June 28, 2019

Dr. Calvin Ball, County Executive
Howard County Government
3430 Court House Drive
Ellicott City, MD 21043

Ms. Christiana Mercer Rigby, Chairperson
Howard County Council
3430 Court House Drive
Ellicott City, MD 21043

Dear Dr. Ball and Ms. Rigby:

Enclosed is, for your review, the Annual Report of the Pension Oversight Commission for the Howard County Retirement Plan and the Howard County Police and Fire Employees’ Retirement Plan. The Annual Report is presented as one document for both Plans and covers the fiscal year 2018, ending June 30, 2018.

Should you have any questions, please feel free to contact us.

Sincerely,

Todd D. Snyder
Chair

cc: Mr. Mitchell Stringer, Commission Member
Mr. Ken Barnes, Commission Member
Mr. Jae Chon, Commission Member
Ms. Wanda Hutchinson, Chair, Retirement Plan Committees
Mr. Scott Southern, Howard County
Ms. Cynthia Peltzman, Howard County
ANNUAL REPORT BY THE HOWARD COUNTY PENSION OVERSIGHT Commission
FOR THE FISCAL YEAR ENDED JUNE 30, 2018

Introduction

The Howard County Pension Oversight Commission (the “Commission”) hereby submits its annual report of the status of the Howard County Retirement Plan (the “Retirement Plan”) and the Police and Fire Employees’ Retirement Plan (the “Police and Fire Plan” and together with the Retirement Plan, the “Plans”) to the County Executive and the County Council for the fiscal year ended June 30, 2018. This report includes:

A. The Commission’s assessment of the appropriateness of the actuarial assumptions used;
B. A statement of revenues, including contributions, investment earnings, and forfeitures;
C. The cost of the Plans, including an analysis of fees, commissions and expenses;
D. An evaluation of the administration of the Plans;
E. Any proposal or amendment of the Plans that the Commission may wish to recommend;
F. Events Subsequent to FYE 2018; and
G. Considerations and Recommendations.

A. Actuarial Review

County’s Pension Contributions

The Commission reviewed the Actuarial Valuation Reports for both the Retirement Plan and the Police and Firefighter’s Retirement Plan (the “Plans”) dated July 1, 2018 submitted by Bolton Partners Inc, actuaries for the Plans. The purpose of an actuarial valuation is (1) to determine the actuarially determined contribution (“ADC”) – the amount that, if contributed consistently and combined with investment earnings, would be sufficient to pay promised benefits in full over the long-term) and (2) to measure the funding progress of the Plans. The principle objective of these reports is to determine the Plans’ contributions for the fiscal year 2020 (starting July 1, 2019). The ADC for each of the Plans increased as follows:

<table>
<thead>
<tr>
<th>Plan</th>
<th>FY 2019 ADC</th>
<th>FY 2020 ADC</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police and Fire Plan</td>
<td>$30,577,565</td>
<td>$27,974,522</td>
<td>8.5%</td>
</tr>
<tr>
<td>Retirement Plan</td>
<td>$14,808,044</td>
<td>$14,296,317</td>
<td>3.5%</td>
</tr>
</tbody>
</table>
The ADCs for the Plans are based on a number of assumptions, including investment return, inflation rate and other actuarial assumption changes approved by the Plans' combined Retirement Plan Committee (“RPC”) in January 2019 (see discussion in Subsequent Events later in the report).

The county's contributions for the Plans expressed as a as a percentage of payroll for the five fiscal year ends beginning July 2016 are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Employee Retirement Plan</th>
<th>Police and Firefighters Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>FYE 2020</td>
<td>11.6%</td>
<td>35.4%</td>
</tr>
<tr>
<td>FYE 2019</td>
<td>11.5%</td>
<td>33.1%</td>
</tr>
<tr>
<td>FYE 2018</td>
<td>11.7%</td>
<td>32.5%</td>
</tr>
<tr>
<td>FYE 2017</td>
<td>11.6%</td>
<td>30.6%</td>
</tr>
<tr>
<td>FYE 2016</td>
<td>12.4%</td>
<td>30.0%</td>
</tr>
</tbody>
</table>

The County has consistently made the ADC payment to the Plans. The County made contributions in excess of the ADC in 2012 and 2017 for the Retirement Plan. Contributions have remained in a consistent range and as a percentage of payroll appear reasonable. Persistent underfunding would ultimately jeopardize the sustainability of a pension plan.

Another measure of plan risk is Unfunded Actuarial Accrued Liabilities as a percentage of payroll. For the Retirement Plan, the ratio is 16.3%, which is a very strong number. For the Police and Firefighters Plan, the ratio is 164.4%, which reflects the legacy of the plan's large original liability (about 37% funded) at the inception of the plan in 1995. The plan has about $10 million of unfunded liability still to be amortized from the original unfunded position. Benefits are also "richer" for the Police and Firefighters' plan, which results in greater liabilities when compared with the Employee plan.

