FIXED INCOME STRATEGIES FOR LATE 2017

NAVIGATING UNCHARTERED TERRITORY, RISING RATES, AND YOUR FIXED INCOME PORTFOLIO
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• Similarly aligned belief shared with AGRiP – constant collaboration on a formal and informal basis leads to better results

• More than 215 different pools with different liabilities, investment objectives/goals, and guidelines
  
  › Pools vary widely in policies and practices, members served, financial measures and metrics, and operational structures; investment structure is not a one size fits all solution

• Understanding Risk Pooling structures, statutes/legislation, regulations, investment policies, and investment guidance from Pool Executives and Staff is vital
REBOUNDING FROM THE CREDIT CRISIS
LONG PERIOD OF EXPANSION SINCE CRISIS,ALTHOUGH ONLY MODERATE GROWTH

• Entering our 9th year of economic expansion
• Persistent output gap, with post-crisis GDP growth 1% below 70-year average

POST-CRISIS GDP GROWTH

Post-Crisis Average GDP (Sept 2009-June 2017): 2.2%
Post-War Average GDP (June 1947-June 2017): 3.2%

Source: Bloomberg; as of 6/30/17
• Unemployment rate has fully recovered to pre-crisis levels
• At 4.4%, the labor market is generally considered to be at/near full-employment

• Labor force participation has declined to 40-year lows

Source: Bloomberg; as of 8/31/17
Wage growth has improved in recent years, as unemployment finally fell below 5%.

Source: Bloomberg; as of 6/30/17
Inflation has been running consistently below the Fed’s 2% target level.

TIPS breakevens are pricing in sub 2% inflation for the next 10 years.
• Global central banks used quantitative easing as an additional monetary policy tool
• $15 trillion would be equivalent to nearly 40% of the total U.S. fixed income market

Source: Bloomberg; as of 8/31/17
Low rates are the norm globally.

- U.S. Government bond rates are the highest in the developed world.

Source: Bloomberg; as of 8/31/17
ECONOMIC EXPECTATION

- GDP growth and inflation to be above recent levels
  - Wage gains
  - Low energy prices fully reflected

- Do not expect a return to historical 3% + growth
  - New normal/secular stagnation
  - Aging of the workforce
  - Lower population growth
  - Weaker productivity gains

- Potential for 3% growth, but only for short periods of time
  - Fiscal policy
  - Unsustainable long-term
Market remains skeptical of the Fed’s rate forecast
Fed has consistently lowered their future rates expectations over time

Source: Bloomberg; as of 9/20/17
MARKET RALLY CONTINUES
## 10-YEARS LATER – REBOUNDING FROM THE CREDIT CRISIS

<table>
<thead>
<tr>
<th>Year</th>
<th>Emerging Markets</th>
<th>Gov't Treasury</th>
<th>High Yield</th>
<th>Real Estate</th>
<th>Gov't Treasury</th>
<th>Int'l Stocks</th>
<th>Small Cap</th>
<th>Real Estate</th>
<th>Real Estate</th>
<th>Int'l Stocks</th>
<th>Small Cap</th>
<th>Real Estate</th>
<th>Real Estate</th>
<th>Small Cap</th>
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</thead>
<tbody>
<tr>
<td>2007</td>
<td>28.62%</td>
<td>24.03%</td>
<td>58.21%</td>
<td>28.07%</td>
<td>29.93%</td>
<td>17.32%</td>
<td>38.82%</td>
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<td>21.31%</td>
<td>38.82%</td>
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<td>2008</td>
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<td>Int'l Stocks</td>
<td>Large Cap</td>
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<td>2009</td>
<td>11.17%</td>
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<td>Commodities</td>
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<td>26.46%</td>
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<td>18.91%</td>
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<td>Cash</td>
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<td>Gov't Treasury</td>
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<td>Gov't Treasury</td>
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</table>

