# King County Investment Pool

**Portfolio Review**

**Quarter Ended June 30, 2019**

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 March 2019 review. Our approach included a detailed portfolio analysis and Investment Policy Compliance review, based on the County's Investment Policy, dated July 26, 2017.<br>• Our analysis was based on the Investment Pool's holdings as of June 30, 2019, with reference to holdings in past periods.<br>• 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.<br>• 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 first quarter, the yield curve deepened its inversion, while the Fed shared plans for rate cuts in 2019. Equity markets continued to strengthen, credit spreads tightened and volatility decreased.<br>• Heightened U.S. GDP growth of 3.1% in the first quarter, followed third quarter and fourth quarter figures of 3.4% and 2.2%, respectively.<br>• Inflation metrics were muted-moderate and continued to hover just below the Fed's target of 2%<br>• The Federal Reserve turned more dovish, revealing a shift in stance on monetary policy from "patient" to "appropriate". Fed Chair Powell acknowledged the domestic consequences of escalating trade tensions and affirmed the Fed's pledge to "act as appropriate to sustain the expansion". The fed funds target range is currently 2¼ to 2½%.<br>• U.S equities posted the best first half of a year in decades. For the year to date, the S&P 500 rose 17% and the Nasdaq soared 21%. While the Dow, at 14% year-to-date, had its best June performance since 1938. |
| Observations | • The portfolio is of very high credit quality. The majority of securities (78%) 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).<br>• The County maintained issuer diversification during the quarter between Corporate and CP issuers.<br>• The Portfolio maintained duration over the quarter at 80% of the benchmark's duration.<br>• The County Pool appears to provide adequate liquidity, with 14.9% (or $1.09 billion) invested in a combination of the State LGIP, bank deposits, and repurchase agreements (overnight) and 39% of the portfolio invested in US Treasuries.<br>• In anticipation of the upcoming quarter, over the past five years, for the quarters ending September 30, the Investment Pool has experienced an average net outflow of $202 million. |

# Investment Pool Portfolio Review

## Portfolio Review

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<br><br>25% maximum exposure to any one repo counterparty.<br><br>For the purposes of aggregating issuers across sectors, overnight repo counterparties are not included. | The counterparty must have:<br>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<br>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.<br>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<br>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<br>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%<br><br>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.<br><br>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%<br><br>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.<br><br>Maximum 5% per issuer applied across investment types. | See RCW 39.58 of the state Code.<br><br>If not 100% collateralized, must be rated in the highest short-term rating category by at least one NRSRO.<br><br>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.<br><br>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.<br><br>Must be issued by a bank or corporation organized and operating in the U.S.<br><br>Maximum 3% per issuer in combined categories of commercial paper and corporate notes.<br><br>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.<br><br>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.<br><br>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.<br><br>Investments in MBS will count toward the total that can be invested in any one agency as described in U.S. Agencies above.<br><br>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.<br><br>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<br><br>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.<br><br>2% per issuer rated in broad single A category.<br><br>Split ratings will take most conservative rating.<br><br>Maximum 3% per issuer in combined categories of commercial paper and corporate notes.<br><br>Maximum 5% per issuer applied across investment types. | Must be rated at least in the broad single A category or better.<br><br>Broad single A category with a negative outlook may not be purchased. | 5 years<br><br>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

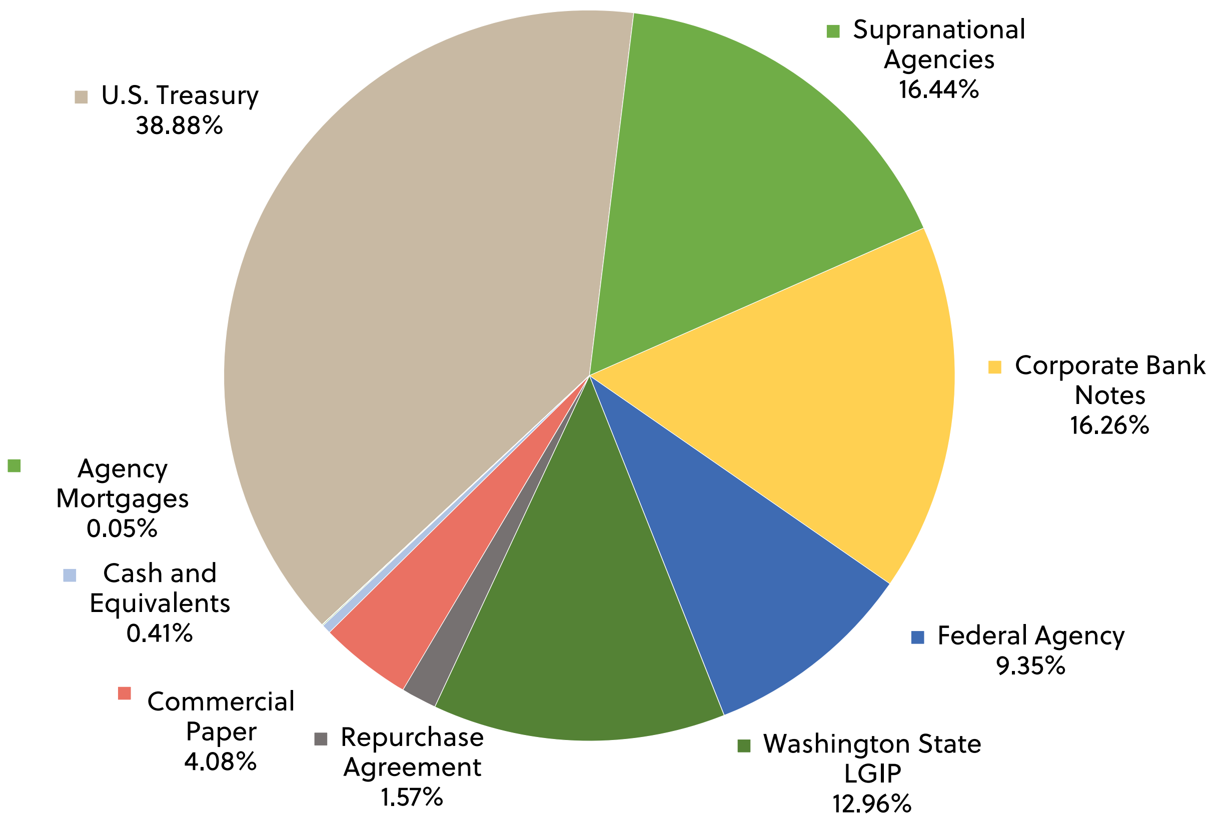
| Topic | Observations |
|---|---|
| Sector Allocation | • All sector allocations fall within the limits set forth by the County's Investment Policy Statement. The Pool is predominantly invested in U.S. government securities which are either explicitly guaranteed or carry a high level of support by the U.S. government.<br>• The County's Investment Pool balance (market value) as of June 30, 2019 was $7.3 billion and it experienced a net increase of approximately $230 million over the quarter.<br>• The County's investment pool increased percentage allocations to Commercial Paper (+0.1%), Corporates (+0.16%), and the LGIP (+3.9%) . All sectors remain with applicable policy limits.<br>• All other sectors experienced decreases in quarter-over-quarter allocation percentages. |
| Credit Quality | • Approximately 63% of the County pool's assets are guaranteed or supported by the U.S. government. Furthermore, 12% is invested in the State LGIP, where 67% 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 73%.<br>• Corporate allocations (both commercial paper and corporate notes) increased over the quarter to 22% of the portfolio from 20%, and all securities are investment grade. Allocations to corporate notes continue to be below the maximum allocation limit of 25%.<br>• 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.<br>• Approximately 64% of the Pool's assets mature in one year or less, 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 | 2,847,999,840 | 38.88% | ✓ | 4.67 years | ✓ |
| Supranational Agencies | 1,204,471,089 | 16.44% | ✓ | 2.58 years | ✓ |
| Corporate Bank Notes | 1,191,205,586 | 16.26% | ✓ | 4.85 years | ✓ |
| Federal Agency | 684,679,950 | 9.35% | ✓ | 3.24 years | ✓ |
| Washington State LGIP | 949,069,357 | 12.96% | ✓ | 1 day | ✓ |
| Repurchase Agreement | 115,000,000 | 1.57% | ✓ | 1 day | ✓ |
| Commercial Paper | 298,588,234 | 4.08% | ✓ | 197 days | ✓ |
| Cash and Equivalents | 29,790,468 | 0.41% | ✓ | 1 day | ✓ |
| Agency Mortgages | 3,798,917.35 | 0.05% | ✓ | 4.03 years (WAL) | ✓ |
| TOTAL | **7,324,603,440** | **100.00%** | | | |

