

King County Investment Pool

Portfolio Review

Quarter Ended March 31, 2019



Executive Summary

Purpose, Scope and Approach	 PFM Asset Management LLC ("PFM") prepared this report to update our ongoing analysis and to address any Investment Pool developments since our December 2018 review. Our approach included a detailed portfolio analysis and Investment Policy Compliance review, based on the County's Investment Policy, dated July 26, 2017. Our analysis was based on the Investment Pool's holdings as of March 31, 2019, with reference to holdings in past periods. The review encompasses all current investments in the County's Investment Pool.
Investment Program and Portfolio Review	 PFM reviewed the County's portfolio with respect to Investment Policy Compliance, Sector Allocation, Issuer Concentration, Credit Quality, Maturity Distribution, and Duration Distribution. The County's Investment Pool appears to provide ample liquidity, is well diversified, and is of sound credit quality. All holdings are investment grade and pose very low risk to principal.
Market Recap	 Continuing the trend from the fourth quarter of 2018, interest rates moved lower during the first quarter of 2019, as the Fed stated it has no plans for further rate action in 2019. However, in a strong reversal from the prior quarter, equity markets rebounded, credit spreads tightened and volatility decreased. Slowing U.S. GDP growth of 2.2% in the fourth quarter, followed second quarter and third quarter figures of 4.2% and 3.4%, respectively. Inflation metrics were muted-moderate and continued to hover near the Fed's target of 2% The labor market continued to strengthen as the unemployment rate held steady at 3.8% and wage growth continued to improve, reaching 3.4% year-over-year, the largest gain in nearly a decade. There was solid consumer sentiment in the first quarter on the heels of equity market strength and a resolution to the U.S. Government's longest shut down in history. The Fed held short-term rates unchanged at the current target range of 2.25% to 2.50% and shifted to a "patient" stance on future rate actions. U.S. Treasury yields with maturities beyond one year fell 20-30 basis points (0.20% to 0.30%). In the last week of the quarter, the 3-month to 10-year part of the yield curve inverted temporarily, renewing concerns about a possible recession.
Observations	 The portfolio is of very high credit quality. The majority of securities (80%) are explicitly guaranteed or carry a high level of support by the U.S. Government (U.S. Treasury and federal agency) and/or possess overnight liquidity (Washington State LGIP, bank deposits, and repurchase agreements). The County maintained issuer diversification during the quarter between Corporate and CP issuers. The Portfolio shortened duration over the quarter from 84% to 80% of the benchmark's duration, due to holdings in Supranational agencies and Treasuries rolling down the yield curve from last quarter. The County Pool appears to provide adequate liquidity, with 12.2% (or \$866 million) invested in a combination of the State LGIP, bank deposits, and repurchase agreements (overnight) and 40% of the portfolio invested in US Treasuries. In anticipation of the upcoming quarter, over the past five years, for the quarters ending June 30, the Investment Pool has experienced an average net inflow of \$604 million.

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Investment Pool Portfolio Review

Portfolio Review

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- **III.** Issuer Concentration
- **IV.** Overall Credit Quality
- V. Maturity and Duration Distribution



Investment Policy Compliance – Investment Policy Summary

• The Investment Policy summary is based on the current Investment Policy for the County Investment Pool, dated July 26, 2017.

Туре	Maximum Portfolio Allocation	Issuer Restrictions	Credit Ratings	Maturity Restrictions
U.S. Treasuries	100%	None	N/A	Up to 5 years
U.S. Agencies	100%	35% exposure to any single Agency Senior debt obligations issued by any government sponsored enterprise, agency or instrumentality of the United States.		Up to 5 years
Repurchase Agreements – Top Tier Rating (A-1 or P1)	100%	·		60 days or less
Repurchase Agreements – Second Tier Rating (A-2 or P-2)	10%	5% maximum exposure to any one repo counterparty. For the purposes of aggregating issuers across sectors, overnight repo counterparties shall NOT be included.	 A rating in the second highest short-term credit rating category by at least one Nationally Recognized Statistical Rating Organization (NRSRO) or possesses a guarantee by an entity with such a rating; and A minimum asset and capital size of \$5 billion in assets and \$175 million in capital 	Overnight only
Reverse Repurchase Agreement	20%	5% per investment dealer	 rated in the highest short-term credit rating category by at least one NRSRO or possesses a guarantee by an entity with such a rating; and a minimum asset and capital size of \$5 billion in assets and \$175 million in capital 	6 months or less
Local Government Investment Pool ("LGIP")	25%	State of Washington LGIP	N/A	N/A

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Investment Policy Compliance – Investment Policy Summary (cont'd)

Туре	Maximum Portfolio Allocation	Issuer Restrictions	Credit Ratings	Maturity Restrictions
Bankers' Acceptances	When combined with Term Repos (greater than overnight), Certificates of Deposit, Commercial Paper and Corporate Notes not to exceed 50% of the Pool assets.	Must be issued by a bank organized and operating in the U.S. Maximum 5% per issuer applied across investment types.	Rated in the highest short-term credit rating category by at least two NRSROs.	Up to 180 days
Certificates of Deposit	When combined with Banker's Acceptance, Term Repos (greater than overnight), Commercial Paper and Corporate Notes not to exceed 50% of the Pool assets.	Must be a public depository in the State of Washington. Maximum 5% per issuer applied across investment types.	See RCW 39.58 of the state Code. If not 100% collateralized, must be rated in the highest short-term rating category by at least one NRSRO. Those institutions not meeting the 100% collateralization or minimum credit requirements may receive deposits up to the FDIC or federally guaranteed amounts.	Up to 1 year
Commercial Paper	25% of total market value when combined with Corporate Notes. When combined with Banker's Acceptance, Certificates of Deposit, Term Repos (greater than overnight) and Corporate Notes not to exceed 50% of the Pool assets.	Secondary market purchases only. Must be issued by a bank or corporation organized and operating in the U.S. Maximum 3% per issuer in combined categories of commercial paper and corporate notes. Maximum 5% per issuer applied across investment types.	Purchases with greater than 100 days maturity must have an issuer long-term rating in one of the three highest credit rating categories by one major NRSRO. Rated in the highest short-term rating category by at least two major NRSROs. If the commercial paper is rated by more than two major NRSROs, it must have the highest rating from all of the organizations. State law requires that Commercial Paper be purchased only from dealers.	270 days
General Obligation Municipal Bonds	20%	5% of portfolio: bond issues by pool participants must be purchased on the secondary market only	Rated in at least the highest three long-term rating categories by at least one NRSRO.	5 years

