HIGHLANDS RANCH METROPOLITAN DISTRICT
FINANCE WORKSHOP ADDENDA

February 20, 2019

Addendum documents can also be viewed at
http://highlandsranch.org
or
http://intranet.highlandsranch.org/default.aspx

- Highlands Ranch Metro District Review of Investment Performance Quarter-ended December 31, 2019
Highlands Ranch Metro District

Review of Investment Performance
Quarter-ended December 31, 2018

Current Market Themes

- U.S. economic conditions are characterized by:
  - Reasonably strong GDP growth fueled in part by tax cuts and increased federal government spending
  - Solid job growth with a low unemployment rate of 3.5%, and modest pickup in wage growth
  - Strong corporate profits
  - Potential imbalances, including a growing budget deficit

- In December, the U.S. Treasury yield curve partially inverted between 2-5 year maturities for the first time since 2007. Interest rates fell sharply in Q4 as the bond market reacted to a significant correction in the stock market.

- The year ended with a partial U.S. government shutdown which affected nine federal government departments. This compounded with other geopolitical risks and added to the uncertainty in financial markets.

- After rising nearly 10% by September, U.S. equity markets corrected by nearly 20% in the 4th quarter, more than erasing all gains for the year.

- The Federal Reserve raised rates for a 4th time for the year at its December meeting. But, their updated "dot plot" reduced the projected pace of rate hikes from 3 to 2 in 2019. Meanwhile, the market's expectation (based on traded futures) is for zero hikes. Recent comments by Fed officials Chair Jerome Powell's indicated a more data-driven approach to future rate action.

- Geopolitical risks skew to the downside amid divided government in the U.S., contentious trade disagreements, rising populism around the globe, and generally growing policy uncertainties.

Where Are We in the Economic Cycle?

- Wage Growth
- Housing Starts
- Capital Spending
- Consumer Confidence
- Corporate Leverage
- Bond Default Rates
- Bank Lending Standards
- Unit Labor Cost
- Residential Investment/GDP
- Consumer Durables/GDP
- Household Leverage

Length of Cycle
- Labor Market Slack
- Output Market Slack
- S&P 500 Margins
- Yield Curve

Early
- Recession

Mid

Late
**Strong Economic Growth Continues in the Third Quarter**

- U.S. economic activity expanded at a solid pace in Q3:
  - GDP grew at a 3.4% annual rate, making Q2 and Q3 the best back-to-back quarters since 2014.
  - Consumer spending and inventory provided the largest contributions since 2014 and 2015.
  - Government spending rose by the most since 2016, providing a boost from fiscal stimulus and defense spending.
  - Trade was the largest drag in 33 years.
  - Housing posted its third consecutive drag on GDP growth.

![U.S. Real GDP QoQ, SAAR](image)

**Core Inflation Decelerates Below the Fed's 2% Target**

- The Fed's preferred measure of inflation, the Core PCE Price Index (Y/Y), accelerated to 1.6%, just below the Fed's 2% target, which does not raise any urgency for increased rate hikes from the Federal Reserve. Moreover, forward-looking inflation expectations has declined below the 2% level.
- While job growth is solid, wage growth has been slower than in previous expansionary cycles. Tariffs could, however, push prices higher as a result of the increased cost of raw materials and growing supply bottlenecks.

![Inflation Measures \(Y/Y\)](image)

**Fed Raises Rates for Fourth Time in 2018 in December**

- Information revealed since the FOMC met in November indicates that the labor market has continued to strengthen and that economic activity has been rising at a strong rate. Job gains have been strong, on average, in recent months, and the unemployment rate has remained low. Household spending has continued to grow strongly, while growth of business fixed investment has moderated from its rapid pace earlier in the year. On a 12-month basis, both overall inflation and inflation for items other than food and energy remain near 2 percent. Indicators of longer-term inflation expectations are little changed, on balance.
- In view of realized and expected labor market conditions and inflation, the Committee decided to raise the target range for the federal funds rate to 2% to 2.5%.
- Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee judges that some further gradual increases in the target range for the federal funds rate will be consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term. The Committee judges that risks to the economic outlook are roughly balanced, but will continue to monitor global economic and financial developments and assess their implications for the economic outlook.
Fed Action Less Certain in 2019

Fed expects 2 rate hikes in 2019

Market pricing in a potential rate cut


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U.S. Yield Curve Inverts At The Belly Of The Curve

<table>
<thead>
<tr>
<th>Tenor</th>
<th>Year-End 12/31/18</th>
<th>Year-End 12/29/2017</th>
<th>Year-End 12/30/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 month</td>
<td>2.35%</td>
<td>1.38%</td>
<td>0.50%</td>
</tr>
<tr>
<td>6 month</td>
<td>2.48%</td>
<td>1.53%</td>
<td>0.61%</td>
</tr>
<tr>
<td>1 year</td>
<td>2.60%</td>
<td>1.73%</td>
<td>0.81%</td>
</tr>
<tr>
<td>2 year</td>
<td>2.49%</td>
<td>1.69%</td>
<td>1.10%</td>
</tr>
<tr>
<td>3 year</td>
<td>2.49%</td>
<td>1.97%</td>
<td>1.45%</td>
</tr>
<tr>
<td>5 year</td>
<td>2.51%</td>
<td>2.21%</td>
<td>1.50%</td>
</tr>
<tr>
<td>10 year</td>
<td>2.68%</td>
<td>2.41%</td>
<td>2.44%</td>
</tr>
</tbody>
</table>

Source: Bloomberg, as of 12/30/18.

