City and County of Denver

Investment Portfolio Performance Report

Quarter Ended 3/31/2020

Prepared By:

Cash, Risk & Capital Funding Division

Director of Cash & Investments:
Caroline Hendrickson
1.720.913.9335
caroline.hendrickson@denvergov.org

Portfolio Administrator:
Gregory T. King
1.720.913.9348
gregory.king@denvergov.org

Sr. Portfolio Analyst:
Mario Dominguez
1.720.913.3091
mario.dominguez@denvergov.org

Assoc. Portfolio Analyst:
Siye Desta
1.720.913.9510
siye.desta@denvergov.org

Report Content:

Discussion of Investment Performance 1

Consolidated Portfolio 2

Airport Reserve Portfolio 6

Worker's Comp Portfolio 8

Special Purpose Investments 9

Escrows 9

I. Economic Commentary

Capital markets reached historic volatility during the end of the first quarter of 2020, as the COVID-19 crisis hit every part of the economy requiring fiscal and monetary intervention. Yields along the entire U.S. Treasury yield curve declined due to market uncertainty and the Federal Reserve made two emergency rate cuts in the month of March. The 2-year Treasury yield decreased by 132 basis points and the 10-year treasury yield decreased by 125 basis points by quarter end. The short end of the yield curve saw the largest movement in rates. The 1-month treasury declined 142 basis points and the 3-month treasury declined 148 basis points.

The Federal Open Market Committee (FOMC) made two emergency moves to effectively cut rates to zero. The Federal funds rate ended the quarter at a range of 0.00% to 0.25%. The Federal Reserve used a full range of tools to support households, businesses, and the U.S. economy overall. Quantitative easing and purchases of treasury and mortgage-backed securities were implemented. Other measures taken included planned purchases of fixed income ETFs and high yield bonds, otherwise known as junk bonds. Several other programs were instituted or expanded to support the flow of credit to consumers, businesses and municipalities. The Federal Reserve messaged that action was required to support many areas of the economy due to the COVID-19 crisis and will continue to do so as needed.

Payrolls declined by 701,000 in March due to the COVID-19 pandemic. Employment in leisure and hospitality sectors was a good portion of the decline, down 459,000. Wages had only a slight uptick to 0.4% for March. On a year-over-year basis, wages increased 3.1%. The monthly unemployment rate increased to 4.4% in March from 3.5% in February. The U-6, a broader measure of unemployment, increased to 8.7% up from 7.0% in February.

Manufacturing data indicated contraction with the ISM Index falling to a value of 49.1 by quarter end. The sub-50.0 rating suggests the manufacturing sector remains in contraction. The housing sector saw home prices increase 3.1% year over year in January. Housing starts were mixed with single-family starts up 6.7% in February, but multi-family starts declined 14.7% in the same month. The trend suggests that low mortgage rates and a strong labor market continued to drive single-family housing activity; however, this data is before the COVID-19 crisis.

Exposure to credit securities in the portfolios increased in the first quarter. Credit spreads widened significantly at the end of March as the COVID-19 crisis hit credit markets. Treasury yields declined in the same period. Volatility in fixed income markets affected portfolio performance for the quarter. The City's investment portfolio modestly underperformed the stated benchmark indices by 0.16% year to date on a total return basis.

Portfolios	Market Value
Managed Portfolios	$5,834,757,257
Special Purpose Portfolios	$55,869,340
Finance Administrated	**$5,890,626,597**

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Discussion of Investment Performance 1
Consolidated Portfolio 2
Airport Reserve Portfolio 6
Worker's Comp Portfolio 8
Special Purpose Investments 9
Escrows 9

II. Consolidated Portfolio $5,245,303,036

Total Return	1-Month	3-Month	YTD
Total Return	0.69%	2.69%	2.69%
Blended Benchmark (TR)	0.77%	2.83%	2.83%
Excess Return	**-0.08%**	**-0.14%**	**-0.14%**

Current Return	1-Month	3-Month	YTD
Current Return	2.27%	2.30%	2.30%
Blended Benchmark (CR)	1.18%	1.50%	1.50%
Excess Return	**1.09%**	**0.80%**	**0.80%**

Year-to-Date earnings on a current return basis for the Consolidated Portfolio were $29,393,375.

