

# **Pensions & Investments**

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**Presented by:**

**Carroll South, Executive Director**

**Montana Board of Investments**

**September 9, 2005**



# Unified Investment Program

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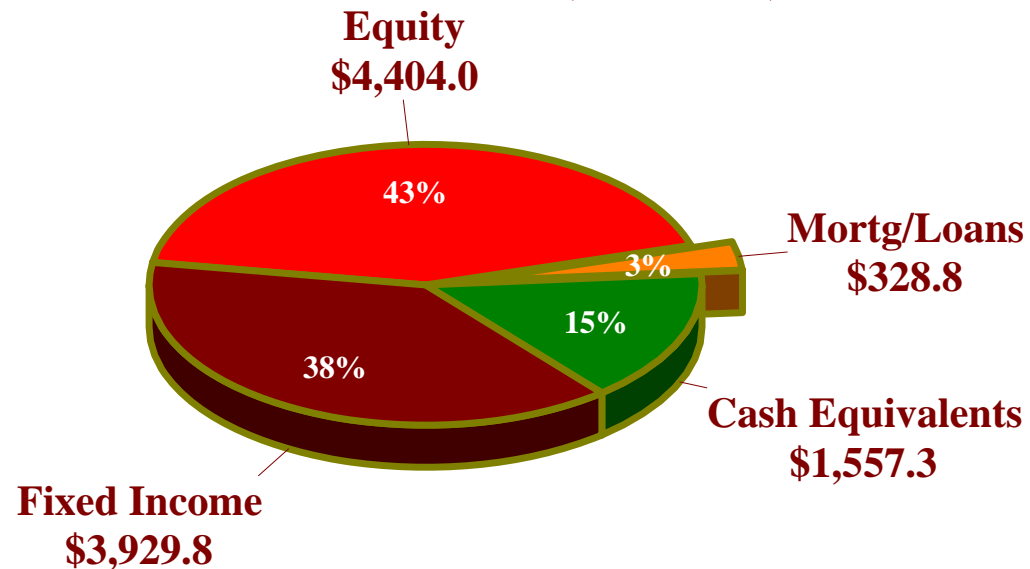
- ❖ **Created by Constitution**
- ❖ **Managed by Board of Investments**
- ❖ **Investments Include:**
  - ❖ **All State Funds (Mandatory)**
  - ❖ **Local Government Funds (Discretionary)**



# Investment Portfolio by Asset

**\$10.20 Billion Fair Value At February 28, 2005**

**(In Millions)**



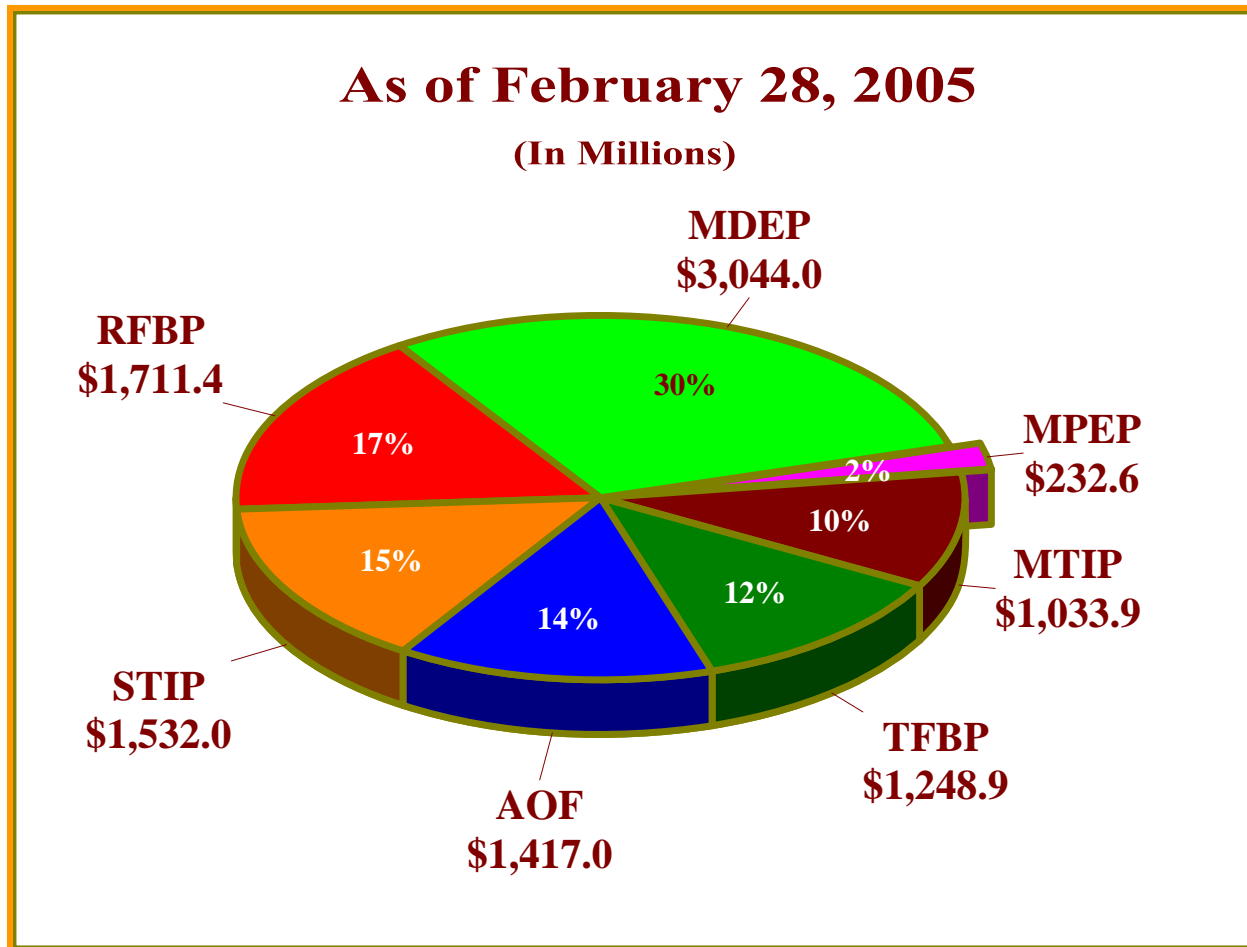


# Equity Accounts

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- ❖ **Pension funds comprise 98% of equities**
  - ❖ **Pension funds invested in:**
    - ❖ **Actively-managed domestic Large-Cap stock**
    - ❖ **Passively-managed domestic Large-Cap stock**
    - ❖ **Passively-managed domestic Mid-Cap stock**
    - ❖ **Actively-managed domestic Small –Cap stock**
    - ❖ **Passive and actively-managed international stock**
    - ❖ **Private equities**
- ❖ **State Fund has \$77.0 million in equities**
  - ❖ **Passively invested in Large-Cap stock**

# Investment Management Process





# Investment Process (Continued)

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## ❖ Short Term Investment Pool (STIP)

- ❖ Created in 1973 to invest state cash while providing liquidity
- ❖ Participants may buy/sell shares with 24-hour notice
- ❖ \$1.00 constant share value
- ❖ 453 participants, including 173 local governments
- ❖ Board staff do not control participant share purchase/sales

## ❖ Domestic Equity Pool (MDEP)

- ❖ Created July 1980 to facilitate investment of domestic equities
- ❖ 17 participants, including all 9 pension funds
- ❖ Board staff control participant share purchase/sales



# Investment Process (Continued)

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## ❖ Retirement Funds Bond Pool (RFBP)

- ❖ Created April 1995 to facilitate investment of pension fund bonds
- ❖ Contains a mix of corporate and government bonds
- ❖ Participation limited to 9 pension funds
- ❖ Board staff control participant share purchase/sales

## ❖ Trust Funds Bond Pool (TFBP)

- ❖ Created October 1995 to facilitate investment of trust fund bonds
- ❖ Contains a mix of corporate and government bonds
- ❖ 24 participants with funds that may be invested long-term
- ❖ Board staff control participant purchase/sales





# Investment Process (Continued)

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## ❖ International Equity Pool (MTIP)

