

# Responses to Task Force Questions

City of Pasadena

Fire & Police Retirement System  
Funding Task Force

August 19, 2009

**P<sup>3</sup>** *Actuaries you can understand*

# Responses

- Based on June 30, 2008 valuation information projected to June 30, 2009 with a few exceptions:
  - Estimated market value of assets as of June 30, 2009 is \$87.25 million
  - Investment return, actual return and inflation assumptions are adjusted where noted

# Question 1

- Assuming an investment return of 8% and 3.8% inflation (COLA), what amount of money needed today to fund to 100%? Same question except to fund to 90%?

# Response 1

- Estimated Present Value of Benefits at June 30, 2009 = \$177.5 million
- Estimated Actuarial Value of Assets at June 30, 2009 = \$119.5 million
- Additional contribution to get to:
  - 100% funded = \$58.0 million
  - 90% funded = \$40.2 million

## Question 2

- In the 6/30/08 Actuarial Valuation page 49, why use assumptions like 80% of male members married at retirement and spouse assumed to be three years younger when the plan has only 298 members? Should we be using actual numbers.

# Response 2

- For current annuitants, we use actual spouse information where that information is available.
- The information on page 49 of the June 30, 2008 actuarial valuation report refers to the assumption used for employees who were not yet retired.
- As of June 30, 2009, all remaining plan members were retired.

## Question 3

- What percentage of retirees were disability as opposed to regular service and how does that compare to other comparable agencies?

# Response 3

- As of June 30, 2008:
  - 128 Service Retirees (53%)
  - 114 Disabled Retirees (47%)
  - Excludes beneficiaries receiving benefits
- Benefit amounts for some Disabled Retirees would be the same as they would have received as Service Retirees.



## Question 4

- What was the average age at retirement for current FPRS retirees?

# Response 4

- As of June 30, 2008:
  - Service Retirees: 52.2 at retirement
  - Disabled Retirees: 44.7 at retirement
  - Combined Retirees: 48.7 at retirement
- Excludes beneficiaries receiving benefits

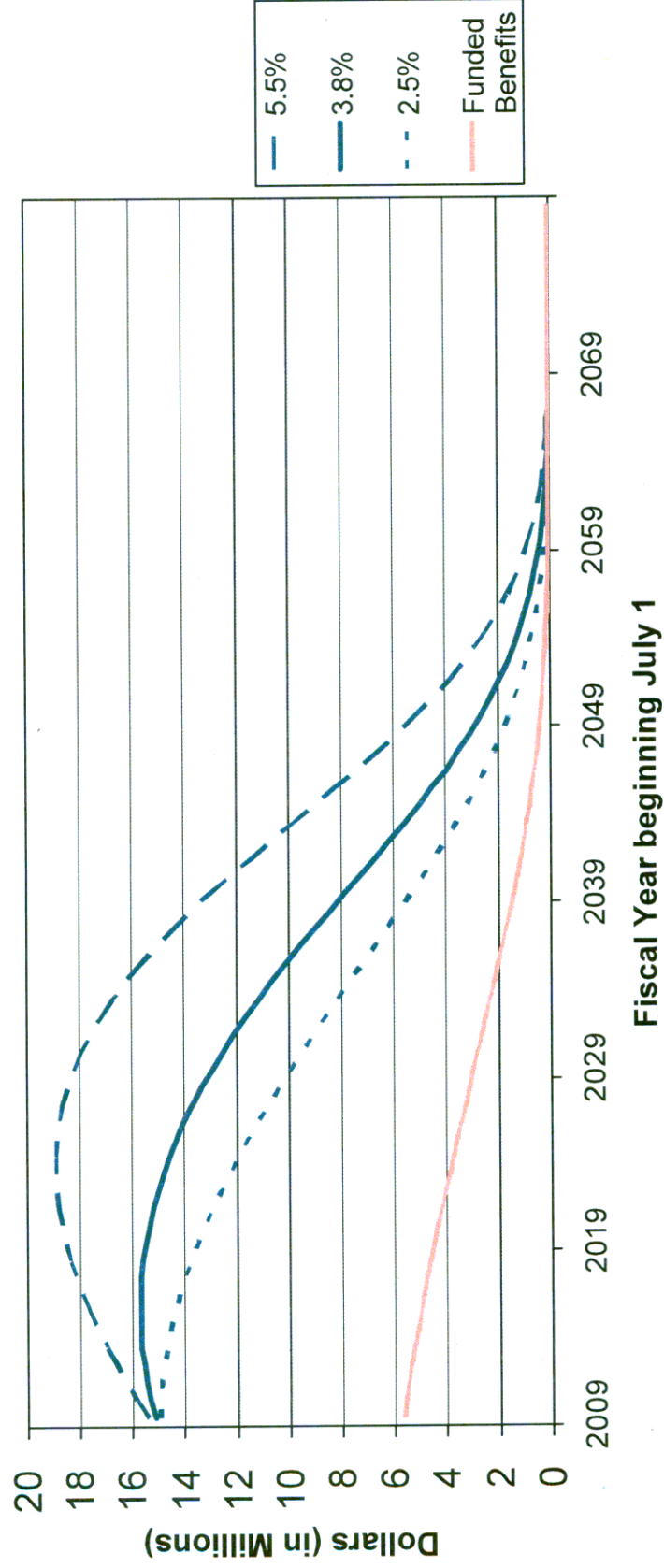
## Question 5

- Recalculate the graphs under the funding scenarios using
  - four interest rates options (5%, 6%, 7% and 8% [current]), along with
  - three inflation options (2.5%, 3.8% [current] and 5.5%).

