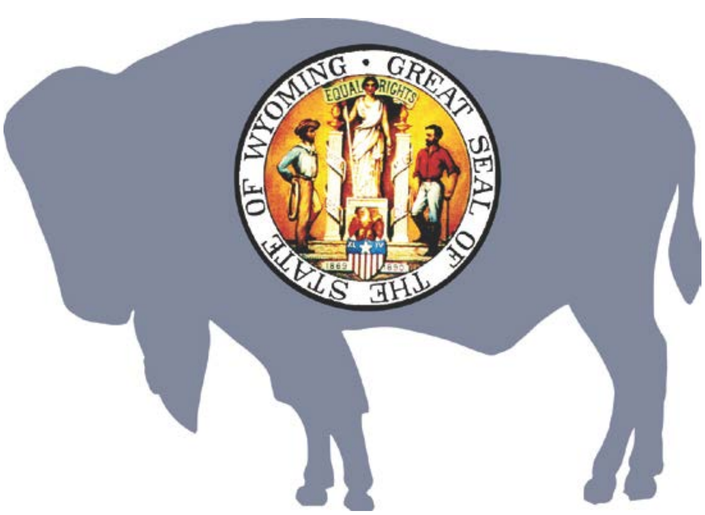
Wyoming

RETIREMENT SYSTEM

PARTNERING TO BUILD FINANCIAL SECURITY FOR MEMBERS AND THEIR FAMILIES

Performance Compensation Plan Update

10/29/2020



Wyoming Retirement System

Partnering to Build Financial Security for Members and their Families

Mark Gordon
Governor

David Swindell
Executive Director

Select Committee on Capital Financing & Investment
Joint Appropriations Committee
VIA EMAIL c/o Legislative Service Office

October 29, 2020

Senator Eli Bebout, Co-Chair JAC
Representative Bob Nicholas, Co-Chair, JAC
Senator Drew Perkins, Chairman, Select Committee on Capital Financing & Investments

Dear Senator Bebout, Senator Perkins and Representative Nicholas,

House Enrolled Act No. 32 requires WRS to provide an update on the status of the Performance Compensation Plan before November 1st of each year. Our report also includes peer compensation information requested by the committees.

We are grateful to the Wyoming Legislature for supporting this program. It plays an important role in improving the stability of the investment team, which is critical to maximizing risk-adjusted investment returns and increasing the funding ratio. During the past year, we believe that we have already seen a substantial positive impact in both retaining key members of the team and in our recruiting of a new senior investment officer.

We are pleased to report that the investment team outperformed the benchmark by 1.24% for the fiscal year ending June 30, 2020. This represents excess profits of approximately $106.6 million. Per the terms of the Plan, the investment team has earned the maximum performance compensation. The compensation calculation was verified by WRS' internal accounting department as well as Meketa, WRS' investment consultant. Meketa's review is attached as an exhibit.

The earned amount is only 0.66% of the additional value-add. The amount paid out this year will be only 0.17% of the additional value-add. The remainder is subject to a three-year vesting schedule. We believe this represents an excellent value for all WRS stakeholders.

Our Board takes its fiduciary responsibility very seriously and has spent considerable time on the design, implementation and oversight of the Performance Compensation Plan. We appreciate the Legislature's continued support of this program.

Tom Chapman,
Board Chair

David Swindell,
Executive Director

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Purpose

House Enrolled Act No. 32 (the "Act") requires WRS to report on the status of the Performance Compensation Plan no later than November 1st of each year.

"The board shall report to the joint appropriations committee and the select committee on capital financing and investments by November 1 of each year on the plan authorized by subsection (a) of this section. The report shall include: (i) Payments and methodology of calculating payments under the plan; (ii) A measurement quantifying the risk resulting from the variation between the prior year's investment benchmarks and the prior year's actual investments; (iii) An estimate of future payments under the plan and future expected investment benchmarks."

In addition to the statutory reporting requirements, WRS was asked to provide peer compensation data on an annual basis. Base wages enumerated in the budget footnote from the 2019 session will benefit from periodic review, lest they become stale.

Background

The Act was passed during the 2019 legislative session with an effective date of July 1, 2019. It authorizes the payment of performance compensation for WRS investment team members. Material terms are as follows:

- The period used for calculation of performance compensation is based on the rolling three-year return at the end of each June fiscal year. The periods for the first and second year of the program are trailing one-year and two-year performance, respectively.
- The total performance compensation bonus pool is based on 2% of "alpha dollars," defined as the dollar profit corresponding to the return of the total portfolio above its benchmark.
- Performance compensation is based solely on the performance of the total portfolio. No portion is based on individual asset class performance.
- Each investment team member can earn performance compensation up to a maximum percentage of their salary, with more senior employees earning larger percentages.
- Payments vest over a three-year period (25%/25%/50%).

Statutory Requirements

Requirement (i) Payments and methodology of calculating payments under the plan;

Response: The first performance compensation measurement period was the fiscal year ending June 30, 2020. The methodology for calculating payments is embedded within WRS' performance compensation plan document (articles 4.01-4.04) and is attached as Exhibit A.

The Board believes that the portfolio investment return relative to benchmark is the primary measure of the investment program's success. Based on this standard, the investment team performed very well for the most recent fiscal year ending June 30th. The portfolio outperformed its benchmark by 1.24%, representing $106 million of added value. The total value of the WRS portfolio was $8.5 billion as of this date.

Based on the strong outperformance, per the terms of the Plan, the investment team has earned the maximum performance compensation amount. See Exhibit B for the detailed calculations. The earned amount is only 0.66% of the additional value-add, or $706,103. The amount paid out this year will be only 0.17% of the additional value-add, or $176,526. The remainder is subject to a three-year vesting schedule. We believe this represents an excellent value for all WRS stakeholders.

