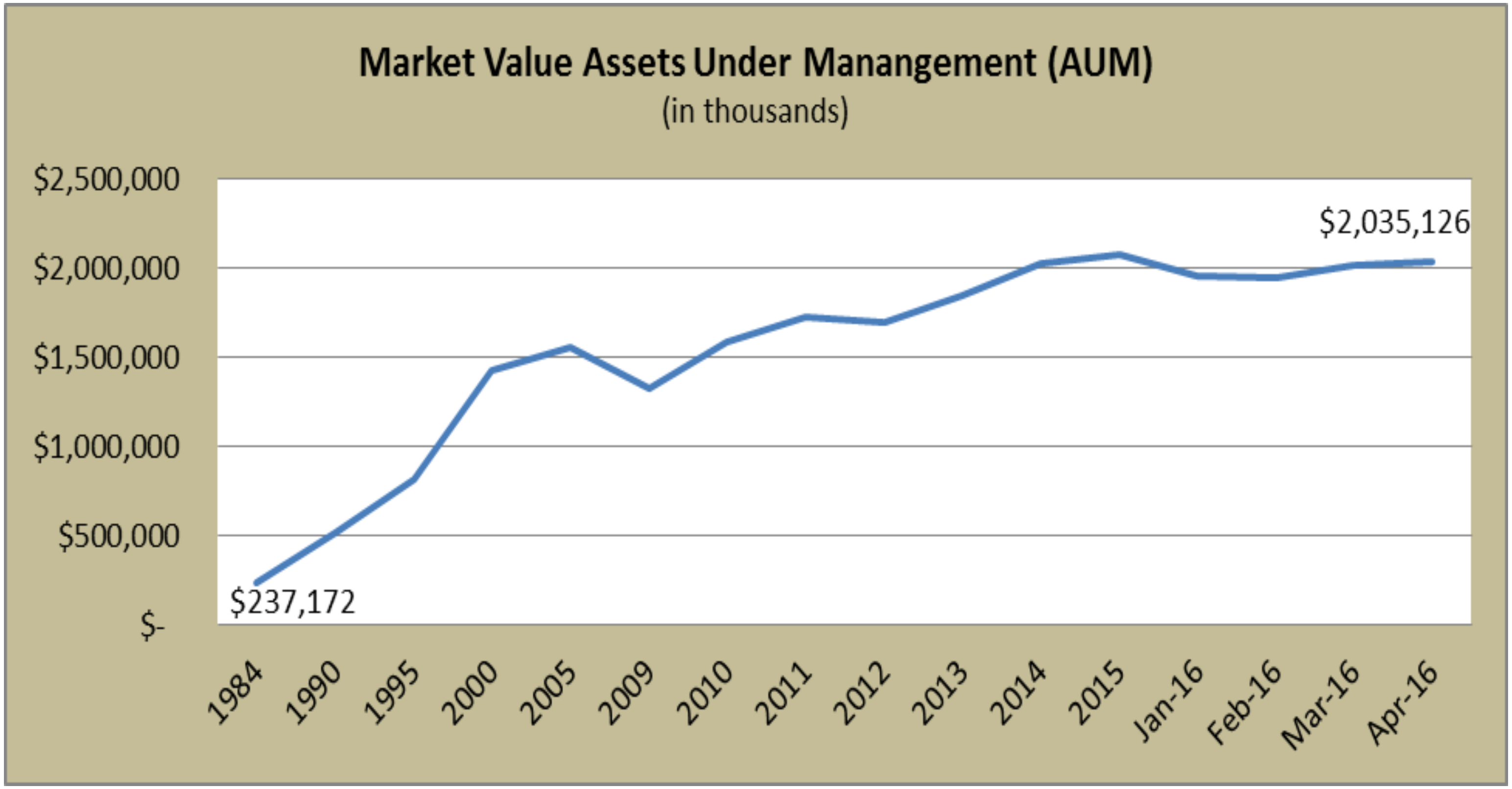
Joint Meeting with Fort Worth City Council

