2. **Transmittal Letter**
   - **Draft Annual Report (Fiscal Year 2017) on the Performance and Value of Each Investment Class [per ORC 4121.12(F)(12)]**

Mr. Dunn presented the Draft Annual Report (Fiscal Year 2017) on the Performance and Value of Each Investment Class [per ORC 4121.12(F)(12)]. A copy of the draft report dated October 16, 2017 is incorporated by reference into the minutes and was provided to the IC prior to the meeting.

Mr. Palmer introduced the presentation by indicating this report, upon approval by the Board, will be presented to the Governor's Office, as well as Ohio House and Ohio Senate leadership. The report is required by Ohio law. Mr. Dunn noted the first read of this draft report occurs at this IC meeting, and the second reading will occur at the November 2017 IC meeting. The report has eighteen subject matter headers for ease of reference. There is also a one page executive summary report which details the Bureau's portfolio performance by investment class for Fiscal Year 2017 and the asset allocation mix of the portfolio at the end of Fiscal Year 2017. Further, the executive summary focused on the success of active management in the Bureau's portfolio. All three active management mandates collectively generated an estimated $138 million in net incremental investment income above respective benchmarks during Fiscal Year 2017, and achieved an estimated 54 basis points ("bp") of excess return for the Bureau's portfolio. The Bureau's portfolio generated a 7.5% return for Fiscal Year 2017. If the three active management mandates were passively managed, the Bureau's portfolio would have generated a return between 6.90% and 6.95% for Fiscal Year 2017. The executive summary also detailed the trend of investment manager fees, which increased somewhat during Fiscal Year 2017 mostly because of additional investment in real estate. The fiduciary audit during Fiscal Year 2017 identified no control deficiencies, and Mr. Dunn thanked the Investment Division staff for achieving this goal.

Mr. Dunn then covered the draft transmittal letter completely. Fiscal Year 2017 marked the eighth consecutive year of economic growth, identified by positive increase in Real Gross Domestic Product ("GDP"), for the U.S. economy. This eight-year period is the third longest expansion of the U.S. economy since 1854. As of September, 2017, the expansion is currently at 99 months. The longest expansion of the U.S. economy since 1854 is 120 months. U.S. GDP growth during Fiscal Year 2017 was approximately 3% during the spring and summer quarters but weak during the autumn and winter quarters. U.S. unemployment fell from 4.9% to 4.4% during Fiscal Year 2017. Additionally, there was a 2.4% increase in the U.S. civilian worker employment cost index during 2017. Productivity remained weak during Fiscal Year 2017, with growth of less than 1% in that area. The Federal Reserve raised the Federal Funds rate three times during Fiscal Year 2017, which implied the Federal Reserve was fully confident the U.S. economy could tolerate the increase in interest rates. The Federal Reserve has a 2% growth in the Consumer Price Index ("CPI") target, and the U.S. economy has been struggling to achieve that goal. For Fiscal Year 2017, the CPI grew by 1.6%, and by 1.7% excluding food and energy.

Mr. Dunn then reported the strength of the U.S. economy generated strong results in the U.S. financial markets. The U.S. stock markets have not seen a 5% contraction since June 2016, which is a record dating back to 1946. The surprise election of President Trump fueled investor sentiment in the expectation of tax cuts, deregulation and infrastructure spending. Additionally, European economies have been rebounding quite well, and China still has a strong economy. The recent French and Dutch Presidential Elections had an anti-populist candidate elected, and consequently, European markets have been performing better than U.S. markets. Long term bond yields saw a quick increase in Fourth Quarter 2016 after the presidential election when the federal funds rate was increased from 0.50% to 0.75%, but long-term bond yields abated during the first half of 2017 by 0.20-0.30%. Intermediate bond yields remained flat during this same period. There were extremely positive returns in stock markets during Fiscal Year 2017 documented by stock market indices generating returns as follows: S & P 500, 17.9%; Russell 2000, 24.6%; and ACWI ex-US, 20.4%. Bonds saw a flattening of the yield curve during Fiscal Year 2017. Long credit bonds generated a 3% return, and intermediate duration bonds generated a negative 0.50% return, during Fiscal Year 2017.

Mr. Dunn reported the Bureau's portfolio generated a 7.5% net return for Fiscal Year 2017. The Bureau's portfolio has generated: a 6.9% annualized return over the last 10 years; a 6.5% annualized return over the last 5 years, and a 5.1% annualized return over the last 3 years. These multi-year returns include Fiscal Year 2015, which was a weak year of performance for the Bureau's portfolio. Bureau bond assets generated a 1.4% total return during Fiscal Year 2017, broken down by a 3.6% return in interest income offset by a 2.2% reduction in market value.