Long-term performance has also been very strong. The investment team has substantially outperformed the portfolio benchmark over all rolling periods.

% Annualized Returns (as of June 30, 2020)	**June 30 Fiscal YTD (Performance Comp. Period)**		**Calendar YTD**	**1-Year**	**2-Year**	**3-Year**	**5-Year**	**10-Year**
WRS	2.46		-3.67	2.46	4.75	5.46	5.61	7.71
Benchmark	1.22		-3.73	1.22	3.23	4.61	5.06	7.04
Difference	+1.24		+0.06	+1.24	+1.52	+0.85	+0.55	+0.67

While the Board believes peer comparisons are a less important measure of the investment program's success, we are frequently asked to present this data. We have been very pleased with both the level and the improvement in our peer ranking. Based on the most recent data available, the one-year and three-year peer rankings are in the top third and the five-year ranking is in the top 40%, which is roughly the period in which the current team has been in place. This is a notable improvement from several years ago when the five-year ranking was usually in the bottom half and frequently in the bottom quartile.

Peer Ranking (as of June 30, 2020)	**1-Year**	**3-Year**	**5-Year**
WRS Percentile Ranking*	32	30	40

*Ranking data is in percentiles, with 1 being the top performing percentile and 99 being the worst performing percentile. The peer set is public defined benefit plans with assets greater than $1 billion.

Requirement (ii): Provide a measurement quantifying the risk resulting from the variation between the prior year's investment benchmarks and the prior year's actual investments;

Response: The Board measures portfolio risk in a variety of ways, but primarily by measuring the actual portfolio allocation compared to the target, or benchmark, allocation. Based on this approach, the portfolio had a lower risk profile than the benchmark throughout the entire fiscal year. Cumulative risk assets, which are primarily equities, were below target. Risk reducing assets, such as fixed income, were above target.

The role of the investment team is to adjust the risk profile of the portfolio to be higher or lower than the benchmark, to reflect their view of current market environments and valuations. During this past fiscal year, the team successfully adjusted portfolio risk to add substantial value. They reduced equity exposure in late February based on their view that the corona virus outbreak was going to be worse than anticipated. After the market fell precipitously in March in response to the pandemic spreading, the team bought oversold equities and high-yield fixed income and benefitted from the subsequent market rally. Please see Exhibit C for the fiscal year-end asset allocation and Exhibit D for historical asset allocations.

Another way to measure risk, is to compare the standard deviation (variability) of actual returns and benchmark returns. However, this method has certain limitations when applied to a short period, such as one year because the sample size consists of only 12 monthly data points, or only four when including quarterly private investment valuations.

Regardless, standard deviation has limited value when viewed in isolation. It must be considered in the context of the corresponding portfolio return in order to have much meaning. An industry-wide standard for doing so is to calculate the Sharpe Ratio (excess return divided by standard deviation) to produce a measure of return per unit of risk. Based on the Sharpe Ratio, the WRS portfolio outperformed its benchmark on a risk adjusted basis for the year. See Exhibit E.

WRS limits risk within the portfolio through the use of restrictions at the portfolio, asset class, manager and security levels. These limits are in formal guidelines which were reviewed by the JAC, CapFin and the IFC in 2019. These guidelines are monitored by a combination of WRS internal audit, the external consultant Meketa, the custodian Northern Trust, and the overlay provider Russell investments.

Requirement (iii) - Provide an estimate of future payments under the plan and future expected investment benchmarks.

Response: As previously noted, the investment team outperformed the benchmark by 1.24% for the fiscal year ending June 30, 2020. This represents excess profits of approximately $106.6 million. Per the terms of the Plan, the investment team has earned the maximum performance compensation.

The earned amount is only 0.66% of the additional value-add. The amount paid out in 2020 is only 0.17% of the additional value-add.

Position	Salary	Max % of Salary for Performance Compensation	Indicated Performance Compensation	2020 Payout	2021 Payout	2022 Payout
CIO	250,000	100.0%	250,000	62,500	62,500	125,000
SIO #1	189,000	75.0%	141,750	35,438	35,438	70,875
SIO #2	189,000	75.0%	141,750	35,438	35,438	70,875
SIO #3*	189,000	75.0%	118,125	29,531	29,531	59,063
3 Analysts	229,500	25.0%	54,479	13,620	13,620	27,240
Totals	**$1,046,500**		**$706,104**	**$176,526**	**$176,526**	**$353,052**
% of Total Value Added Paid As Bonuses			**0.66%**	**0.17%**	**0.17%**	**0.33%**
Total Investment Team Value Added ("Alpha")			**$106,667,921**			
Vesting Schedule				25%	25%	50%
*Note: Incumbent is prorated for 82.465%, based on hire date						

Potential future payments will depend on returns for the coming two fiscal years. The table below shows the minimum and maximum payments that could be due. The minimum amount is the amount that has already been earned. The maximum amount is based on the assumption that performance will exceed the benchmark in each of the next two fiscal years by an adequate amount to earn maximum performance compensation.

Scenario	2020 Payout	2021 Payout	2022 Payout
Minimum Payments (current earned amounts)	**$176,778**	**$176,778**	**$353,555**
Maximum Future Year Earned Payments	-	**$183,187**	**$366,374**
Maximum Total Payments	**$176,778**	**$359,965**	**$719,929**

Note: Assumes current staffing levels and compensation.

Meketa, WRS’ investment consultant, recommended the WRS portfolio benchmarks. The Board approved the benchmarks, which were then reviewed by the Investment Funds Committee. The JAC and Capital Finance committees also reviewed and commented on the benchmarks prior to the first year of implementation. The only change that was made since then was the incorporation of a 65% currency hedge ratio in the developed market equity benchmark beginning on July 1, 2020. The Investment Fund Committee reviewed this change.

