# Asset Liability Management Report 

## Performance Indicators and Key Measures

Cash, Investment and Debt Balances - Book Value (\$M)

Restricted Cash and Investments Unrestricted Cash and Investments Total Cash and Investments
537.3

1,501.4
2,038.7

Total Outstanding Debt
2,216.8

| INVESTMENT PERFORMANCE | INTEREST RATE RISK |
| :---: | :---: |
| Prior quarter: Average | Prior quarter: Low |
| Interest earnings forecast to exceed budget. ST Portfolio performance on a risk adjusted basis at or above the benchmark for a rolling 1 year period of time. | The current long term rate for tax exempt bonds and blended rate for outstanding debts are below the assumed borrowing rate in the financial plan. |
| Key Measures | Key Measures |
| Interest income is $\$ 25.4 \mathrm{M}$ vs. $\$ 14.6 \mathrm{M}$ budget. <br> Without unrealized gains and losses, interest income is $\$ 10.8 \mathrm{M}$ above budget. | The 20 year MMD rate is $3.07 \%$, 25 basis point higher than the June 29th rate. The blended ST interest cost is $3.63 \%$. The current assumed rate in the financial plan is $4 \%$ from 2017 to 2021 and 5.3\% from 2022 to 2041. |
| Book yield for the unrestricted ST investment portfolio is 2.01\%, State Pool is $2.06 \%$, and KC Pool is 1.83\%. | The blended investment yield is $2.04 \%$ versus the variable debt rate of $1.94 \%$ on 09/30/18. |


| CREDIT RISK |
| :---: | :---: |
| Prior quarter: Low |

## 3 Q 2018 ALM Overview

## Market Environment

- The Federal Open Market Committee (FOMC) raised the federal funds rate up 25 bps to a range of $2.00 \%$ to $2.25 \%$ on September 26 ${ }^{\text {th }}$, 2018. Fed Funds is on track for one more rate increase in 2018.
- National Unemployment Rate drops to $3.7 \%$ in September. The initial Jobless Claims reached a 50 year low confirming the exceptionally strong strength in employment.
- Current U.S Inflation rate is $2.3 \%$ for the 12 months ended September 2018, hitting the Feds preferred target rate $2 \%$. Strong growth in employment could potentially lead to the possibility of higher incomes which will impact future inflation levels. Two-year treasury yields increased 28 basis points and 10-year notes increased 20 basis points. The two year note yield changed from 2.53 to 2.81, and the ten year note yield changed from 2.86 to 3.06 .

Current Borrowing Rate versus Investment Rate



## Credit Watch

- ST is currently in "stand still" status on its Lease In/Lease Out agreement with AIG, awaiting further market and regulatory developments. AIG's financial standing has stabilized.
- Capital Replacement account holds $\$ 8.5 \mathrm{~mm}$ of the Minneapolis, Minnesota Taxable UTGO 3.25 12/1/18 which Fitch lowered their rating on the issuer effective 11/8/17 from AAA to AA+ with a stable outlook. The bonds remain rated Aa1 by Moody's and AAA by S\&P.


## Cash，Investment and Debt Balances

ALM Position（\＄M）

| Balance and Duration | Value（\＄M） | Interest Rate | Duration／Avg．Life | Benchmark |
| :--- | ---: | ---: | ---: | ---: |
| Assets（Cash／Investments） |  |  |  |  |
| Restricted | 537.3 | $2.04 \%$ | 1.6 years | 2.78 years |
| Unrestricted | $1,501.4$ | $2.00 \%$ | 0.86 years | 0.91 years |
| Assets（Cash／Investments）total | $2,038.7$ | $2.01 \%$ |  |  |
| Liabilities（Debt） | $(2,123.4)$ |  |  |  |
| Fixed－Rate | $(150.0)$ | $3.78 \%$ |  |  |
| Variable－Rate | $(2,273.4)$ | $2.79 \% *$ | 15.84 |  |
| Liabilities（Debt）total | $(234.7)$ | $3.72 \%$ |  |  |
| Net Position |  |  |  |  |