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) are 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 portfolios have been allocated towards a modestly shorter benchmark duration within the 1-5 and 1-10 year strategies. We believe investment in shorter duration securities into the strategies is most prudent during times of elevated interest rate volatility. Safety of principal is paramount in investing the City's funds.
- Corporate Bonds, Collateralized Mortgage Obligations, Mortgage-Backed Securities, and Asset-Backed Securities are new asset classes approved by voters for implementation in 2014 by an amendment to the City Charter. Purchases of the new asset classes continued to increase as a percentage of total composition at the beginning of the first quarter of 2020; but purchases slowed in March due to market volatility caused by COVID-19 pandemic.
- 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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Report Content:

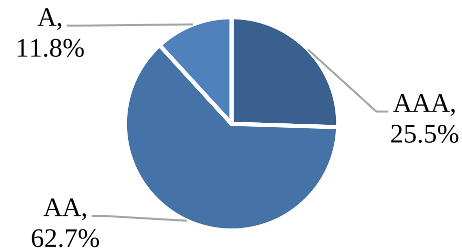
Discussion of Investment Performance	1
Consolidated Portfolio	2
Airport Reserve Portfolio	6
Worker's Comp Portfolio	8
Special Purpose Investments	9
Escrows	9

Consolidated Portfolio Composition

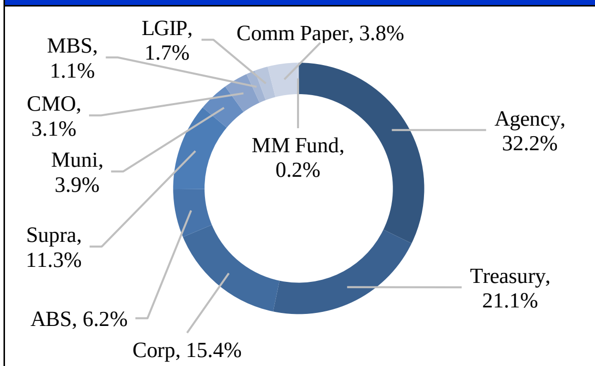
Characteristics

Average Duration	2.57 yrs
Average Coupon	2.30%
Average Yield to Maturity	0.91%
Average Rating (S&P)	AA+
Average Life	2.67 yrs

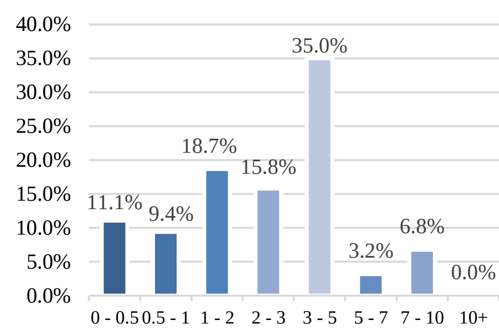
Credit Quality (S&P)



Asset Allocation



Maturity Distribution



- The Consolidated Portfolio's net assets increased by approximately $189 million during the first quarter of 2020. On March 31st, 2020, net assets were $5.25 billion, compared to $5.05 billion on December 31st, 2019, as inflows exceeded expenditures. The decrease in net assets was primarily due to cyclical inflows, consistent with historical first quarter activity. A large portion of inflows for the City occur during the first half of the year.

- The weighted average maturity (WAM), an aggregate portfolio measure of total years remaining until the maturity of all underlying holdings, ended higher during the first quarter. The WAM increased at end of the quarter, due to reduced exposure to short term assets. While modestly short benchmark duration, rebalancing and securities purchase activity in the intermediate strategies during the first quarter extended duration more closely with the model and benchmark. The model continues to remain short of benchmark duration.

