

# Milliman 2008 Pension Funding Study

## 2007 Gains Reversed in First Quarter of 2008

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# Key Findings

- Significant improvement in funded status
- 2007 gains reversed in first quarter of 2008
- Liabilities decreased for first time as discount rates rise
- Asset gains for fifth straight year
- Pension expense dropped for first time since 2001
- Continued decline in employer contributions
- Equity allocation decreased with implementation of LDI strategies

# Milliman 2008 Pension Funding Study

- Milliman 100 companies
  - U.S. public companies with defined benefit plans that file reports with the SEC
  - Companies with the largest DB plan assets
  - Total pension assets of over \$1.3 trillion
- Analysis of Key Pension Data
  - Footnote disclosures
  - Earnings statement
  - Balance sheet

# Milliman 2008 Pension Funding Study

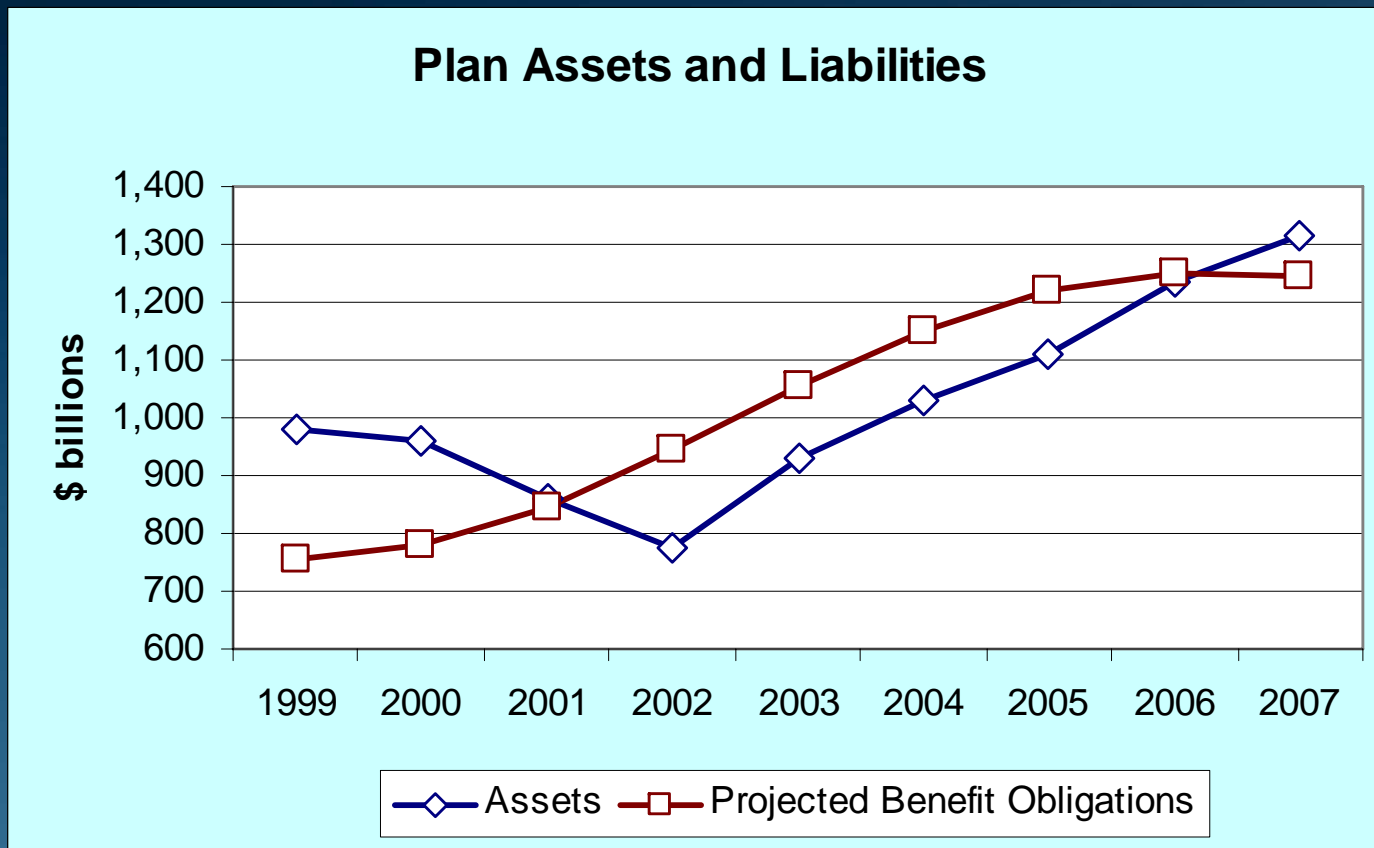
- Companies included
  - Annual reports release by 3/15/2008
  - Includes 29 companies with Measurement Dates other than 12/31
- Companies excluded - private companies, mutual insurance companies, U.S. subsidiaries of foreign parents
- Pension information includes
  - U.S. qualified pension plans
  - Non-qualified plans (mostly unfunded)
  - Foreign plans (often unfunded)
- Does not reflect funded status of U.S. qualified plans under ERISA