The primary risk incurred by a defined benefit plan sponsor (the County in this case) is the risk of substantial increases in annual contributions. If the contributions are not fully paid, interest accrues on the unpaid portion at the plan's expected long-term rate of return. Changes in the expected long-term rate of return (the discount rate) will change the ADC, with a reduction in the assumed rate resulting in a higher ADC.
Funded Ratios

The Actuarial Reports for the Plans dated July 1, 2018 submitted by Bolton Partners Inc. indicated the funding level, based on Market Value of Assets, for the Plans increased at FYE 2018 compared to FYE 2017, as follows:

<table>
<thead>
<tr>
<th></th>
<th>FYE 2018</th>
<th>FYE 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirement Plan</td>
<td>95.8%</td>
<td>95.2%</td>
</tr>
<tr>
<td>Police and Fire Plan</td>
<td>84.0%</td>
<td>82.5%</td>
</tr>
</tbody>
</table>

The funded ratios of the Plans, as reported in the Auditor’s Report (prepared by CliftonLarsonAllen LLP) for the fiscal year 2018, are 82% for the Police and Fire Plan, and 94% for the County Retirement Plan. The ratios are calculated using the market value of the plan assets as of June 30, 2017 and the present value of the plan liabilities. A ratio of less than 100% indicates that plan assets are less than estimated plan liabilities. The Government Finance Officers Association (GFOA) recommends a target funded ratio of 100% or more (full funding) in their Best Practice¹. Funding levels are higher assuming actuarial value of assets, which applies “smoothing” to investment returns.²

Funded Ratio Sensitivity

Table 2. Net Pension Liabilities Sensitivity to Changes in the Discount Rate

<table>
<thead>
<tr>
<th></th>
<th>1% Decrease (6.50%)</th>
<th>FY2018 Discount Rate (7.50%)</th>
<th>1% Increase (8.50%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Pension Liability FY2018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police and Fire Plan Employees Plan</td>
<td>221,639,954</td>
<td>122,593,725</td>
<td>41,463,640</td>
</tr>
<tr>
<td>Employees Plan</td>
<td>92,573,359</td>
<td>31,068,108</td>
<td>(20,437,482)</td>
</tr>
<tr>
<td>Funded Ratio /¹</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police and Fire Plan Employees Plan</td>
<td>68%</td>
<td>82%</td>
<td>94%</td>
</tr>
<tr>
<td>Employees Plan</td>
<td>81%</td>
<td>94%</td>
<td>104%</td>
</tr>
</tbody>
</table>

Source: Howard County Police and Fire Employees’ Retirement Plan Financial Statements, June 30, 2018 and Howard County Retirement Plan Financial Statements, June 30, 2018

¹ Funded Ratio is equal to the pension fiduciary net position divided by total pension liability. Pension Net Position is the difference between the Total Pension Liability and the Net Pension Liability.

The use of a 6.50% discount rate is in line with the long-term rate of return estimate (5.96%) based on long-term capital market assumptions provided by the Plans¹

¹ “Sustainable Funding Practices for Defined Benefit Pension Plans and Other Postretirement Benefits,” January 2016
²Smoothing spreads market value investment gains or losses in excess of the assumed return over a 5-year period.
former investment manager, Summit, from its report dated December 31, 2017. Further, NEPC, the current investment manager, recently presented a 6.1% expected 5-7 year return at a March RPC 2019 meeting, and then a 6.57% target 5-7 year return at an April 2019 RPC meeting.

For the funded ratio calculation, the value of pension assets is determined based on the market value of the assets on the valuation date. Determining the value of pension liabilities is, however, more difficult and requires the following two estimates for: (1) the expected future cash stream of pension benefit payments and (2) the discount rate used to determine the present value of the expected future cash stream.

The expected future cash stream of the benefit payments is determined by an actuary with a set of assumptions, such as future salary increases, future mortality rates and disabliment rates to mention a few examples. The details of the assumptions used to calculate the future cash stream of the pension benefit payments are based, in part, on the experience study issued on June 26, 2014 by Bolton Partners. The study covers the period from July 1, 2009 through June 30, 2013. As discussed below, a more recent study was issued in September, 2018 covering the period from July 1, 2013 through June 30, 2017.

Once the actuary determines the expected future cash stream of payments, a discount rate is applied to calculate the present value of all the future benefit payments to determine the pension liabilities on the valuation date. As pension benefits are long-term in nature, the present value of the pension liabilities is extremely sensitive to the level of discount rate. The higher the discount rate, the lower the present value of the pension liabilities will be. To determine the pension liabilities for the fiscal year 2018, the discount rate used is 7.50%. The discount rate is selected by the Retirement Plan Committee. The discount rate was lowered from 7.75% to 7.50% in 2014. Investment earnings represent a majority of revenue for the Plans and thus, the accuracy of the return assumption (discount rate) has a significant effect on the estimates relating to the Plans’ financial condition and actuarial funding level.

To assess the appropriateness of the discount rate used for the pension liability calculations, the Commission reviewed the long-term capital market assumptions as of December 31, 2017 presented by the Summit Strategies Group. Table 1 provides a summary of the review.

