

Orange County Sanitation District

Administration Committee February 8, 2023

Period Ending December 31, 2022

CHANDLER ASSET MANAGEMENT, INC. | 800.317.4747 | www.chandlerasset.com



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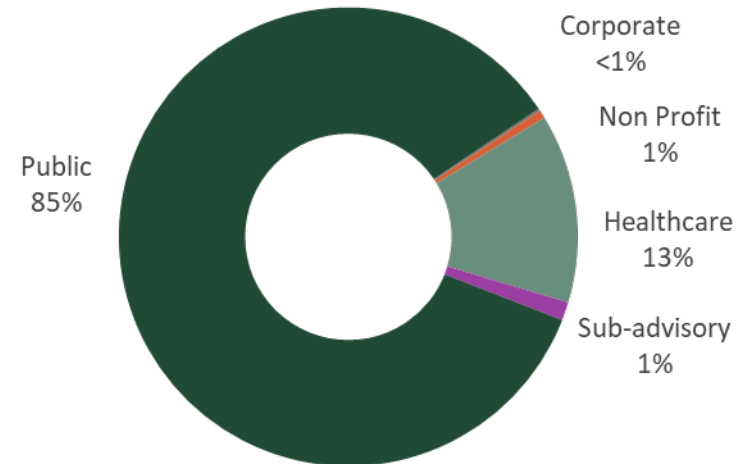
Section 1 | Firm Overview

Specializing in Investment Management for Public Agencies

“We believe if we do what is right for our clients, our own success will follow.”

- *Independent & 100% Employee-Owned*
 - Fixed income specialist since 1988
 - Founded by public investment professionals
 - Serve institutions with public sector focus
 - Headquartered in San Diego, CA
- *Custom Investment Programs*
 - Investment solutions based on your risk profile and return goals
 - Strategies for operating, short-, and long-term reserves
 - Direct contact with investment management team
- *Stable Team of Investment Professionals*
 - Team of investment professionals average over two decades portfolio management experience
 - Disciplined, repeatable investment philosophy and process
 - Proprietary investment analysis

Assets Under Management \$28.6 Billion



Lasting Partnerships with Neighbors and Peers

Local Water District, Sanitation District, and Utilities Clients

Client Name	AUM
Orange County Sanitation District	\$938 M
Coachella Valley Water District	\$425 M
San Diego County Water Authority	\$339 M
Rancho California Water District	\$314 M
Western Municipal Water District	\$234 M
Elsinore Valley Muni. Water District	\$213 M
Alameda County Water District	\$179 M
Moulton Niguel Water District	\$130 M
Vallecitos Water District	\$51 M
West Basin Municipal Water District	\$44 M
San Bernardino Municipal Water Department	\$40 M
East Orange County Water District	\$37 M
Walnut Valley Water District	\$34 M

Neighboring Public Agency Clients

Client Name	AUM
Transportation Corridor Agencies	\$1.4 B
Orange County Sanitation District	\$938 M
City of Riverside	\$738 M
Orange County Transportation Authority	\$475 M
City of Newport Beach	\$305 M
Moulton Niguel Water District	\$130 M
City of Brea	\$95 M
City of Buena Park	\$91 M
City of San Clemente	\$78 M
City of Costa Mesa	\$60 M
City of Tustin	\$64 M
City of Fountain Valley	\$41 M
City of San Juan Capistrano	\$58 M

Chandler's water agency clients and sample Inland Empire area clients as of December 31, 2022. Both lists only include clients that have given permission to be listed. It is not known whether the clients listed approve or disapprove of Chandler Asset Management and the advisory services provided. Includes discretionary and non-discretionary relationships.

Our Experienced Team is a Resource for the District

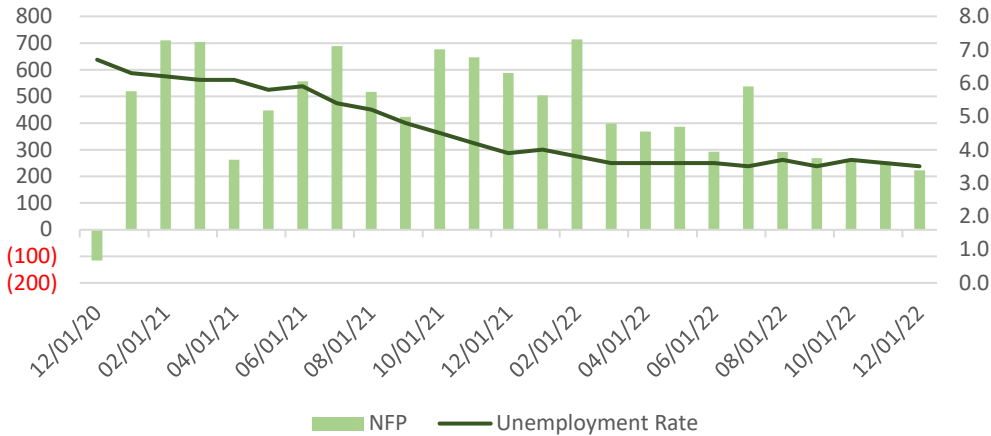
Investment Professionals	Responsibility	Industry Experience	Firm Tenure
Martin Cassell, CFA <i>Chief Finance Officer</i>	Leads the firm's finances and manages the Employee Stock Ownership Plan	1987	1991
William Dennehy II, CFA <i>Co-Chief Investment Officer</i>	Co leads the investment team. Implements portfolio strategies, performs credit analysis; Co-Chair of the Credit Committee and Economic and Market Analysis Committee, and member of the Multi-Asset Class Committee	1992	2011
Scott Prickett, CTP <i>Co-Chief Investment Officer</i>	Co leads the investment team. Implements portfolio strategies, monitors alignment with client objectives; Co-Chair of Economic and Market Analysis Committee, and member of the Multi-Asset Class Committee	1987	2014
Jayson Schmitt, CFA <i>Co-Chief Investment Officer</i>	Co leads the investment team. Implements portfolio strategies, performs credit analysis; Co-Chair of Quantitative Analysis Committee, and member of the Multi-Asset Class Committee and the Economic and Market Analysis Committee	1994	1995
Dan Delaney, CFA <i>Senior Portfolio Manager</i>	Implements portfolio strategies, performs credit analysis; Co-Chair of Sector Committee, and member of the Credit Committee	2006	2021
Genny Lynkiewicz, CFA <i>Senior Portfolio Manager</i>	Implements portfolio strategies, performs credit analysis; Co-Chair of Sector Committee and a member of the Economic and Market Analysis Committee	2000	2015
Ted Piorkowski, CFA <i>Senior Portfolio Manager</i>	Implements portfolio strategies, performs credit analysis, and member of the Sector Committee	1987	1999
Julie Hughes <i>Senior Portfolio Strategist</i>	Implements portfolio strategies and monitors alignment with client objectives and policies, and member of the Economic and Market Analysis committee and Quantitative Analysis Committee	1993	2014
Carlos Oblites <i>Senior Portfolio Strategist</i>	Implements portfolio strategies and monitors alignment with client objectives and policies; Co-Chair of Multi-Asset Class Committee	1995	2017
Alaynè Marie Sampson <i>Senior Portfolio Strategist</i>	Implements portfolio strategies and monitors alignment with client objectives and policies, and member of the Credit Committee	2000	2022
Karl Meng <i>Portfolio Strategist</i>	Implements portfolio strategies and monitors alignment with client objectives and policies	2006	2022
Stephen Church <i>Assistant Portfolio Manager</i>	Assists with implementation of portfolio strategies, and member of the Quantitative Analysis Committee and Credit Committee	2013	2022
Aaron Nail <i>Assistant Portfolio Manager</i>	Assists with implementation of portfolio strategies	2017	2022
Charlotte Powell <i>Assistant Portfolio Manager</i>	Assists with implementation of portfolio strategies, and member of the Sector and Quantitative Analysis Committee	2020	2021
Kara Hooks <i>Assistant Portfolio Strategist</i>	Implements portfolio strategies and monitors alignment with client objectives and policies	2012	2012
Client Service and Operations	Responsibility	Industry Experience	Firm Tenure
Nicole Drago, JD, IACCP <i>Chief Executive Officer</i>	Leads the firm's vision, oversight and strategy	2000	2001
Ryan Tauber <i>Managing Director, Business Development</i>	Leads the firm's Client Service, Marketing and Relationship Management teams	1999	2020
Mia Corral Brown <i>Regional Director</i>	Relationship Management	1997	2004
Stacey Alderson, CTP <i>Client Service Director</i>	Leads Client Service Team, reporting, onboarding	1998	2014



