



SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
1 The Commonwealth should annually maintain full payment of the actuarially determined contribution amount necessary to fund each public pension plan.	General Assembly Action Required – SERS Action Taken in Support Board Motion (2019-16) - The Board accepts the recommendation of the Board Finance and Member Services Committee which directed SERS Executive Director and staff to work with the General Assembly to pursue legislative strategies to ensure full funding in a manner in line with the objectives of the PPMAIRC recommendations, including exploration of the use of a dedicated funding source to fund future obligations.	Finance & Member Services Committee
2 The General Assembly should consider additional legislation mandating full funding of each retirement fund, pursuant to Act 120 of 2010 as an annual budgetary priority.	General Assembly Action Required – SERS Action Taken In Support See above (Recommendation #1)	Finance & Member Services Committee
3 The General Assembly should consider legislation requiring the pre-funding of any future benefit structure enhancement or COLA.	General Assembly Action Required See above (Recommendation #1)	Finance & Member Services Committee
4 The General Assembly should consider the creation of a rate stabilization fund as a precaution against annual underfunding of the two retirement systems during periods of state budgetary stress.	General Assembly Action Required See above (Recommendation #1)	Finance & Member Services Committee
5 Continue the work of the PPMAIRC Commission through the establishment of a review commission to explore questions beyond the purview of PPMAIRC.	General Assembly Action Required Board Motion (2020-30) - The Board accepts the recommendation of the Board Governance and Personnel Committee to acknowledge that it is for the legislature if they choose to do so to establish a review commission to explore questions beyond the purview of the PPMAIRC.	Board Governance & Personnel Committee
6 Pennsylvania should lead an effort to form a consortium of major state pension funds to reset the balance of power between asset owners and investment managers.	Reviewed, Alternative Action Taken Board Motion (2020-31) - The Board accepts the recommendation of the Board Governance and Personnel Committee to have staff continue to actively participate in ILPA, PREA, CII and NASRA, in their efforts to reset the balance of power.	Board Governance & Personnel Committee

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7	<p>The General Assembly enact legislation requiring an annual stress test of each system, broadly aligning with the Blue Ribbon Panel recommendations, including at least a 2-percentage point variation in a baseline benchmark return, and a quantifiable contribution risk (e.g., the 80% measure recommended by the panel).</p>	<p>Finance & Member Services Committee</p>
8	<p>The Systems' stress tests report the impact of the stress on other financial measures (e.g., contributions in dollars, contributions as % of payroll, funded ratios, etc.) and cover a period of at least 30 years.</p>	<p>Finance & Member Services Committee</p>
9	<p>Stochastic models be used in addition to deterministic modelling.</p>	<p>Finance & Member Services Committee</p>
10	<p>The Systems make their stress test reports publicly available.</p>	<p>Finance & Member Services Committee</p>
11	<p>The Systems' stress test charts be simple to understand, with the policy question or decision the chart address featured prominently and clearly at the top of each chart.</p>	<p>Finance & Member Services Committee</p>
12	<p>The Systems' stress tests be conducted by an experienced actuary, not an investment consultant.</p>	<p>Finance & Member Services Committee</p>

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13	<p>The Systems conduct and publish "reverse" stress tests showing market events and funding scenarios likely to cause certain undesirable outcomes (including but not limited to the funds' investment portfolios becoming more illiquid than a Board-determined threshold limit, expressed as a multiple of annual distributions.)</p>	<p>Finance & Member Services Committee</p>
14	<p>Post complete board materials on each system's public websites, including manager presentations with proposed fee terms, no less than one week before each board or investment committee meeting, and remain online for 7 years.</p>	<p>Board Governance & Personnel Committee</p>
15	<p>Each public board and committee meeting should be live streamed, and video and audio recordings of public board proceedings be published and archived.</p>	<p>Board Governance & Personnel Committee</p>

Recommendation Implemented
See above (Recommendation #7)

Reviewed, Alternative Action Taken
Board Motion (2019-38) - The Board accepts the recommendation of the Board Governance and Personnel Committee to direct the SERS Investment Office, in collaboration with the board's consultants, to post summary board materials on SERS' public website and for the SERS Investment Office to provide the board with a sample document for its review and approval that is reflective of the summary board materials.

Board Motion (2019-74) - The Board approves the format of the sample documents including staff memo, consultant memo and recommended template for future manager presentations to be publicly posted on SERS' public website.

Recommendation Implemented
Board Motion (2020-46) - The Board accepts the recommendation of the Board Governance and Personnel Committee to have staff implement livestreaming of each public portion of each board and committee meeting, with a goal of commencing with the December 1 and 2, 2020, board and committee meetings, with recordings of the livestream to be: (i) published on the SERS website, and (ii) archived in accordance with applicable Commonwealth records retention policies and management directives.

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16	<p>All investment marketing ("pitch") materials, investment agreement terms, including side letters, related to fees, costs, expenses, performance and risk be publicly available. Also, fee terms should not be redacted in contracts posted to e-contracts website, and both retirement systems should use a common standard checklist for transparency issues when evaluating managers.</p>	<p>Reviewed, Alternative Action Taken Board Motion (2019-39) - The Board accepts the recommendation of the Board Governance and Personnel Committee to direct the SERS Investment Office to work with PSERS to develop a common standard checklist for transparency issues when evaluating managers.</p> <p>Board Motion (2019-74) - The Board approves the format of the sample documents including staff memo, consultant memo and recommended template for future manager presentations to be publicly posted on SERS' public website. Unless and until a common standard checklist is agreed to, SERS' private market teams have been requesting the consent of any prospective GP/Manager to publish the metrics found in the respective specialty consultant semi-annual performance report, as well as other information. It is the Investment Office's intention to include in the 'staff' memo to the Investment Committee for any prospective GP/Manager, the manager's response to the above metrics thereby providing the Investment Committee insight into the GP/Manager's consent for disclosing such information.</p> <p>Board Motion (2020-32) - The Board accepts the recommendation of the Board Governance and Personnel Committee to direct the Investment Office to include in its staff memo to the Investment Committee for any prospective GP/Manager the responses received from the GP/Manager to the request for consent to publish the metrics found in the specialty consultants' semi-annual performance reports, as well as other information.</p>	<p>Board Governance & Personnel Committee</p>
17	<p>Both systems are commended for disclosing investment policy guidelines and asset allocation plans as well as other statements of their processes. Recommendation is to continue.</p>	<p>Recommendation Implemented With the adoption of Board Motion (2019-87) and Board Motion (2019-88), the Board approved an Investment Policy Statement, which includes the investment policy guidelines and asset allocation plan.</p>	<p>Board Governance & Personnel Committee</p>
18	<p>Systems are commended for disclosing total fund performance and performance of certain asset classes relative to benchmarks. Recommendation is to continue.</p>	<p>Recommendation Implemented No Further Action Needed.</p>	<p>Investment Committee</p>

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19 Both systems should publish net-of-fee and gross-fee returns when reporting investment performance, and the General Assembly should consider enacting legislation to require that.	Recommendation Implemented The Q1 2020 General Consultant report was given to the IC at the June 9, 2020 meeting which included the gross and net of fee performance reporting. The report has been published on SERS' website.	Investment Committee
20 To facilitate understanding by stakeholders and policy markets, each fund should report total fund performance against a risk-appropriate and commonly understood reference portfolio benchmark as Rhode Island (e.g., global 60/40 or 50/30 index, with and without leverage if used, and for 1, 3, 5, 7, 15, 20 & 25-year periods, as well as year by year.	Recommendation Implemented The 2nd quarter 2019 performance report was presented at the September 2019 meeting and included a benchmark consisting of 60% MSCI ACWI IMI/40% Bloomberg US Aggregate Bond Index as well as a graph of 3 year rolling and 5 year rolling total fund returns. This report has been published on SERS website.	Investment Committee
21 Both systems should publish returns, costs and fees of individual investments relative to a similar risk public markets alternative, on a levered and unlevered basis.	Reviewed, Alternative Action Taken The returns of SERS' private market managers is provided in the semi-annual performance reports prepared and presented by StepStone for private equity and NEPC for private real estate. Unfortunately, public market benchmarks with similar risks on both a levered and unlevered basis do not exist. Moreover, SERS is unable to report unlevered performance for the private market managers. None of SERS' public market managers utilize leverage.	Investment Committee
22 Returns of internal investments should be reported in the same manner as other investments - by investment, asset class, vintage year (if appropriate) and as a portfolio on a levered and unlevered basis.	No SERS Action Required Not Applicable; SERS does not have internally managed investments	Investment Committee
23 Performance reports for the two systems should include a rolling 3- and 5-year comparison in graphic form, and annual returns for the last 5 years, in addition to the returns over 3-, 5-, 10-, 15- and 20-year periods ending at the current period in situations where not already done.	Recommendation Implemented The 2nd quarter 2019 performance report was presented at the September 2019 meeting and included a benchmark consisting of 60% MSCI ACWI IMI/40% Bloomberg US Aggregate Bond Index as well as a graph of 3 year rolling and 5 year rolling total fund returns. This report has been published on SERS website.	Investment Committee
24 Both systems should publicly post detailed quarterly portfolio performance reports received from general consultants, with per-manager returns versus benchmarks, and alternative investment performance reports received from specialty consults, including public market equivalent (PME) values for each fund/manager based on a board-approved index.	Recommendation Implemented The Board has reviewed (Dec 4, 2019) and was satisfied with the examples presented of the public and private reports and these reports have since been published on SERS website. Board Motion (2019-86)	Investment Committee

SERS RESPONSES TO PPM AIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
25	<p>The General Assembly should repeal statutory provisions that permit both systems to shield investment performance, risk and expense information from public disclosure pursuant to RTKL requests.</p>	Investment Committee
26	<p>The General Assembly should enact legislation that designates all retirement system records related to investment performance, risk and expense information as public records (using Arkansas, Nevada, Texas and New York as examples).</p>	Investment Committee
27	<p>(At a minimum) the General Assembly should enact legislation that would apply the provisions of PSERS' retirement code relating to the designation of valuation and expense information related to alternative investments to SERS' alternative investments.</p>	Investment Committee
28	<p>Both retirement systems should require all external managers to use the ILPA template. SERS should require, not request, this of managers.</p>	Investment Committee
29	<p>Both retirement systems should publicly disclose all travel or other expenses incurred by staff and paid for by an external investment manager, fund or consultant.</p>	Investment Committee