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Report Content:

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Consolidated Portfolio 2
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Worker's Comp Portfolio 8
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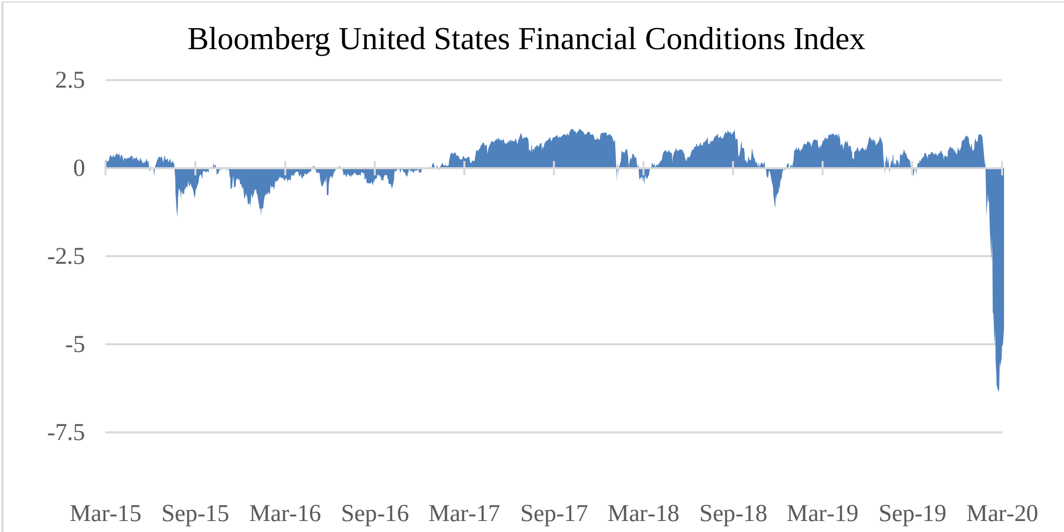
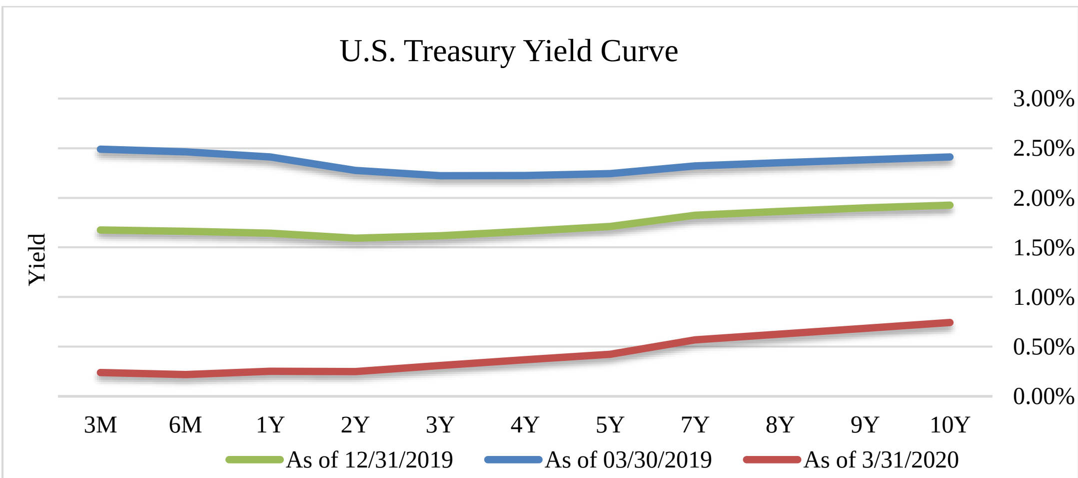
Escrows 9

