



AGENDA
CHARTER TOWNSHIP OF MERIDIAN
PENSION BOARD – PUBLIC MEETING
May 12, 2025 4:00 PM

1. CALL MEETING TO ORDER
2. ROLL CALL
3. PUBLIC COMMENT
4. APPROVAL OF AGENDA
5. APPROVAL OF MINUTES
 - A. May 13, 2024 Draft Meeting Minutes
6. PRESENTATIONS
 - A. David Reid, Vice President PNC Institutional Investment Advisor – Investment Report
 - B. Kevin Noelke, Consultant & Actuary Gabriel, Roeder, Smith & Company – Actuary Report
7. ACTION ITEMS
8. DISCUSSION ITEM
 - A. Availability for Future Meetings in 2025
 - B. Nomination of New Chair
9. COMMENTS FROM THE PUBLIC
10. OTHER MATTERS AND BOARD MEMBER COMMENTS
11. ADJOURNMENT

All comments limited to 3 minutes, unless prior approval for additional time for good cause is obtained from the Chair. Individuals with disabilities requiring auxiliary aids or services should contact the Meridian Township Pension Board by contacting: Township Manager Tim Dempsey, 5151 Marsh Road, Okemos, MI 48864 or 517.853.4258 - Ten Day Notice is Required.

Meeting Location:
5151 Marsh Road, Okemos, MI 48864 Township Hall

Providing a safe and welcoming, sustainable, prime community.



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CHARTER TOWNSHIP OF MERIDIAN
PENSION BOARD-MEETING MINUTES
Meridian Municipal Building
5151 Marsh Road, Okemos, MI 48864-1198
Monday, May 13, 2024 4:00 p.m.

Members Present: Tanya Pratt, Jim Houthoofd, Treasurer Phil Deschaine
Members Absent: None
Staff: Finance Director Dante Ianni and HR Director Abby Tithof
Others Present: David Reid, PNC Institutional Advisor and Kevin Noelke, Consultant & Actuary
Gabriel, Roeder, Simth & Company

1. CALL MEETING TO ORDER

- Treasurer Phil Deschaine called the meeting to order at 4 p.m. Finance Director Ianni moved the appointment of Treasurer Deschaine as chair for the meeting, which was seconded by Board Member Houthoofd. Approved unanimously.

2. PUBLIC COMMENT

- None Present

3. APPROVAL OF AGENDA

- Treasurer Deschaine moved to approve and Board Member Houthoofd seconded. Approved unanimously.

4. APPROVAL OF MINUTES FROM NOVEMBER 6, 2023 MEETING

- Treasurer Deschaine moved to approve November 6, 2023 minutes and Board Member Houthoofd seconded. Approved unanimously.

5. PRESENTATIONS

- David Reid, PNC Institutional Advisor and Kevin Noelke, Consultant & Actuary Gabriel, Roeder, Simth & Company provided reports to the board.

6. ACTION ITEMS

- Finance Director Ianni moved Treasurer Deschaine's appointment as permanent chair of the Pension Board, which was seconded by Board Member Pratt. Approved unanimously.

7. DISCUSSION ITEM

- The next meeting was scheduled for Tuesday, March 11, 2025, at 4 p.m.

8. COMMENTS FROM THE PUBLIC

- None

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9. OTHER MATTERS AND BOARD MEMBER COMMENTS

- None

10. ADJOURNMENT

- Treasurer Deschaine motioned for the meeting to adjourn, which Board Member Pratt seconded at 4:50 p.m. Approved unanimously.
-

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Meridian Township Employee Pension

Review for March 31, 2025

Presented by:

David A Reid, CIMA

Investment Advisor Sr, Vice President

PNC Institutional Asset Mgmt.

(248) 729-8352

david.reid@pnc.com

- I. Taking Stock of the Markets

- II. Investment Policy Statement

- III. Portfolio Review

- IV. Appendix

Taking Stock of the Markets

Investment Strategy

April 2025

Key Macro and Market Themes

The path forward is highly dependent on notable themes

We maintain a positive view on financial markets despite near-term uncertainty regarding fiscal policy. Underlying fundamentals remain healthy, led by a positive earnings outlook for U.S. large capitalization equity.

Macroeconomics

1. Fiscal policy uncertainty
2. Rapid decline in sentiment
3. Manufacturing instability

Markets

1. Emphasize quality stocks
2. Fixed income ballast
3. U.S. leadership remains intact

Investment Process and Asset Allocation Views

Each facet of analysis plays a critical role in our decision-making

Fiscal policy uncertainty is rising whereas global monetary policy continues to focus on easing financial conditions. We continue to believe the reward/risk balance favors diversified, high-quality portfolios.

Investment process insights



Business Cycle

Fiscal policy could materially disrupt the path of the business cycle

Without offsetting actions such as tax cuts, tariff policy uncertainty could slow economic activity.



Valuations

Valuations are not priced for a lengthy period of foreign trade uncertainty

Earnings multiples remain well above their long-term averages; however, to justify these lofty levels, earnings growth needs to broaden and reaccelerate in 2025.



Technical

Stocks in correction become dependent on the path of the business cycle

Historically, most corrections that have occurred outside of recessions have been short-lived.

Asset allocation views



Equities

Quality remains our top factor when macro uncertainty is high

We continue to favor quality allocations that can weather elevated inflation, high interest rates and an uncertain fiscal policy backdrop.



Fixed Income

Credit spreads are widening, but from very low levels, while fundamentals remain intact

Parts of the U.S. Treasury (UST) curve are inverted again, and credit spreads are widening as investors readjust their economic growth expectations due to changes to fiscal policy.



Alternatives

Broad opportunity set for long-term investors

Alternative investments offer various return/risk correlation and liquidity profiles for differentiated alpha, potentially aiding risk-adjusted performance and dampening volatility.

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Economic and Equity Markets Dashboard

Sentiment surveys have recently weakened despite ongoing economic growth

A few leading economic indicators have recently surprised to the downside, and together fiscal policy uncertainty, are negatively impacting investor sentiment despite strength from hard economic data.

Economic Data Dashboard

2.4%

PRIOR: 3.1%

**U.S. REAL GDP
4Q 2024**

4.1%

PRIOR: 4.0%

**UNEMPLOYMENT
RATE**

2.8%

PRIOR: 3.0%

**CONSUMER PRICE
INDEX ANNUAL CHG.**

4.21%

PRIOR: 4.21%

**10-YEAR U.S.
TREASURY YIELD**

4.0%

PRIOR: 3.9%

**ANNUAL HOURLY
WAGE GROWTH**

-0.9%

PRIOR: 4.4%

**ANNUAL U.S. RETAIL
SALES GROWTH**

32 BASIS POINTS

PRIOR: 22 BASIS POINTS

**2YR/10YR YIELD
CURVE**

151,000

PRIOR: 125,000 (REVISED)

**MONTHLY PAYROLL
REPORT ADDITIONS**

\$3.20/GAL

PRIOR: \$3.10/GAL

**NATIONAL AVERAGE
GASOLINE PRICE**

Equity Market Highlights

Consensus Estimates Earnings Growth

	2025E	
	EPS GROWTH	NTM P/E
S&P 500	11.0%	20.2x
"Magnificent 7"* stocks	50.9%	28.2x
Russell 2000®	37.6%	22.5x
MSCI World ex USA	10.2%	14.0x
MSCI EM IMI	15.8%	12.1x
S&P 500 2025 EPS Strategists' Median Est.	3/31/25 \$270	
Bull Case	\$282	
Bear Case	\$249	

*"Magnificent 7" stocks includes Microsoft Corp.; Apple, Inc.; Nvidia Corp.; Alphabet, Inc.; Amazon.com, Inc.; Meta Platforms Inc. and Tesla, Inc.

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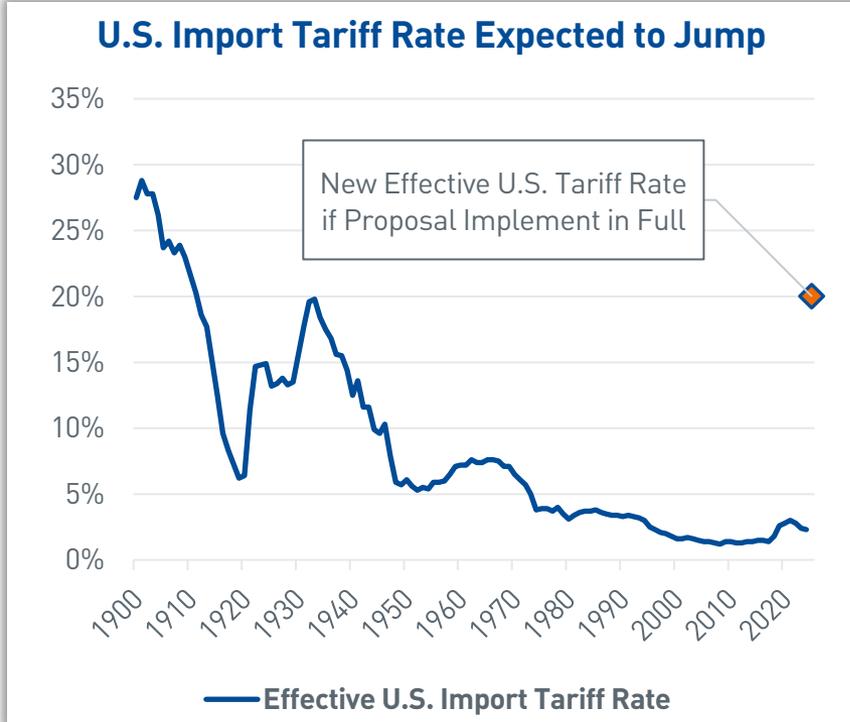
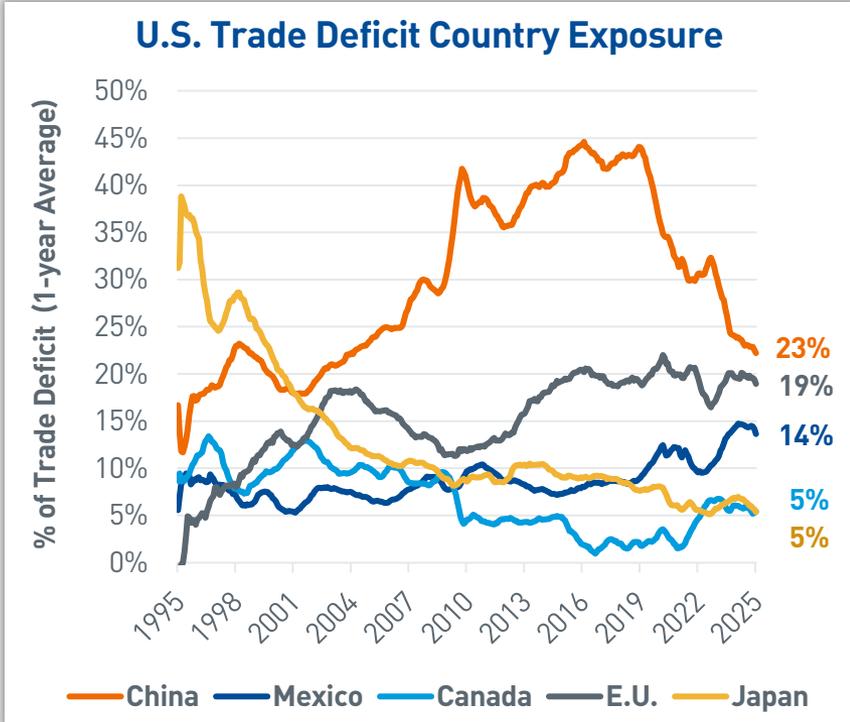
Fiscal Policy Uncertainty

Lack of clarity on U.S. trade policy continues to stoke market volatility

Trade policy uncertainty could be a material negative impact on activity

The U.S. economy is a net-importer, especially for consumer goods, and the range of trading partners is vast, adding to the complexity of tariff policies.

Based on initial estimates, and without tax deductions to offset, new tariff rates would jump to the highest level in 100 years.