<table>
<thead>
<tr>
<th>Plan</th>
<th>Current Rate of Return Assumption</th>
<th>Current Inflation Assumption*</th>
<th>Real Return Assumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Howard County Retirement Plan</td>
<td>7.50%</td>
<td>2.0%</td>
<td>5.50%</td>
</tr>
<tr>
<td>Howard County Police and Fire Employees’ Retirement Plan</td>
<td>7.50%</td>
<td>2.0%</td>
<td>5.50%</td>
</tr>
</tbody>
</table>

*Inflation assumption based on both a 10- and 30- year basis
**Figures are net of investment fees

In conjunction with the evaluation of the discount rate used for pension liability calculations, the Commission once again reviewed the long-term capital market assumptions as presented in the September 2018 Experience Study by Bolton Partners.

The Commission believes that the investment return assumption is generally high and should be re-assessed in light of current market conditions.

The Experience Study stated a current investment rate of return assumption of 7.50% and that the historical five year average return as of June 30, 2017 is 8.5% for the Fire and Police Plan and 8.7% for the County Employees Plan. In both plans, inflation is estimated at 2.0%, but proposed to be 2.5%.

Recently, the investment rate of return assumption was reduced from 7.50% to 7.45%; however, the Commission believes that the assumption remains higher than the expected return over the next 5-7 years.

For example, the Experience Study references the National Association of State Retirement Systems’ (NASRA) annual Public Pension Investment Return Assumptions (dated February 2018), which reflects a “continued pattern of decreasing investment return assumptions, with an expectation that the current average of slightly more than 7.5% will continue to decline in the next two years.” The Commission believes this study should be reviewed further to determine factors for any further adjustments that should be made to the return assumption.

Furthermore, the NEPC asset allocation presentation delivered to the Retirement Plan Committees on April 25, 2019 references an expected target return of 6.57% over 5-7 years and 7.66% over 30 years.

The Commission recommends that these factors be evaluated in light of any additional risk that may be taken on in order to achieve a 7.45% return than would be present for a lower return assumption.

We agree with Bolton’s recommendation to re-evaluate the investment return assumption to determine if it should be lowered further as an adjustment in both the inflation rate (as proposed) and expected return would impact the overall investment return assumption.
B. Statement of revenues, including contributions, investment earnings, and forfeitures

The following is a summary of certain financial information as of, and for the year ended, June 30, 2018:

<table>
<thead>
<tr>
<th></th>
<th>Police and Fire Plan</th>
<th>Retirement Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Investments</td>
<td>$569,822,514</td>
<td>$446,495,212</td>
</tr>
<tr>
<td>Other Assets</td>
<td>2,671,322</td>
<td>1,748,622</td>
</tr>
<tr>
<td>Total Assets</td>
<td>572,493,836</td>
<td>448,243,834</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>591,800</td>
<td>484,324</td>
</tr>
<tr>
<td>Fiduciary Net Position</td>
<td>$571,902,036</td>
<td>$447,759,510</td>
</tr>
<tr>
<td>Net Investment Income</td>
<td>$46,560,068</td>
<td>$35,807,945</td>
</tr>
<tr>
<td>Benefits</td>
<td>$24,755,084</td>
<td>$16,809,399</td>
</tr>
<tr>
<td>Net Change in Fiduciary Position</td>
<td>$55,646,249</td>
<td>$37,644,625</td>
</tr>
<tr>
<td>% Net Change vs 2017</td>
<td>10.78%</td>
<td>9.18%</td>
</tr>
<tr>
<td>Total Investments Beginning of year</td>
<td>$514,465,252</td>
<td>$408,922,644</td>
</tr>
<tr>
<td>Simple Average Total Investments</td>
<td>$542,143,883</td>
<td>$427,708,928</td>
</tr>
<tr>
<td>NII as % of Avg. Total Investments</td>
<td>8.59%</td>
<td>8.37%</td>
</tr>
</tbody>
</table>
A summary of investment performance follows:

| 1 Year Composite Return 6/30/18 - Net of fees | 8.70% |
| 1 Year Composite Return 6/30/18 - Gross of fees | 9.01% |
| 1 Year Composite Return 3/31/19 - Gross of fees | 4.20% |

<table>
<thead>
<tr>
<th>1 Year Return 6/30/18 by investment type (net)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
</tr>
<tr>
<td>Fixed Income</td>
</tr>
<tr>
<td>Real Assets</td>
</tr>
<tr>
<td>Private Equity</td>
</tr>
<tr>
<td>Hedge Funds</td>
</tr>
<tr>
<td>Cash</td>
</tr>
</tbody>
</table>

**Portfolio Diversification as of 6/30/18**

| Equities                                       | 44.00% |
| Debt                                           | 28.04% |
| Alternatives (real assets, private equity and hedge funds) | 27.06% |
| Cash                                          | 0.91%  |

C. **Cost of the Plans, including an analysis of fees, commissions and expenses**

According to the 2018 NCPERS Public Retirement Systems Study (January 30, 2019), the overall average expenses to administer the funds and to pay investment management fees for 2018 was 59.7 basis points. The variance between gross returns and net returns for the Plans for FYE 2018 was approximately 31 basis points, and together with other administrative expenses, total reported expenses at the Plan-level appear to approximately 40 basis points, below the survey average. However, as discussed below under the Considerations and Recommendations section, the Commission was unable to obtain sufficient information to assess fees and expenses for the Plans’ investments in alternative investments and real assets, and these amounts do not appear to be reported in the information available to the public. These hidden fees and costs could affect assessment of the overall fees, commissions and expenses of the Plans.