# Funded Status Improvement

- PBO funded status improved during 2007 due to the effect of increased discount rates and asset gains - \$70b surplus at end of 2007 versus \$15b deficit at the end of 2006, an \$85b gain
- Balance sheet gains of over \$100b during 2007 when \$15b of gains in OPEB funded status are added to the pension gains
- Cumulative funded status gains of \$192b over the past five years after losses of \$304b for the preceding three years
- Number of companies in surplus position at the end of 2007 up to 58 from 41 at the end of 2006 but still far below the 90 companies with surplus assets at the end of 1999

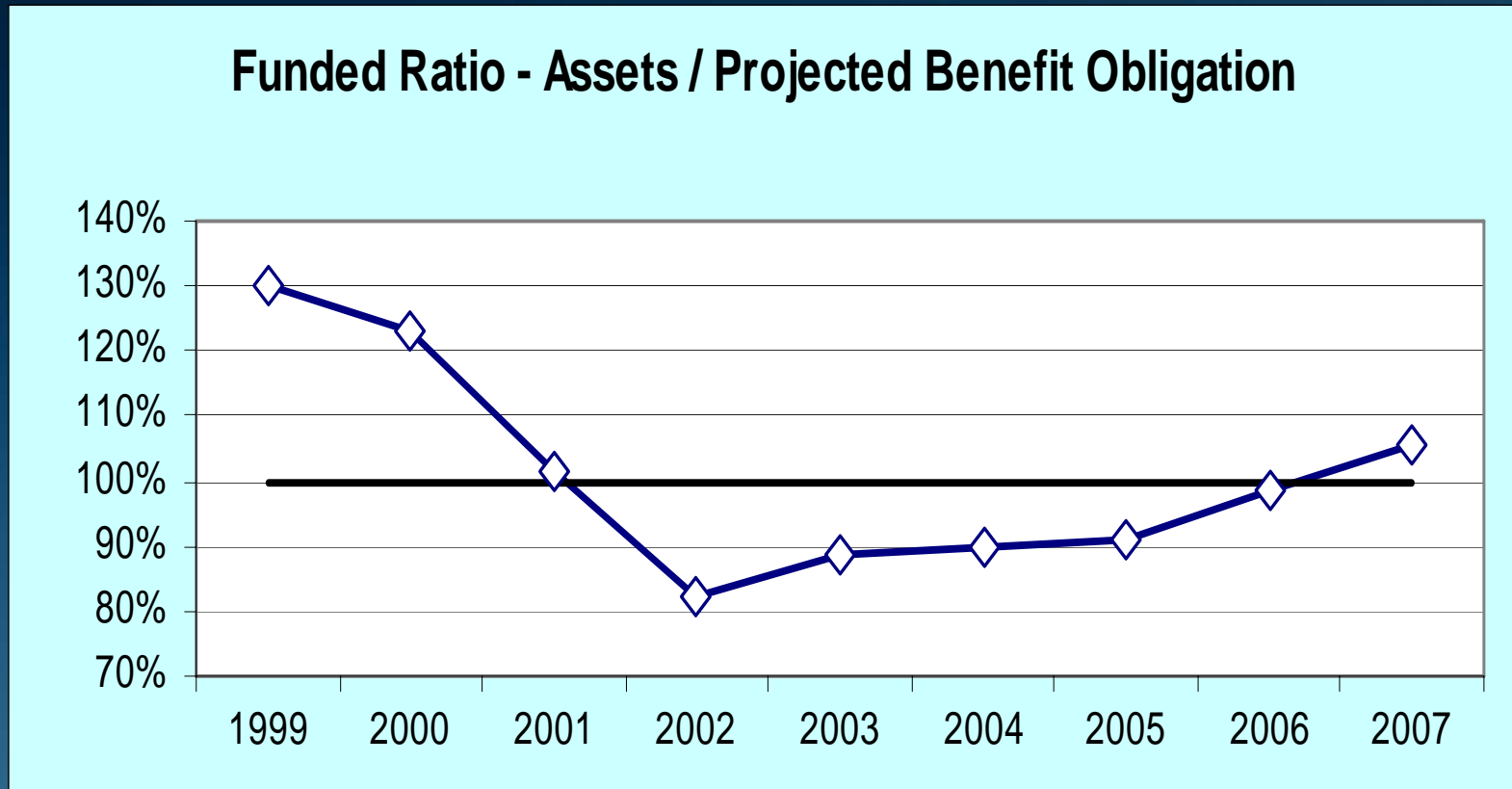
# Funded Status Improves in 2007

Assets up, Liabilities down



# Funded Status Improves in 2007

Fifth Year of Increase in Funded Ratio



# 2007 Gains Reversed in First Quarter of 2008

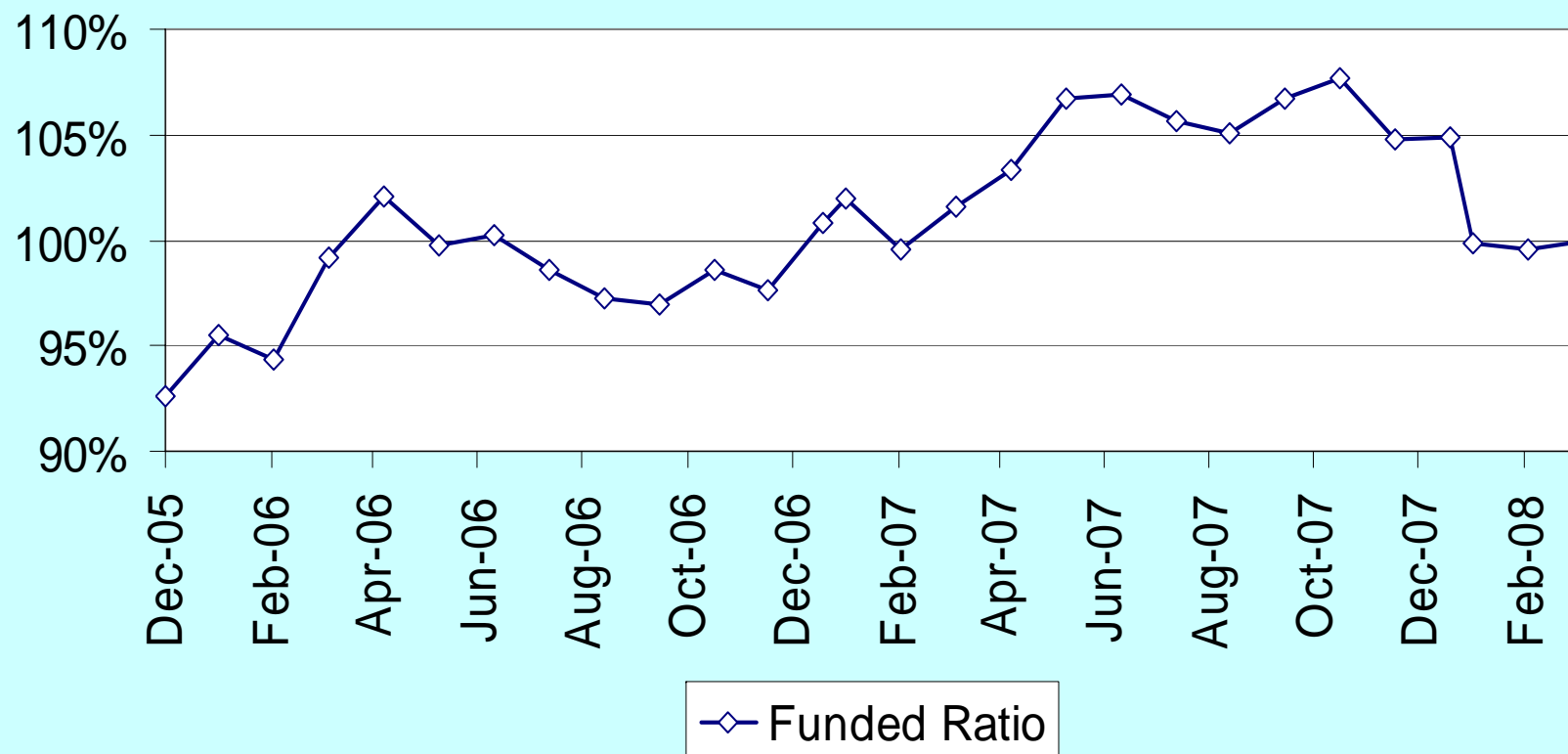
- Asset losses and interest rate declines in January 2008 eliminated the net surplus in assets
  - Asset return for January estimated at a negative 3.6%
  - Liability return for January estimated at a positive 1.3%
  - Largest drop in funded status for the period 2006 to 2008
- Projected return to full funding by end of 2008 if no additional net asset or liability losses
  - Assumes median expected return of 8.3% for remainder of 2008
  - Assumes discount rates remain level