# Benefit Payments

- The annual amount expected to be paid to annuitants from the retirement system.

# Benefit Payments

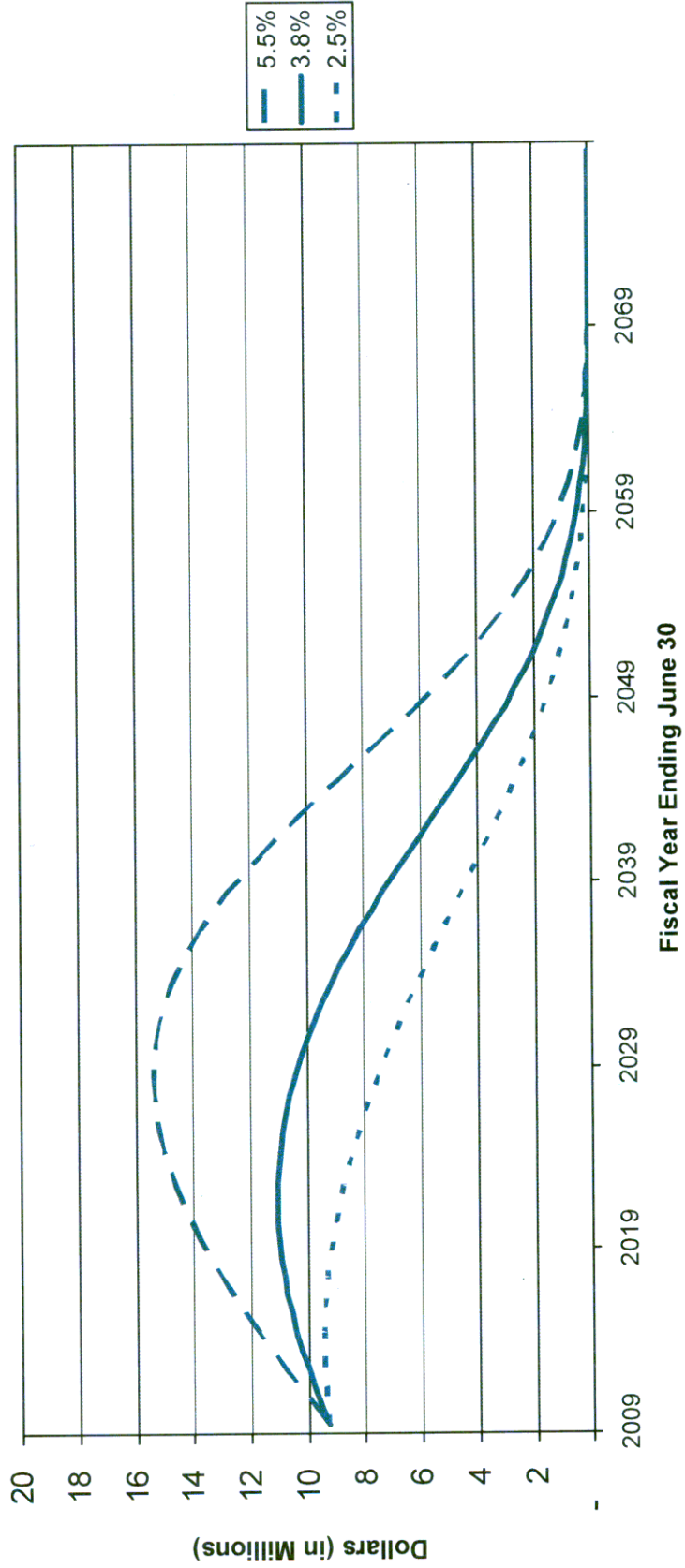


**P<sup>3</sup>** Actuaries you can understand

# Reimbursement Cap

- Maximum amount payable by the City in any year under Contribution Agreement #16,900
- City Statute historically splits retirement benefits into four categories:
  - Funded Benefits
  - Unfunded Benefits
  - COLA Benefits
  - 1919 Benefits
- Reimbursement Cap is sum of Unfunded Benefits, COLA Benefits and 1919 Benefits paid in prior year