- ❖ Created January 1997 to facilitate foreign stock investments
- ❖ Participation limited to the 9 pension funds
- ❖ Contains passively and actively-managed stock portfolios
- ❖ All portfolios externally managed
- ❖ Board staff control participant purchase/sales

## ❖ Private Equity Pool (MPEP)

- ❖ Created May 2002 to consolidate private equity investments
- ❖ Participation limited to the 9 pension funds
- ❖ Least liquid of all investment pools
- ❖ Board staff control participant purchase/sales



# Investment Process (Continued)

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## ❖ All Other Funds (AOF)

- ❖ Contains all investments not invested in pools
- ❖ Includes State Fund bonds/stocks & Treasurer's Fund bonds
- ❖ Includes 13 other accounts with bond portfolios
- ❖ Includes pension real estate investments
- ❖ Includes pension mortgages & Coal Tax Trust loans

## ❖ Securities Lending

- ❖ Board is authorized to lend securities to increase cash income
- ❖ Domestic securities collateralized at 102%
- ❖ International securities collateralized at 105%
- ❖ Fiscal 2004 income was \$907,508

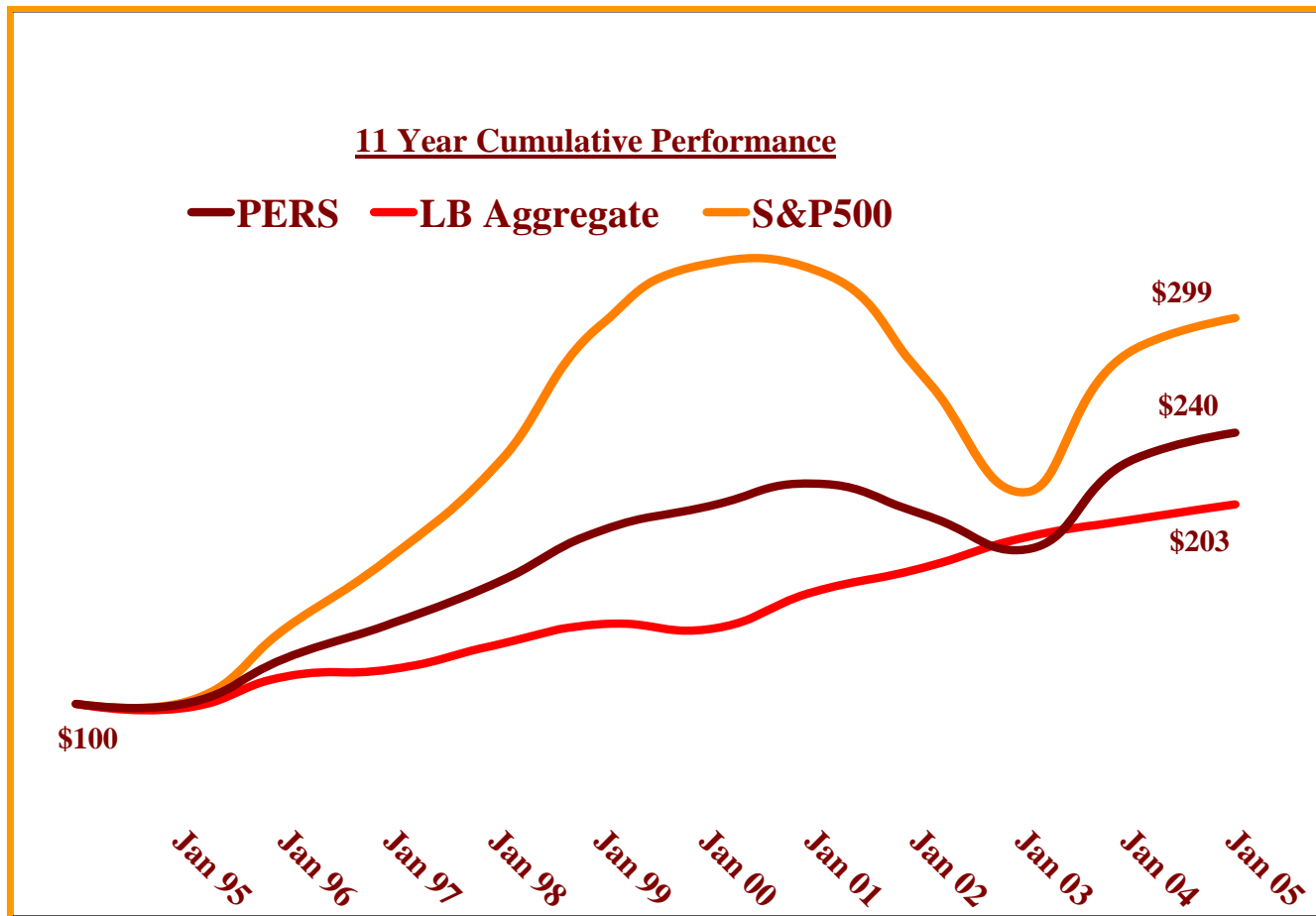


# The Prudent Expert Principle

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- ❖ **The Board's Basic Governing Law**
- ❖ **Diversification is required**
- ❖ **Cannot diversify into assets precluded by law**
- ❖ **Pension funds may invest in any asset class**
- ❖ **Other funds are limited by law**
- ❖ **Diversification occurs at 2 levels**
  - ❖ **Highest level is equity & fixed-income**
  - ❖ **Further diversification occurs within these assets**
    - ❖ **Domestic/International/Public/Private Equity**
    - ❖ **Domestic/International/Public/Private Fixed-Income**

# Diversification (Continued)



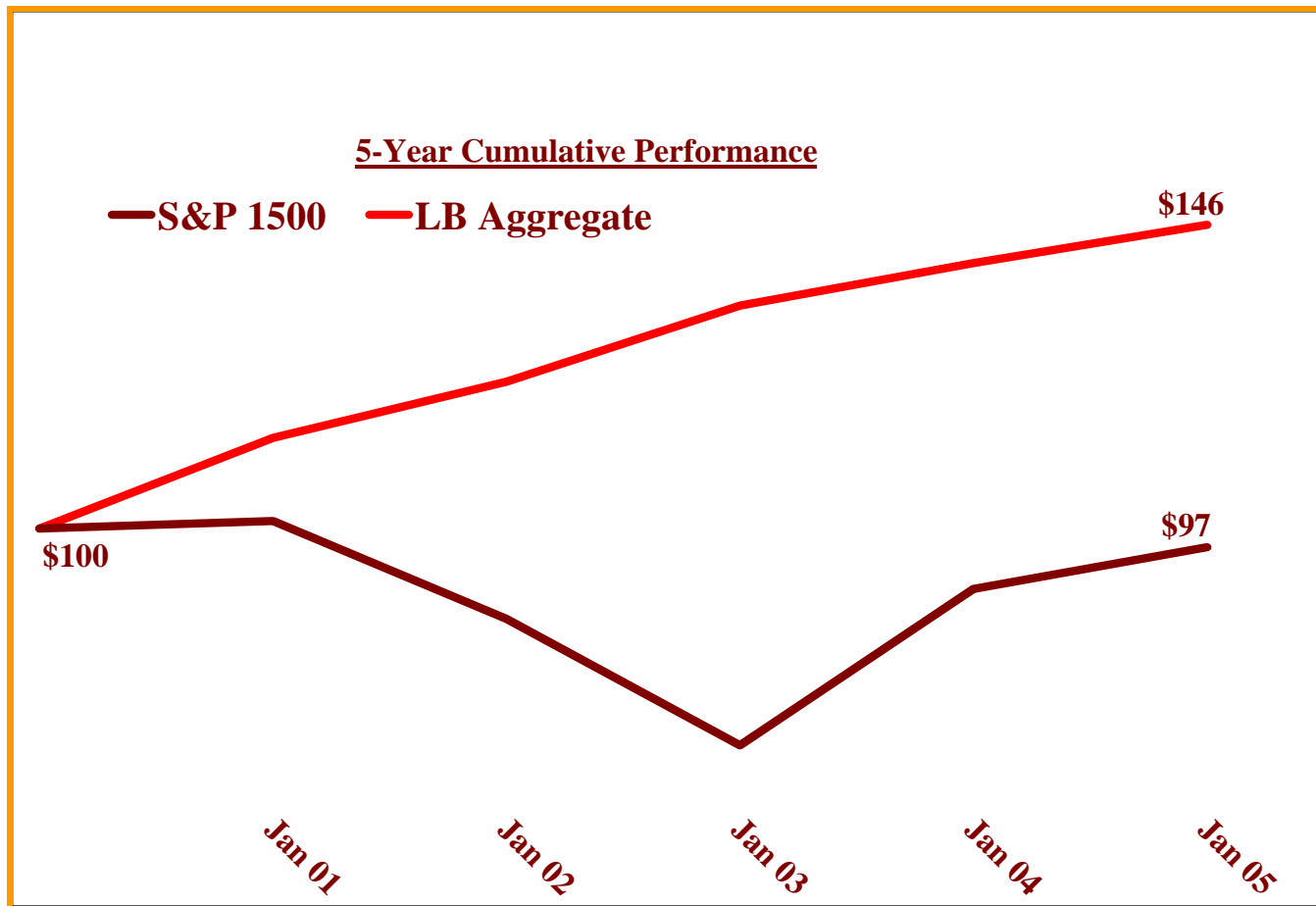
# Diversification (Short/Long Term)