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Investment Policy Compliance – Investment Policy Summary (cont'd)

Туре	Maximum Portfolio Allocation	Issuer Restrictions	Credit Ratings	Maturity Restrictions
Mortgage-Backed Securities	25%	Must be issued by Federal Agencies of the United States. Investments in MBS will count toward the total that can be invested in any one agency as described in U.S. Agencies above. Full faith and credit MBS are limited to 25%.	Senior debt obligations issued by any government sponsored enterprise, agency or instrumentality of the United States. The securities must pass the Federal Financial Institutions Examination Council ("FFIEC") suitability test, which banks use to determine lowest risk securities.	5 year average life at time of purchase
Corporate Notes	25% of total market value when combined with commercial paper When combined with Banker's Acceptance, Certificates of Deposit, Commercial Paper and Term Repos (greater than overnight) not to exceed 50% of the Pool assets.	3% per issuer rated AA or better. 2% per issuer rated in broad single A category. Split ratings will take most conservative rating. Maximum 3% per issuer in combined categories of commercial paper and corporate notes. Maximum 5% per issuer applied across investment types.	Must be rated at least in the broad single A category or better. Broad single A category with a negative outlook may not be purchased.	The maximum duration of the corporate notes portfolio shall not exceed 3 years.

Additional Notes to the Investment Policy

- The Pool will maintain an effective duration of 1.5 years or less.
- The Pool will maintain at least 40% of its total value in securities having a remaining maturity of 12 months or less.
- Floating rate and variable rate securities are permitted subject to the following criteria:
 - 1) The rate on the FRN/VRN resets no less frequently than quarterly; and
 - 2) The FRN/VRN is indexed to a money market rate.
- Major NRSRO is defined as Moody's and Standard & Poor's.
- Purchases prior to 9/15/16 are considered grandfathered in for issuer limit purposes and can be held to maturity.



I. Investment Policy Compliance – County Investment Pool

Topic	Observations
Sector Allocation	 All sector allocations fall within the limits set forth by the County's Investment Policy Statement. The Pool is predominantly invested in U.S. government securities which are either explicitly guaranteed or carry a high level of support by the U.S. government. The County's Investment Pool balance (market value) as of March 31, 2019 was \$7.1 billion and it experienced a net decrease of approximately \$377 million over the quarter. Sectors that experienced a sector allocation percentage increase over the quarter were Treasuries (+1.66%), Corporates (+1.9%), and the LGIP (+1.17%). All sectors remain with applicable policy limits. Sectors that experienced decreases in quarter-over-quarter allocation percentages included: Repurchase agreements(-2.31%) and Commercial Paper (-3.67%).
Credit Quality	 Approximately 68% of the County pool's assets are guaranteed or supported by the U.S. government. Furthermore, 9% is invested in the State LGIP, where 56% of the LGIP is invested directly in U.S. Treasuries or federal agencies. Additionally, considering the County pool's holdings of repurchase agreements and bank accounts collateralized by government securities, the overall government-related credit quality exceeds 75%. Corporate allocations (both commercial paper and corporate notes) decreased over the quarter to 20% of the portfolio from 22%, and all securities are investment grade. Allocations to corporate notes continue to be below the maximum allocation limit of 25%. Total allocations of corporate notes and commercial paper also do not exceed the 50% allocation limit set forth in the County's Investment Policy.
Maturity Distribution	 All maturities fall within the limits set forth in the County's Investment Policy. Approximately 59% of the Pool's assets mature in one year or less, well above the minimum of 40% that is mandated by the Investment Policy.

Security Type	Market Value(\$)	Allocation Percentage	Within Policy Limits	Max Maturity Held	Within Policy Limits
U.S. Treasury	2,846,465,340	40.12%	✓	2.80 years	✓
Supranational Agencies	1,266,884,012	17.86%	✓	2.83 years	✓
Corporate Bank Notes	1,144,984,396	16.14%	✓	3.37 years	✓
Federal Agency	680,456,200	9.59%	✓	3.49 years	✓
Washington State LGIP	642,487,418	9.06%	✓	1 day	✓
Repurchase Agreement	184,000,000	2.59%	✓	1 day	✓
Commercial Paper	286,589,475	4.04%	✓	145 days	✓
Cash and Equivalents	39,339,240	0.55%	✓	1 day	✓
Agency Mortgages	3,891,358.22	0.05%	✓	4.08 years (WAL)	✓
TOTAL	7,095,097,439	100.00%			