As of 4/2/2025. Source: Bloomberg L.P., Strategas Research Partners Inc.

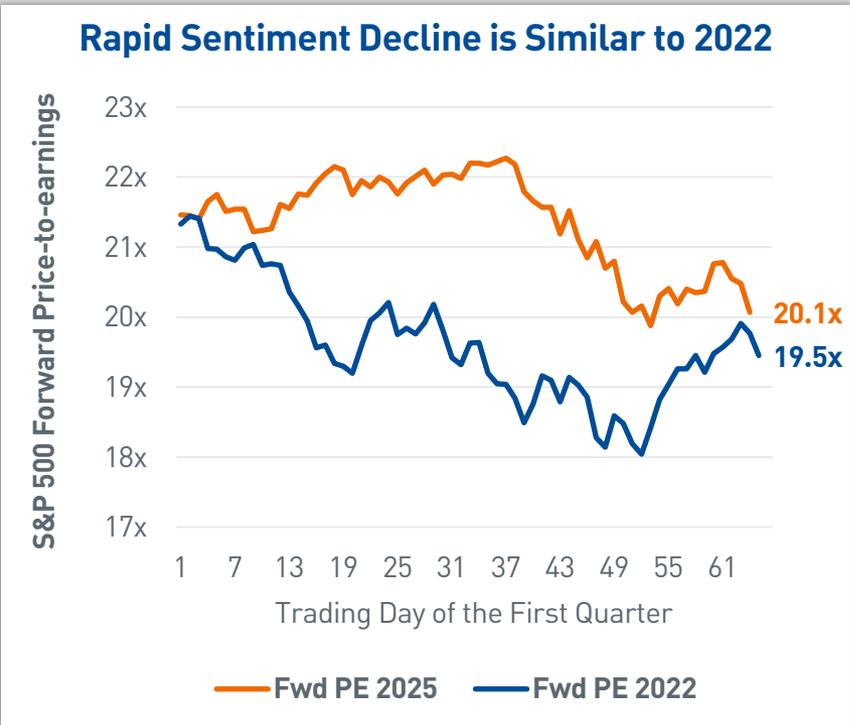
Rapid Decline in Sentiment

A sharp contrast from the monetary policy uncertainty of 2022

Fiscal policy changes typically have an immediate economic impact

Sweeping changes to fiscal policy could have an immediate, and potentially negative impact, and the uncertainty is weighing on investor sentiment.

In contrast, monetary policy uncertainty in 2022 had an immediate negative impact on investor sentiment, but a lagged effect on corporate earnings.



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Manufacturing Instability

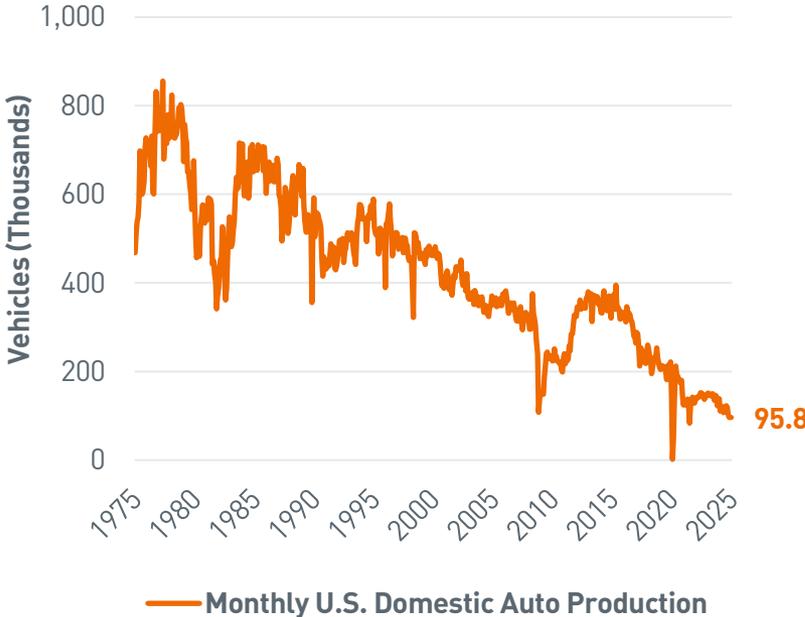
Tariffs could impact supply chains and dampen a manufacturing rebound

Manufacturing has already been in a two-year contraction due to an uncertain outlook

Manufacturing activity has been weak over the past two years, weighed down by high input prices, weak global economic growth and now trade uncertainty. A recovery in the automobile industry will be critical to deliver a manufacturing rebound, but U.S. car production has been declining for 40 years.



U.S. Auto Production in Secular Decline



ISM® Purchasing Manager Indexes (PMI®) survey senior executives at private sector companies to help measure the overall health of an economy. An index reading above 50 suggests economic activity is expansionary and below 50 suggests contractionary economic activity. As of 3/31/2025. Source: Bloomberg L.P. Indices are unmanaged, not available for direct investment and not subject to management fees, transaction costs or other types of expenses that an account may incur.

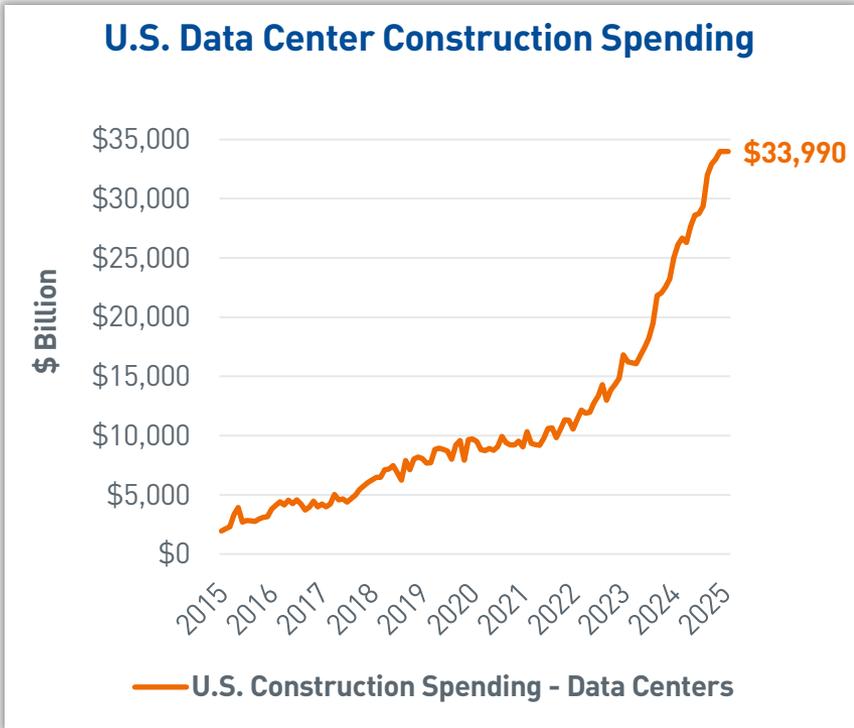
Keeping an Eye on AI

Data center supply and demand coming to a crossroads

Mega-cap company balance sheets have taken on significant capital expenditures' (capex) plans

With the advent of AI at scale, data center construction has grown rapidly due to significant computing power needs.

As modeling efficiency improves, investors are questioning if significant capex will lead to more innovation and AI use cases in 2025.



■ “Magnificent 7” Trailing 12-month Capex

Magnificent 7* Stocks	Trailing 12-month Capex (\$MM)
Amazon.com Inc.	\$82,999
Microsoft Corp.	\$55,552
Alphabet Inc.	\$52,535
Meta Platforms Inc.	\$37,256
Tesla Inc.	\$11,339
Apple Inc.	\$9,995
NVIDIA Corp.	\$3,236
S&P 500 Median Capex	\$563
S&P 500 Median Market Value	\$36,698

*“Magnificent 7” stocks include Microsoft Corp.; Apple, Inc.; Nvidia Corp.; Alphabet, Inc.; Amazon.com, Inc.; Meta Platforms, Inc. and Tesla, Inc. As of 3/31/2025. Source: FactSet®, FactSet® is a registered trademark of FactSet Research Systems, Inc., and its affiliates. Indices are unmanaged, not available for direct investment and not subject to management fees, transaction costs or other types of expenses that an account may incur.

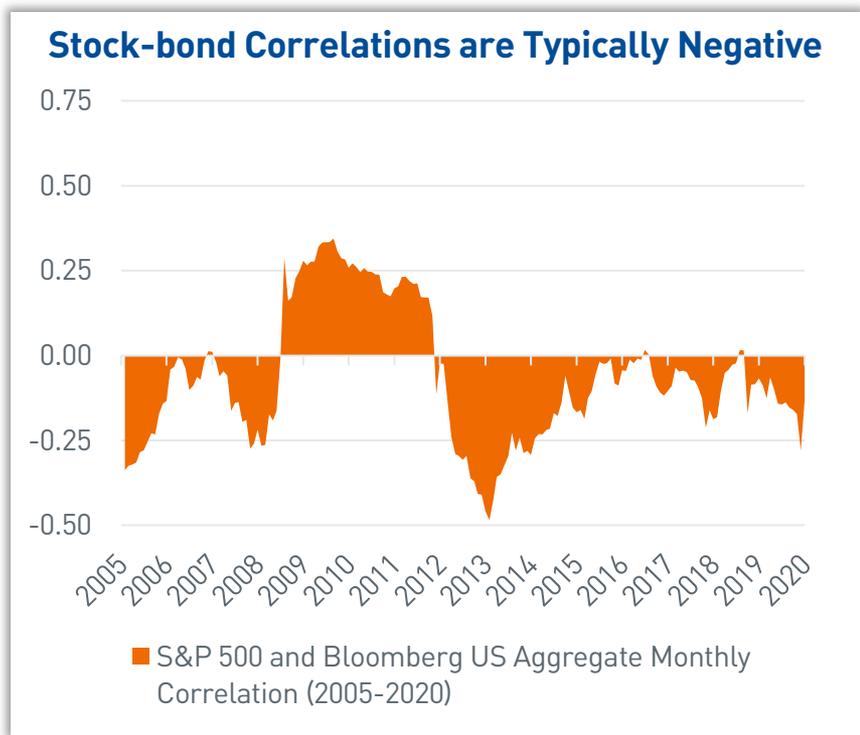
Fixed Income Ballast

Three years of correlations with stocks is reversing during the market downturn

We continue to see value in fixed income during equity market downturns

Historically, one of the benefits of fixed income is their low correlation to stocks — when equities pull back, bonds typically provide support.

That relationship did not hold in 2022 as the Fed was hiking interest rates, but the last two months have seen bonds provide ballast as correlations improve again.