<u>Investment Type</u>	<u>Annualized Return *</u> <u>1926-2004</u>
Long-term Domestic Corporate Bonds	5.90%
Long-term Government Bonds	5.40%
Intermediate-term Government Bonds	5.36%
US Treasury Bills	3.72%
Large-cap Domestic Stock	10.43%
Small-cap Domestic Stock	12.74%

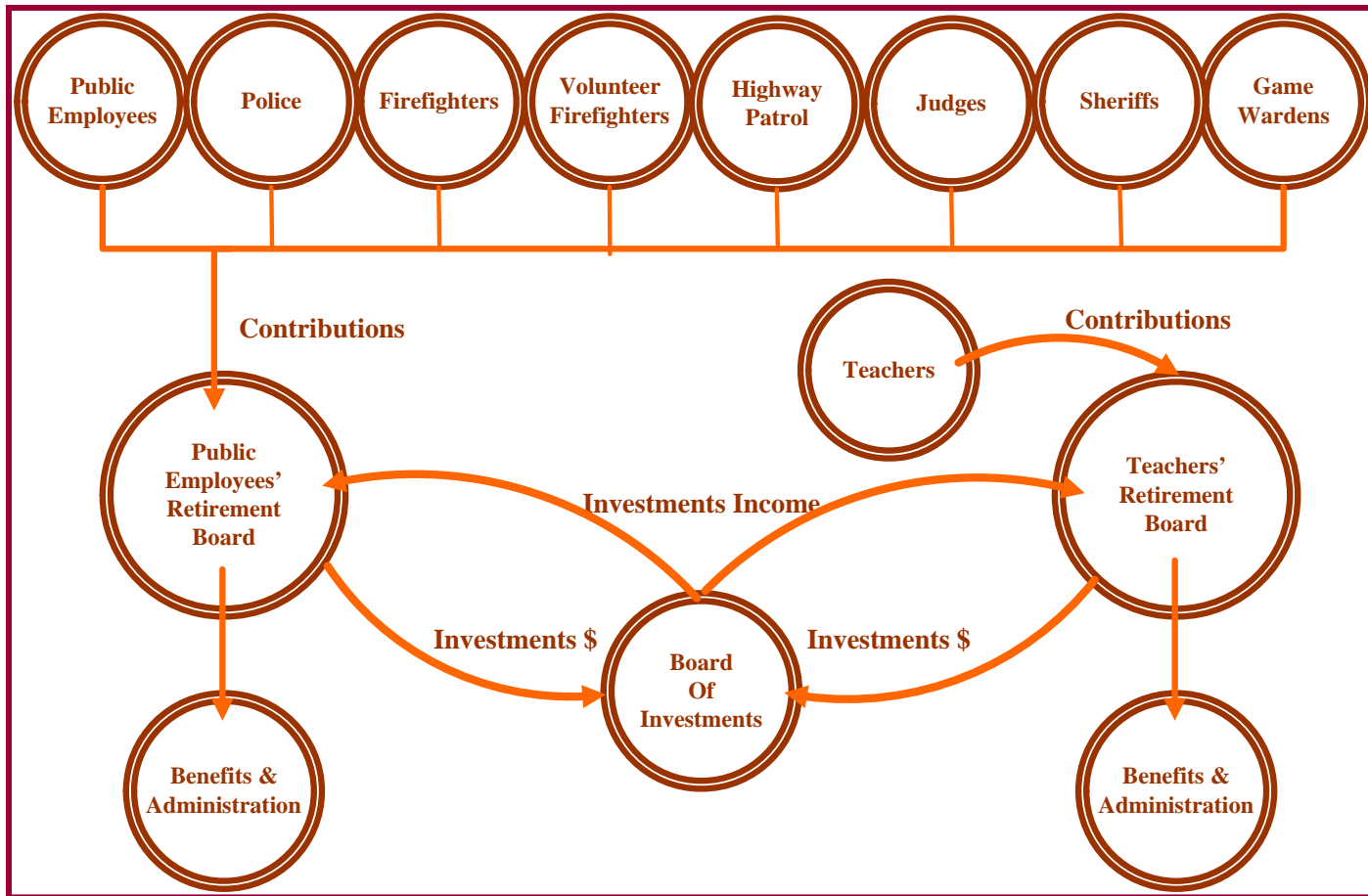
\* Ibbotson data

- ❖ **Over long periods of time:**
  - ❖ **Stocks outperform bonds**
  - ❖ **Small company stocks outperform large company stocks**
  - ❖ **Long-term bonds outperform short-term bonds**
- ❖ **During shorter time periods this is not always true**

# Diversification (Short/Long Term)



# Pension System Governance





# Montana Pension Systems

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- ❖ **Funding statuses based on assumptions**
- ❖ **Investment return assumptions are:**
  - ❖ **The most volatile of all assumptions**
  - ❖ **Likely to be inaccurate during short periods**
  - ❖ **Small assumption variances = large \$ impact**
  - ❖ **Actual returns are driven by capital markets**





# Investment Return Assumptions

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- ❖ Pension assets = \$6.5 billion
- ❖ Assumed 8% annual return on assets
- ❖ Actual 7% annual return on assets =
  - ❖ \$65.0 million investment loss
- ❖ Actual 4% annual return on assets =
  - ❖ \$260.0 million investment loss
- ❖ Actuary addresses volatility by “smoothing”