SERS RESPONSES TO PPM AIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
<p>30 Both systems should utilize and report information from the ILPA template for each manager in the reporting of fees, costs and expenses of alternative investments, including carried interest. For traditional investments, the systems should publish investment management fees, costs and expenses by manager and aggregated by asset class, separately identifying base management, performance/carried interest, and other expenses (e.g., CalPERS, Missouri, South Carolina). The General Assembly should consider enacting legislation requiring such reporting.</p>	<p>Recommendation Implemented Board Motion (2020-66): PPM AIRC #30 REPORTING FEE INFO Meeting Date: September 30, 2020 RESOLVED: That the board accepts the recommendation of the Investment Committee to direct the SERS Investment Office and Office of Finance and Administration to: 1. Report for each investment manager/general partner, separately as well as in the aggregate for both traditional and non-traditional investments, the fees, costs, and expenses, and in the case of non-traditional investments, carried interest, similar to the report found in the executive session materials for the most recent Investment Committee meeting. This report is to be produced on an annual basis going forward and presented to the Investment Committee in July of each year; and 2. Produce an additional report suitable for public dissemination, in accordance with confidentiality terms outlined in contractual agreements between SERS and SERS' Investment Managers/general partners, as certified by the SERS Legal Office, similar to the report provided to the Investment Committee.</p>	Investment Committee
<p>31 Policymakers and stakeholders should be prepared/willing to defend the systems against false comparisons that may be made as a result of increased transparency on fees. Policymakers should avoid "penalizing" Pennsylvania's funds for doing the right thing.</p>	<p>Recommendation Implemented The Executive Director shall work with the Communications Office, SERS Board members, and other external stakeholders to seek outreach opportunities to SERS' members and participants, legislative and administration decision makers, and the general public, to accurately report SERS investment performance and funded status and ensure any comparisons with other pension systems are fairly and appropriately represented.</p>	Investment Committee
<p>32 Ensure there is a risk budget that specifies the tolerable volatility, downside risk, and illiquidity and the associated simple benchmark profile.</p>	<p>Recommendation Implemented The risk analysis was conducted as part of the asset liability study performed by Callan in 2019. The Board approved a new target allocation with a projected expected risk reflecting its risk tolerance. Callan's quarterly performance report includes a simple 60/40 equity/fixed income benchmark for reference, as well as risk statistics analysis and holdings-based analysis. The quarterly executive summary now includes liquidity analysis and projected risk analysis.</p>	Investment Committee

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33 Ensure there is a diversified policy benchmark composed of investable index funds.	<p>Recommendation Implemented This has been added to the quarterly Callan reports at the asset class level. Callan reports are published on the SERS website.</p>	Investment Committee
34 Ensure there are systematic risk calculations are defined and targets established.	<p>Recommendation Implemented Callan addressed this in its Asset-Liability Study where they reviewed the expected risk of various asset mixes including expected standard deviation etc. The Board approved a new target allocation with a projected expected risk. Callan's quarterly performance report includes risk statistics for the total fund, by public markets asset class, and for public markets managers. Some sample metrics for the total fund include standard deviation, tracking error, drawdown analysis, and risk-adjusted return analysis. Asset class and manager-specific analysis includes drawdown analysis, risk-adjusted return analysis, risk statistics analysis, and holdings-based analysis. The quarterly executive summary now includes liquidity analysis and projected risk analysis.</p>	Investment Committee
35 Ensure that idiosyncratic risk limits are defined.	<p>Recommendation Implemented SERS has established idiosyncratic (unsystematic) risk limits for each of its public market managers through the Investment Strategy Statements ("ISS") which are part of the Investment Manager Agreement ("IMA"). The ISS establishes limits on the amount a manager may invest in any one company, asset type etc.</p>	Investment Committee
36 Ensure there is a specified rebalancing policy.	<p>Recommendation Implemented On December 4, 2019 the Board adopted Board Motion (2019-87), approving the updated Investment Policy Statement that includes an updated Rebalancing Policy in Section 10 of the IPS.</p>	Investment Committee
37 The level of illiquidity in combination with leverage at PSERS should be reviewed and addressed immediately.	<p>No SERS Action Required Not Applicable; recommendation is PSERS specific</p>	Investment Committee
38 The level of illiquidity at SERS be comprehensively reviewed and reevaluated.	<p>Recommendation Implemented Liquidity is monitored on an ongoing basis by providing a Cash Flow Forecast and a liquidity schedule to the IC in Executive Session at each meeting (this has been an on going practice since the GFC).</p>	Investment Committee

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39	Both funds report the levels of return-seeking and risk-mitigating assets, as well as those levels for just liquid assets.	Investment Committee
40	New risk reports should be developed so the amount of liquidity and leverage is transparent, and the allocations and systematic risks of the portfolio on a look-through basis is clear. Risk reports should identify how risk is allocated across the portfolio, specify the risks (by investment or asset class) not captured in the standard deviation metric and provide appropriate ways to measure or monitor those risks.	Investment Committee
41	Internal investment management should be limited to index investments until risk controls and compliance procedures can be verified or established that are consistent with more complex strategies. No expansion of internal strategies beyond indexing should take place until this happens.	Investment Committee
42	Both funds should limit new commitments in private markets until risk controls, liquidity management and evaluations are fixed.	Investment Committee
43	The fiduciary Boards should oversee and explicitly authorize any tactical asset allocation decisions the investment staff makes, track how these decisions have performed, and establish clear limits to deviations from the strategic asset allocation.	Investment Committee

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44	Establish a new body, such as this Commission, with appropriate expertise, resources and time, to further study issues around private market investing more broadly, and that private markets investments be limited until there is better evidence both that private markets investing provides a risk-adjusted return above public markets, and that SERS and PSERS have rigorous processes to ensure selection of above median managers, on a risk-adjusted basis.	Investment Committee
45	SERS and PSERS should collaborate on a detailed CEM administrative cost benchmarking analysis, and make the detailed reports publicly available. (Not just an executive summary)	Investment Committee
46	The Boards should see an annual report on manager contracts, which identifies changing terms.	Investment Committee
47	Costs should be linked to performance in a report similar to the Novarca study that identifies whether managers outperform and how much value they capture.	Investment Committee
48	The General Assembly should investigate the feasibility of establishing a common investment performance reporting period for both retirement systems that complements existing employer budgeting periods.	Investment Committee
50	The Commission recognizes some level of investment in private markets, which by definition are actively managed, is reasonable for the two funds, and that there is an appropriate role for active management in those allocations.	Investment Committee

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51 SERS and PSERS should move to fully indexing all public market investments.	<p>Reviewed, Alternative Action Taken SERS is comfortable with the composition of its public market portfolio. However, SERS is waiting for the equity structure study to be completed by Callan, possibly by June 2021. At the conclusion of that study SERS' IO will consider fully indexing its public market portfolio.</p>	Investment Committee
52 SERS is commended for its strong movement toward indexing public equities in recent years, and should index the remaining portions of its public equity portfolio that are currently actively managed.	<p>Reviewed, Alternative Action Taken SERS is comfortable with the composition of its public market portfolio. However, SERS is waiting for the equity structure study to be completed by Callan, possibly by June 2021. At the conclusion of that study SERS' IO will consider fully indexing its public market portfolio.</p>	Investment Committee
53 SERS should index its fixed income portfolio, for a savings of \$4.5 million annually, and \$449 million over 30 years.	<p>Reviewed, Alternative Action Taken SERS is working closely with Callan to restructure its fixed income portfolio. Callan will be presenting the results of its fixed income structure study to the IC at the December 2020 meeting.</p>	Investment Committee
54 PSERS is commended for using an index approach for the portion of its "Passive Plus" management of all US Equities, and should fully index its public equity portfolio for savings of \$17.2 million annually, and \$1.7 billion over 30 years.	<p>No SERS Action Required Not Applicable; recommendation is PSERS specific</p>	Investment Committee
55 PSERS should index the public security portion of its fixed income portfolio, for a savings of \$1.8 million annually, and \$179 million over 30 years.	<p>No SERS Action Required Not Applicable; recommendation is PSERS specific</p>	Investment Committee
56 For every non-public investment considered, there should be a careful pre-investment selection of a risk appropriate (levered if needed) investable market index or indices.	<p>Recommendation Implemented The Investment Office conducts a pre-investment analysis of the fund's performance relative to risk appropriate investable indices.</p>	Investment Committee
57 Returns should be measured and reported such that actual investments can be compared for risk and return versus a low-cost, index implementation.	<p>Recommendation Implemented The 2nd quarter 2019 performance report was presented at the September 2019 meeting and included a benchmark consisting of 60% MSCI ACWI IMI/40% Bloomberg US Aggregate Bond Index as well as a graph of 3 year rolling and 5 year rolling total fund returns. This report has been published on SERS website.</p>	Investment Committee
58 Gross-fee and net-of-fee performance should be reported.	<p>Recommendation Implemented Beginning with the Q1 2020 quarterly performance report Callan began reporting both gross and net of fee returns. The report is published on SERS website.</p>	Investment Committee

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59	Report manager returns relative to both a risk matched benchmark established at the time of investment, and relative to the investible liquid allocation it replaces.	Investment Committee
60	Returns for the portfolio, asset classes, and individual mandates should include annual returns, 1-, 3-, 5-, 10-, 15- and 20-year returns ending in the current period, along with rolling 5-year returns.	Investment Committee
61	Attribution analysis should be performed for each manager to identify whether the drivers of performance were aligned with expectations.	Investment Committee
62	Where portfolio leverage is used, both levered and unlevered returns should be reported, against an appropriately levered or unlevered benchmark.	Investment Committee
63	Performance of private markets, including private equity, should be measured against relevant stylistic benchmarks, as well as the liquid public market Kaplan-Schoar PME values, where the choice of the market index is first that which is consistent with the risk taken by the manager and second, with the index the manger replaces in the diversified portfolio benchmark.	Investment Committee

Recommendation Implemented

The 2nd quarter 2019 performance report was presented at the September 2019 meeting and included a benchmark consisting of 60% MSCI ACWI IMI/40% Bloomberg US Aggregate Bond Index as well as a graph of 3 year rolling and 5 year rolling total fund returns.

Recommendation Implemented

The 2nd quarter 2019 performance report was presented at the September 2019 meeting and included a benchmark consisting of 60% MSCI ACWI IMI/40% Bloomberg US Aggregate Bond Index as well as a graph of 3 year rolling and 5 year rolling total fund returns.

Recommendation Implemented

Currently reflected in Callan quarterly reports for traditional investments. These reports are published on SERS website. Attribution analysis is not applicable for private equity, private credit, and private real estate managers.

No SERS Action Required

Not Applicable; SERS does not use portfolio leverage.

Recommendation Implemented

Both Staff and StepStone run KS-PME and Direct Alpha against SERS' reference benchmark of the Russell 3000 Total Return index for each PE fund commitment. This analysis is included in all new PE investment memos that are sent to the Board. NEPC will begin to include PME metrics (including Kaplan-Schoar) for individual funds in the semi-annual performance reports, where available and appropriate given the limited availability of such indices.