Mr. Dunn stated there were two asset allocation revisions in Fiscal Year 2017. The first asset allocation revision concerned the Disabled Workers' Relief Fund II portfolio. The Board made the decision to switch an asset allocation to long term duration bonds, namely long government and long credit bonds, from intermediate duration bonds to better match the DWRF II portfolio's liabilities. The DWRF II portfolio's liabilities have a duration of 18 years. Additionally, the Board approved transitioning the MWBE program, which represents 1% of SIF assets or approximately $250 million in SIF assets, from active management to passive management. Coordinated with this decision, the benchmark index for the MWBE Program was changed from the Russell 3000 Index to the Russell Top 200 Index. A Request for Proposals for a passive MWBE large-capitalization equities manager was issued during Fiscal Year 2017. Rhumbline Advisors was the selected finalist, which the Board approved in August 2017.

Mr. Dunn noted Clark, Schaeffer and Hackett performed a fiduciary performance audit of the Investment Division's policies and procedures during Fiscal Year 2017. The audit, which is required by Ohio law every ten years, identified zero internal control deficiencies. This audit showed great improvement from the audit performed previously in policies, procedures, and governance. There were five findings received from the audit. Two of the findings were adopted, and three findings were not adopted, by the Bureau after vetting the findings with RVK and Bureau staff. Three audit findings were not adopted because the Bureau believed there was no need to act given the current policies, procedures and processes currently in place. The Bureau did adopt the audit finding to establish a benchmark index for the Bureau's cash asset allocation. Additionally, the Bureau did adopt the audit finding to establish a termination policy for outside investment managers and investment consultants, which was approved by the Board in January 2017. There were also three minor Bureau portfolio compliance matters during Fiscal Year 2017; all three of the compliance matters were promptly addressed and corrected.

Mr. Dunn said investment manager fees for the Bureau's portfolio increased to $60 million (23-24 bp) during Fiscal Year 2017 from $50 million (21 bp) in Fiscal Year 2016. There were two primary reasons for the increase in investment manager fees during Fiscal Year 2017. First, there was the buildup of the SIF real estate portfolio. The Bureau invested an additional $446 million in SIF real estate during Fiscal Year 2017. Real estate fund managers charge higher fees than stock or bond investment managers. Second, the Bureau portfolio's base equities assets appreciated significantly in market value. This increase in base assets led to an increase of $1.6 million in active SIF U.S. equities investment manager fees. The Bureau investment staff was very pleased with the performance of the active SIF fixed income managers during Fiscal Year 2017. The active long credit managers collectively outperformed the benchmark index by 0.56%, net of fees. This outperformance generated an estimated $40 million in incremental income above the benchmark return during Fiscal Year 2017, based on month-end net asset balances. The active SIF U.S. Aggregate core-plus managers generated a 2.27% incremental return above the benchmark return during Fiscal Year 2017, net of fees. This outperformance provided an estimated $71 million in incremental net income as a result. Active core plus managers can navigate between many different bond asset classes, including high-yield bonds. Three of the four active SIF U.S. Aggregate core-plus managers had an average 15-20% exposure to high-yield bonds, and high-yield bonds outperformed investment-grade bonds during Fiscal Year 2017. High-yield bonds typically perform well when equities markets also perform well, but yield spreads for high-yield bonds did compress during Fiscal Year 2017. Additionally, the active SIF U.S. Aggregate core-plus managers made very good credit decisions about investments in mortgage back securities and asset backed securities. This credit selection also significantly contributed to the active SIF U.S. Aggregate core-plus managers' outperformance. Regarding the active SIF U.S. small-capitalization ("small-cap") and mid-capitalization ("mid-cap") equities managers, the active SIF U.S. mid-cap equities managers did well, but some active SIF U.S. small-cap equities managers did underperform, during Fiscal Year 2017. The Russell 2000 Index generated a 24.60% return during Fiscal Year 2017, and some of the active SIF U.S. small-cap U.S. equities managers could not keep up with this exceptionally high return. One sector driving the large return of the Russell 2000 Index was biotechnology, which is substantially underweighted by the active SIF U.S. small-cap equities managers.

Mr. Dunn reported the Bureau's bond portfolio has remained consistent over the past five-six years in terms of quality and duration. The Bureau's bond portfolio has an average credit quality of between "AA" and "A", which is significantly impacted through a 35% bond asset allocation to U.S. Government bonds. Only 4.3% of the Bureau's bond portfolio, and only 2.3% of the Bureau's entire investment portfolio represented investments in below investment grade bonds as of June 30, 2017. The effective duration of the Bureau's bond portfolio was 10.7 years as of June 30, 2017. This effective duration matches the duration of 10-11 years of the Bureau's liabilities.