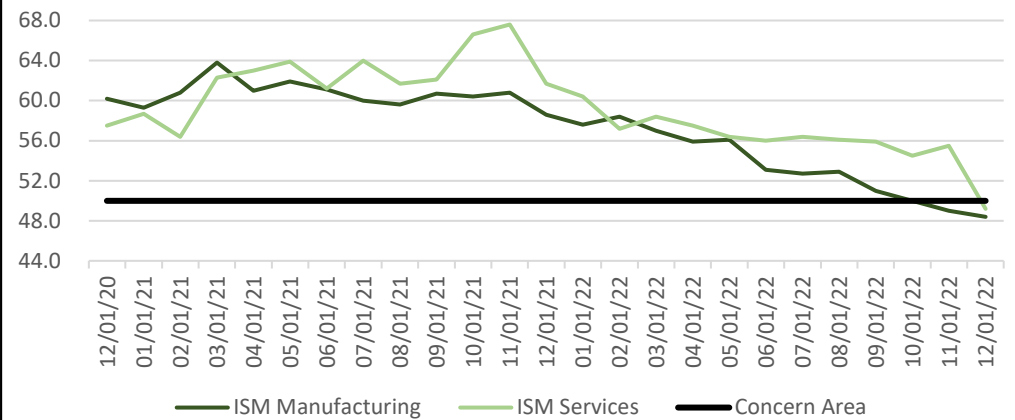
Section 2 | Economic Update

Economic Data Mixed

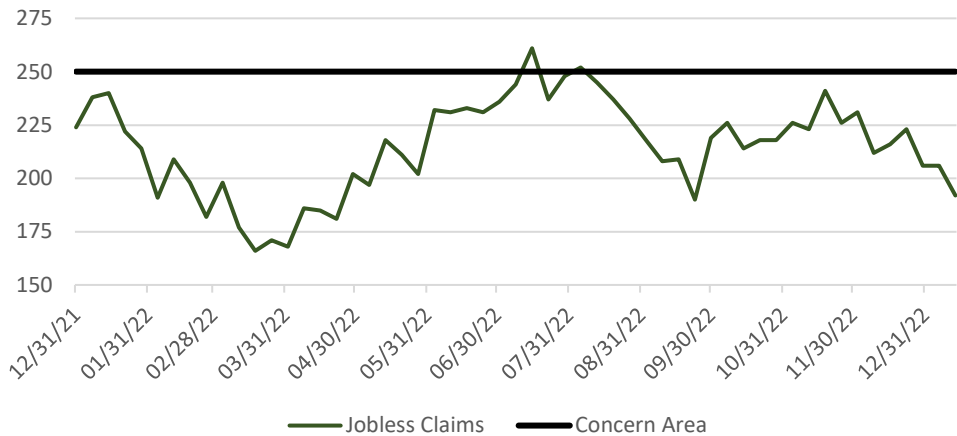
Non Farm Payrolls and Unemployment



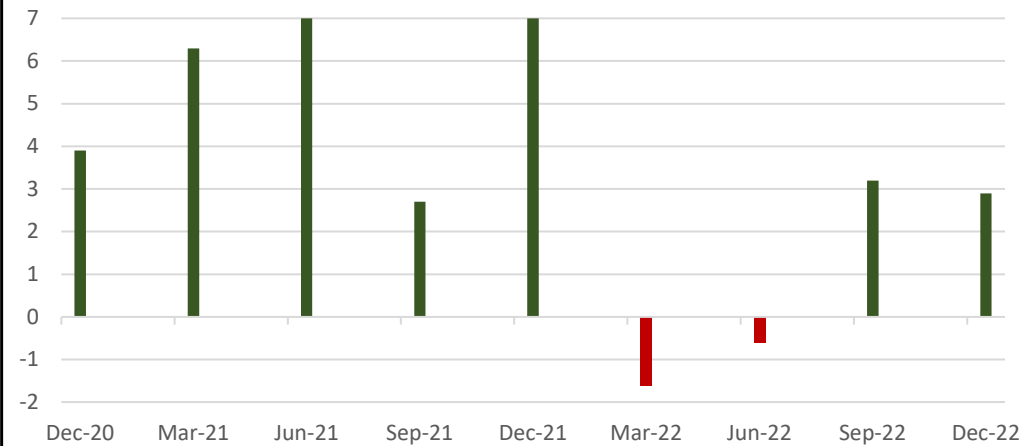
ISM Manufacturing and ISM Services Indices