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64 Private market risk reports should measure and describe subscription lines with performance adjusted for the use of those financing facilities as well as other uses of leverage.	<p>Recommendation Implemented With the continued use of capital call facilities by private market sponsors, private market staff and consultant Due Diligence ("DD") reports already incorporate performance analysis with and without the use of leverage (if applicable). This information is readily available (and reliable) during the DD process. The disclosure of this information on an ongoing basis is inconsistent but is constantly changing and improving. As this information continues to be reported and becomes more statistically consistent, staff and consultant will look to further incorporate this data into regular reporting.</p>	Investment Committee
65 Each fund should revisit and reconsider its asset allocation in light of the findings in the consultant report as to past risk-adjusted and relative performance of the current models.	<p>Recommendation Implemented With the newly adopted IPS, the fixed income allocation has been increased, while lowering public equity, private equity, and real estate, which in turn has increased the fund's liquidity profile and lowered risk. As previously mentioned, SERS' liquidity is monitored on an ongoing basis. A Cash Flow Forecast and a liquidity schedule is presented to the IC in Executive Session at each meeting (this has been an on going practice since the GFC).</p>	Investment Committee
66 SERS should reconsider its focus on the role of illiquid investments in the portfolio, particularly private equity, and reduce them to more appropriate levels.	<p>Recommendation Implemented With the newly adopted IPS, the fixed income allocation has been increased, while lowering public equity, private equity, and real estate, which in turn has increased the fund's liquidity profile and lowered risk. As previously mentioned, SERS' liquidity is monitored on an ongoing basis. A Cash Flow Forecast and a liquidity schedule is presented to the IC in Executive Session at each meeting (this has been an on going practice since the GFC).</p>	Investment Committee
67 PSERS should focus on the role of illiquid investments more broadly, particularly private equity, hedge funds and commodities. PSERS is urged to reconsider its current allocation targets for illiquid private equity investments and reduce them to more appropriate levels.	<p>No SERS Action Required Not Applicable; PSERS specific</p>	Investment Committee
68 PSERS, as a matter of priority, should revisit and reexamine its use of leverage, clearly examine and communicate risks, and ensure that robust board-level guidelines are in place and understood by all stakeholders.	<p>No SERS Action Required Not Applicable; PSERS specific</p>	Investment Committee

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69	SERS is commended for maintaining a more rigorous fund-level benchmark. SERS should continue to use the rigorous benchmark and focus its effort on continuing to improve execution.	<p>Recommendation Implemented No Action Needed</p>	Investment Committee
70	PSERS should reconsider and revise its fund-level benchmark and should comprehensively reexamine its performance weaknesses in both "strategy" and "execution."	<p>No SERS Action Required Not Applicable; PSERS specific</p>	Investment Committee
71	Investment management of the systems should be redirected towards simplicity. Because the Consultant report suggests the funds do not currently have the expertise and oversight in place to properly oversee their current complex (particularly in the case of PSERS) portfolios, the funds should take a new and simpler approach. (Complexity increases costs and risks without any assurance of higher returns.)	<p>Recommendation Implemented On December 4, 2019, the Board adopted Board Motions (2019-87) and (2019-88), approving the updated Investment Policy Statement. Per the newly adopted IPS, the fixed income allocation has been increased, while lowering public equity, private equity, and real estate, which in turn has increased the fund's liquidity profile and lowered risk. Although SERS portfolio is well diversified, it would not be considered complex by industry standards. Moreover, given the increase in professional staff and the outsourcing of the non-core private equity managers to Fairview Capital, SERS is well positioned to provide the necessary oversight to the portfolio.</p>	Investment Committee
72	There appears to be a fundamental "mismatch" between oversight capacities for complex portfolios such as PSERS had adopted, particularly internal management, derivatives, and illiquid investments, and such capacities appear "stretched" at SERS, particularly in the large number of allocations to private equity and real estate. New commitments of capital to these strategies at either fund should be limited until these issues are addressed.	<p>Reviewed, Alternative Action Taken On December 4, 2019 the Board adopted Board Motions (2019-87) and (2019-88), approving the updated Investment Policy Statement. Per the newly adopted IPS, the fixed income allocation has been increased, while lowering public equity, private equity, and real estate, which in turn has increased the fund's liquidity profile and lowered risk. SERS implemented a program for its private market managers where by larger commitments are being made to fewer managers thereby reducing the number of managers that require oversight by SERS and its consultants. Furthermore, SERS engaged Fairview Capital to manage and wind down the "non-core" private equity managers thereby providing SERS staff more time to concentrate on the "core" private equity managers.</p>	Investment Committee

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<p>73 Due to a perceived lack of sufficient accountability, risk monitoring and management structures, certain "innovation" cost-savings options, such as further internal management, co-investments, seeding new managers and/or forming exclusive relationships with new firms, should NOT be pursued at this time.</p>	<p>Reviewed, Alternative Action Taken The Board approved Investment Policy Statement includes initiatives to be undertaken by the Investment Office.</p>	<p>Board Governance & Personnel Committee</p>
<p>74 Cost-savings recommendations in the Consultant report are limited (they were only able to analyze public mandates), and recommendations were made in the context of presuming no change to current allocations or strategies. Thus, the following recommendations should be understood as options that may be superseded by recommendations found elsewhere in this report.</p>	<p>Recommendation Implemented No Action Needed</p>	<p>Investment Committee</p>
<p>75 It is noted that the Consultant report finds that in practice at both SERS and PSERS, "active mandates that cost more do not necessarily represent better value for money" and indeed, at one asset class at PSERS, the cheapest mandates were the best performing.</p>	<p>Recommendation Implemented Callan has provided active versus passive education across public markets asset classes for the PA SERS Board in 2019 and in 2020. In 2020, after the asset-liability study was completed and the new asset allocation was approved at the end of 2019, we began asset class structure studies where active versus passive implementation is addressed. As the next step, the fixed income structure will be presented to the Board at the December meeting.</p>	<p>Investment Committee</p>
<p>76 PSERS should comprehensively review and revise its benchmarks for asset classes, sub-asset classes and managers, particularly all benchmarks used for performance-based compensation. (Consultants says PSERS benchmarks are not 'sufficiently granular."</p>	<p>No SERS Action Required Not Applicable; PSERS specific</p>	<p>Investment Committee</p>
<p>77 Performance pay arrangements at both funds should be rigorously reviewed, appropriately benchmarked, and entered into only after modeling total costs to the fund of different options. Furthermore, all fees, whether base or performance, should be considered and tracked. Pursuing fee "savings" that are simply shifting costs from base fees to performance fees, is not recommended.</p>	<p>Recommendation Implemented For those managers in which SERS has directly entered into a performance pay arrangement, all of the fees of said managers are tracked and publicly reported in SERS' Budget Book. The performance pay arrangements with SERS' separately managed real estate accounts were recently renegotiated. Staff will work with Callan to review and if possible, renegotiate the performance pay arrangement of its public markets managers.</p>	<p>Investment Committee</p>

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78 Track the age of all fee schedules, and reviewing at least every two years.	<p>Recommendation Implemented The fee schedules for public market managers are now tracked as part of SERS' on-going diligence and will be reviewed on a biennial basis. Callan has provided public market manager investment fee evaluation studies to SERS IO in 2019 and 2020 and expects to present the 2020 fee study at the December 2020 Board meeting.</p>	Investment Committee
79 Track the age of all manager relationships, and considering longevity of relationship in recurring fee reviews and negotiations.	<p>Recommendation Implemented Although the public market managers' inception date is tracked in the quarterly performance report, it is also being tracked by the on-going diligence checklist maintained by SERS' staff. Longevity is considered when renegotiating fees. Private market manager vintage years are provided in various reports including SERS' CAFR, budget books and the semi-annual performance reports. It should be noted private market manager contracts do not allow for fee renegotiations once executed.</p>	Investment Committee
80 Require all asset managers to confirm in writing that they do not receive commissions, rebates and the like in connection with fund investments.	<p>Recommendation Implemented SERS' Master DDQ has been updated to include a section that requires all prospective managers to certify in writing they do not receive any indirect compensation from funds/accounts in which SERS is considering investing. Further, the manager also certifies if they begin receiving any indirect compensation from managing funds in which SERS is invested they will notify SERS promptly.</p>	Investment Committee
81 Require all asset managers to confirm in writing that they have not paid fees, commissions and the like in connection with obtaining investments into their funds.	<p>Recommendation Implemented This is addressed by SERS master DDQ under the placement agent disclosure form which requires a signature of every potential manager.</p>	Investment Committee
82 Establish a fee budget, at the fund level, for all investment managers, subject to waiver by the board.	<p>Reviewed, Alternative Action Taken Callan is not aware of any clients that use a fee budget - Callan canvassed consultants internally and was unable to identify a client who uses a fee budget. They believe that using fee budgets can be overly constraining to a Plan. The best practice is to periodically review fees to confirm lowest cost vehicle and potentially negotiate fees down based on market rates, and to achieve value for fees paid, defined as net of fee performance, not simply lowest fees in every case.</p>	Investment Committee

SERS RESPONSES TO PPMARC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
83 Prohibit the use of bundled brokerage by brokers and managers.	<p>Reviewed, Alternative Action Taken SERS is reviewing the use of bundled brokerage (soft dollars) by its investment managers and determining if the manager can eliminate it. If the manager cannot eliminate the use of bundled brokerage, SERS will require these managers to report their soft dollar commissions to SERS on a quarterly basis. The soft dollar commissions will include the SERS' share of the amount of the commission from trades, types of services paid with these commissions, and the cost of the services.</p>	Investment Committee
84 SERS is commended for conducting regular transaction cost analysis; PSERS should do the same.	<p>Recommendation Implemented No Further Action Needed.</p>	Investment Committee
85 Both funds should establish a better process for considering specific alternatives to each proposed investment under consideration; any proposed investment should be evaluated not in a vacuum, but against a specific low-fee equivalent-risk alternative, as a way of strengthening a commitment to cost discipline and better evaluation of expected and realized performance.	<p>Recommendation Implemented SERS has been focused on lowering costs by taking alternative approaches to investing in private and public markets. SERS has been increasing investments in its private markets co-investment platform and public market index strategies. SERS plans to evaluate an optimal approach to internally manage certain public market strategies as well as factor-based index strategies. In addition, SERS is evaluating an approach to reduce funded status volatility risks by hedging its liabilities.</p>	Investment Committee
86 Both funds should evaluate procurement guidelines for asset management services.	<p>Recommendation Implemented Board Motion: 2020-38 - PPMARC RECOMMENDATION #100 (PROCUREMENT OF INVESTMENT MANAGERS) Meeting Date: June 10, 2020 RESOLVED: That the board accepts the recommendation of the Investment Committee to implement the following to enhance the current process for hiring public market managers: Post an announcement in a timely manner to SERS' website that SERS is seeking a manager with a certain mandate, e.g. large cap value manager. Post a similar announcement on the website of SERS' general investment consultant requesting managers to enter/update such consultant's database by a certain agreed upon date. Advertise the announcement using Twitter, LinkedIn and industry publications.</p>	Investment Committee

SERS RESPONSES TO PPM/IRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee	
87	<p>Both funds should adopt the practices detailed in the Consultant report to negotiate harder on private market investments, particularly when the systems together would constitute one of the top investors in terms of asset size, including but not limited to: seeking to pay fees based only on invested rather than committed capital; seeking fee reductions during the investment phase; capping monitoring, oversight and legal fees; negotiating carry terms more carefully and modeling different scenarios seeking full transparency on waterfall terms, and whether other waterfall terms have been offered to other investors; recalculating GP-determined carry payments; having a process to ensure that all terms contained in marketing materials or arrived at in negotiations are legally documented and monitored; and monitoring and auditing all fees and costs charge by GPs in limited partnership structures.</p>	<p>Recommendation Implemented As a fiduciary, SERS continues to leverage its relationship with PSERS and its consultant to push fund sponsors for the most attractive terms possible for SERS. This includes leveraging relationship size, industry best practices and full alignment of interest. Though current process includes tracking and reporting fees and costs charged by General Partners, further analysis is underway to determine the cost to recalculate and audit these metrics.</p>	Investment Committee
88	<p>Both funds should retain the services of an outside expert who, with proper access to full information, could assist them in developing and implementing further cost-savings.</p>	<p>Recommendation Implemented Callan has provided investment management fee studies of public markets mandates to the SERS IO in 2019 and in 2020 based on Callan industry studies, which assess fee competitiveness versus peer mandates, and can be used to renegotiate mandates with managers. With respect to its private market investments SERS has been a leader in pushing for reduced and/or no fee structures on the funds LPAC. SERS has been actively reducing fees whenever possible including working with PSERS, when possible, to negotiate size discounts, identifying new investment managers or funds where SERS can guide the structuring of new investment opportunities and receive reduced fees as a "strategic LP", making sizable commitments on our own to take advantage of size discounts, committing to reduce fee Co-Investment side-cars vehicles or creating co-investment vehicles with significantly reduced management fees and carried interest terms.</p>	Investment Committee