The Board does not anticipate making any changes to the benchmarks in the near future. See Exhibit F for current portfolio benchmarks.

Performance Compensation Audit

The WRS internal accounting department audited the performance compensation calculation. To provide a third-party verification, Meketa, WRS' general consultant, reviewed and verified all of the inputs and methodology for the calculation. See Appendix G. For confidentiality reasons, all actual individual salary information was not included, however, it can be made available to the Legislature's oversight committees upon request.

The WRS Board approved the payout at the September board meeting. The Investment Fund Committee reviewed the calculation and methodology, and had no comments.

Peer Compensation Comparison

WRS was asked to provide a public pension peer compensation analysis as part of its annual reporting package. The following table includes survey data provided by the McLagan company, which is widely considered to be the investment industry's premier source of compensation data. See Exhibit H.

WRS investment team salaries have historically been in the bottom quartile of the peer set and 18%-25% below median. The performance compensation plan has been very helpful in closing this gap.

Approximately half of the WRS peer plans have bonus programs.

McLagan Public Plan 2020 Salary Data (as of October 2020)

Salary

Salary ($ in ,000s)	Analyst	Sr. Analyst	Sr. Investment Officer	CIO
Public Pension Median	$93	$123	$231	$343
WRS Actual (maximum authorized)	$70	$93	$189	$250
WRS - $ Difference from Median	-$23	-$30	-$42	-$93
WRS - % Difference from Median	-25%	-24%	-18%	-27%
Quartile	4th	4th	4th	4th

Conclusion

Once again, we are deeply grateful for the Legislature's approval and continued support of the performance compensation plan. It is critical to maintaining a top-tier investment program and maximizing investment returns for the benefit of all WRS stakeholders.

Exhibit A - Performance Compensation Calculation Methodology

Article IV. Calculation of Performance Compensation

Section 4.01 Quantitative Performance. The Plan Administrator shall calculate Performance Compensation for a particular Investment Period by comparing the Total Fund's actual performance for a specified Investment Period to a Total Fund Benchmark established by the Board prior to the beginning of an Investment Period. Performance shall be calculated to the nearest $1/10^{th}$ of a basis point. The Plan Administrator shall provide the calculation to the Board with its recommendation regarding whether Performance Compensation was earned for a given Investment Period. The Board's final determination regarding whether the Total Fund Benchmark was exceeded for a given Investment Period is subject to review by the Investment Funds Committee.

> **Example:** If the Total Fund Return equals 10% and the Benchmark Return was 9.75%, then the fund would have outperformed the benchmark by 25 basis points (0.25%) for that Investment Period.

The Board shall determine the Alpha for any given Investment Period by multiplying the Portfolio Value by the percentage outperformance for that Investment Period. Portfolio Value shall be determined by averaging the monthly values of the Total Fund Portfolio over the course of an Investment Period.

> **Example:** If the average value of the Total Fund for an Investment Period was $8.1 billion, that amount would be multiplied by 25 basis points outperformance (0.0025), resulting in a dollar amount equal to $20,250,000.00 (Alpha).

Section 4.02 Maximum Performance Compensation. Prior to the beginning of each Fiscal Year, the Board shall estimate the Maximum Performance Compensation that may become payable to Participating Employees for the Investment Period. The Maximum Performance Compensation that may be earned in any given Investment Period for each Participating Employee shall not exceed the following:

Eligible Employee Position	Maximum Performance Compensation
Chief Investment Officer	One Hundred Percent (100%) of Base Salary
Senior Investment Officer	Seventy-Five Percent (75%) of Base Salary
Investment Officer	Fifty Percent (50%) of Base Salary
Senior Analyst	Twenty-Five Percent (25%) of Base Salary
Analyst	Twenty-Five Percent (25%) of Base Salary

Total payments to all Participating Employees for Performance Compensation earned in a given Investment Period shall not exceed two percent (2%) of the net investment returns above the Total Fund Benchmark established by the Board for that Investment Period. The amount of outperformance needed to achieve Maximum Performance Compensation payout for any given

Investment Period shall be determined by dividing the aggregate total of Maximum Performance Compensation for all Participating Employees by two percent (2%).

Example: Salary data used in the below example is not reflective of actual salary data. Salary data and the number of employees participating in a particular Investment Period are subject to change and will impact the determination of available Performance Compensation eligible for payment.

Position	Total Base Salary ($)	Percentage Max (%)	Dollar Max ($)
Chief Investment Officer (1)	250,000	100	250,000
Senior Investment Officer (3)	567,000	75	425,250
Investment Officer (1)	120,000	50	60,000
Senior Analyst (3)	210,000	25	52,500
Total	**1,150,000**		**787,750**

The total Maximum Performance Compensation payout in this example would be $790,000.00. Dividing that amount by two percent (2%) results in an amount equal to $39,500,000.00. This is the Alpha that would be required to pay the Maximum Performance Compensation for this Investment Period.

Section 4.03 <u>Calculating Performance Compensation</u>. At the conclusion of each Investment Period, the Plan Administrator shall calculate the amount of Performance Compensation earned for each Participating Employee and make a recommendation to the Board. If the Board determines that the Total Fund Benchmark has not been exceeded for a given Investment Period, then no Performance Compensation shall be payable for that Investment Period. If the Board determines that the Total Fund Benchmark has been exceeded for a given Investment Period, and that the Alpha is equal to or greater than the amount required for Maximum Performance Compensation payout, then Maximum Performance Compensation shall be payable to each Participating Employee for that Investment Period. If the Board determines that the Total Fund Benchmark has been exceed for a given Investment Period, and that the Alpha is less than the amount required for Maximum Performance Compensation payout, then the amount of Performance Compensation payable shall be calculated by dividing the Alpha actually achieved by the Alpha required to pay Maximum Performance Compensation.