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

## II. Sector Allocation

**Sector Diversification**
as of June 30, 2019

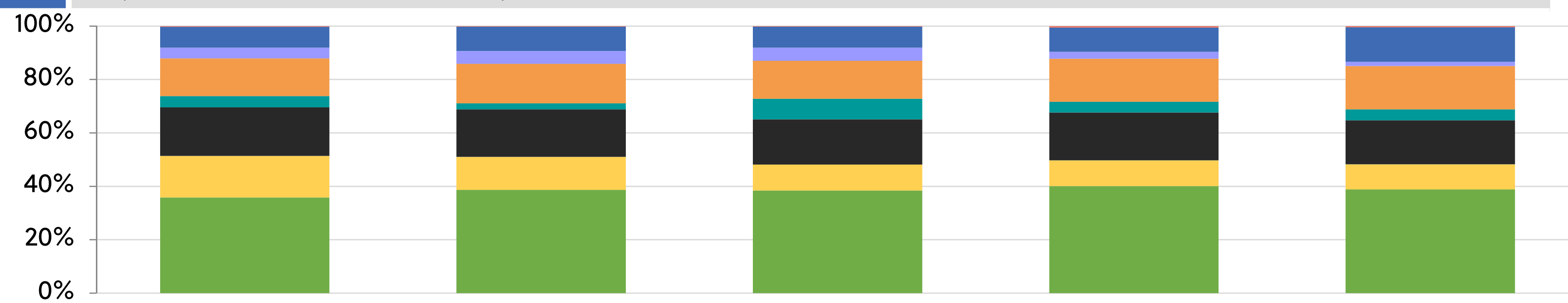



*Percentages may not total to 100% due to rounding.*

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

**Changes in Sector Allocation**

- The County's investment pool increased percentage allocations to Commercial Paper (+0.1%), Corporates (+0.26%), and the LGIP (+3.9%) while decreasing allocations to all other sectors.
- U.S. Treasuries During the second quarter, U.S. Treasuries increased by $1.5 million however the overall allocation to the sector decreased slightly to 38.88% over the quarter.
- Federal Agencies Federal agency allocations including supranationals and mortgage securities had a decrease of 3.06% of the portfolio over the quarter.
- Corporate Notes The portfolio's corporate note exposure increased over the quarter to account for 16.26% of the overall portfolio from last quarter's 16.1%.
- Commercial Paper Commercial paper increased slightly during the quarter, up to 4.1% of the total portfolio, staying in line with historic allocations from the fourth quarter's large jump to 7.7%
- Washington State LGIP Balances invested in the State LGIP increased by about $306 million and continued to serve as the Pool's primary liquidity vehicle. This investment accounts for approximately 13% of the overall portfolio.
- Repurchase Agreements and Bank Deposits Allocations to repurchase agreements continued to decrease, going down by $69 million over the quarter and account for 1.6% of the total portfolio.



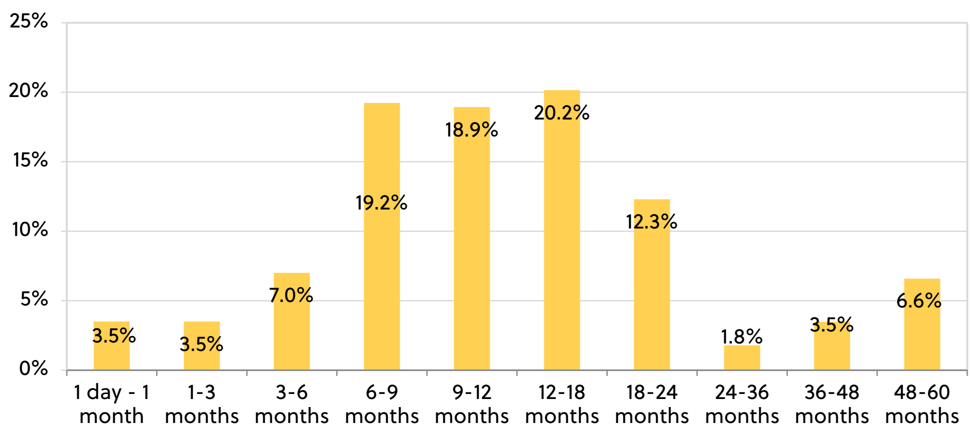

| | June 30, 2018 | September 30, 2018 | December 31, 2018 | March 31, 2019 | June 30, 2019 |
|---|---|---|---|---|---|
| U.S. Treasury | 35.82% | 38.66% | 38.46% | 40.12% | 38.88% |
| Federal Agencies | 15.52% | 12.35% | 9.67% | 9.59% | 9.35% |
| Agency Mortgages | 0.06% | 0.06% | 0.05% | 0.05% | 0.05% |
| Supranational Agencies | 18.22% | 17.79% | 16.89% | 17.86% | 16.44% |
| Commercial Paper | 4.18% | 2.2% | 7.7% | 4.0% | 4.1% |
| Corporate Notes | 14.13% | 14.8% | 14.2% | 16.1% | 16.26% |
| Repurchase Agreements | 4.01% | 4.78% | 4.90% | 2.59% | 1.57% |
| Washington State LGIP | 7.80% | 9.11% | 7.89% | 9.06% | 12.96% |
| Cash and Equivalents | 0.27% | 0.23% | 0.19% | 0.55% | 0.41% |