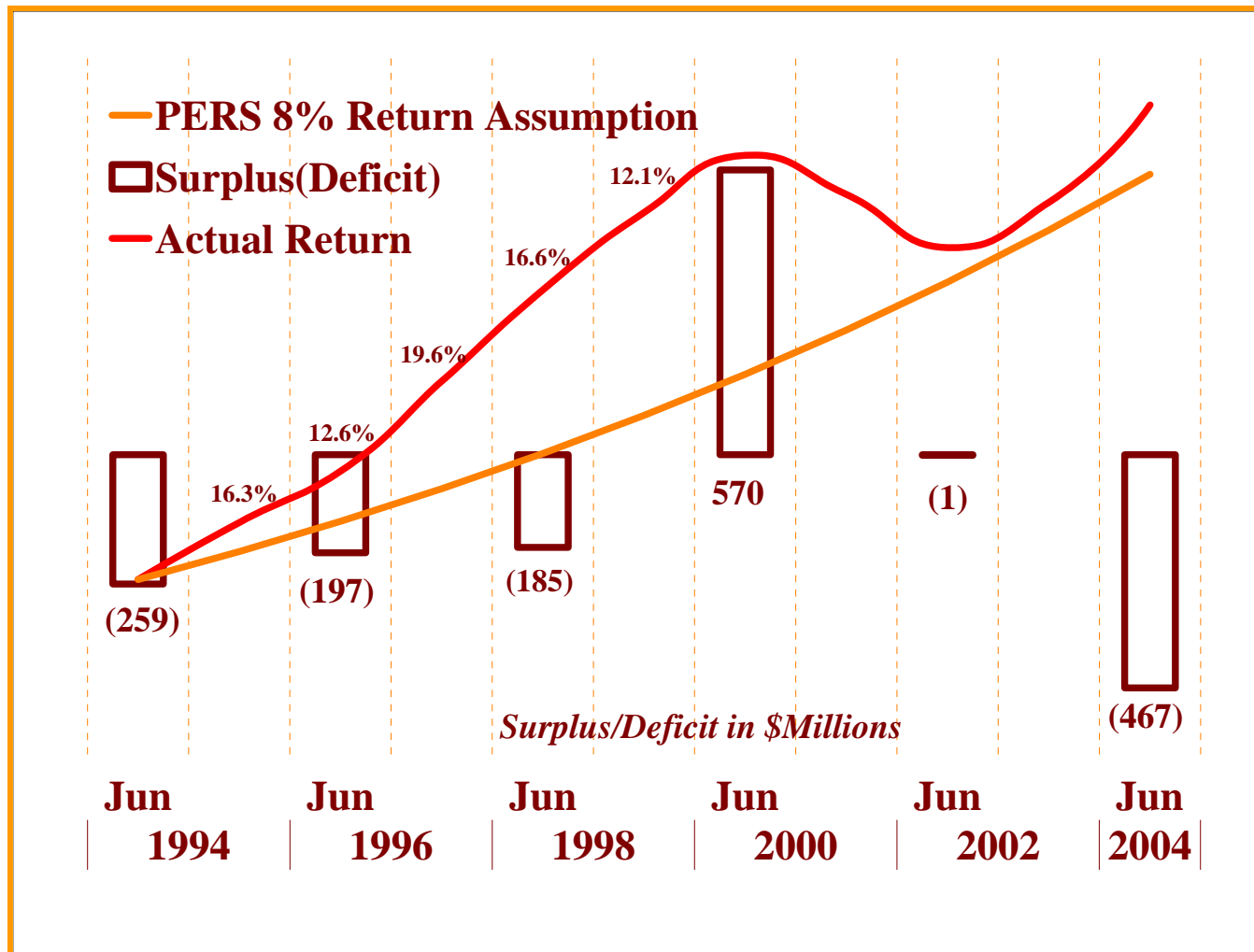


# Return Assumptions (Continued)

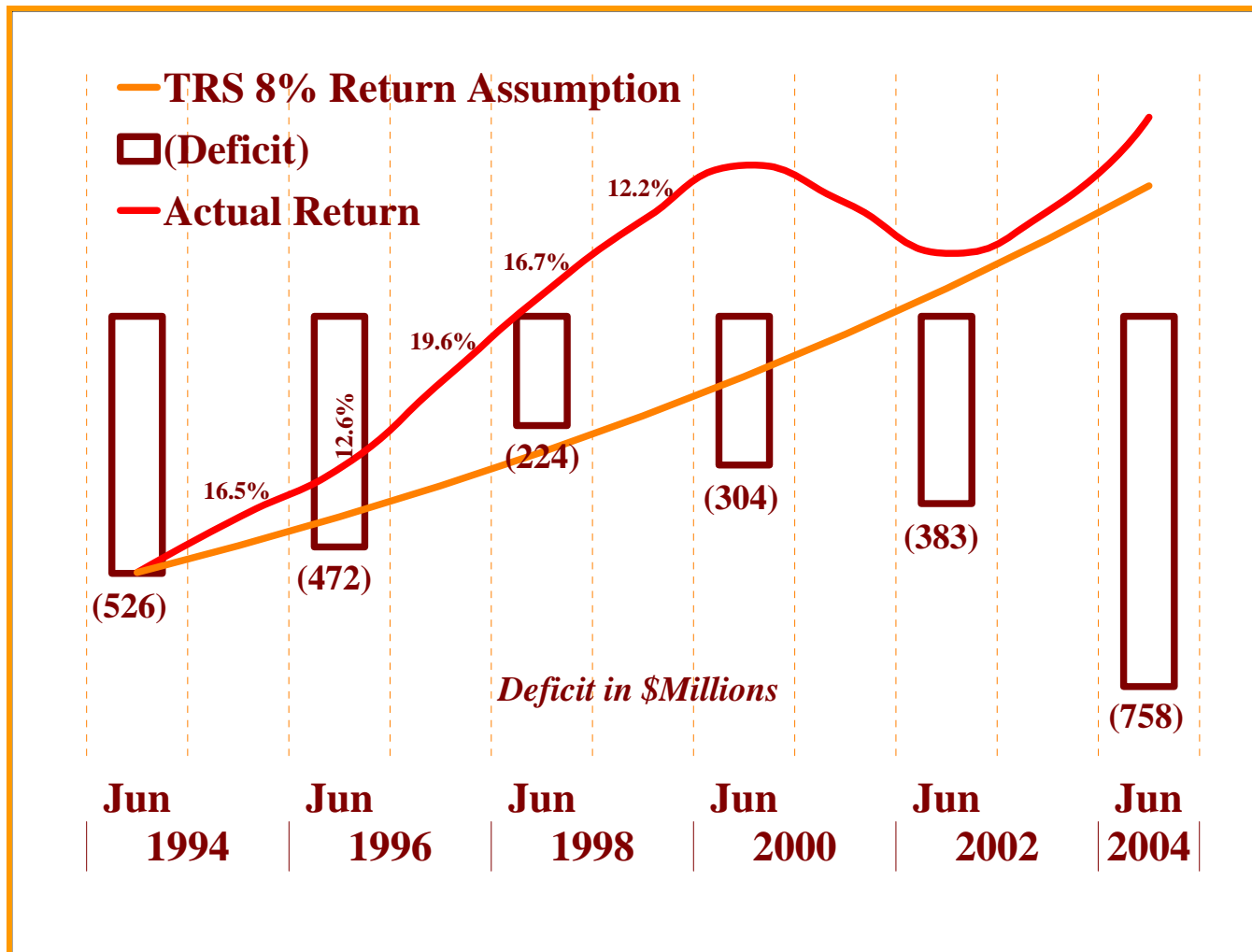
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- ❖ **Actuarial pension surpluses are not:**
  - ❖ **Cash in the bank**
  - ❖ **Insured by the federal government**
- ❖ **Surpluses are based on long-term assumptions**
- ❖ **Due to investment return volatility**
  - ❖ **Surpluses can disappear quickly**
  - ❖ **Surpluses can turn into deficits**

