

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

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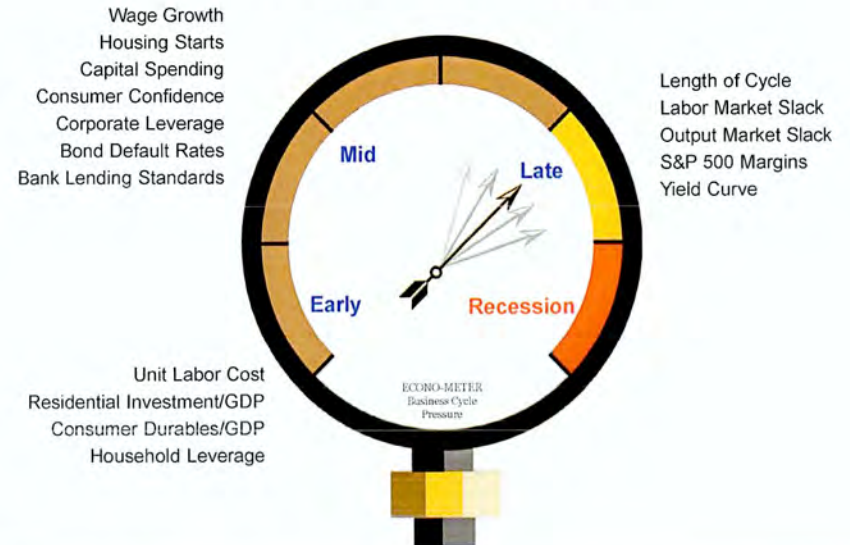
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Economic and Market Update

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 3.9%, 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?



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.



Source: Bloomberg, as of Q3 2018, first growth estimate. SAAR is seasonally adjusted annualized rate. Orange denotes rolling four-quarter averages.

Labor Market Shows Continued Strength In December

- The U.S. economy added 312,000 jobs in December, the strongest showing since last February and among the strongest of the expansion.
- Job gains averaged 220,000 per month in 2018.
 - The unemployment rate rose to 3.9% in December, but the increase was due to more workers entering the work force.
 - Average hourly earnings – a key measure of wage growth – rose by 3.2% YOY, matching the high for the year.



Source: Bloomberg, latest data available as of 12/31/2018.

Core Inflation Decelerates Below the Fed's 2% Target

- The Fed's preferred measure of inflation, the Core PCE Price Index (YoY), accelerated to 1.9%, 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.



Source: Bloomberg, latest data available as of December 2018. Inflation expectations based on yield difference between 5-year Treasury note and 5-year Treasury Inflation Protected Securities (TIPS).

Fed Raises Rates for Fourth Time in 2018 in December

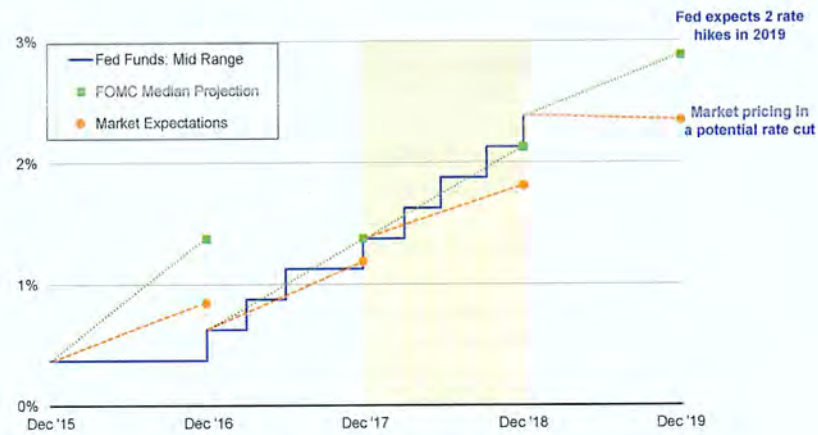
December

19

- Information received 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 1/2 percent**.
- 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.**