D. **Evaluation of the Administration of the Plans**

The evaluation of the administration of the Plans is included in the Considerations and Recommendations section below.

E. **Any proposal or amendment of the Plans that the Commission may wish to recommend.**
Any proposal or amendment of the Plans is included in the Considerations and Recommendations section below.

F. Events Subsequent to FYE 2018

The Commission is including a discussion of events subsequent to FYE 2018 (June 30, 2018) that it believes are significant and should be reported prior to the release of the FYE 2019 Report.

**Experience Study**

Bolton Partners prepared an experience study for the Plans for the period from July 1, 2013 through June 30, 2017. The purpose of the study (dated September 20, 2018) is to determine potential changes in actuarial valuation assumptions (e.g., mortality rates, retirement rates, employee turnover rates, disability incidence) that occurred over the prior four years, as well as an update of the investment return and inflation rate assumptions. The prior experience study was prepared in 2014. The RPC adopted the changes to the actuarial assumptions as proposed by Bolton. The cost impact of these changes is reflected in the County’s 2020 ADC for the Plans.

**Investment Return (discount rate) Assumption**

The Commission notes that the gradual adoption of the recommended changes to the inflation rate and investment return assumptions, while within the range recommended by Bolton, defers the RPC’s ability to mitigate risk associated with the Plans’ investment allocations. At an RPC meeting on January 31, 2019, the proposed reduction in the investment return was discussed. Bolton said the proposed reduction in the return assumption from 7.5% to 7.45% was within the acceptable range (7.5%-7.0%). In response to a comment from a member of the RPC, Bolton agreed that risk “wouldn’t be taken off the table” unless the return assumption was lowered to 7%, i.e., the investment advisor must manage the money more aggressively to achieve the 7.45% return than they would for a lower return assumption. Bolton added that if funds were available, then the return assumption should be lowered. The RPC discussed the fiduciary duties of the RPC given the trade-off between budgetary impact versus risk management of the Plan. Lonny Robbins noted that the county budget was approved in the fall of 2018 before the ADC for FY 2020 was proposed. The Retirement Plan Committee (“RPC”) adopted the changes to the actuarial assumptions as proposed by Bolton. However, one member abstained from the vote.

**Inflation Rate Assumption**

Bolton evaluated several factors in developing their recommendation for the inflation rate, including the CPI-U Baltimore-Columbia-Towson MD, the inflation assumption embedded in the investment manager’s (Summit) 10- and 30- year investment return assumptions, and the inflation expectations reflected in the spread between nominal Treasury yields and TIPS (inflation protected securities) yields. In its written experience study, Bolton recommended a lowering of the inflation assumption and “urged” the RPC to consider lowering the return the return assumption from 7.5% to 7.25% in consideration of their recommendation to lower the inflation rate to 2.5%. Ultimately, Bolton recommended that the inflation assumption be lowered from 2.75% to 2.7% and the investment return assumption from 7.5% to 7.45%, further
recommending that these assumptions be revisited each year and further reductions considered.

Other Assumptions
Bolton recommended other changes to actuarial assumptions, including updating mortality tables to more recent standard tables, adjusting retirement rates, turnover rates, disability rates and salary rates. These changes, somewhat different for the Employee plan and the Police and Firefighters’ plan, had a modest impact on the ADC for FYE 2020.

Impact of Actuarial Assumption Changes to FY 2020 ADC
The following estimated costs are based on 7/1/2017 actuarial valuations.

**FY 2019 ADC**

<table>
<thead>
<tr>
<th></th>
<th>Employee Plan</th>
<th>Police and Fire</th>
</tr>
</thead>
<tbody>
<tr>
<td>No assumption changes</td>
<td>$14,296,317</td>
<td>$27,975,552</td>
</tr>
<tr>
<td>With assumption changes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.5% investment return</td>
<td>$14,872,557</td>
<td>$28,895,005</td>
</tr>
<tr>
<td>7.25% investment return</td>
<td>$15,777,070</td>
<td>$32,118,340</td>
</tr>
</tbody>
</table>

For the Employee plan for FY 2020 using FY 2018 actuarial valuations, the ADC assuming no change to assumptions (7.5% investment return and 2.75% inflation) would be $14,634,848. The ADC based on the assumptions approved by the RPC (7.45% return assumption and 2.7% inflation rate assumption) is $14,808,044, a difference of $173,196.