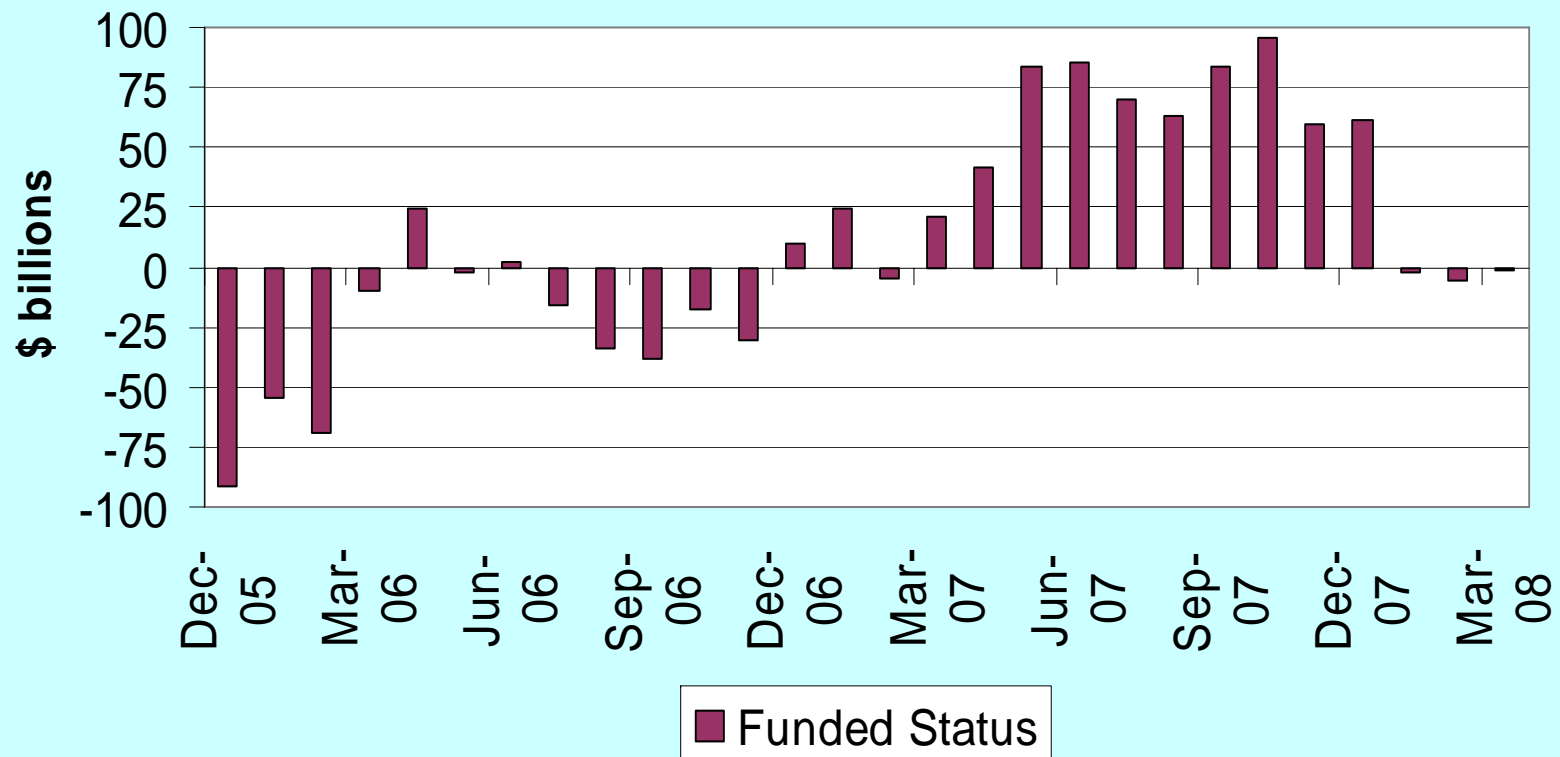
# Milliman 100 Monthly Pension Funding Index

- Combined results of 2008 and prior studies projected forward to reflect monthly changes in market returns and interest rate changes
- Based on actual data from the Milliman 100 companies
  - Liabilities normalized to weighted average discount rate
  - Assets projected based on actual asset allocations
  - Liabilities projected based on changes in Citibank yield curve
- Surplus and funded ratio peaked at end of October 2007
  - Surplus assets have dropped by almost \$100b in six months