Source: Federal Reserve

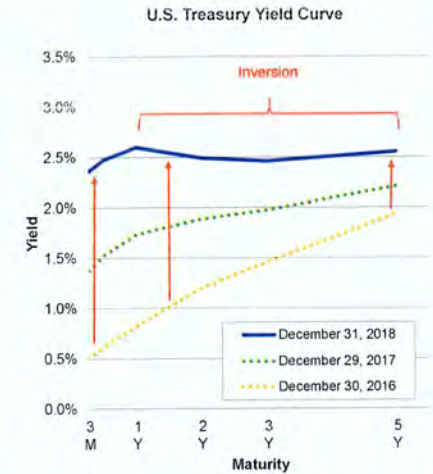
Fed Action Less Certain in 2019



Source: Fed expectations from Federal Reserve dot plot as of December 19, 2018. Market expectations as measured by Fed Funds futures as of January 4, 2019.

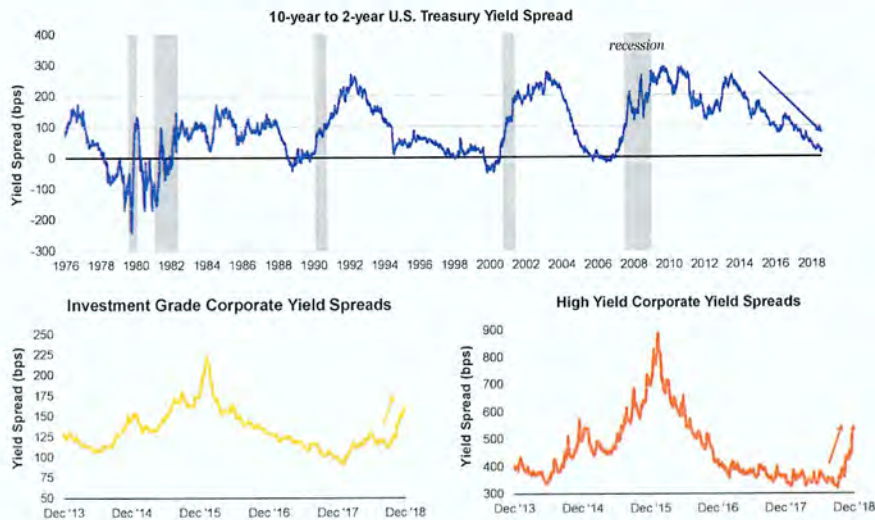
U.S. Yield Curve Inverts At The Belly Of The Curve

Tenor	Year-End 12/31/18	Year-End 12/29/2017	Year-End 12/30/16
3 month	2.35%	1.38%	0.50%
6 month	2.48%	1.53%	0.61%
1 year	2.60%	1.73%	0.81%
2 year	2.49%	1.88%	1.19%
3 year	2.46%	1.97%	1.45%
5 year	2.51%	2.21%	1.93%
10 year	2.68%	2.41%	2.44%



Source: Bloomberg, as of 12/31/18.

Market-Based Indicators Show Some Uncertainty



Source: Bloomberg, as of 12/31/18. Corporate yield spreads are relative to comparable Treasury index yields.

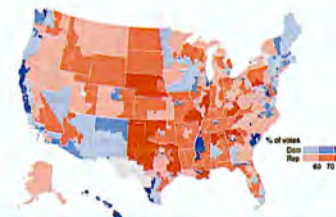
U.S. Midterm Elections Result in Divided Government

- 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.

Democrats take the House

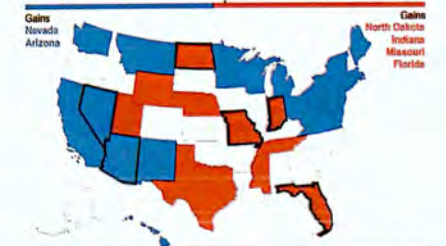
Dem 232 218 to win Rep 198



Source: AP. Grey districts are undecided

Republicans hold the Senate

Dem 47 50 Rep 53



Source: AP. White areas have no senate election.

Source: BBC, as of 12/31/18.