Example: Using the above example data, if the Total Fund outperformed the benchmark by 25 basis points, Performance Compensation would be calculated by dividing $20,250,000.00 (Alpha) by $39,500,000.00 (Alpha required to pay the Maximum Performance Compensation), resulting in an adjusted payout equal to fifty-one percent (51%) of Maximum Performance Compensation. This percentage would be applied to each Participating Employee’s maximum payout for that Investment Period.

Position	Base Salary ($)	% Max	$ Max	Adjusted Payout Amount
CIO (1)	250,000	100	250,000	127,500
SIO (3)	570,000	75	425,250	216,878
IO (1)	120,000	50	60,000	30,600
SA (3)	210,000	25	52,500	26,775
Total	**1,150,000**		**787,750**	**401,753**

Section 4.04 <u>Performance Compensation Payments During Plan Initiation</u>. Payments for Performance Compensation for any one Investment Period shall be as follows:

(a) Payments of Performance Compensation for Fiscal Year 2020, if any, shall be based upon Total Fund investment performance beginning July 1, 2019 and ending June 30, 2020.

(b) Payments of Performance Compensation for Fiscal Year 2021, if any, shall be based upon the arithmetic average of the Total Fund investment performance beginning July 1, 2019 and ending June 30, 2020 and the Total Fund investment performance beginning July 1, 2020 and ending June 30, 2021.

(c) Payments of Performance Compensation for Fiscal Year 2022 and each Fiscal Year thereafter, if any, shall be based upon the arithmetic average of the Total Fund investment performance beginning that Fiscal Year and the two immediately preceding Fiscal Years.

Exhibit B - Calculation

September 10, 2020

Performance Compensation Model

Payout Based on Actual June 30, 2020 FYTD Returns

Title	Annual Salary	Max Potential Bonus (% of Salary)	Maximum Potential Bonus	Earned Payout	Year 1 Payout (25%)	Year 2 Payout (25%)	Year 3 Payout (50%)
Team Total	$ 1,046,498		$ 706,103	$ 706,103	$ 176,526	$ 176,526	$353,051
Bonus as a % of $ Alpha Produced				**0.66%**	**0.17%**	**0.17%**	**0.33%**
$ of Alpha for Each $ of Bonus				**$151**	**$604**	**$604**	**$302**

Fiscal Year June 2020 Portfolio Values	
Beginning	$8,645,383,274
Average	$8,602,251,685
Ending	$8,515,331,425

Maximum Potential Bonus Pool	$706,103	
Maximum % of Alpha Available for Bonuses	2.0%	
$ Alpha Required to Earn Max Bonus	$ 35,305,149	(Max Potential bonus pool) ÷ 2%
% Return Outperformance Equivalent	0.41%	($ Alpha Required) ÷ (Average Portfolio Value)

Actual Performance June 2020 FY	**1-Year Return**
WRS performance	2.46%
Strategic Benchmark Performance	1.22%
Staff Value-Add (Outperformance)	1.24%

Final June returns from Meketa (8/17/20).

Actual $ Alpha	$ 106,667,921	(Avg. Portfolio Value) x (Staff Value Add %)
$ Alpha Required for Max Bonus	$ 35,305,149	
% of Maximum Bonus Calculation	302%	(Estimated Alpha) ÷ (Required Alpha)
% of Max Bonus Target Earned	**100%**	(Lesser of 100% and Formula)

<u>Exhibit C - June 30, 2020 Fiscal Year-End Asset Allocation</u>

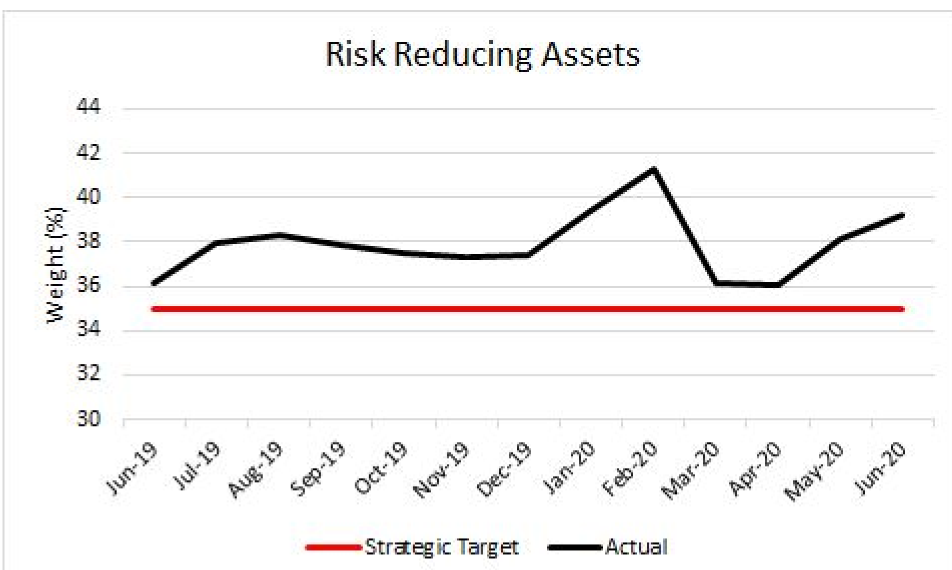
As shown in the table, based on broad asset class exposure, portfolio risk was lower than the benchmark. The portfolio was underweight equities by 4.1% and overweight cash and marketable alternatives by an equivalent amount. Up until March, within fixed income, the portfolio was equal weighted to US Government bonds and core fixed income. During the dislocation in March, the investment team sold Treasury bonds and increased exposure to core fixed income.

