of any fees or expenses which would reduce returns. We strongly recommend that these factors be taken into consideration before an investment decision is made. Neither Merrill Lynch nor the index sponsor can verify the validity or accuracy of the self-reported returns of the managers used to calculate the index returns. Merrill Lynch does not guarantee the accuracy of the index returns and does not recommend any investment or other decision based on the results presented. The indices referred to in the presentation do not reflect the performance of any account or fund managed by Merrill Lynch or its affiliates, or of any other specific fund or account, and do not reflect the deduction of any management or performance fees or expenses. The hedge fund universe from which the components of the indices are selected is based on funds which have continued to report results for a minimum period of time. This prerequisite for fund selection injects a significant element of “survivor bias” into the reported levels of the indices, as generally only successful funds will continue to report for the required period, so that the funds from which the statistical analysis or the performance of the indices to date is derived necessarily tend to have been successful. There can, however, be no assurance that such funds will continue to be successful in the future. Indices are unmanaged and results shown are not reduced by taxes or transaction costs such as fees. It is not possible to invest directly in an index.

Alternative Investments are speculative and subject to a high degree of risk. Although risk management policies and procedures can be effective in reducing or mitigating the effects of certain risks, no risk management policy can completely eliminate the possibility of sudden and severe losses, illiquidity and the occurrence of other material adverse effects. Some or all alternative investment programs may not be suitable for certain investors. Many alternative investment products, specifically private equity and most hedge funds, require purchasers to be “qualified purchasers” within the meaning of the federal securities laws (generally, individuals who own at least $5 million in “investments” and institutional investors who own at least $25 million in “investments,” as such term is defined in the federal securities laws). No assurance can be given that any alternative investment’s investment objectives will be achieved. In addition to certain general risks, each product will be subject to its own specific risks, including strategy and market risk.

Alternative Investments such as derivatives, hedge funds, private equity funds, and funds of funds can result in higher return potential but also higher loss potential. Changes in economic conditions or other circumstances may adversely affect your investments. Before you invest in alternative investments, you should consider your overall financial situation, how much money you have to invest, your need for liquidity, and your tolerance for risk.

Investors should bear in mind that the global financial markets are subject to periods of extraordinary disruption and distress. During the financial crisis of 2008-2009, many private investment funds incurred significant or even total losses, suspended redemptions or otherwise severely restricted investor liquidity, including increasing the notice period required for redemptions, instituting gates on the percentage of fund interests that could be redeemed in any given period and creating side-pockets and special purpose vehicles to hold illiquid securities as they are liquidated. Other funds may take similar steps in the future to prevent forced liquidation of their portfolios into a distressed market. In addition, investment funds implementing alternative investment strategies are subject to the risk of ruin and may become illiquid under a variety of circumstances, irrespective of general market conditions.

There may be conflicts of interest relating to the alternative investment and its service providers, including Bank of America Corporation, and its affiliates, who are engaged in businesses and have clear interests other than that of managing, distributing and otherwise providing services to the alternative investment. These activities and interests include potential multiple advisory, transactional and financial and other interests in securities and instruments that may purchase or sell such securities and instruments. These are considerations of which investors in the alternative investments should be aware. Additional information relating to these conflicts is set forth in the offering materials for the alternative investment.
Disclosures (continued)

Nonfinancial assets, such as closely-held businesses, real estate, oil, gas and mineral properties, and timber, farm and ranch land, are complex in nature and involve risks including total loss of value. Special risk considerations include natural events (for example, earthquakes or fires), complex tax considerations, and lack of liquidity. Nonfinancial assets are not suitable for all investors. Always consult with your independent attorney, tax advisor, investment manager, and insurance agent for final recommendations and before changing or implementing any financial, tax, or estate planning strategy.

The investments discussed have varying degrees of risk. Some of the risks involved with equities include the possibility that the value of the stocks may fluctuate in response to events specific to the companies or markets, as well as economic, political or social events in the U.S. or abroad. Bonds are subject to interest rate, inflation and credit risks. Investments in high yield bonds may be subject to greater market fluctuations and risk of loss of income and principal than securities in higher rated categories. Investments in foreign securities involve special risks, including foreign currency risk and the possibility of substantial volatility due to adverse political, economic or other developments. These risks are magnified for investments made in emerging markets. Investments in a certain industry or sector may pose additional risk due to lack of diversification and sector concentration. Investments in real estate securities can be subject to fluctuations in the value of the underlying properties, the effect of economic conditions on real estate values, changes in interest rates, and risk related to renting properties, such as rental defaults. There are special risks associated with an investment in commodities, including market price fluctuations, regulatory changes, interest rate changes, credit risk, economic changes and the impact of adverse political or financial factors.

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