For the Police and Firefighters plan for FY 2020 using 2018 actuarial valuations, the ADC assuming no changes to assumptions (7.5% investment return assumption and 2.75% inflation assumption) would be $29,878,725. The ADC based on the assumptions approved by the RPC (7.45% return assumption and 2.7% inflation rate assumption) is $30,577,565, a difference of $698,840.

If the investment return were changed from 7.5% to 7.25%, the combined ADC increase would be $4,127,848. The impact of the ADC increases as the investment return assumption is reduced, along with the resulting risk mitigation benefit, should be considered as the 2020 county budget is prepared.

Change in Investment Manager
NEPC was selected by the RPC to replace Summit Strategies as the Plans’ investment manager. Summit was acquired by Mercer consulting in August 2018, with the acquisition closing on November 15, 2018. The Commission was informed that Mercer did not want to retain Summit’s public pension consulting practice, as it is not consistent with their business model. The RPC selected AndCo to replace Summit temporarily while they conducted a search for a permanent replacement for Summit. The RPC solicited proposals for investment managers to assume that role.
for the RPC. After an evaluation process, the RPC approved NEPC as the new investment manager for the plans.

**Investment Policy – Allocation Changes**

At the April 25, 2019 RPC meeting, NEPC recommended changes to the long-term target allocations in the Investment Policy Statement. The recommended changes reduce the risk of the plan slightly (standard deviation decreasing from 11.66% to 11.51%). The expected return is unchanged at 6.57%. The recommended changes include a greater allocation to large cap equities (from 15% to 19%) and a decreased exposure to hedge funds (from 12.5% to 8%). The fixed income allocation was increased from 30% to 35%, with the increase reflecting a decrease in core fixed income with new allocations to TIPS and private debt. NEPC expressed concern over the high fees associated with hedge funds, lower returns than passive equity strategies, and the limited degree of non-correlation to other asset classes provided by hedge funds.

NEPC also recommended that the RPC make direct investments in funds rather than solely use fund of fund arrangements for hedge funds and investments in private debt. Direct investments require a greater degree of due diligence by the RPC compared with fund of fund arrangements. This due diligence requires a level of expertise beyond that which exists on the RPC. The Commission recommends that the RPC hire a senior financial analyst, preferable with a CFA, to provide such expertise to the RPC.

**G. Considerations and Recommendations**

1. **Investment Return Assumption**

The Commission believes that the investment return assumption is generally high and should be re-assessed in light of current market conditions.

The actuarial assessment of the Plans involve a number of assumptions, primarily divided into two categories: (1) demographic assumptions, such as mortality rates, turnover rates, disability rates, and termination rates and (2) economic assumptions that forecast the present and future of assets, benefits and liabilities, such as inflation rates, discount rates, and salary growth rates. “Of all actuarial assumptions, a public pension plan’s investment return assumption has the greatest effect on the plan’s funding level and its projected long-term cost. This is because over time, a majority of revenues of a typical public pension fund come from investment earnings. Even a small change in a plan’s investment return assumption can impose a disproportionate impact on a plan’s funding level and cost.” [emphasis added] National Association of State Retirement Administrators (“NASRA”) Public Fund Survey dated November 2018.

The investment return assumption (total return) is based on both an inflation assumption and a real rate of return, with the sum totaling the nominal rate of return that is often referenced in discussions and literature. The inflation assumption is also used for other actuarial assumptions, such as cost of living adjustments and wage growth. Generally, to obtain a real rate of return in excess of 0% means taking some investment risk,
because investments with little or no perceived risk (US T-bills) generally are seen as having no real rate of return. Equities, bonds and alternative investments can provide some level of real return in exchange for taking risk. Expected returns vary over time based on market conditions and market cycles. Currently, markets have experienced a long period of favorable returns during the economic recovery following the global financial crisis around 2009.

A number of public pension plans have lowered expected returns recently. These include the North Carolina Retirement Systems, which cut its assumed rate of return to 7% from 7.2%, the Teacher Retirement System (TRS) of Texas, which reduced its assumed rate of investment return to 7.25% from 8%, The National Association of State Retirement Systems’ (NASRA) annual Public Pension Investment Return Assumptions (dated February 2018), indicates a “continued pattern of decreasing investment return assumptions, with an expectation that the current average of slightly more than 7.5% will continue to decline in the next two years.” While the NASRA survey indicated an median assumption of 7.38%, the trend is toward lower return assumptions and the Commission believes, based on articles and literature, that the reduction in assumed returns has potentially been slowed by political influences relating to budgetary concerns.

Given the placement in the cycle, markets have begun to re-assess expected returns over the next five to ten years, when a recession is more likely. This is reflected by the Plans’ new investment consultant, NEPC, in its asset allocation presentation provided on April 25, 2019 that references an expected target return of 6.57% over 5-7 years and 7.66% over 30 years. Additionally, the 12-month return for the Plans for the year ended March 31, 2019 was only 4.2%, possibly evidencing a slow down in returns and, at a minimum, evidencing volatility in returns in the short-term.