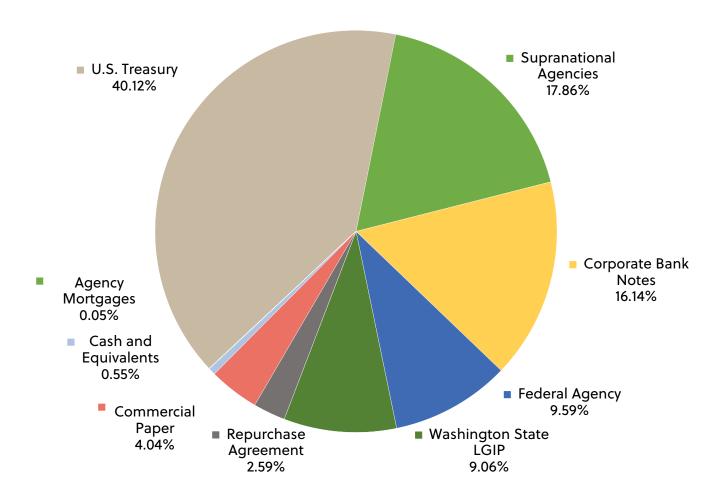
^{*}Percentages may not total to 100% due to rounding.



II. Sector Allocation

Sector Diversification

as of March 31, 2019



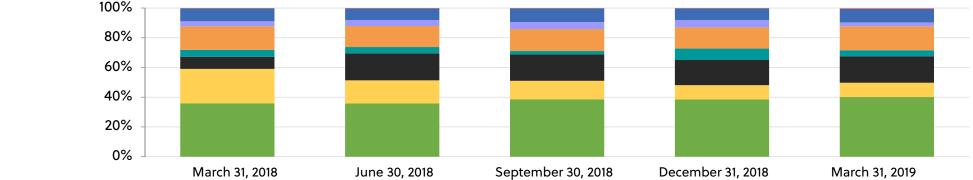
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II. Changes in Portfolio Sector Allocation over the Past 12 Months

Changes in Sector Allocation

- The County's investment pool increased percentage allocations to Treasuries (+1.66%), Corporates (+1.9%), and the LGIP (+1.17%) while decreasing allocations to Repurchase Agreements (-2.31%) and Commercial Paper (-3.67%).
- <u>U.S. Treasuries</u> During the fourth quarter U.S. Treasuries decreased by \$27.4 million however the overall allocation to the sector increased slightly to 40.12% over the quarter.
- <u>Federal Agencies</u> Federal agency allocations including supranationals and mortgage securities had an increase of +0.9% of the portfolio over the quarter.
- <u>Corporate Notes</u> The portfolio's corporate note exposure increased over the quarter to account for 16.1% of the overall portfolio from last quarter's 14.2%.
- <u>Commercial Paper</u> Commercial paper decreased significantly during the quarter, down to 4.04% of the total portfolio to be more in line with historic allocations from last quarter's large jump to 7.7%
- <u>Washington State LGIP</u> Balances invested in the State LGIP decreased by about \$80.9 million and continued to serve as the Pool's primary liquidity vehicle. This investment accounts for approximately 9.1% of the overall portfolio.
- Repurchase Agreements and Bank Deposits Allocations to repurchase agreements decreased by \$182 million over the quarter and account for 2.6% of the total portfolio.



	WidiCii 31, 2016	Julie 30, 2016	September 30, 2016	December 31, 2016	WidiCii 31, 2019
U.S. Treasury	35.94%	35.82%	38.66%	38.46%	40.12%
Federal Agencies	23.08%	15.52%	12.35%	9.67%	9.59%
Agency Mortgages	0.07%	0.06%	0.06%	0.05%	0.05%
Supranational Agencies	8.16%	18.22%	17.79%	16.89%	17.86%
Commercial Paper	4.63%	4.18%	2.2%	7.7%	4.0%
Corporate Notes	15.83%	14.13%	14.8%	14.2%	16.1%
Repurchase Agreements	3.40%	4.01%	4.78%	4.90%	2.59%
Washington State LGIP	8.66%	7.80%	9.11%	7.89%	9.06%
Cash and Equivalents	0.22%	0.27%	0.23%	0.19%	0.55%

^{*}Percentages may not total to 100% due to rounding.



II. Sector Allocation – U.S. Treasury Securities

Topic	Observations	
Observations	instruments like Treasury securities. o The 10-year Treasury yield was down 27 bps, while o The yield curve continues to be inverted in the 1- more hikes to the federal funds target rate are e	irst quarter as concerns over volatility in equity markets caused a flight to high-quality ille the two-year yield fell 23 bps. I-year to 5-year space. Longer-term yields continue to lower as the Fed has signaled no expected in 2019.
	 than one year and are positioned further out in the country's weighted average maturity (WAM) of its Treasuring 366 days on March 31st due to longer-dated securities rolling to the chart on the left below, illustrates the current maturity distillustrates the current shape of the U.S. Treasury yield curve confured the current when yields were enjoying a steepening in the shortest. 	(\$1.5 billion, or 52.89% of all Treasury holdings) have remaining maturities of greater the yield curve. ry allocation decreased over the quarter by 65 days, from 431 days on December 31st, to down the yield curve from 18-24 months into the 12-18 months area of the curve. stribution of the County's allocations to U.S. Treasuries and the chart on the right ompared to the yield curve last quarter, when the inversion first began; and in third er maturities of the curve. The County's Treasury holdings continue to be concentrated the curve, as investors are still not being compensated for taking on additional risk.
10%	U.S. Treasury Maturity Distribution as of March 31, 2019	U.S. Treasury Yield Curve 9/30/18 vs 12/31/18 vs 3/31/19