Portfolio Management Environment





- The Federal Reserve lowered the Fed funds rate to a range of 0.00%-0.25% during the first quarter of 2020. The Fed made two emergency cuts in the month of March lowering rates by 150 basis points in total.
- The one-month LIBOR rate was 0.99% as of March 31st, 2020; a decrease of 77 basis points from December 31st, 2019.
- As of March 31st, 2020, the yield of the two-year Treasury index was 0.24%, and the five-year Treasury index was yielding 0.38%. A year earlier, as of March 31st, 2019, the yield of the two-year Treasury index was 2.49%, and the five-year Treasury index was yielding 2.26%.
- The median of economists' forecast is for a .25% two-year Treasury yield at the end of the of the year 2020.
- Rates of the yield curve declined significantly in quarter with yields declining between 105 to 148 basis points along the curve. The two-year, five-year, and ten-year were at 0.24%, 0.38%, and 0.67%, respectively. The three-month treasury saw the biggest decline of 148 basis points with a rate of 0.14%.

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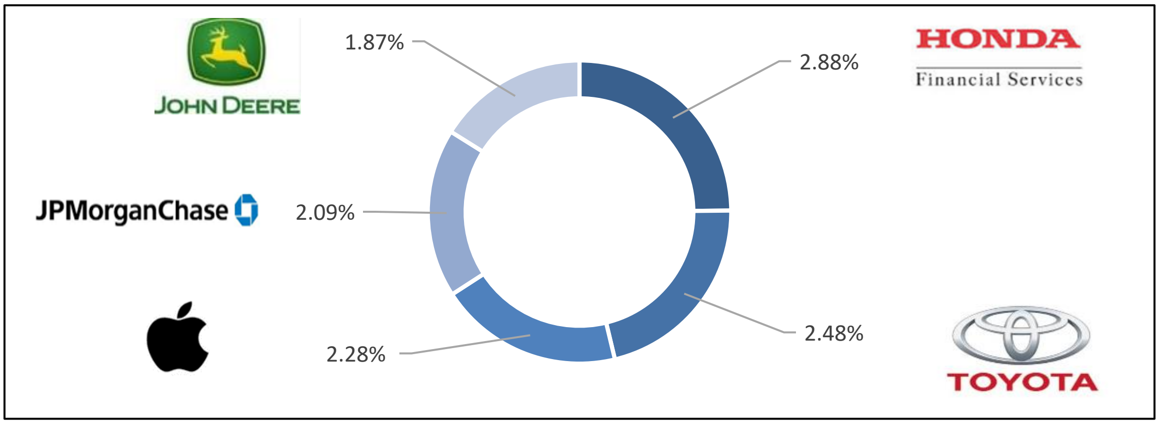
Special Purpose Investments 9