## Milliman 100 Monthly Pension Funding Index Pension Funded Ratio



## Milliman 100 Monthly Pension Funding Index Pension Surplus / Deficit

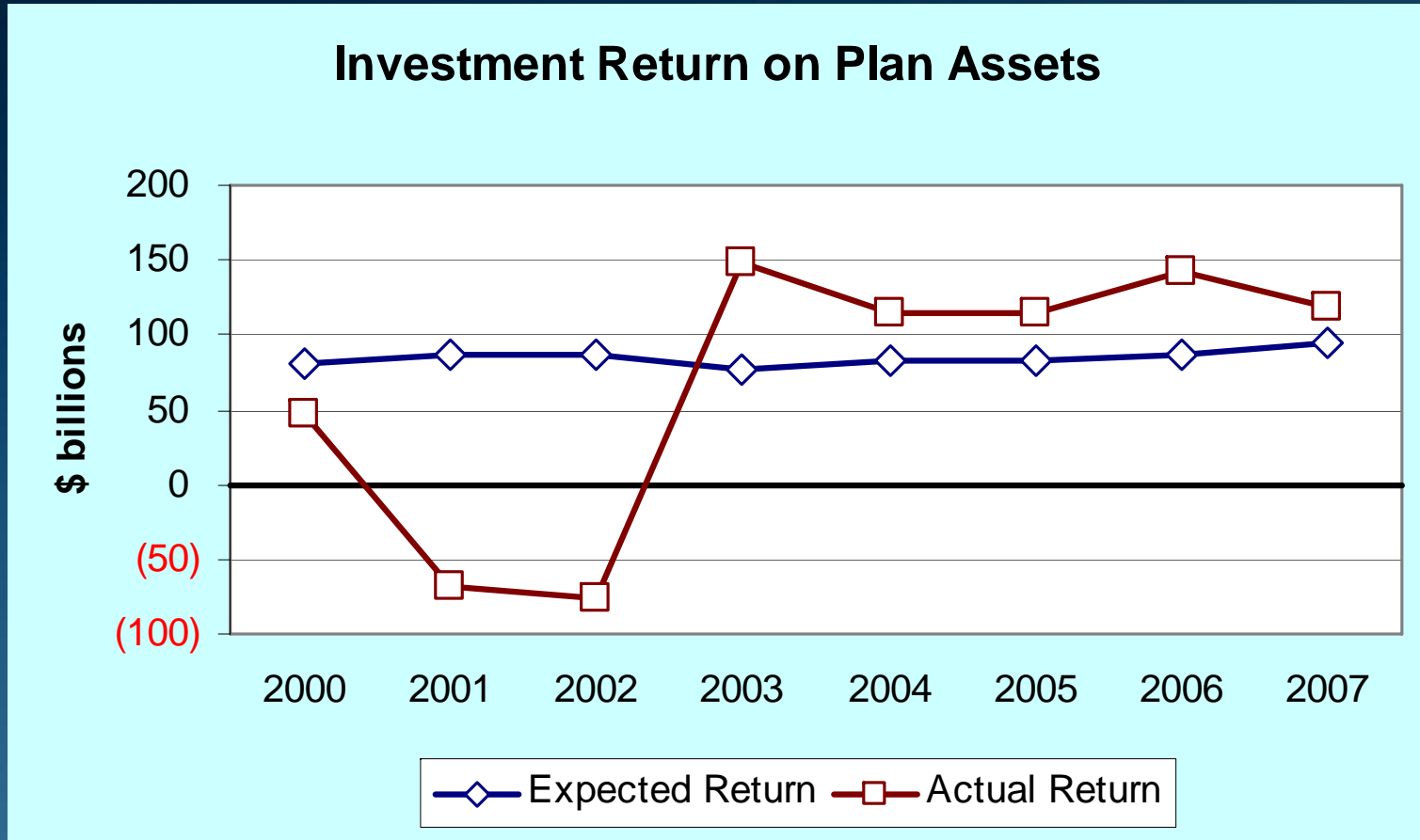


# Continued Asset Gains

- Actual return on assets of 9.9% for 2007 exceeded expected return of 8.3% by \$23.8b
  - Fifth consecutive year of gains (average annual return of 13.1% with cumulative surplus gains of \$192b) after three years of losses (cumulative losses of \$304b)
  - Actual returns for 2007 ranged from 2.7% to 18.3%
  - During the past eight years, actual rate of return has been about 6.5% vs. expected return of 8.7%