Weekly Jobless Claims

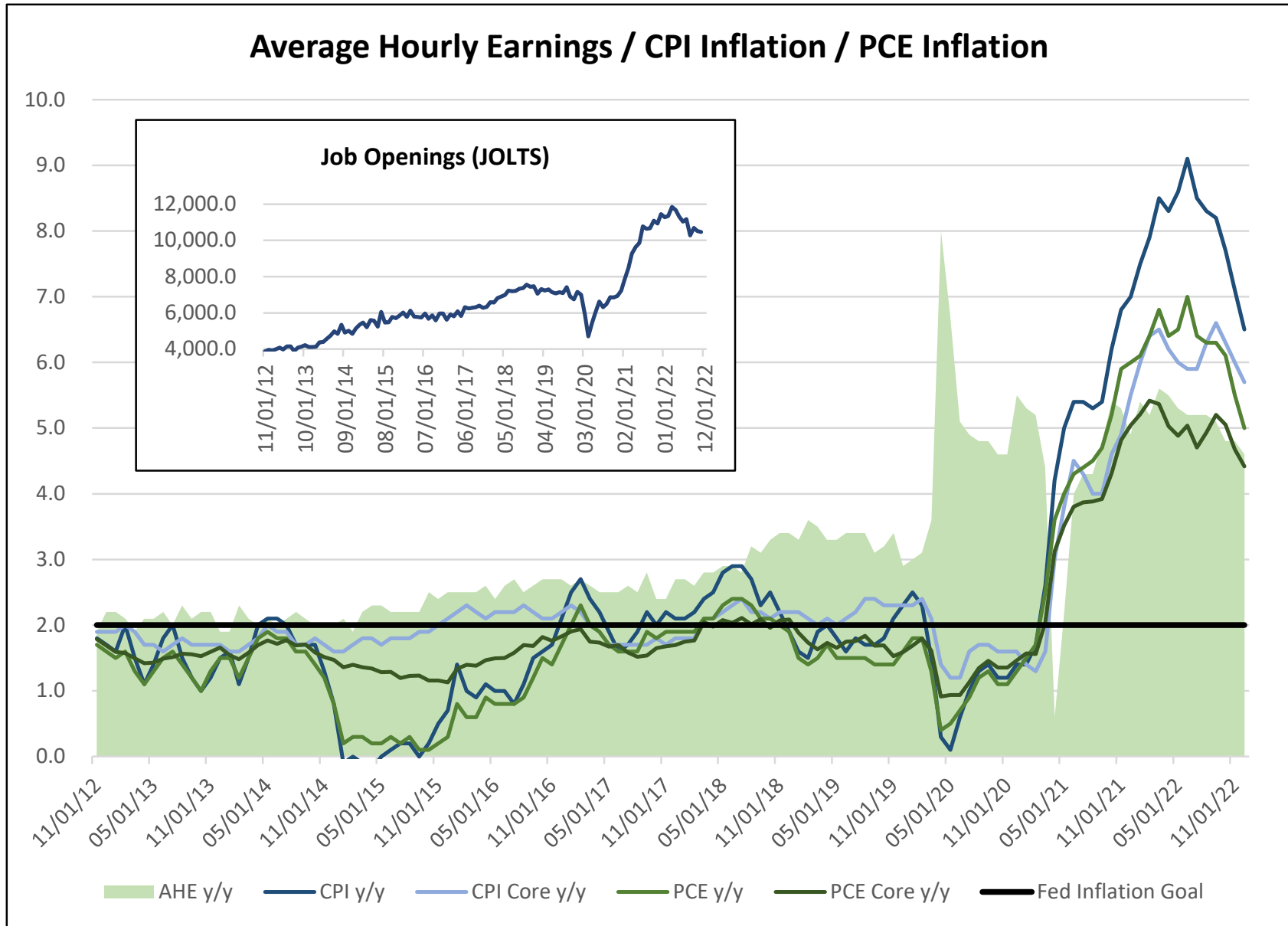


Gross Domestic Product



Source: Bureau of Labor Statistics, Institute of Supply Management, Department of Labor, & Bureau of Economic Analysis

Inflation Starting to Trend Lower – 2% Not Imminent



Source: Bureau of Labor Statistics & Bureau of Economic Analysis

Nominal Yield = Break Even Spread + Real Yield

- Since the onset of monetary policy tightening Real Yields have moved higher, and indication of tighter financial conditions.
- Market based inflation metrics remain contained – the market has confidence policymakers will achieve their inflation objectives.
- Given the starting point of consumer and corporate balance sheets, higher real rates will not be a deterrent to the overall outlook for economic growth in Chandler's view.



Source: Bloomberg

Treasury Yields Materially Higher in 2022

- The mark to market impact of the quick adjustment higher in yields has been detrimental to all asset classes, including fixed income.
- When inflation moderates, w/monetary policy less restrictive – total returns will improve.

Benchmark Rates	12/31/18	12/31/19	12/31/20	12/31/21	12/30/22	09/30/22	12/31/22
Fed Funds Tgt Upper Bound	2.50	1.75	0.25	0.25	4.50	3.25	4.50
Treasury 2y	2.49	1.57	0.12	0.73	2.96	4.28	4.43
Treasury 5y	2.51	1.69	0.36	1.26	3.04	4.09	4.01
Treasury 10y	2.69	1.92	0.92	1.51	3.02	3.83	3.88
German Bund 10y	0.24	(0.19)	(0.57)	(0.18)	1.33	2.11	2.57
Inflation Metrics	12/31/18	12/31/19	12/31/20	12/31/21	12/30/22	09/30/22	12/31/22
CPI y/y	1.9	2.3	1.4	7.0	9.1	8.2	6.5
CPI core y/y	2.2	2.3	1.6	5.5	5.9	6.6	5.7
PCE Deflator y/y	1.9	1.6	1.3	6.0	7.0	6.3	5.0
PCE Core y/y	2.1	1.6	1.5	5.0	5.0	5.2	4.4
Equity Benchmarks	12/31/18	12/31/19	12/31/20	12/31/21	12/30/22	09/30/22	12/31/22
S&P 500	2,506.85	3,230.78	3,756.07	4,766.18	3,785.38	3,585.62	3,839.50
YTD Change %		28.88%	16.26%	26.89%	-20.58%	-24.77%	-19.44%
Russell 2000	1,348.56	1,668.47	1,974.86	2,245.31	1,707.99	1,664.72	1,761.25
YTD Change %		23.72%	18.36%	13.70%	-23.93%	-25.86%	-21.56%