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Market-Based Indicators Show Some Uncertainty

10-year to 2-year U.S. Treasury Yield Spread

Investment Grade Corporate Yield Spreads

High Yield Corporate Yield Spreads

Source: Bloomberg, as of 12/30/18. Corporate yield spreads are relative to comparable Treasury yields.

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U.S. Midterm Elections Result in Divided Government

- The Democrats gained the majority of the House of Representatives in the U.S. midterm elections, winning 40 seats.
- Republicans increased their majority in the Senate.

Democrat take the House

Republicans hold the Senate

Source: AP. Gray districts are undecided.

Source: AP. White areas have no senate election.
**Portfolio Characteristics and Investment Strategy**

**Portfolio Recap**
- Investors gravitated toward lower-risk assets through the final months of 2018 as volatility surged, stocks lost their footing, credit spreads widened, and the belly of the curve (maturities between one and five years) began to decline at rates lower than shorter- and longer-term securities (maturities over five years). The U.S. Treasury yields reversed course during the quarter as maturities beyond one year declined 30 to 40 basis points (0.30% to 0.40%).
- For the past several quarters we have positioned the portfolio with a duration less than that of the benchmark. This benefited the portfolio for most of 2018 as the Federal Reserve raised rates, and yields across the curve increased. However, in the fourth quarter, sudden shifts in market sentiment caused interest rates to fall, which eroded some of those benefits, negatively impacting portfolio performance relative to the benchmark. At the same time, the declines in longer-term yields positively impacted the portfolio’s absolute performance.
- Our strategy over the past several months was to actively reduce exposure to credit sectors (and increase allocations to safer U.S. Treasuries), which helped to reduce relative underperformance versus the benchmark as U.S. Treasuries outperformed credit sectors for the quarter.
- The federal agency sector was one of the few to generate positive asset flows relative to U.S. Treasuries for the quarter. The modest incremental yield spread versus Treasuries accounted for the slight relative outperformance.
- Incremental income from subordinations contributed to relative outperformance versus U.S. Treasuries for the quarter.
- Corporates felt the pressure of wider spreads across all industries. As a result, the sector underperformed the most fixed income alternatives in the quarter. While portfolio allocations to the sector declined from performance relative to the benchmark, our shift to a more defensive bias at the beginning of the quarter—favored higher quality issuers, active selling of lower-yielding issues, and shorter durations—helped mitigate the underperformance.
- After gradually adding asset-backed securities (ABS) in prior quarters, the portfolio’s allocation was maintained in the quarter. We continue to view ABS as a favorable sector that offers incremental income and enhanced credit quality. Although the sector generated returns that were less than those of similar-duration Treasuries, in the fourth quarter the AAA-rated ABS sector generated attractive relative performance compared to corporates.
- After yields narrowed to 12-month lows in the third quarter, spreads on negotiable bank certificates of deposit and commercial paper issuers rebounded in the fourth quarter. As a result, the portfolio benefited from additional allocations to these high-quality, short-term credit instruments at attractive yields.
- Mortgage-backed securities (MBS)—regardless of structure, coupon, and collateral type—generated returns less than Treasuries in the quarter. Although allocations to the sector declined from performance relative to Treasury-only benchmarks, our cautious view of the sector helped limit overall risk to the portfolio.
## Managed Account Details of Securities Held

**Highlands Ranch Metro District – 3661000**

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<tr>
<th>Security Type/Description</th>
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**PFM Asset Management LLC**

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**PFM Asset Management LLC**

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**Investment Strategy Outlook**

- While the path of future Fed rate hikes is less clear than in recent years, we expect future tightening (additional Fed rate hikes) to be modest. Further, political gridlock adds additional uncertainty. As a result, we will seek to incrementally adjust duration to be more in line with (neutral to) the benchmark.

