King County Investment Pool

Portfolio Review

Quarter Ended September 30, 2018

PFM Asset
Management LLC

213 Market Street
Harrisburg, PA 17101

(717) 232-2723
pfm.com

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 June 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 September 30, 2018, 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	• A robust US economy, supported by a strong labor market, high consumer sentiment, and record corporate profits, influenced the Federal Reserve (Fed) to raise interest rates for the third time this year. The Fed also signaled its commitment to a continued gradual pace of rate hikes. • The probability priced into the federal funds futures for a total of four rate increases this year went from 8.9% at the beginning of the year to 69.3% by the end of September. • The labor market continued to strengthen with recent monthly job gains, low unemployment and average hourly earnings hitting 2.9% (year-over-year) in August. • Investment grade credit spreads tightened on high corporate profits, strong economic fundamentals, and new stock market gains during the third quarter. • The S&P 500 hit record highs during the quarter as the economic outlook remained strong despite increased concerns surrounding trade. Domestic equities continued outpacing the MSCI ex-U.S. index, gaining 8.25% year-to-date vs -3.77% year-to-date as of September 30. • The trade dispute between the U.S. and China continued throughout the quarter, bringing total enacted tariffs from the U.S. to $250 billion, and $100 billion from China.
Observations	• The portfolio is of very high credit quality. The majority of securities (83%) 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 continued to diversify its issuers over the quarter with credit purchases of commercial paper from Apple Inc., and corporate notes from 3M Company and United Parcel Service. • The Portfolio slightly shortened duration over the quarter from 94% to 90% of the benchmark's duration, due to holdings in all sectors except corporates rolling down the yield curve. • The County Pool appears to provide adequate liquidity, with 14% (or $1 million) invested in a combination of the State LGIP, bank deposits, and repurchase agreements (overnight) and 39% of the portfolio invested in US Treasuries. • In anticipation of the upcoming quarter, during the fourth quarters of the past five years, the Pool experienced an average net <u>outflow</u> of $302 million.

Investment Pool Portfolio Review

<u>Portfolio Review</u>

I. **Investment Policy Compliance**

II. **Sector Allocation**

- U.S. Treasuries
- Federal Agencies
- Supranational Agencies
- Commercial Paper
- Corporate Notes
- Repurchase Agreements
- LGIP and Cash Equivalents

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.

Type	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%	100% for repurchase agreements with the Federal Reserve Bank of New York 25% maximum exposure to any one repo counterparty. For the purposes of aggregating issuers across sectors, overnight repo counterparties are not included.	The counterparty must have: 1. A rating in the highest short-term credit rating category by at least one Nationally Recognized Statistical Rating Organization (NRSRO) or possess a guarantee by an entity with such a rating; and 2. A minimum asset and capital size of $5 billion in assets and $175 million in capital	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.	1. 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 2. 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	1. 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 2. 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

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

Type	Maximum Portfolio Allocation	Issuer Restrictions	Credit Ratings	Maturity Restrictions
Bankers' Acceptances	25% 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	25% 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

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

Type	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.	5 years 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.

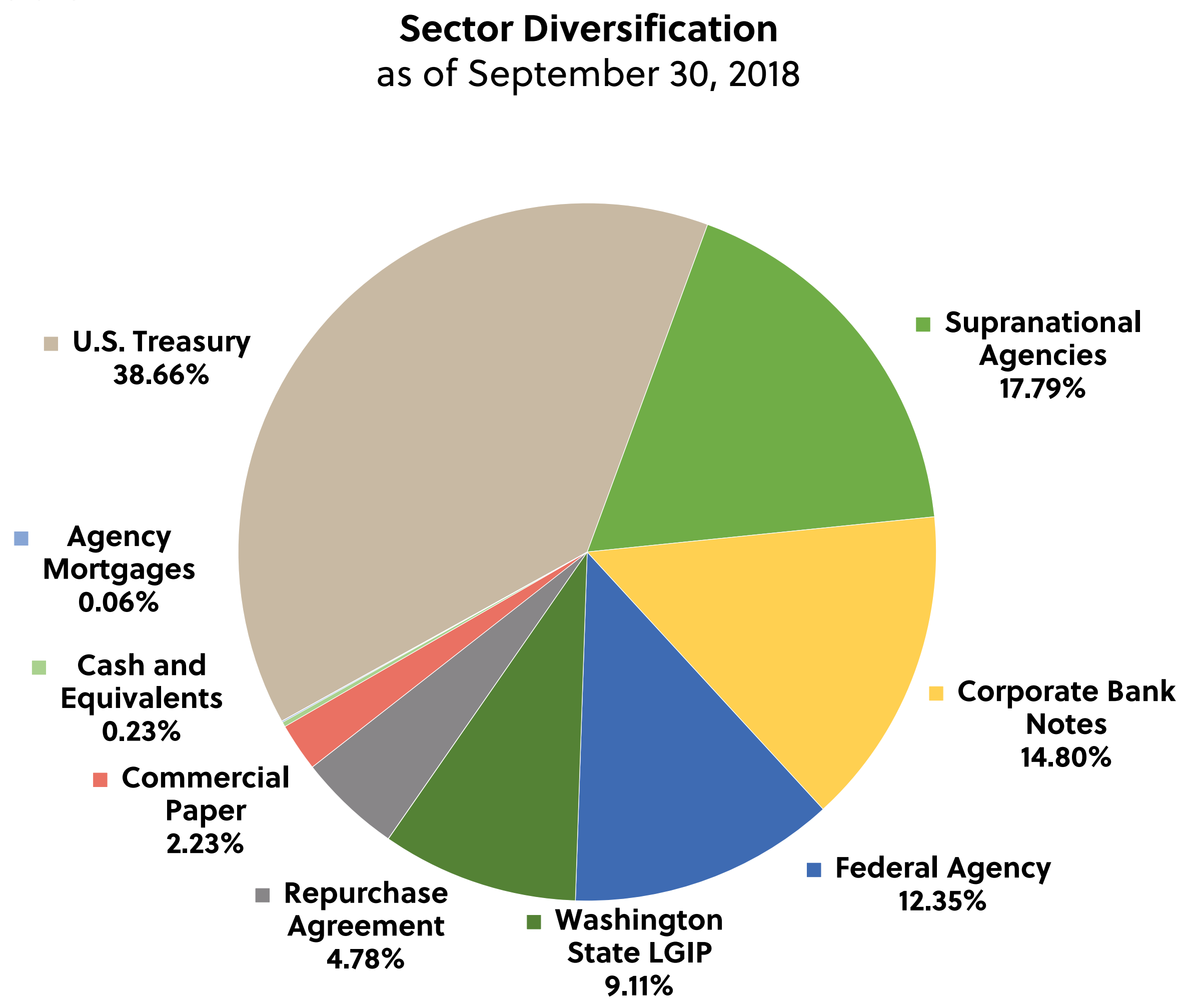
I. Investment Policy Compliance – County Investment Pool