＊Blended rate of actual through quarter end and Assumed Variable Rate， $3.67 \%$ at time of issuance，for remaining life of the bonds．The Assumed Variable Rate is the highest 12 month rolling average of the SIFMA index over the preceding 10 years．

| Balance and Duration | End 3Q 2018 （\＄M） | End 4Q 2017 （\＄M） | End 3Q 2017 （\＄M） | Investment Yield （trend vs．last Q） |
| :---: | :---: | :---: | :---: | :---: |
| Restricted Cash \＆Invs | 537.3 | 500.7 | 511.2 | 2．04\％介 |
| Unrestricted Cash \＆Invs | 1，501．4 | 1，294．4 | 1，226．2 | 2．00\％介 |
| Total Cash and Investments | 2，038．7 | 1，795．1 | 1，737．4 | 2．01\％介 |
|  | Current Debt | Undrawn TIFIA Loans＊ | Future Debt | Projected Next Bond Issue |
| Total Debt | 2，273．4 | 3，263．7 | 13，878＊＊ | TBD |


| Net Interest | 2017 Budget（\＄M） | $\mathbf{2 0 1 7}$ Actual（\＄M） | $\mathbf{2 0 1 8}$ Budget（\＄M） 2018 YTD Budget（\＄M） | $\mathbf{2 0 1 8}$ YTD Actual（\＄M） |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Uncapitalized Debt Interest Exp | 0.0 | $(15.6)$ | $(14.3)$ | $(81.5)$ | $(79.8)$ |
| Capitalized Debt Interest Exp | $(109.4)$ | $(81.9)$ | $(95.3)$ | $(71.5)$ | $(73.8)$ |
| Interest Earnings＊ | 9.6 | 16.9 | 19.5 | 14.6 | 18.1 |
| Net Interest Expense | $\mathbf{( 9 9 . 8 )}$ | $\mathbf{( 8 0 . 7 )}$ | $\mathbf{( 9 0 . 1 )}$ | $\mathbf{( 1 3 8 . 3 )}$ | $\mathbf{( 1 3 5 . 5 )}$ |
| Budget based on the annual Adopted Budget |  |  |  |  |  |

Budget based on the annual Adopted Budget．
＊Interest Earnng with adjusted unrealized gains and losses

## Strategy

The portfolios were positioned shorter in duration due to the outlook for higher rates. This strategy has allowed the portfolio earnings yield on the investment portfolio to increase over the quarter as maturities were reinvested at higher rates. The earnings yield on the investments are lower than the LGIP due to the longer portfolio structures of the investments. The State LGIP has a 60 -day average maturity and $1 / 2$ of the portfolio turns over monthly which gives it the ability to reset upward as the Federal reserve increase short term rates. The investment funds will move up more slowly as the portfolio turnover is longer. The shorter duration strategy also somewhat protected the principal market price decline because the maturities were shorter and did not get price down as much as the longer investments. It is important to view the investments through interest rate cycles and the added earnings that are contributed from the investment strategy. We expect the portfolio investment yields to continue to increase into next year as excess cash is invested at rates between 2 and 3\%.

| Cash and Investments (\$M) | Book <br> Value | Net Change | Average Duration | Benchmark Duration | Risk Adj Ratio (RAR)* | Benchmark RAR | Current Yield | Qtrly Yield Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Unrestricted |  |  |  |  |  |  |  |  |
| State Investment Pool | 212.0 | 60.0 | 0.05 |  |  |  | 2.06\% | 0.19 |
| Operating account/Uncleared checks** | (1.8) | 0.4 | 0.01 |  |  |  | 2.04\% | 0.16 |
| King County Investment Pool | 153.4 | 0.7 | 1.02 |  |  |  | 1.83\% | 0.11 |
| ST Internal Investments | 1,137.8 | 0.7 | 0.99 |  |  |  | 2.01\% | 0.24 |
| Total Unrestricted | 1,501.4 | 61.8 | 0.86 | 0.91 | 3.33 | 1.56 | 2.00\% | 0.22 |
| Restricted |  |  |  |  |  |  |  |  |
| Operating/Contingency (internal) | 78.0 | 0.4 | 0.05 |  |  |  | 2.06\% | 0.18 |
| Capital Replacement (internal) | 330.5 | 1.8 | 2.27 | 2.48 | (0.55) | (0.78) | 2.07\% | 0.02 |
| Emergency Loss Reserve (internal) | 24.0 | 0.1 | 0.05 |  |  |  | 2.06\% | 0.18 |
| Debt Service Accounts | 75.6 | 13.5 | 0.05 |  |  |  | 2.06\% | 0.17 |
| BNSF Escrow | 8.0 | 0.0 | 0.01 |  |  |  | 0.05\% | 0.00 |
| OCIP Collateral | 2.3 | 0.0 | 4.17 |  |  |  | 3.68\% | (0.00) |
| Link Risk Fund | 0.5 | (0.1) | 1.02 |  |  |  | 1.83\% | 0.13 |
| Prior Debt Service Reserve | 18.3 | 0.1 | 5.05 |  |  |  | 5.09\% | 2.24 |
| FTA Grant Recovery | 0.2 | 0.0 | 0.05 |  |  |  | 2.06\% | 0.18 |
| Total Restricted | 537.3 | 15.8 | 1.60 | N/A*** |  |  | 2.15\% | 0.14 |
| Total | 2,038.7 | 77.6 | 1.06 |  |  |  | 2.04\% | 0.20 |
| *Risk Adjusted Ratio is the rolling 1 year Sharpe Ratio, using a risk free rate of $.50 \%$. <br> **Balance is not included in total RAR calculation since balance represents cash used for daily operations. |  |  |  |  |  |  |  |  |
| ***Restricted benchmarks are based upon projected cash flow needs. Calculating a "total" benchmark duration for restricted investments is not applicable. |  |  |  |  |  |  |  |  |

