



DENVER
THE MILE HIGH CITY

Prepared By:

Cash & Capital
Funding Division

Director of Cash &
Investments:
Caroline Hendrickson
1.720.913.9335
Cashand.InvestmentAdministration@denvergov.org

Portfolio
Administrator:
Gregory T. King
1.720.913.9348
Cashand.InvestmentAdministration@denvergov.org

Sr. Portfolio
Manager:
Mario Dominguez
1.720.913.3091
Cashand.InvestmentAdministration@denvergov.org

Sr. Investment
Analyst:
Ernest Cheon
1.720.913.9510
Cashand.InvestmentAdministration@denvergov.org

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I. Economic Commentary

Market volatility intensified in the fourth quarter of 2022 as global central banks pursue monetary policies to combat persistently high inflation. Although the pace of job growth is moderating, the strength of the labor market has sustained economic growth. Inflation metrics are trending downward but remain significantly higher than the Fed's target. While evidence of slower economic conditions has begun to mount, it is expected that the Federal Reserve will continue to raise rates to battle inflation, albeit at a less aggressive pace.

The Federal Open Market Committee (FOMC) increased short term rates to the target range of 4.25% to 4.50%, delivering its fourth consecutive 75-basis point increase. Fed Chairman Powell continued to message that the Federal Reserve is committed to its 2% long-term inflation target and ongoing increases would be appropriate. Most market participants expect the Federal Reserve will continue to implement tighter monetary policy at a slower pace and hold rates at restrictive levels for some time until inflationary pressures subside and remain in the Fed's target range.

The Consumer Price Index (CPI) increased 6.5% year-over-year in December, down from a 7.1% year-over-year increase in November. Core CPI (CPI less food and energy) rose 5.7% year-over-year in December, down from 6.0% in November. Core PCE increased 4.7%.

Nonfarm payrolls increased 223,000 in December. Trends in employment remain strong, with the three-month moving average payroll at 247,000. The monthly unemployment rate dipped to 3.5% returning to its pre-pandemic level. The U-6, a broader measure of unemployment fell to 6.5% from 6.7% the prior month. Wage growth eased in September, with average hourly earnings rising 4.6% down from 5.0% in a year-over-year in December.

Manufacturing data weakened with the ISM Index decreasing to 48.4 in December. The index below 50 suggests a contraction in the manufacturing sector. The declining trend reflects sluggish demand amid economic uncertainty and easing pricing pressures in the goods sector. The housing sector saw mortgage rates continue to remain high. A 30-year fixed rate mortgage loan averaged 6.40%. Home price increases receded from 10.6% in September to 8.6% in October. Total housing starts declined 0.5% reflecting a shift from single family units to more affordable multi-family units. Single-family starts fell by 4.1%. Rising mortgage rates and high home prices remain a headwind for the housing sector.

Exposure to credit securities in the portfolios increased in the fourth quarter. Credit spreads slightly widened while treasury yields decreased during the quarter. The City's investment portfolio outperformed the stated benchmark indices by 0.43% at year end on a total return basis.

Portfolios	Market Value
Managed Portfolios	\$7,038,311,163
Special Purpose Portfolios	\$3,414,413
Denver ARPA Escrow Account	\$154,038,149
Finance Administrated	\$7,195,763,725



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Investment Portfolio Performance Report

Quarter Ended

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II. Consolidated Portfolio

\$6,459,026,520

Total Return			
	1-Month	3-Month	YTD
Total Return	0.12%	0.98%	-3.34%
Blended Benchmark (TR)	0.13%	1.04%	-3.75%
Excess Return	-0.01%	0.06%	0.42%

Current Return			
	1-Month	3-Month	YTD
Current Return	2.90%	2.63%	1.89%
Blended Benchmark (CR)	4.38%	4.28%	2.61%
Excess Return	-1.48%	-1.65%	-0.72%

Year-to-Date earnings on a current return basis for the Consolidated Portfolio were \$118,321,458.

The 1-5 Year Strategy Blended Benchmark consists of 67.50% Intercontinental Exchange (ICE) BofAML 1-5 Year US Treasury & Agency Index, 17.50% ICE BofAML 1-5 Year AAA-A US Corporate Index, 7.50% ICE BofAML AAA US Asset Backed Securities, 5.00% ICE BofAML 0-3 Year US Agency CMOs and 2.50% ICE BofAML 3-5 Year US Mortgage Backed Securities Index. Prior to 1/1/2016 the benchmark was the BofA Merrill Lynch 1-5 Year US Treasury & Agency Index.