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 September 30, 2018 was $7.1 billion and it experienced a net decrease of approximately $23 million over the quarter. • Over the quarter, sectors that experienced allocation percentage increases included: US Treasuries (+2.84%), and the Washington State LGIP (+1.32%). All sectors experiencing an increase over the quarter still remain within applicable policy limits. • Sectors that experienced decreases in quarter-over-quarter allocation percentages included: federal agencies (-3.17%) and commercial paper (-1.95%)
Credit Quality	• Approximately 70% of the County pool's assets are guaranteed or supported by the U.S. government. Furthermore, 9% is invested in the State LGIP, where 63% 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 82%. • Corporate allocations (both commercial paper and corporate notes) remained steady over the quarter at 17% of the portfolio, and all securities are investment grade. Allocations to corporates continue to be below the maximum allocation limit of 25%. • Total allocations of corporates 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 52% 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	2,750,267,940.00	38.66%	✓	2.46 years	✓
Supranational Agencies	1,265,276,334.16	17.79%	✓	3.33 years	✓
Corporate Bank Notes	1,052,712,387.09	14.80%	✓	2.96 years	✓
Federal Agency	878,337,330.01	12.35%	✓	2.13 years	✓
Washington State LGIP	648,430,387.95	9.11%	✓	1 day	✓
Repurchase Agreement	340,000,000.00	4.78%	✓	1 day	✓
Commercial Paper	158,707,665.70	2.23%	✓	102 days	✓
Cash and Equivalents	16,099,721.44	0.23%	✓	1 day	✓
Agency Mortgages	4,125,118.06	0.06%	✓	3.88 years (WAL)	✓
TOTAL	7,113,956,884.41	100.00%			

**Percentages may not total to 100% due to rounding.*

II. Sector Allocation

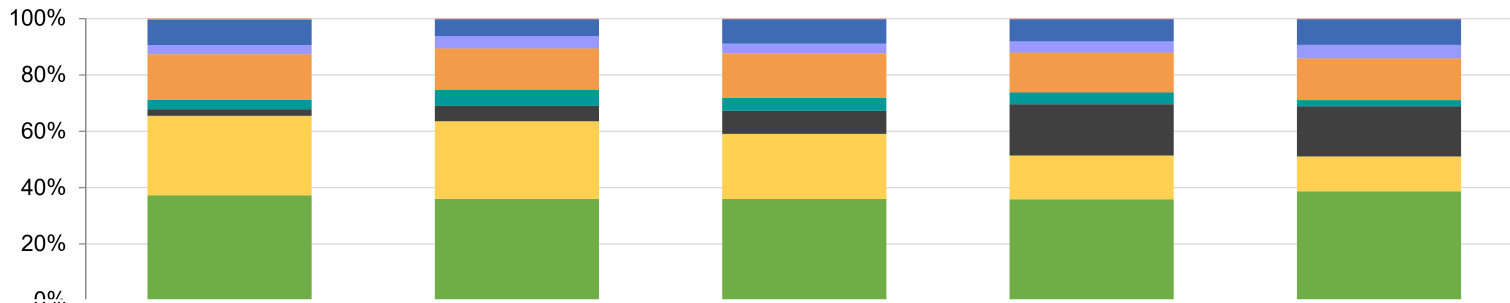


*Percentages may not total to 100% due to rounding.

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

Changes in Sector Allocation

- The County's investment pool increased percentage allocations to US Treasuries (+2.84%), and the Washington State LGIP (+1.32%), while decreasing allocations to federal agencies (-3.17%) and commercial paper (-1.95%).
- U.S. Treasuries During the third quarter U.S. Treasuries increased by $194 million and the overall allocation to the sector increased to 38.66% over the quarter.
- Federal Agencies Federal agency allocations decreased over the quarter by $229 million, or -3.17%.
- Corporate Notes The portfolio's corporate note exposure slightly increased over the quarter, now accounting for 14.8% of the overall portfolio from last quarter's 14.1%.
- Commercial Paper Commercial paper declined during the quarter. These holdings now account for 2.23% of the total portfolio, down from 4.18% last quarter.
- Washington State LGIP Balances invested in the State LGIP increased by approximately $92 million and continued to serve as the Pool's primary liquidity vehicle. This sector accounts for approximately 9.1% of the overall portfolio.
- Repurchase Agreements and Bank Deposits Allocations to repurchase agreements increased by $54 million over the quarter and account for 4.8% of the total portfolio.



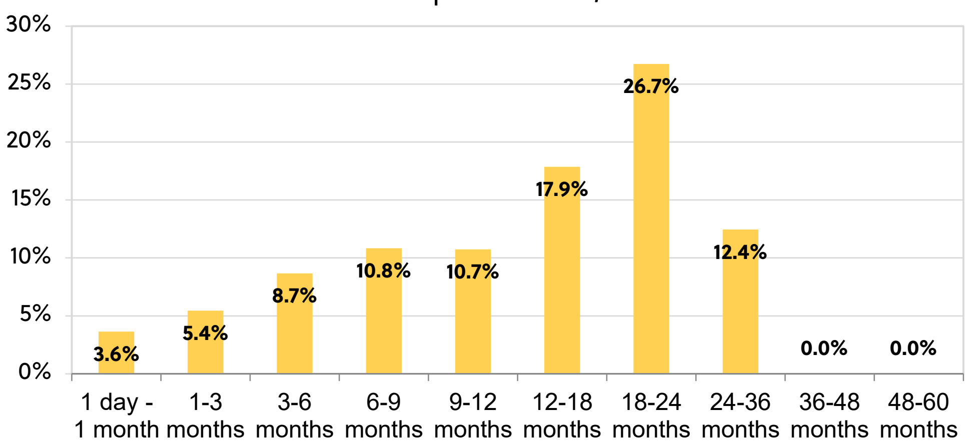
	September 30, 2017	December 31, 2017	March 31, 2018	June 30, 2018	September 30, 2018
U.S. Treasury	37.24%	36.03%	35.94%	35.82%	38.66%
Federal Agencies	28.18%	27.49%	23.08%	15.52%	12.35%
Agency Mortgages	0.08%	0.07%	0.07%	0.06%	0.06%
Supranational Agencies	2.26%	5.47%	8.16%	18.22%	17.79%
Commercial Paper	3.36%	5.61%	4.63%	4.18%	2.23%
Corporate Notes	16.28%	14.77%	15.83%	14.13%	14.80%
Repurchase Agreements	3.22%	4.29%	3.40%	4.01%	4.78%
Washington State LGIP	8.95%	6.02%	8.66%	7.80%	9.11%
Cash and Equivalents	0.43%	0.25%	0.22%	0.27%	0.23%