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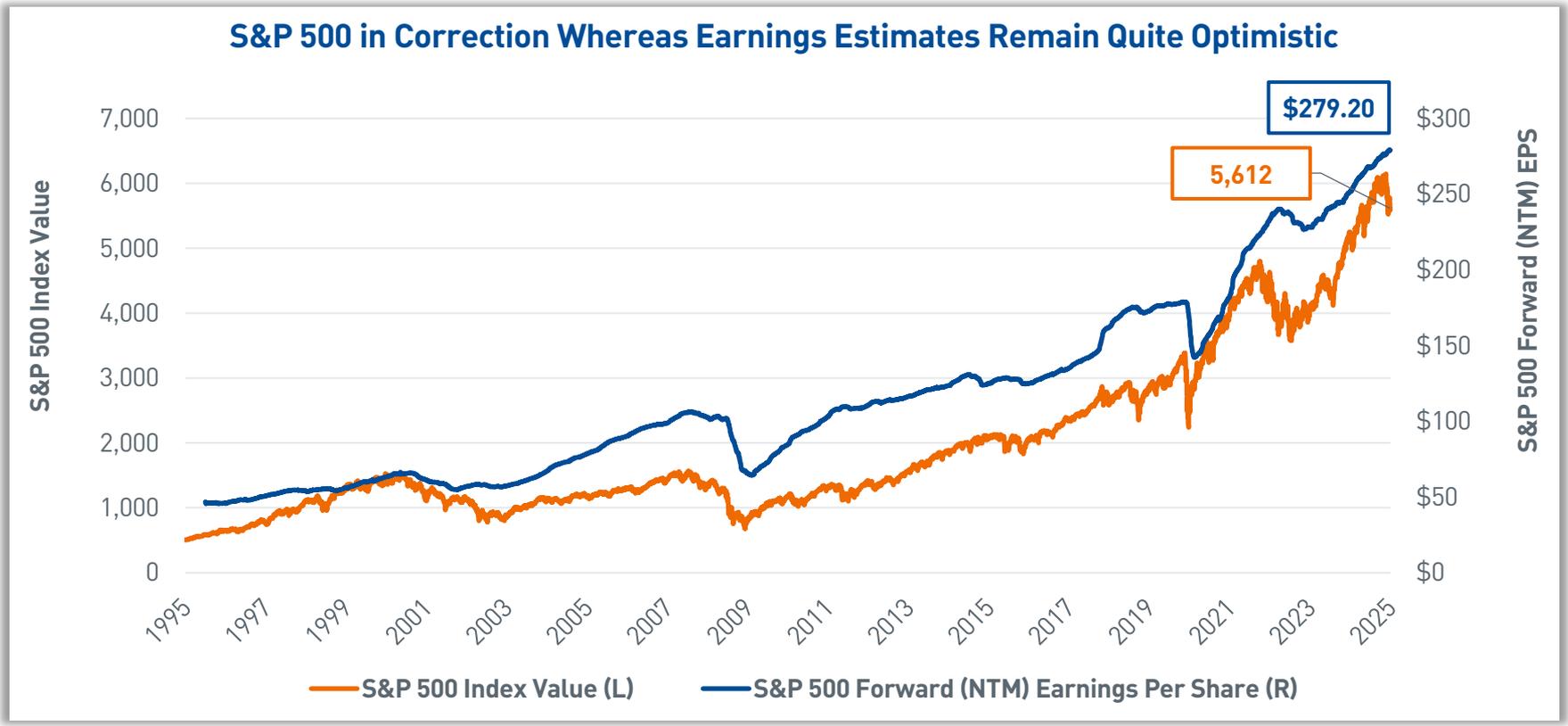
S&P 500 Index and Forward Earnings

Earnings drive stock prices in the long run



S&P 500 momentum softens on fiscal policy uncertainty

Tariff threats and stagflation fears gripped financial markets in March as the S&P 500 Index fell into correction territory. Notably, earnings estimates have not moved meaningfully lower with first-quarter earnings season looming.



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S&P 500 Earnings Outlook

Despite weak revisions recently, earnings for 2025 still point to growth

First-quarter estimates have fallen due to fiscal policy uncertainty

A key market driver in 2025 needs to include a reacceleration in earnings growth; however, revisions have been falling, especially for the first quarter.

Should 2025 grow as consensus expects, it should help compress elevated valuations while still maintaining a positive equity outlook.



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S&P 500 Earnings and Valuations

Valuation scenario analysis and the equity risk premium



Broadening earnings growth should help to compress valuation multiples

Over the past two years, accelerating earnings has been primarily driven by the strong earnings growth of a concentrated number of mega-cap growth stocks. This year, we expect earnings growth to broaden across sectors, which should help ease extended valuations and maintain positive market momentum.



Implied S&P 500 Price Level using EPS and Forward Price-to-earnings (P/E)

NTM EPS	Hypothetical Scenario	Price to Earnings (P/E NTM)				
		17.2x	18.7x	20.2x	21.7x	23.2x
\$209	25% downside	3,594	3,908	4,223	4,537	4,851
\$251	10% downside	4,313	4,690	5,067	5,444	5,821
\$279	*NTM Consensus Est.	4,792	5,211	5,630	6,049	6,468
\$307	10% upside	5,272	5,732	6,193	6,654	7,114
\$349	25% upside	5,991	6,514	7,038	7,561	8,085

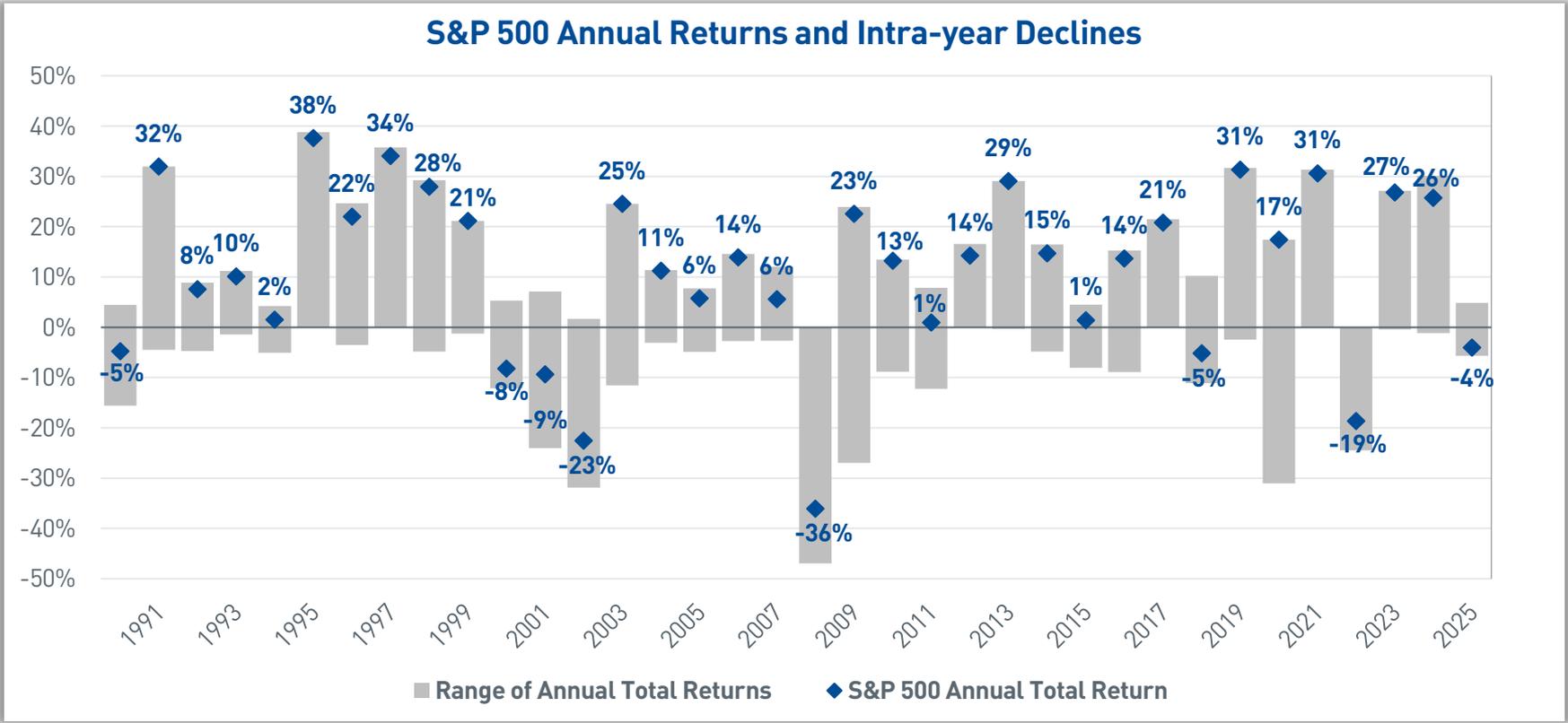
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S&P 500 Market Volatility

Market volatility hinged on the path of monetary and fiscal policy

Pullbacks might present a buying opportunity

Intra-year pullbacks can be sizeable and uncomfortable, but history has shown that markets recover from these drawdowns. Thus, these declines are a poor guide for how a year ultimately turns out, so it is important to stay invested.

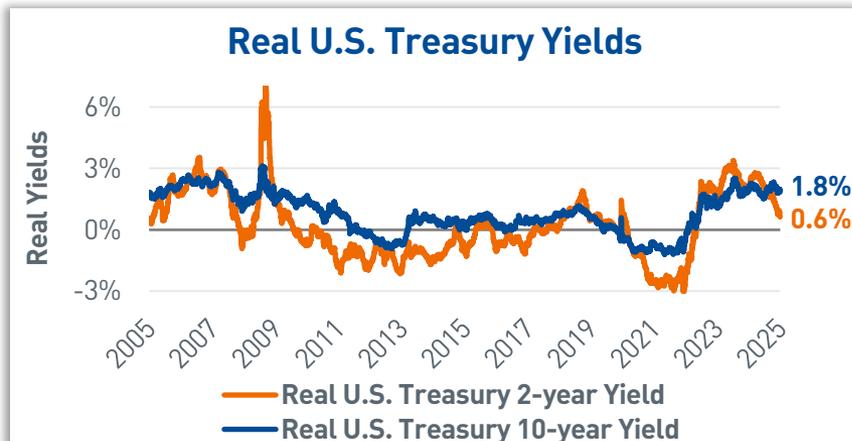
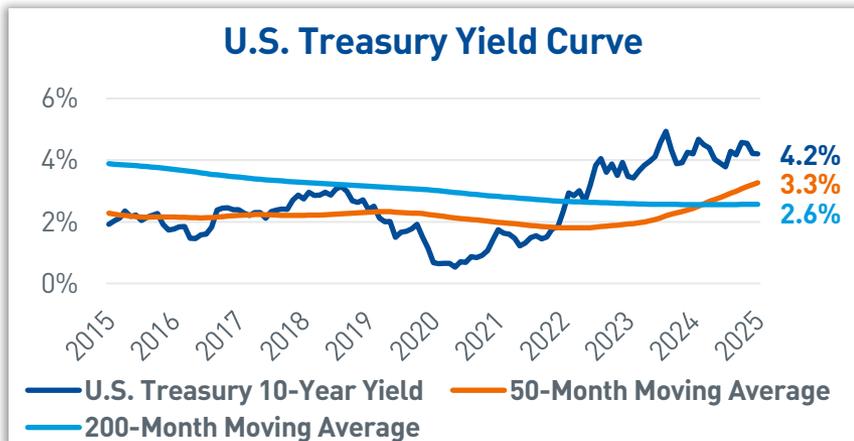


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Interest Rates

Cautious inflationary backdrop makes it challenging for the Fed to cut rates

While parts of the yield curve have normalized, monetary policy is still quite restrictive when comparing the fed funds rate to U.S. Treasury yields, and real yields are also still elevated.



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Capital Market Assumptions: Methodology

Methodology & Key Assumptions

Results in this report incorporate PNC's Capital Market Assumptions (CMA) for calendar year 2025. These assumptions represent the PNC Asset Management Group's 10-year projections of risk and return for the respective asset classes. These estimates are updated on an annual basis and take into account economic fundamentals, long-term historical trends, as well as other relevant factors.

Methodology

CMA returns reflect combining market-implied equilibrium returns with PNC's subjective views using a technique known as Black-Litterman¹. Black Litterman Methodology blends subjective and market-implied views using a Bayesian approach that takes account of cross-asset-class relationships to help determine an internally consistent set of final estimates. In general, the expected return on every asset class is adjusted so that it is as consistent as possible with both the market-implied equilibrium and our subjective views, even if we do not express a specific subjective view on that asset class. This methodology is an imperfect model of market behavior. Among the simplifications is the assumption that asset returns are adequately summarized by constant means, variances, and correlations. Empirical evidence generally indicates that these statistics are not sufficient to fully characterize asset returns.

The projected returns for hedge funds, private debt, private equity, and private real estate (property) include premiums for the fact that these classes are, in varying degrees, illiquid. The mean returns shown should be interpreted as arithmetic average returns. They are not compounded rates of return. The difference between these two concepts is approximately equal to one-half the asset's volatility squared.

Key Assumptions

Risk-free Rate — As we perform our 2025 CMA analysis, the risk-free rate remains unchanged from last year at 3.0%. We believe this is a reasonable expectation as the Fed has started to normalize the interest rate environment and is expected to continue leading to a terminal rate of 3.0% over the period of this analysis.