The 1-10 Year Strategy Blended Benchmark consists of 65.00% ICE BofAML 1-10 Year US Treasury & Agency Index, 15.00% ICE BofAML 1-5 Year AAA-A US Corporate Index, 5.00% ICE BofAML AAA US Asset Backed Securities, 7.50% ICE BofAML 0-10 Year US Agency CMOs and 7.50% ICE BofAML 0-10 Year US Mortgage Backed Securities Index. Prior to 1/1/2016 the benchmark was the BofA Merrill Lynch 1-10 Year US Treasury & Agency Index.

Factors Affecting Performance & Management Strategies

- Chandler's proprietary Horizon Model that the City uses with the intent to meet or outperform the benchmarks over time (the Intercontinental Exchange (ICE) BofAML Treasury/Agency 1-5 year index and the ICE BofAML Treasury/Agency 1-10 year index) is revised on a regular basis, reflecting the volatility of both bond market interest rates and interest rate curve movements. The City evaluates the portfolios each time a new Horizon Model is received. The key variables subject to potential revision as a result of Horizon Model changes include duration, composition, and structure.
- The portfolio was modestly short benchmark duration in the 1-5 year strategy while 1-10 year strategy was in line with the benchmark. We expect duration to move closer to the benchmark as additional allocation of longer duration securities are added to the portfolio. Safety of principal is paramount in investing the City's funds.
- Corporate Bonds, Collateralized Mortgage Obligations, Mortgage-Backed Securities, and Asset-Backed Securities are asset classes approved by voters for implementation in 2014 by an amendment to the City Charter. Purchases of the new asset classes increased as a percentage of total composition due to asset purchases outpacing maturities. Purchases in the voter approved asset classes increased during the quarter due to increased issuance by approved credit issuers primarily in the Asset-Backed Securities asset class.
- The Consolidated Portfolio benchmarking indices are comprised of five ICE BofAML indices, creating a static weighted blended benchmark. A total of two blended benchmarks are used for the 1-5 year and 1-10 year strategies to closely reflect the portfolio duration and asset allocation constraints.



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Consolidated Portfolio Composition

Characteristics		Credit Quality (S&P)
Average Duration	2.09	
Average Coupon	2.87%	
Average Yield to Maturity	4.46%	
Average Rating (S&P)	AA+	
Average Life	2.21yrs	

Asset Allocation	Maturity Distribution

- The Consolidated Portfolio's net assets increased by approximately \$440million during the fourth quarter of 2022. On December 31st, 2022, net assets were \$6.46 billion, compared to \$6.02 billion on September 30th, 2022, as inflows exceeded outflows, and Denver International Airport had a debt issuance and bond refunding.
- The weighted average maturity (WAM), an aggregate portfolio measure of total years remaining until the maturity of all underlying holdings, ended higher in the fourth quarter. The WAM increased due to increased exposure to longer term assets. While modestly short to benchmark duration, rebalancing and securities purchase activity in the intermediate strategies extended duration more closely with the model and benchmark. The model continues to remain modestly short of benchmark duration.