- Our outlook for the major investment-grade fixed income sectors are as follows:
  - Despite the outperformance from the federal agency sector in the fourth quarter, federal agency spreads (incremental yield) remain very narrow as most maturities offer less than five basis points (0.05%) of incremental yield relative to U.S. Treasuries. We will continue to moderate use of agencies where yield differences are narrow, seeking bidirectional relative value in either Treasuries or other sectors. Callable agencies will be continued to be evaluated, and, where analysis indicates strong value, we will seek to utilize these securities as portfolio diversifiers.
  - Supercyclical issuance is expected to increase during the first quarter of 2019. We will seek to take advantage of attractively priced new issues through the first several months of the year.
  - Although it appears that volatility may not dissipate quickly, the significant sell-off in the corporate sector (resulting in wider spreads) presents an opportunity to selectively add to the sector. We prefer high-quality, defensive issuers with a focus on one- to three-year maturities and continue to prefer financials (specifically domestic issuers) and to remain selective in industrial issuers.
  - Allocations to AAA-rated Asset-Backed Securities (ABS) will be maintained. The sector continues to offer attractive incremental income compared to government securities while also serving as a lower volatility credit alternative. Further, as issuance is expected to increase through the beginning of the year, opportunities may arise to add exposure.
  - The MBS sector has underperformed as spreads have widened. While certain structures (namely Collateralized Mortgage-Backed Securities) have been identified as an opportunity to add to the portfolio, our view of the overall sector remains cautious. Elevated volatility and the pace of global economic growth remain headwinds as well as the Fed's continued wind-down of its MBS holdings.
  - Short-term money market investors continue to reap the rewards of current monetary policy as the fed funds effective rate now hovers two and a half percent. Short-term negotiable bank certificates of deposit and commercial paper have seen normalized following very narrow yield differences at year-end, and once again provide an attractive, high-quality source of incremental income.

**IMPORTANT DISCLOSURES**

This material is not intended to be a recommendation for the purchase or sale of any security. Past performance does not necessarily reflect future results. Any investment or market outlook is not guaranteed and may be subject to change without notice. No investment strategy is guaranteed to provide the benefits and performance achieved in the past.

- Market values that exclude accrued interest are derived from closing trades as of the last business day of the month as reported by Bloomberg or Thomson. Where prices are not available for generally recognized sources, the securities are priced using a yield-to-bond matrix system to arrive at an estimated market value.
- In accordance with generally accepted accounting principles, information is presented on a tax basis, forward-looking performance is estimated with sufficient detail to understand the assumptions, and market volatility is not reflected.
- Performance is presented in accordance with the CFA Institute's "Global Investment Performance Standards (GIPS)." Unless otherwise noted, performance is determined from costs that are based on time-historical industry standards.
- The information contained in this presentation is not an offer to purchase or sell any securities.

**PIM Faer Management LLC**

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GLOSSARY

- **ACCRUED INTEREST**: Interest that is due on a bond or other fixed-income security since the last interest payment was made.

- **AGENCIES**: Federal agency securities and Government-sponsored enterprises.

- **ASSESSMENT COST**: The original cost of the principal of the security is adjusted for the amount of the periodic accretion of any discount or premium from the purchase date until the date of the report. Discount or premium is paid to shareholders securities (those with less than one year to maturity at time of issuance) is amortized on a straight-line basis.

- **BANKRUPTCY PROCEEDINGS**: A court-supervised process by which a person or business is forced to liquidate all its assets in order to satisfy its creditors.

- **CONTRIBUTION TO FOREIGN**: Represents contributions of up to 10% of the average monthly salary in all foreign subsidiaries.

- **DURATION TO WORST**: A measure of the sensitivity of a bond to a change in interest rates, stated in years, computed from cash flows to the maturity date or in the put date, whichever results in the highest yield to the investor.

- **EFFECTIVE DURATION**: A measure of the sensitivity of a bond's price to a change in interest rates, stated in years.

- **EFFECTIVE YIELD**: The total yield an investor receives in relation to the nominal yield or coupon of a bond. Effective yield takes into account the interest compounded on investment returns, while nominal yield does not.

- **FDIC**: Federal Deposit Insurance Corporation. A federal agency that insures bank deposits to a specified amount.

- **INTEREST RATE**: Interest per period divided by principal amount and expressed as a percentage.

- **MARKET VALUE**: The price that would be received or paid for an investment in an orderly transaction between market participants at the measurement date.

- **MATURE**: The date on which the principal or stated value of an investment becomes due and payable.

- **NEGOTIABLE CERTIFICATES OF DEPOSIT**: A CD with a very large denomination, usually $1 million or more, that can be traded in secondary markets.

- **PAR VALUE**: The nominal or face amount of a security.

- **PASS THROUGH SECURITY**: A security that passes through the income of its underlying assets to its shareholders. The most common type is the mortgage-backed security.

- **REPURCHASE AGREEMENTS**: A loan of securities with those securities to an investor with an agreement to repurchase them at a fixed price on a fixed date.

- **SETTLE DATE**: The date on which the transaction is settled and the securities are exchanged.

- **TRADE DATE**: The date on which the transaction occurs. Prior to the settlement date, the investor and the seller have a price agreement.

- **UNSETTLED LOSS**: A trade which has not been executed, however, the final consummation of the security transaction and payment has not yet taken place.

- **U.S. TREASURY**: The department of the U.S. government that issues Treasury securities.

- **YIELD**: The rate of return based on the current market value, the annual interest receipts, maturity value, and the time period remaining until maturity, stated as a percentage on an annualized basis.

- **YIELD AT COST**: The yield to maturity at cost is the expected rate of return based on the original cost, the annual interest receipts, maturity value, and the time period from purchase date to maturity, stated as a percentage on an annualized basis.

- **YIELD AT MARKET**: The yield to maturity at market is the rate of return based on the current market value, the annual interest receipts, maturity value, and the time period remaining until maturity, stated as a percentage on an annualized basis.