Government Shutdown Update



*Represents the 11 longest government shutdowns. Average includes other shutdowns as well

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 trading at rates lower than shorter- and longer-term securities (maturities one year or less and maturities greater than five years). U.S. Treasury yields reversed course during the quarter as maturities beyond one year declined 30 – 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 versus 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 excess returns relative to U.S. Treasuries for the quarter. The modest incremental yield spread versus Treasuries accounted for the slight relative outperformance.
 - Incremental income from supranationals 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 most fixed income alternatives in the quarter. While portfolio allocations to the sector detracted from performance relative to the benchmark, our shift to a more defensive bias at the beginning of the quarter—favoring higher quality issuers, active selling of lower-yielding issues, and shorter durations—helped mitigate the underperformance.
 - After actively 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 detracted from performance relative to Treasury-only benchmarks, our cautious view of the sector helped limit overall risk to the portfolio.

Investment Program Summary

Investment Type	Amount	Yield	Note
CSIP Liquid	\$25,192,889	2.45% Monthly Distribution	Liquidity pool
CSIP Term	\$0	N/A Weighted Average	Term maturities based on cash flow needs
Investment Portfolio	\$39,847,781	2.15% Yield at Cost 2.65% Yield at Market	Benchmarked to the ICE BofAML 1-3 Year Treasury Index
Total	\$65,040,670		

Source: PFM statement 12/31/2018

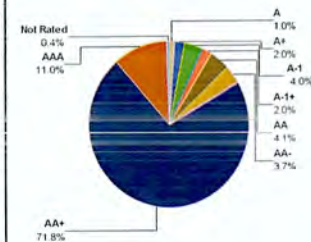
Portfolio Holdings

Portfolio Statistics

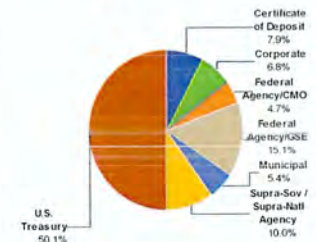
As of December 31, 2018

Par Value:	\$28,872,238
Total Market Value:	\$30,847,781
Security Market Value:	\$19,847,488
Accrued Interest:	\$200,295
Cash:	-
Amortized Cost:	\$35,878,472
Yield at Market:	2.65%
Yield at Cost:	2.15%
Effective Duration:	1.58 Years
Duration to Worst:	1.53 Years
Average Maturity:	1.74 Years
Average Credit:	AA

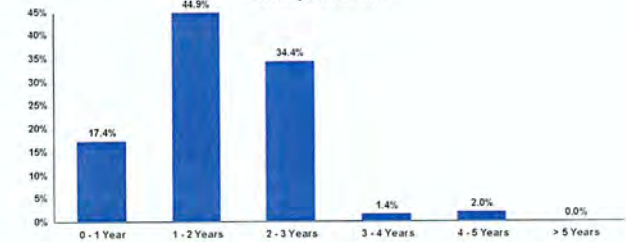
Credit Quality (S&P Ratings)



Sector Allocation



Maturity Distribution

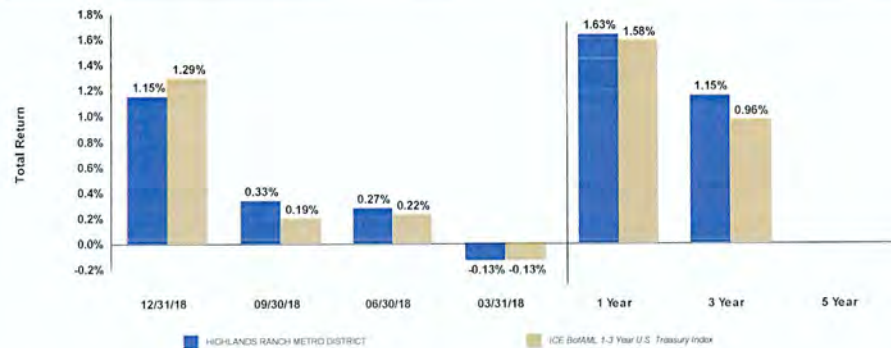


*As average of each security's credit rating assigned a numeric value and adjusted for its relative weighting in the portfolio