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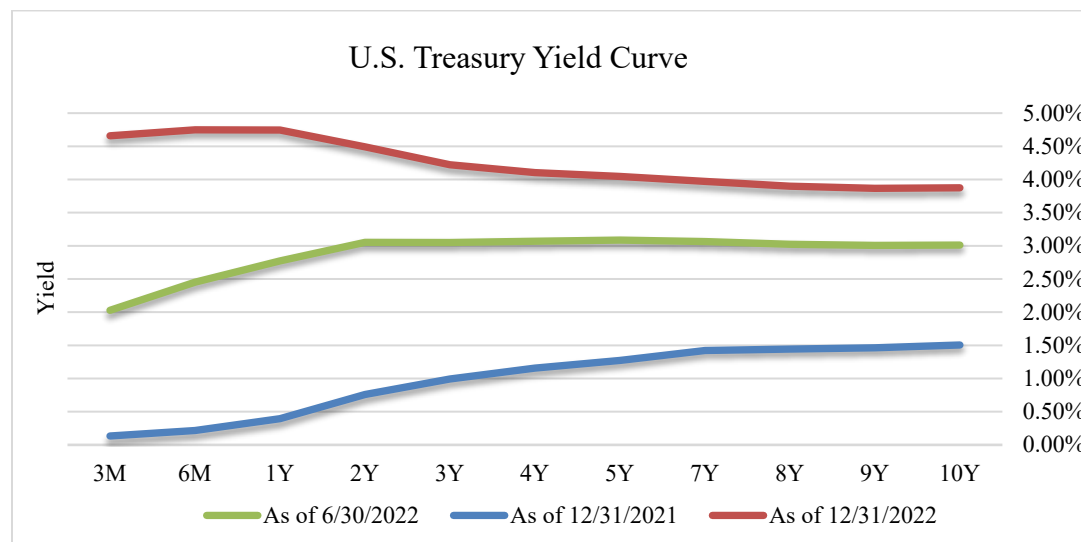
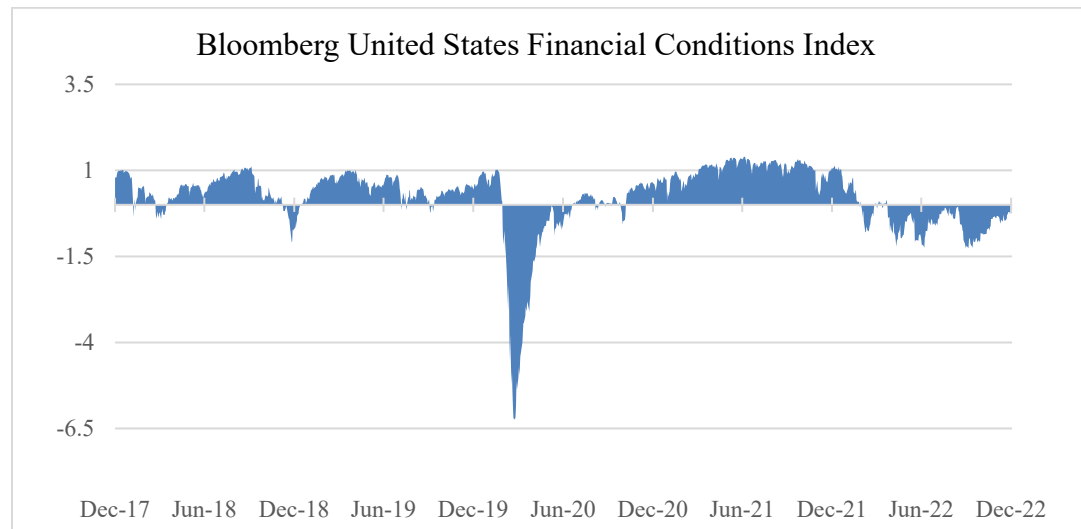
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Portfolio Management Environment



- The Federal Reserve increased the Fed funds rate to a range of 4.25%-4.50% at the end of the fourth quarter of 2022. The Fed signaled that they would continue to increase rates in 2023.
- The United States SOFR rate was 4.30% as of December 31st, 2022; an increase of 132 basis points from September 30th, 2022.
- As of December 31st, 2022, the yield of the two-year Treasury index was 4.42%, and the five-year Treasury index was yielding 4.00%. A year earlier, as of September 30th 2021, the yield of the two-year Treasury index was 0.73%, and the five-year Treasury index was yielding 1.26%.
- The median of economists' forecast is for a 3.37% ten-year Treasury yield at the end of the year 2023.
- Volatility in rates of the yield curve increased for both short-term and long-term yields. At the end of the fourth quarter, the two-year, five-year, and ten-year were at 4.42%, 4.00%, and 3.87%, respectively.

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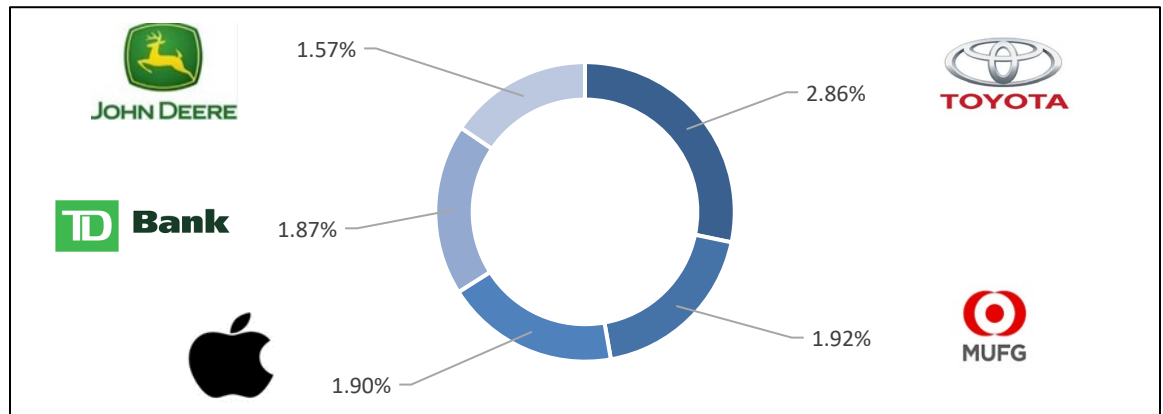
Special Purpose Investments 9