# Return Assumptions (Continued)



# Return Assumptions (Continued)



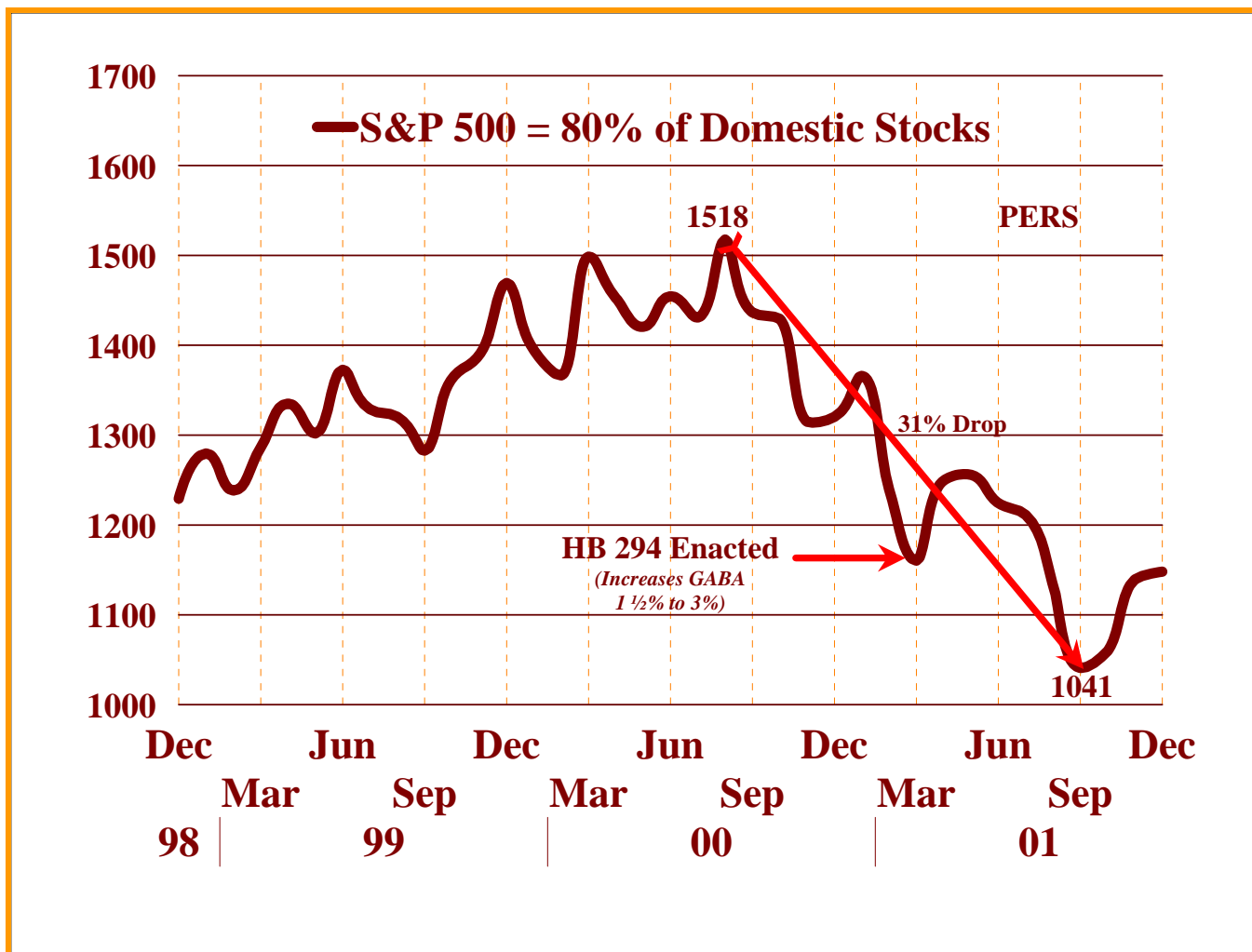


# The Perfect Storm

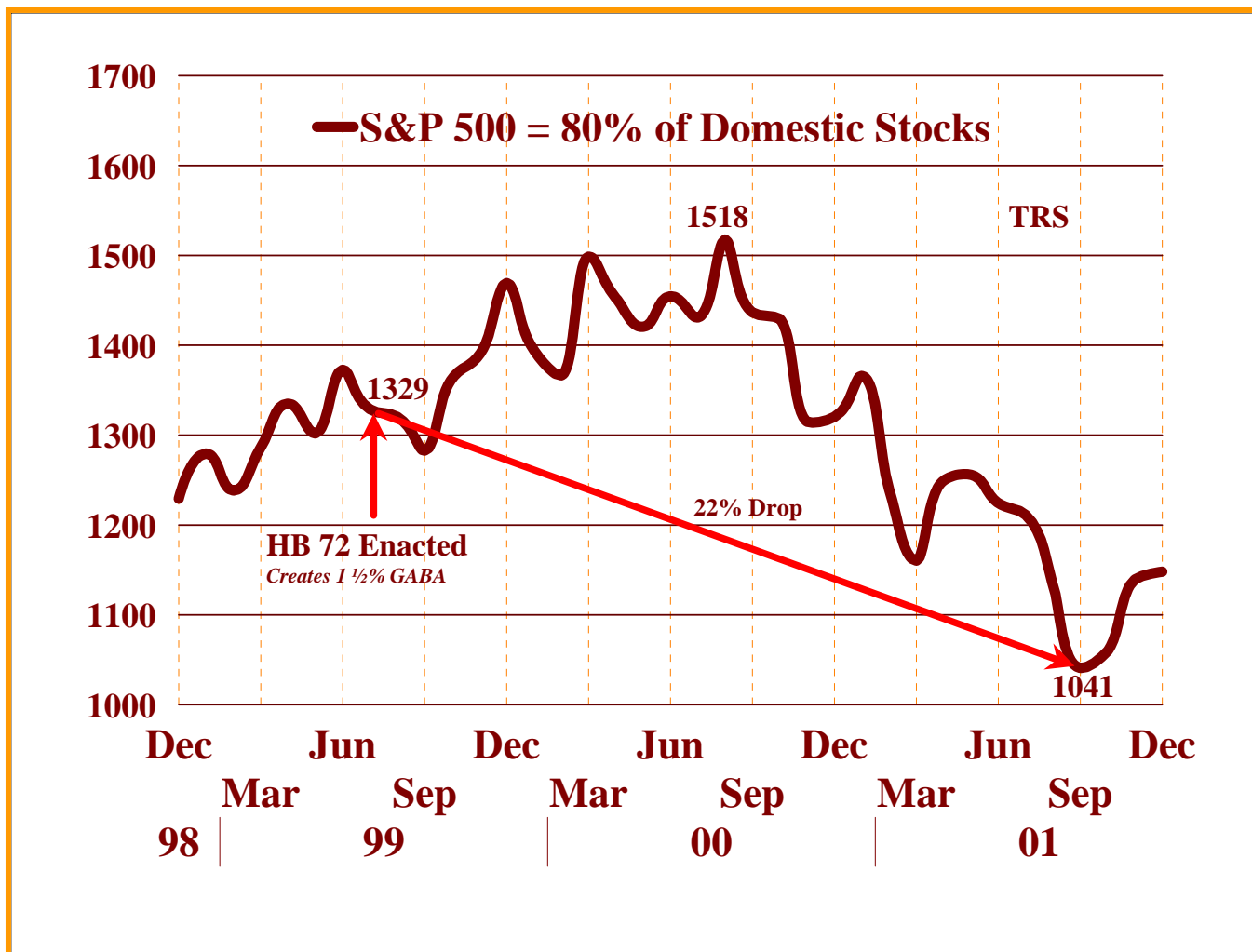
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- ❖ **Legislature increases benefits**
- ❖ **Benefits cannot be decreased**
- ❖ **Capital markets decrease asset bases**
- ❖ **Asset bases cannot be increased**
- ❖ **Markets are beyond legislative control**
- ❖ **Markets are unpredictable and volatile**
- ❖ **Investment returns cannot “fix” the problem**