Source: eVestment; as of 12/31/16
### Fixed Income Sector Returns

**EVEN WITHIN FIXED INCOME, ALL SECTORS AREN’T CREATED EQUAL**

<table>
<thead>
<tr>
<th>Year</th>
<th>TIPS</th>
<th>Treasury</th>
<th>High Yield</th>
<th>CMBS</th>
<th>TIPS</th>
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<td>2008</td>
<td>8.83%</td>
<td>8.34%</td>
<td>28.45%</td>
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<td>10.70%</td>
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<td>28.45%</td>
<td>8.15%</td>
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<tr>
<td>2009</td>
<td>6.90%</td>
<td>-2.35%</td>
<td>ABS</td>
<td>24.72%</td>
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<td>9.00%</td>
<td>6.57%</td>
<td>18.68%</td>
<td>ABS</td>
<td>6.80%</td>
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<td>2013</td>
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<td>MBS</td>
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<td>High Yield</td>
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<td>2014</td>
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<td>TIPS</td>
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<td>ABS</td>
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<td>2.03%</td>
<td>IG Corporates</td>
<td>-0.68%</td>
<td>MBS</td>
<td>6.17%</td>
<td>Municipal</td>
<td>1.18%</td>
<td>CMBS</td>
<td>0.97%</td>
</tr>
</tbody>
</table>

Source: eVestment; as of 12/31/16
Accommodative Global Central Banks, low rates, low inflation, modest growth has encouraged a risk-on appetite.

Stock and bond returns have performed well over the past 25 years; however, they have exhibited strong negative correlation during this time period (correlation = -0.53).

Interestingly, stocks and bonds have not both been negative during any calendar year since 1969.
“Bull markets are born on pessimism, grown on skepticism, mature on optimism, and die on euphoria.”

– Sir John Templeton

Source: Daily S&P 500 returns, Bloomberg; as of 9/20/17
NAVIGATING UNCHARTERED TERRITORY – WHAT ARE OUR OPTIONS TO ADD YIELD?
OPTION 1: EXTEND DURATION
• 10-year Treasury yields are still near the lowest levels since 1950
• More room for rates to move higher than lower

Yield curve is at its flattest since 2007, when the level of rates was much higher.

Limited yield to be gained by moving further out the curve.

Source: Bloomberg, U.S. Treasury; as of 6/30/17
OPTIONS FOR RISK POOL MANAGERS TO INCREASE YIELD: INCREASE DURATION

YIELD ADVANTAGE VS. DURATION RISK
Barclays Agg vs. Barclays Int Gov’t/Credit

- Barclays Aggregate duration is now 2 years longer than the Barclays Intermediate Government/ Credit
- Yield premium has shrunk to 50 bps
- Least attractive time to extend duration in the last 10 years

Source: Barclays Live as of 8/31/17
OPTION 2: INCREASE RISK IN CORPORATES
OPTIONS FOR RISK POOL MANAGERS TO INCREASE YIELD: INCREASE CORPORATE CREDIT RISK

CUMULATIVE EBIDTA GROWTH

- Strong cumulative EBIDTA growth since the crisis, especially when excluding the struggling energy sector

Source: Moody’s; as of 12/31/16
• Debt increased 89%, causing gross leverage to rise from 1.5x to 2.5x
• Corporate cash increased 145%, limiting the rise in net debt leverage from 1.0x to 1.4x
Corporate actions have become an increasing risk to bondholders.