SERS RESPONSES TO PPMARC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee	
89	<p>SERS, with the assistance of an outside expert, should immediately renegotiate public security mandates identified in the Consultant report that are mispriced to achieve at least \$4.87 million in savings on an annual basis, or \$584 million compounded over 30 years. (This recommendation is not meant to preclude action on other savings recommendations elsewhere in this report that may supersede it.)</p>	<p>Reviewed, Alternative Action Taken Callan has provided investment management fee studies of public markets mandates to the SERS IO in 2019 and in 2020 based on Callan industry studies, which assess fee competitiveness versus peer mandates, and can be used to renegotiate mandates with managers.</p>	Investment Committee
90	<p>Deploying these and other approaches, SERS, with the assistance of an outside expert, should renegotiate all new (or renewed) private equity investment agreements to achieve at least \$12.18 million in savings on an annual basis, or \$926 million compounded over 30 years.</p>	<p>Reviewed, Alternative Action Taken LPAs cannot be retroactively “renegotiated” by a single LP, let alone an “outside expert” that is not an LP in the fund except in the case of fund extensions where SERS has been a leader in pushing for reduced and/or no fee structures on the funds LPAC. SERS has been actively reducing fees whenever possible including working with PSERS, when possible, to negotiate size discounts, identifying new investment managers or funds where SERS can guide the structuring of new investment opportunities and receive reduced fees as a “strategic LP”, making sizable commitments on our own to take advantage of size discounts, committing to reduce fee Co-Investment side-cars vehicles or creating co-investment vehicles with significantly reduced management fees and carried interest terms.</p>	Investment Committee
91	<p>PSERS, with the assistance of an outside expert, should immediately renegotiate the public security mandates identified in the Consultant report that are mispriced to achieve at least \$4.91 million in savings on an annual basis, or \$560 million compounded over 30 years.</p>	<p>No SERS Action Required Not Applicable; PSERS specific</p>	Investment Committee
92	<p>Deploying these and other approaches, PSERS, with the assistance of an outside expert, should renegotiate all new (or renewed) private equity investment agreements to achieve at least \$15.48 million in savings on an annual basis, or \$1.17 billion compounded over 30 years.</p>	<p>No SERS Action Required Not Applicable; PSERS specific</p>	Investment Committee
93	<p>PSERS, with the assistance of an outside expert, immediately restructure its high yield allocation as suggested in the Consultant report, to achieve savings of at least \$42.5 million on an annual basis, or \$3.23 billion compounded over 30 years, while noting that this recommendation is not meant to preclude action on other savings recommendations elsewhere in this report that may supersede it.</p>	<p>No SERS Action Required Not Applicable; PSERS specific</p>	Investment Committee

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee	
94	<p>In the absence of the legislatively-created consolidated Central Pension Investment Office, the systems should establish structures to share manager selection, monitoring, and risk control work between the two Systems.</p>	<p>Reviewed, Alternative Action Taken June 14, 2019 Board Meeting - Board Motion (2019-39) - Jointly Develop Transparency Checklist with PSERS: Resolved that the Board accepts the recommendation of the Board Governance and Personnel Committee to direct the SERS Investment Office to work with PSERS to develop a common standard checklist for transparency issues when evaluating managers. On-going discussions with PSERS will continue to take place with respect to this matter.</p>	Investment Committee
95	<p>The General Assembly should enact legislation to establish a consolidated central pension investment office ("Office") to manage and execute all investment mandates on behalf of and as directed by each retirement system. While maintaining existing government structures for both systems, the Office would avoid duplication of investment operations, enhance internal execution capacities, and leverage the combined fund size.</p>	<p>General Assembly Action Required In the spring of 2019, the Board and the Pennsylvania Public School Employees' Retirement Board (PSERB) contracted with McKinsey & Company, Inc. Washington, D.C. to assist in reviewing best practices in consolidating investment operations. Special fiduciary counsel, Christopher Waddell, also provided guidance to the Board with respect to input to be provided by the Board to implementing legislation. H.B. 1960 was introduced to create the Office. Staff continues to monitor H.B. 1960 and will continue to keep the Board apprised as to any further legislative action.</p>	Board Governance & Personnel Committee
96	<p>The office would be responsible for the management, implementation, and execution of all investment mandates on behalf of both Systems pursuant to each retirement board's adoption of asset allocation plans.</p>	<p>General Assembly Action Required See above (Recommendation #95)</p>	Board Governance & Personnel Committee
97	<p>The Office should be composed of high caliber investment professionals.</p>	<p>General Assembly Action Required See above (Recommendation #95)</p>	Board Governance & Personnel Committee
98	<p>The Office would be subject to a fiduciary standard requiring it to act in the sole and best interest of each client System and shall maintain vigorous reporting and disclosure standards consistent with those recommended in the Commission's report.</p>	<p>General Assembly Action Required See above (Recommendation #95)</p>	Board Governance & Personnel Committee
99	<p>The Office, in consultation with the respective System, should be the sole contracting authority to retain investment management and consulting services on behalf of the Systems.</p>	<p>General Assembly Action Required See above (Recommendation #95)</p>	Board Governance & Personnel Committee

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
100	Both SERS and PSERS should consider the benefits and limitations of adopting open competitive-bidding processes for investment managers.	Investment Committee
101	SERS should adopt an open competitive-bidding process for all investment consultants (PSERS has this in place).	Investment Committee

Reviewed, Alternative Action Taken
Board Motion (2020-38) - PPMAIRC RECOMMENDATION #100 (PROCUREMENT OF INVESTMENT MANAGERS)
RESOLVED: That the board accepts the recommendation of the Investment Committee to implement the following to enhance the current process for hiring public market managers:
 1) Post an announcement in a timely manner to SERS’ website that SERS is seeking a manager with a certain mandate, e.g. large cap value manager.
 2) Post a similar announcement on the website of SERS’ general investment consultant requesting managers to enter/update such consultant’s database by a certain agreed upon date.
 3) Advertise the announcement using Twitter, LinkedIn and industry publications.

Recommendation Implemented
Board Motion (2020-39) - PPMAIRC RECOMMENDATIONS #101-106 (PROCUREMENT OF INVESTMENT CONSULTANTS)
Meeting Date: June 10, 2020
RESOLVED: That the board accepts the recommendation of the Investment Committee to amend the Investment Policy Statement to provide that a Request for Information (RFI) process is to be used for the hiring of general and specialty investment consultants, with the following requirements:
 (a) All RFIs are to be posted on SERS’ website; and
 (b) Once a contract has been entered into with the selected consultant, post on SERS’ website the selected consultant’s proposal received in response to the RFI, with redactions consistent with those made for proposals received pursuant to the Procurement Code, as set forth in the Procurement Handbook - Part I Chapter 50 - Public Access to Procurement Information.

SERS RESPONSES TO PPMARC RECOMMENDATIONS

	Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
102	Both PSERS and SERS should publish policy documents that address the following:	Recommendation Implemented See #101	Investment Committee
103	Circumstances (if any) for which asset classes, and for which categories of investment professionals are RFIs and RFPs issues?	Recommendation Implemented See #101	Investment Committee
104	Publish all RFIs and RFPs. Publish the names of all respondents.	Recommendation Implemented See #101	Investment Committee
105	Publish the contents of the responses.	Recommendation Implemented See #101	Investment Committee
106	Identify the criteria and justification for exercising the single source / sole source exemption.	Recommendation Implemented See #101	Investment Committee
107	PSERS is commended for urging management firms to comply with the CFA Manager Code; SERS should do the same. SERS and PSERS should include a firm's compliance with the CFA Manager Code as part of the evaluation and due diligence process.	Recommendation Implemented Board Motion (2020-40) - PPMARC RECOMMENDATION #107 (EVALUATION/ DUE DILIGENCE PROCESS FOR INVESTMENT MANAGERS) RESOLVED: That the board accepts the recommendation of the Investment Committee to direct SERS' Investment Office staff to include in the due diligence questionnaire for prospective investment managers an inquiry as to whether a firm is compliant with the CFA Institute Asset Manager Code.	Investment Committee
108 - 109	The General Assembly should enact legislation to encourage diversity and inclusion efforts to increase the use of minority- and women-owned asset management managers and firms. These initiatives include but are not limited to: Encouraging Pennsylvania's public pension systems and other investment boards to use minority investment managers in managing their assets, encompassing all asset classes, and to increase the racial, ethnic, and gender diversity of their fiduciaries to the greatest extent feasible within the bounds of financial and fiduciary prudence, and to take affirmative steps to remove any barriers to the full participation in investment opportunities.	General Assembly Action Required – SERS Action Taken in Support With the adoption of Board Motion (2019-87) and Board Motion (2019-88) , the Board approved an Investment Policy Statement, which includes a provision providing for the use of diverse investment managers in all asset classes, within the bounds of financial and fiduciary prudence. In March 2019, the Investment Office revised its Due Diligence Questionnaire to obtain information from managers as to their diversity efforts.	Board Governance & Personnel Committee

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
110	Requiring the public pension systems and other investment boards to report annually on the ethnicity and gender of the members of their own staffs as well as money managers they hire.	Board Governance & Personnel Committee
111	Requiring the public pension systems and other investment boards to obtain diversity information on each current and prospective manager and produce a minority inclusion report annually.	Board Governance & Personnel Committee
112	Creating a Commonwealth online database of minority- and woman-owned asset managers.	Board Governance & Personnel Committee
113	Adopting minimum goals for the utilization of minority- and woman-owned asset management firms.	Board Governance & Personnel Committee

SERS RESPONSES TO PPM AIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
<p>5 Continue the work of the PPM AIRC Commission through the establishment of a review commission to explore questions beyond the purview of PPM AIRC.</p>	<p>General Assembly Action Required Board Motion (2020-30) - The Board accepts the recommendation of the Board Governance and Personnel Committee to acknowledge that it is for the legislature if they choose to do so to establish a review commission to explore questions beyond the purview of the PPM AIRC.</p>	<p>Board Governance & Personnel Committee</p>
<p>6 Pennsylvania should lead an effort to form a consortium of major state pension funds to reset the balance of power between asset owners and investment managers.</p>	<p>Reviewed, Alternative Action Taken Board Motion (2020-31) - The Board accepts the recommendation of the Board Governance and Personnel Committee to have staff continue to actively participate in ILPA, PREA, CII and NASRA, in their efforts to reset the balance of power.</p>	<p>Board Governance & Personnel Committee</p>
<p>14 Post complete board materials on each system's public websites, including manager presentations with proposed fee terms, no less than one week before each board or investment committee meeting, and remain online for 7 years.</p>	<p>Reviewed, Alternative Action Taken Board Motion (2019-38) - The Board accepts the recommendation of the Board Governance and Personnel Committee to direct the SERS Investment Office, in collaboration with the board's consultants, to post summary board materials on SERS' public website and for the SERS Investment Office to provide the board with a sample document for its review and approval that is reflective of the summary board materials.</p> <p>Board Motion (2019-74) - The Board approves the format of the sample documents including staff memo, consultant memo and recommended template for future manager presentations to be publicly posted on SERS' public website.</p>	<p>Board Governance & Personnel Committee</p>
<p>15 Each public board and committee meeting should be live streamed, and video and audio recordings of public board proceedings be published and archived.</p>	<p>Recommendation Implemented Board Motion (2020-46) - The Board accepts the recommendation of the Board Governance and Personnel Committee to have staff implement livestreaming of each public portion of each board and committee meeting, with a goal of commencing with the December 1 and 2, 2020, board and committee meetings, with recordings of the livestream to be: (i) published on the SERS website, and (ii) archived in accordance with applicable Commonwealth records retention policies and management directives.</p>	<p>Board Governance & Personnel Committee</p>