Inflation — We use an inflation expectation of 2.25% per year, based on our estimated Consumer Price Index (CPI)² level over the forecast period. This is consistent with last year's analysis, but slightly higher than the Fed's long-run inflation target level of 2%. While CPI has fallen recently, we believe structural forces will keep inflation elevated relative to the last 20 years, normalizing around 2.25%. This is also consistent with market expectations based on inflation breakeven rates³, which are currently at 2.45% for five years and 2.35% for 10 years (as of November 22, 2024).

U.S. Dollar — We have assumed the Fed's nominal Trade-Weighted U.S. Dollar Index⁴ remains flat over the forecast horizon. Given the significant interest rate differentials around the globe, we expect the dollar to maintain its current position of relative strength against most other major currencies.

¹ The Black-Litterman methodology was introduced by Fischer Black and Robert Litterman of Goldman Sachs in 1990. It avoids problems inherent in some other methods by incorporating market-implied equilibrium returns consistent with the risk structure of the asset classes. The model works by blending subjective and market-implied views using a Bayesian approach that takes account of cross-asset-class relationships to help determine an internally consistent set of final estimates. In general, the expected return on every asset class is adjusted so that it is as consistent as possible with both the market-implied equilibrium and our subjective views, even if we do not express a specific subjective view on that asset class.

² The CPI measures changes in the price level of a weighted average market basket of consumer goods and services purchased by households. It is usually calculated and reported by the U.S. Bureau of Labor Statistics, or its equivalent in countries outside the United States, on a monthly and annual basis.

³ The inflation breakeven rate is derived as a discount rate that equates the nominal return on a dollar of investment to the real return (not as an arithmetic difference between the nominal rate and the real rate).

⁴ The Trade-Weighted U.S. Dollar Index, also known as the broad index, is a measure of the value of the dollar relative to other world currencies. It is a trade-weighted index that improves on the older U.S. Dollar Index by using more currencies and updating the weights annually rather than on an ad hoc basis.

Capital Market Projections have been furnished for illustrative purposes only and are not intended as investment advice. Past performance is not indicative of future returns. Indices are unmanaged, not available for direct investment, and not subject to management fees, transaction costs or other types of expenses that an account may incur. Source: PNC

Capital Market Assumptions: Key Assumptions

Methodology & Key Assumptions

Currency Impacts — For U.S. investors, international equities generally involve currency exposure, which can increase volatility. However, compensation for this additional risk may not be adequate or reliable, and international equities have not historically offered consistent purchasing power protection. Over the short term, when the dollar is strengthening, U.S. equities and fixed income investments tend to outperform their international counterparts. Conversely, when the dollar is weakening, international investments tend to outperform. This holds true from the perspective of a U.S.-based investor (defined as an investor whose local currency is the U.S. dollar, whether an individual or institution).

In an international equity portfolio with exposure to a basket of currencies, it is likely some securities will have positive returns in local currency terms, while others will have negative returns. In theory, this counterbalancing effect should result in currency exposures generally offsetting themselves over time. Additionally, currency returns do not exhibit strong positive correlations and, as such, tend to help diversify equity portfolios. Furthermore, there is ample empirical evidence, cited by the CFA Institute, among others, suggesting the standard deviation (i.e., volatility) of currency prices is only about half the standard deviation of stock prices. This suggests that an unhedged currency exposure may help reduce the volatility of an international equity portfolio over time. As currencies also tend to revert to a theoretical fair value/mean over time, currency-related volatility risk tends to fall, becoming a less critical component of equity risk. Thus, over the long term, our preference is to be unhedged to potential currency exposures.

Cash and Cash Equivalents — We use the 3-month U.S. Treasury bill (T-bill) as our proxy for cash, despite it being subject to inflation and interest rate risk. Although T-bills do not typically generate positive real returns (i.e., inflation-adjusted) over time, they do offer liquidity, safety of principal and exemption from state and local taxes. T-bills tend to carry higher yields than what are available in cash accounts, such as money market funds or deposit accounts, but are comparable on a risk-adjusted basis. Our expected return and volatility assumptions for the 3-month T-bill are 3.0% and 0.56%, respectively, for the 2025 CMAs.

Volatility — Our volatility assumptions are primarily driven by a historical blend of both turbulent and quiet market periods. According to Windham Portfolio Advisors, turbulent periods are identified by statistically unusual asset movements, based on their proprietary methodology. Based on our analysis of historical market volatility over the past 20-plus years, we use a blend of 60% quiet periods, 40% turbulent periods to derive our assumed asset class volatilities. This methodology is consistent with last year's CMA process.

Capital Market Assumptions: 10-Year Forecast

2025-2034

Asset Class	Index	Projected	
		Annual Return	Annual Volatility ⁵
U.S. EQUITY			
U.S. Large Cap – Core	S&P 500	7.50%	17.30%
U.S. Mid Cap – Core	S&P MidCap 400	9.00%	21.10%
U.S. Small Cap – Core	Russell 2000	8.00%	23.20%
Real Estate Investment Trusts	MSCI USA IMI Real Estate 25-50	8.75%	24.10%
INTERNATIONAL EQUITY			
Int'l Large/Mid – Core	MSCI World ex USA	9.25%	19.10%
Int'l Small – Core	MSCI World ex USA Small Cap	9.75%	21.30%
Emerging Markets	MSCI Emerging Markets IMI	9.50%	24.60%

Asset Class	Index	Projected	
		Annual Return	Annual Volatility ⁵
FIXED INCOME			
Municipal Short-term	Bloomberg Municipal Bond (1-3 Y)	3.10%	1.50%
Municipal	Bloomberg Municipal Bond	3.50%	5.10%
Core Short-term	Bloomberg US Aggregate (1-3 Y)	3.40%	1.50%
Core	Bloomberg US Aggregate	4.60%	4.40%
Taxable Long	Bloomberg US Government/Corporate Long	6.50%	11.40%
U.S. High Yield	Bloomberg US Corporate High Yield	6.75%	10.50%
Emerging Markets	Bloomberg Emerging Markets USD Aggregate	6.00%	9.70%
Inflation-linked Bonds	Bloomberg US Treasury TIPS	4.50%	6.10%
ALTERNATIVES			
Private Equity	MSCI Global Private Equity	12.00%	22.00%
Private Debt	MSCI Global Private Credit	8.75%	12.60%
Private Real Estate	MSCI Global Private Real Estate	9.75%	14.50%
Private Infrastructure	MSCI Global Private Infrastructure	7.70%	10.00%
Hedge Funds	HFRI Fund of Funds Composite Index	5.50%	5.75%

⁵ The volatilities for each asset class shown in this table represent our projections for annual volatilities. In performing the underlying analysis, we used historical monthly volatilities (as opposed to daily or weekly) spanning the last 20+ years as a key input.

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Investment Policy Statement



PNC
INSTITUTIONAL
ASSET MANAGEMENT

Investment Policy Statement

Meridian Township Employee Pension



This Investment Policy Statement covers the Meridian Twp Emp Pension Portfolio, which is comprised of the following account(s):

MERIDIAN TWP EMP PENSION 20-75-067-XXX9678

I. Purpose

The purposes of this Investment Policy Statement (IPS) are (i) to document our understanding of the investment goals and guidelines for the portfolio, including the investment objective, risk tolerance, investment restrictions and asset allocation ranges, and (ii) to establish a basis upon which to evaluate the attainment of portfolio objectives.

II. Investor Profile

A. Investment Time Horizon:
The period of time during which the assets will be invested is expected to be 20 years.

B. Portfolio Risk Tolerance:
Investment theory and historical capital market return data suggest that, over long periods of time, there is a relationship between the level of risk assumed and the level of return that can be expected in a portfolio, although there can be no guarantee of returns. In general, higher risk (e.g. return volatility) is associated with higher return. Given this relationship between risk and return, a fundamental step in determining the investment policy is the determination of an appropriate risk tolerance profile. There are a number of factors that influence the risk profile for a portfolio, including: sustainability of income, liquidity, return objectives, time horizon and investment experience. Based on your and PNC's understanding of the relevant situation, you agree that the portfolio risk tolerance is best described as: Investments may fluctuate and suffer occasional losses, so that overall returns will keep pace with inflation.

C. Investment Objectives:
The overall investment objective for this portfolio is Growth.

III. Restrictions and Limitations

No restrictions exist for this portfolio.

IV. Strategic Asset Allocation

Asset Class	Proposed Allocation (%)	Minimum (%)	Maximum (%)
Equity	65.00	55.0	75.0
Equity - US Equity	48.00		
Equity - International Equity	13.00		
Equity - REITs	4.00		
Fixed Income	32.00	22.0	42.0
Fixed Income - US Investment Grade	32.00		
Cash	3.00	0.0	13.0
Cash	3.00		
Total	100.00		

V. Strategic Considerations

The Strategic Asset Allocation represents a customized investment framework with baseline allocation percentages for each major asset class. The allocation has been developed using both quantitative and qualitative input, data and processes and reflects your preferences. The assets of this portfolio shall be diversified among various classes of investments, unless PNC is directed otherwise.

The PNC baseline Strategic Asset Allocation is a long-term strategic asset allocation that considers equity, fixed income, alternative assets and cash according to your risk profile. PNC may make tactical changes from time to time in these baseline Strategic Asset Allocation Strategies. In addition, your account may vary from the baseline allocation due to changes in the value of assets in the account, market conditions and account specific events, such as instructions from you.

VI. Investment Authority

PNC's investment authority for the accounts in the portfolio is defined as follows:

Account Name	Account Number	Investment Authority
MERIDIAN TWP EMP PENSION	20-75-067-XXX9678	Full/Sole Discretion

Investment Policy Statement (cont.)

Meridian Township Employee Pension

VII. Performance Measurement

The portfolio's performance will be measured in accordance with industry standards and against appropriate benchmarks.

VIII. Additional Comments

No Additional Comments

IX. Signator's Role

As financial circumstances, goals, investment objectives and preferences change, it is important that you communicate those changes to us so that appropriate adjustments can be made in the portfolio.

The undersigned agree(s) that this Investment Policy Statement (IPS) applies to all of the accounts that constitute the Portfolio in the aggregate. PNC may manage each account to its own investment objective as long as all accounts in the aggregate comply with this IPS.

Each of PNC and the Signator is signing this IPS in the capacity defined by the governing instrument for each account listed in this IPS. This IPS is subject to the terms and conditions, including the standard of care and limitations of liability, of the documents, which constitute the governing instruments for the applicable account(s). This IPS has been accepted and approved by:

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E-SIGNED by DANTE IANNI

on 09/28/2023 10:48:59 EDT

DANTE IANNI

PNC BANK, NATIONAL ASSOCIATION

E-SIGNED by DAVID A REID

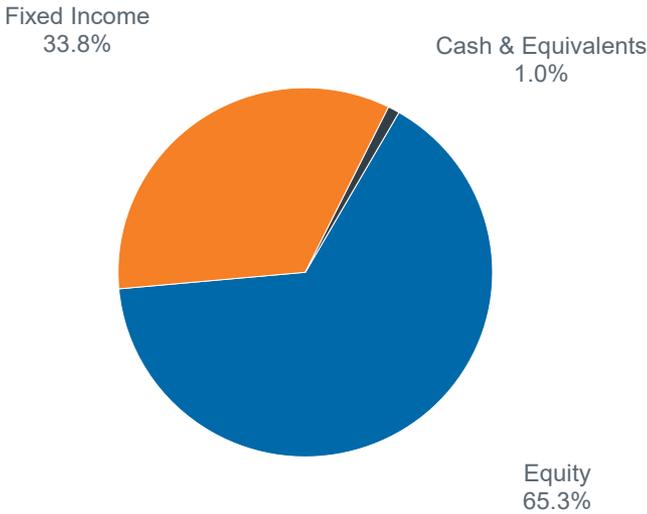
By : on 09/28/2023 11:17:18 EDT

DAVID A REID, V.P.