# Actual Returns Exceed Expected in 2007

## Fifth Consecutive Year of Asset Gains



# Pension Expense Declines

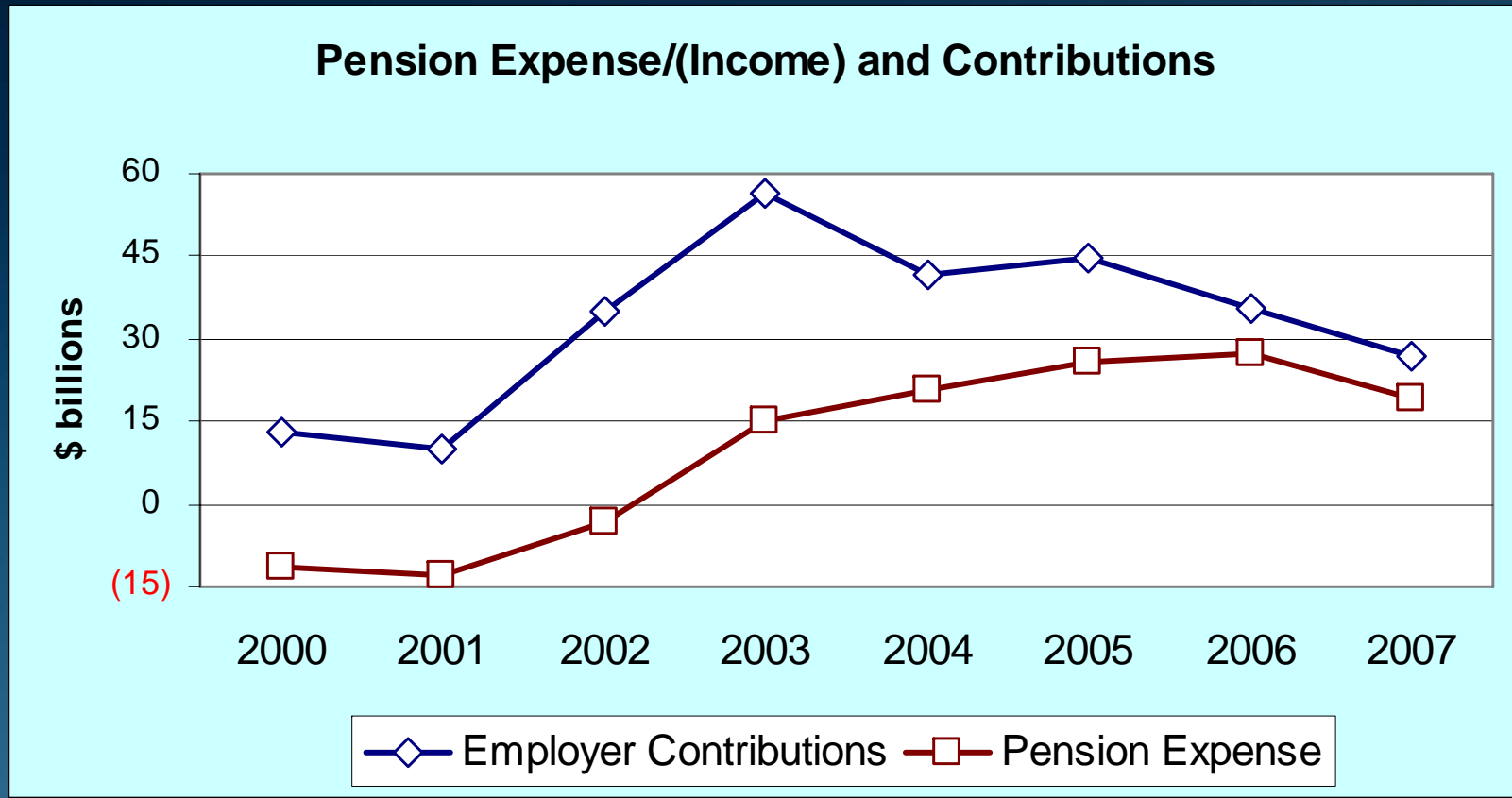
- Pension expense of \$19.3b for 2007, down from 2006 expense of \$27.3b – compared with pension *income* of \$12.9b in 2001
- 16 companies with pension income in 2007, up from 8 in 2006 - compared with 62 in 2001
- Asset gains, together with discount rate increases, for 2007 likely to produce even lower pension expense in 2008
- Asset and liability losses in first quarter of 2008 will NOT affect 2008 pension expense