**Percentages may not total to 100% due to rounding.*

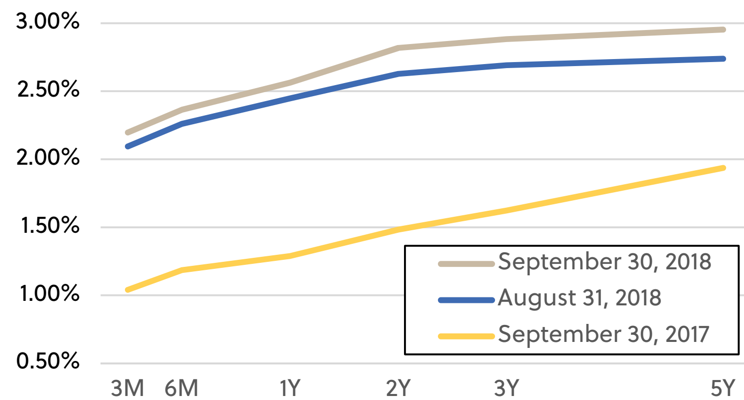
II. Sector Allocation – U.S. Treasury Securities

Topic	Observations
Observations	• The County's balances held in U.S. Treasuries increased to 38.7% of the total portfolio, up from 35.8% in the second quarter. – Treasury yields rose across the curve during the third quarter, as strength in equity markets caused a sell-off in safe haven assets like Treasury securities. o The 10-year Treasury yield was up 20 bps, while the two-year yield rose 29 bps. o The flattening of the yield curve continued as short-term rates rose in response to the September Federal Funds Rate hike and international pressures continue to dampen longer-term yields. – The majority of the Pool's Treasury investments ($1.57 billion, or 57.1% of all Treasury holdings) have remaining maturities of greater than one year and are positioned in the steeper portions of the U.S. Treasury yield curve. • The County's weighted average maturity (WAM) of its Treasury allocation decreased over the quarter by 60 days, from 504 days on June 30th, to 444 days on September 30th due to longer-dated securities rolling down the yield curve from 24-36 months into the 18-24 months area of the curve. • The chart on the left below, illustrates the current maturity distribution of the County's allocations to U.S. Treasuries and the chart on the right illustrates the current shape of the U.S. Treasury yield curve, compared to the yield curve a month ago and one year ago. The curve has flattened significantly, which means that investors receive less incremental yield by investing further out the curve than they did one year ago. Subsequently, the County's Treasury holdings are concentrated in shorter-term securities, with the most value found in the 18-24 month area of the curve.

U.S. Treasury Maturity Distribution
as of September 30, 2018



U.S. Treasury Yield Curve
9/30/17 vs 8/31/18 vs 9/30/18

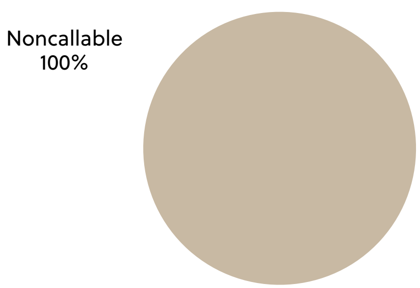


** Source Bloomberg Financial Systems*

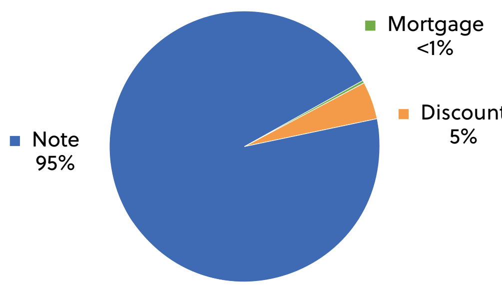
II. Sector Allocation – Federal Agencies

Topic	Observations			
Structure *(as % of Federal Agency Allocations)*	• Non-Callable • Callable	100.0% 0.0%	• Discount Notes • Coupon Bearing Notes • Agency Mortgage	4.5% 95.2% 0.3%
Diversification *(as % of Federal Agency Allocations)*	• Freddie Mac (FHLMC) • Federal Home Loan Bank (FHLB) • Fannie Mae (FNMA) • Supranational Agencies	8.7% 13.8% 9.2% 58.9%	• Federal Farm Credit Bank (FFCB) • Freddie Mac Mortgage-Backed (FHR) • Fannie Mae Mortgage-Backed (FNR)	9.1% 0% <1%
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%). • All supranational agency holdings are below the 35% issuer limit, at 18.8% of the entire portfolio. • The total amount invested in federal agencies decreased from the second quarter by $229 million. As a portion of the total portfolio, federal agencies decreased from 15.5% in the second quarter to 12.4% in the third quarter. • The County Pool's only remaining allocation to agency mortgages is in Fannie Mae pools, totaling approximately $4.1 million. • Four federal agencies matured in the third quarter, for a total of $314 million, compared to a total of $537 million maturing in the quarter ended June 30th. The County continued to avoid buying new federal agencies, as they remain expensive compared to Treasury securities.			

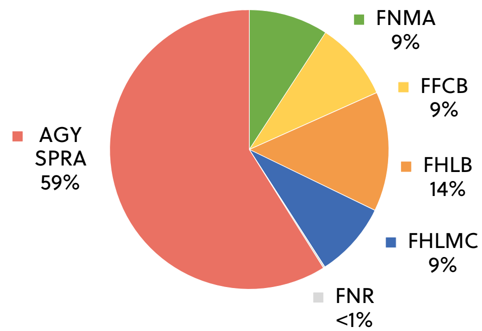
Callable vs. Non-Callable
as of September 30, 2018



Structure Distribution
as of September 30, 2018



Issuer Diversification
as of September 30, 2018

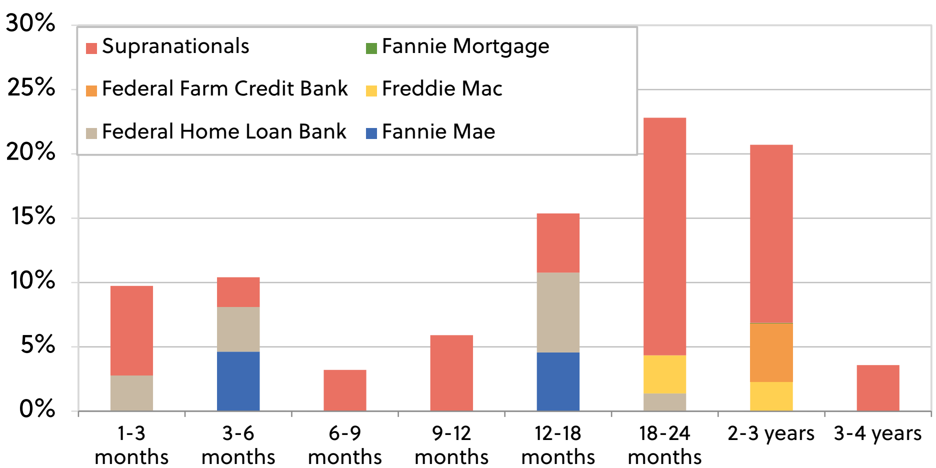


**All calculations above are based on total cash equivalents exposure, not overall Portfolio.*
***Percentages may not total to 100% due to rounding.*