Portfolio Review

Asset Allocation – Total as of March 31, 2025

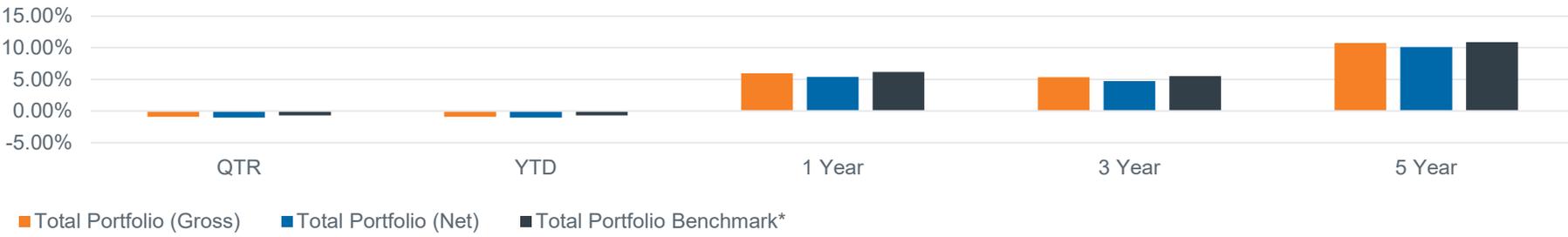
Meridian Township Employee Pension



Description	Market Value (\$)	Portfolio Allocation	Policy Target	Policy Range
Equity	2,724,179	65.3%	65%	55 - 75%
US Equity	2,049,286	49.1%		
<i>US Large Cap</i>	1,743,076	41.8%		
<i>US Mid Cap</i>	117,984	2.8%		
<i>US Small Cap</i>	188,226	4.5%		
International Equity	520,566	12.5%		
<i>Intl. Developed</i>	520,566	12.5%		
Equity Other	154,327	3.7%		
Fixed Income	1,408,729	33.8%		
US Fixed Income	1,408,729	33.8%	32%	22 - 42%
Cash & Equivalents	41,417	1.0%	3%	0 - 13%
Total Portfolio	4,174,325	100.0%		

Total Portfolio Performance as of March 31, 2025

Meridian Township Employee Pension



Description	QTR	YTD	1 Year	3 Year	5 Year
Total Portfolio (Gross)	-0.88%	-0.88%	5.96%	5.33%	10.74%
Total Portfolio (Net)	-1.02%	-1.02%	5.38%	4.74%	10.12%
Total Portfolio Benchmark*	-0.69%	-0.69%	6.18%	5.53%	10.90%
Equity	-2.54%	-2.54%	5.93%	6.37%	15.28%
Fixed Income	2.50%	2.50%	5.51%	2.59%	1.99%

Definitions for various indexes referenced herein can be accessed at <https://www.pnc.com/en/personal-banking/investments-and-retirement/index-catalogue.html>. Indices are unmanaged, not available for direct investment, and not subject to management fees, transaction costs or other types of expenses that an account may incur. See Appendix for policy benchmark composition for description of benchmarks. Total Portfolio (Gross) shows performance gross of advisory fees and separately managed account (SMA) fees. Total Portfolio (Net) shows performance net of advisory fees, transaction costs, and all manager fees. Performance reflects reinvestment of dividends, interest and capital gain distributions and rebalancing. Indices are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that an account may incur. **Past performance is not guarantee of future results.**

Manager Performance as of March 31, 2025

Meridian Township Employee Pension

Description	QTR	YTD	1 Year	3 Year	5 Year
Equity	-2.54%	-2.54%	5.93%	6.37%	15.28%
US Equity	-4.61%	-4.61%	6.07%	7.55%	16.32%
US Large Cap	-4.01%	-4.01%	7.96%	8.90%	18.36%
US Large Cap Core	-4.01%	-4.01%	7.96%	8.97%	18.51%
Fidelity 500 Index Fd-Ai	-4.28%	-4.28%	8.24%	9.05%	N/A
S&P 500	-4.27%	-4.27%	8.25%	9.06%	N/A
Wisdomtree U.S. Quality Divi Etf	-0.99%	-0.99%	6.48%	N/A	N/A
WisdomTree US Quality Dividend Growth Idx Gross	-0.92%	-0.92%	6.74%	N/A	N/A
US Mid Cap	-6.10%	-6.10%	-2.54%	4.41%	13.67%
US Mid Cap Core	-6.10%	-6.10%	-2.54%	4.41%	13.90%
iShares Core S&P Mid-Cap Etf	-6.10%	-6.10%	-2.54%	4.41%	N/A
S&P Midcap 400	-6.10%	-6.10%	-2.70%	4.42%	N/A
US Small Cap	-8.96%	-8.96%	-3.49%	0.72%	7.36%
US Small Cap Core	-8.96%	-8.96%	-3.49%	0.72%	N/A
iShares Core S&P Small Cap Etf	-8.96%	-8.96%	-3.49%	0.72%	N/A
S&P Small Cap 600	-8.93%	-8.93%	-3.38%	0.71%	N/A
International Equity	5.43%	5.43%	2.97%	2.43%	11.48%
Intl. Developed	5.43%	5.43%	2.97%	2.43%	11.48%
Intl. Large Cap Core	5.43%	5.43%	2.97%	2.43%	N/A
Federated Hermes International Equity Fund	5.01%	5.01%	2.82%	2.26%	11.37%
MSCI ACWI ex USA Net	5.23%	5.23%	6.09%	4.48%	10.92%
iShares Msci Intl Quality Factor Etf	6.92%	6.92%	2.85%	N/A	N/A
MSCI EAFE Net	6.86%	6.86%	4.88%	N/A	N/A
Equity Other	0.78%	0.78%	9.31%	N/A	N/A

Performance is shown gross of advisory fees and separately managed account (SMA) fees. The effect of advisory fees on the portfolio could be material. If these fees were reflected, returns would be lower. Indices are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that an account may incur. **Past performance is not guarantee of future results.**

Manager Performance as of March 31, 2025

Meridian Township Employee Pension

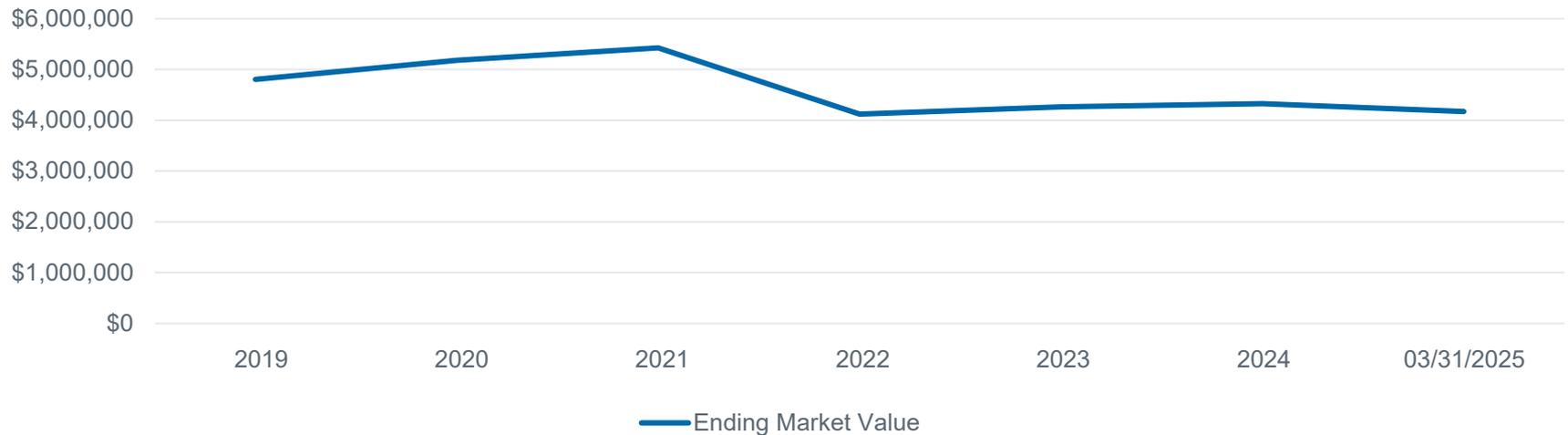


Description	QTR	YTD	1 Year	3 Year	5 Year
Fidelity Real Estate Etf Etf	2.62%	2.62%	9.03%	N/A	N/A
FTSE Nareit All Equity REITs Gross	2.75%	2.75%	9.24%	N/A	N/A
iShares US Infrastructure Etf	-2.06%	-2.06%	N/A	N/A	N/A
S&P Global Infrastructure Index Net	4.41%	4.41%	N/A	N/A	N/A
Fixed Income	2.50%	2.50%	5.51%	2.59%	1.99%
US Fixed Income	2.50%	2.50%	5.51%	2.59%	N/A
US Taxable	2.50%	2.50%	5.51%	2.59%	N/A
Core	2.43%	2.43%	5.71%	1.92%	N/A
Baird Intermediate Bd Fd Instl Fd #70	2.43%	2.43%	5.78%	3.14%	N/A
Bloomberg Govt/Credit Intermediate	2.42%	2.42%	5.65%	2.18%	N/A
Core Plus	2.87%	2.87%	5.53%	N/A	N/A
Dodge & Cox Income Fund Fd #147	2.87%	2.87%	5.53%	N/A	N/A
Bloomberg US Aggregate	2.78%	2.78%	4.88%	N/A	N/A
Cash & Equivalents	1.06%	1.06%	4.85%	4.16%	2.69%
Cash & Equivalents	1.06%	1.06%	4.85%	4.16%	2.69%
Cash	1.06%	1.06%	4.85%	4.16%	2.69%

Performance is shown gross of advisory fees and separately managed account (SMA) fees. The effect of advisory fees on the portfolio could be material. If these fees were reflected, returns would be lower. Indices are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that an account may incur. **Past performance is not guarantee of future results.**

Historical Cash Flow as of March 31, 2025

Meridian Township Employee Pension



Description	2019	2020	2021	2022	2023	2024	03/31/2025
Beginning Market Value	\$4,155,185	\$4,802,375	\$5,182,268	\$5,427,354	\$4,120,598	\$4,261,839	\$4,326,534
Net Contributions & Withdrawals	-\$267,322	-\$243,285	-\$367,887	-\$481,218	-\$470,666	-\$467,025	-\$116,541
Income Received	\$94,693	\$70,648	\$81,090	\$91,421	\$103,753	\$115,503	\$17,106
Gain/Loss	\$819,820	\$552,529	\$531,883	-\$916,959	\$508,154	\$416,216	-\$52,774
Ending Market Value	\$4,802,375	\$5,182,268	\$5,427,354	\$4,120,598	\$4,261,839	\$4,326,534	\$4,174,325
Total Portfolio (Gross)	22.73%	14.20%	12.32%	-15.63%	15.87%	13.08%	-0.88%
Benchmark Return	20.64%	12.60%	14.74%	-14.09%	16.50%	12.57%	-0.69%

*See Appendix – Policy Benchmark Composition, for description of Benchmarks.

Total Portfolio (Gross) shows performance gross of advisory fees and separately managed account (SMA) fees. Performance reflects reinvestment of dividends, interest and capital gain distributions and rebalancing. Indices are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that an account may incur. **Past performance is not guarantee of future results.**



Thank you for your business.

How can we better serve your needs?