Update: Investment Performance and Strategic Initiatives

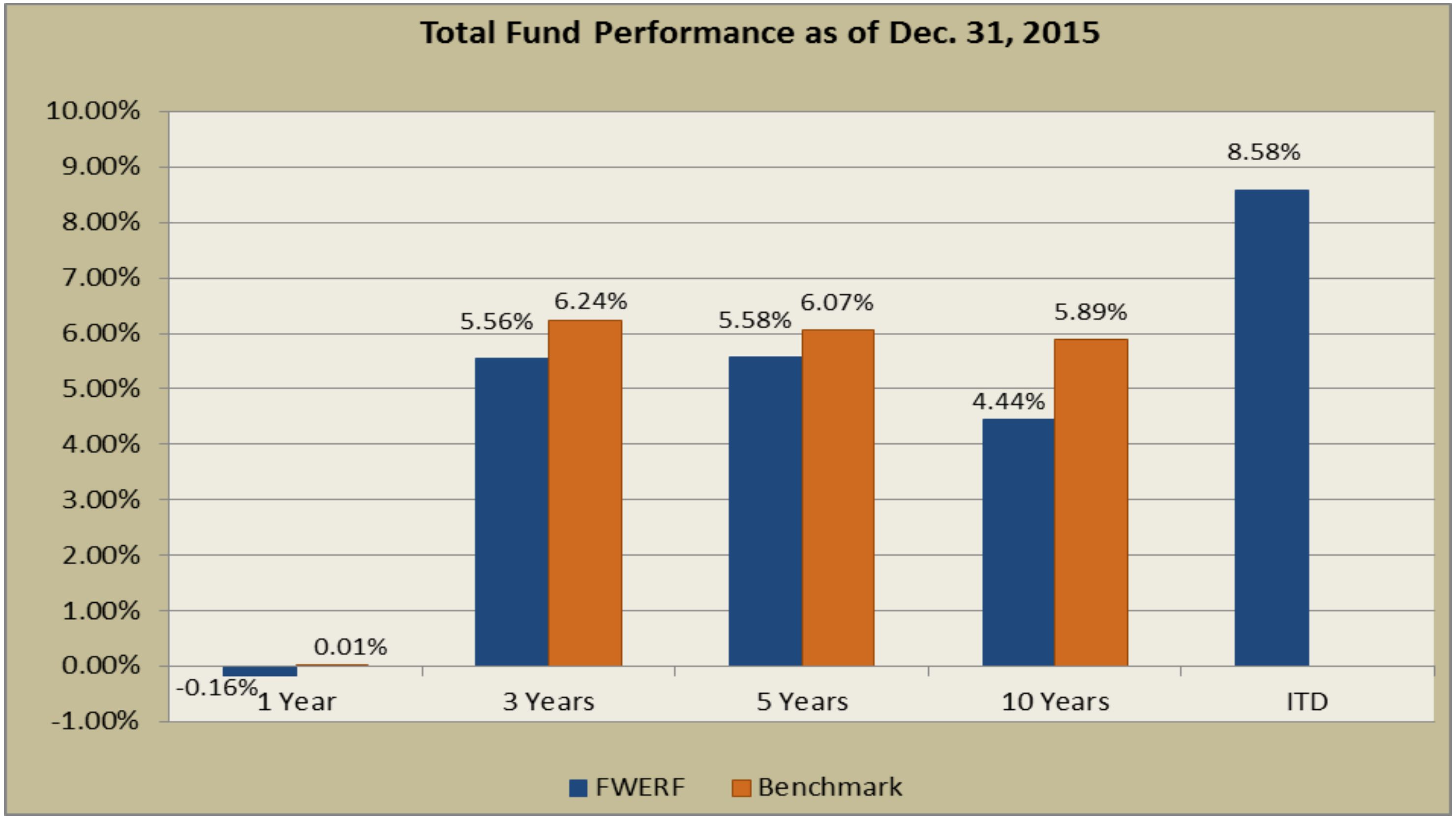
June 21, 2016

Dedicated to providing retirement benefits and exceptional services while sustaining our members' trust