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

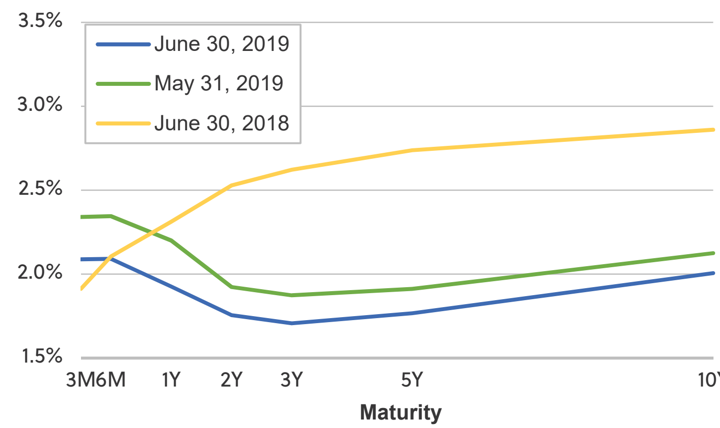
# II. Sector Allocation – U.S. Treasury Securities

| Topic | Observations |
|---|---|
| Observations | • The County's balances held in U.S. Treasuries decreased slightly from 40.1% of the total portfolio to 38.9%.<br>• Treasury yields continued to fall across the curve during the second quarter, and remain inverted.<br>o The 10-year Treasury yield was down 11 bps, while the one-year yield fell 27 bps.<br>o The yield curve continues to be inverted in the 6-month to 5-year space. Longer-term yields continue to lower as the Fed has signaled that rate cuts to the federal funds target rate are expected in 2019.<br>o The majority of the Pool's Treasury investments ($1.6 billion, or 51% of all Treasury holdings) have remaining maturities of less than one year and are positioned in the shorter part of the yield curve.<br>• The weighted average maturity (WAM) of the County's Treasury allocation increased over the quarter by 75 days, from 366 days on March 31st, to 441 days on June 30th due to the purchase of longer-dated securities.<br>• 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 last quarter, and the yield curve one year ago, before the inversion began. The County's Treasury holdings continue to be concentrated in shorter-term securities, primarily in the 6-18 month area of the curve, as investors are still not being compensated for taking on additional risk. |

U.S. Treasury Maturity Distribution
as of June 30, 2019




U.S. Treasury Yield Curve
6/30/18 vs 3/31/19 vs 6/30/19

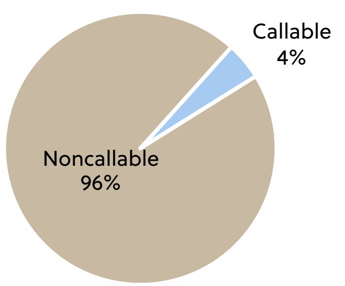



* Source Bloomberg Financial Systems

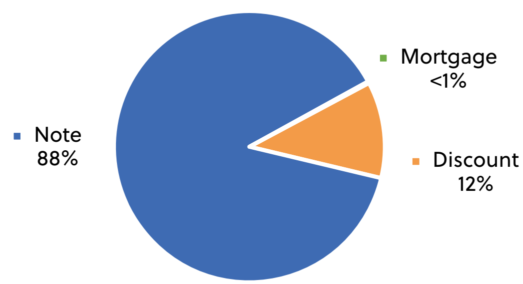
# II. Sector Allocation – Federal Agencies

| Topic | Observations | | | |
|---|---|---|---|---|
| Structure *(as % of Federal Agency Allocations)* | • Non-Callable | 95.5% | • Discount Notes | 11.5% |
| | • Callable | 4.5% | • Coupon Bearing Notes | 88.3% |
| | | | • Agency Mortgage | 0.2% |
| Diversification *(as % of Federal Agency Allocations)* | • Freddie Mac (FHLMC) | 6.4% | • Federal Farm Credit Bank (FFCB) | 12.6% |
| | • Federal Home Loan Bank (FHLB) | 13.7% | • Freddie Mac Mortgage-Backed (FHR) | 0% |
| | • Fannie Mae (FNMA) | 5.6% | • Fannie Mae Mortgage-Backed (FNR) | 0.2% |
| | • Supranational Agencies | 61.5% | | |
| 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%).<br>• The amount invested in federal agencies, excluding supranationals and mortgage securities, increased by $4.2 million. As a portion of the total portfolio, federal agencies were nearly unchanged, decreasing from 9.6% in the first quarter to 9.3% in the second quarter.<br>• All supranational agency holdings are below the 35% issuer limit, at 15% of the entire portfolio.<br>• The County Pool's only allocation to agency mortgages is in Fannie Mae pools, totaling approximately $3.8 million.<br>• No federal agencies matured in the second quarter, compared to a total of $224.5 million maturing in the quarter ended March 31. | | | |

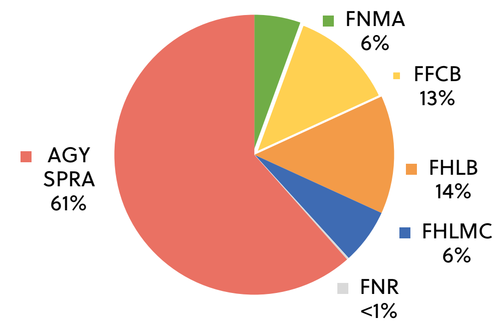
Callable vs. Non-Callable
as of June 30, 2019