Investment Performance Portfolio Composition




## Asset Allocation Compliance

| Asset Class | \$ Par Value | Percentage Allocation | Policy Limit |
| :--- | ---: | ---: | ---: |
| U.S. Treasuries | $654,035,000$ | $32.15 \%$ | $100 \%$ |
| U.S. Government Agencies | $788,160,000$ | $38.74 \%$ | $75 \%$ |
| Certificates of Deposit | 0 | $0.00 \%$ | $10 \%$ |
| King County Investment Pool | $153,897,817$ | $7.56 \%$ | $50 \%$ |
| State Investment Pool | $394,126,144$ | $19.37 \%$ | $100 \%$ |
| Commerical Paper | 0 | $0.00 \%$ | $10 \%$ |
| Taxable Municipal/G.O. Bonds | $44,210,000$ | $2.17 \%$ | $25 \%$ |
|  | $2,034,428,962$ | $100.00 \%$ |  |
|  |  | 5 |  |

## 3Q 2018 Debt Overview

## Strategy

Sound Transit will consider the diversification of its long-term liabilities in the context of its future borrowing needs. With the agency's TIFIA loans, the strategy would be to utilize the lowest cost available loans first prior to issuance of other debt.

## Debt Summary

- On July 18, 2018, Sound Transit successfully closed the remarketing of $\$ 75$ million Series 2015S-2A and $\$ 75$ million Series 2015S-2B floating rate notes ("the FRNs" or "the Notes"). In doing so, Sound Transit accomplished several important goals including:
- reduced the cost of the series 2015S-2A FRNs by 40 basis points and the Series 2015S-2B FRNS by 25 basis point versus the original offering of the notes,
- diversified the remarketing term periods of the 2015S-2A and 2015S-2B notes to 3.28 years and 5.28 years respectively
- increased Sound Transit's flexibility related to future remarketing of the notes with a 12 month optional redemption provision which is 6 months earlier than the original offering of the notes.
- The 20 -year MMD ended the quarter at $3.07 \%, 25$ basis point higher than the June $29^{\text {th }}$ rate. During the quarter, the 20 -year MMD was as high as $3.14 \%$ on 9/25/2018, and as low as $2.78 \%$ between 7/06/2018 and 7/09/2018.
- The spread between the 20 -year AAA MMD and the 20 -year A MMD was 49 basis points as of $9 / 28 / 2018$, which is the same as the spread was on 6/29/2018.



## Debt Portfolio Composition




Variable Rate Pricing Comparison 2015-Q3 2018

**King County corverted 2010A VRDOs to a direct purchase in Oct 2017

| Variable Rates as of 9/30/18 |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SIFMA Index | Spread to <br> SIFMA* | Bank Credit <br> Spread** | Liquidity <br> Fee | Remarketing <br> Fee | Total Cost |  |
| Sound Transit 2015S-2A FRNs*** | $1.56 \%$ | $0.30 \%$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $1.860 \%$ |  |
| Seattle City Light 2015B-1 \& B-2 FRNs | $1.56 \%$ | $0.68 \%$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $2.240 \%$ |  |
| Port of Seattle - 2008 VRDOs | $1.56 \%$ | $\mathrm{n} / \mathrm{a}$ | $0.12 \%$ | $0.45 \%$ | $0.065 \%$ | $2.195 \%$ |  |

* Fixed spread, will not change.
** Not fixed. Will vary with market conditions and changes in bank credit quality.
*** Average borrowing cost since issuance 1.42\%

| Bond Ratings as of 09/30/2018 |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Prior | Parity | TIFIA |
| Moody's | Aaa | Aa1 |  |
| S\&P | AAA | AAA | A + |
| Fitch |  |  | AA + |