Historic Growth in Asset Value



2015 Investment Performance



Drivers of 2015 Performance

	Total Fund	Domestic Equity	Int'l Equity	Fixed Income	Real Return	Real Estate	ERF Hedge Fund	Private Equity
FWERF Performance	-0.16	-3.60	-3.74	-1.55	-13.43	9.64	-1.96	15.36
Benchmark Performance	0.00	0.48	-5.66	0.43	-13.06	13.71	-0.26	2.75
Difference	*-0.16*	*-4.08*	*1.92*	*-1.98*	*-0.37*	*-4.07*	*-1.70*	*12.61*

- <u>Contributors</u>
  - Real estate allocation (13%), which returned 9.64%
  - Private equity allocation (9%), which returned 15.36%

- <u>Detractors</u>
  - Active management in US equity and fixed income
  - The Fund's allocation to real return asset classes (10%) that experienced large market declines, such as commodities and MLPs

FORT WORTH EMPLOYEES' RETIREMENT FUND

Investment Performance through April 2016

- Total Fund market value of $2.018 billion and a calendar-year-to-date (CYTD) investment return of 2.5%. For the 12 months ending April 30, the Fund has returned -1.4%.
- US equity assets returned 2.44% CYTD and -3.5% for 12 months.
- Non-US equity assets returned 2.8% CYTD and -8.66% for 12 months.
- Bonds returned 4.83% CYTD and 1.66% for 12 months.
- Alternative Assets, including hedge funds, private equity, real estate provided 2.8% CYTD and 13.7% for 12 months.
- Real return strategies such as energy & TIPs returned 6.8% CYTD but were down 10.3% for 12 months ended April 30.
- Total Fund investment performance for Q1 2016 ranked in the top 1/3 of peer public funds.

STRATEGIC INITIATIVES 2015-2016

Asset/Liability Study

Thematic Asset Allocation

Actuarial Experience Study

Asset/Liability Study

- The central purpose of an A/L study is to examine the probable future consequences, over extended periods of time, of applying differing asset allocation strategies to the Fund's investment assets in order to fund the liabilities created by the benefit provisions of the Plan.

Asset/Liability Study

- Based on 12/31/14 actuarial valuation:
  - Demographic & economic assumptions
  - Contribution levels
  - Plan design (benefit levels)
  - Participant data
  - Cost method

- Projections for a 20 year horizon

- Analysis under two methodologies:
  - Deterministic basis
    - All assumptions remain fixed and are assumed to be met over the time horizon
  - Stochastic basis
    - Introduces uncertainty to future economic assumptions: investments and inflation

FORT WORTH EMPLOYEES' RETIREMENT FUND

Asset/Liability Study – Key Conclusions

- “This study suggests that the Plan’s financial health has a meaningful probability of deteriorating further over the next 20 years as current employer contribution rates consistently fall below the rates required to soundly fund the Plan.”

- “The stress of inadequate contributions to date, and throughout the projection period, causes several key indicators of the Plan’s financial health to progressively deteriorate, particularly if the investment returns fall short of the assumed rate of return.”

FORT WORTH EMPLOYEES’ RETIREMENT FUND

Asset/Liability Study – Key Conclusions (continued)

- "Should returns be consistently short of the assumed rate of return, the Board may be faced with difficult decisions regarding the Plan's investment strategy."

- The study suggests caution in increased pursuit of higher expected returns through even more aggressive (and hence more volatile) asset allocation.

- A high expected return and high expected risk approach brings with it the increased risk of large declines in the value of the Plan due to extended periods of poor market conditions.

Asset Allocation

- GFOA Best Practice – Asset Allocation for Defined Benefit Plans:
  - Asset allocation - the practice of dividing an investment portfolio among the major asset categories of equities, fixed income, cash equivalents, and alternatives - is a fundamental principle of sound investing.
  - Diversifying the investment portfolio by including asset categories with investment returns that increase or decrease under different market conditions can protect a DB plan against significant investment losses.
  - The key is to identify investments in segments of each asset category that may perform differently under different market conditions.

FORT WORTH EMPLOYEES' RETIREMENT FUND

Thematic Asset Allocation

- A different way to view the allocation of asset types, with all the same assets and the same attention to prudent investing.

- Using an asset's expected purpose, or role, within the portfolio to define its classification.