Structure Distribution
as of June 30, 2019




Issuer Diversification
as of June 30, 2019

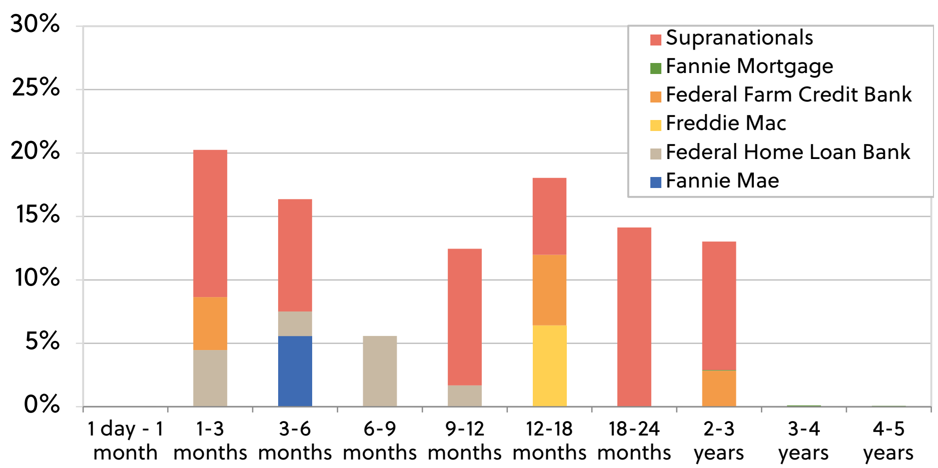



*All calculations above are based on total cash equivalents exposure, not overall Portfolio.*
***Percentages may not total to 100% due to rounding.*

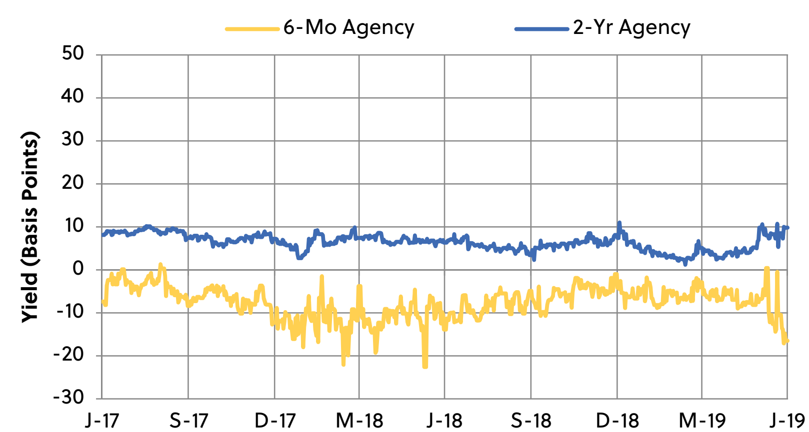
# II. Sector Allocation – Federal Agencies

| Topic | Observations |
|---|---|
| Maturity Distribution | • The County's federal agency maturity distribution falls within the limits set forth by the Investment Policy Statement.<br>• Over the quarter, the weighted average maturity (WAM) of the County's federal agency holdings decreased by 72 days, from 443 days on March 31st to 371 days on June 30th.<br>• Agency spreads in the shorter end (less than 2 years) of the curve have widened. Supranational spreads have also widened, and remain an attractive alternative to federal agency securities.<br>— When yields of federal agencies and Treasuries are relatively close, the U.S. Treasury security is typically preferred.<br>• There were no new agency purchases this quarter.<br>— Because there were no new additions of longer maturity Agencies, natural shortening has resulted in 73% of the County's total agency holdings set to mature in less than 1 year, compared to 50% of agency holdings on March 31st. |

Federal Agency Maturity Distribution by Name
as of June 30, 2019




Federal Agency Yield Spreads to Treasuries
Past 24 Months



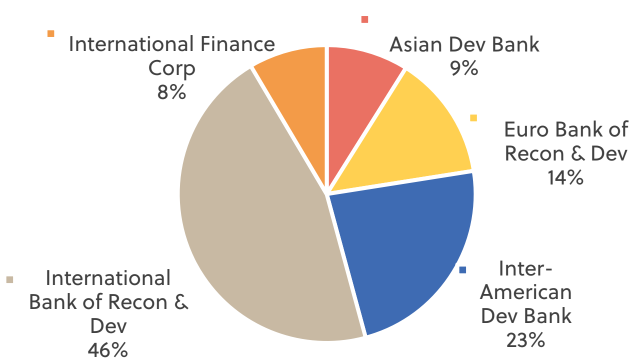

** Source Bloomberg Financial Systems*

- *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.*

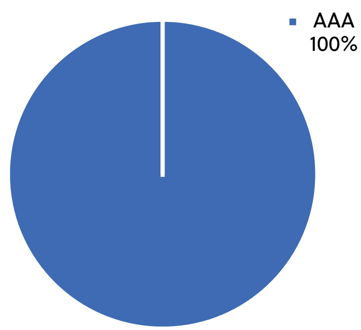
# II. Sector Allocation – Supranational Agencies

| Topic | Observations |
|---|---|
| Credit Distribution | • The County had one supranational issue from the Inter-American Development Bank mature in the second quarter.<br>• The County maintained exposure to five supranational issuers.<br>— 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.<br>• 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.<br>— The portfolio's allocation to supranational agencies is concentrated in maturities over 1 year, with 53.6% having a remaining maturity of over 1 year. |
| Spread to Agency Rates | • The chart on the right shows the spread between supranational agencies and federal agency securities.<br>— 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. |

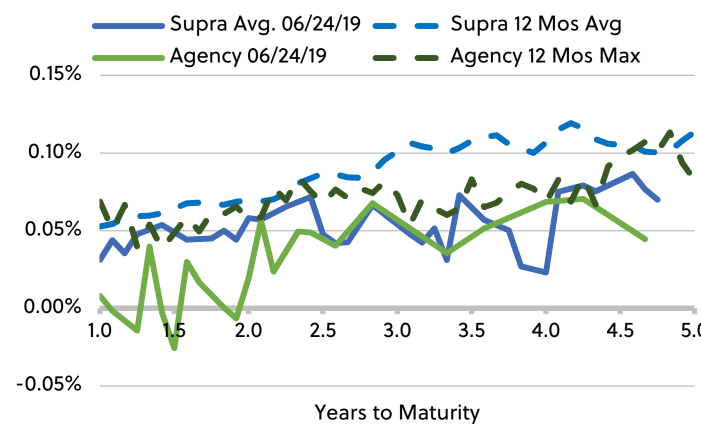
Issuer Distribution
as of June 30, 2019




Credit Distribution
as of Jun 30, 2019




Supranational Agency vs.
Federal Agency Yield Spreads

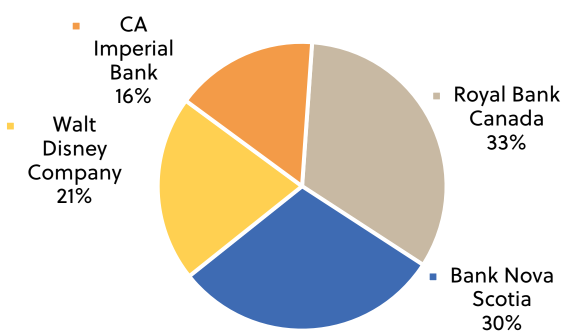



** Source Bloomberg Financial Systems*

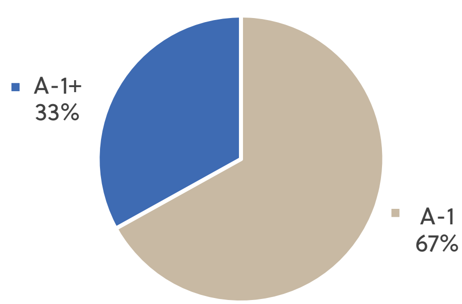
# II. Sector Allocation – Commercial Paper