PFM Asset Management LLC

Portfolio Performance (Total Return)

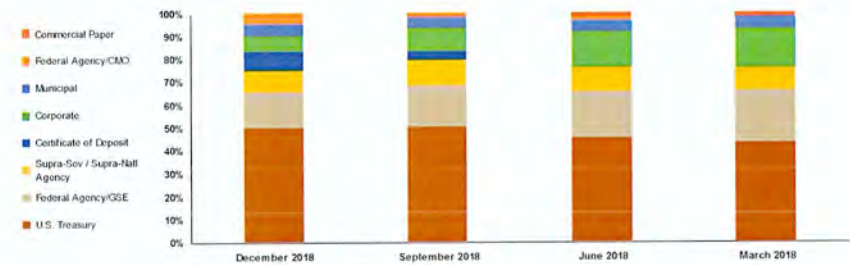
Portfolio/Benchmark	Effective Duration	Quarter Ended				Annualized Return		
		12/31/18	09/30/18	06/30/18	03/31/18	1 Year	3 Year	5 Year
HIGHLANDS RANCH METRO DISTRICT	1.58	1.15%	0.33%	0.27%	-0.13%	1.63%	1.15%	-
ICE BofAML 1-3 Year U.S. Treasury Index	1.81	1.29%	0.19%	0.22%	-0.13%	1.58%	0.96%	-
Difference		-0.14%	0.14%	0.05%	0.00%	0.05%	0.19%	-



Portfolio performance is gross of fees unless otherwise indicated

Sector Allocation

Sector	December 31, 2018		September 30, 2018		June 30, 2018		March 31, 2018	
	MV (\$MM)	% of Total	MV (\$MM)	% of Total	MV (\$MM)	% of Total	MV (\$MM)	% of Total
U.S. Treasury	19.9	50.1%	19.7	50.2%	17.7	45.2%	16.9	43.3%
Federal Agency/GSE	6.0	15.1%	7.0	17.9%	7.8	19.9%	8.8	22.5%
Supra-Sov / Supra-Natl Agency	4.0	10.0%	4.5	11.4%	4.3	11.1%	3.9	10.0%
Certificate of Deposit	3.1	7.9%	1.5	4.0%	0.0	0.0%	0.0	0.0%
Corporate	2.7	6.8%	3.8	9.7%	6.0	15.4%	6.7	17.2%
Municipal	2.1	5.4%	1.9	5.0%	1.9	5.0%	1.9	5.0%
Federal Agency/CMO	1.9	4.7%	0.7	1.8%	0.5	1.4%	0.0	0.0%
Commercial Paper	0.0	0.0%	0.0	0.0%	0.8	2.0%	0.8	2.0%
Total	\$39.6	100.0%	\$39.2	100.0%	\$39.1	100.0%	\$39.0	100.0%



Detail may not add to total due to rounding



Managed Account Detail of Securities Held

For the Month Ending December 31, 2018

Table with columns: Security Type/Description, Dated Date/Coupon/Maturity, CUSIP, S&P Par, Moody's Rating, Trade Date, Settle Date, Original Cost, YTM at Cost, Accrued Interest, Amortized Cost, Market Value. Includes sub-totals for U.S. Treasury Bond / Note and Federal Agency Collateralized Mortgage Obligation.

PFM Asset Management LLC



Managed Account Detail of Securities Held

For the Month Ending December 31, 2018

Table with columns: Security Type/Description, Dated Date/Coupon/Maturity, CUSIP, S&P Par, Moody's Rating, Trade Date, Settle Date, Original Cost, YTM at Cost, Accrued Interest, Amortized Cost, Market Value. Includes sub-totals for U.S. Treasury Bond / Note, Supra-National Agency Bond / Note, and Federal Agency Collateralized Mortgage Obligation.