Asset Class	**WRS Board Adjusted Policy Weight**	**WRS Investment Team Implemented Weight**	**Difference as of 6/30/20**
<u>Total Market Value</u>	**<u>100%</u>**	**<u>100%</u>**	
Total Cash	2.0%	4.2%	2.2%
Marketable Equities	44.0%	39.9%	-4.1%
Emerging Market	8.6%	7.1%	-1.5%
Domestic Equity	21.2%	15.0%	-6.2%
International Developed Equity	14.2%	17.8%	3.6%
Private Markets	17.0%	17.6%	0.6%
Fixed Income	18.0%	17.8%	-0.2%
Core Plus	5.0%	9.2%	4.2%
Opportunistic Credit	4.0%	3.3%	-0.7%
US Gov't Debt	9.0%	5.3%	-3.7%
Marketable Alternatives	19.0%	20.5%	1.5%

Exhibit D - Historical Asset Allocation Graphs

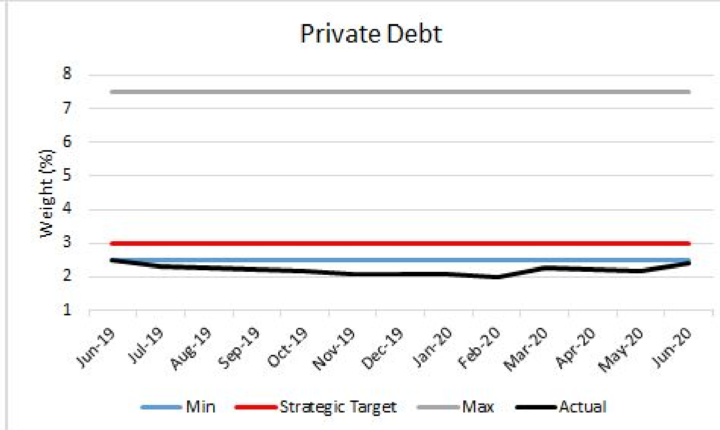
Combined risk assets were below benchmark for the entirety of the year. The team reduced risk assets in February in anticipation of the market recognizing the severity of the coronavirus pandemic. In March, when the market overreacted and sold off substantially, the team increased exposure to cheap risk assets, and benefited from the subsequent rally.

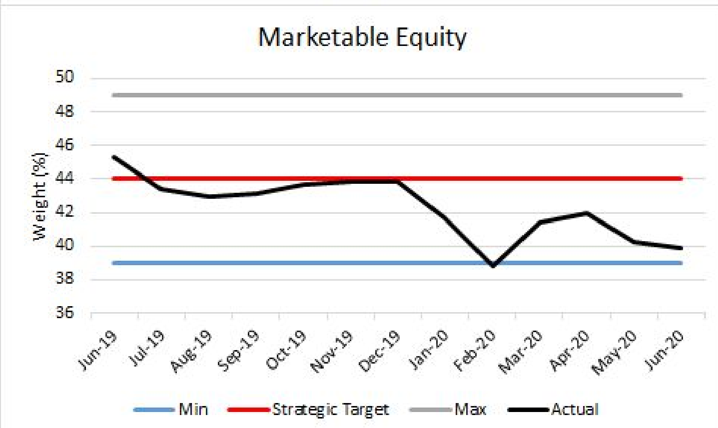
Risk Assets includes: Marketable (Public) Equity, Private Equity, Opportunistic Credit, Private Debt, and Private Real Assets

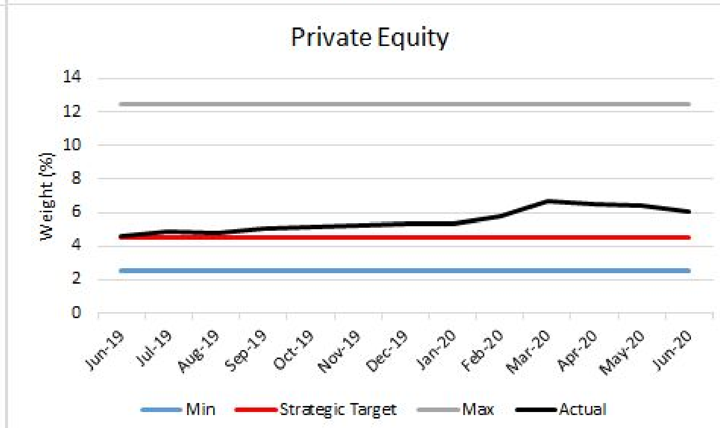


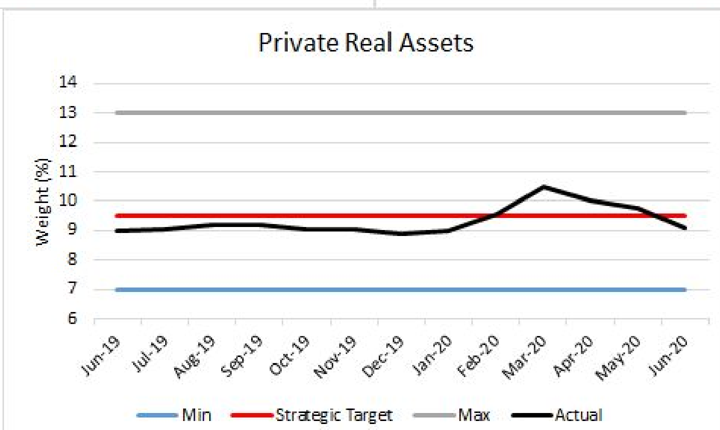
Risk Reducing Assets include Cash, Core Plus, US Government Debt, and Marketable Alternatives