# Lower Employer Contributions

- Employer contributions decreased to \$27b in 2007, the lowest level since 2001, after averaging \$45b over the prior four years
- Contributions continued to exceed expense, by a cumulative \$182b over the past eight years
- Pension Protection Act of 2006 will significantly affect amount and volatility of contributions, starting in 2008
- Plan sponsors may contribute at higher levels in 2008 under the new PPA rules

# Pension Expense and Contributions

First drop in pension expense since 2001



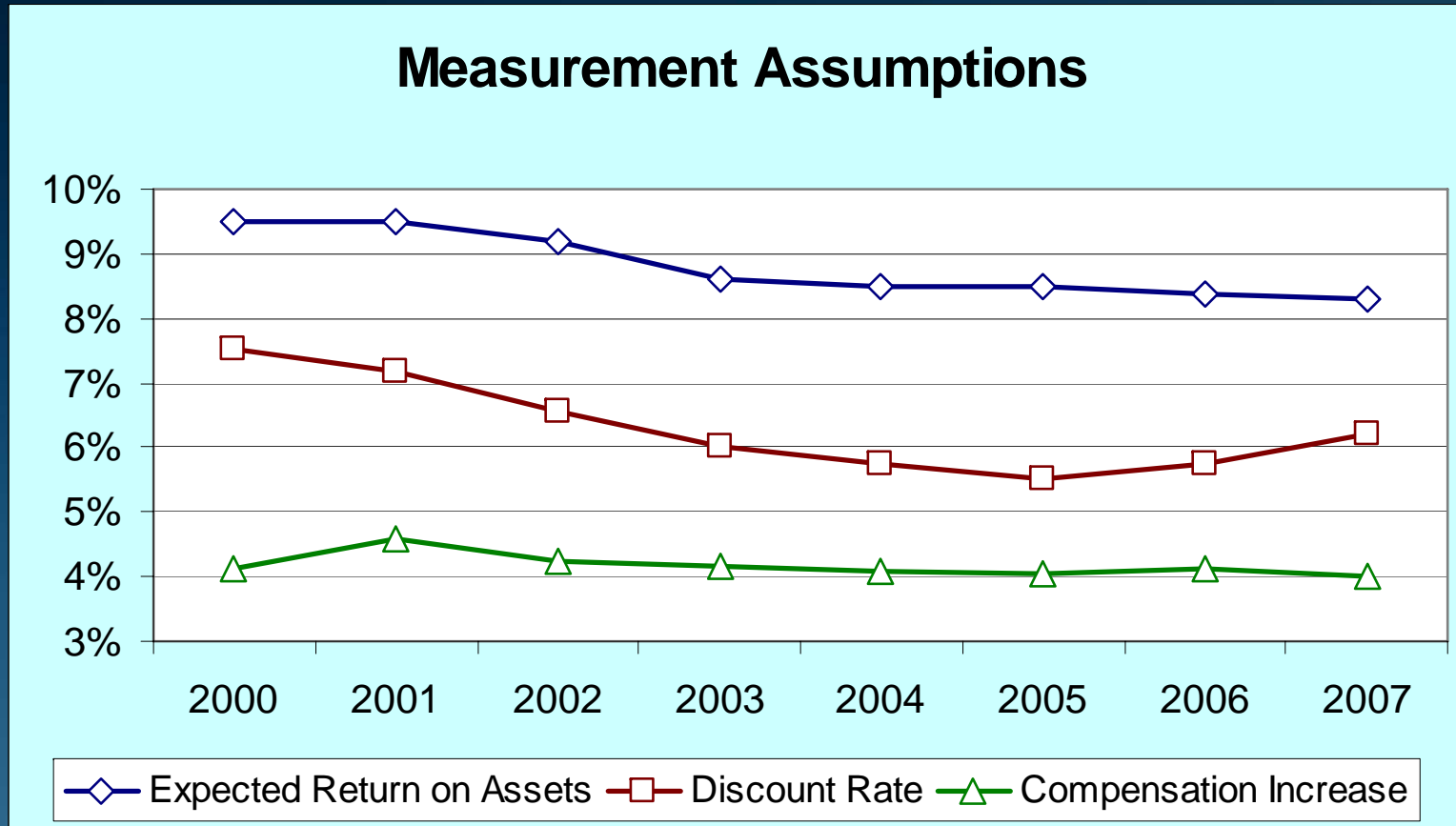


# Higher Discount Rates

- Median discount rate up to 6.2% at the end of 2007, up from 5.75% in 2006 – after incremental declines from 7.5% in 2000
- Increase in discount rates lowered liabilities for the first time in the history of the study
- Median expected return on assets remained at 8.3% in 2007
- Ten companies continue to use an expected return of at least 9.0%