| Topic | Observations |
| --- | --- |
| Issuer Diversification | • The County's allocation to commercial paper increased slightly over the quarter, by approximately $12 million and now accounts for 4.1% of the total portfolio, up from 4.0% at the end of last quarter.<br>• The portfolio continued to hold Canadian Imperial Bank, the Bank of Nova Scotia, and the Royal Bank of Canada. The County also added allocations to the Walt Disney Company, which had been previously held only in the corporate sector.<br>• The incremental yield offered by commercial paper continued to be attractive in the second quarter with the continuing decrease in short term Treasury yield deflating yields across the board.<br>— "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, the Bank of Nova Scotia, and the Walt Disney Company 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.<br>• After significantly decreasing commercial paper allocation in the first quarter, the County maintained current allocations. During the quarter the County added an additional issuer, contributing to diversification benefits. |

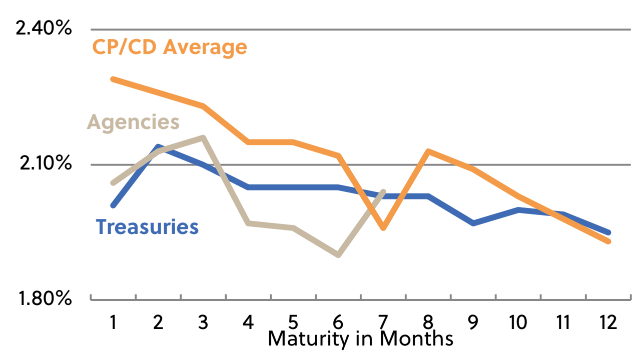
Issuer Distribution
as of June 30, 2019




Credit Distribution
as of June 30, 2019




Current Short-Term Yields
as of June 30, 2019




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

** Source Bloomberg Financial Systems*

# II. Sector Allocation – Corporate Notes

| Topic | Observations |
|---|---|
| Maturity Distribution | • The County expanded its allocation to high-quality corporate notes, increasing by 0.16% over the quarter. This sector accounts for 16.3% of the overall portfolio, totaling approximately $1.2 billion. Of corporate note holdings, 45% are still callable as of June 30th.<br>— Corporate allocations to Wells Fargo Bank matured during the quarter, however the issuer remains in other sectors.<br>— When viewing the County's corporate note holdings to the next call date, the weighted average maturity of these investments is 1.18 years. Of the County's total allocation to this sector, 44% is held in maturities beyond 1 year. All corporate holdings mature in 4 years or less.<br>• 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, however this quarter we have seen significant tightening. |

| Credit & Issuer Distribution | S&P Short | S&P Long | Moody's Short | Moody's Long | % of Corporate Holdings | % of Portfolio |
|---|---|---|---|---|---|---|
| Apple Inc. | A-1+ | AA+ | P-1 | Aa1 | 11.23% | 1.83% |
| US Bank | A-1+ | AA- | P-1 | A1 | 10.95% | 1.78% |
| Microsoft Corp | A-1+ | AAA | P-1 | Aaa | 9.50% | 1.55% |
| Bank of Montreal | A-1 | A+ | P-1 | Aa2 | 9.49% | 1.54% |
| Toronto Dominion Bank | A-1+ | AA- | P-1 | Aa1 | 9.17% | 1.49% |
| PNC Bank | A-1 | A | P-1 | A2 | 8.40% | 1.37% |
| JP Morgan Chase | A-1 | A+ | P-1 | Aa2 | 7.84% | 1.28% |
| Proctor & Gamble Co | A-1+ | AA- | P-1 | Aa3 | 6.73% | 1.09% |
| Bank of New York Mellon | A-1+ | AA- | P-1 | Aa2 | 6.30% | 1.02% |
| Canadian Imperial Bank | A-1 | A+ | P-1 | Aa2 | 4.82% | 0.78% |
| Royal Bank of Canada | A-1+ | AA- | P-1 | Aa2 | 4.19% | 0.68% |
| Bank of Nova Scotia | A-1 | A+ | P-1 | Aa2 | 3.64% | 0.59% |
| United Parcel | A-1 | A+ | P-1 | A1 | 2.51% | 0.41% |
| 3M Co | A-1+ | AA- | P-1 | A1 | 2.14% | 0.35% |
| Walt Disney Co | A-1 | A | P-1 | A2 | 1.26% | 0.20% |
| Honeywell International | A-1 | A | P-1 | A2 | 1.13% | 0.18% |
| Home Depot Inc. | A-1 | A | P-1 | A2 | 0.69% | 0.11% |

**Corporate/Treasury Yield Spreads**
June 2016 through June 2019

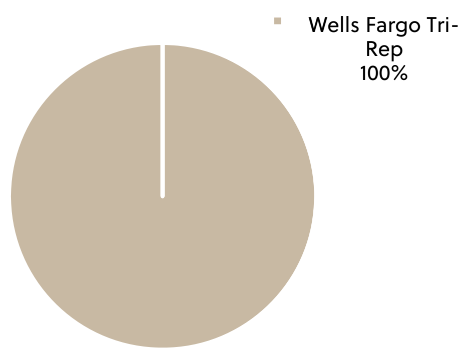

** Source Bloomberg Financial Systems*

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

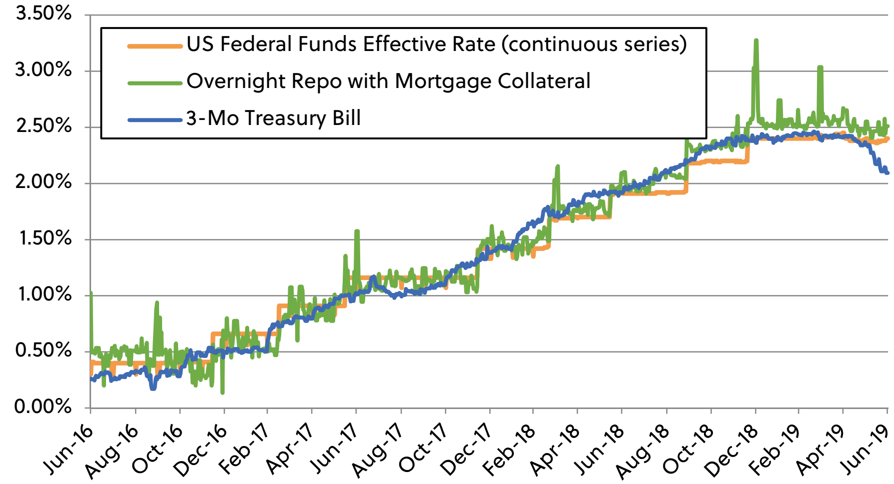
# II. Sector Allocation – Repurchase Agreements