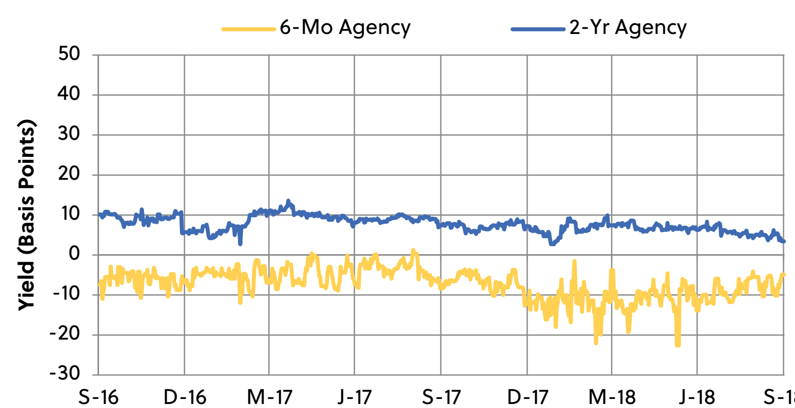
II. Sector Allocation – Federal Agencies

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 11 days, from 498 days on June 30th to 487 days on September 30th. • Agency spreads remain near 12-month tights. While value exists in price concessions when new issues are first traded, the supranational sector offers additional income benefit relative to both Treasury and agency securities. – When yields of federal agencies and Treasuries are relatively close, the U.S. Treasury security is typically preferred. • Given last quarter's substantial addition of supranational agency holdings, 54% of the County's total agency holdings are invested in maturities greater than 1 year. – There were no new agency purchases this quarter. All of the agency holdings in the portfolio have naturally rolled down the curve from last quarter.

Federal Agency Maturity Distribution by Name
as of September 30, 2018



Federal Agency Yield Spreads
Past 24 Months



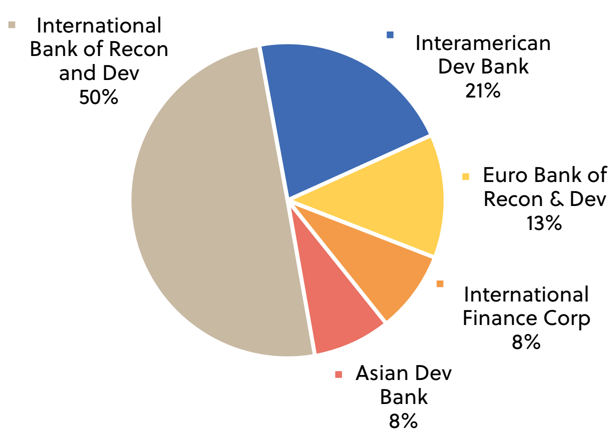
** Source Bloomberg Financial Systems*

- *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.*

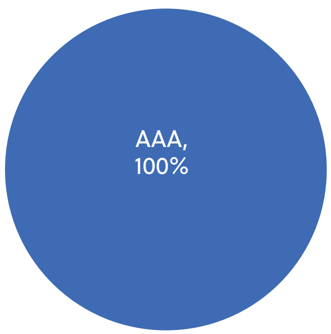
II. Sector Allocation – Supranational Agencies

Topic	Observations
Credit Distribution	• While supranational agencies continue to offer value relative to federal agency securities, spreads have tightened due to a decline in issuance of these types of securities. The County did not add any new supranational agencies this quarter. • The County maintained is 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 (69%) 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. As we near year-end, spreads between supranational agencies and Treasuries have tightened as supply dwindled. Tighter spreads make relative value options more difficult to find.

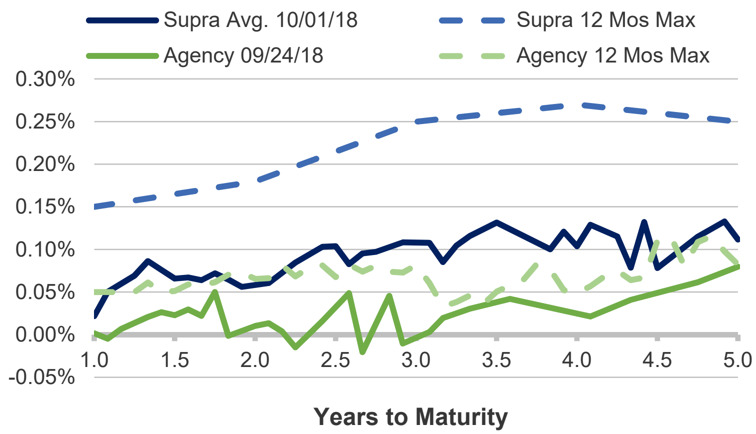
Issuer Distribution
as of September 30, 2018



Credit Distribution
as of September 30, 2018



Supranational Agency vs.
Federal Agency Yield Spreads

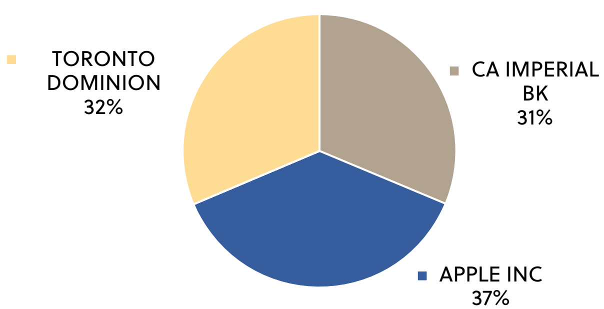


** Source Bloomberg Financial Systems*

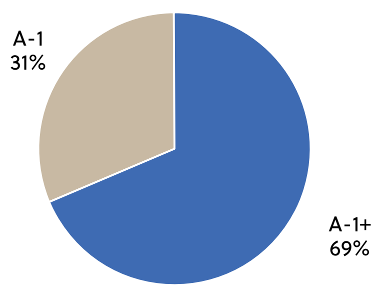
II. Sector Allocation – Commercial Paper

Topic	Observations
Issuer Diversification	• The County's allocation to commercial paper decreased over the quarter, by approximately $140 million and now accounts for 2.2% of the total portfolio, down from 4.2% at the end of the second quarter. • The portfolio added one issuer, Apple Inc., to its other commercial paper holdings: Canadian Imperial Bank, and Toronto Dominion. The County has held Apple Inc., in past quarters but previously held Apple Inc. securities had matured during the second quarter. The Colgate-Palmolive commercial paper held last quarter matured in the third quarter. • The incremental additional yield offered by commercial paper has lessened but continues to outperform compared to similar term government securities. — "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 Toronto Dominion and Apple Inc. as A-1+, and Canadian Imperial Bank 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. • Commercial paper generally provides a yield advantage relative to similar maturity Treasury and agency securities. However, as commercial paper becomes more expensive with spreads tightening to Treasuries and agencies, the County should be selective in its purchases.