# Reimbursement Cap



# Liabilities

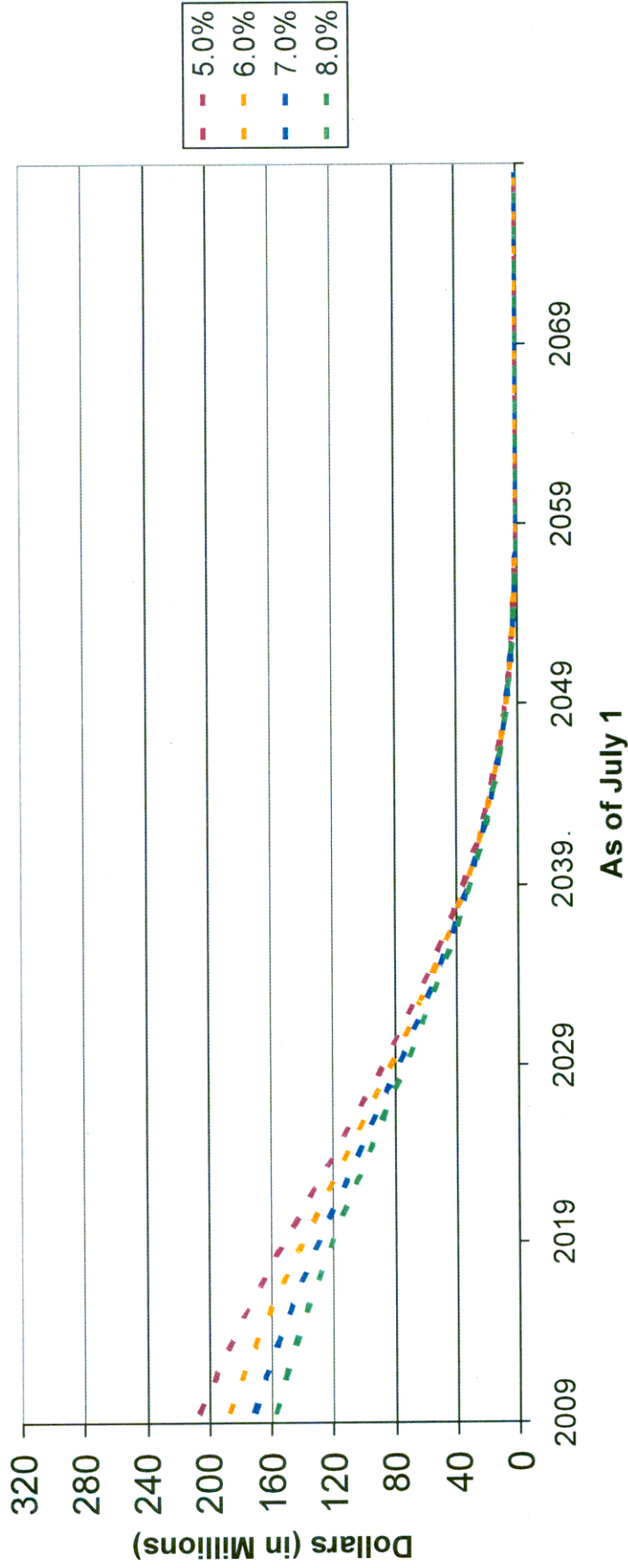
- The single amount needed at the date of the actuarial valuation that would be enough to pay for all future benefits if all assumptions are met in all future years.
- Liabilities will vary with changes in inflation and discount rate.