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee	
16	<p>All investment marketing ("pitch") materials, investment agreement terms, including side letters, related to fees, costs, expenses, performance and risk be publicly available. Also, fee terms should not be redacted in contracts posted to e-contracts website, and both retirement systems should use a common standard checklist for transparency issues when evaluating managers.</p>	<p>Reviewed, Alternative Action Taken Board Motion (2019-39) - The Board accepts the recommendation of the Board Governance and Personnel Committee to direct the SERS Investment Office to work with PSERS to develop a common standard checklist for transparency issues when evaluating managers.</p> <p>Board Motion (2019-74) - The Board approves the format of the sample documents including staff memo, consultant memo and recommended template for future manager presentations to be publicly posted on SERS' public website. Unless and until a common standard checklist is agreed to, SERS' private market teams have been requesting the consent of any prospective GP/Manager to publish the metrics found in the respective specialty consultant semi-annual performance report, as well as other information. It is the Investment Office's intention to include in the 'staff' memo to the Investment Committee for any prospective GP/Manager, the manager's response to the above metrics thereby providing the Investment Committee insight into the GP/Manager's consent for disclosing such information.</p> <p>Board Motion (2020-32) - The Board accepts the recommendation of the Board Governance and Personnel Committee to direct the Investment Office to include in its staff memo to the Investment Committee for any prospective GP/Manager the responses received from the GP/Manager to the request for consent to publish the metrics found in the specialty consultants' semi-annual performance reports, as well as other information.</p>	Board Governance & Personnel Committee
17	<p>Both systems are commended for disclosing investment policy guidelines and asset allocation plans as well as other statements of their processes. Recommendation is to continue.</p>	<p>Recommendation Implemented With the adoption of Board Motion (2019-87) and Board Motion (2019-88), the Board approved an Investment Policy Statement, which includes the investment policy guidelines and asset allocation plan.</p>	Board Governance & Personnel Committee
73	<p>Due to a perceived lack of sufficient accountability, risk monitoring and management structures, certain "innovation" cost-savings options, such as further internal management, co-investments, seeding new managers and/or forming exclusive relationships with new firms, should NOT be pursued at this time.</p>	<p>Reviewed, Alternative Action Taken The Board approved Investment Policy Statement includes initiatives to be undertaken by the Investment Office.</p>	Board Governance & Personnel Committee

SERS RESPONSES TO PPMIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
95	<p>The General Assembly should enact legislation to establish a consolidated central pension investment office ("Office") to manage and execute all investment mandates on behalf of and as directed by each retirement system. While maintaining existing government structures for both systems, the Office would avoid duplication of investment operations, enhance internal execution capacities, and leverage the combined fund size.</p>	Board Governance & Personnel Committee
96	<p>General Assembly Action Required See above (Recommendation #95)</p>	Board Governance & Personnel Committee
97	<p>General Assembly Action Required See above (Recommendation #95)</p>	Board Governance & Personnel Committee
98	<p>General Assembly Action Required See above (Recommendation #95)</p>	Board Governance & Personnel Committee
99	<p>General Assembly Action Required See above (Recommendation #95)</p>	Board Governance & Personnel Committee
108 - 109	<p>General Assembly Action Required – SERS Action Taken in Support With the adoption of Board Motion (2019-87) and Board Motion (2019-88), the Board approved an Investment Policy Statement, which includes a provision providing for the use of diverse investment managers in all asset classes, within the bounds of financial and fiduciary prudence. In March 2019, the Investment Office revised its Due Diligence Questionnaire to obtain information from managers as to their diversity efforts.</p>	Board Governance & Personnel Committee

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
110	Requiring the public pension systems and other investment boards to report annually on the ethnicity and gender of the members of their own staffs as well as money managers they hire.	Board Governance & Personnel Committee
111	Requiring the public pension systems and other investment boards to obtain diversity information on each current and prospective manager and produce a minority inclusion report annually.	Board Governance & Personnel Committee
112	Creating a Commonwealth online database of minority- and woman-owned asset managers.	Board Governance & Personnel Committee
113	Adopting minimum goals for the utilization of minority- and woman-owned asset management firms.	Board Governance & Personnel Committee

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
<p>1 The Commonwealth should annually maintain full payment of the actuarially determined contribution amount necessary to fund each public pension plan.</p>	<p>General Assembly Action Required – SERS Action Taken in Support Board Motion (2019-16) - The Board accepts the recommendation of the Board Finance and Member Services Committee which directed SERS Executive Director and staff to work with the General Assembly to pursue legislative strategies to ensure full funding in a manner in line with the objectives of the PPMAIRC recommendations, including exploration of the use of a dedicated funding source to fund future obligations.</p>	<p>Finance & Member Services Committee</p>
<p>2 The General Assembly should consider additional legislation mandating full funding of each retirement fund, pursuant to Act 120 of 2010 as an annual budgetary priority.</p>	<p>General Assembly Action Required – SERS Action Taken In Support See above (Recommendation #1)</p>	<p>Finance & Member Services Committee</p>
<p>3 The General Assembly should consider legislation requiring the pre-funding of any future benefit structure enhancement or COLA.</p>	<p>General Assembly Action Required See above (Recommendation #1)</p>	<p>Finance & Member Services Committee</p>
<p>4 The General Assembly should consider the creation of a rate stabilization fund as a precaution against annual underfunding of the two retirement systems during periods of state budgetary stress.</p>	<p>General Assembly Action Required See above (Recommendation #1)</p>	<p>Finance & Member Services Committee</p>

SERS RESPONSES TO PPMIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
7	<p>The General Assembly enact legislation requiring an annual stress test of each system, broadly aligning with the Blue Ribbon Panel recommendations, including at least a 2-percentage point variation in a baseline benchmark return, and a quantifiable contribution risk (e.g., the 80% measure recommended by the panel).</p>	Finance & Member Services Committee
	<p>General Assembly Action Required – SERS Action Taken in Support Board Motion (2019-17) - The Board accepts the recommendation of the Board Finance and Member Services Committee, which directed SERS Executive Director and staff to work with the actuary, Korn Ferry, to implement annual stress testing in line with the broad overall objectives of the PPMIRC recommendations and to discuss the stress testing approach with the General Assembly.</p> <p>Korn Ferry presented a draft Stress Testing and Risk Assessment report to the Finance and Member Services Committee on December 3, 2019, which was accepted with no edits.</p> <p>Board Motion (2019-85) - The Board accepts the recommendation of the Board Finance and Member Services Committee to approve the Stress Testing and Risk Assessment report, prepared in accordance with and for the purpose of achieving the broad overall objectives outlined in the PPMIRC recommendations.</p> <p>The Stress Testing and Risk Assessment report was published on SERS website on December 9, 2019.</p> <p>Korn Ferry presented the second annual Stress Testing and Risk Assessment report to the Finance and Member Services Committee on September 29, 2020. The report was approved and subsequently published on SERS website.</p>	
8	<p>The Systems' stress tests report the impact of the stress on other financial measures (e.g., contributions in dollars, contributions as % of payroll, funded ratios, etc.) and cover a period of at least 30 years.</p>	Finance & Member Services Committee
9	<p>Stochastic models be used in addition to deterministic modelling.</p>	Finance & Member Services Committee
10	<p>The Systems make their stress test reports publicly available.</p>	Finance & Member Services Committee
11	<p>The Systems' stress test charts be simple to understand, with the policy question or decision the chart address featured prominently and clearly at the top of each chart.</p>	Finance & Member Services Committee
12	<p>The Systems' stress tests be conducted by an experienced actuary, not an investment consultant.</p>	Finance & Member Services Committee

SERS RESPONSES TO PPM AIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee	
13	The Systems conduct and publish "reverse" stress tests showing market events and funding scenarios likely to cause certain undesirable outcomes (including but not limited to the funds' investment portfolios becoming more illiquid than a Board-determined threshold limit, expressed as a multiple of annual distributions.)	Recommendation Implemented See above (Recommendation #7)	Finance & Member Services Committee
18	Systems are commended for disclosing total fund performance and performance of certain asset classes relative to benchmarks. Recommendation is to continue.	Recommendation Implemented No Further Action Needed.	Investment Committee
19	Both systems should publish net-of-fee and gross-fee returns when reporting investment performance, and the General Assembly should consider enacting legislation to require that.	Recommendation Implemented The Q1 2020 General Consultant report was given to the IC at the June 9, 2020 meeting which included the gross and net of fee performance reporting. The report has been published on SERS' website.	Investment Committee
20	To facilitate understanding by stakeholders and policy markets, each fund should report total fund performance against a risk-appropriate and commonly understood reference portfolio benchmark as Rhode Island (e.g., global 60/40 or 50/30 index, with and without leverage if used, and for 1, 3, 5, 7, 15, 20 & 25-year periods, as well as year by year.	Recommendation Implemented The 2nd quarter 2019 performance report was presented at the September 2019 meeting and included a benchmark consisting of 60% MSCI ACWI IMI/40% Bloomberg US Aggregate Bond Index as well as a graph of 3 year rolling and 5 year rolling total fund returns. This report has been published on SERS website.	Investment Committee
21	Both systems should publish returns, costs and fees of individual investments relative to a similar risk public markets alternative, on a levered and unlevered basis.	Reviewed, Alternative Action Taken The returns of SERS' private market managers is provided in the semi-annual performance reports prepared and presented by StepStone for private equity and NEPC for private real estate. Unfortunately, public market benchmarks with similar risks on both a levered and unlevered basis do not exist. Moreover, SERS is unable to report unlevered performance for the private market managers. None of SERS' public market managers utilize leverage.	Investment Committee
22	Returns of internal investments should be reported in the same manner as other investments - by investment, asset class, vintage year (if appropriate) and as a portfolio on a levered and unlevered basis.	No SERS Action Required Not Applicable; SERS does not have internally managed investments	Investment Committee

SERS RESPONSES TO PPMIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
23	Performance reports for the two systems should include a rolling 3- and 5-year comparison in graphic form, and annual returns for the last 5 years, in addition to the returns over 3-, 5-, 10-, 15- and 20-year periods ending at the current period in situations where not already done.	Investment Committee
24	Both systems should publicly post detailed quarterly portfolio performance reports received from general consultants, with per-manager returns versus benchmarks, and alternative investment performance reports received from specialty consults, including public market equivalent (PME) values for each fund/manager based on a board-approved index.	Investment Committee
25	The General Assembly should repeal statutory provisions that permit both systems to shield investment performance, risk and expense information from public disclosure pursuant to RTKL requests.	Investment Committee
26	The General Assembly should enact legislation that designates all retirement system records related to investment performance, risk and expense information as public records (using Arkansas, Nevada, Texas and New York as examples).	Investment Committee
27	(At a minimum) the General Assembly should enact legislation that would apply the provisions of PSERS' retirement code relating to the designation of valuation and expense information related to alternative investments to SERS' alternative investments.	Investment Committee

Recommendation Implemented
 The 2nd quarter 2019 performance report was presented at the September 2019 meeting and included a benchmark consisting of 60% MSCI ACWI IMI/40% Bloomberg US Aggregate Bond Index as well as a graph of 3 year rolling and 5 year rolling total fund returns. This report has been published on SERS website.