Source: Bloomberg, Bureau of Labor Statistics, & Bureau of Economic Analysis



Section 3 | Account Profile

Orange County Sanitation District Liquid

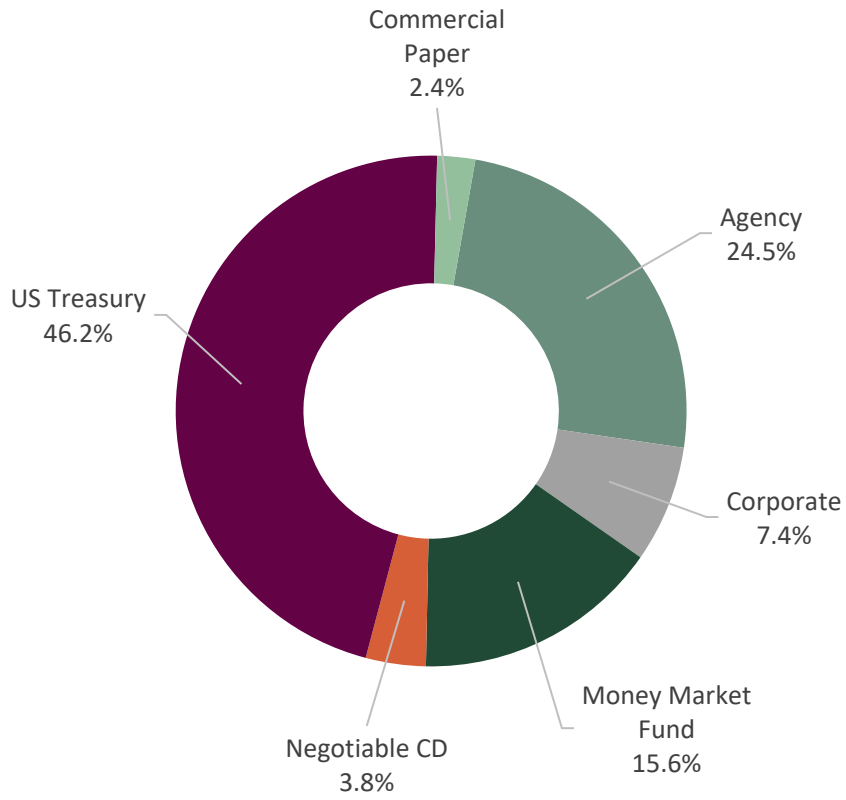
	12/31/22		09/30/22
	Benchmark*	Portfolio	Portfolio
Average Maturity (yrs)	0.15	0.21	0.28
Average Modified Duration	0.14	0.21	0.28
Average Purchase Yield	n/a	3.57%	2.01%
Average Market Yield	4.13%	4.27%	3.53%
Average Quality**	AAA	AAA/Aaa	AA+/Aa1
Total Market Value		225,394,892	109,456,669

*ICE BofA 3-Month US Treasury Bill Index

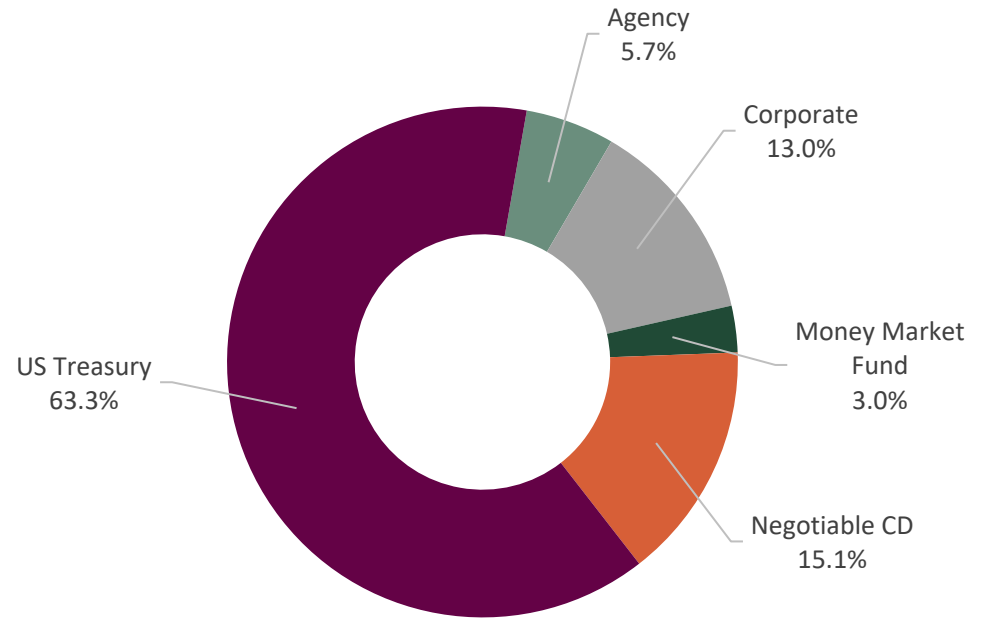
**Benchmark is a blended rating of S&P, Moody's, and Fitch. Portfolio is S&P and Moody's respectively.