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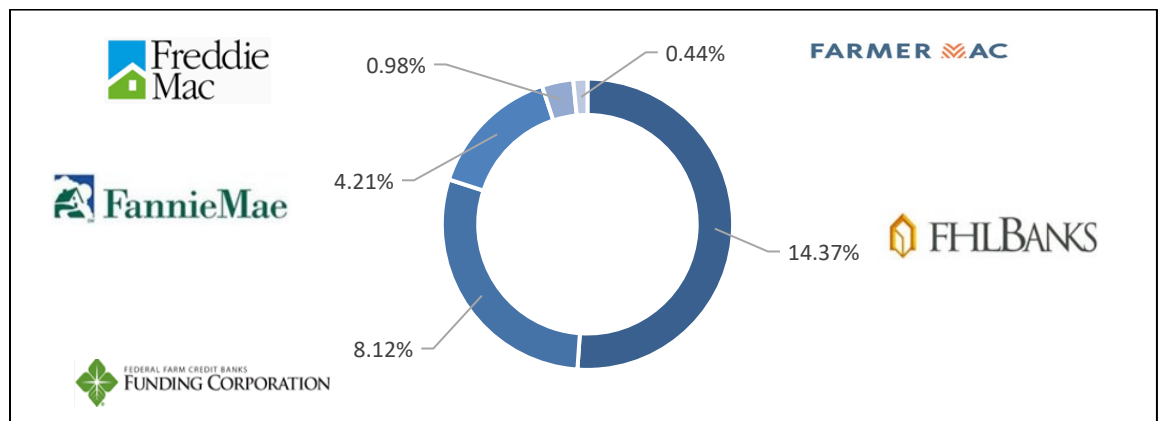
Consolidated Top Holdings

Top 5 Credit Holdings			
Issuer	Market Value	% Of Portfolio	Industry
Toyota Motor Credit Corp.	185,583,585	2.86%	Automobiles
MUFG Bank Ltd./NY	124,670,375	1.92%	Financials
Apple, Inc.	122,918,956	1.90%	Technology
Toronto Dominion	121,371,528	1.87%	Financials
John Deere Capital Corp.	101,983,369	1.57%	Industrials
Total	\$656,527,813	10.12%	

*Credit holdings include commercial paper, asset-backed securities, and corporate bonds.



Top 5 Agency Holdings		
Issuer	Market Value	% Of Portfolio
FHLB	932,080,792	14.37%
FFCB	526,451,975	8.12%
FNMA	273,082,876	4.21%
FHLMC	63,375,081	0.98%
FAMCA	28,263,195	0.44%
Total	\$1,823,253,919	28.12%





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III. Airport Reserve Portfolio

\$545,905,588

Total Return			
	1-Month	3-Month	YTD
Total Return	-0.14%	1.02%	-7.09%
Blended Benchmark (TR)	-0.17%	1.13%	-7.70%
Excess Return	0.03%	-0.11%	0.61%

Current Return			
	1-Month	3-Month	YTD
Current Return	1.89%	2.17%	2.02%
Blended Benchmark (CR)	4.38%	4.50%	3.04%
Excess Return	-2.49%	-2.33%	-1.02%

Year-to-Date earnings on a current return basis for the Reserve Portfolio were \$9,351,854.

The 1-5 Year Strategy Blended Benchmark consists of 67.50% ICE BofAML 1-5 Year US Treasury & Agency Index, 17.50% ICE BofAML 1-5 Year AAA-A US Corporate Index, 7.50% ICE BofAML AAA US Asset Backed Securities, 5.00% ICE BofAML 0-3 Year US Agency CMOs and 2.50% ICE BofAML 3-5 Year US Mortgage Backed Securities Index. Prior to 1/1/2016 the benchmark was the BofA Merrill Lynch 1-5 Year US Treasury & Agency Index.

The 1-10 Year Strategy Blended Benchmark consists of 65.00% ICE BofAML 1-10 Year US Treasury & Agency Index, 15.00% ICE BofAML 1-5 Year AAA-A US Corporate Index, 5.00% ICE BofAML AAA US Asset Backed Securities, 7.50% ICE BofAML 0-10 Year US Agency CMOs and 7.50% ICE BofAML 0-10 Year US Mortgage Backed Securities Index. Prior to 1/1/2016 the benchmark was the BofA Merrill Lynch 1-10 Year US Treasury & Agency Index.