| Topic | Observations |
|---|---|
| Issuer Diversification | • The County decreased tri-party repurchase agreement allocations over the quarter, with 1.6% of the portfolio allocated to the sector, compared to 2.6% in September.<br>• At June 30, the portfolio utilized one repurchase agreement provider, Wells Fargo Bank, with an allocation of $115 million.<br>• 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.<br>• 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 June 30, 2019, the repurchase agreement sector's weighted-average yield was 2.47%, down 11 bps compared to the last quarter. Yields for overnight repurchase agreements continued to fall, keeping in line with short term Treasury rates. |

**Issuer/Credit Distribution**
as of June 30, 2019



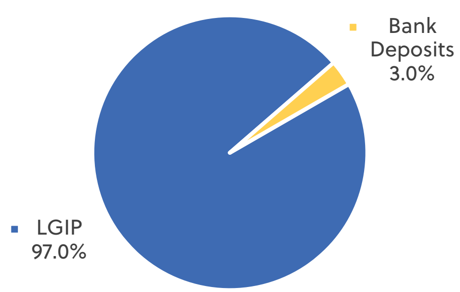

**Short-Term Yields**
June 2016 through June 2019



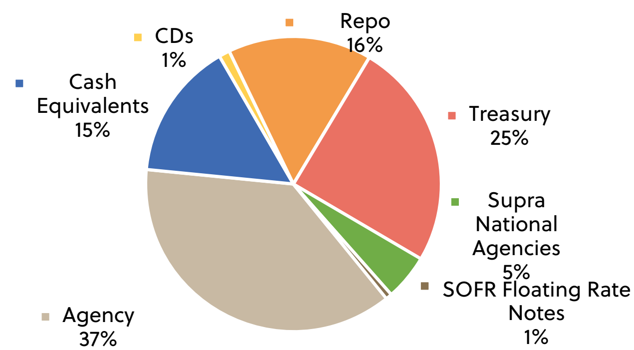
# II. Sector Allocation – LGIPs and Cash Equivalents

| | Underlying Investments | Rating (Short-Term: S&P/ Moody's/Fitch) | Observations |
|---|---|---|---|
| Washington State LGIP | • U.S. Treasuries 24.9%<br>• Federal Agencies 37.4%<br>• Supra National Agencies 5.0%<br>• Repurchase Agreements 15.7%<br>• Certificates of Deposit 1.2%<br>• Cash Equivalents 15.1%<br>• SOFR Floating Notes 0.7%<br>*As of June 30, 2019* | • N/A | • The County currently has allocated $949 million to the Washington State LGIP, up approximately $307 million from the previous quarter.<br>• The County's allocation to the State LGIP continues to serve as the primary source of overnight liquidity for the portfolio.<br>• The State LGIP increased federal agency allocations, ending a several quarter trend of decreasing exposure, increasing the sector by 8.3%, primarily at the expense of supranationals (-3.8%) and cash equivalents (-3.4%). |
| Cash Equivalents | • State LGIP 97.0%<br>• U.S. Bank 2.64%<br>• Key Bank 0.038%<br>• Bank of America 0.03% | • U.S. Bank: A-1+/P-1/F1+<br>• Key Bank: A-2/P-2/F-1<br>• 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.<br>• The County significantly decreased its allocation to bank deposits over the quarter, by $10 million, ending June at $29.8 million. The U.S. Bank account represents 87% of the Pool's bank deposits (Key Bank 12% and Bank of America 1%). |

Cash Equivalents Distribution
as of June 30, 2019




Washington State LGIP Sector Distribution
as of June 30, 2019

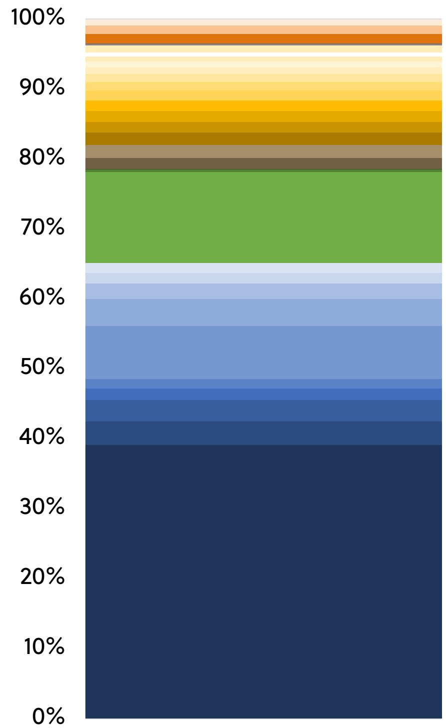



*All calculations above are based on total cash equivalents exposure, not overall Portfolio.*
***Percentages may not total to 100% due to rounding.*

# III. Issuer Concentration

| Issuer Exposure | |
|---|---|
| | • The County continues to maintain a well-diversified portfolio by issuer, as shown in the chart below.<br>• Approximately 64.7% of the portfolio is allocated directly to U.S. government guaranteed or government supported entities.<br>• Of the remaining 36.7% of the portfolio, 14.9% is allocated to ultra short-term or overnight investment vehicles, including the State LGIP, repurchase agreements, and bank deposits. The remaining 20.3% is allocated to credit issuers, including commercial paper and corporate notes.<br>• While the county removed corporate exposure to Wells Fargo, and added CP exposure to the Walt Disney Company, this issuers were already being utilized in other sectors, so the high credit quality and issuer diversification of the portfolio has not changed. |

| U.S. Treasury (100% Limit) | 38.88% |
|---|---|
| **Agency Issuers** | **Percentage (35% Limit)** |
| FHLB | 3.34% |
| FFCB | 3.08% |
| FHLMC | 1.57% |
| FNMA | 1.41% |
| Intn'l Bk of Recon & Dev | 7.52% |
| Inter-American Dev Bk | 3.83% |
| Euro Bk of Recon & Dev | 2.23% |
| Asian Dev Bank | 1.47% |
| International Finance Corp | 1.40% |
| **Washington State LGIP (25% Limit)** | **12.96%** |
| **Overnight Deposits** | **Percentage (No Limit)** |
| US Bank | 0.35% |
| Key Bank | 0.05% |
| Bank of America | <0.1% |
| **Repo Issuers** | **Percentage (25% Limit)** |
| Wells Fargo Tri-Repo | 1.57% |