- Asset categorization focuses on risk profile and how the asset performs instead of how it has traditionally been labeled.
  - High growth, growth (equity risk)
  - Capital preservation, inflation protection (interest rate & inflation risk)
  - Diversification (a degree of each risk but with less volatility)

- Enhances the Board's ability to view the portfolio strategically long-term based on its risk tolerance, mindful of the Fund's liquidity needs and return objective.

Thematic Asset Allocation

Thematic Asset Class Overview

High Growth

- Private Equity
- Non-Core Real Estate
- Emerging Markets Equity
  - *Distressed Debt*

Growth

- Global Equity
- Emerging Markets Debt (EMD)
- Real Estate Investment Trusts (REITs)
- Long-Biased Long/Short Equity Hedge Funds
  - *Direct Lending (levered)*

Diversification

- Multi-Strategy Hedge Funds
- Equity Market Neutral Hedge Funds
- Managed Futures Hedge Funds

Capital Preservation

- Intermediate Duration Fixed Income
- Non-US Developed Sovereign Fixed Income
- Treasury Inflation Protected Securities (TIPS)

Inflation

- Core Real Estate
- Commodities
- Master Limited Partnerships (MLPs)
  - *Agriculture*
  - *Energy*
  - *Infrastructure*
  - *Timber*
  - *Direct Lending (unlevered)*

Liquidity

- Cash

Asset classes shown in italics represent potential investments.

RVK

2016 Asset Allocation - Thematic

Thematic Asset Class	2015 Allocation %	New Allocation %
High Growth	21	22
Growth	42	44
Diversification	13	10
Inflation	6	8
Capital Preservation	16	15
Liquidity	2	1
Total	100	100
Expected Return	7.10%	7.27%
Risk (Standard Deviation)	11.69%	12.22%
Compound Return	6.47%	6.58%

FORT WORTH EMPLOYEES' RETIREMENT FUND

Actuarial Experience Study

- Recommended changes to actuarial assumptions adopted by Board of Trustees March 2016:
  - Reduce investment rate of return from 8% to 7.75%
  - Reduce inflation rate from 3% to 2.5%
  - Payroll growth reduced from 3.25% to 3%
  - Various demographic assumptions:
    - Updated mortality tables
    - Updated overtime, other & final pay
    - Sick leave loads
    - Duty death
    - Disability
    - Others

Other Strategic Initiatives

- 2015 actuarial valuation completed, using the newly-adopted actuarial assumptions.
- Strategic Planning retreat held in May 2016: update and revise the Strategic Plan for the next four years.
- Fee project: gain a better understanding of how FWERF asset manager and consultant fees paid compares to peers and initiate fee assessment and monitoring protocol.

Key Distinctions in Authoritative Roles Governing FWERF

Mayor & City Council

- Appoint five Fort Worth residents to serve as Board Trustees.
- Designate the City's Chief Financial Officer to serve as a Board Trustee.
- Adopt benefit changes.
- Set the annual pension contribution rate and contribute the employer portion to the pension fund.

Board of Trustees

- Conduct elections for seven Board Trustee positions from active and retired membership.
- Administer pension benefits.
- Develop an Investment Policy, establish asset allocation, and invest portfolio assets.
- Hire a qualified actuary to perform annual actuarial study.
- Adopt actuarial assumptions based on recommendations from the qualified actuary.

FORT WORTH EMPLOYEES' RETIREMENT FUND

Summary

- The low interest rate environment and other external market forces continue to challenge public pension fund investing; investment approaches alone, whether conservative or risky, won't improve funded status.

- According to the A/L study, the Board and City may have to make equally, if not even more-difficult, decisions than they already have about the future cost, funding, and overall framework of the Plan if returns consistently fall short of the assumed rate of return.

- Based on the 2015 actuarial valuation, a 5% of payroll additional contribution to the Fund can alleviate the unfunded accrued liability over a 30 year amortization period.

- The Board of Trustees continues to exercise discipline during periods of low market returns and to explore ways to construct a low-cost, risk-focused portfolio designed to achieve the target return over the long term.

- Coordination of pension-related actions between the Mayor & City Council and the Board of Trustees is critical to ensure long-term sustainability of the pension benefit so that it can provide a financially-secure retirement for current & future City retirees.

Questions?