3 1 2 3 4 5

MYYYYY

10

* Source Bloomberg Financial Systems

Maturity

1 day - 1 1-3

3-6

6-9

12-18

9-12

month months months months months months months months months

18-24

24-36

36-48

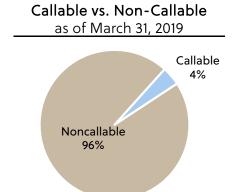
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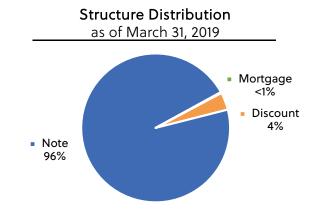
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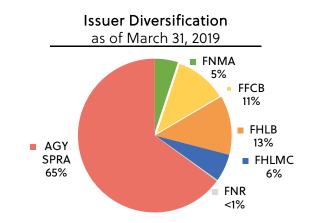


II. Sector Allocation – Federal Agencies

Topic	Observations			
Structure (as % of Federal Agency Allocations)	Non-CallableCallable	95.9% 4.1%	Discount NotesCoupon Bearing NotesAgency Mortgage	3.8% 96.0% 0.2%
Diversification (as % of Federal Agency Allocations)	 Freddie Mac (FHLMC) Federal Home Loan Bank (FHLB) Fannie Mae (FNMA) Supranational Agencies 	5.8% 12.5% 5.1% 64.9%	 Federal Farm Credit Bank (FFCB) Freddie Mac Mortgage-Backed (FHR) Fannie Mae Mortgage-Backed (FNR) 	11.5% 0% 0.2%
Conclusions	 The County's federal agency holdings continue to be well diversified. All issuer allocations fall within the issuer guidelines and security structures in the County's investment policy (max per agency issuer 35%). The amount invested in federal agencies, excluding supranationals and mortgage securities, decreased by \$42 million. As a portion of the total portfolio, federal agencies were nearly unchanged, decreasing from 9.7% in the third quarter to 9.6% in the fourth quarter. All supranational agency holdings are below the 35% issuer limit, at 17.9% of the entire portfolio. The County Pool's only remaining allocation to agency mortgages is in Fannie Mae pools, totaling approximately \$4.0 million. Four federal agencies matured in the fourth quarter, for a total of \$224.5 million, compared to a total of \$382 million maturing in the quarter ended December 31. 			







 $^{{}^{\}star}\!All\ calculations\ above\ are\ based\ on\ total\ cash\ equivalents\ exposure,\ not\ overall\ Portfolio.$

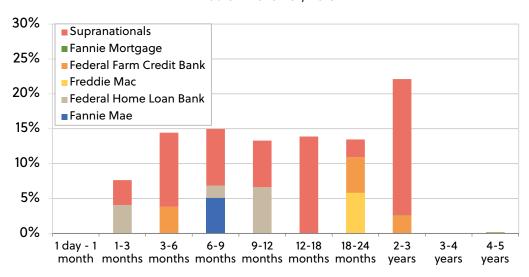
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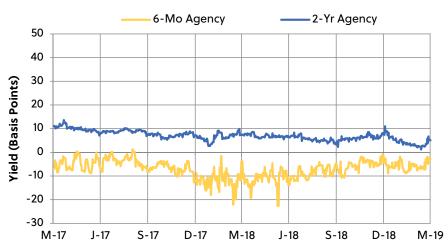
II. Sector Allocation – Federal Agencies

Topic	Observations
Maturity Distribution	 The County's federal agency maturity distribution falls within the limits set forth by the Investment Policy Statement. Over the quarter, the County's weighted average maturity (WAM) of federal agency holdings decreased by 23 days, from 466 days on December 31st to 443 days on March 31st. Agency spreads in the shorter end (less than 2 years) of the curve remain near 12-month lows. Supranational spreads have also decreased, but remain as attractive alternatives to federal agency securities. When yields of federal agencies and Treasuries are relatively close, the U.S. Treasury security is typically preferred. There were three new agency purchases this quarter; one federal agency note in the 3 year portion of the curve and two at 3.7 years. Given these additions, 50% of the County's total agency holdings are invested in maturities greater than 1 year, compared to 56% of agency holdings on December 31st.

Federal Agency Maturity Distribution by Name as of March 31, 2019



Federal Agency Yield Spreads to Treasuries Past 24 Months



* Source Bloomberg Financial Systems

[·] Agency Mortgage maturities are calculated as average life. Average life data taken from Bloomberg Financial Markets

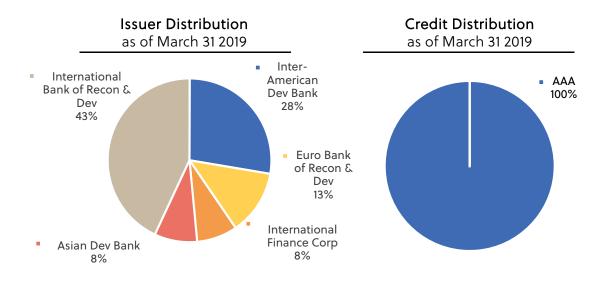
[•] Callable securities are shown to their next call date.

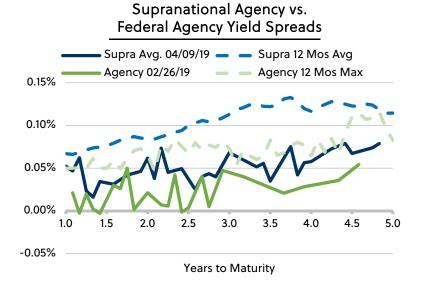
All other Agency maturities are calculated as days to maturity.