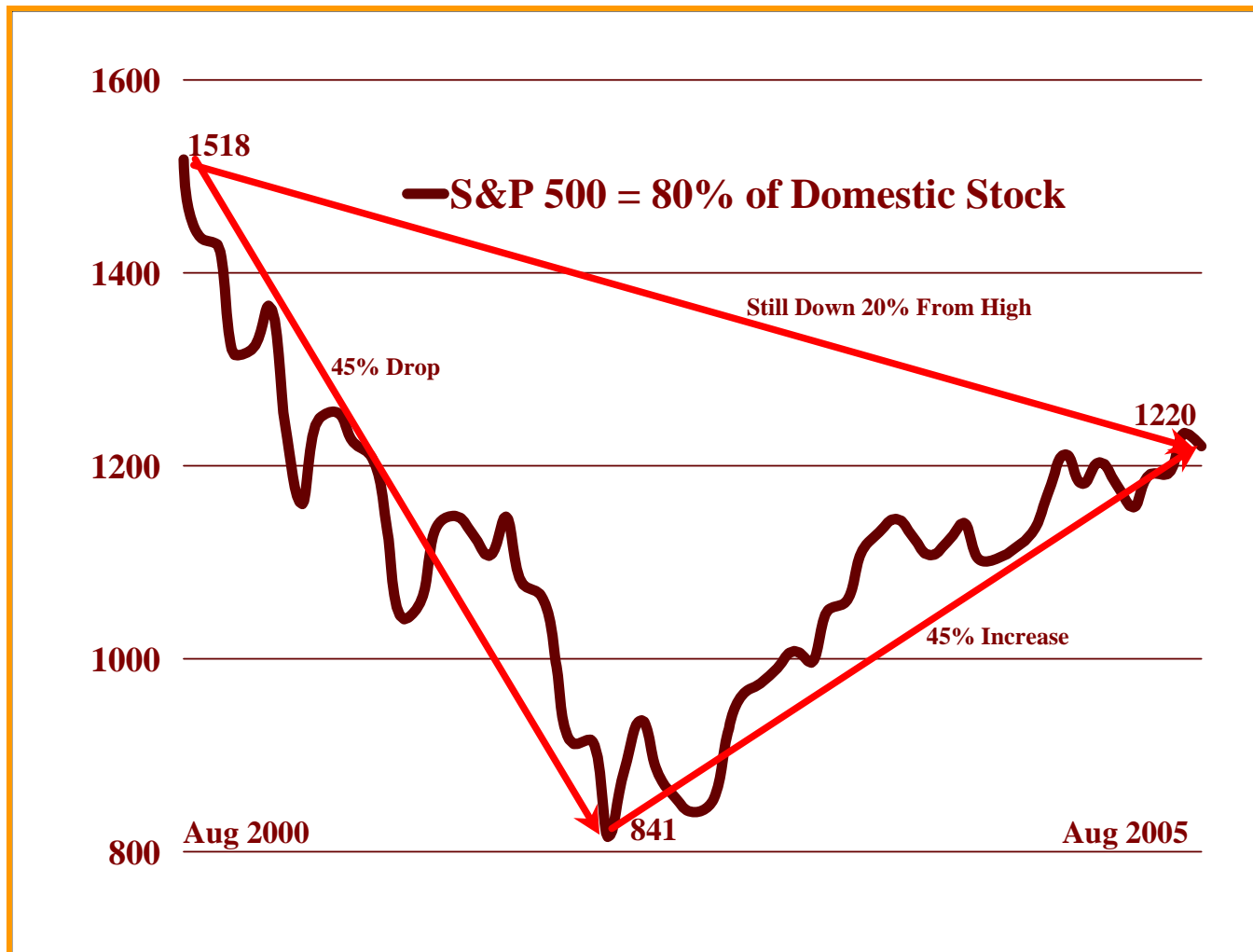
# The Perfect Storm (Continued)