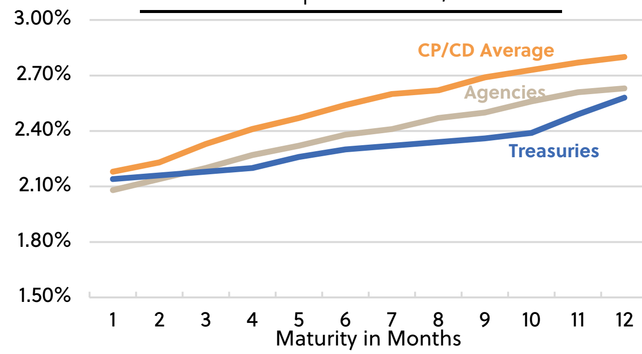
Issuer Distribution
as of September 30, 2018



Credit Distribution
as of September 30, 2018



Current Short-Term Yields
as of September 30, 2018



** Source Bloomberg Financial Systems*

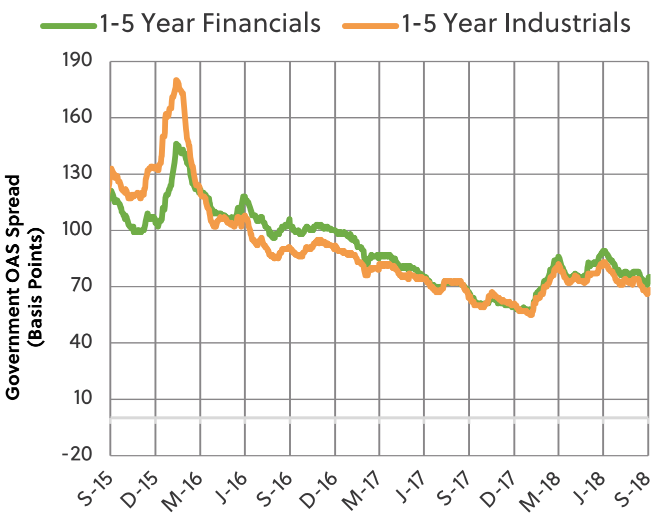
**All calculations above are based on total cash equivalents exposure, not overall Portfolio.*
***Percentages may not total to 100% due to rounding.*

II. Sector Allocation – Corporate Notes

Topic	Observations
Maturity Distribution	• The County largely maintained allocation to high-quality corporate notes, increasing by just 0.7% over the quarter. This sector accounts for 14.8% of the overall portfolio, totaling approximately $1.1 billion. – The County added two new high-quality names to the corporate sector; 3M and UPS in the 3-4 year area of the curve. • When viewing the County's corporate note holdings to the next call date, the weighted average maturity of these investments is 1.3 years. • Of the County's total allocation to this sector, 64% is held in maturities beyond 1 year, above the 48% of last quarter, representing longer-dated additions to the corporate portfolio. 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 tightening this quarter.

Credit & Issuer Distribution	S&P Short	S&P Long	Moody's Short	Moody's Long	% of Corporate Holdings	% of Portfolio
Toronto Dominion Bank	A-1+	AA-	P-1	Aa3	12.64%	1.87%
Microsoft Corp	A-1+	AAA	P-1	Aaa	11.20%	1.66%
Royal Bank of Canada	A-1+	AA-	P-1	A2	10.85%	1.61%
US Bank	A-1+	AA-	P-1	A1	9.88%	1.46%
JP Morgan Chase	A-1	A+	P-1	Aa3	8.83%	1.31%
PNC Bank	A-1	A	P-1	A2	8.28%	1.23%
Bank of Montreal	A-1	A+	P-1	Aa2	7.26%	1.07%
Wells Fargo Bank	A-1	A+	P-1	Aa2	7.18%	1.06%
Bank of Nova Scotia	A-1	A+	P-1	Aa2	7.08%	1.05%
Proctor & Gamble Co	A-1+	AA-	P-1	Aa3	5.19%	0.77%
Apple Inc.	A-1+	AA+	P-1	Aa1	3.18%	0.47%
Canadian Imperial Bank	A-1	A+	P-1	Aa2	2.82%	0.42%
United Parcel	A-1	A+	P-1	A1	2.78%	0.41%
3M Co	A-1+	AA-	P-1	A1	1.42%	0.21%
Walt Disney Co	A-1+	A+	P-1	A2	1.41%	0.21%

Corporate/Treasury Yield Spreads
September 2015 through September 2018



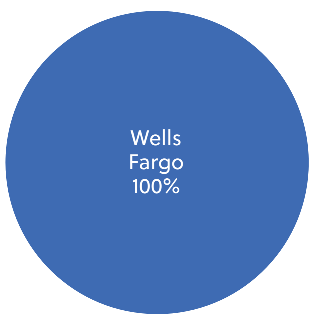
** Source Bloomberg Financial Systems*

**Percentages may not total to 100% due to rounding.*
***Source Moody's*

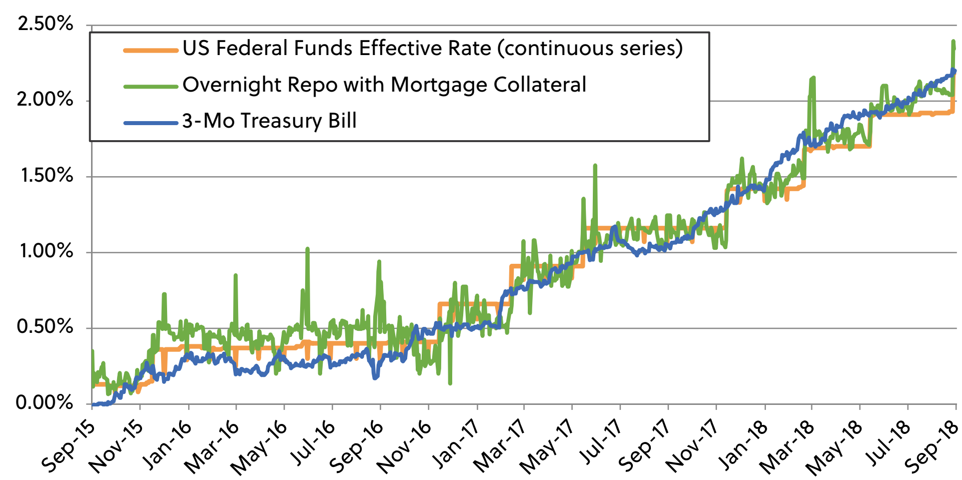
II. Sector Allocation – Repurchase Agreements

Topic	Observations
Issuer Diversification	• The County continued to increase tri-party repurchase agreement allocation over the quarter, with 4.8% of the portfolio allocated to the sector, up from 4.0% in June. • At September 30, the portfolio utilizes one repurchase agreement provider, Wells Fargo Bank, with an allocation of $340 million which is up $54 million from the previous quarter-end. • This allocation falls within the permitted investment guidelines of 25% per issuer and 100% maximum to the sector.
Credit Distribution	• Standard & Poor's rates Wells Fargo's short-term issuer credit as A-1. • While Wells Fargo maintains very high-quality ratings from S&P, the ultimate quality of the repurchase agreement depends on the underlying collateral.
Conclusions	• As of September 30, 2018, the repurchase agreement sector's yield was 2.25%, which is an additional 17 bps compared to the last quarter. Yields for overnight repurchase agreements continue to climb in keeping with the rise in short term rates for Treasury .