Risk Assets Sub-Categories









Risk Reducing Assets Sub-Categories

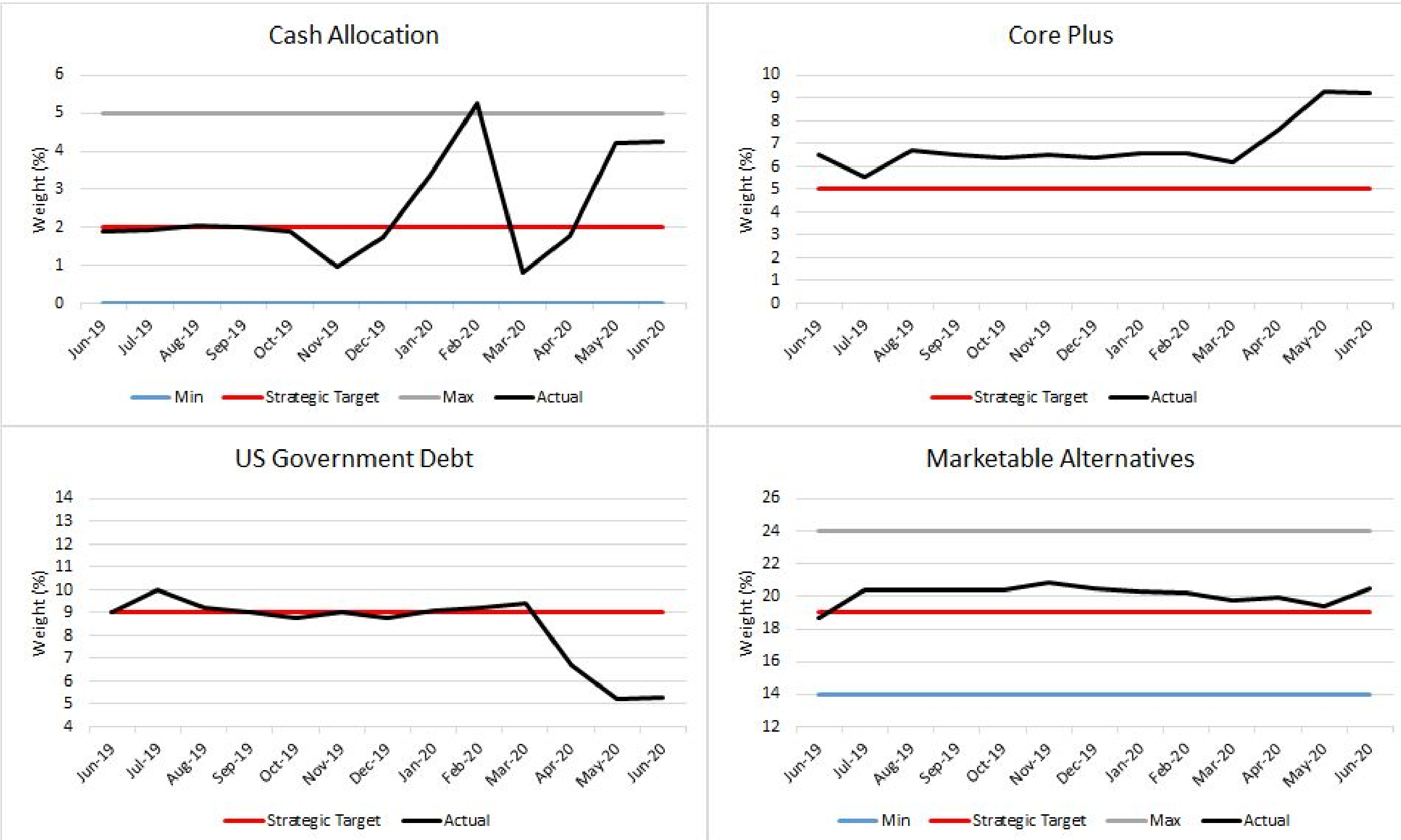


Exhibit E - Portfolio Risk - Sharpe Ratios

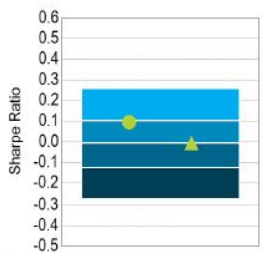
The portfolio Sharpe ratio (return/risk) was higher than the benchmark Sharpe ratio over the past year, indicating that the portfolio produced a greater level of return for each unit of risk. The WRS portfolio Sharpe ratio compared favorably to the peer set as well.

MEKETA

Wyoming Retirement System

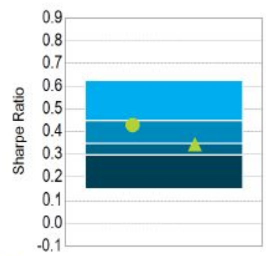
Total Fund with Overlay and FX | As of June 30, 2020

Sharpe Ratio 1YR



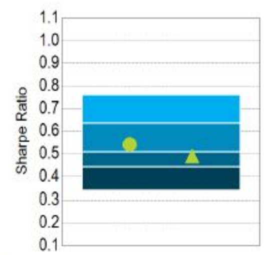
Total Fund with Overlay and FX	
Value	0.1
Rank	30
Strategic Blended Benchmark	
Value	0.0
Rank	51
Universe	
5th %tile	0.3
25th %tile	0.1
Median	0.0
75th %tile	-0.1
95th %tile	-0.3
Observations	71

Sharpe Ratio 3YRS



Total Fund with Overlay and FX	
Value	0.4
Rank	31
Strategic Blended Benchmark	
Value	0.3
Rank	54
Universe	
5th %tile	0.6
25th %tile	0.4
Median	0.4
75th %tile	0.3
95th %tile	0.1
Observations	71

Sharpe Ratio 5YRS



Total Fund with Overlay and FX	
Value	0.5
Rank	44
Strategic Blended Benchmark	
Value	0.5
Rank	57
Universe	
5th %tile	0.8
25th %tile	0.6
Median	0.5
75th %tile	0.4
95th %tile	0.3
Observations	70

Exhibit F - WRS Portfolio Benchmarks

Pursuant to the Authority granted to it by 2019 House Enrolled Act No. 32, the Board has established the following external benchmarks for the Fiscal Year 2021 Investment Period beginning July 1, 2020.