Orange County Sanitation District Liquid

December 31, 2022



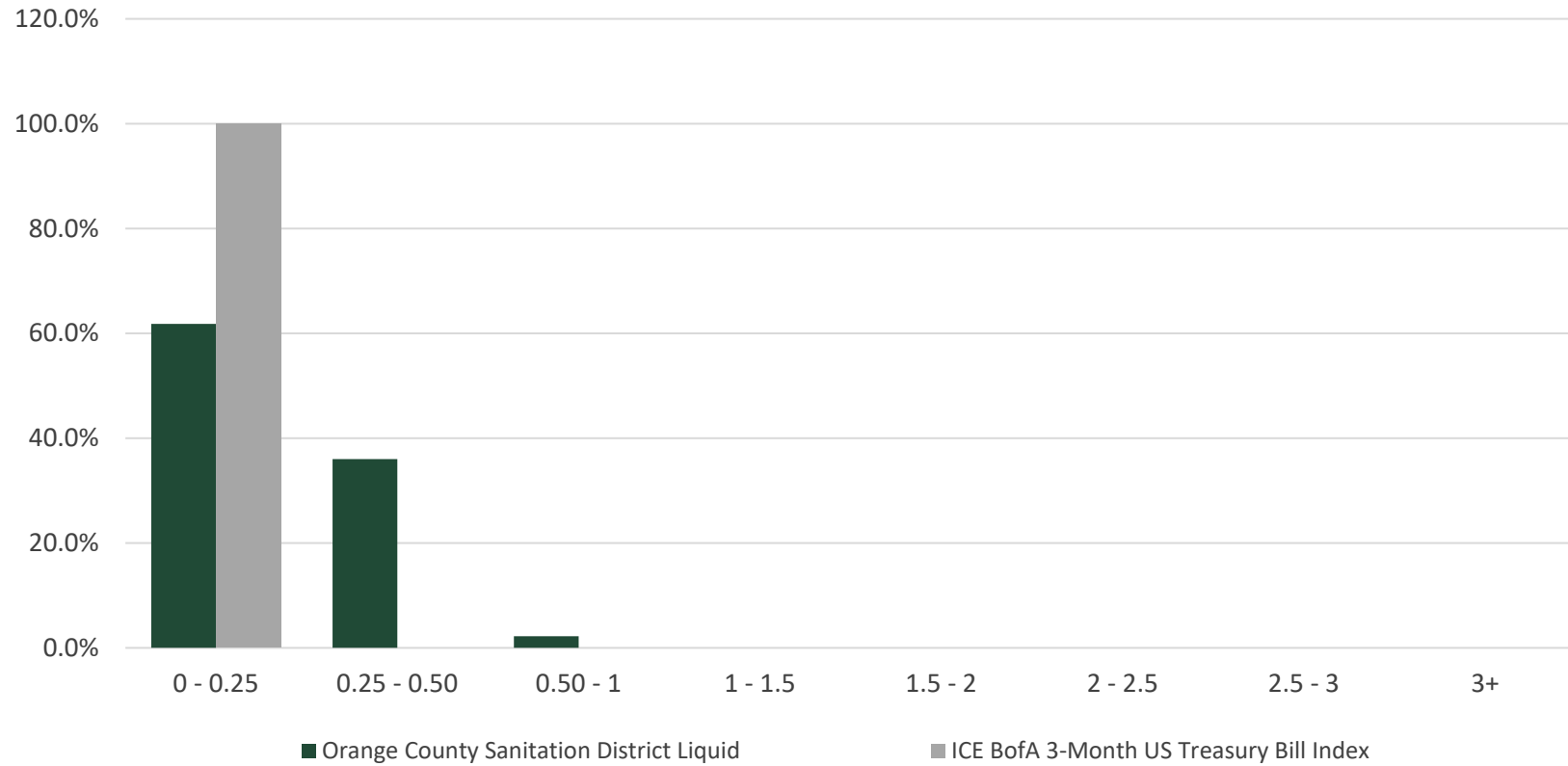
September 30, 2022



Duration Distribution

As of December 31, 2022

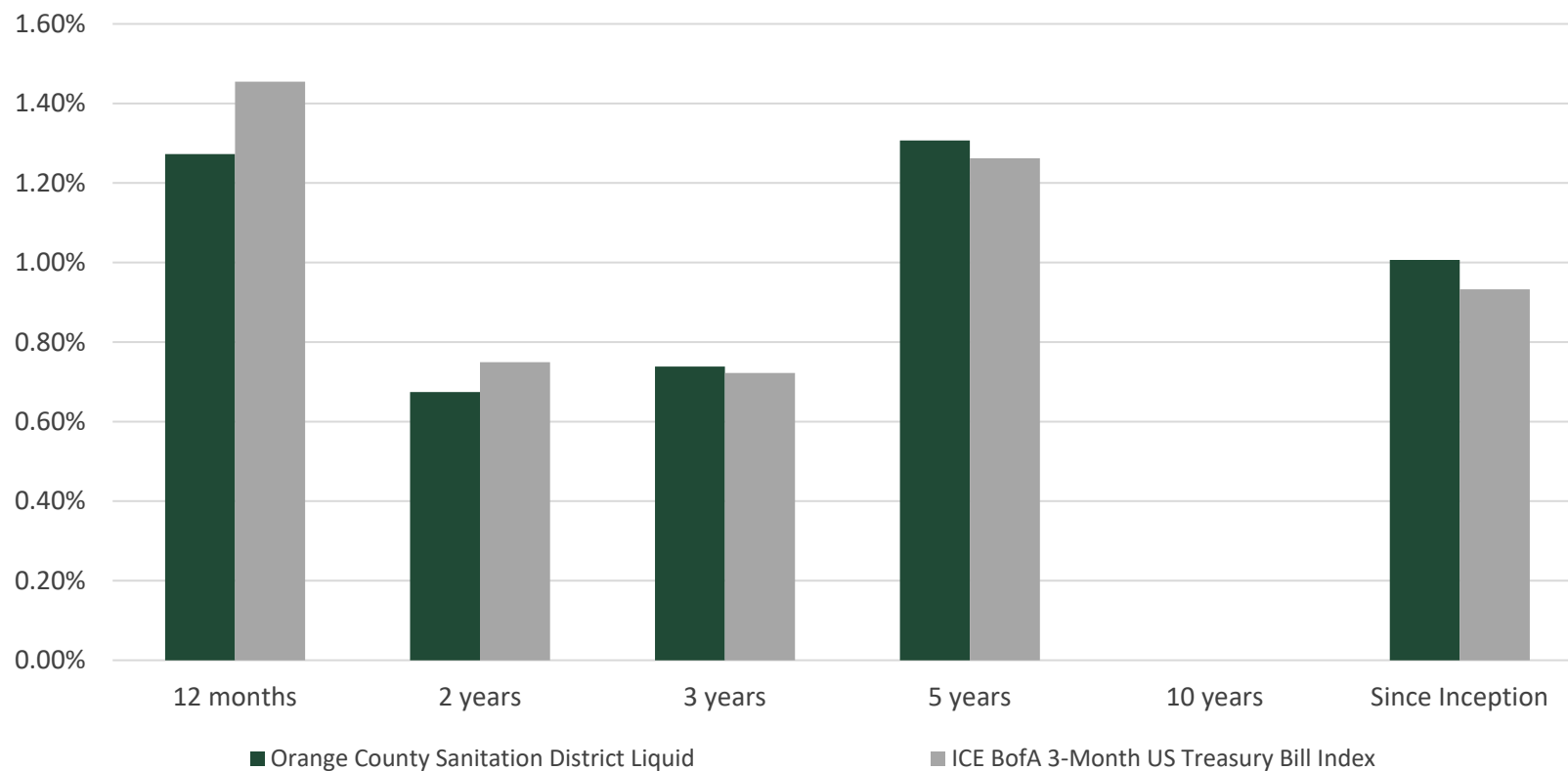
Orange County Sanitation District Liquid Portfolio Compared to the Benchmark