Increases in M&A and shareholder rewards have outstripped discretionary cashflow generation.
• Global demand for fixed income has tightened all spread sectors
• Corporate spreads are near post-crisis tights and well through longer-term medians
OPTIONS FOR RISK POOL MANAGERS TO INCREASE YIELD: INCREASE CORPORATE CREDIT RISK

- Spreads for riskier Corporates have compressed with higher quality issuers
- Minimal compensation for taking on additional credit risk

Source: Barclays Live; as of 7/31/17
CORPORATE MARKET SUMMARY

• Positive fundamentals
  › Strong earnings growth
  › Potential for tax reform

• Reasons for caution
  › Increased leverage
  › Greater corporate action risk

• Unattractive valuations
  › Spreads near post-crisis tights
  › Through longer term medians

• Strategy
  › Maintain exposure but position defensively
    - Higher quality issuers
    - Shorter duration bonds
    - Extreme diversification
OPTION 3: INCREASE ALLOCATION TO MBS
OPTIONS FOR RISK POOL MANAGERS TO INCREASE YIELD: INCREASE MBS RISK

**SINGLE A CORPORATE SPREADS VS. MBS**

- Single A corporates only spread 20bps more than mortgages
- Smallest pick-up in 7 years

Source: Citi, Barclays Point; as of 8/31/17
• Fed owns $1.7tn of MBS securities, which represents 29% of the MBS market
• After nine years of modest net issuance, supply of MBS set to increase substantially
• Through 2021, Fed’s MBS portfolio will shrink by $700bn (40%) and only represent 14% of the market
MBS STRATEGY

• Attractive yields relative to other spread sectors

• Risks
  › Fed Balance Sheet unwind
  › Greater interest rate volatility
    - Negative convexity
    - Duration extension if rates rise

• Recommendation
  › Neutral MBS exposure today
  › Buy on any cheapening
  › Protect downside by paying up for better convexity
PASSIVE VS. ACTIVE DEBATE CONTINUES –
WHO HAS HISTORICALLY WON FROM A PERFORMANCE STANDPOINT?
Large Cap Core universe is well followed and highly efficient
Active Large Cap equity managers have had a difficult time outperforming the S&P 500 benchmark consistently
• Core fixed income universe does not represent the full investment opportunity set
• Active core fixed income managers have had success producing excess returns versus the Barclays U.S. Aggregate Bond Index over time
Two primary drawbacks when comparing passive fixed income index to an efficient fixed income portfolio:

1. Restrictive rules for inclusion in fixed income indices

   • High minimum issuance size excludes:
     
     › Many government guaranteed programs
     
     › Certain other credit sectors (Taxable Municipals, Non-Corporate)

   • Structural requirements exclude 144a, floaters, certain Agency MBS securities

   • Bloomberg Barclays U.S. Aggregate Bond Index only captures $20tn of the total $40tn in outstanding U.S. fixed income securities
2. Sub-optimal sector allocations of indices

**LONG RUN EXCESS RETURNS VS. TREASURIES (2000-2016)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Long Run Excess Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Related</td>
<td>0.59%</td>
</tr>
<tr>
<td>MBS</td>
<td>0.37%</td>
</tr>
<tr>
<td>ABS</td>
<td>0.56%</td>
</tr>
<tr>
<td>Corporates</td>
<td>0.76%</td>
</tr>
</tbody>
</table>

**BENCHMARK COMPOSITION**

**Bloomberg Barclays U.S. Aggregate Bond Index**
- Treasury/Agency/Cash: 44%
- MBS: 28%
- ABS/CMBS: 2%
- Corporate: 25%

**Galliard Core Portfolio**
- Treasury/Agency/Cash: 12%
- Other Government: 13%
- MBS: 20%
- ABS/CMBS: 15%
- Tax Muni/Non-Corp: 10%
- Corporate: 30%

Source: Barclays Point; as of 12/31/16
RISK POOLS INVESTMENT CONSIDERATIONS
• We are not expecting a return back to historical 3% + growth; however, we do expect growth and inflation to move above recent low levels

• Modestly stronger economic backdrop has led to strong positive returns for investors in equity and fixed income markets, but we believe the cycle is maturing

• Chasing yield by extending duration and moving down the quality spectrum does not come without tradeoffs, and we are in unchartered territory as the Fed begins to unwind their balance sheet

• Prudent diversification and utilizing the full fixed income opportunity set is important to meet Risk Pool investment objectives