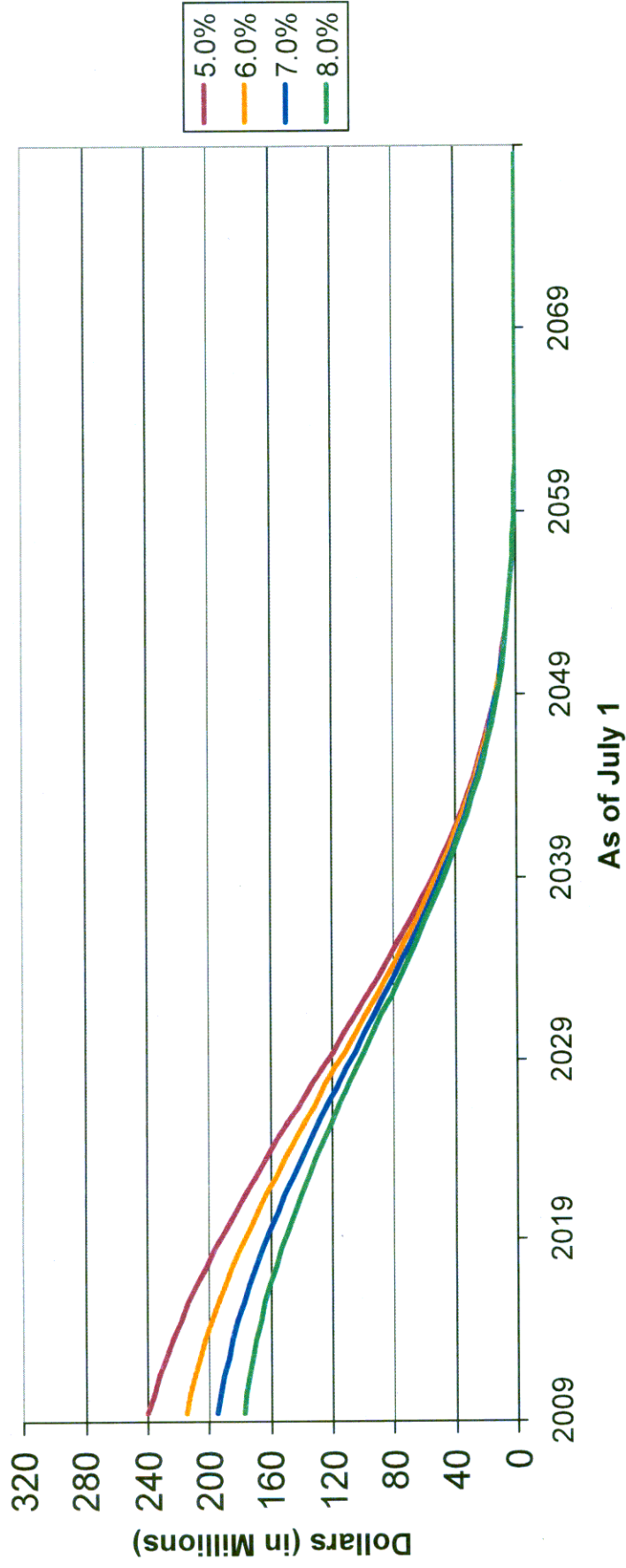
# Liabilities

- Graphs show results by:
  - Inflation (3 graphs), and
  - Discount Rate (4 graphs)

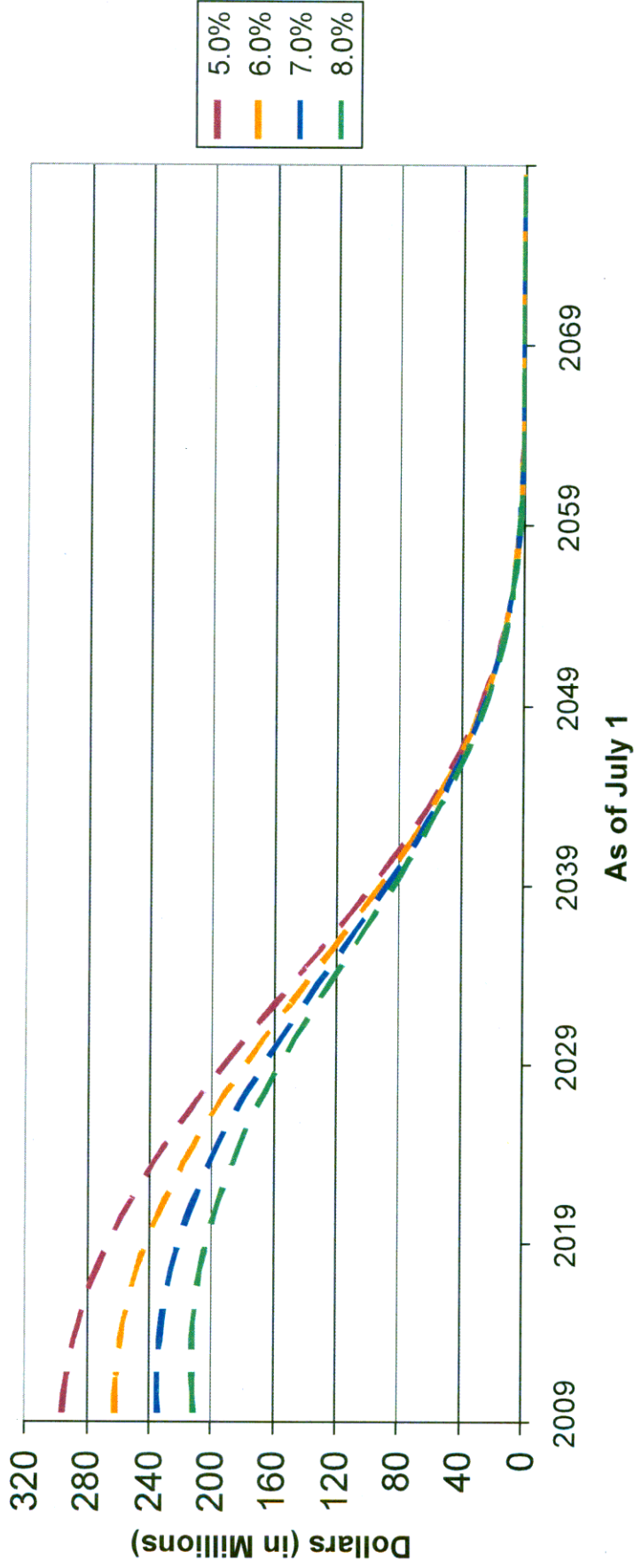
## Liabilities at Varying Discount Rates 2.5% Inflation