PFM Asset Management LLC



Managed Account Detail of Securities Held

For the Month Ending December 31, 2018

Table with columns: Security Type/Description, Dated Date/Coupon/Maturity, CUSIP, S&P Par, Moody's Rating, Trade Date, Settle Date, Original Cost, YTM at Cost, Accrued Interest, Amortized Cost, Market Value. Includes sub-totals for Supra-National Agency Bond / Note, Municipal Bond / Note, and Federal Agency Collateralized Mortgage Obligation.

PFM Asset Management LLC



Managed Account Detail of Securities Held

For the Month Ending December 31, 2018

Table with columns: Security Type/Description, Dated Date/Coupon/Maturity, CUSIP, S&P Par, Moody's Rating, Trade Date, Settle Date, Original Cost, YTM at Cost, Accrued Interest, Amortized Cost, Market Value. Includes sub-totals for Federal Agency Collateralized Mortgage Obligation, Federal Agency Bond / Note, and Federal Agency Collateralized Mortgage Obligation.

PFM Asset Management LLC



Managed Account Detail of Securities Held

For the Month Ending December 31, 2018

HIGHLANDS RANCH METRO DISTRICT - 36161000											
Security Type/Description		S&P	Moody's	Trade	Settle	Original	YTM	Accrued	Amortized	Market	
Dated Date/Coupon/Maturity	CUSIP	Par	Rating	Rating	Date	Date	at Cost	Interest	Cost	Value	
Federal Agency Bond / Note											
FREDDIE MAC NOTES (CALLABLE) DTD 08/27/2018 2.960% 08/27/2021	313400WCS	775,000.00	AA+	Aaa	08/27/18	08/27/18	775,000.00	2.90	7,741.39	775,000.00	774,996.90
FEDERAL HOME LOAN BANKS NOTES (CALLABLE) DTD 09/20/2018 3.850% 09/20/2021	3130AEXV7	575,000.00	AA+	Aaa	09/13/18	09/20/18	575,000.00	3.00	4,839.58	575,000.00	576,436.35
FEDERAL HOME LOAN BANKS NOTES (CALLABLE) DTD 10/12/2018 3.500% 10/12/2021	3130AF5B9	805,000.00	AA+	Aaa	11/02/18	11/06/18	799,536.00	3.02	5,206.67	799,562.41	810,204.80
Security Type Sub-Total		6,020,000.00					6,015,223.35	2.30	33,507.20	6,016,983.74	6,001,681.60
Corporate Note											
WAL-MART STORES INC CORP NOTE DTD 18/20/2017 1.750% 10/09/2019	931142D46	360,000.00	AA	Aa2	10/11/17	10/20/17	359,992.80	1.75	1,415.00	359,999.84	357,472.44
TOYOTA MOTOR CORP NOTES DTD 10/15/2016 1.550% 10/18/2019	80236TDH5	110,000.00	AA-	Aa3	10/13/16	10/18/16	109,945.00	1.57	345.74	109,985.14	108,714.32
THE PROCTER & GAMBLE CO CORP NOTES DTD 10/25/2017 1.750% 10/25/2019	742718E25	180,000.00	AA-	Aa3	10/23/17	10/25/17	179,937.00	1.77	577.50	179,974.02	178,479.54
EVONIX MOBIL (CALLABLE) CORP NOTE DTD 03/06/2015 1.912% 03/06/2020	30231GAG7	150,000.00	AA+	Aaa	07/05/17	07/10/17	150,292.50	1.84	916.17	150,127.52	148,651.50
EVONIX MOBIL (CALLABLE) CORP NOTE DTD 03/06/2015 1.912% 03/06/2020	30231GAG7	225,000.00	AA+	Aaa	04/26/17	04/28/17	225,084.25	1.77	1,374.25	225,356.54	222,977.25
TOYOTA MOTOR CREDIT CORP DTD 04/17/2017 1.950% 04/17/2020	80236TDJ6	240,000.00	AA-	Aa3	04/11/17	04/17/17	239,889.60	1.97	962.00	239,951.59	237,019.20
THE PROCTER & GAMBLE CO CORP NOTES DTD 10/25/2017 1.900% 10/23/2020	742718FA2	105,000.00	AA-	Aa3	10/23/17	10/25/17	104,839.35	1.95	376.83	104,901.72	103,475.19
JOHNSON & JOHNSON CORP NOTE DTD 11/10/2017 1.950% 11/10/2020	470160CH5	165,000.00	AAA	Aaa	11/08/17	11/10/17	164,823.45	1.99	455.81	164,839.44	162,582.92
WAL-MART STORES INC CORP NOTE DTD 10/20/2017 1.900% 12/15/2020	931142EA7	375,000.00	AA	Aa2	03/07/18	03/09/18	367,768.88	2.63	316.67	369,839.84	369,117.00