II. Sector Allocation – Supranational Agencies

Topic	Observations
Credit Distribution	 The County had one supranational from the International Bank of Reconstruction & Development mature in the fourth quarter. The County maintained its exposure to five supranational issuers over the quarter. The U.S. is the largest country from a shareholder perspective for all five Supranational issuers (co-largest with Japan for the Asian Development Bank), meaning the U.S. has the largest decision making power, and these securities are considered to have been issued by federal instrumentalities. By continuing to invest in this sector, the County is able to diversify the portfolio and add to its high credit quality, while also capturing additional yield over federal agency and Treasury securities. The portfolio's allocation to supranational agencies remains concentrated (55%) in maturities over 1 year.
Spread to Agency Rates	 The chart on the right shows the spread between supranational agencies and federal agency securities. Supranational agencies remain a value-adding alternative to both comparable maturity Treasuries and federal agencies. However, supranational agency issuance is seasonal, and tends to be highest in the beginning of a calendar year. Near year-end, spreads between supranational agencies and Treasuries tightened as supply dwindled. Tighter spreads make relative value options more difficult to find.



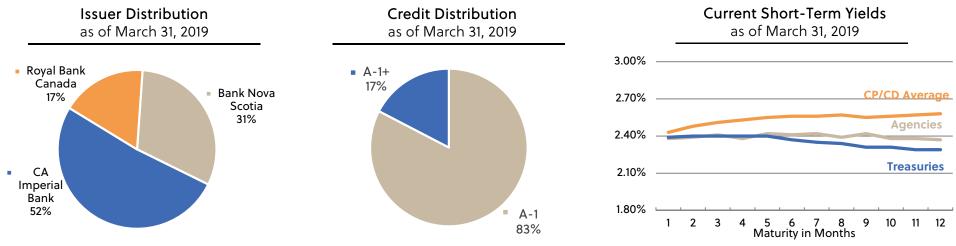


^{*} Source Bloomberg Financial Systems



II. Sector Allocation – Commercial Paper

Topic	Observations
Issuer Diversification	 The County's allocation to commercial paper decreased over the quarter, by approximately \$290 million and now accounts for 4.0% of the total portfolio, down from 7.7% at the end of the third quarter.
	 The portfolio continued to hold Canadian Imperial Bank, the Bank of Nova Scotia, and the Royal Bank of Canada. The County previously held Apple Inc. and Merck & Co commercial paper which matured in the first quarter.
	 The incremental additional yield offered by commercial paper continued to be attractive in the first quarter, as equity market volatility and a decrease in short term treasury yield deflating yields across the board.
	 "Rolling" short-term commercial paper is an attractive investment strategy relative to most other short-term permitted investment options in the current fixed income market.
Credit Distribution	• Standard & Poor's rates the short-term credit of Royal Bank of Canada as A-1+, and Canadian Imperial Bank and the Bank of Nova Scotia as A-1.
Conclusions	 From an overall portfolio duration perspective, utilizing short term commercial paper helps the County to offset the purchasing of longer term securities. These commercial paper investments generally offer greater yields than other short term securities and overnight investments.
	 After increasing commercial paper allocation in the fourth quarter, the County was prepared to let CP roll off as they made more withdrawals from the pool. The County went back down to three issuers from five, without losing diversification benefits.



 $^{{}^{\}star}\!All\ calculations\ above\ are\ based\ on\ total\ cash\ equivalents\ exposure,\ not\ overall\ Portfolio.$

* Source Bloomberg Financial Systems

^{**}Percentages may not total to 100% due to rounding.



II. Sector Allocation – Corporate Notes

Observations Maturity Distribution The County expanded its allocation to high-quality corporate notes, increasing by 1.9% over the quarter. This sector accounts for 16.1% of the overall portfolio, totaling approximately \$1.15 billion. Of corporate note holdings, 39% was still callable as of March 31. The County did not add any new issuers in the first quarter. When viewing the County's corporate note holdings to the next call date, the weighted average maturity of these investments is 1.1 years. Of the County's total allocation to this sector, 39% is held in maturities beyond 1 year. All corporate holdings mature in 4 years or less. The graph on the right below shows the difference in yields for financial corporates and industrial corporates when compared to a similar-maturity Treasury security. In the last few quarters, financial spreads have outpaced industrial spreads, with both spreads widening this quarter.

Credit & Issuer Distribution	S&P Short	S&P Long	Moody's Short	Moody's Long	% of Corporate Holdings	% of Portfolio
Microsoft Corp	A-1+	AAA	P-1	Aaa	9.82%	1.58%
Bank of Montreal	A-1	A+	P-1	Aa2	9.77%	1.58%
Toronto Dominion Bank	A-1+	AA-	P-1	Aa1	9.51%	1.54%
US Bank	A-1+	AA-	P-1	A1	9.14%	1.48%
JP Morgan Chase	A-1	A+	P-1	Aa2	8.14%	1.31%
Royal Bank of Canada	A-1+	AA-	P-1	Aa2	7.84%	1.27%
Apple Inc.	A-1+	AA+	P-1	Aa1	7.03%	1.14%
Proctor & Gamble Co	A-1+	AA-	P-1	Aa3	6.93%	1.12%
Wells Fargo Bank	A-1	A+	P-1	Aa2	6.54%	1.06%
PNC Bank	A-1	Α	P-1	A2	5.24%	0.85%
Bank of Nova Scotia	A-1	A+	P-1	Aa2	5.07%	0.82%
Bank of New York Mellon	A-1+	AA-	P-1	Aa2	4.37%	0.71%
Canadian Imperial Bank	A-1	A+	P-1	Aa2	2.61%	0.42%
United Parcel	A-1	A+	P-1	A 1	2.60%	0.42%
3M Co	A-1+	AA-	P-1	A1	2.21%	0.36%
Walt Disney Co	A-1	Α	P-1	A2	1.30%	0.21%
Honeywell International	A-1	Α	P-1	A2	1.16%	0.19%
Home Depot Inc.	A-1	Α	P-1	A2	0.71%	0.12%