- The Airport Bond Reserve portfolio has a maximum maturity constraint of 10 years. On an ongoing basis, liquidity is generated from income received from the portfolio holdings, as well as from periodic bond calls of Agency securities. All income received during the year is transferred out of this portfolio into the Airport Operating funds contained in the Consolidated Portfolio (subject to ongoing adjustments to the required portfolio balance stated in the bond indenture).
- The Airport Reserve Portfolio benchmarking indices are comprised of five ICE BofAML indices, creating a static weighted blended benchmark. A total of one blended benchmark is utilized for the 1-10 year strategy to closely reflect the portfolio duration and asset allocation constraints.



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Airport Reserve Portfolio Composition

Characteristics		Credit Quality (S&P)
Average Duration	3.60	
Average Coupon	2.44%	
Average Yield to Maturity	4.43%	
Average Rating (S&P)	AA+	
Average Life	4.01yrs	

Asset Allocation	Maturity Distribution



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IV. Workers Compensation Portfolio Composition

\$33,379,055

Characteristics		Credit Quality (S&P)
Average Duration	3.54	<p>A, 17.7%</p> <p>AAA, 29.4%</p> <p>AA, 52.9%</p>
Average Coupon	2.85%	
Average Yield to Maturity	4.48%	
Average Rating (S&P)	AA+	
Average Life	4.35yrs	

Asset Allocation	Maturity Distribution
<p>MBS, 2.0%</p> <p>Agency, 23.0%</p> <p>Treasury, 12.9%</p> <p>Corp, 16.7%</p> <p>Muni, 22.4%</p> <p>Supra, 11.7%</p> <p>ABS, 6.5%</p> <p>CMO, 4.8%</p>	<p>0-0.5 3.0%</p> <p>0.5-1 3.0%</p> <p>1-2 22.4%</p> <p>2-3 2.9%</p> <p>3-5 23.0%</p> <p>5-7 34.6%</p> <p>7-10 6.0%</p> <p>10+ 5.1%</p>

- WC liabilities have a much longer term expected average duration than most other funds managed by the City. For this reason, management has determined that it is prudent to extend the duration of the invested assets associated with these obligations.
- A combination of cash and securities were transferred from the Consolidated Portfolio to the newly established WC portfolio in August 2009. An allocation to cash equivalents appropriate to fund the liquidity needs of the unit was set aside (and is monitored and adjusted monthly), and the balance of the funds were invested in treasury, corporate, agency, municipal, and structured fixed income securities. The annualized current return for the fourth quarter of 2022 was 2.63%.
- Year-to-Date earnings on a current return basis for the Worker's Compensation were \$980,339.



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V. Special Purpose Portfolio

\$3,414,413

In addition to the actively managed investments, the Cash & Capital Funding Division manages one additional portfolio. The Denver Cableland Trust portfolio was established to fund the annual maintenance expenses for Cableland, a facility donated to the City. The portfolio is authorized by the Investment Policy to contain longer term securities and higher per issuer constraints within the Consolidated and Reserve portfolios. Most of the investments in these portfolios were purchased in market environments that featured much higher interest rates than those currently available. The investment income and principal of the portfolio is pledged for specific purposes.

	Market Value	2022 Current Return	2022 Earnings
Denver Cableland Trust	\$3,414,413	3.62%	\$129,376

Escrows

Cash & Capital Funding Division also manages certain investments held in an escrow account at external financial institutions on behalf of Denver International Airport. As of December 31st, 2022, there was an outstanding balance of \$154,038,149 in one escrow account.

Investment Policy

The City operates under a written Investment Policy, a copy of which can be obtained on the City's website (www.denvergov.org) or by contacting the Cash & Capital Funding Division at 720-913-3091.

Caroline Hendrickson
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Gregory T. King
Portfolio Administrator

STATEMENT OF REVIEW OF PORTFOLIO PERFORMANCE

Chandler Asset Management, a Registered Investment Advisor with the Securities and Exchange Commission and noticed filed in the State of Colorado, as Independent Consultant to the City and County of Denver, periodically reviews the City's Investment portfolio and represents the following:

1. The investments, as of December 31, 2022, are authorized by the Denver City Charter and are in compliance with the City's Investment Policy;
2. Upon review of the City's Investment Portfolio Performance Report and relying on the independent market pricing provided by Interactive Data Corporation, the City's securities appear to be priced accurately. Chandler Asset Management has performed no independent verification of the securities pricing provided herein; and
3. Investment performance as reported in the City's attached Investment Portfolio Performance Report, for the period ending December 31, 2022, appears to be accurately reflected.

Signed this 9th day of January 2023



Rhea Gutierrez
Senior Compliance Officer