Given the timing in the cycle, the divergence between expected returns over the near term and long-term presents a challenge in assessing financial health of the Plans. By ignoring this divergence, and continuing to use long-term return assumptions, the Plans risk experiencing a steady increase in unfunded pension liabilities and corresponding costs if the Plans continue to use a long-term assumption while experiencing short-term actual returns. While it is recognized that reducing the assumption to reflect lower near-term projections will cause an increase in unfunded liabilities (and required costs), the Commission believes this will present more realistic transparency to the public and the plan beneficiaries.

As discussed above, the independent auditor (CliftonLarsonAllen) provided the estimates of the net pension liabilities for the fiscal year 2018 using different discount rates:

<table>
<thead>
<tr>
<th>Funded Ratio</th>
<th>Discount Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.50%</td>
</tr>
<tr>
<td>Police and Fire Plan</td>
<td>68%</td>
</tr>
<tr>
<td>Retirement Plan</td>
<td>81%</td>
</tr>
</tbody>
</table>
The foregoing demonstrates the potential that an unreasonably high discount rate assumption is overstating the financial health of the Plans.

Further, the Commission notes comments below regarding increased exposure to alternative investments, which have higher potential returns but yet higher perceived risk. The Commission recommends that the foregoing factors be evaluated in light of any additional risk that may be taken on in order to potentially achieve a 7.45% return than would be present for a lower return assumption. The Commission also recommends that an independent third-party assessment be obtained to provide an unbiased and impartial assessment of the expected return assumption.

We also agree with Bolton’s recommendation to re-evaluate the investment return assumption to determine if it should be lowered further as an adjustment in both the inflation rate (as proposed) and expected return would impact the overall investment return assumption.

2. Commission’s Inability to Effectively Conduct Oversight Function due to Lack of Access to Information

Over the past ten years, since the global financial crisis, the percentage of the Plans’ combined investment in private securities, such as hedge funds, real estate funds and other alternative investments, has grown from 7.5% as of June 30, 2009 to approximately 27% as of June 30, 2018. The Plans are not alone in this change, as reduced yields on fixed income, together with increased volatility in the stock market, have caused many pension managers to move to alternative investments with the hope of higher potential returns.

In a bid to boost investment returns and diversify investment portfolios, public pension plans in recent decades have shifted funds away from low-risk, fixed-income investments. During the 1980s and 1990s, plans significantly increased their reliance on stocks, also known as equities. And over the past decade, funds have increasingly turned to alternative investments to achieve investment return targets.


However, these private placement alternative investments present unique risks, such as limited liquidity, valuation risks, limited control by investors, a high reliance on management, and potentially high fees and expenses, as well as investment risks associated with the investment strategy. Private investments often lack the protections of registered investments due to the limited oversight by federal and state regulators, and transparency is limited by absence of SEC filing requirements.

In moving more to alternatives, public plans have taken nearly 25 percent of their investment assets off the grid, a move that can shortchange participants, the public and sometimes trustees of important information. It is a disturbing development, especially because private equity and other
alternatives are the most expensive asset classes of pension funds. Pensions & Investments article cited in 
https://www.aft.org/sites/default/files/bigsqueeze_may2017.pdf (American Federation of Teachers)

The Commission is charged with conducting oversight of the Plans, including assessment of the actuarial assumptions, the financial results of the Plans, the expenses of the Plans and the administration of the Plans.

a. A key assumption in the actuarial assessment of the Plans is the estimated investment return of the Plans’ investments. To the extent that this key actuarial assumption is too high, the financial health of the Plans could be overstated, leaving an erroneous impression to the County Council, the County Executive, current and future retiree beneficiaries and the citizens of the County. Evaluation of the risks presented by investing in alternative investments directly affects this key assumption.

b. A key driver of the reported returns of the private investments is based on the valuation of the underlying investments held by such investments. For example, an article by the American Federation of Teachers notes that “[p]rivate equity firms have generally reported more robust returns than hedge funds, but the veracity of their reported returns has been routinely called into question on a number of fronts, including the accuracy of reporting methods and the question of inflated valuations.” https://www.aft.org/sites/default/files/bigsqueeze_may2017.pdf. Assessment of the reliability of the valuation methodology is key to the ability to assess the accuracy of reported returns.

c. Private investments often have higher fees than traditional investments. These fees can come in many forms, such as origination or acquisition fees, expense reimbursements, asset management fees, promoted profits interests, and can also include multiple layers of fees in the case of funds that invest in other funds.

d. The management of the business of the Plans is vested in the County and the RPC, with the RPC effectively managing the investment process by selecting investments recommended by a hired investment advisor. This function of the RPC is arguably its most significant function with the highest degree of potential effect on both the current and future retiree beneficiaries and the citizens of the County as a whole.