**Liabilities  
at Varying Discount Rates  
3.8% Inflation**

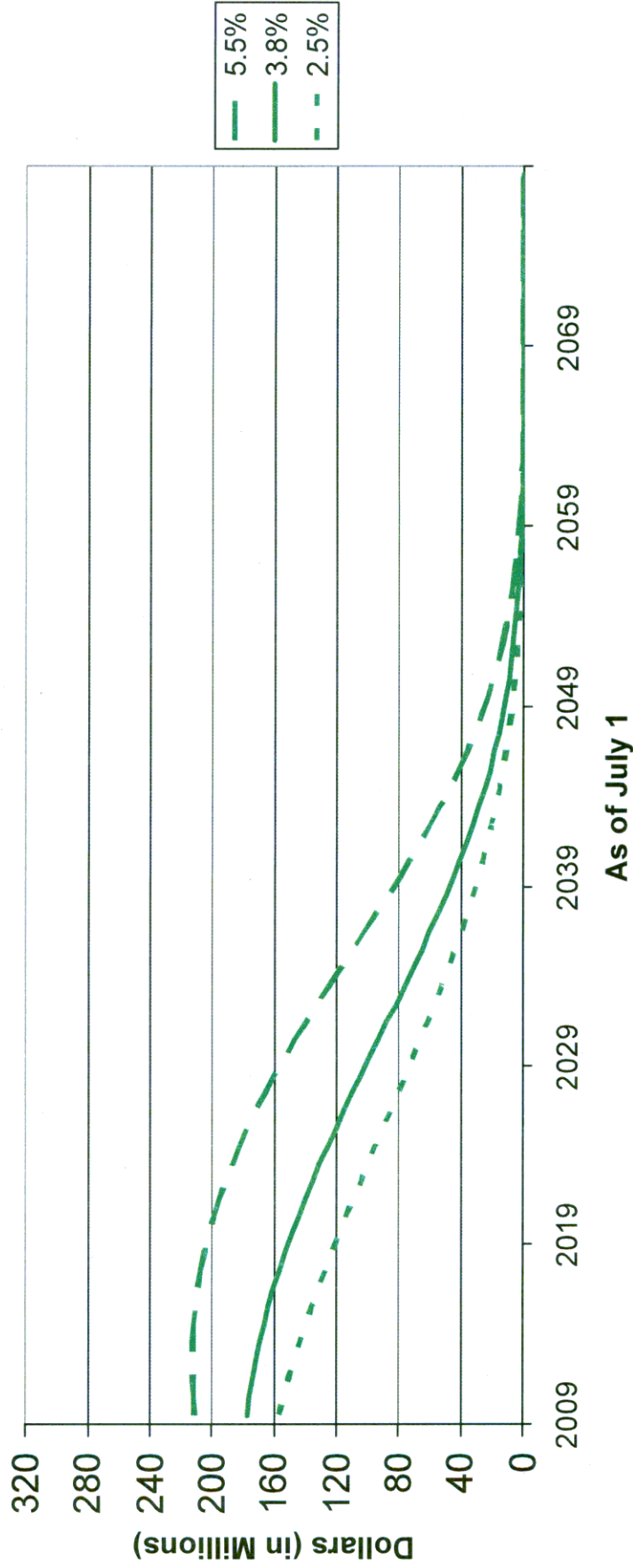


## Liabilities at Varying Discount Rates 5.5% Inflation

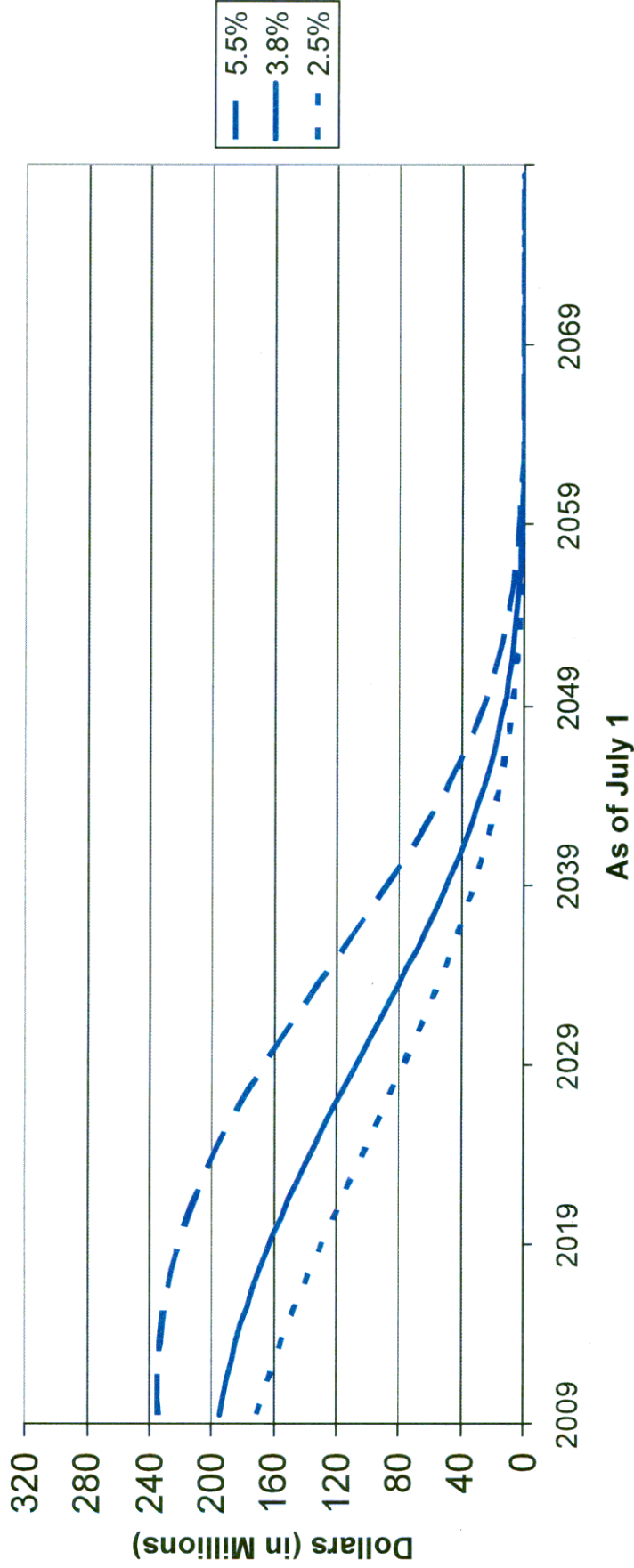