Recommendation Implemented
 The Board has reviewed (Dec 4, 2019) and was satisfied with the examples presented of the public and private reports and these reports have since been published on SERS website. **Board Motion (2019-86)**

General Assembly Action Required
 SERS has taken numerous actions to be more transparent including but not limited to publishing on its website quarterly performance reports, the semi-annual performance reports provided by its specialty consultants StepStone (private equity) and NEPC (real estate) and an annual fee and expense report.

General Assembly Action Required
 SERS has taken numerous actions to be more transparent including but not limited to publishing on its website quarterly performance reports, the semi-annual performance reports provided by its specialty consultants StepStone (private equity) and NEPC (real estate) and an annual fee and expense report.

General Assembly Action Required
 SERS' Investment Office (IO) does not believe any action is required at this time since the recommendation is for the General Assembly and not SERS.

SERS RESPONSES TO PPM AIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
<p>28 Both retirement systems should require all external managers to use the ILPA template. SERS should require, not request, this of managers.</p>	<p>Recommendation Implemented Pursuant to Board Motion (2019-43), the requirement to provide the information found in the ILPA template is included in contracts/agreements/side letters of all new private market investments since the adoption of this resolution. For SERS' existing private market investments, an email was sent late May 2019 requesting that the GPs provide the ILPA template or the information found in the template.</p>	Investment Committee
<p>29 Both retirement systems should publicly disclose all travel or other expenses incurred by staff and paid for by an external investment manager, fund or consultant.</p>	<p>Recommendation Implemented Pursuant to Board Motion (2020-65), the Board approved the template of the sample report for disclosing all travel or other expenses incurred by staff and paid for by an external investment manager, fund or consultant as well as all expenses incurred by SERS.</p>	Investment Committee
<p>30 Both systems should utilize and report information from the ILPA template for each manager in the reporting of fees, costs and expenses of alternative investments, including carried interest. For traditional investments, the systems should publish investment management fees, costs and expenses by manager and aggregated by asset class, separately identifying base management, performance/carried interest, and other expenses (e.g., CalPERS, Missouri, South Carolina). The General Assembly should consider enacting legislation requiring such reporting.</p>	<p>Recommendation Implemented Board Motion (2020-66): PPM AIRC #30 REPORTING FEE INFO Meeting Date: September 30, 2020 RESOLVED: That the board accepts the recommendation of the Investment Committee to direct the SERS Investment Office and Office of Finance and Administration to: 1. Report for each investment manager/general partner, separately as well as in the aggregate for both traditional and non-traditional investments, the fees, costs, and expenses, and in the case of non-traditional investments, carried interest, similar to the report found in the executive session materials for the most recent Investment Committee meeting. This report is to be produced on an annual basis going forward and presented to the Investment Committee in July of each year; and 2. Produce an additional report suitable for public dissemination, in accordance with confidentiality terms outlined in contractual agreements between SERS and SERS' Investment Managers/general partners, as certified by the SERS Legal Office, similar to the report provided to the Investment Committee.</p>	Investment Committee

SERS RESPONSES TO PPMIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
<p>31 Policymakers and stakeholders should be prepared/willing to defend the systems against false comparisons that may be made as a result of increased transparency on fees. Policymakers should avoid "penalizing" Pennsylvania's funds for doing the right thing.</p>	<p>Recommendation Implemented The Executive Director shall work with the Communications Office, SERS Board members, and other external stakeholders to seek outreach opportunities to SERS' members and participants, legislative and administration decision makers, and the general public, to accurately report SERS investment performance and funded status and ensure any comparisons with other pension systems are fairly and appropriately represented.</p>	Investment Committee
<p>32 Ensure there is a risk budget that specifies the tolerable volatility, downside risk, and illiquidity and the associated simple benchmark profile.</p>	<p>Recommendation Implemented The risk analysis was conducted as part of the asset liability study performed by Callan in 2019. The Board approved a new target allocation with a projected expected risk reflecting its risk tolerance. Callan's quarterly performance report includes a simple 60/40 equity/fixed income benchmark for reference, as well as risk statistics analysis and holdings-based analysis. The quarterly executive summary now includes liquidity analysis and projected risk analysis.</p>	Investment Committee
<p>33 Ensure there is a diversified policy benchmark composed of investable index funds.</p>	<p>Recommendation Implemented This has been added to the quarterly Callan reports at the asset class level. Callan reports are published on the SERS website.</p>	Investment Committee
<p>34 Ensure there are systematic risk calculations are defined and targets established.</p>	<p>Recommendation Implemented Callan addressed this in its Asset-Liability Study where they reviewed the expected risk of various asset mixes including expected standard deviation etc. The Board approved a new target allocation with a projected expected risk. Callan's quarterly performance report includes risk statistics for the total fund, by public markets asset class, and for public markets managers. Some sample metrics for the total fund include standard deviation, tracking error, drawdown analysis, and risk-adjusted return analysis. Asset class and manager-specific analysis includes drawdown analysis, risk-adjusted return analysis, risk statistics analysis, and holdings-based analysis. The quarterly executive summary now includes liquidity analysis and projected risk analysis.</p>	Investment Committee

SERS RESPONSES TO PPMIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
35 Ensure that idiosyncratic risk limits are defined.	<p>Recommendation Implemented SERS has established idiosyncratic (unsystematic) risk limits for each of its public market managers through the Investment Strategy Statements ("ISS") which are part of the Investment Manager Agreement ("IMA"). The ISS establishes limits on the amount a manager may invest in any one company, asset type etc.</p>	Investment Committee
36 Ensure there is a specified rebalancing policy.	<p>Recommendation Implemented On December 4, 2019 the Board adopted Board Motion (2019-87), approving the updated Investment Policy Statement that includes an updated Rebalancing Policy in Section 10 of the IPS.</p>	Investment Committee
37 The level of illiquidity in combination with leverage at PSERS should be reviewed and addressed immediately.	<p>No SERS Action Required Not Applicable; recommendation is PSERS specific</p>	Investment Committee
38 The level of illiquidity at SERS be comprehensively reviewed and reevaluated.	<p>Recommendation Implemented Liquidity is monitored on an ongoing basis by providing a Cash Flow Forecast and a liquidity schedule to the IC in Executive Session at each meeting (this has been an on going practice since the GFC).</p>	Investment Committee
39 Both funds report the levels of return-seeking and risk-mitigating assets, as well as those levels for just liquid assets.	<p>Recommendation Implemented Callan includes charts depicting return seeking and risk mitigating assets beginning with the Q2 2020 performance report.</p>	Investment Committee
40 New risk reports should be developed so the amount of liquidity and leverage is transparent, and the allocations and systematic risks of the portfolio on a look-through basis is clear. Risk reports should identify how risk is allocated across the portfolio, specify the risks (by investment or asset class) not captured in the standard deviation metric and provide appropriate ways to measure or monitor those risks.	<p>Recommendation Implemented Callan's quarterly performance report includes risk statistics for the total fund, by public markets asset class, and for public markets managers. Some sample metrics for the total fund include standard deviation, tracking error, drawdown analysis, and risk-adjusted return analysis. Asset class and manager-specific analysis includes drawdown analysis, risk-adjusted return analysis, risk statistics analysis, and holdings-based analysis. The quarterly executive summary now includes liquidity analysis and projected risk analysis.</p>	Investment Committee

SERS RESPONSES TO PPMIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
<p>41 Internal investment management should be limited to index investments until risk controls and compliance procedures can be verified or established that are consistent with more complex strategies. No expansion of internal strategies beyond indexing should take place until this happens.</p>	<p>No SERS Action Required Not Applicable; SERS does not have internally managed investments</p>	Investment Committee
<p>42 Both funds should limit new commitments in private markets until risk controls, liquidity management and evaluations are fixed.</p>	<p>Reviewed, Alternative Action Taken With the newly adopted IPS, the fixed income allocation has been increased, while lowering public equity, private equity, and real estate, which in turn has increased the fund's liquidity profile and lowered risk. As previously mentioned, SERS' liquidity is monitored on an ongoing basis. A Cash Flow Forecast and a liquidity schedule is presented to the IC in Executive Session at each meeting (this has been an on going practice since the GFC).</p>	Investment Committee
<p>43 The fiduciary Boards should oversee and explicitly authorize any tactical asset allocation decisions the investment staff makes, track how these decisions have performed, and establish clear limits to deviations from the strategic asset allocation.</p>	<p>Recommendation Implemented On December 4, 2019 the Board adopted Board Motions (2019-87) and (2019-88) approving the updated Investment Policy Statement. The adopted IPS addresses asset allocation policy (strategic asset allocation). SERS does not execute tactical asset allocation decisions.</p>	Investment Committee
<p>44 Establish a new body, such as this Commission, with appropriate expertise, resources and time, to further study issues around private market investing more broadly, and that private markets investments be limited until there is better evidence both that private markets investing provides a risk-adjusted return above public markets, and that SERS and PSERS have rigorous processes to ensure selection of above median managers, on a risk-adjusted basis.</p>	<p>General Assembly Action Required Establishing any new body to make further recommendations would exceed the purview of SERS. On December 4, 2019 the Board adopted Board Motions (2019-87) and (2019-88), approving the updated Investment Policy Statement.</p>	Investment Committee
<p>45 SERS and PSERS should collaborate on a detailed CEM administrative cost benchmarking analysis, and make the detailed reports publicly available. (Not just an executive summary)</p>	<p>Recommendation Implemented While we continue to attempt to coordinate certain decision making with PSERS, SERS has adopted a strategic plan which provides that by June 30,2021 will develop an approach to benchmark against its peers.</p>	Investment Committee
<p>46 The Boards should see an annual report on manager contracts, which identifies changing terms.</p>	<p>Reviewed, Alternative Action Taken Pending IC action on December 1, 2020 the Investment Office is requesting the IC to review and approve a sample report.</p>	Investment Committee