Corporate/Treasury Yield Spreads March 2016 through March 2019



* Source Bloomberg Financial Systems

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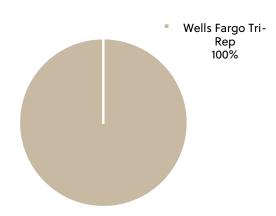
^{**}Source Moody's



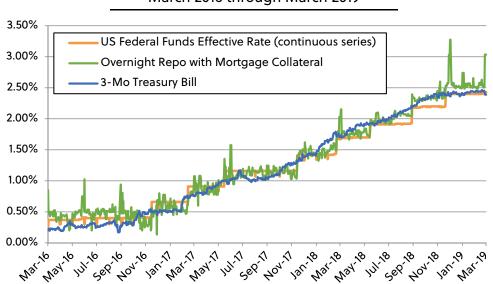
II. Sector Allocation – Repurchase Agreements

Topic	Observations
Issuer Diversification	 The County decreased tri-party repurchase agreement allocations over the quarter, with 2.6% of the portfolio allocated to the sector, compared to 4.9% in September. At March 31, the portfolio utilized one repurchase agreement provider, Wells Fargo Bank, with an allocation of \$184 million. This allocation falls within the permitted investment guidelines of 25% per issuer and 100% maximum to the sector.
Credit Distribution	 Standard & Poor's rates both Wells Fargo short-term issuer credit as A-1. While this issuer has a high-quality rating from S&P, the ultimate quality of the repurchase agreement depends on the underlying collateral.
Conclusions	 As of March 31, 2019, the repurchase agreement sector's weighted-average yield was 3.34%, which is an additional 83 bps compared to the last quarter. Yields for overnight repurchase agreements continued to climb in keeping with the rise in short term Treasury rates.





Short-Term Yields March 2016 through March 2019

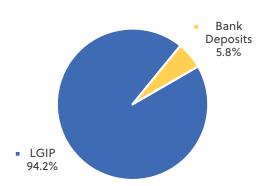




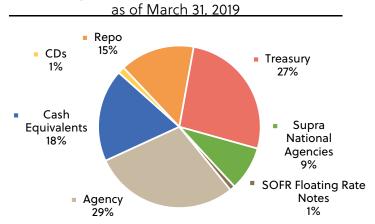
II. Sector Allocation – LGIPs and Cash Equivalents

	Underlying Investments	Rating (Short-Term: S&P/ Moody's/Fitch)	Observations
Washington State LGIP	 U.S. Treasuries 26.6 Federal Agencies 29. Supra National Agencies 8.8 Repurchase Agreements 14.9 Certificates of Deposit 1.0 Cash Equivalents 18.9 SOFR Floating Notes 1.0 As of March 31, 2019 	% % % %	 The County currently has allocated \$642 million to the Washington State LGIP, up approximately \$53 million from the previous quarter. The County's allocation to the State LGIP continues to serve as the primary source of overnight liquidity for the portfolio. The State LGIP continued to decrease federal agency allocations, a practice which started last quarter, decreasing the sector by 5.1% primarily in favor of Bank Deposits (+4.9%).
Cash Equivalents	 State LGIP 94.2 U.S. Bank 4.69 Key Bank 1.09 Bank of America 0.03 	% • <u>Key Bank:</u> % A-2/P-2/F-1	 The County's deposit accounts at U.S. Bank, Key Bank, and Bank of America are FDIC-insured up to FDIC limits, and are collateralized by the Public Deposit Protection Commission. The County significantly increased its allocation to bank deposits over the quarter, by \$25 million, ending December at \$39 million. The U.S. Bank account represents 81% of the Pool's bank deposits (Key Bank 19% and Bank of America <1%).

Cash Equivalents Distribution as of March 31, 2019



Washington State LGIP Sector Distribution



^{*}All calculations above are based on total cash equivalents exposure, not overall Portfolio.
**Percentages may not total to 100% due to rounding.

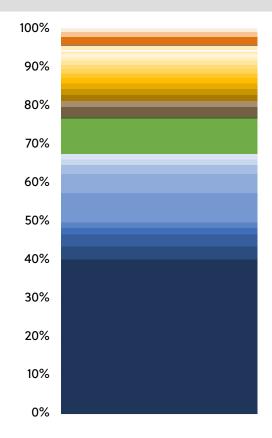


III. Issuer Concentration

Issuer Exposure

- The County continues to maintain a well-diversified portfolio by issuer, as shown in the chart below.
- · Approximately 68% of the portfolio is allocated directly to U.S. government guaranteed or government supported entities.
- Of the remaining 32% of the portfolio, 12.0% is allocated to ultra short-term or overnight investment vehicles, including the State LGIP, repurchase agreements, and bank deposits. The remaining 20% is allocated to credit issuers, including commercial paper and corporate notes.
- The County neither added nor removed issuers from their Corporate allocation., maintaining high credit quality and further increasing issuer diversification.