Issuer/Credit Distribution
as of September 30, 2018



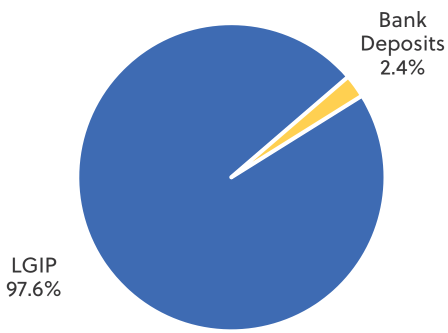
Short-Term Yields
September 2015 through September 2018



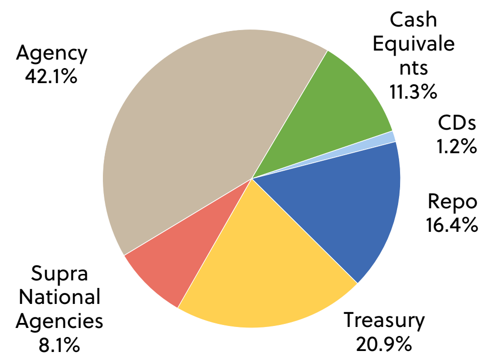
II. Sector Allocation – LGIPs and Cash Equivalents

	Underlying Investments	Rating (Short-Term: S&P/ Moody's/Fitch)	Observations
Washington State LGIP	• U.S. Treasuries 20.9% • Federal Agencies 42.1% • Supra National Agencies 8.1% • Repurchase Agreements 16.4% • Certificates of Deposit 1.2% • Cash Equivalents 11.3% *As of September 30, 2018*	• N/A	• The County currently has allocated $648 million to the Washington State LGIP, up approximately $91 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 shifted approximately 15% of its portfolio away from repurchase agreements and into federal agencies (up 8.4%), supranational agencies (up 3.5%), and cash (up 3.0%). Other sector allocations were largely maintained since March.
Cash Equivalents	• State LGIP 97.6% • U.S. Bank 1.8% • Key Bank 0.6% • Bank of America <0.1%	• U.S. Bank: A-1+/P-1/F1+ • Key Bank: A-2/P-2/F-1 • Bank of America: A-1/P-1/F1+	• 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 slightly decreased its allocation to bank deposits over the quarter, by $3 million, ending September at $16 million. The U.S. Bank account represents 73% of the Pool's bank deposits (Key Bank 26% and Bank of America 1%).

Cash Equivalents Distribution
as of September 30, 2018



Washington State LGIP Sector Distribution
as of September 30, 2018



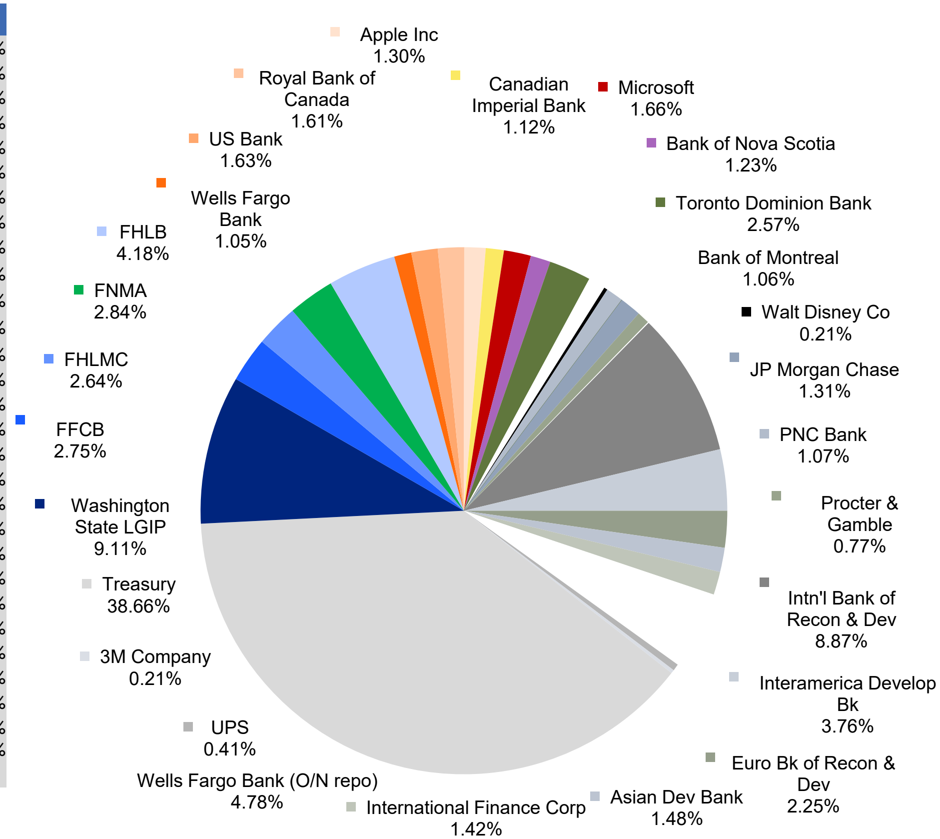
**All calculations above are based on total cash equivalents exposure, not overall Portfolio.*
***Percentages may not total to 100% due to rounding.*

III. Issuer Concentration

Issuer Exposure

- The County continues to maintain a well-diversified portfolio by issuer, as is evidenced by the chart below.
- Approximately 68.8% of the portfolio is allocated directly to U.S. government guaranteed or government supported entities.
- Of the remaining 31.2% of the portfolio, 14.1% is allocated to ultra short-term or overnight investment vehicles, including the State LGIP, repurchase agreements, and bank deposits. The remaining 17.0% is allocated to credit issuers, including commercial paper and corporate notes.
- The County added two new issuers to its corporate allocation this quarter; 3M and the United Parcel Service, maintaining high credit quality and increasing issuer diversification.