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
47 Costs should be linked to performance in a report similar to the Novarca study that identifies whether managers outperform and how much value they capture.	<p>Reviewed, Alternative Action Taken Given the lack of an industry standard publicly-traded benchmark to determine outperformance in private markets, the private markets teams will continue to invest in a fee efficient manner and follow the PPMAIRC recommendations in presenting all investment level fee and expense details. With respect to SERS' public market investments, Callan has provided investment management fee studies of public markets mandates to the SERS IO in 2019 and in 2020 based on Callan industry studies, which assess fee competitiveness versus peer mandates, and can be used to renegotiate mandates with managers.</p>	Investment Committee
48 The General Assembly should investigate the feasibility of establishing a common investment performance reporting period for both retirement systems that complements existing employer budgeting periods.	<p>Recommendation Implemented HB 1961 was recently signed into law by the Governor, requiring SERS to continue reporting performance on a calendar and fiscal year basis through the general consultant quarterly reports as well as the specialty consultant semi-annual reports.</p>	Investment Committee
50 The Commission recognizes some level of investment in private markets, which by definition are actively managed, is reasonable for the two funds, and that there is an appropriate role for active management in those allocations.	<p>No SERS Action Required No Action Needed</p>	Investment Committee
51 SERS and PSERS should move to fully indexing all public market investments.	<p>Reviewed, Alternative Action Taken SERS is comfortable with the composition of its public market portfolio. However, SERS is waiting for the equity structure study to be completed by Callan, possibly by June 2021. At the conclusion of that study SERS' IO will consider fully indexing its public market portfolio.</p>	Investment Committee
52 SERS is commended for its strong movement toward indexing public equities in recent years, and should index the remaining portions of its public equity portfolio that are currently actively managed.	<p>Reviewed, Alternative Action Taken SERS is comfortable with the composition of its public market portfolio. However, SERS is waiting for the equity structure study to be completed by Callan, possibly by June 2021. At the conclusion of that study SERS' IO will consider fully indexing its public market portfolio.</p>	Investment Committee
53 SERS should index its fixed income portfolio, for a savings of \$4.5 million annually, and \$449 million over 30 years.	<p>Reviewed, Alternative Action Taken SERS is working closely with Callan to restructure its fixed income portfolio. Callan will be presenting the results of its fixed income structure study to the IC at the December 2020 meeting.</p>	Investment Committee

SERS RESPONSES TO PPM AIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
54 PSERS is commended for using an index approach for the portion of its "Passive Plus" management of all US Equities, and should fully index its public equity portfolio for savings of \$17.2 million annually, and \$1.7 billion over 30 years.	No SERS Action Required Not Applicable; recommendation is PSERS specific	Investment Committee
55 PSERS should index the public security portion of its fixed income portfolio, for a savings of \$1.8 million annually, and \$179 million over 30 years.	No SERS Action Required Not Applicable; recommendation is PSERS specific	Investment Committee
56 For every non-public investment considered, there should be a careful pre-investment selection of a risk appropriate (levered if needed) investable market index or indices.	Recommendation Implemented The Investment Office conducts a pre-investment analysis of the fund's performance relative to risk appropriate investable indices.	Investment Committee
57 Returns should be measured and reported such that actual investments can be compared for risk and return versus a low-cost, index implementation.	Recommendation Implemented The 2nd quarter 2019 performance report was presented at the September 2019 meeting and included a benchmark consisting of 60% MSCI ACWI IMI/40% Bloomberg US Aggregate Bond Index as well as a graph of 3 year rolling and 5 year rolling total fund returns. This report has been published on SERS website.	Investment Committee
58 Gross-fee and net-of-fee performance should be reported.	Recommendation Implemented Beginning with the Q1 2020 quarterly performance report Callan began reporting both gross and net of fee returns. The report is published on SERS website.	Investment Committee
59 Report manager returns relative to both a risk matched benchmark established at the time of investment, and relative to the investible liquid allocation it replaces.	Recommendation Implemented The 2nd quarter 2019 performance report was presented at the September 2019 meeting and included a benchmark consisting of 60% MSCI ACWI IMI/40% Bloomberg US Aggregate Bond Index as well as a graph of 3 year rolling and 5 year rolling total fund returns.	Investment Committee
60 Returns for the portfolio, asset classes, and individual mandates should include annual returns, 1-, 3-, 5-, 10-, 15- and 20-year returns ending in the current period, along with rolling 5-year returns.	Recommendation Implemented The 2nd quarter 2019 performance report was presented at the September 2019 meeting and included a benchmark consisting of 60% MSCI ACWI IMI/40% Bloomberg US Aggregate Bond Index as well as a graph of 3 year rolling and 5 year rolling total fund returns.	Investment Committee

SERS RESPONSES TO PPM AIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
61 Attribution analysis should be performed for each manager to identify whether the drivers of performance were aligned with expectations.	<p>Recommendation Implemented Currently reflected in Callan quarterly reports for traditional investments. These reports are published on SERS website. Attribution analysis is not applicable for private equity, private credit, and private real estate managers.</p>	Investment Committee
62 Where portfolio leverage is used, both levered and unlevered returns should be reported, against an appropriately levered or unlevered benchmark.	<p>No SERS Action Required Not Applicable; SERS does not use portfolio leverage.</p>	Investment Committee
63 Performance of private markets, including private equity, should be measured against relevant stylistic benchmarks, as well as the liquid public market Kaplan-Schoar PME values, where the choice of the market index is first that which is consistent with the risk taken by the manager and second, with the index the manger replaces in the diversified portfolio benchmark.	<p>Recommendation Implemented Both Staff and StepStone run KS-PME and Direct Alpha against SERS' reference benchmark of the Russell 3000 Total Return index for each PE fund commitment. This analysis is included in all new PE investment memos that are sent to the Board. NEPC will begin to include PME metrics (including Kaplan-Schoar) for individual funds in the semi-annual performance reports, where available and appropriate given the limited availability of such indices.</p>	Investment Committee
64 Private market risk reports should measure and describe subscription lines with performance adjusted for the use of those financing facilities as well as other uses of leverage.	<p>Recommendation Implemented With the continued use of capital call facilities by private market sponsors, private market staff and consultant Due Diligence ("DD") reports already incorporate performance analysis with and without the use of leverage (if applicable). This information is readily available (and reliable) during the DD process. The disclosure of this information on an ongoing basis is inconsistent but is constantly changing and improving. As this information continues to be reported and becomes more statistically consistent, staff and consultant will look to further incorporate this data into regular reporting.</p>	Investment Committee

SERS RESPONSES TO PPM AIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
65	Each fund should revisit and reconsider its asset allocation in light of the findings in the consultant report as to past risk-adjusted and relative performance of the current models.	Investment Committee
66	SERS should reconsider its focus on the role of illiquid investments in the portfolio, particularly private equity, and reduce them to more appropriate levels.	Investment Committee
67	PSERS should focus on the role of illiquid investments more broadly, particularly private equity, hedge funds and commodities. PSERS is urged to reconsider its current allocation targets for illiquid private equity investments and reduce them to more appropriate levels.	Investment Committee
68	PSERS, as a matter of priority, should revisit and reexamine its use of leverage, clearly examine and communicate risks, and ensure that robust board-level guidelines are in place and understood by all stakeholders.	Investment Committee
69	SERS is commended for maintaining a more rigorous fund-level benchmark. SERS should continue to use the rigorous benchmark and focus its effort on continuing to improve execution.	Investment Committee
70	PSERS should reconsider and revise its fund-level benchmark and should comprehensively reexamine its performance weaknesses in both "strategy" and "execution."	Investment Committee

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee	
71	<p>Investment management of the systems should be redirected towards simplicity. Because the Consultant report suggests the funds do not currently have the expertise and oversight in place to properly oversee their current complex (particularly in the case of PSERS) portfolios, the funds should take a new and simpler approach. (Complexity increases costs and risks without any assurance of higher returns.)</p>	<p>Recommendation Implemented On December 4, 2019, the Board adopted Board Motions (2019-87) and (2019-88), approving the updated Investment Policy Statement. Per the newly adopted IPS, the fixed income allocation has been increased, while lowering public equity, private equity, and real estate, which in turn has increased the fund's liquidity profile and lowered risk. Although SERS portfolio is well diversified, it would not be considered complex by industry standards. Moreover, given the increase in professional staff and the outsourcing of the non-core private equity managers to Fairview Capital, SERS is well positioned to provide the necessary oversight to the portfolio.</p>	Investment Committee
72	<p>There appears to be a fundamental "mismatch" between oversight capacities for complex portfolios such as PSERS had adopted, particularly internal management, derivatives, and illiquid investments, and such capacities appear "stretched" at SERS, particularly in the large number of allocations to private equity and real estate. New commitments of capital to these strategies at either fund should be limited until these issues are addressed.</p>	<p>Reviewed, Alternative Action Taken On December 4, 2019 the Board adopted Board Motions (2019-87) and (2019-88), approving the updated Investment Policy Statement. Per the newly adopted IPS, the fixed income allocation has been increased, while lowering public equity, private equity, and real estate, which in turn has increased the fund's liquidity profile and lowered risk. SERS implemented a program for its private market managers where by larger commitments are being made to fewer managers thereby reducing the number of managers that require oversight by SERS and its consultants. Furthermore, SERS engaged Fairview Capital to manage and wind down the "non-core" private equity managers thereby providing SERS staff more time to concentrate on the "core" private equity managers.</p>	Investment Committee
74	<p>Cost-savings recommendations in the Consultant report are limited (they were only able to analyze public mandates), and recommendations were made in the context of presuming no change to current allocations or strategies. Thus, the following recommendations should be understood as options that may be superseded by recommendations found elsewhere in this report.</p>	<p>Recommendation Implemented No Action Needed</p>	Investment Committee

SERS RESPONSES TO PPM AIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee	
75	<p>It is noted that the Consultant report finds that in practice at both SERS and PSERS, "active mandates that cost more do not necessarily represent better value for money" and indeed, at one asset class at PSERS, the cheapest mandates were the best performing.</p>	<p>Recommendation Implemented Callan has provided active versus passive education across public markets asset classes for the PA SERS Board in 2019 and in 2020. In 2020, after the asset-liability study was completed and the new asset allocation was approved at the end of 2019, we began asset class structure studies where active versus passive implementation is addressed. As the next step, the fixed income structure will be presented to the Board at the December meeting.</p>	Investment Committee
76	<p>PSERS should comprehensively review and revise its benchmarks for asset classes, sub-asset classes and managers, particularly all benchmarks used for performance-based compensation. (Consultants says PSERS benchmarks are not 'sufficiently granular."</p>	<p>No SERS Action Required Not Applicable; PSERS specific</p>	Investment Committee
77	<p>Performance pay arrangements at both funds should be rigorously reviewed, appropriately benchmarked, and entered into only after modeling total costs to the fund of different options. Furthermore, all fees, whether base or performance, should be considered and tracked. Pursuing fee "savings" that are simply shifting costs from base fees to performance fees, is not recommended.</p>	<p>Recommendation Implemented For those managers in which SERS has directly entered into a performance pay arrangement, all of the fees of said managers are tracked and publicly reported in SERS' Budget Book. The performance pay arrangements with SERS' separately managed real estate accounts were recently renegotiated. Staff will work with Callan to review and if possible, renegotiate the performance pay arrangement of its public markets managers.</p>	Investment Committee
78	<p>Track the age of all fee schedules, and reviewing at least every two years.</p>	<p>Recommendation Implemented The fee schedules for public market managers are now tracked as part of SERS' on-going diligence and will be reviewed on a biennial basis. Callan has provided public market manager investment fee evaluation studies to SERS IO in 2019 and 2020 and expects to present the 2020 fee study at the December 2020 Board meeting.</p>	Investment Committee
79	<p>Track the age of all manager relationships, and considering longevity of relationship in recurring fee reviews and negotiations.</p>	<p>Recommendation Implemented Although the public market managers' inception date is tracked in the quarterly performance report, it is also being tracked by the on-going diligence checklist maintained by SERS' staff. Longevity is considered when renegotiating fees. Private market manager vintage years are provided in various reports including SERS' CAFR, budget books and the semi-annual performance reports. It should be noted private market manager contracts do not allow for fee renegotiations once executed.</p>	Investment Committee