Escrows 9

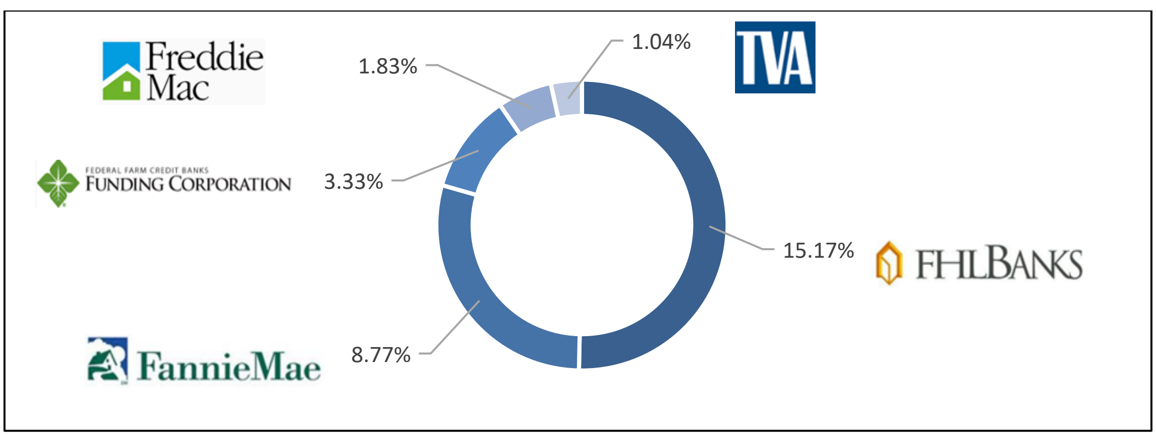
Consolidated Top Holdings

Top 5 Credit Holdings			
Issuer	**Market Value**	**% of Portfolio**	**Industry**
American Honda Finance	151,190,671	2.88%	Automobiles
Toyota Motor Credit Corp.	130,250,091	2.48%	Automobiles
Apple, Inc.	119,343,554	2.28%	Technology
JP Morgan Chase & Co	109,765,993	2.09%	Financials
Deere & Co.	97,995,349	1.87%	Machinery
Total	**$608,545,658**	**11.60%**	

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



Top 5 Agency Holdings		
Issuer	**Market Value**	**% of Portfolio**
FHLB	795,847,790	15.17%
FNMA	460,159,918	8.77%
FFCB	174,622,443	3.33%
FHLMC	95,773,708	1.83%
TVA	54,732,726	1.04%
	$1,581,136,585	**30.14%**



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Discussion of Investment Performance 1
Consolidated Portfolio 2
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Special Purpose Investments 9
Escrows 9

III. Airport Reserve Portfolio

$543,214,287

Total Return	1-Month	3-Month	YTD
Total Return	1.06%	3.79%	3.79%
Blended Benchmark (TR)	1.13%	3.95%	3.95%
Excess Return	**-0.07%**	**-0.16%**	**-0.16%**

Current Return	1-Month	3-Month	YTD
Current Return	2.61%	2.65%	2.65%
Blended Benchmark (CR)	1.20%	1.55 %	1.55%
Excess Return	**1.41%**	**1.10%**	**1.10%**

Year-to-Date earnings on a current return basis for the Reserve Portfolio were $3,341,147.

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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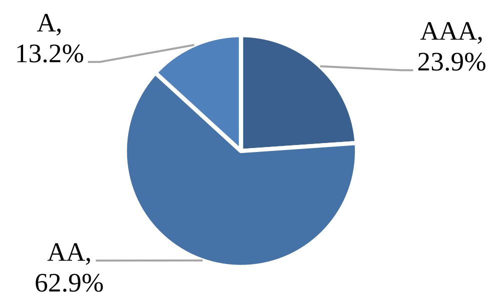
Discussion of Investment Performance 1
Consolidated Portfolio 2
Airport Reserve Portfolio 6
Worker's Comp Portfolio 8
Special Purpose Investments 9
Escrows 9

Airport Reserve Portfolio Composition

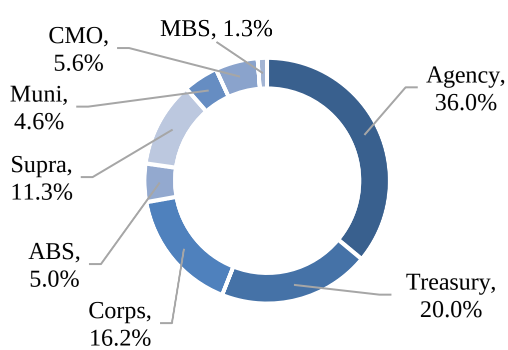
Characteristics

Average Duration	3.35 yrs
Average Coupon	2.62%
Average Yield to Maturity	0.97%
Average Rating (S&P)	AA+
Average Life	3.60 yrs

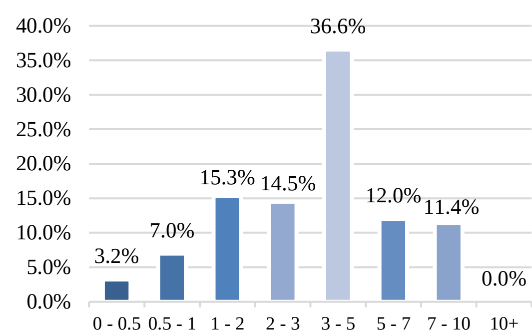
Credit Quality (S&P)