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 increase portfolio duration to be more in line with (neutral to) the benchmark.
- Our outlooks 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 better relative value in either Treasuries or other sectors. Callable agencies will continue to be evaluated, and, where analyses indicate strong value, we will seek to utilize these securities as portfolio diversifiers.
 - Supranational 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 nears two and a half percent. Short-term negotiable bank certificates of deposit and commercial paper have since normalized following very narrow yield differences at year-end, and once again provide an attractive, high-quality source of incremental income.



Managed Account Detail of Securities Held

For the Month Ending December 31, 2018

HIGHLANDS RANCH METRO DISTRICT - 36161000											
Security Type/Description		S&P	Moody's	Trade	Settle	Original	YTM	Accrued	Amortized	Market	
Dated Date/Coupon/Maturity	CUSIP	Par	Rating	Rating	Date	Date	at Cost	Interest	Cost	Value	
Corporate Note											
EXXON MOBIL CORPORATE (CALLABLE) NOTES DTD 03/03/2016 2.222% 03/01/2021	80231GAV4	400,000.00	AA+	Aaa	03/02/18	03/06/18	394,076.00	2.74	2,962.67	395,656.00	394,240.80
TOYOTA MOTOR CREDIT CORP NOTES DTD 04/13/2018 2.950% 04/13/2021	80236TJL6	155,000.00	AA-	Aa3	04/11/18	04/13/18	155,071.30	2.91	990.71	155,054.81	155,023.25
TOYOTA MOTOR CREDIT CORP NOTES DTD 04/13/2018 2.950% 04/13/2021	80236TJEU5	245,000.00	AA-	Aa3	04/10/18	04/13/18	244,902.00	2.96	1,565.96	244,924.66	245,026.75
Security Type Sub-Total		2,710,000.00					2,697,422.13	2.24	12,279.31	2,700,656.18	2,682,790.16
Certificate of Deposit											
GOLEMAN SACHS BANK USA CERT DEPOS DTD 08/13/2018 2.800% 08/05/2019	40054PAE5	175,000.00	A-1	P-1	08/10/18	08/13/18	175,000.00	2.80	8,499.17	175,000.00	173,884.94
WESTPAC BANKING CORP NY CERT DEPOS DTD 10/19/2018 2.970% 10/18/2019	96130AAK4	800,000.00	A-1	P-1	10/18/18	10/19/18	800,000.00	2.97	4,884.90	800,000.00	799,207.85
WELLS FARGO BANK NA CERT DEPOS DTD 11/19/2018 3.000% 11/15/2019	6499983L0	800,000.00	A-1	P-1	11/16/18	11/19/18	800,000.00	3.00	2,952.67	800,000.00	799,821.36
BANK OF MONTREAL CHICAGO CERT DEPOS DTD 08/03/2018 3.190% 08/03/2020	06370REU9	775,000.00	A-	Aa2	08/01/18	08/03/18	775,000.00	3.23	10,369.72	775,000.00	774,097.13
Security Type Sub-Total		3,150,000.00					3,150,000.00	3.02	26,705.56	3,150,000.00	3,147,011.78
Managed Account Sub-Total		39,872,237.80					39,832,414.69	2.15	200,295.49	39,878,472.25	39,647,485.56
Securities Sub-Total		\$39,872,237.80					\$39,832,414.69	2.15%	\$200,295.49	\$39,878,472.25	\$39,647,485.56
Accrued Interest											\$200,295.49
Total Investments											\$39,847,781.05