| Corporate Issuers | Percentage (5% Limit) |
|---|---|
| Apple Inc. | 1.83% |
| US Bank | 1.78% |
| Microsoft Corp | 1.55% |
| Bank of Montreal | 1.54% |
| Toronto Dominion Bank | 1.49% |
| PNC Bank | 1.37% |
| JP Morgan Chase | 1.28% |
| Proctor & Gamble Co | 1.09% |
| Bank of New York Mellon | 1.02% |
| Canadian Imperial Bank | 0.78% |
| Royal Bank of Canada | 0.68% |
| Bank of Nova Scotia | 0.59% |
| United Parcel | 0.41% |
| 3M Co | 0.35% |
| Walt Disney Co | 0.20% |
| Honeywell International | 0.18% |
| Home Depot Inc. | 0.11% |
| **CP Issuers** | **Percentage (5% Limit)** |
| Royal Bank Canada | 1.35% |
| Bank Nova Scotia | 1.23% |
| Walt Disney Company | 0.85% |
| CA Imperial Bank | 0.65% |

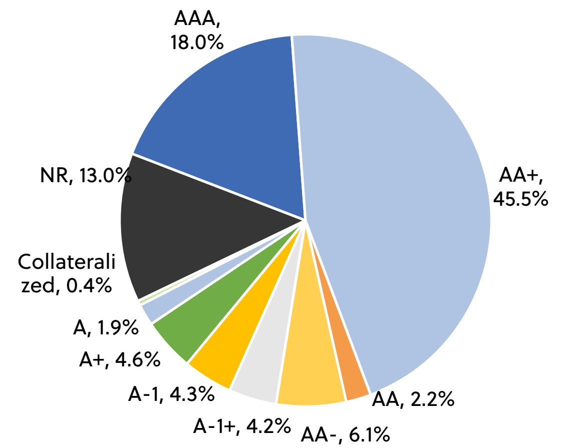
*Percentages may not add to 100% due to rounding.*
** For the purposes of totaling issuer concentration, issuers are aggregated across all sector types. It is noted however that issuers across sector types may maintain separately rated issuer credits.*

# 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 increased its credit exposure through commercial paper and corporate notes over the quarter, ending at approximately 20.4% of the portfolio, compared to 20.2% last quarter.
  - Commercial paper now accounts for 4.1% of the entire portfolio, while corporate notes account for 16.26%.
- The County added CP allocations to the Walt Disney Company, which had been previously held only in the corporate sector.
- 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 13% 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, 2.2% of the County's Pool is allocated indirectly to corporate securities (repurchase agreements and certificates of deposit).

Total Pool Credit Distribution*
as of June 30, 2019




Corporate/CP Issuer Ratings Table
as of June 30, 2019

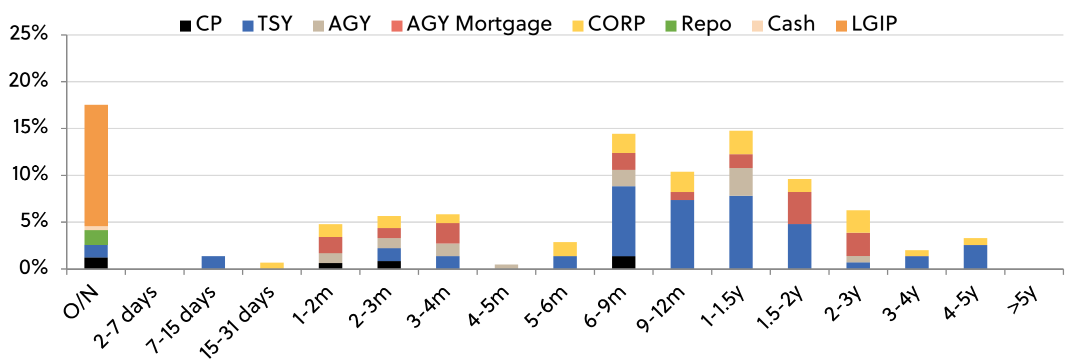
| Issuer Distribution | Sectors Invested | S&P Short* | S&P Long* | Moody's Short** | Moody's Long** |
|---|---|---|---|---|---|
| Apple Inc. | Corp | A-1+ | AA+ | P-1 | Aa1 |
| US Bank | Corp | A-1+ | AA- | P-1 | A1 |
| Microsoft Corp | Corp | A-1+ | AAA | P-1 | Aaa |
| Bank of Montreal | Corp | A-1 | A+ | P-1 | Aa2 |
| Toronto Dominion Bank | Corp | A-1+ | AA- | P-1 | Aa1 |
| PNC Bank | Corp | A-1 | A | P-1 | A2 |
| JP Morgan Chase | Corp | A-1 | A+ | P-1 | Aa2 |
| Proctor & Gamble Co | Corp | A-1+ | AA- | P-1 | Aa3 |
| Bank of New York Mellon | Corp | A-1+ | AA- | P-1 | Aa2 |
| Canadian Imperial Bank | Corp/CP | A-1 | A+ | P-1 | Aa2 |
| Royal Bank of Canada | Corp/CP | A-1+ | AA- | P-1 | Aa2 |
| Bank of Nova Scotia | 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/CP | A-1 | A | P-1 | A2 |
| Honeywell International | Corp | A-1 | A | P-1 | A2 |
| Home Depot Inc. | 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 invest across its permitted maturity range, as seen in the chart below.<br>• A majority of the holdings, 64% of the portfolio, are scheduled to mature within the next twelve months, a 5% increase from the previous quarter-end and conservatively above the 40% mandated by the investment policy.<br>• It appears the County's maturity strategies over the past several quarters have included:<br>– Allowing previously purchased, longer-dated U.S. Treasury and federal agency investments to naturally shorten in maturity and roll-down the yield curve.<br>– Targeting purchases in the following spaces:<br>o Higher-yielding federal agency purchases with maturities of under 3 years, however none were purchased this quarter.<br>o High-quality corporate notes with maturities between 1 and 2 years, which contributed to portfolio diversification.<br>o US Treasury purchases in the longer-end (more than 3 years) of the curve .<br>– The WAM of the portfolio ended the second quarter at 368 days, up from 362 days at previous quarter-end.<br>– The increase in portfolio WAM can primarily be attributed to purchases of higher quality corporate notes and treasury purchase in the longer-end of the 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 14.9% (or $1.09 billion) invested in a combination of the Washington State LGIP, bank deposits, and repurchase agreements (overnight liquidity), another 4.6% of the portfolio's holdings are scheduled to mature within the next thirty-one days. |