Appendix

Portfolio Holdings as of March 31, 2025

Meridian Township Employee Pension

Description	Ticker	Units	Market Value	Percent
Total Equity			2,724,179	65.3
US Equity			2,049,286	49.1
US Large Cap Core			1,743,076	41.8
Fidelity 500 Index Fd-Ai	FXAIX	8,162	1,595,415	38.2
Wisdomtree U.S. Quality Divi Etf	DGRW	1,849	147,661	3.5
US Mid Cap Core			117,984	2.8
iShares Core S&P Mid-Cap Etf	IJH	2,022	117,984	2.8
US Small Cap Core			188,226	4.5
iShares Core S&P Small Cap Etf	IJR	1,800	188,226	4.5
International Equity			520,566	12.5
Intl. Developed			520,566	12.5
Intl. Large Cap Core			520,566	12.5
Federated Hermes International Equity Fund	PEIRX	18,084	405,266	9.7
iShares Msci Intl Quality Factor Etf	IQLT	2,905	115,299	2.8
Equity Other			154,327	3.7
Fidelity Real Estate Etf Etf	FREL	3,472	95,376	2.3
iShares US Infrastructure Etf	IFRA	1,308	58,952	1.4
Total Fixed Income			1,408,729	33.7
US Fixed Income			1,408,729	33.7
Core			1,182,020	28.3
Baird Intermediate Bd Fd Instl Fd #70	BIMIX	113,438	1,182,020	28.3
Core Plus			226,709	5.4
Dodge & Cox Income Fund Fd #147	DODIX	17,993	226,709	5.4

Portfolio Holdings as of March 31, 2025

Meridian Township Employee Pension



Description	Ticker	Units	Market Value	Percent
Total Cash & Equivalents			41,417	1.0
Cash & Equivalents			41,417	1.0
Cash	-	41,417	41,417	1.0
Total Portfolio			4,174,325	100.0

Benchmark Composition as of March 31, 2025

Meridian Township Employee Pension

Total Portfolio

Policy Benchmark

Policy Total Portfolio Index - April 2023	%
S&P 500	40.00
MSCI EAFE Net	13.00
Russell 2000	8.00
FTSE Nareit All Equity REITs Gross	4.00
Bloomberg Govt/Credit Intermediate	32.00
Bloomberg US Treasury Bill 1-3 M	3.00

Policy Total Portfolio Index - December 2013	%
S&P 500	40.00
MSCI EAFE Net	13.00
Russell 2000	8.00
FTSE Nareit All Equity REITs Gross	4.00
Bloomberg Govt/Credit Intermediate	32.00
Bloomberg US Treasury Bill 1-3 M	3.00

Policy Total Portfolio Index - November 2010	%
Bloomberg Govt/Credit Intermediate	35.00
MSCI EAFE Net	14.00
Russell 2000	11.00
Bloomberg US Treasury Bill 1-3 M	10.00
S&P 500	30.00

Indices are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that an account may incur. Indices performance results do not represent, and are not necessarily indicative of, the results that may be achieved in accounts investing in the corresponding investment strategy; actual account returns may vary significantly.

For definitions of Indices/Benchmarks used in this presentation, please refer to www.pnc.com/indexdefinition

Benchmark Composition as of March 31, 2025

Meridian Township Employee Pension



Policy Total Portfolio Index - July 1994	%
Bloomberg US Aggregate	35.00
MSCI EAFE Net	14.00
Russell 2000	11.00
Bloomberg US Treasury Bill 1-3 M	10.00
S&P 500	30.00

Indices are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that an account may incur. Indices performance results do not represent, and are not necessarily indicative of, the results that may be achieved in accounts investing in the corresponding investment strategy; actual account returns may vary significantly.

For definitions of Indices/Benchmarks used in this presentation, please refer to www.pnc.com/indexdefinition

<p style="text-align: center;">ONLINE ACCOUNT ACCESS</p> <ul style="list-style-type: none"> • Access from any device • Customized access for each user • Dedicated technical support • Messaging capabilities • Document retrieval for statements, investment policy statement, fee invoices and more. 	<p style="text-align: center;">REPORTING CAPABILITIES</p> <ul style="list-style-type: none"> • Customizable reporting of key account information • Benefit payment inquiry access and reporting • Paperless statements for authorized persons
<p style="text-align: center;">OPERATIONAL CAPABILITIES</p> <ul style="list-style-type: none"> • Ability to initiate and manage cash processing • Ability to initiate and manage benefit payments • Ability to process mutual fund, equity, and fixed income trades 	<p style="text-align: center;">SECURITY FEATURES</p> <ul style="list-style-type: none"> • Unique login credential with strict password parameters • Each login requires additional one-time passcode be sent to email, phone (voice) or text • Customizable approval flows for your organization
<p style="text-align: center;">DECEMBER 2022 SYSTEM ENHANCEMENTS</p>	
<ul style="list-style-type: none"> • Requirement for One-Time Passcode (OTP) with each login to assist with preventing fraud. Expanded options to receive the OTP include voice call or text message. • Allowing a current authorized person to utilize I-Hub to request a new authorized signer be added. The new Authorized Signers form is executed within I-Hub using e-Sign. • Messaging enhancement to include the Investment Advisor in addition to the existing options of the Institutional Trust Officer and I-Hub Support. 	

If you have questions, or would like an I-Hub demo, please reach out to your Institutional Trust Officer or PNC contact.

I-Hub Support at 1-877-636-9703 or pnc.i-hub.support@pnc.com

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Charter Township of Meridian Employee Pension Plan

Annual Actuarial Valuation
December 31, 2024





April 17, 2025

Board of Trustees
Charter Township of Meridian
Employee Pension Plan
Okemos, Michigan

Dear Board Members:

The results of the December 31, 2024 annual actuarial valuation of the Charter Township of Meridian Employee Pension Plan are presented in this report. This report was prepared at the request of the Board and is intended for use by the Pension Plan and those designated or approved by the Board. This report may be provided to parties other than the Plan only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation was to measure the Plan's funding progress and to determine the employer contribution for the fiscal year beginning January 1, 2025. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different. Information required by Statement No. 68 of the Governmental Accounting Standards Board (GASB) is provided in a separate report.

The computed contributions in this report were determined using the actuarial assumptions and methods adopted by the Board. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. Additional information about the actuarial assumptions is included in Section C of this report. The combined effect of the assumptions, excluding prescribed assumptions or methods set by law, is expected to have no significant bias (i.e., not significantly optimistic or pessimistic).

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed. This report includes risk metrics on pages A-9 and A-10, but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

The findings in this report are based on data and other information through December 31, 2024. The valuation was based upon information furnished by the Township, concerning Pension Plan benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Township.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

We have assessed that the contribution rate calculated under the current funding policy is a reasonable Actuarially Determined Employer Contribution (ADEC) and it is consistent with the plan accumulating adequate assets to make benefit payments when due.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Charter Township of Meridian Employee Pension Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Brad Lee Armstrong, Jeffrey T. Tebeau and Kevin T. Noelke are Members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and report with the Board of Trustees and to answer any questions pertaining to the valuation.

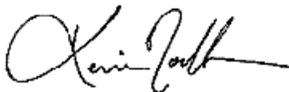
Respectfully submitted,
Gabriel, Roeder, Smith & Company



Brad Lee Armstrong, ASA, EA, MAAA, FCA



Jeffrey T. Tebeau, FSA, EA, MAAA, FCA



Kevin T. Noelke, ASA, MAAA, FCA

BLA/JTT/KTN:rl



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SECTION A

VALUATION RESULTS AND COMMENTS

Funding Objective

The funding objective of the Pension Plan is to establish and receive contributions, expressed as level dollar amounts, which will remain approximately level from year to year and will not have to be increased for future generations of citizens.

The annual actuarial valuation measures the relationship between Pension Plan obligations and assets and determines the contribution rates for the ensuing year. The Pension Plan is supported by member contributions, Township contributions, and investment income from Pension Plan assets.

The flow of activity constituting the valuation may be summarized as follows:

- A. Covered person information about:
 - Each person receiving pension payments
 - Each former participant with a vested pension not yet payable
 - Each former participant who is not vested and has not claimed a member contribution refund
 - Each active participant
- B. Financial Information (assets, revenues, and expenditures)
- C. Benefit Provisions (Plan Ordinance)
- D. Actuarial Assumptions about the volume and incidence of future activities
- E. Actuarial Cost Method (individual entry age) for allocating benefit costs to time periods
- F. Mathematical linking of the person information, financial information, benefit provisions, experience estimates and actuarial cost method
- G. Determination of:
 - Contribution rate for the plan year
 - Current funded condition

Items A, B and C are furnished by the pension office and constitute the current knowns about the Pension Plan. Since the majority of activities will occur in the future, estimates must be made about these future activities (Item D).

Computed contributions for the fiscal year beginning January 1, 2025 are shown on page A-2.

Computed Contribution

<u>Contributions for</u>	FY Beginning January 1, 2025	FY Beginning January 1, 2024
Employer Normal Cost	\$ -	\$ -
<u>UAAL Payment *</u>	<u>5,750</u>	<u>-</u>
Total Employer Contribution	\$ 5,750	\$ -

Funded Status

<u>Actuarial Accrued Liabilities for</u>	December 31, 2024	December 31, 2023
Active Members	\$ -	\$ -
Vested Deferred Members	560,535	542,167
<u>Retirees and Beneficiaries</u>	<u>3,822,759</u>	<u>3,966,109</u>
Total	\$ 4,383,294	\$ 4,508,276
Funding Value of Assets	\$ 4,330,463	\$ 4,526,538
Unfunded Actuarial Accrued Liability	<u>52,831</u>	<u>(18,262)</u>
<i>Funded Ratio</i>	<i>98.79%</i>	<i>100.41%</i>
	December 31, 2024	December 31, 2023
<i>Rate of Return on Market Value of Assets</i>	<i>12.57%</i>	<i>15.12%</i>
<i>Rate of Return on Funding Value of Assets</i>	<i>5.74%</i>	<i>5.81%</i>

* Amortized as level dollar contributions using a 6.00% interest rate and layered amortization as shown on page A-3.



Sources and Financing of Unfunded Actuarial Accrued Liability (UAAL)

Date Established	Initial Amount	Financing Period	Current Amount*	Remaining Financing Period 12/31/2024	Amortization Factor	Contribution #
Initial Unfunded						
12/31/2016	\$ 1,447,937	10 yrs.	\$ (21,924)	2 yrs.	1.887593	\$ (11,615)
Changes from experience deviations						
12/31/2023	\$ 29,754	5 yrs.	\$ 24,476	4 yrs.	3.567545	\$ 6,861
12/31/2024	72,189	5 yrs.	72,189	5 yrs.	4.336894	16,645
Changes from actuarial assumptions, methods and/or asset valuation method						
12/31/2023	\$ (26,635)	5 yrs.	\$ (21,910)	4 yrs.	3.567545	\$ (6,141)
Totals			\$ 52,831	\$ 5,750		

* This amount is projected to the applicable fiscal year with interest less the intervening contributions expected from the prior valuation.

Not less than zero.

The Board adopted a layered amortization policy beginning with the December 31, 2023 valuation. The initial unfunded amount was established in the December 31, 2016 valuation and has 2 years of payments remaining as of December 31, 2024. All future unexpected changes in the UAAL will flow into separate 5-year bases.

The Initial Unfunded layer will expire after the 2025 actuarial valuation. Since this layer is currently negative (i.e., a credit towards the unfunded amount) the contribution for the UAAL is expected to increase for the 2026 valuation.



Actuarial Balance Sheet

Present Resources and Expected Future Resources

	December 31, 2024	
A. Actuarial Value of Plan assets		
1. Net assets from Plan financial statements	\$	4,326,609
2. Market value adjustment		<u>3,854</u>
3. Funding Value of Assets	\$	4,330,463
B. Actuarial Present Value of Expected Future Contributions		
1. For Normal Costs		-
2. For Unfunded Actuarial Accrued Liability		<u>52,831</u>
3. Total	\$	52,831
C. Actuarial Present Value of Expected Future Member Contributions	\$	<u>-</u>
D. Total Present and Expected Future Resources	\$	<u><u>4,383,294</u></u>

Actuarial Present Value of Expected Future Benefit Payments

	December 31, 2024	
A. To Retirants and Beneficiaries	\$	3,822,759
B. To Vested Terminated Members		560,535
C. To Present Active Members		
1. Allocated to service rendered prior to valuation date		-
2. Allocated to service likely to be rendered after valuation date		<u>-</u>
3. Total	\$	-
D. Total Actuarial Present Value of Expected Future Benefit Payments	\$	<u><u>4,383,294</u></u>



Experience Gain (Loss) Year Ended December 31, 2024

(1) UAAL at start of year	\$	(18,262)
(2) Total Normal Cost from last valuation		-
(3) Contributions		-
(4) Interest on above at 6.00%		(1,096)
(5) Expected UAAL before changes		(19,358)
(6) Net effect of assumption, cost method and/or Asset Valuation Method changes		-
(7) Effect of benefit changes		-
(8) Expected UAAL after changes		(19,358)
(9) Actual UAAL		52,831
(10) Gain (loss): (7) - (8)	\$	(72,189)
(11) As % of AAL at start of year (\$4,508,276)		(1.60)%
<i>Gain (loss) on investments</i>		<i>(0.25%)</i>
<i>Gain (loss) on liabilities</i>		<i>(1.35%)</i>

UAAL represents Unfunded Actuarial Accrued Liability.
AAL represents Actuarial Accrued Liability.