	0 - 0.25	0.25 - 0.50	0.50 - 1	1 - 1.5	1.5 - 2	2 - 2.5	2.5 - 3	3+
Portfolio	61.8%	36.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Benchmark*	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

*ICE BofA 3-Month US Treasury Bill Index

Orange County Sanitation District Liquid Total Rate of Return Annualized Since Inception November 30, 2014



TOTAL RATE OF RETURN	Annualized						
	3 months	12 months	2 years	3 years	5 years	10 years	Since Inception
Orange County Sanitation District Liquid	0.89%	1.27%	0.67%	0.74%	1.31%	N/A	1.01%
ICE BofA 3-Month US Treasury Bill Index	0.84%	1.45%	0.75%	0.72%	1.26%	N/A	0.93%

Total rate of return: A measure of a portfolio's performance over time. It is the internal rate of return, which equates the beginning value of the portfolio with the ending value; it includes interest earnings, realized and unrealized gains and losses in the portfolio.

Portfolio Characteristics

As of December 31, 2022

Orange County Sanitation District Long Term

	12/31/22		09/30/22
	Benchmark*	Portfolio	Portfolio
Average Maturity (yrs)	2.65	2.70	2.78
Average Modified Duration	2.50	2.28	2.41
Average Purchase Yield	n/a	1.82%	1.68%
Average Market Yield	4.50%	4.57%	4.42%
Average Quality**	AAA	AA/Aa1	AA/Aa1
Total Market Value		712,704,567	700,168,917

*ICE BofA 1-5 Yr AAA-A US Corp & Govt Index

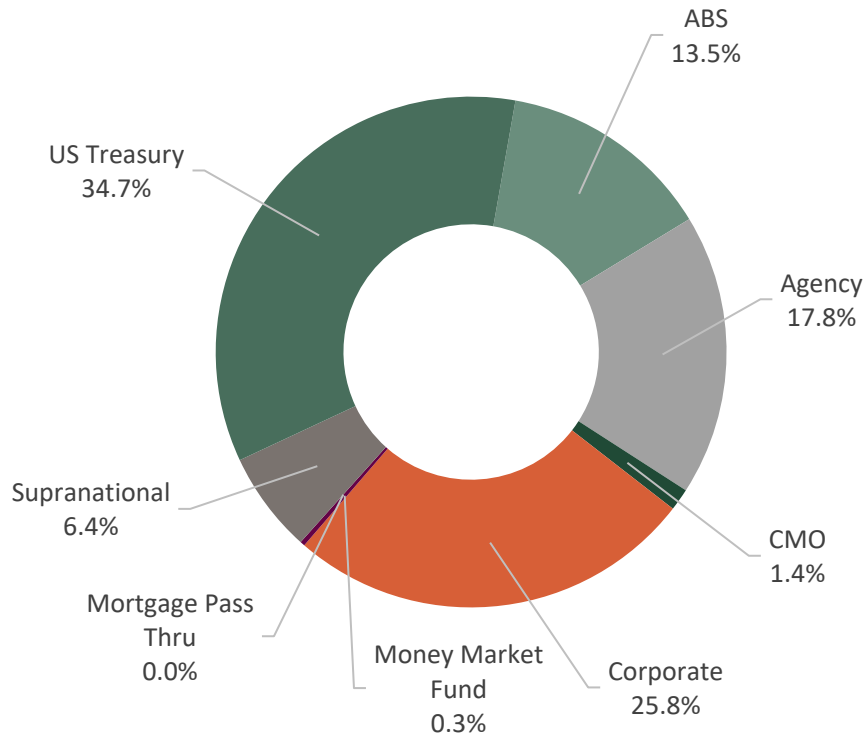
**Benchmark is a blended rating of S&P, Moody's, and Fitch. Portfolio is S&P and Moody's respectively.