Maturity Distribution as of June 30, 2019



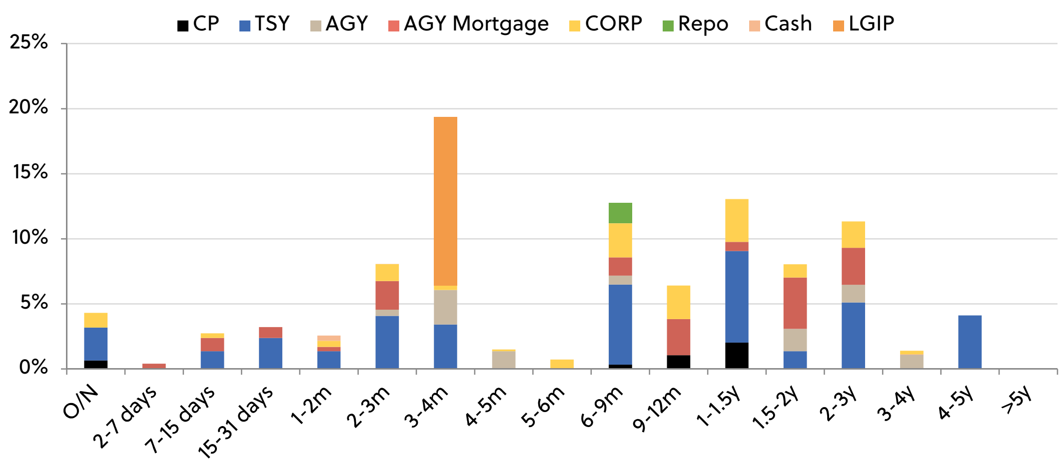

| Contribution to Maturity | | |
|---|---|---|
| **Sector** | **6/30/19** | **3/31/19** |
| Supranational Agencies | 67.30 | 84.67 |
| Cash | 0.00 | 0.01 |
| Corporate Notes | 81.68 | 74.32 |
| Commercial Paper | 3.76 | 2.80 |
| Federal Agencies | 40.55 | 50.29 |
| The Washington State LGIP | 0.13 | 0.09 |
| Agency Mortgages | 2.59 | 2.79 |
| Repurchase Agreements | 0.02 | 0.03 |
| US Treasuries | 171.53 | 146.77 |
| **Maturity:** | **368 days** | **362 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.<br>• 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).<br>• As of June 30th, the duration of the County Investment Pool was 1.00 years, an increase from the previous quarter which ended at 0.91 years.<br>— The increase in portfolio duration can be attributed to the purchase of longer term Treasuries.<br>• 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.<br>— The Pool maintained duration over the past two quarters at 80% of the benchmark's duration which was 1.14 years for the second quarter of 2019. |

Duration Distribution as of June 30, 2019




| Contribution to Duration | | |
|---|---|---|
| **Sector** | **6/30/19** | **3/31/19** |
| Supranational Agencies | 0.18 | 0.22 |
| Cash | 0.00 | 0.00 |
| Corporate Notes | 0.16 | 0.16 |
| Commercial Paper | 0.03 | 0.01 |
| Federal Agencies | 0.11 | 0.12 |
| The Washington State LGIP | 0.03 | 0.00 |
| Agency Mortgages | 0.00 | 0.00 |
| Repurchase Agreements | 0.01 | 0.00 |
| US Treasuries | 0.48 | 0.39 |
| **Duration:** | **1.00 years** | **0.91 years** |

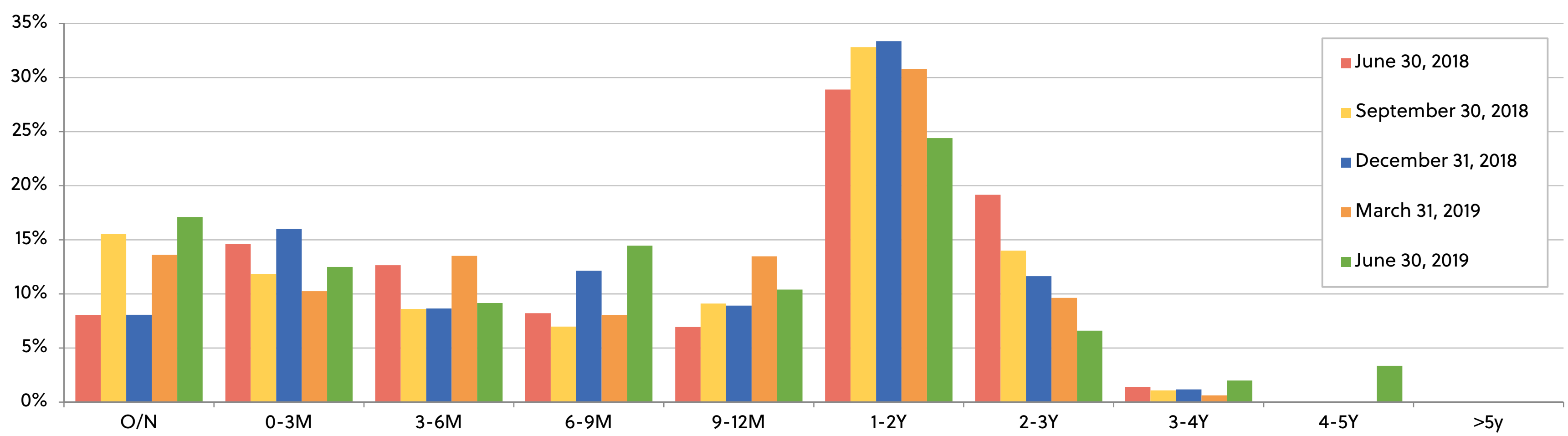
*Agency Mortgage durations are shown as effective duration taken from Bloomberg Financial Markets.*
*Duration for Federal Agency Discount Notes and Repurchase Agreements are calculated as days to maturity. WA LGIP and bank deposits considered to have a one day duration.*
*All other security durations 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 6- to 9-month portion of the yield curve and the 4-5 year portion during the second quarter of 2019.
    - The increase in allocation to 6- to 9-month maturities are primarily due to roll downs from the 9-12 month bucket.
    - Increases in the 4-5-year portion of the curve are due to new purchases, primarily in the treasury sector.
    - Targeting these areas of the curve could offer additional income potential and roll-down opportunities.
- 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 September 30, the average net <u>outflow</u> from the Investment Pool was $202 million.
  - Over the past five years, for the quarters ending December 31, the Investment Pool has experienced an average net <u>inflow</u> of $347 million.

Maturity Distribution June 30, 2018 to June 30, 2019




*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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