# The Perfect Storm (Continued)



# Has the Market Recovered?





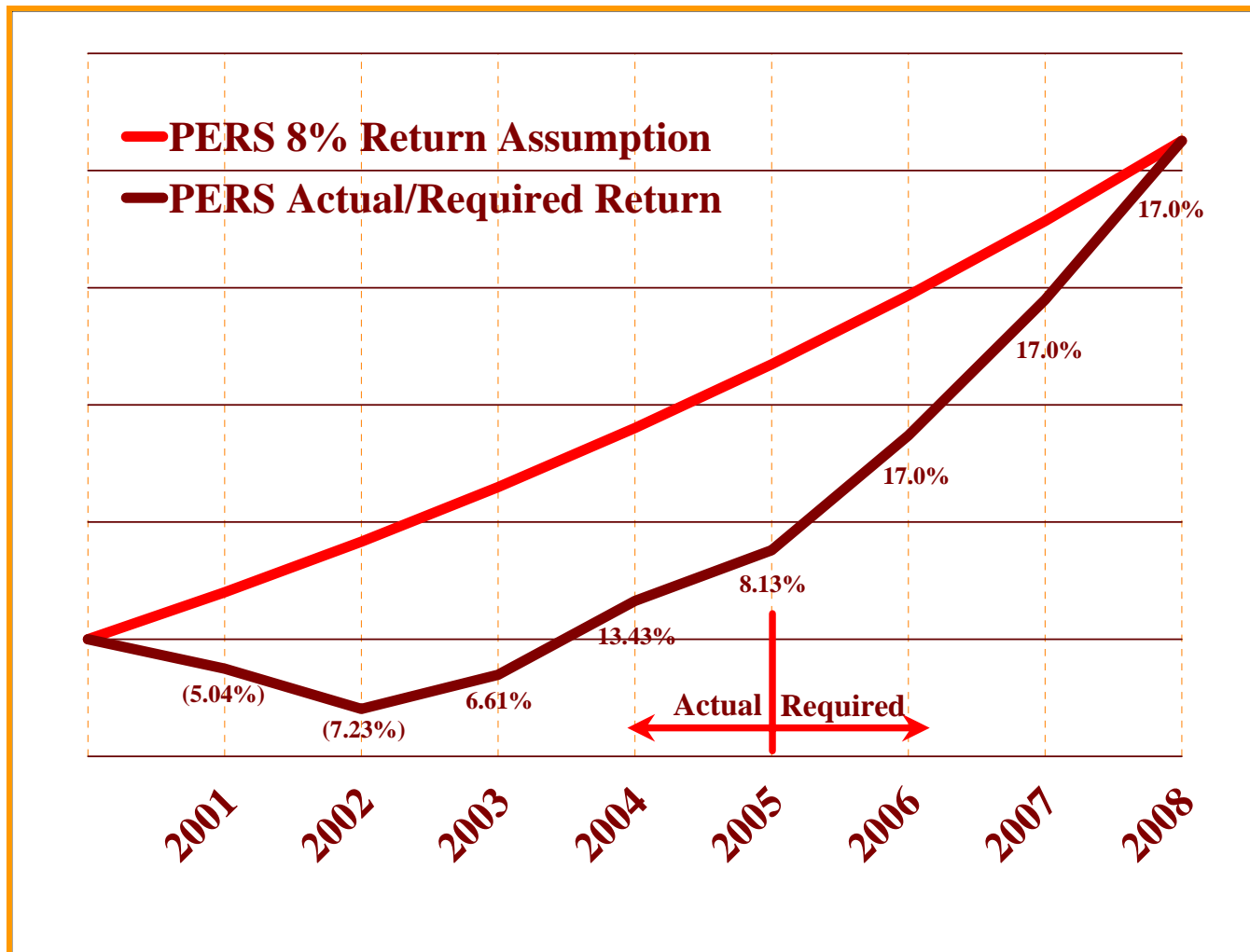


# Will the Market Recover?

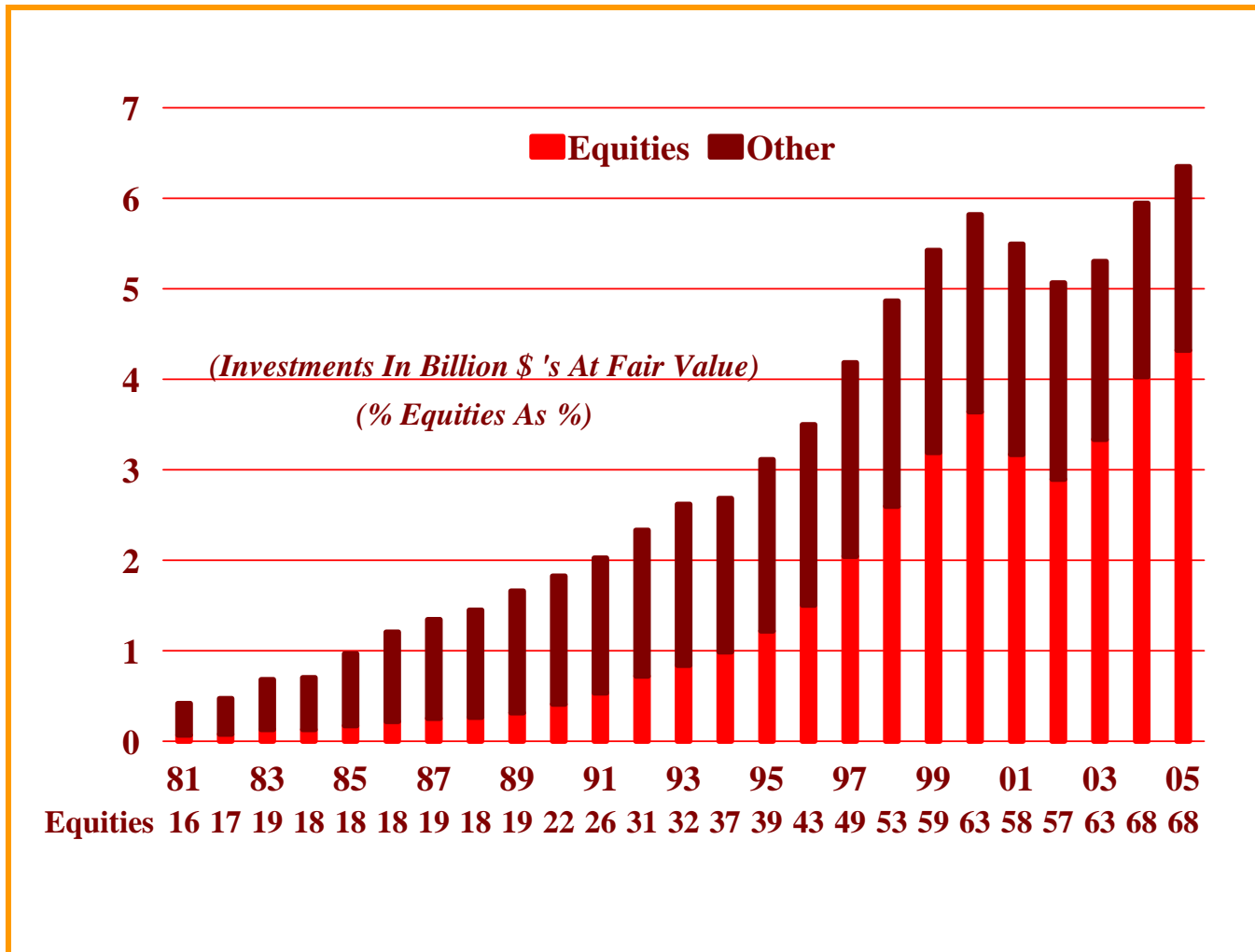
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- ❖ **The S & P 500 fell 45%**
- ❖ **It has gained 45% since the fall**
- ❖ **It must gain another 24% to fully recover**
- ❖ **Not likely to recover in short term**

# How Difficult is Pension Recovery?



# Board Response to Volatile Market





# **Board Response** (Continued)

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- ❖ **During fiscal years 2001, 2002,2003:**
  - ❖ **The Board sold:**
    - ❖ **\$380.0 million of TRS\PERs fixed income**
  - ❖ **The Board purchased:**
    - ❖ **\$963.0 million of TRS\PERs equity**
  - ❖ **The Board exercised its rebalancing policy**
  - ❖ **Rebalancing is counter intuitive**
  - ❖ **Rebalancing reinforces buy low/sell high**



# Lessons To Be Learned

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## ❖ We should not:

- ❖ Increase benefits using actuary “surpluses”
  - ❖ Surpluses can and do disappear quickly
- ❖ Increase benefits by increasing unfunded liabilities
  - ❖ Unfunded liabilities burden future generations

## ❖ We should:

- ❖ Fully fund increased benefits
  - ❖ By using contribution increases
  - ❖ By not assuming increased investment returns