Sector Distribution

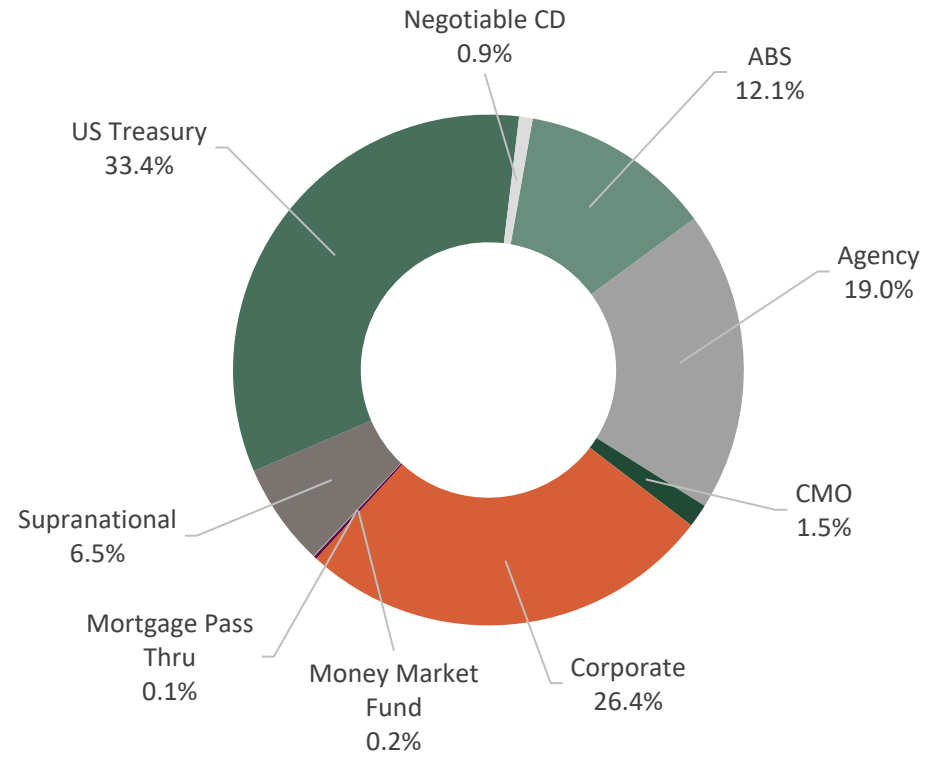
As of December 31, 2022

Orange County Sanitation District Long Term

December 31, 2022



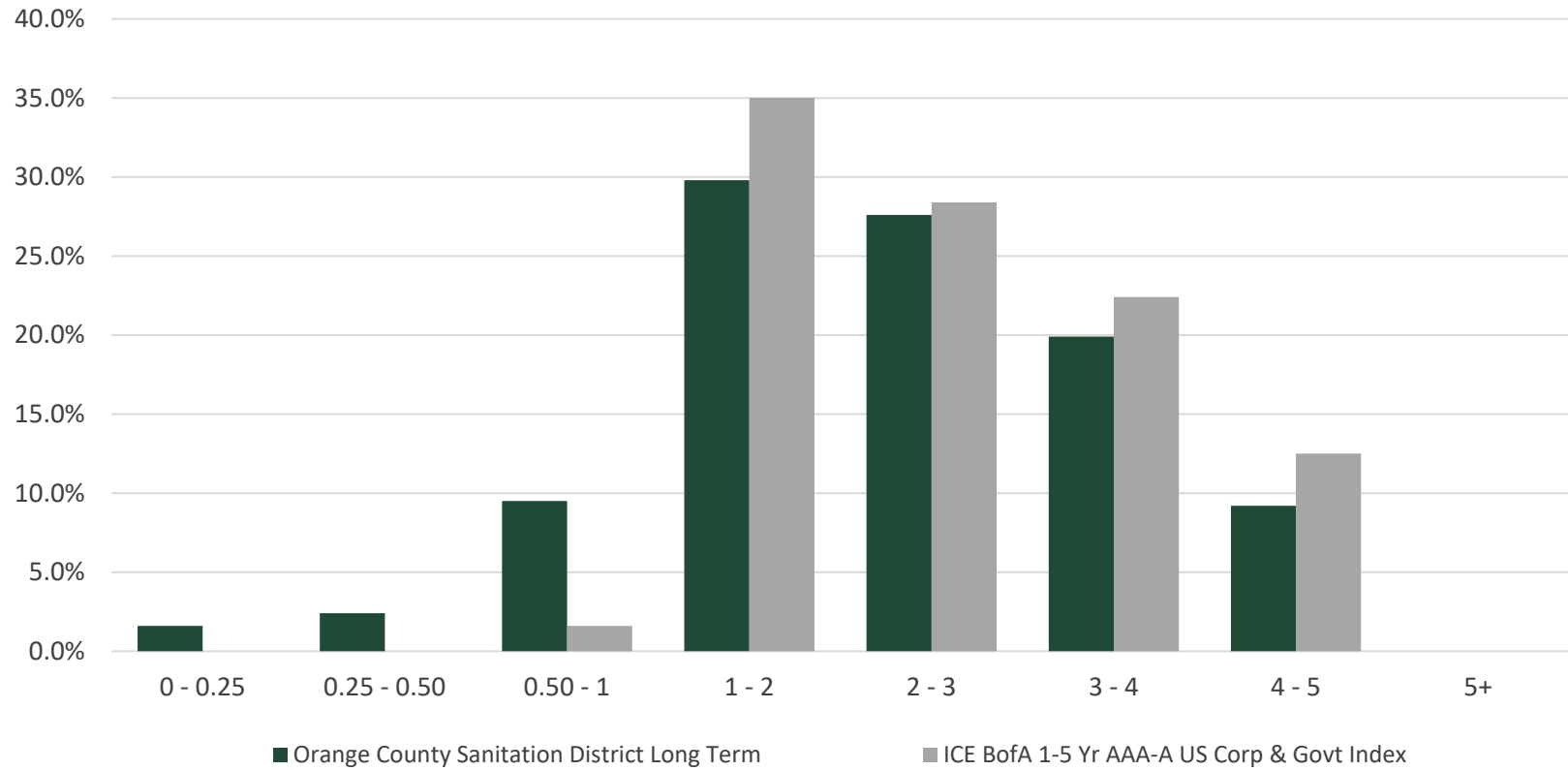
September 30, 2022



Duration Distribution

As of December 31, 2022

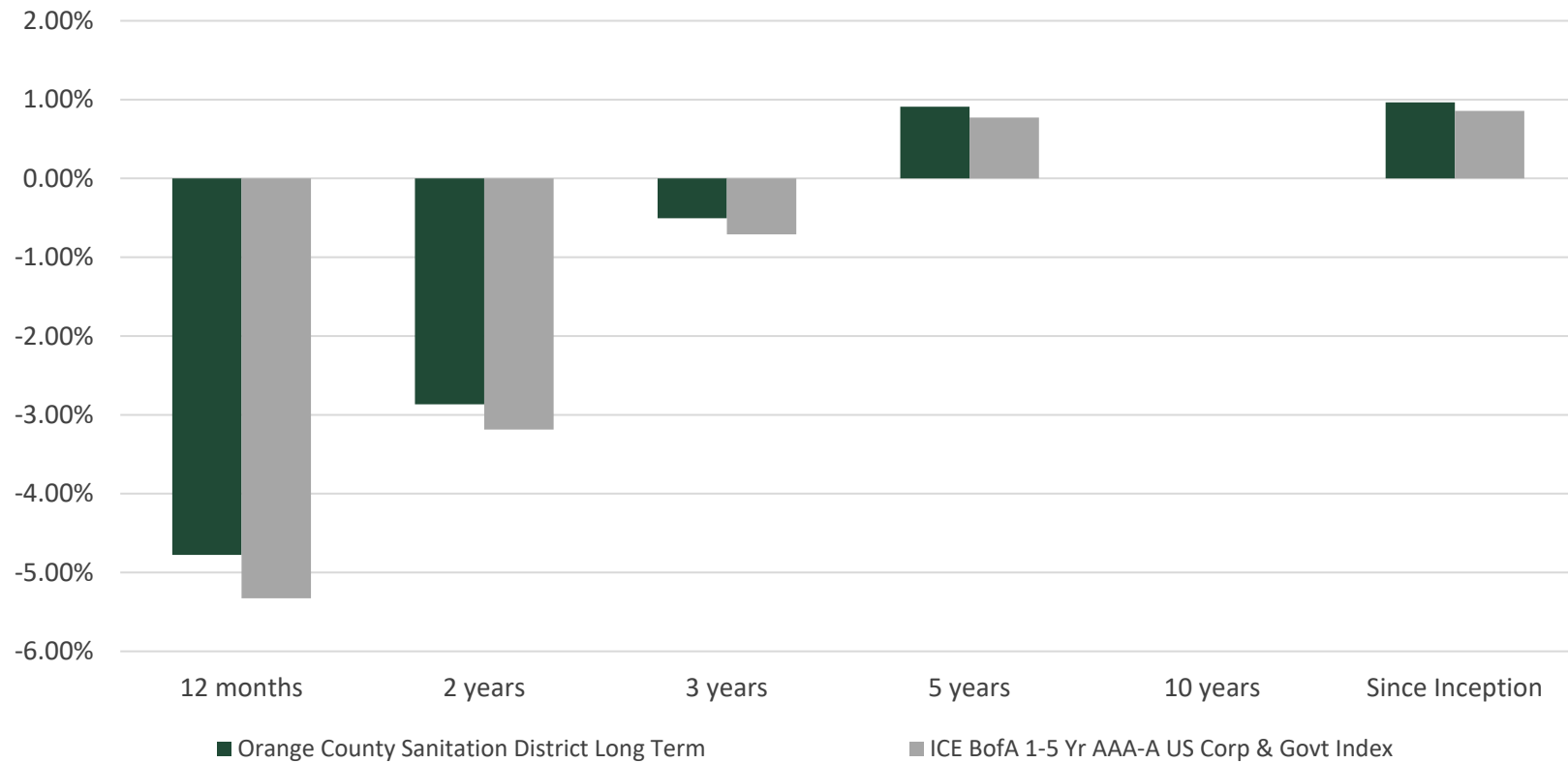
**Orange County Sanitation District Long Term
Portfolio Compared to the Benchmark**



	0 - 0.25	0.25 - 0.50	0.50 - 1	1 - 2	2 - 3	3 - 4	4 - 5	5+
Portfolio	1.6%	2.4%	9.5%	29.8%	27.6%	19.9%	9.2%	0.0%
Benchmark*	0.0%	0.0%	1.6%	35.0%	28.4%	22.4%	12.5%	0.0%

*ICE BofA 1-5 Yr AAA-A US Corp & Govt Index

Orange County Sanitation District Long Term Total Rate of Return Annualized Since Inception November 30, 2014



TOTAL RATE OF RETURN	Annualized						
	3 months	12 months	2 years	3 years	5 years	10 years	Since Inception
Orange County Sanitation District Long Term	1.07%	-4.78%	-2.87%	-0.51%	0.91%	N/A	0.97%
ICE BofA 1-5 Yr AAA-A US Corp & Govt Index	1.08%	-5.33%	-3.19%	-0.71%	0.77%	N/A	0.86%

Total rate of return: A measure of a portfolio’s performance over time. It is the internal rate of return, which equates the beginning value of the portfolio with the ending value; it includes interest earnings, realized and unrealized gains and losses in the portfolio.

Important Disclosures

As of December 31, 2022

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Performance results are presented gross-of-advisory fees and represent the client's Total Return. The deduction of advisory fees lowers performance results. These results include the reinvestment of dividends and other earnings. Past performance may not be indicative of future results. Therefore, clients should not assume that future performance of any specific investment or investment strategy will be profitable or equal to past performance levels. All investment strategies have the potential for profit or loss. Economic factors, market conditions or changes in investment strategies, contributions or withdrawals may materially alter the performance and results of your portfolio.

Index returns assume reinvestment of all distributions. Historical performance results for investment indexes generally do not reflect the deduction of transaction and/or custodial charges or the deduction of an investment management fee, the incurrence of which would have the effect of decreasing historical performance results. It is not possible to invest directly in an index.