IMPORTANT DISCLOSURES

- This material is based on information obtained from sources generally believed to be reliable and available to the public; however, PFM Asset Management LLC cannot guarantee its accuracy, completeness or suitability. This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation. All statements as to what will or may happen under certain circumstances are based on assumptions, some, but not all of which, are noted in the presentation. Assumptions may or may not be proven correct as actual events occur, and results may depend on events outside of your or our control. Changes in assumptions may have a material effect on results. Past performance does not necessarily reflect and is not a guaranty of future results. The information contained in this presentation is not an offer to purchase or sell any securities.
- Market values that include accrued interest are derived from closing bid prices as of the last business day of the month as supplied by Interactive Data, Bloomberg, or Telorate. Where prices are not available from generally recognized sources, the securities are priced using a yield based matrix system to arrive at an estimated market value.
 - In accordance with generally accepted accounting principles, information is presented on a trade date basis, forward settling purchases are included in the monthly balances, and forward settling sales are excluded.
 - Performance is presented in accordance with the CFA Institute's Global Investment Performance Standards (GIPS). Unless otherwise noted, performance is shown gross of fees. Quarterly returns are presented on an annualized basis. Returns for periods greater than one year are presented on an annualized basis. Past performance is not indicative of future returns.
 - Bank of America/Merrill Lynch indices provided by Bloomberg Financial Markets
 - Money market fund/cash balances are included in performance and duration computations
 - Standard & Poor's is the source of the credit ratings. Distribution of credit rating is exclusive of money market fund/GIP holdings
 - Callable securities in the portfolio are included in the maturity distribution analyses to their stated maturity date, although, they may be called prior to maturity.
 - MBS maturities are represented by expected average life

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/or Government-sponsored enterprises.
- **AMORTIZED COST:** The original cost of the principal of the security is adjusted for the amount of the periodic reduction of any discount or premium from the purchase date until the date of the report. Discount or premium with respect to short-term securities (those with less than one year to maturity at time of issuance) is amortized on a straight line basis. Such discount or premium with respect to longer-term securities is amortized using the constant yield basis.
- **BANKERS' ACCEPTANCE:** A draft or bill of exchange accepted by a bank or trust company. The accepting institution guarantees payment of the bill as well as the insurer.
- **COMMERCIAL PAPER:** An unsecured obligation issued by a corporation or bank to finance its short-term credit needs, such as accounts receivable and inventory.
- **CONTRIBUTION TO DURATION:** Represents each sector or maturity range's relative contribution to the overall duration of the portfolio measured as a percentage weighting. Since duration is a key measure of interest rate sensitivity, the contribution to duration measures the relative amount or contribution of that sector or maturity range to the total rate sensitivity of the portfolio.
- **DURATION TO WORST:** A measure of the sensitivity of a security's price to a change in interest rates, stated in years, computed from cash flows to the maturity date or to the put date, whichever results in the highest yield to the investor.
- **EFFECTIVE DURATION:** A measure of the sensitivity of a security'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 power of compounding 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 year divided by principal amount and expressed as a percentage.
- **MARKET VALUE:** The value that would be received or paid for an investment in an orderly transaction between market participants at the measurement date.
- **MATURITY:** The date upon 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 dollar face amount of a security.

GLOSSARY

- **PASS THROUGH SECURITY:** A security representing pooled debt obligations that passes income from debtors to its shareholders. The most common type is the mortgage-backed security.
- **REPURCHASE AGREEMENTS:** A holder of securities sells these 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 monies/securities are exchanged. If the settle date of the transaction (i.e., coupon payments and maturity proceeds) occurs on a non-business day, the funds are exchanged on the next business day.
- **TRADE DATE:** The date on which the transaction occurred; however, the final consummation of the security transaction and payment has not yet taken place.
- **UNSETTLED TRADE:** A trade which has 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.
- **YTM 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.
- **YTM 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.