## Asset Liability Management Report <br> 3 Q 2018

Key for Performance Summary

|  | Above Average | Average | Below Average |
| :---: | :---: | :---: | :---: |
| INVESTMENT PERFORMANCE | Interest earnings forecast to exceed budget. ST Portfolio performance on a risk adjusted basis at or above the benchmark for a rolling 1 year period of time. | Interest earnings forecast to meet budget. ST Portfolio performance on a risk adjusted basis near benchmark for a rolling 1 year period of time. | Interest earnings forecast to be below budget. ST Portfolio performance on a risk adjusted basis below benchmark or a rolling 1 year period of time. |
|  | Low | Medium | High |
| INTEREST RATE RISK | Change in interest rates will have less than \$5M impact on ST financial plan over 5year period. | Change in interest rates will have less than \$10M impact on ST financial plan over 5-year period. | Change in interest rates will have less than \$20M impact on ST financial plan over 5-year period. |
| LIQUIDITY RISK | All reserves and liquidity contingencies in place. Current liquidity contingency greater than policy minimum. | All reserves and liquidity contingencies in place. Current liquidity contingency equal to policy minimum. | Not all reserves and liquidity contingencies in place. |
| CREDIT RISK | No known credit risks that could materially impact ST balance sheet. | Known credit risks could potentially materially impact ST balance sheet. | Known credit risks are likely to materially impact ST balance sheet. |

## Glossary of Debt and Investment Terms

Basis Point - The smallest measure used in quoting yields on bonds and notes. One basis point is $0.01 \%$ of yield. For example, a bond's yield that changed from $3.50 \%$ to $3.00 \%$ would be said to have moved 50 basis points.
Benchmark - A bond whose terms are used for comparison with other bonds of similar maturity. The global financial market typically looks to U.S Treasury securities as benchmarks.

BNSF Escrow - Collateral pursuant to the Sound Transit / Amtrak / BNSF lease-sub-lease dated September 2000.
Book Value - The amount at which an asset is carried on the books of the owner. The book value of an asset does not necessarily have a significant relationship to the market value of the security.

Duration - The weighted maturity of a fixed-income investment's cash flows, used in the estimation of the price sensitivity of fixed-income securities for a given change in interest rates.
Federal Funds Rate - The rate of interest at which Federal Funds are traded between banks. Federal Funds are excess reserves held by banks that desire to invest or lend them to banks needing reserves. The particular rate is heavily influenced through the open market operations of the Federal Reserve Board. Also referred to as the "Fed Funds rate."
General Obligation Bond (GO) - A municipal bond secured by the pledge of the issuer's full faith and credit, and backed by their taxing authority.

Link Risk Fund - Funded by Sound Transit to pay certain claims related to the operation of Central Link.
Liquidity - The ease and speed with which an asset can be converted into cash without a substantial loss in value.
Local Government Investment Pool (LGIP) - The aggregate of all funds from political subdivisions that are placed in the custody of the State Treasurer for investment.

Market Price - For securities traded through an exchange, the last reported price at which a security was sold; for 4securities traded "over-the-counter," the current price of the security in the market.

Par Value - The nominal or face value of a debt security; that is, the value at maturity.
Performance - An investment's return (usually total return), compared to a benchmark that is comparable to the risk level or investment objectives of the investment.
Risk Adjusted Ratio (RAR): The RAR also referred to as the Sharpe ratio is a measure for calculating risk-adjusted return. The Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility (standard deviation) or total risk. The Sharpe ratio helps explain whether a portfolio's excess returns are due to smart investment decisions or the result of too much risk. The greater a portfolio's Sharpe ratio, the better its risk-adjusted performance has been. A negative Sharpe ratio indicates that a risk-less asset would perform better than the security being analyzed.
SIFMA - The Securities Industry and Financial Markets Association Municipal Swap Index is a 7 -day high-grade market index comprised of tax-exempt Variable Rate Demand Obligations (VRDOs) with certain characteristics. The Index is calculated and published by Bloomberg.

TIFIA Loan - Transportation Infrastructure Finance and Innovation Act loan with the United States Department of Transportation, acting by and through the Federal Highway Administrator. TIFIA loans are used to complement other sources of debt, resulting in a lower cost of funding than would be available in the capital markets.

Total Return - Investment performance measure over a stated time period which includes coupon interest, interest on interest, and any realized and unrealized gains or losses.

OCIP Collateral - Pledged collateral for the Owner Controlled Insurance Program for University Link and Northgate Link.