Mr. Dunn said the Bureau is invested in 21 real estate funds: seven SIF core real estate funds; six SIF core-plus real estate funds; and eight SIF value-added real estate funds. SIF real estate generated a 7.6% net return for Fiscal Year 2017, which is a moderation in return from the low to mid double-digit returns seen each fiscal year since Fiscal Year 2014, the first full fiscal year that the Bureau owned real estate assets. The moderation in SIF real estate returns was expected. The SIF real estate funds generated $192 million in net investment income during Fiscal Year 2017. The Bureau received approximately $101 million in income, and approximately $118 million in unrealized gains, from the SIF real estate funds during Fiscal Year 2017. In years past, SIF real estate appreciation was two-three times more than SIF real estate income. The expectation was for returns to be comprised more from real estate income than appreciation, and the Bureau is seeing this moderation occur. Cash and cash equivalents comprised approximately 1.6% of the Bureau portfolio at the end of Fiscal Year 2017. The 7-day money market yield, through the three federal fund rate increases, increased from 0.30% to 0.85% during Fiscal Year 2017. If there is a federal funds rate increase in December 2017, Mr. Dunn expects this 7-day money market yield to soon thereafter exceed 1%. Presently the 7-day money market yield is currently at 0.92%. Finally, the report documents a sensitivity analysis of the Bureau's SIF bond portfolio, like the one contained in his monthly CIO Report. However, the sensitivity analysis in this report is for a twelve-month period instead of a shock movement in interest rates.

Mr. Dunn concluded his presentation by stating Fiscal Year 2017 was a great year. He was proud of the Bureau's accomplishments during the year. The Bureau moved money at very good times in the marketplace, both to fund operations and the Third Billion Back premium rebate program. Good execution was also received from the Bureau's investment managers.

DISCUSSION ITEMS

1. **RVK Education Session – Asset Allocation vs. Asset Liability Study Overview (Part II)**

Mr. Palmeri and Mr. Plitt presented the RVK Education Session – Asset Allocation vs. Asset Liability Study Overview (Part II). Slideshow presentations titled "Asset Allocation vs. Asset Liability Study Overview" and dated September 27, 2017, and "Asset Allocation Education Part II, Ohio Bureau of Workers' Compensation" and dated October 25, 2017, are incorporated by reference and were provided to the IC prior to the meeting.

Mr. Plitt began the presentation by providing an overview of Slides 1 through 17 of the slideshow presentation dated September 27, 2017 that was presented at last month's IC meeting. The biggest difference between an Asset Allocation Study ("AAS") and an Asset Liability Study ("ALS") is an ALS incorporates the liabilities of a fund into the analysis. An AAS is more straightforward, to wit: how the fund's asset allocation is optimized to maximize the fund's return objectives. The Bureau's liabilities of the State Insurance Fund ("SIF") are calculated using a 4% discount rate, which is the SIF's minimum fund objective for investment return. The Bureau performed an ALS of its funds which is more in-depth and considered existing and projected liabilities. An AAS, in terms of an analogy, should be thought of as a medical checkup, where some changes may be prescribed; an ALS is a higher level diagnostic test, such as an MRI. An AAS is also performed more frequently, every one to three years, compared to an ALS that is performed every three to five years.

Mr. Plitt then discussed the appendix of the slideshow presentation dated September 27, 2017, which began on Slide 18. The appendix discussed how assumptions and inputs are used in an AAS. In discussing Slide 19, the most important input into an AAS are the capital market assumptions. An AAS models expected returns, risk (volatility), and correlations between asset classes over a long period of time on a forward-looking basis, and the Bureau has liabilities longer than that. In discussing Slide 20, Mr. Plitt said RVK has approximately 15-20 employees who work on developing RVK's capital market assumptions each year. The capital market assumptions are for the upcoming year, and longer data sets are used with assumptions given the current state of the economy. In discussing Slide 21, the table showed how capital market assumptions changed from 2016 to 2017. The capital market assumptions for 2018 will be finalized at the end of January 2018, which will be a benefit to the Bureau moving forward with the AAS.

Mr. Plitt and Mr. Palmeri then discussed the slideshow presentation dated October 25, 2017. The slideshow presentation depicted an example AAS. Mr. Palmeri emphasized the slideshow presentation was not one performed for the Bureau, but a different RVK client. The Bureau's data was not used in the AAS, and the RVK client had different investment objectives. The purpose of the slideshow presentation is only to show the IC and Board what an AAS' output is, which again only examines assets. Again, an AAS only examines a fund's investment objective. The Bureau has a 4% discount rate, which considers more data than simply assets.

In discussing Slide 3, Mr. Palmeri said the AAS will examine how the Bureau reaches its 4% return through its current asset allocation, and what asset allocation will provide the most minimal risk for SIF. The first question an AAS answers is what asset classes should the fund invest. As to this question, the Bureau already has that answer. The Bureau invests in stocks, bonds and real estate, and the AAS will not change those asset classes. The IC and Board examined other asset classes and chose not to invest