Asset Class	WRS Approved Benchmark
US Equity	Russell 3000
Int'l Developed Equity	EAFE IMI (hedged 65%)
Emerging Market Equity	EM IMI
Private Equity	Cambridge Associates Global All Private Equity, QTR lag
Core Fixed Income	Barclays U.S. Aggregate
US Gov't Debt	Barclays U.S. Government
Opportunistic Credit	50% Credit Suisse Leveraged Loan/ 50% Barclays High Yield
Marketable Alternatives	HFRI FoF
Cash	Barclays Short Treasury
Private Real Assets	Cambridge Vintage Year, MSCI World Infrastructure, QTR Lag
Private Real Estate	NCREIF ODCE

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Meketa.com

Exhibit G - Meketa Performance Compensation Review

MEMORANDUM

TO: Board of Trustees, Wyoming Retirement System

FROM: Mika Malone, Nick Erickson, Paola Nealon, Meketa Investment Group

DATE: September 10, 2020

RE: Incentive Compensation Calculation 2020

Meketa Investment Group ("Meketa") has been asked by the CIO to review the calculation inputs utilized to determine the eligible incentive compensation available to WRS Investment Staff. *Meketa has reviewed the inputs and the calculation, as well as the legislation authorizing the Incentive Compensation, and concurs with Staff's calculation.* The Staff provided calculation is included as an Appendix. An excerpt from Meketa's Performance Report for June 30, 2020 is also included as an Appendix.

Review of Inputs

- Based on the HB0222, and the Enrolled Act No. 32, for the Incentive Compensation calculation for the one-year period ending June 30, 2020, several inputs are needed:
  - June 30 final market value, as provided by Meketa 45 days post quarter end.
  - Total Fund Performance, calculated by Meketa, through June 30, in the final Quarterly performance report.[1]
  - Total Fund Benchmark Performance, calculated by Meketa, cutting off data feeds 45 days after quarter end.
- Meketa has checked the inputs in Staff's calculation and confirms the inputs as described above are drawn from the appropriate source documents.
- Meketa has also confirmed that the eligible employees have the correct number of months attributed to their tenure, as well as that salaries are correct, as per the Executive Administrator.

Review of Calculation

Meketa reviewed the statute providing for incentive compensation, and highlights that this is the first year that Investment Staff are eligible for this program, which means the formula relies entirely on a one-year performance calculation. In future years, a two-year, and then a rolling three-year calculation will be added in order to evaluate the success of Staff over longer time periods. We further confirm that;

- The maximum eligible percent (%) of compensation was attributed to each employee based on the classifications outlined in HB0222.
- Incentive Compensation for the System is calculated at the Total Fund level only.

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[1] It should be noted that Meketa relies on custodian provided, Investorforce, and index data, as well as manager provided data to aggregate performance reporting. This influences both market values and return data over the periods referenced.

- Payments for Incentive Compensation are calculated as to be paid over three years, as dictated in the legislation (25% Year 1, 25% Year 2, and 50% year 3).
- Does not exceed 2% of net investment returns above the established Total Fund benchmark.
- Reporting to the Board includes a risk metric.
  - Meketa's standard quarterly reports include Sharpe Ratio[1] calculations, which allow Trustees to evaluate the risk adjusted return in a portfolio (calculation in footnote; a higher number is more favorable). The 1 year annualized Sharpe Ratio for the portfolio was 0.10% as of June 30, 2020, while the Sharpe Ratio for the benchmark was 0.00%. The portfolio also remained within its Policy Target ranges for the period.

Summary

In the year ended June 30, 2020, WRS achieved a one-year return of 2.46%, compared to a benchmark return of 1.22% (as found in Meketa's standard quarterly reporting). This performance ranks in the 31st percentile relative to peers for the period.

Following our review of the available data, it appears that Staff is eligible for 100% of their incentive compensation for the year ended June 30, 2020. It further appears that Staff has appropriately utilized the statute to calculate the incentive compensation that they are eligible for.

If you have questions, please feel free to contact us at (760) 795-3450.

MM/NE/pq

[1] The Sharpe ratio measures the performance of an investment compared to a risk-free asset, after adjusting for its risk. It is defined as the difference between the returns of the investment and the risk-free return, divided by the standard deviation of the investment.

Appendix

Performance Compensation Model

Payout Based on Actual June 30, 2020 FYTD Returns

Title	Annual Salary	Max Potential Bonus (% of Salary)	Maximum Potential Bonus	Earned Payout	Year 1 Payout (25%)	Year 2 Payout (25%)	Year 3 Payout (50%)
Team Total	$ 1,046,498		$ 706,103	$ 706,103	$ 176,526	$ 176,526	$353,051
Bonus as a % of $ Alpha Produced				**0.66%**	**0.17%**	**0.17%**	**0.33%**
$ of Alpha for Each $ of Bonus				**$151**	**$604**	**$604**	**$302**

Fiscal Year June 2020 Portfolio Values	
Beginning	$8,645,383,274
Average	$8,602,251,685
Ending	$8,515,331,425

Maximum Potential Bonus Pool	$706,103	
Maximum % of Alpha Available for Bonuses	2.0%	
$ Alpha Required to Earn Max Bonus	$ 35,305,149	(Max Potential bonus pool) ÷ 2%
% Return Outperformance Equivalent	0.41%	($ Alpha Required) ÷ (Average Portfolio Value)

Actual Performance June 2020 FY	**1-Year Return**
WRS performance	2.46%
Strategic Benchmark Performance	1.22%
Staff Value-Add (Outperformance)	1.24%

Final June returns from Meketa (8/17/20).