Issuer Distribution	Value	Percentage	Issuer Limit
Treasury	2,750,267,940	38.66%	100%
Washington State LGIP	648,430,388	9.11%	25%
Intn'l Bank of Recon & Dev	631,341,507	8.87%	35%
Wells Fargo Bank (O/N repo)	340,000,000	4.78%	25%
FHLB	297,430,850	4.18%	35%
Interamerica Develop Bk	267,239,793	3.76%	35%
FNMA	201,847,118	2.84%	35%
FFCB	195,714,880	2.75%	35%
FHLMC	187,469,600	2.64%	35%
Toronto Dominion Bank	182,890,009	2.57%	5%
Euro Bk of Recon & Dev	160,358,040	2.25%	35%
Microsoft	117,858,976	1.66%	5%
US Bank	115,715,242	1.63%	5%
Royal Bank of Canada	114,245,450	1.61%	5%
Asian Dev Bank	105,636,985	1.48%	35%
International Finance Corp	100,700,010	1.42%	35%
JP Morgan Chase	92,979,840	1.31%	5%
Apple Inc	92,667,884	1.30%	5%
Bank of Nova Scotia	87,202,954	1.23%	5%
Canadian Imperial Bank	79,359,534	1.12%	5%
PNC Bank	76,468,024	1.07%	5%
Bank of Montreal	75,574,582	1.06%	5%
Wells Fargo Bank	74,536,500	1.05%	5%
Procter & Gamble	54,621,850	0.77%	5%
UPS	29,213,100	0.41%	5%
3M Company	14,974,500	0.21%	5%
Walt Disney Co	14,796,000	0.21%	5%
Key Bank	4,187,046	0.06%	5%
Bank of America	228,283	0.00%	5%
Total	$7,113,956,884	100.00%	



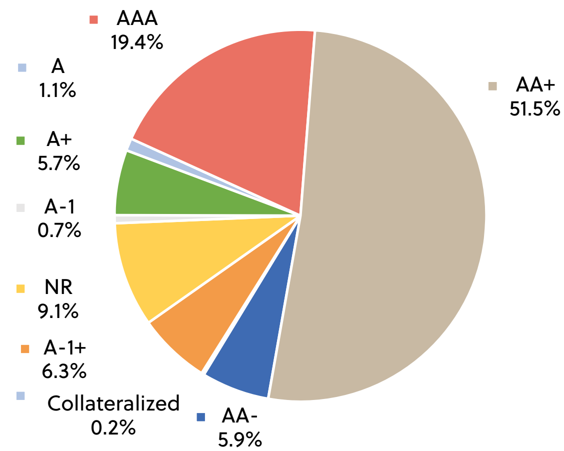
Percentages may not add to 100% due to rounding.
** For the purposes of totaling issuer concentration, issuers are aggregated across all sector types. It is noted however that issuers across sector types may maintain separately rated issuer credits.*

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 slightly decreased its credit exposure through commercial paper and corporate notes over the quarter, ending at approximately 17.0% of the portfolio, compared to 18.3% last quarter.
  - Commercial paper now accounts for 2.2% of the entire portfolio, while corporate notes account for 14.8%.
- Allocations were maintained to corporate notes for all previously held issuers except for commercial paper allocations to Colgate-Palmolive and the Bank of Nova Scotia, which matured over the quarter.
  - The portfolio added two corporate issuers, 3M Company and United Parcel Service, to its exposure, and picked up a new Apple Inc. commercial paper, a name it has held previously.
  - 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, 1.6% of the County's Pool is allocated indirectly to corporate securities (repurchase agreements and certificates of deposit).

Total Pool Credit Distribution*
as of September 30, 2018



Corporate/CP Issuer Ratings Table
as of September 30, 2018

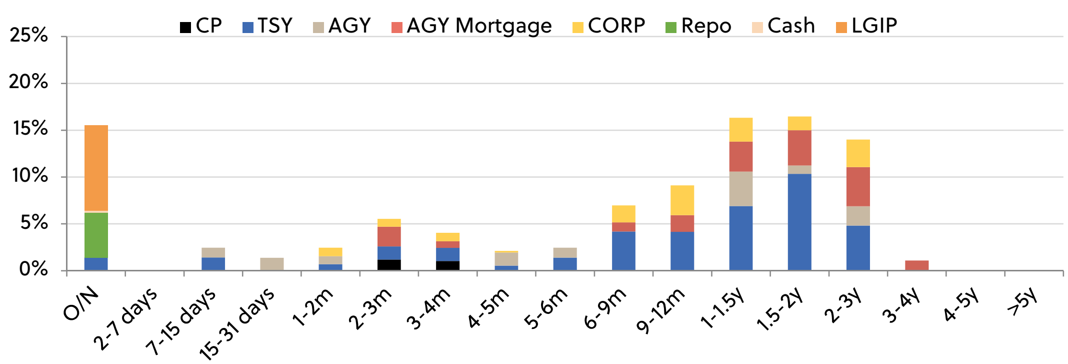
Issuer Distribution	Sectors Invested	S&P Short	S&P Long	Moody's Short	Moody's Long
Toronto Dominion Bank	Corp/CP	A-1+	AA-	P-1	Aa3
Microsoft Corp	Corp	A-1+	AAA	P-1	Aaa
Royal Bank of Canada	Corp	A-1+	AA-	P-1	A2
US Bank	Corp	A-1+	AA-	P-1	A1
JP Morgan Chase	Corp	A-1	A+	P-1	Aa3
PNC Bank	Corp	A-1	A	P-1	A2
Bank of Montreal	Corp	A-1	A+	P-1	Aa2
Wells Fargo Bank	Corp	A-1	A+	P-1	Aa2
Bank of Nova Scotia	Corp	A-1	A+	P-1	Aa2
Proctor & Gamble Co	Corp	A-1+	AA-	P-1	Aa3
Apple Inc.	Corp/CP	A-1+	AA+	P-1	Aa1
Canadian Imperial Bank	Corp/CP	A-1	A+	P-1	Aa2
United Parcel	Corp	A-1	A+	P-1	A1
3M Company	Corp	AA-	A-1+	P-1	A1
Walt Disney Company	Corp	A-1+	A+	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 diversify holdings across its permitted maturity range, as seen in the chart below. • A majority of the holdings, 52% of the portfolio, are scheduled to mature or have a call date within the next twelve months, in line with the previous quarter-end and well 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, federal agency, and corporate note investments to naturally shorten in maturity and roll-down the yield curve. – Targeting purchases in the following spaces: o High-quality corporate notes in the 3-year area of the curve to capture additional yield over similar-dated Treasuries and diversify credit exposure, totaling $187 million. o US Treasury purchases targeting the 1-3 year maturity range totaling $196 million. • The WAM of the portfolio ended the third quarter at 386 days, down from 404 days at previous quarter-end. – The decrease in portfolio WAM can primarily be attributed to longer-dated Treasury, federal agency, and supranational agency holdings rolling down the yield curve.
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 14.1% (or $1 billion) invested in a combination of the Washington State LGIP, bank deposits, and repurchase agreements (overnight liquidity), another 3.8% of the portfolio's holdings are scheduled to mature within the next thirty-one days.