**P<sup>3</sup>** *Actuaries you can understand*

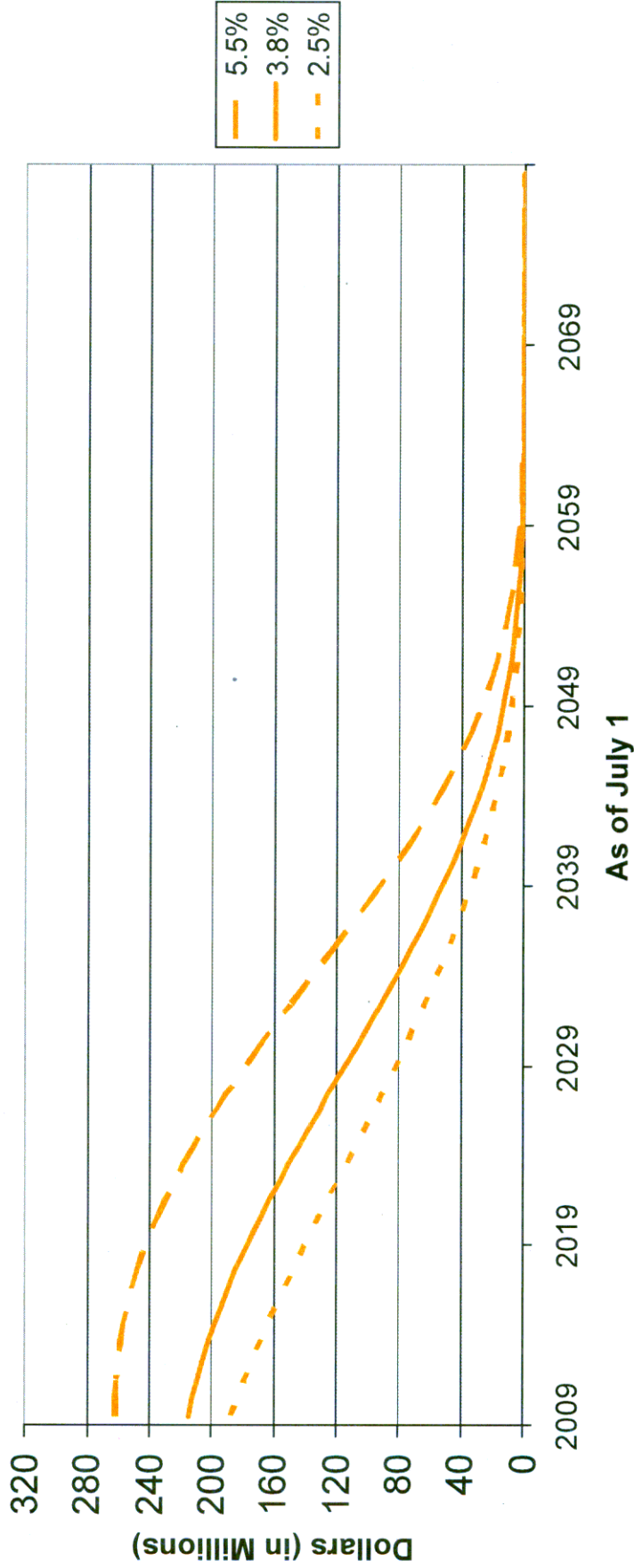
**Liabilities  
at Varying Inflation Rates  
8.0% Discount Rate**