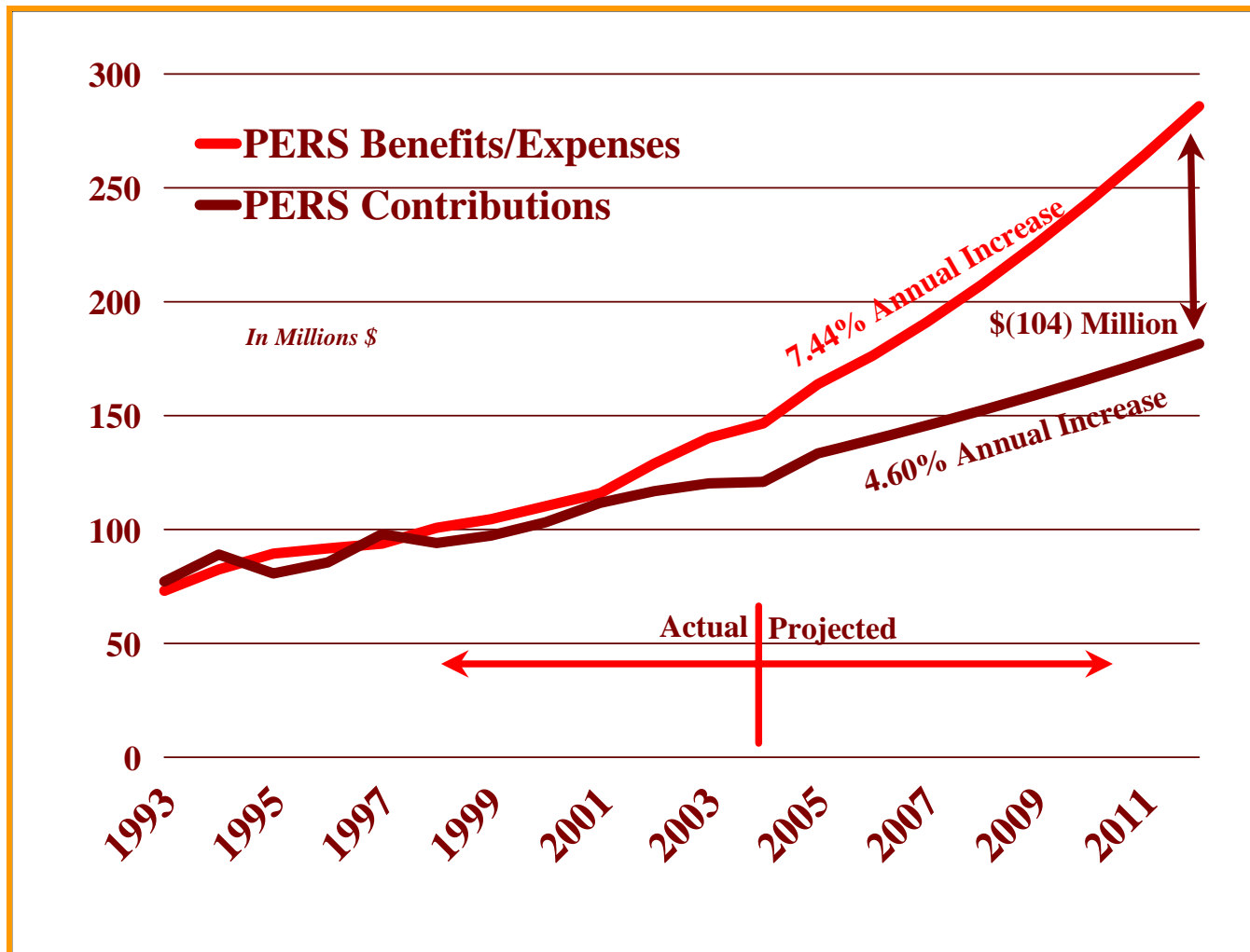


# The Bottom Line

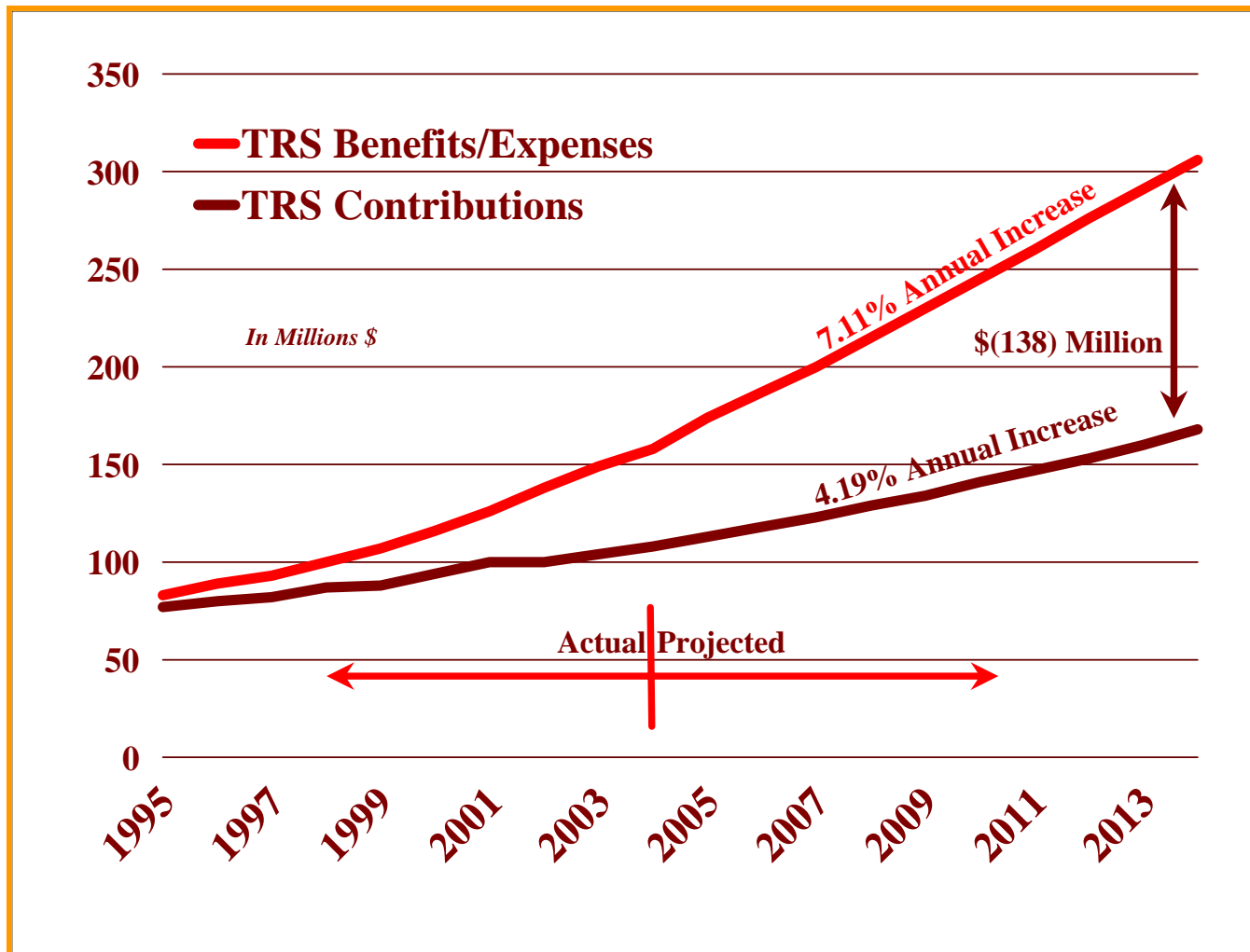
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- ❖ **Whatever benefit increases were granted**
- ❖ **Whatever the capital markets did and may do**
- ❖ **Regardless of the future return on assets**
- ❖ **Regardless of unfunded liability statuses**
- ❖ **The state has a contractual obligation to:**
  - ❖ **Pay beneficiaries the benefits promised when due**
  - ❖ **Ensure that cash is available for such payments**
  - ❖ **These promises extend far into the future**

# The Bottom Line (Continued)



# The Bottom Line (Continued)





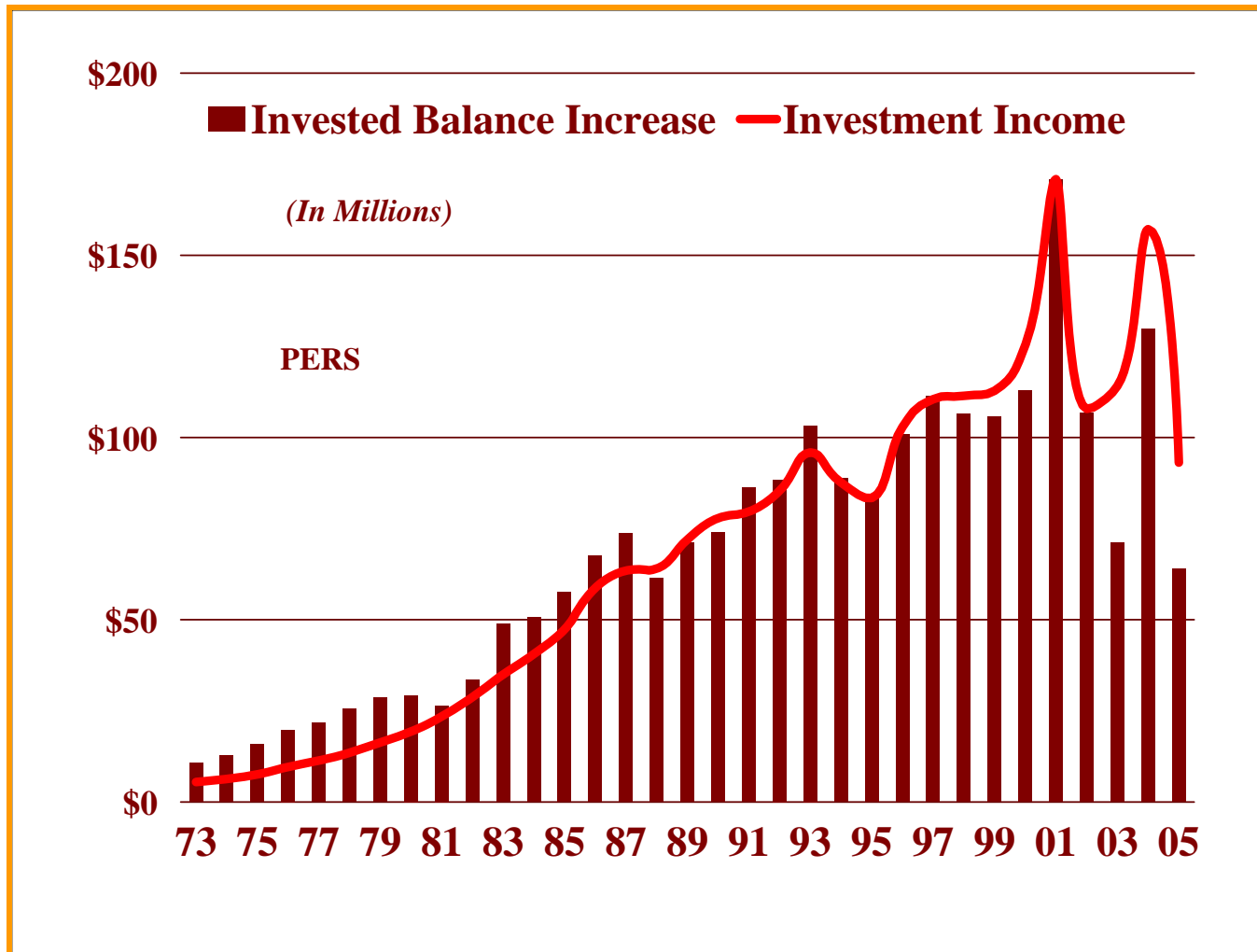


# Bottom Line Observations

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- ❖ **When benefit payments exceed contributions**
- ❖ **Investment income is used to pay benefits**
- ❖ **When income is used to pay benefits**
- ❖ **That income is not reinvested**
- ❖ **The growth of the asset base slows**
- ❖ **Slower asset growth reduces future income**

# Income and Asset Growth





# What are the Options?

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- ❖ **Increase pension asset bases by:**
  - ❖ **Infusing cash immediately (used by corporations)**
  - ❖ **Selling pension bonds (not recommended)**
  - ❖ **A significant asset base increase immediately:**
    - ❖ **Increases investment income**
    - ❖ **Reduces the unfunded liability**
- ❖ **Increase employer contributions to:**
  - ❖ **Reduce the amortization period of unfunded liability**
  - ❖ **Free up investment income to increase asset growth**
- ❖ **Combine both options**



# Report Data Sources

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- ❖ **Board of Investments Annual Reports**
- ❖ **PERS/TRS Actuary Reports**
- ❖ **Custodial Bank Accounting/Performance Records**
- ❖ **Standard & Poor's Web Site**
- ❖ **Ibbotson**