Comments

Plan Experience: Actuarial experience was less favorable than expected for the fiscal year ending December 31, 2024 as indicated by the experience loss shown on page A-5 of \$72,189. The unfavorable experience was due to recognized investment losses of \$11,216 and lower retiree mortality (less release of liability than expected). The Township's computed contribution for FY 2025 increased from \$0 in the prior valuation to \$5,750 and the funded status decreased from 100.4% to 98.8% since the prior valuation. If the Market Value of Assets were used, the Township contribution would have been \$6,639 and the funded status would have been 98.7%.

There is an unrecognized loss in the asset valuation method scheduled to be recognized for the 2025 valuation, which will increase the recommended contribution and decrease the funding status, unless offset by future experience gains. The converse is true for the unrecognized gain scheduled for 2026.

Plan Amendments: There were no plan changes reported for this valuation.

Assumption/Method Changes: There were no changes in actuarial assumptions or methods for this valuation.

Public Act 202 of 2017: The Michigan State Treasurer has established uniform actuarial assumptions as required by Public Act 202 (PA 202) of 2017 for use with the annual Form 5572 (Retirement System Annual Report). The current assumptions meet the requirements of Public Act 202 for fiscal year 2024 reporting. An excerpt of this form with some of the required information is provided in the December 31, 2024, GASB Statement No. 68 report. Please note that the Treasurer reviews and updates the uniform assumptions each year.

Looking Forward: Plan experience and contribution requirements are expected to fluctuate from year to year. The expectation inherent in the funding of a Pension Plan is that year-to-year fluctuations will tend to cancel over periods of 5 to 10 years and result in realizing long-term assumptions. There are still expected to be mortality and investment experience gains and losses and expenses even though there are no active participants.

Since this plan is closed with only retirees remaining, mortality experience will likely become the driver of plan experience going forward. If retirees live longer than expected, additional employer contributions may be required in the future. In addition, the Board should be aware that Pension Plan cash flows (i.e., plan contributions minus benefit payments) will become increasingly negative as the plan continues to pay benefits over the remaining lifetime of the retirees. Therefore, even if the Pension Plan remains at or around 100% funded for the foreseeable future, additional employer contributions may be needed if retirees live longer than expected.

Conclusion: It is the actuary's opinion that the required contribution rates determined by this actuarial valuation are sufficient to meet the Pension Plan's funding objective for another year, presuming timely receipt of required contributions.



Low-Default-Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the “right” liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of the Pension Plan is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of the Pension Plan is set equal to the **expected return** on the Plan’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For the Employee Pension Plan, the investment return assumption is 6.00%.

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the December 2024 Treasury Yield Curve Spot Rates (monthly average). The 1-, 5-, 10- and 30-year rates follow: 4.29%, 4.29%, 4.37% and 4.64%. This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

The difference between the two measures (Valuation and LDROM) is one illustration of the savings the sponsor anticipates by taking on risk in a diversified portfolio:

Valuation Accrued Liabilities	LDROM
\$4,383,294	\$4,834,056



Other Observations

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Contributions and Funded Status

Given the Plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the Pension Plan earning 6.00% on the Market Value of Assets), it is expected that:

1. The employer normal cost is sufficient to cover the cost of benefits accruing each year;
2. The Unfunded Actuarial Accrued Liabilities (UAAL) will be fully amortized; and
3. The funded status of the Pension Plan will gradually increase to a 100% funded ratio.

The computed contribution shown on page A-2 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the Actuarial Accrued Liability (AAL) and the Funding Value of Assets (FVA). Unless otherwise indicated, with regard to any funded status measurements presented in this report:

1. The measurement is inappropriate for assessing the sufficiency of Pension Plan assets to cover the estimated cost of settling the Pension Plan's benefit obligations; for example, transferring the liability to an unrelated third party in a market value type transaction.
2. The measurement is dependent upon the Actuarial Cost Method which, in combination with the Pension Plan's amortization policy, affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. Even though the funded status is over 100%, the Pension Plan would still require future normal cost contributions (i.e., contributions to cover the cost of active membership accruing an additional year of service credit).
3. The measurement would produce different results if the Market Value of Assets were used instead of the Funding Value of Assets.

Risk Measures — Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the System's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution Risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.



Risk Measures

(\$ in Thousands)

Actuarial Valuation Date (12/31)	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Unfunded AAL (UAAL) (2) - (1)	(4) Payroll	(5) Funded Ratio (1) / (2)	(6) Retiree Liabilities (RetLiab)	(7) RetLiab / AAL (6)/(2)	(8) AAL / Payroll (2) / (4)	(9) Non-Invest. Cash Flow (NICF)	(10) NICF / Assets (9)/(1)	(11) Market Rate of Return	(12) 5-Year Trailing Average
2020*	\$ 4,731	\$ 5,138	\$ 408	\$ 113	92.1%	\$ 3,816	74.3%	4,566.5%	\$ (225)	(4.8)%	12.9%	9.4%
2021	4,872	4,929	57	-	98.8%	4,426	89.8%	N/A	(332)	(6.8)%	11.5%	10.9%
2022	4,714	4,693	(20)	-	100.4%	4,181	89.1%	N/A	(477)	(10.1)%	(16.0)%	4.1%
2023*	4,527	4,508	(18)	-	100.4%	3,966	88.0%	N/A	(448)	(9.9)%	15.1%	8.2%
2024	4,330	4,383	53	-	98.8%	3,823	87.2%	N/A	(443)	(10.2)%	12.6%	6.5%

* Revised actuarial assumptions, methods and/or asset valuation method.

(5). The funded ratio is the most widely known measure of a plan's financial strength, but the trend in the funded ratio is much more important than the absolute ratio. The funded ratio should trend to 100%. As it approaches 100%, it is important to re-evaluate the level of investment risk in the portfolio and potentially to re-evaluate the assumed rate of return.

(6) and (7). The ratio of retiree liabilities to total accrued liabilities gives an indication of the maturity of the system. As the ratio increases, cash flow needs increase, and the liquidity needs of the portfolio change. For a closed system, this ratio will hit 100% when the last active participant retires.

(8). The ratio of unfunded liability to payroll gives an indication of the plan sponsor's ability to actually pay off the unfunded liability. A ratio above approximately 300% or 400% may indicate difficulty in discharging the unfunded liability within a reasonable time frame.

(9) and (10). Positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means benefits and expenses exceed contributions, and existing funds may be used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

(11) and (12). Investment return is probably the largest single risk that most systems face. The year-by-year return and the five-year geometric average both give an indication of the reasonableness of the system's assumed return. Of course, past performance is not a guarantee of future results. Market rate shown is based on an actuarial estimation method and will differ modestly from figures reported by the investment consultant.



SECTION B

SUMMARY OF BENEFIT PROVISIONS EVALUATED AND VALUATION DATA SUBMITTED BY THE PENSION PLAN

Summary of Benefit Provisions Evaluated (December 31, 2024)

Normal Retirement

Eligibility – Age 65.

Annual Amount – Retirement benefits varied by department prior to May 1, 2000. For an active participant who retires on or after May 1, 2000: 1.5% of Final Average Compensation (FAC) times credited service.

Effective January 1, 2009: 1.8% of Final Average Compensation (FAC) times credited service for an active, non-union employee hired prior to February 1, 1980.

Type of Final Average Compensation – Highest 5 consecutive years out of the last 10 years immediately preceding retirement.

Normal Form of Payment – 10-year certain and life annuity. Joint and Survivor options (50, 66 $\frac{2}{3}$, 75, or 100%) are also available.



Asset Information Submitted for Valuation

Reported Assets

Cash & Equivalents	\$ 153,800
Accrued Interest and Dividends	649
Equities	2,797,810
Mutual Funds	1,374,350
Payables	-

Total Market Value	\$ 4,326,609
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Revenues and Expenditures

Market Value - December 31, 2023	\$4,261,753
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Revenues	
Member contributions	0
Employer contributions	0
Investment income	531,907
Expenditures	
Benefit payments	443,157
Refunds of member contributions	0
Administrative expenses	23,894
Investment expenses	0

Market Value - December 31, 2024	\$4,326,609
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Development of Funding Value of Assets

Valuation Date December 31:	2023	2024	2025	2026
A. Funding Value Beginning of Year	\$4,713,569	\$4,526,538		
B. Market Value End of Year	4,261,753	4,326,609		
C. Market Value Beginning of Year	4,120,408	4,261,753		
D. Non-Investment Net Cash Flow (EE+ER cont.)-(Ret. Ben.+Refunds)	(447,665)	(443,157)		
E. Investment Return				
E1. Market Total: B-C-D	589,010	508,013		
E2. Assumed Rate	6.00%	6.00%		
E3. Amount for Immediate Recognition	269,384	258,298		
E4. Amount for Phased-In Recognition	319,626	249,715		
F. Phased-In Recognition of Investment Return				
F1. Current Year: $E4 \div 3$ ($E4 \div 4$ prior to 2023)	106,542	83,238		
F2. First Prior Year	(276,873)	106,542	\$ 83,238	
F3. Second Prior Year	75,877	(276,873)	106,542	\$ 83,239
F4. Third Prior Year	85,704	75,877	(276,873)	0
F5. Total Recognized Investment Gain	(8,750)	(11,216)	(87,093)	83,239
G. Funding Value of Assets End of Year	4,526,538	4,330,463		
H. Difference Between Market & Funding Values	(264,785)	(3,854)	83,239	0
I. Recognized Rate of Return - Funding Value	5.81%	5.74%		
J. Recognized Rate of Return - Market Value	15.12%	12.57%		
K. Ratio of Funding Value to Market Value	106.21%	100.09%		

The Funding Value of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed three-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will be greater than market value. The Funding Value of Assets is unbiased with respect to Market Value. At any time, it may be either greater or less than Market Value. If actual and assumed rates of retirement income are exactly equal for three consecutive years, the Funding Value will become equal to Market Value.



Retirees and Beneficiaries Comparative Schedule as of December 31, 2024

Valuation Date December 31	No.	Annual Pensions	Average Annual Pension	Discounted Value of Pensions	
				Total	Average
2015 *	44	\$ 424,173	\$ 9,640	\$ 4,216,945	\$ 95,840
2016	45	419,668	9,326	4,115,020	91,445
2017	44	412,149	9,367	4,021,702	91,402
2018	46	423,134	9,199	4,030,006	87,609
2019	48	434,252	9,047	4,057,922	84,540
2020 *	44	416,296	9,461	3,815,848	86,724
2021	42	476,460	11,344	4,425,829	105,377
2022	41	457,024	11,147	4,180,678	101,968
2023 *	39	443,323	11,367	3,966,109	101,695
2024	38	442,326	11,640	3,822,759	100,599

* After changes in actuarial assumptions, methods or asset valuation method.