Asset Allocation



Maturity Distribution



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Discussion of Investment Performance 1
Consolidated Portfolio 2
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Worker's Comp Portfolio 8
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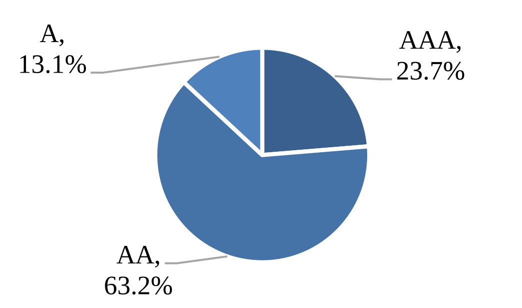
Escrows 9

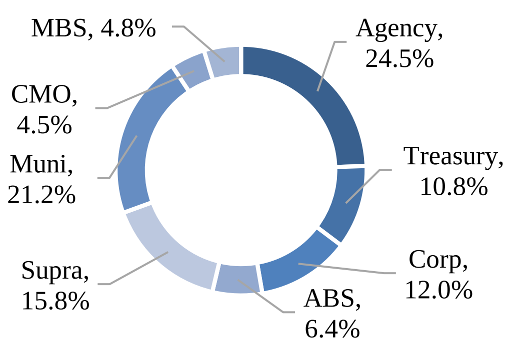
IV. Workers Compensation Portfolio Composition **$46,239,934**

Characteristics	
Average Duration	3.83 yrs
Average Coupon	2.85%
Average Yield to Maturity	1.50%
Average Rating (S&P)	AA+
Average Life	5.08 yrs

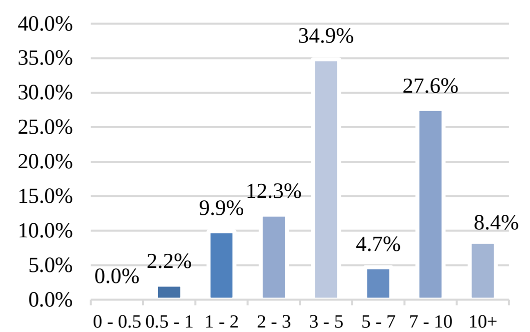
Credit Quality (S&P)



Asset Allocation



Maturity Distribution



- 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 first quarter of 2020 was 2.76%.
- Year-to-Date earnings on a current return basis for the Worker's Compensation were $269,761.

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V. Special Purpose Portfolios $55,869,340

In addition to the actively managed investments, the Cash, Risk & Capital Funding Division manage three additional portfolios. The FAA (Federal Aviation Administration) Escrow Defeasance portfolio was established to economically defease outstanding airport bonds. The Denver Cableland Trust portfolio was established to fund the annual maintenance expenses for Cableland, a facility donated to the City. These portfolios are authorized by the Investment Policy to contain longer term securities and higher per issuer constraints within the Consolidated and Reserve portfolios. The majority 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 three portfolios are pledged for specific purposes.

	Market Value	2020 YTD Current Return	2020 YTD Earnings
FAA Escrow Account	$51,705,784	6.57%	$648,189
Denver Cableland Trust	$4,163,556	3.37%	$32,414

Escrows

Cash, Risk & Capital Funding Division also manages certain investments held in escrow accounts at external financial institutions on behalf of Denver International Airport (primarily representing equipment leases). As of March 31st, 2020, there was an outstanding balance of $0.

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, Risk & Capital Funding Division at 720-913-3091.

Caroline Hendrickson
Director of Cash & Investments

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 March 31, 2020, 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 March 31, 2020, appears to be accurately reflected.

Signed this 20th day of April 2020

Nicole Dragoo
COO, Chief Compliance Officer

6225 Lusk Boulevard | San Diego, CA 92121 | Phone 800.317.4747 | chandlerasset.com