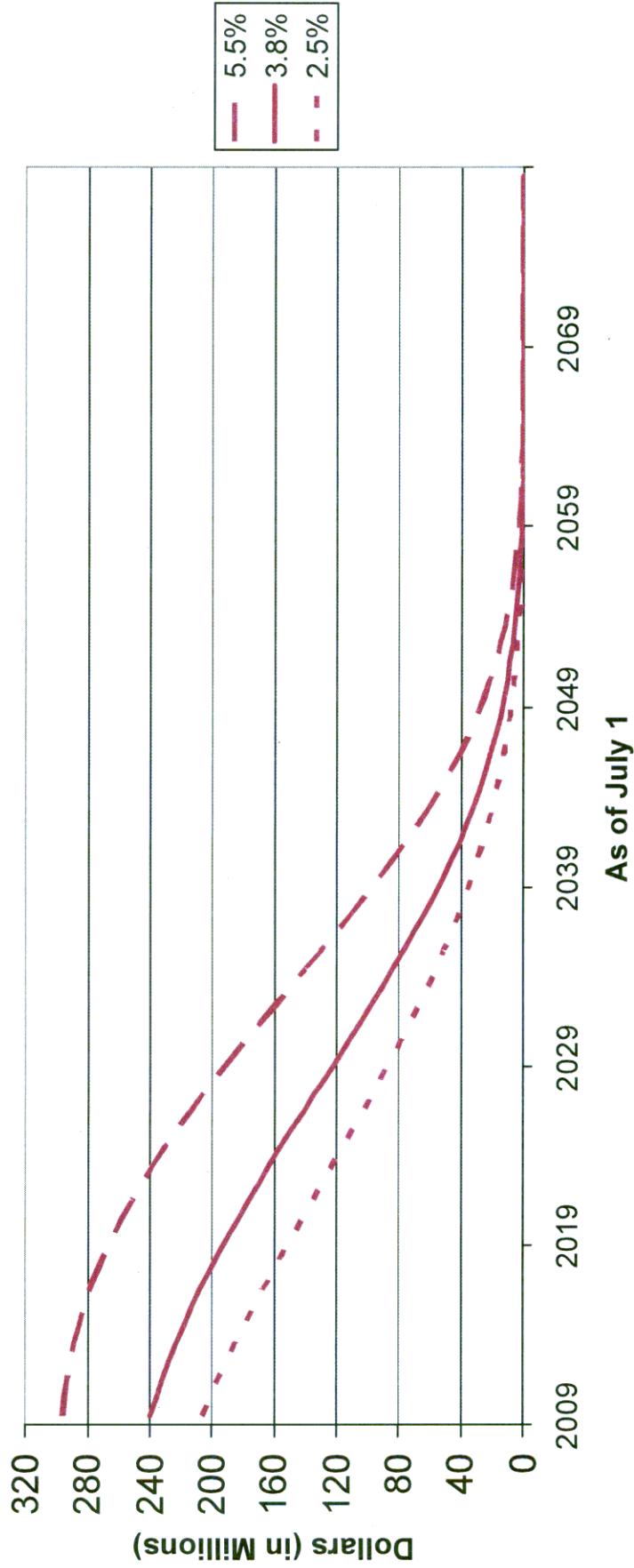
### Liabilities at Varying Inflation Rates 7.0% Discount Rate



**Liabilities  
at Varying Inflation Rates  
6.0% Discount Rate**



## Liabilities at Varying Inflation Rates 5.0% Discount Rate





# Funded Percentage

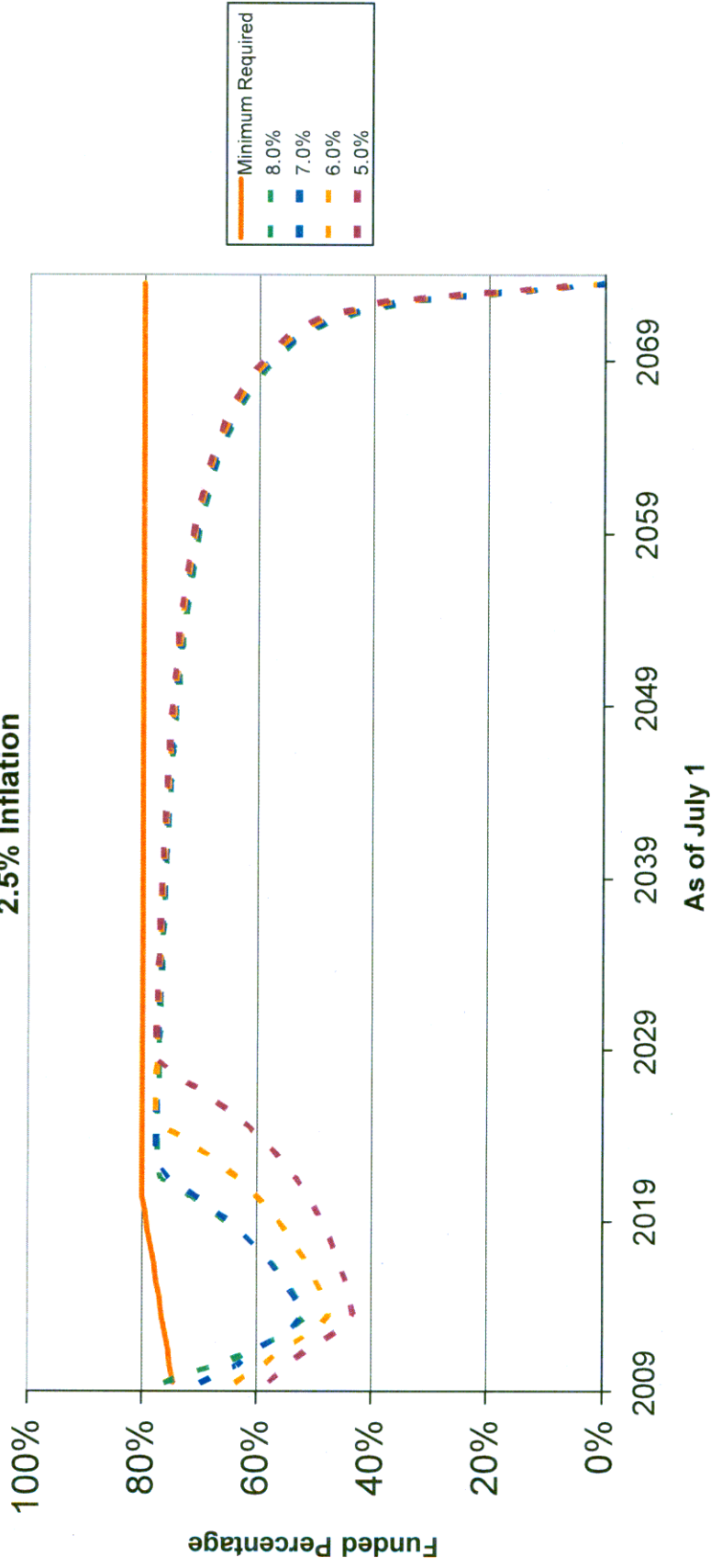
- The proportion of liabilities that are funded at each valuation date.