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
80 Require all asset managers to confirm in writing that they do not receive commissions, rebates and the like in connection with fund investments.	<p>Recommendation Implemented SERS' Master DDQ has been updated to include a section that requires all prospective managers to certify in writing they do not receive any indirect compensation from funds/accounts in which SERS is considering investing. Further, the manager also certifies if they begin receiving any indirect compensation from managing funds in which SERS is invested they will notify SERS promptly.</p>	Investment Committee
81 Require all asset managers to confirm in writing that they have not paid fees, commissions and the like in connection with obtaining investments into their funds.	<p>Recommendation Implemented This is addressed by SERS master DDQ under the placement agent disclosure form which requires a signature of every potential manager.</p>	Investment Committee
82 Establish a fee budget, at the fund level, for all investment managers, subject to waiver by the board.	<p>Reviewed, Alternative Action Taken Callan is not aware of any clients that use a fee budget - Callan canvassed consultants internally and was unable to identify a client who uses a fee budget. They believe that using fee budgets can be overly constraining to a Plan. The best practice is to periodically review fees to confirm lowest cost vehicle and potentially negotiate fees down based on market rates, and to achieve value for fees paid, defined as net of fee performance, not simply lowest fees in every case.</p>	Investment Committee
83 Prohibit the use of bundled brokerage by brokers and managers.	<p>Reviewed, Alternative Action Taken SERS is reviewing the use of bundled brokerage (soft dollars) by its investment managers and determining if the manager can eliminate it. If the manager cannot eliminate the use of bundled brokerage, SERS will require these managers to report their soft dollar commissions to SERS on a quarterly basis. The soft dollar commissions will include the SERS' share of the amount of the commission from trades, types of services paid with these commissions, and the cost of the services.</p>	Investment Committee
84 SERS is commended for conducting regular transaction cost analysis; PSERS should do the same.	<p>Recommendation Implemented No Further Action Needed.</p>	Investment Committee

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee	
85	<p>Both funds should establish a better process for considering specific alternatives to each proposed investment under consideration; any proposed investment should be evaluated not in a vacuum, but against a specific low-fee equivalent-risk alternative, as a way of strengthening a commitment to cost discipline and better evaluation of expected and realized performance.</p>	<p>Recommendation Implemented SERS has been focused on lowering costs by taking alternative approaches to investing in private and public markets. SERS has been increasing investments in its private markets co-investment platform and public market index strategies. SERS plans to evaluate an optimal approach to internally manage certain public market strategies as well as factor-based index strategies. In addition, SERS is evaluating an approach to reduce funded status volatility risks by hedging its liabilities.</p>	Investment Committee
86	<p>Both funds should evaluate procurement guidelines for asset management services.</p>	<p>Recommendation Implemented Board Motion: 2020-38 - PPMAIRC RECOMMENDATION #100 (PROCUREMENT OF INVESTMENT MANAGERS) Meeting Date: June 10, 2020 RESOLVED: That the board accepts the recommendation of the Investment Committee to implement the following to enhance the current process for hiring public market managers: Post an announcement in a timely manner to SERS' website that SERS is seeking a manager with a certain mandate, e.g. large cap value manager. Post a similar announcement on the website of SERS' general investment consultant requesting managers to enter/update such consultant's database by a certain agreed upon date. Advertise the announcement using Twitter, LinkedIn and industry publications.</p>	Investment Committee
87	<p>Both funds should adopt the practices detailed in the Consultant report to negotiate harder on private market investments, particularly when the systems together would constitute one of the top investors in terms of asset size, including but not limited to: seeking to pay fees based only on invested rather than committed capital; seeking fee reductions during the investment phase; capping monitoring, oversight and legal fees; negotiating carry terms more carefully and modeling different scenarios seeking full transparency on waterfall terms, and whether other waterfall terms have been offered to other investors; recalculating GP-determined carry payments; having a process to ensure that all terms contained in marketing materials or arrived at in negotiations are legally documented and monitored; and monitoring and auditing all fees and costs charge by GPs in limited partnership structures.</p>	<p>Recommendation Implemented As a fiduciary, SERS continues to leverage its relationship with PSERS and its consultant to push fund sponsors for the most attractive terms possible for SERS. This includes leveraging relationship size, industry best practices and full alignment of interest. Though current process includes tracking and reporting fees and costs charged by General Partners, further analysis is underway to determine the cost to recalculate and audit these metrics.</p>	Investment Committee

SERS RESPONSES TO PPMAIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee	
88	<p>Both funds should retain the services of an outside expert who, with proper access to full information, could assist them in developing and implementing further cost-savings.</p>	<p>Recommendation Implemented Callan has provided investment management fee studies of public markets mandates to the SERS IO in 2019 and in 2020 based on Callan industry studies, which assess fee competitiveness versus peer mandates, and can be used to renegotiate mandates with managers. With respect to its private market investments SERS has been a leader in pushing for reduced and/or no fee structures on the funds LPAC. SERS has been actively reducing fees whenever possible including working with PSERS, when possible, to negotiate size discounts, identifying new investment managers or funds where SERS can guide the structuring of new investment opportunities and receive reduced fees as a "strategic LP", making sizable commitments on our own to take advantage of size discounts, committing to reduce fee Co-Investment side-cars vehicles or creating co-investment vehicles with significantly reduced management fees and carried interest terms.</p>	Investment Committee
89	<p>SERS, with the assistance of an outside expert, should immediately renegotiate public security mandates identified in the Consultant report that are mispriced to achieve at least \$4.87 million in savings on an annual basis, or \$584 million compounded over 30 years. (This recommendation is not meant to preclude action on other savings recommendations elsewhere in this report that may supersede it.)</p>	<p>Reviewed, Alternative Action Taken Callan has provided investment management fee studies of public markets mandates to the SERS IO in 2019 and in 2020 based on Callan industry studies, which assess fee competitiveness versus peer mandates, and can be used to renegotiate mandates with managers.</p>	Investment Committee
90	<p>Deploying these and other approaches, SERS, with the assistance of an outside expert, should renegotiate all new (or renewed) private equity investment agreements to achieve at least \$12.18 million in savings on an annual basis, or \$926 million compounded over 30 years.</p>	<p>Reviewed, Alternative Action Taken LPAs cannot be retroactively "renegotiated" by a single LP, let alone an "outside expert" that is not an LP in the fund except in the case of fund extensions where SERS has been a leader in pushing for reduced and/or no fee structures on the funds LPAC. SERS has been actively reducing fees whenever possible including working with PSERS, when possible, to negotiate size discounts, identifying new investment managers or funds where SERS can guide the structuring of new investment opportunities and receive reduced fees as a "strategic LP", making sizable commitments on our own to take advantage of size discounts, committing to reduce fee Co-Investment side-cars vehicles or creating co-investment vehicles with significantly reduced management fees and carried interest terms.</p>	Investment Committee

SERS RESPONSES TO PPMARC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
91 PSERS, with the assistance of an outside expert, should immediately renegotiate the public security mandates identified in the Consultant report that are mispriced to achieve at least \$4.91 million in savings on an annual basis, or \$560 million compounded over 30 years.	No SERS Action Required Not Applicable; PSERS specific	Investment Committee
92 Deploying these and other approaches, PSERS, with the assistance of an outside expert, should renegotiate all new (or renewed) private equity investment agreements to achieve at least \$15.48 million in savings on an annual basis, or \$1.17 billion compounded over 30 years.	No SERS Action Required Not Applicable; PSERS specific	Investment Committee
93 PSERS, with the assistance of an outside expert, immediately restructure its high yield allocation as suggested in the Consultant report, to achieve savings of at least \$42.5 million on an annual basis, or \$3.23 billion compounded over 30 years, while noting that this recommendation is not meant to preclude action on other savings recommendations elsewhere in this report that may supersede it.	No SERS Action Required Not Applicable; PSERS specific	Investment Committee
94 In the absence of the legislatively-created consolidated Central Pension Investment Office, the systems should establish structures to share manager selection, monitoring, and risk control work between the two Systems.	Reviewed, Alternative Action Taken June 14, 2019 Board Meeting - Board Motion (2019-39) - Jointly Develop Transparency Checklist with PSERS: Resolved that the Board accepts the recommendation of the Board Governance and Personnel Committee to direct the SERS Investment Office to work with PSERS to develop a common standard checklist for transparency issues when evaluating managers. On-going discussions with PSERS will continue to take place with respect to this matter.	Investment Committee
100 Both SERS and PSERS should consider the benefits and limitations of adopting open competitive-bidding processes for investment managers.	Reviewed, Alternative Action Taken Board Motion (2020-38) - PPMARC RECOMMENDATION #100 (PROCUREMENT OF INVESTMENT MANAGERS) RESOLVED: That the board accepts the recommendation of the Investment Committee to implement the following to enhance the current process for hiring public market managers: 1) Post an announcement in a timely manner to SERS' website that SERS is seeking a manager with a certain mandate, e.g. large cap value manager. 2) Post a similar announcement on the website of SERS' general investment consultant requesting managers to enter/update such consultant's database by a certain agreed upon date. 3) Advertise the announcement using Twitter, LinkedIn and industry publications.	Investment Committee

SERS RESPONSES TO PPMIRC RECOMMENDATIONS

Commission Recommendation	Actions That Addressed the Recommendation	Lead Committee
101 SERS should adopt an open competitive-bidding process for all investment consultants (PSERS has this in place).	<p>Recommendation Implemented Board Motion (2020-39) - PPMIRC RECOMMENDATIONS #101-106 (PROCUREMENT OF INVESTMENT CONSULTANTS) Meeting Date: June 10, 2020 RESOLVED: That the board accepts the recommendation of the Investment Committee to amend the Investment Policy Statement to provide that a Request for Information (RFI) process is to be used for the hiring of general and specialty investment consultants, with the following requirements: (a) All RFIs are to be posted on SERS' website; and (b) Once a contract has been entered into with the selected consultant, post on SERS' website the selected consultant's proposal received in response to the RFI, with redactions consistent with those made for proposals received pursuant to the Procurement Code, as set forth in the Procurement Handbook - Part I Chapter 50 - Public Access to Procurement Information.</p>	Investment Committee
102 Both PSERS and SERS should publish policy documents that address the following:	<p>Recommendation Implemented See #101</p>	Investment Committee
103 Circumstances (if any) for which asset classes, and for which categories of investment professionals are RFIs and RFPs issues?	<p>Recommendation Implemented See #101</p>	Investment Committee
104 Publish all RFIs and RFPs. Publish the names of all respondents.	<p>Recommendation Implemented See #101</p>	Investment Committee
105 Publish the contents of the responses.	<p>Recommendation Implemented See #101</p>	Investment Committee
106 Identify the criteria and justification for exercising the single source / sole source exemption.	<p>Recommendation Implemented See #101</p>	Investment Committee
107 PSERS is commended for urging management firms to comply with the CFA Manager Code; SERS should do the same. SERS and PSERS should include a firm's compliance with the CFA Manager Code as part of the evaluation and due diligence process.	<p>Recommendation Implemented Board Motion (2020-40) - PPMIRC RECOMMENDATION #107 (EVALUATION/ DUE DILIGENCE PROCESS FOR INVESTMENT MANAGERS) RESOLVED: That the board accepts the recommendation of the Investment Committee to direct SERS' Investment Office staff to include in the due diligence questionnaire for prospective investment managers an inquiry as to whether a firm is compliant with the CFA Institute Asset Manager Code.</p>	Investment Committee