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Fixed income investments are subject to interest, credit and market risk. Interest rate risk: the value of fixed income investments will decline as interest rates rise. Credit risk: the possibility that the borrower may not be able to repay interest and principal. Low rated bonds generally have to pay higher interest rates to attract investors willing to take on greater risk. Market risk: the bond market in general could decline due to economic conditions, especially during periods of rising interest rates.

Ratings information have been provided by Moody's, S&P and Fitch through data feeds we believe to be reliable as of the date of this statement, however we cannot guarantee its accuracy.

Security level ratings for U.S. Agency issued mortgage-backed securities ("MBS") reflect the issuer rating because the securities themselves are not rated. The issuing U.S. Agency guarantees the full and timely payment of both principal and interest and carries a AA+/Aaa/AAA by S&P, Moody's and Fitch respectively.

ICE BofA 3-Month US Treasury Bill Index

The ICE BofA 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.

ICE BofA 1-5 Yr AAA-A US Corp & Govt Index

The ICE BofA 1-5 Year AAA-A US Corporate & Government Index tracks the performance of US dollar denominated investment grade debt publicly issued in the US domestic market, including US Treasury, US agency, foreign government, supranational, and corporate securities. Qualifying securities must be rated AAA through A3 (based on an average of Moody's, S&P and Fitch). In addition, qualifying securities must have at least one year remaining term to final maturity and less than five years remaining term to final maturity, at least 18 months to final maturity at point of issuance, a fixed coupon schedule, and a minimum amount outstanding of \$1 billion for US Treasuries and \$250 million for all other securities.

ICE BofA 1-5 Yr US Corp & Govt Index

The ICE BofA 1-5 Year US Corporate & Government Index tracks the performance of US dollar denominated investment grade debt publicly issued in the US domestic market, including US Treasury, US agency, foreign government, supranational, and corporate securities. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch). In addition, qualifying securities must have at least one year remaining term to final maturity and less than five years remaining term to final maturity, at least 18 months to final maturity at point of issuance, a fixed coupon schedule, and a minimum amount outstanding of \$1 billion for US Treasuries and \$250 million for all other securities.