Retiree and Beneficiary Data December 31, 2024 Tabulated by Type of Pensions Being Paid

Type of Pensions Being Paid	No.	Pensions
Straight Life Pension	14	\$ 191,643
5 or 10-Year Certain and Life	3	15,045
100% Joint and Survivor	8	86,325
66 ⅔% Joint and Survivor	2	40,111
50% Joint and Survivor	5	64,139
Survivor Beneficiaries	6	45,063
Total Pensions Being Paid	38	\$ 442,326



Retired Participants and Survivors Data December 31, 2024 Tabulated by Attained Age and Type of Retirement

Attained Age	Clerical		Director		Supervisory & Non-Supervisory		Non-Contractual		Public Works		Police Officers Labor Council*		Police Non-Supervisory		Fire		Totals			
	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions		
66														1	\$ 12,775	1	\$ 12,775			
67	1	\$ 808														1	808			
70							1	\$ 2,098						1	\$ 4,528	2	6,626			
71			1	\$ 88,566	1	\$ 1,857							1	9,309	3	99,732				
72										1	\$ 12,121				1	12,121				
73						2	4,772								2	4,772				
74							2	16,219	1	\$ 2,908					3	19,127				
75										1	8,904				1	8,904				
76										1	19,368				1	19,368				
77						1	21,232								1	21,232				
78						1	4,830		1	1,719					1	20,779	3	27,328		
79								1	9,276			1	16,145		1	20,340	3	45,761		
81						1	8,837								2	32,983	3	41,820		
82											1	7,276			1	11,911	2	19,187		
83								1	8,321				1	14,598		2	22,919			
84						1	18,210									1	18,210			
85															1	10,826	1	10,826		
86						1	14,324									1	14,324			
87								1	10,822							1	10,822			
89						1	1,513									1	1,513			
90						1	820	1	5,989			1	8,473			3	15,282			
95											1	8,869				1	8,869			
Totals	1	\$ 808	1	\$ 88,566	10	\$ 76,395	7	\$ 52,725	2	\$ 4,627	7	\$ 81,156	3	\$ 28,435	7	\$ 109,614	38	\$ 442,326		

* Includes Police Chief.



Deferred Vested Data December 31, 2024 Tabulated by Attained Age and Type of Retirement

Attained Age	Clerical		Supervisory & Non-Supervisory		Non-Contractual		Police Officers Labor Council		Police Non-Supervisory		Totals	
	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions
63	1	\$ 198			1	\$ 751					2	\$ 949
64	1	1,730									1	1,730
66	1	2,892									1	2,892
67			1	\$ 4,895							1	4,895
68							1	\$ 2,752			1	2,752
69	1	85									1	85
73									1	\$ 271	1	271
74					1	7,331					1	7,331
75	1	942									1	942
77									1	5,277	1	5,277
81									1	1,550	1	1,550
83			1	1,042							1	1,042
86					1	1,205					1	1,205
Totals	5	\$ 5,847	2	\$ 5,937	3	\$ 9,287	1	\$ 2,752	3	\$ 7,098	14	\$ 30,921



Active Members in Valuation Comparative Schedule

Valuation Date	No.	Valuation		Averages		
		Payroll	Pay	% Incr.	Age	Service
12/31/2015	1	\$ 99,161	\$ 99,161	2.2 %	62.6 yrs.	35.0 yrs.
12/31/2016	1	100,153	100,153	1.0	63.6	36.0
12/31/2017	1	102,156	102,156	2.0	64.6	37.0
12/31/2018	1	104,560	104,560	2.4	65.6	38.0
12/31/2019	1	106,283	106,283	1.6	66.6	39.0
12/31/2020	1	112,521	112,521	5.9	67.6	40.0
12/31/2021	0	0	N/A	N/A	N/A	N/A
12/31/2022	0	0	N/A	N/A	N/A	N/A
12/31/2023	0	0	N/A	N/A	N/A	N/A
12/31/2024	0	0	N/A	N/A	N/A	N/A



SECTION C

ACTUARIAL COST METHODS, ACTUARIAL ASSUMPTIONS AND DEFINITIONS OF TECHNICAL TERMS

Actuarial Cost Methods

Age and Service and Casualty Benefits. Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an individual **entry-age actuarial cost method** having the following characteristics:

- (i) The annual normal costs for each individual active member (if any), payable from the date of employment to the date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement; and
- (ii) Each annual normal cost (if any) is a constant percentage of the member's year-by-year projected covered pay.

Financing of Unfunded Actuarial Accrued Liability. The Board adopted a layered amortization policy beginning with the December 31, 2023 valuation. The initial unfunded amount was established in the December 31, 2016 valuation and has 2 years of payments remaining as of December 31, 2024. All future unexpected changes in the UAAL will flow into separate 5-year bases. The UAAL payment reflects payments expected to be made between the valuation date and the fiscal year for which the contributions in this report have been calculated.

Funding Value of Assets. The valuation assets used for funding purposes are derived as follows: prior year valuation assets are increased by contribution and expected investment income and reduced by refunds, benefit payments and expenses. To this amount is added one-third of the difference between expected and actual investment income for each of the previous three years.

Actuarial Assumptions are established by the Board after consulting with the actuary. Non-economic assumptions are generally selected on the basis of the Plan's historical activity, modified for expected future differences. The reasonableness of the economic assumptions is based upon capital market expectations provided by various investment consultants and other sources such as the Social Security Trustees report. All actuarial assumptions are based on future expectations, not market measures.

Actuarial Assumptions Used for the Valuation

The contribution requirements and actuarial present values of a Pension Plan are calculated by applying actuarial assumptions to the benefit provisions and people information of the Plan, using the actuarial methods described on page C-1. All actuarial assumptions in this report are estimates of future experience.

The principal areas of risk which require actuarial assumptions about future experiences are:

- (i) Long-term rates of investment return to be generated by the assets of the Plan;
- (ii) Patterns of pay increases to members;
- (iii) Rates of mortality among members, retirees and beneficiaries;
- (iv) Rates of withdrawal of active members (not applicable in this report);
- (v) Rates of disability among active members (not applicable in this report); and
- (vi) The age patterns of actual retirements.

The monetary effect of each assumption is calculated for as long as a present covered person survives -- a period of time which can be as long as a century.

Actual experience of the Plan will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and considers all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time-to-time one or more of the assumptions are modified to reflect experience trends (but not random or temporary year-to-year fluctuations).



Actuarial Assumptions Used for the Valuation

Investment Return Rate (net of expenses). 6.00% a year, compounded annually. Although not explicitly used in the valuation, the economic assumptions are consistent with a price inflation assumption of 2.50% per year.

This assumption is used to equate the value of payments due at different points in time. Approximate investment returns, for the purpose of comparisons with assumed returns, have been as follows:

	Year Ended December 31					Compound 5-Yr Avg
	2024	2023	2022	2021	2020	
Valuation Assets	5.74%	5.81%	6.89%	10.37%	10.84%	7.91%
Market Value of Assets	12.57%	15.12%	(15.99)%	11.51%	12.90%	6.51%

These rates of return should not be used for measurement of an investment advisor's performance or for comparisons with other plans.

Wage Inflation. 4.50% per year.

The Mortality Table used was the fully generational PUB-2010 Amount-Weighted General Mortality Tables for males and females with MP-2019 mortality improvement scales. Sample healthy values follow:

PUB-2010 Fully Generational Mortality Tables					
Sample Ages in 2024	Value of \$1 Monthly for Life		Future Life Expectancy (Years)		
	Men	Women	Men	Women	
	50	\$172.45	\$177.88	35.90	38.84
55	163.27	169.94	31.00	33.85	
60	152.05	159.88	26.26	28.97	
65	138.50	147.23	21.73	24.20	
70	122.28	131.73	17.42	19.62	
75	103.69	113.49	13.45	15.34	
80	83.71	93.22	9.93	11.48	

This assumption is used to measure the probability of each benefit payment being made after retirement. The margin for future mortality improvement is included in the MP-2019 mortality improvement scales.

Rates of Separation from Active Membership. None.



Actuarial Assumptions Used for the Valuation

Rates of Disability. None.

Pay Increases. Pay Increases are assumed to occur at the beginning of the year.

Decrement Timing. Decrements of all types are assumed to occur mid-year.

Eligibility Testing. Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Benefit Service. Exact fractional service is used to determine the amount of benefit payable.

Normal Form of Benefit. The assumed normal form of benefit is a 10-year certain with straight life form. No additional cost resulting from participants electing to receive benefits in a form other than the normal form was assumed.

Liability Adjustments. Missed benefit payments for deferred vested members who are eligible but have not yet commenced payments were added to the accrued liabilities (due to the Plan making retro payments).

Incidence of Contributions. Contributions are assumed to be received halfway through the fiscal year based upon the dollar contribution shown in this report.

Future Active Membership. The plan is closed to new hires and is therefore assumed to have no new entrants.



Definitions of Technical Terms

Accrued Service. Service credited under the Plan that was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between the actuarial present value of future benefit payments and the actuarial present value of future normal costs. Also referred to as "accrued liability" or "past service liability."

Actuarial Assumptions. Estimates of expected future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of the underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future benefit payments" between future normal costs and actuarial accrued liabilities. Sometimes referred to as the "actuarial valuation cost method."

Actuarial Equivalent. A single amount or series of amounts of equal actuarial present value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

Actuarial Present Value. The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment. Also referred to as "present value."

Amortization. Paying off an interest-discounted amount with periodic payments of interest and principal - as opposed to paying it off with lump sum payment.

Experience Gain (Loss). The difference between actual actuarial costs and assumed actuarial costs -- during the period between two valuation dates.

Normal Cost. The actuarial cost allocated to the current year by the actuarial cost method. Sometimes referred to as "current service cost."

Pension Benefit Obligation. A standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date.

Unfunded Actuarial Accrued Liability. The difference between actuarial accrued liability and the actuarial value of Plan assets. Sometimes referred to as "unfunded past service liability," "unfunded accrued liability" or "unfunded supplemental present value."



SECTION D

ADDITIONAL DISCLOSURES

GASB Statements No. 67 and No. 68 are the accounting standards which replaced GASB Statements No. 25 and No. 27. GASB Statement No. 67 is first effective for fiscal year 2014 and GASB Statement No. 68 is first effective for fiscal year 2015. A separate GASB Statements No. 68 report will be issued outside of this report. This section contains historical GASB Statements No. 25 and No. 27 reporting information for prior fiscal years and illustrative information for fiscal year 2015 and after.

Supplementary Information

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	December 31, 2024
Actuarial cost method	Individual Entry-Age
Amortization method	Level dollar, closed
Remaining amortization period	5 years (Layered)
Asset valuation method	3-year smoothed market
Actuarial assumption:	
Investment rate of return	6.00%
Projected salary increases	N/A
Cost-of-living adjustments	none

Membership of the plan consisted of the following at December 31, 2024, the date of the latest actuarial valuation:

Retirees and beneficiaries receiving benefits	38
Terminated plan members entitled to but not yet receiving benefits	14
Active plan members	<u>0</u>
Total	52



Supplementary Information

Schedule of Funding Progress

Actuarial Valuation Date	Funding Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b - a) / c)
December 31, 2015 *	\$3,799,623	\$5,602,120	\$ 1,802,497	67.8 %	\$ 99,161	1,818 %
2016	4,052,441	5,500,378	1,447,937	73.7	100,153	1,446
2017	4,326,129	5,332,550	1,006,421	81.1	102,156	985
2018	4,366,971	5,254,450	887,479	83.1	104,560	849
2019	4,482,005	5,169,705	687,700	86.7	106,283	647
2020 *	4,730,695	5,138,314	407,619	92.1	112,521	362
2021	4,871,767	4,928,517	56,750	98.8	0	N/A
2022	4,713,569	4,693,398	(20,171)	100.4	0	N/A
2023 *	4,526,538	4,508,276	(18,262)	100.4	0	N/A
2024	4,330,463	4,383,294	52,831	98.8	0	N/A

* After changes in actuarial assumptions, methods or asset valuation method.

Schedule of Employer Contributions

FY Ended December 31	Computed Dollar Contribution	Actual Annual Contributions	Percent Contributed
2016 *	\$ 430,449	\$ 400,000	93 %
2017	206,057	400,000	194
2018	151,469	300,000	198
2019	146,745	200,000	136
2020	127,718	200,000	157
2021 *	89,043	128,800	145
2022	13,085	-	0
2023	-	-	N/A
2024 *	-	-	N/A
2025	5,750		

* After changes in actuarial assumptions, methods or asset valuation method.