The Commission believes that assessment of the Plans’ private alternative investments is appropriate in connection with the Commission’s oversight function and in the best interest of the citizens and current and future retiree beneficiaries of the Plans. However, the County and the RPC have, despite numerous ongoing requests, not provided detailed information regarding the Plans’ private and alternative investments. Presentations and information regarding the private investments are discussed behind closed doors in closed meeting sessions and basic disclosures regarding such investments are not made available to either the Commission or the public. The Plans’ cite the confidentiality requirements imposed
by the private investments themselves, but there appears to be no record of any attempts by the County or the RPC to negotiate or take any significant efforts to allow the Commission to conduct oversight of these potentially higher risk investments. Further, it seems inappropriate for the Plans to contract away the oversight function by the Commission contemplated by the County Code by entering into restrictive confidentiality agreements.

While this issue was included in the Commission’s annual report for the fiscal year ended June 30, 2017, the report did not generate any movement on the issue. To the date of this report, the Commission, despite multiple requests, has not been able to schedule a meeting with the County Executive to discuss its report. The Commission sent another letter to the County Executive on June 3, 2019 (which was delivered on June 5), requesting a meeting, and has yet to hear anything. A single meeting with members of the County Council regarding the issues contained in the 2017 report did not garner any action to rectify the inability to conduct oversight over private investments by the Plans.

The Commission recommends that the County Code and the Plans be amended to specifically require that the Plans facilitate access to information available to the RPC and the County relating to the Plans, including its investments, to facilitate the Commission’s oversight function.

3. Assessment of Fees and Expenses.

A significant aspect of the Plans expenses relates to the fees and expenses charged by private fund managers. The Commission was unable to obtain sufficient information to assess these fees and expenses for the Plans’ investments in alternative investments and real assets. According to a 2016 brief from PEW Charitable Trusts titled “Making State Pension Investments More Transparent,” CalPERS, the nation’s largest public pension plan, began reporting the total amount it pays to invest in private equity in November of 2016. PEW indicated that the move highlights “the widespread problem among public retirement systems of underreported manager fees and expenses, particularly those associated with alternative investments such as private equity, real estate, and hedge funds, and points to the need for greater disclosure in order to provide full transparency on investment costs.” [emphasis added]. While the County has provided some information regarding fees paid on its alternative investments, the Commission does not have sufficient detailed information to assess the total amount of such fees, and cannot effectively perform its oversight function. For example, many, if not most, of the Plans’ private investments involve fund of funds, and it is unknown what fees are paid at the underlying fund level. This layering of fees without transparency can mask the overall cost of investment such that it is difficult to assess the spread between gross investment returns and net Plan returns in order to evaluate the real costs of investment. See also https://www.aft.org/sites/default/files/bigsqueeze_may2017.pdf. In this informative article, the American Federation of Teachers points out that “that excessive fees paid to alternative investment managers are a significant contributor to funding shortfalls.”

Further, even the top level fund costs are difficult to assess without access to details of fees, such as timing of payment, catch up provisions, calculation of basis for the fees,
reimbursable expenses, and other factors that the Commission cannot assess due to lack of access to information. **Among other things, the Commission recommends that the Plans disclose performance, both gross and net of all fees at all levels, by asset class.** This type of disclosure would allow for improved assessment of the overall costs of the investments. **The Commission also recommends that the County Code and the Plans be amended to provide that the Commission has full and complete access to all information necessary to evaluate fees and expenses.** Absent access to further information, the Commission is unable to fulfil its function set forth in the County Code.

4. **RPC Fiduciary Duty.**

The RPC controls many decisions that affect the health of the Plans’ and the transparency of such financial health to the public. These decisions include the key actuarial assumption relating to the projected returns for the Plans’ investments, as discussed herein. As discussed in this report above, during a meeting of the RPC it appeared that, in discussing the appropriate assumption, the RPC may have taken into consideration the County budget and the potential for increased funding that would result from a lower rate. The Commission believes that the RPC members, as fiduciaries for the Plans, should not consider the County’s budget and solely focus on what is in the best interest of the Plans and the beneficiaries in establishing the best estimate for actuarial assumptions.

According to 2018 NCPERS Public Retirement Systems Study (January 30, 2019), 77% of surveyed plans had adopted a written fiduciary standards. While Howard County Code sections 1.455 and 1.458 appear to imply that members of the RPC are fiduciaries, there does not appear to be any direct statement as such. To that end, the Commission recommends that the County Code and the Plans be amended to specifically state that RPC members are fiduciaries of the Plans, that the RPC adopt written fiduciary standards, and that these written fiduciary standards specifically require that actions and decisions made regarding the Plans by the RPC not take into consideration the financial impact on the County outside the activities of the Plans.

5. **Governance, Controls and Processes.**

As noted in the Commission’s annual report for the fiscal year ended June 30, 2017, the Commission continues to recommend that the Plans retain an outside consultant to evaluate and assess the governance, controls and procedures of the Plans on an impartial basis. This would provide an impartial assessment of whether the governance structure is performing in a way that will allow Plans to meet their key pension objectives and goals.