U.S. Treasury (100% Limit)	40.12%
Agency Issuers	Percentage (35% Limit)
FHLB FFCB FHLMC FNMA Intn'l Bk of Recon & Dev Inter-American Dev Bk Euro Bk of Recon & Dev Asian Dev Bank Intn'l Finance Corp	3.43% 3.15% 1.61% 1.45% 7.70% 4.92% 2.29% 1.51%
Washington State LGIP (25% Limit)	9.06%
Overnight Deposits	Percentage (No Limit)
US Bank Key Bank Bank of America	0.45% 0.10% <0.1%
Repo Issuers Wells Fargo Tri-Repo	Percentage (25% Limit) 2.59%



Corporate Issuers	Percentage (5% Limit)
Toronto-Dominion Bank	1.58%
Microsoft	1.58%
Bank Of Montreal	1.54%
US Bank	1.48%
JP Morgan Chase	1.31%
Royal Bank Of Canada	1.27%
Bank Of Nova Scotia	1.14%
Wells Fargo	1.12%
Bank Of New York Mellon	1.06%
Procter & Gamble Co	0.85%
Apple Inc	0.82%
PNC Bank	0.71%
Canadian Imperial Bank	0.42%
UPS	0.42%
3M Company	0.36%
Walt Disney Co	0.21%
Honeywell International	0.19%
Home Depot Inc	0.12%
CD laws	Percentage
CP Issuers	(5% Limit)
Canadian Imperial Bank	2.08%
Bank Of Nova Scotia	1.26%
Royal Bank Of Canada	0.70%
-	

Percentages may not add to 100% due to rounding.

^{*} For the purposes of totaling issuer concentration, issuers are aggregated across all sector types. It is noted however that issuers across sector types may maintain separately rated issuer credits.

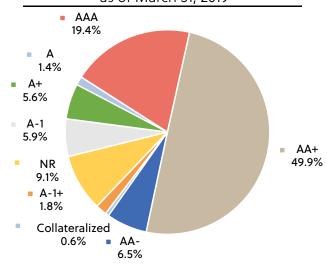


IV. Overall Credit Quality

County Investment Pool Credit Analysis

- The County Pool's overall average credit position remains very strong and is primarily concentrated in U.S. government guaranteed and/or supported securities which maintain a long-term credit rating of AA+ by Standard & Poor's and federal agency discount notes, which maintain a short-term credit rating of A-1+ by S&P.
- The County also maintained its holdings of supranational agencies, which are rated AAA.
- The County decreased its credit exposure through commercial paper and corporate notes over the quarter, ending at approximately 20.2% of the portfolio, compared to 21.9% last quarter.
 - Commercial paper now accounts for 4.0% of the entire portfolio, while corporate notes account for 16.1%.
- The portfolio did not add any commercial paper or Corporate issuers during the quarter, and the pool no longer has CP holdings from Apple Inc. and Merck & Co, which matured in the first quarter
 - Corporate note allocations held throughout the quarter have ratings of A/A1 or higher.
 - Commercial paper allocations are all rated A-1/P-1 or higher.
- The 9.1% NR allocation represents the County's investment in the Washington State LGIP, which is not currently rated by any ratings agency.
- The County's investment in the Washington LGIP includes indirect corporate exposure:
 - Through the LGIP, 1.5% of the County's Pool is allocated indirectly to corporate securities (repurchase agreements and certificates of deposit).

Total Pool Credit Distribution* as of March 31, 2019



Corporate/CP Issuer Ratings Table as of March 31, 2019

Issuer Distribution	Sectors Invested	S&P Short	S&P Long	Moody's Short	Moody's Long
Microsoft Corp	Corp	A-1+	AAA	P-1	Aaa
Bank of Montreal	Corp	A-1	A+	P-1	Aa2
Toronto Dominion Bank	Corp	A-1+	AA-	P-1	Aa1
US Bank	Corp	A-1+	AA-	P-1	A1
JP Morgan Chase	Corp	A-1	A+	P-1	Aa2
Royal Bank of Canada	Corp/CP	A-1+	AA-	P-1	Aa2
Apple Inc.	Corp	A-1+	AA+	P-1	Aa1
Proctor & Gamble Co	Corp	A-1+	AA-	P-1	Aa3
Wells Fargo Bank	Corp	A-1	A+	P-1	Aa2
PNC Bank	Corp	A-1	Α	P-1	A2
Bank of Nova Scotia	Corp/CP	A-1	A+	P-1	Aa2
Bank of New York Mellon	Corp	A-1+	AA-	P-1	Aa2
Canadian Imperial Bank	Corp/CP	A-1	A+	P-1	Aa2
United Parcel	Corp	A-1	A+	P-1	A1
3M Co	Corp	A-1+	AA-	P-1	A1
Walt Disney Co	Corp	A-1	Α	P-1	A2
Honeywell International	Corp	A-1	Α	P-1	A2
Home Depot Inc.	Corp	A-1	Α	P-1	A2

^{*}Ratings by S&P

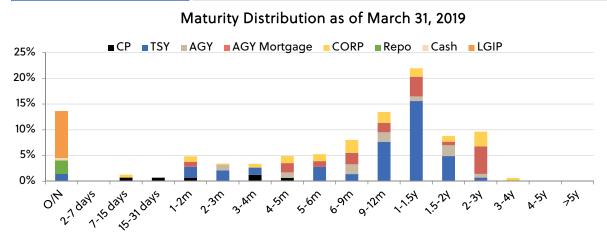
^{**}Percentages may not add to 100% due to rounding.

^{***} Source Moody's



V. Maturity Distribution

Maturity Distribution	Observations
Weighted Average Maturity ("WAM")	 The County continues to invest across its permitted maturity range, as seen in the chart below. A majority of the holdings, 59% of the portfolio, are scheduled to mature or have a call date within the next twelve months, a 5% increase from the previous quarter-end and conservatively above the 40% mandated by the investment policy. It appears the County's maturity strategies over the past several quarters have included: Allowing previously purchased, longer-dated U.S. Treasury and federal agency investments to naturally shorten in maturity and roll-down the yield curve. Targeting purchases in the following spaces:
Liquidity	• The County Pool appears to provide adequate liquidity, both in terms of final maturities and the sectors in which the Pool has invested. In addition to the 12.2% (or \$866 million) invested in a combination of the Washington State LGIP, bank deposits, and repurchase agreements (overnight liquidity), another 2.0% of the portfolio's holdings are scheduled to mature within the next thirty-one days.