# Higher Discount Rates

Second increase after five years of decreases

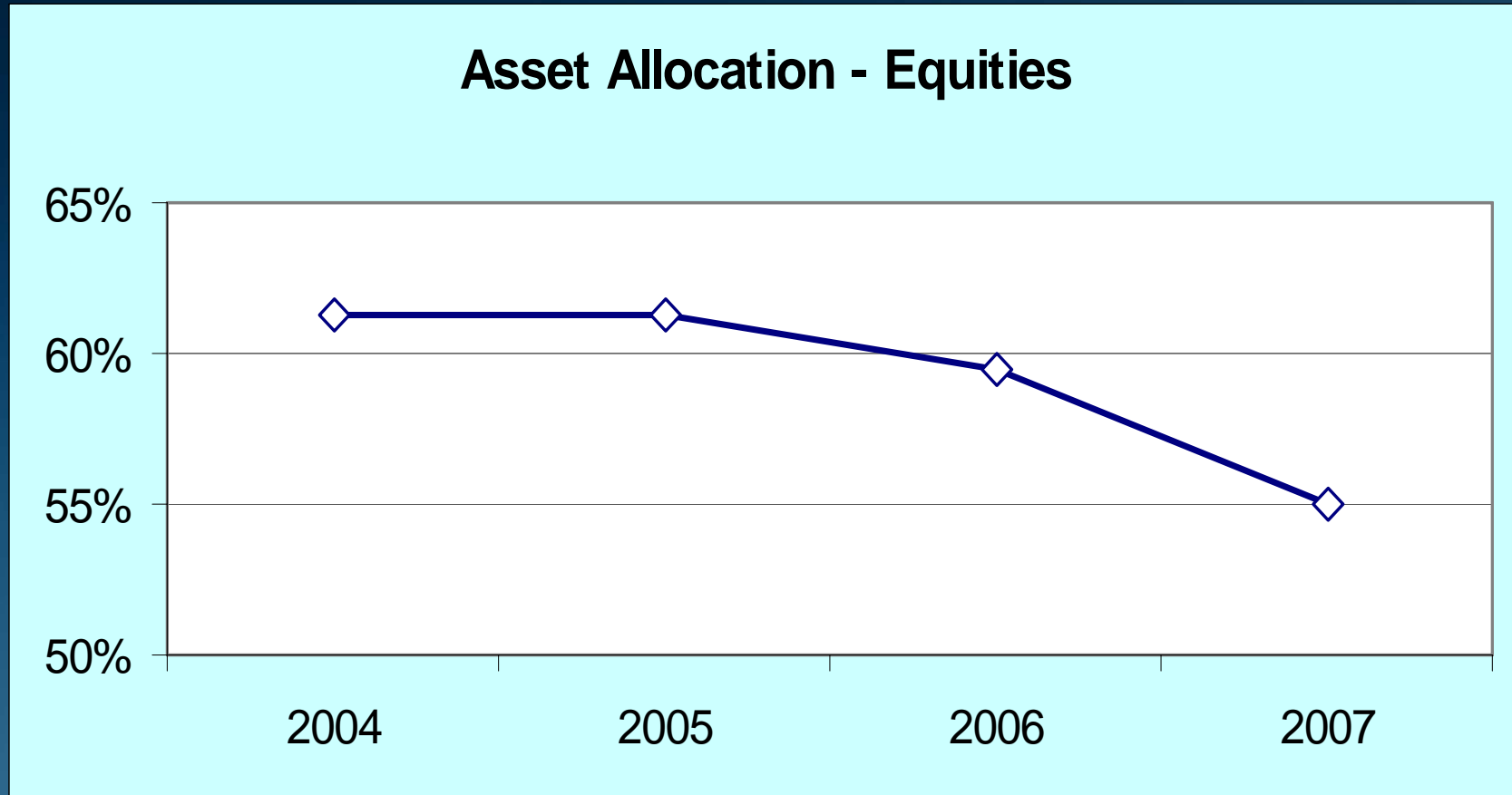


# Asset Allocation Changes in 2007

- Decreases in equity investments during 2007 reallocated to fixed income and “other” asset classes
  - 55% of pension assets invested in equities – down from 60% at the end of 2006
  - 33% invested in fixed income assets – up from 30% in 2006
  - Remaining assets invested in “other” asset classes – real estate, private equity, hedge funds, and cash equivalents
- Asset allocations changes in 2007 represent
  - Decrease of almost \$60b in traditional equities
  - Increase of over \$40b in fixed income assets