6. **Resignation of Summit.**

As noted above, Summit resigned on short notices. While the Commission was provided with limited access to information, it appears that little diligence was done on
the temporary replacement, AndCo. While the Plans may have had little or no choice as to the temporary replacement, we were not provided evidence of basic diligence items, such as background checks, litigation searches, a visit to AndCo’s offices, review of regulatory filings and other similar matters. Also, during our interview with an AndCo executive, we were informed that Summit recommended AndCo as its replacement, and would receive compensation if AndCo was retained for a period of time, a fact that was not mentioned to us as known by the Plans at the time of evaluation. It is noted that AndCo has been replaced by another manager, but the potential lack of appropriate due diligence may be indicative of the lack of experience of staff.

7. Conflicts of Interest relating to HR Participation in Commission Oversight.

Historically, the Commission has received administrative services from the County’s HR Department, including having a staff member act as its secretary. Given the apparent conflicts of interest in receiving services from the same party to whom the Commission is conducting oversight, the Commission is evaluating changes to this policy and will be in contact with the County to the extend such changes require amendment to the Code. The Commission also notes that the Commission is comprised of volunteers who have limited time and resources available to conduct oversight functions. The Commission believes that additional resources would be appropriate for an effective oversight function.

8. Documented processes and procedures.

The Commission requested that the RPC provide the Commission with documentation of its processes and procedures in an indexed form so that the Commission could assess the adequacy of the written procedures relating to administration of the Plans. The Commission was informed these did not exist in the form requested. The Commission believes that each of the entities and organizations providing functions relating to the administration and operation of the Plans should have well documented processes and procedures for all relevant functions and suggest that the Plans insist that the RPC and each other service provider prepare and maintain written processes and procedures that can be tested and reviewed. The Commission recommends that the County Code and the Plans be amended to require that reasonably detailed written policies and procedures be adopted and maintained for administration of the Plans, including investment functions.

9. County Participation on the RPC.

Balance of leadership and structuring of any governing body drives the effectiveness its governance and will have a significant influence on the way in which governance will be practiced, including relating to conflicts of interest. To this end, many public markets and regulatory schemes insist that a board chairman should be an independent director, and that the chairman should not also be the chief executive of the company. While not a corporation, the Plans have many similarities, as the County acts to operate many
aspects of the Plans. Thus, the Commission suggests that the Plans evaluate whether the chairperson of the RPC should be independent of the County. Further, a common model for pension plans separates the investment management function (what to invest) from the governmental functions. Members of the Commission have attended a number of meetings of the RPC. At these meetings, it appears that the business of the RPC is dominated by County staff and, as discussed above, involves political considerations. To mitigate this conflict, the Commission recommends that the County consider whether control and leadership of the fiduciaries responsible for the Plans should be separated, or at least lead, by persons who are not employees of the County subject to political pressure and control. For example the Chair of the RPC could be a member who is not an employee of the County and the Plans could also evaluate potential benefits from separating control of the Plans’ the investment functions from the other administrative functions performed by the County relating to the Plans, with the group responsible for management of investments comprised exclusively of persons who are not County employees.

10. **Inability to effectively conduct oversight relating to due diligence on NEPC.**

NEPC was retained in 2019 as the new investment manager for the Plans. We inquired with the County as to the due diligence conducted on NEPC and were advised that references were checked. We also inquired as to whether additional procedures were performed, and we were generally informed that discussion of NEPC was conducted at a closed-door meeting. Since the Commission was unable to gain access to the due diligence conducted on NEPC, we are unable to effectively perform that oversight function on this important aspect of administration of the Plans.

11. **NEPC Investment Manager reviews.**

We understand that NEPC is currently conducting a review of the Plans’ current investment managers and are hopeful that the Commission will have access to these evaluations.

12. **Investment Due Diligence Procedures.**

The RPC adopted an Investment Monitoring Policy dated January 31, 2019 which appears to be a positive undertaking to establish more formal policies for initial and ongoing due diligence of its investments. While the policy appears to cover many important areas, it is broad in scope and does not itself contain more detailed and granular aspects that would be expected in the review. We would anticipate that the actual documented due diligence reports may evidence these more detailed items and are hopeful that these reports will be made available to the Commission to assess this important process moving forward.
13. **Staffing.**

As discussed above, given the size and makeup of the Plans’ portfolio, the Commission recommends that the RPC hire a senior financial analyst, preferable with a CFA, to provide such expertise to the RPC.

14. **Interactions with the County Executive and County Council.**

Despite multiple requests, the Commission has been unable to schedule a meeting with the County Executive to discuss its findings from the FYE 2017 report. At one point, we were informed that we would only be able to meet with the Chief of Staff, as the County Executive was unable to meet with the Commission. Even then, that meeting never materialized.

We do appreciate the prompt meeting arranged with members of the County Council and the good questions asked by its members. While we appreciate the meeting, we would like to hear from the Council as to its thoughts on the matters discussed, and to continue in an ongoing dialogue.

To that end, we ask to have a timely meeting with both the County Council and the County Executive to discuss the matters discussed herein.