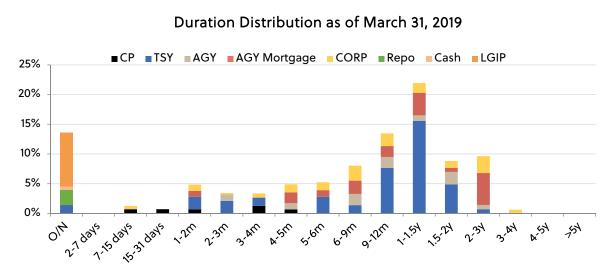
Contribution to Maturity			
Sector	3/31/19	12/31/18	
Supranational Agencies	84.67	87.93	
Cash	0.01	0.00	
Corporate Notes	74.32	60.84	
Commercial Paper	2.80	5.47	
Federal Agencies	50.29	35.30	
The Washington State LGIP	0.09	0.08	
Agency Mortgages	2.79	0.74	
Repurchase Agreements	0.03	0.10	
US Treasuries	146.77	165.71	
Maturity:	362 days	356 days	

Agency Mortgage maturities are reported as average life. Average life data taken from Bloomberg Financial Markets Callable securities shown to their call date.



V. Duration Distribution

Duration Distribution	Observations
Definition	 Duration is a measure of the sensitivity of the value of principal of an investment to a change in interest rates. The value of a portfolio with a higher duration is more sensitive to interest rate increases and decreases. Duration is often quoted in years and is commonly used as a measure of the market risk of a security or portfolio. Duration can be derived in a number of ways; please refer to the notes at the bottom of this page for details.
Duration	 The portfolio's weighted average duration is within the IPS guidelines (no greater than 1.5 years). As of March 31st, the duration of the County Investment Pool was 0.91 years, an decrease from the previous quarter which ended at 0.96 years. The decrease in portfolio duration can be attributed to longer-term Treasury and supranational holdings rolling down the curve. For performance and duration comparison purposes, the portfolio is measured against a blended benchmark consisting of 40% Bank of America Merrill Lynch 3-Month Treasury Index and 60% Bank of America Merrill Lynch 1-3 Year Treasury & Agency Index. The Pool shortened duration over the quarter from 84% of the benchmark's duration for the fourth quarter of 2018, to 80% of the benchmark's duration of 1.14 years for the first quarter of 2019. A defensive duration bias helps mitigate the adverse impact that potential interest rate increases may have on market value of holdings when a rise in interest rates is anticipated.



Contribution to Duration			
Sector	3/31/19	12/31/18	
Supranational Agencies	0.22	0.21	
Cash	0.00	0.00	
Corporate Notes	0.16	0.14	
Commercial Paper	0.01	0.08	
Federal Agencies	0.12	0.14	
The Washington State LGIP	0.00	0.00	
Agency Mortgages	0.00	0.00	
Repurchase Agreements	0.00	0.00	
US Treasuries	0.39	0.40	
Duration:	0.91 years	0.96 years	

Agency Mortgage durations are shown as effective duration taken from Bloomberg Financial Markets.

Duration for Federal Agency Discount Notes and Repurchase Agreements are calculated as days to maturity. WA LGIP and bank deposits considered to have a one day duration.

All other security durations are calculated as effective duration as given by Bloomberg Financial Markets.

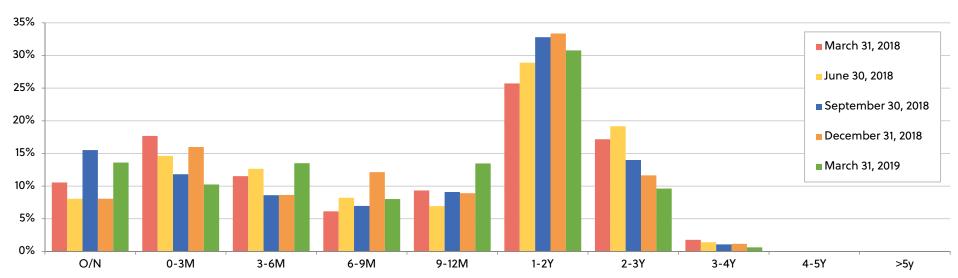


V. Changes in Portfolio Maturity Distribution

Changes in Portfolio Maturity Distribution

- When viewing the current maturity distribution (green bars) in relation to previous periods, a few primary observations are noted:
 - It appears the County targeted increased allocations in both the 3- to 6-month portion of the yield curve and the 9-12 month portion during the first quarter of 2019.
 - o The increase in allocation to 3- to 6-month maturities are primarily due to roll downs from the 6-9 month bucket, as well as the purchase of anew piece of commercial paper from Canadian Imperial Bank
 - o Increases in the 9-12-month portion of the curve are primarily due to roll downs from the 1-2 year range.
 - o Targeting these areas of the curve could offer additional income potential and roll-down opportunities, which add value in a rising rate environment.
- Seasonality of cash flows is critical to maturity distribution and liquidity management and the following is a snapshot of the historical cash flow averages for upcoming quarters.
 - Over the past five years, for the quarters ending June 30, the Investment Pool has experienced an average net <u>inflow</u> of \$604 million.
 - Over the past five years, for the quarters ending September 30, the average net <u>outflow</u> from the Investment Pool was \$202 million.

Maturity Distribution March 31, 2018 to March 31, 2019



Agency Mortgage maturities are reported as average life. Average life data taken from Bloomberg Financial Markets Callable securities shown to their call date.



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