Actual $ Alpha	$ 106,667,921	(Avg. Portfolio Value) x (Staff Value Add %)
$ Alpha Required for Max Bonus	$ 35,305,149	
% of Maximum Bonus Calculation	302%	(Estimated Alpha) ÷ (Required Alpha)
% of Max Bonus Target Earned	**100%**	(Lesser of 100% and Formula)

Total Fund with Overlay and FX | As of June 30, 2020

Trailing Net Performance	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Total Fund with Overlay and FX	**8,515,331,425**	**100.00**	**9.47**	**-3.67**	**2.46**	**5.46**	**5.61**	**7.71**	**8.26**	**Feb-83**
Strategic Blended Benchmark			*8.71*	*-3.73*	*1.22*	*4.61*	*5.06*	*7.04*	*9.35*	*Feb-83*
Over/Under			0.76	0.06	1.24	0.85	0.55	0.67	-1.09	

Historical Total Fund returns from February 1983 through December 1997 are gross only. Data prior to May 2016 provided by previous consultant. The Cash Overlay was implemented July 2014 and the Currency Overlay was implemented February 2017. Data prior to July 2016 provided by previous consultant. Performance is net of fees unless otherwise noted. Inception date reflects first full month of performance. See appendix for full description of benchmarks. Aggregate performance may reflect performance of managers no longer in the fund.

<u>**Exhibit H - McLagan 2020 Compensation Survey**</u>

2020 McLagan United States - Asset Owners / Institutional Investors - Public Funds (US.AOIPUB) - Management Summary

Firm: Wyoming Retirement Sys
Market: All Participants - Limited Report
Currency: USD (000's)

	2019 TOTAL CASH						2019 TOTAL COMPENSATION						2020 SALARY					
	MARKET			WYOMING RETIREMENT SYS			MARKET			WYOMING RETIREMENT SYS			MARKET			WYOMING RETIREMENT SYS		
	LOW QUARTILE (25%)	MEDIAN (50%)	HIGH QUARTILE (75%)	MEDIAN (50%)	RANK OF FIRM'S MEDIAN	VARIANCE TO MEDIAN (50%)	LOW QUARTILE (25%)	MEDIAN (50%)	HIGH QUARTILE (75%)	MEDIAN (50%)	RANK OF FIRM'S MEDIAN	VARIANCE TO MEDIAN (50%)	LOW QUARTILE (25%)	MEDIAN (50%)	HIGH QUARTILE (75%)	MEDIAN (50%)	RANK OF FIRM'S MEDIAN	VARIANCE TO MEDIAN (50%)
LE - Leadership																		
85 - Executive Director with or without CIO Responsibilities																		
LE.8500.P0 - All Focuses All Levels	204.9	**277.6**	406.5	195.0	34 OF 39		204.9	**277.8**	416.0	195.0	34 OF 39		204.9	**283.4**	366.0	195.0	33 OF 39	
BH - Executive Director With CIO Responsibilities																		
LE.BHMF.P0 - All Levels	210.3	**335.0**	496.3	195.0	20 OF 24		210.3	**335.0**	496.3	195.0	20 OF 24		206.7	**332.0**	489.1	195.0	19 OF 24	
BI - Executive Director Without CIO Responsibilities																		
LE.BIMF.P0 - All Levels	199.1	**271.4**	280.4	-	15		199.1	**271.4**	280.9	-	15		202.6	**273.8**	286.0	-	15	
AQ - Chief Investment Officer																		
LE.AQMF.P0 - All Levels	304.9	**387.1**	584.3	250.0	36 OF 41		304.9	**387.4**	627.0	250.0	36 OF 41		298.0	**342.7**	422.7	250.0	33 OF 40	
BC - Chief Operating / Administration Officer																		
LE.BCMF.P0 - All Levels	145.1	**190.0**	249.4	-	22		145.1	**190.0**	249.4	-	22		148.0	**189.0**	241.0	-	22	
PM - Portfolio Management																		
MM - Manager-of-Managers																		
PM.MM00.09 - All Focuses Snr Exp.	202.2	**250.5**	393.8	189.0	25 OF 28		205.4	**258.3**	393.8	189.0	25 OF 28		205.3	**230.5**	267.5	189.0	24 OF 28	
PM.MM00.08 - All Focuses Expert	161.9	**196.1**	305.3	189.0	17 OF 34		162.2	**196.1**	313.9	189.0	17 OF 34		159.5	**176.9**	206.5	189.0	14 OF 35	
PM.MM00.07 - All Focuses Advanced	133.8	**165.1**	205.8	-	21		135.2	**165.1**	205.8	-	21		138.3	**156.6**	183.0	-	20	
PM.MM00.06 - All Focuses Experienced	112.6	**125.0**	143.3	-	30		112.6	**125.0**	144.1	-	30		109.5	**122.5**	132.0	-	30	
PM.MM00.05 - All Focuses Intermediate	82.0	**91.0**	101.7	-	19		82.0	**91.6**	101.7	-	19		85.0	**92.6**	102.5	-	22	
PM.MM00.04 - All Focuses Entry	64.5	**72.0**	82.7	-	14		64.5	**72.0**	82.7	-	14		65.2	**75.1**	82.9	-	14	