Maturity Distribution as of September 30, 2018



Contribution to Maturity

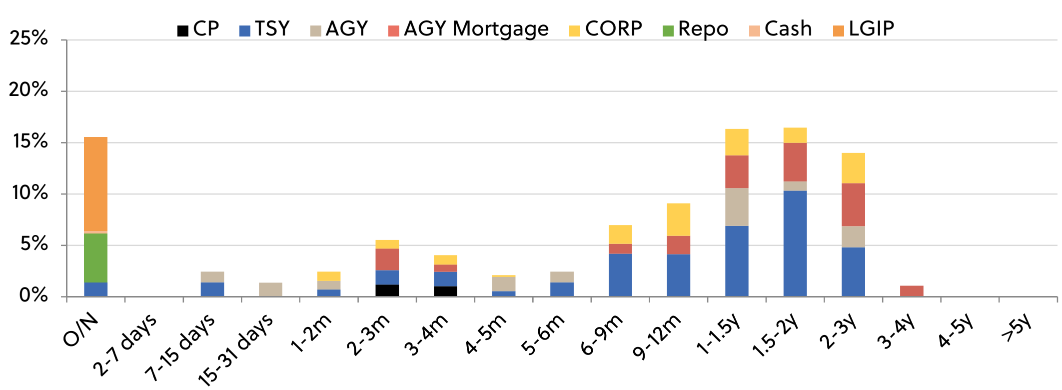
Sector	9/30/18	6/30/18
Supranational Agencies	102.15	110.68
Cash	0.00	0.00
Corporate Notes	65.64	51.94
Commercial Paper	1.77	3.51
Federal Agencies	43.95	56.99
The Washington State LGIP	0.09	0.08
Agency Mortgages	0.82	0.63
Repurchase Agreements	0.05	0.08
US Treasuries	171.68	180.36
Maturity:	**386 days**	**404 days**

Agency Mortgage maturities are reported as average life. Average life data taken from Bloomberg Financial Markets
Callable securities shown to their call date.
All other security maturities are reported as days to maturity. WA LGIP is considered to have a one day maturity.

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 September 30th, the duration of the County Investment Pool was 1.03 years, an decrease from the previous quarter which ended at 1.06 years. — The decrease in portfolio duration can be attributed to the majority of the County's holdings being allowed to roll 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. — Due to the longer-term corporate note purchases, the Pool shortened duration over the quarter from 94% of the benchmark's duration for the second quarter of 2018, to 90% of the benchmark's duration of 1.14 years for the third quarter of 2018. — In anticipation of continued rising rates, this defensive duration bias helps mitigate the adverse impact that potential interest rate increases may have on market value.

Duration Distribution as of September 30, 2018



Contribution to Duration		
Sector	9/30/18	6/30/18
Supranational Agencies	0.27	0.29
Cash	0.00	0.00
Corporate Notes	0.17	0.13
Commercial Paper	0.00	0.01
Federal Agencies	0.12	0.15
The Washington State LGIP	0.00	0.00
Agency Mortgages	0.00	0.00
Repurchase Agreements	0.00	0.00
US Treasuries	0.47	0.48
Duration:	**1.03 years**	**1.06 years**

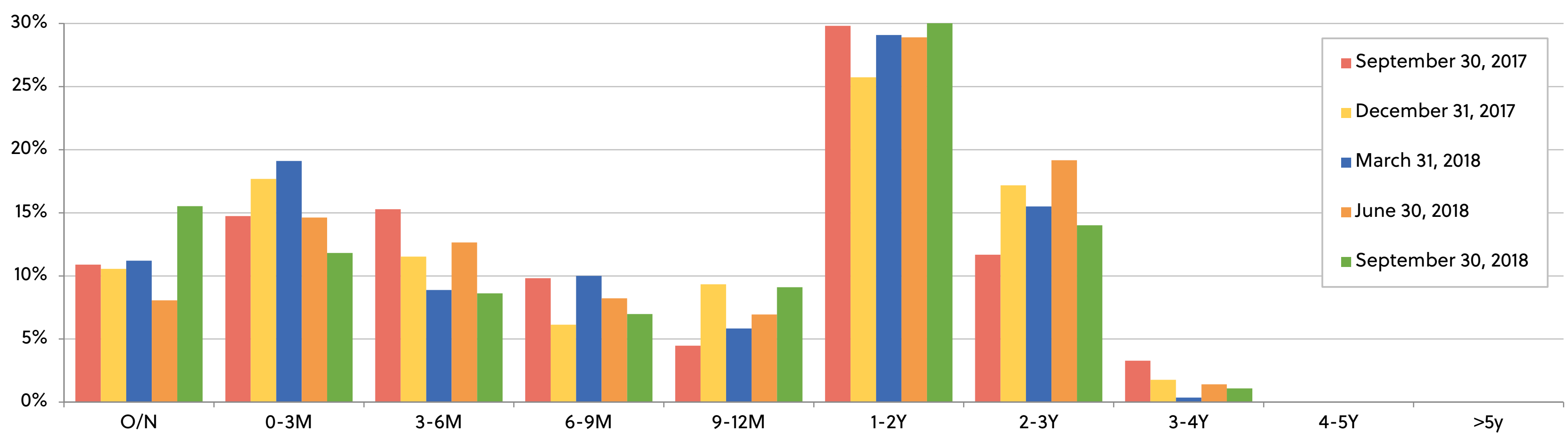
Agency Mortgage durations are shown as effective duration taken from Bloomberg Financial Markets.
Duration for Federal Agency Discount Notes and Repurchase Agreements are calculated as days to maturity. WA LGIP and bank deposits considered to have a one day duration.
All other security durations are 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 the overnight and 9- to 12-month portions of the yield curve during the third quarter of 2018.
    - The increase in allocation to overnight maturities is due to an increase in money held with the Washington State LGIP in addition to the fact that quarter-end landed on a weekend date, meaning that overnight holdings like repurchase agreements are also included here.
    - Increases in the 9-12-month portion of the curve are due to U.S. Treasury purchases in the 1-year range, as well as the natural roll-down of originally longer-dated federal agency and corporate notes.
    - 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 December 31, the average net <u>inflow</u> from the Investment Pool was $302 million.
  - Over the past five years, for the quarters ending March 31, the Investment Pool has experienced an average net <u>outflow</u> of $266 million.

Maturity Distribution September 30, 2017 to September 30, 2018



Agency Mortgage maturities are reported as average life. Average life data taken from Bloomberg Financial Markets
Callable securities shown to their call date.
All other security maturities are calculated as days to maturity. WA LGIP is considered to have a one day maturity.

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