# Asset Allocation - Equities

Decrease of almost 5% during 2007

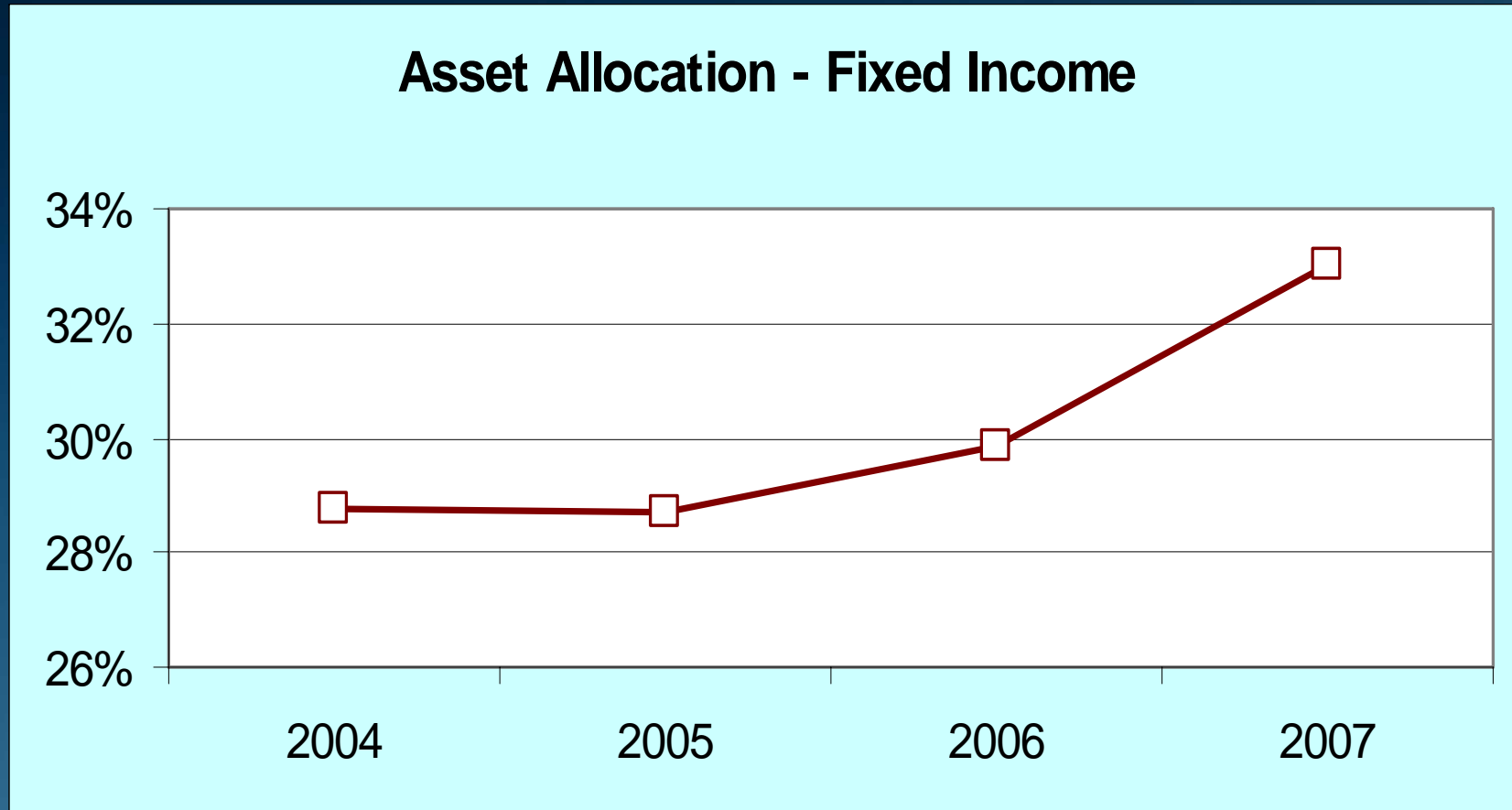


# Decreases in Equity Allocations in 2007

- 31 of the 100 companies decreased their equity allocation by more than 5% during 2007 (up from 11 in 2006)
  - 11 decreased their equity allocation by over 10%
  - 20 decreased their equity allocation between 5% and 10%
- Companies have changed investment policies to ‘de-risk’ their plans as a result of
  - Improved funded status over the past five years
  - Greater awareness of the benefits of liability driven investing (LDI)
- Reductions in equity investments were reallocated to fixed income and/or “other” asset classes

# Asset Allocation – Fixed Income

Reallocation from equities



# Increases in Fixed Income Allocations

- 21 of the 100 companies had increases in fixed income allocations over 5%
  - 7 companies increased their fixed income allocation by over 10%
  - 14 companies increased their fixed income allocation between 5% and 10%
- Many companies have implemented long duration fixed income portfolios to better match the behavioral characteristics of their pension liabilities to
  - Reduce the volatility of expense and surplus
  - Preserve the funded status of their plans
- Companies have also implemented creative “return-generating” investment strategies

# LDI Strategies

- Emerging trends to reduce surplus volatility and preserve funded status
  - Decreasing equity allocations
  - Increasing fixed income allocations
  - Implementing long duration fixed income portfolios
- Comprehensive risk budgeting studies should be conducted to
  - Quantify the level and sources of investment risk relative to liability benchmark and company financials
  - Optimize investment portfolio efficiency relative to liability benchmark



# Outlook for 2008

- Asset and/or liability gains will be needed to recover losses in first quarter of 2008
- Pension expense expected to decrease again
- Employer contributions expected to increase under the new PPA funding rules
- Equity allocations will continue to decline with further implementation of LDI strategies

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QUESTIONS ???

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