Ratio of the  
Actuarial Value of Assets (smoothed)  
to  
Liabilities.

# Funded Percentage

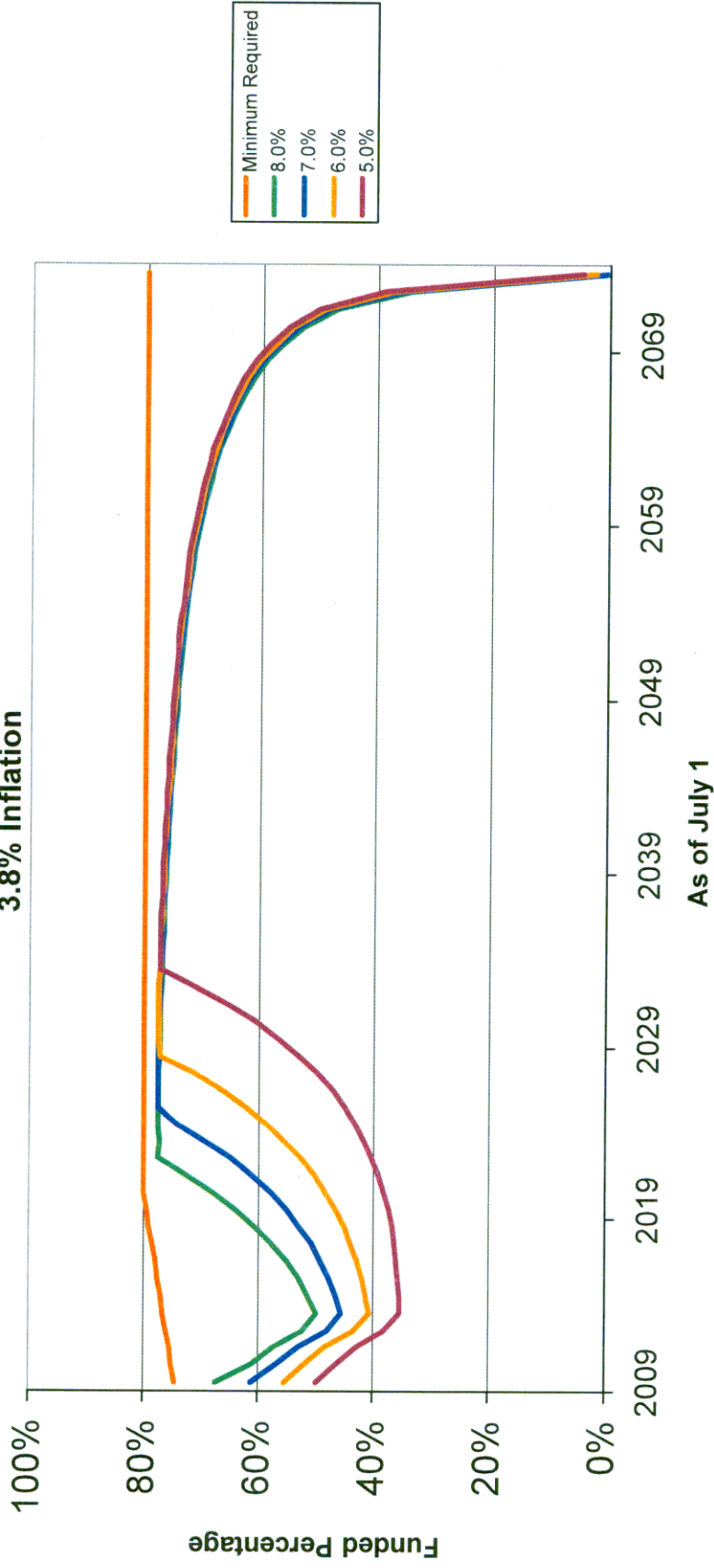
- Will vary based on changes in Inflation, Discount Rate or Actual Investment Return
- Graphs show results by:
  - Inflation (3 graphs),
  - Discount Rate (4 graphs), and
  - Actual Investment Return (2 sets of 7 graphs)

**Funded Percentage  
When Investment Return Matches Discount Rate  
2.5% Inflation**



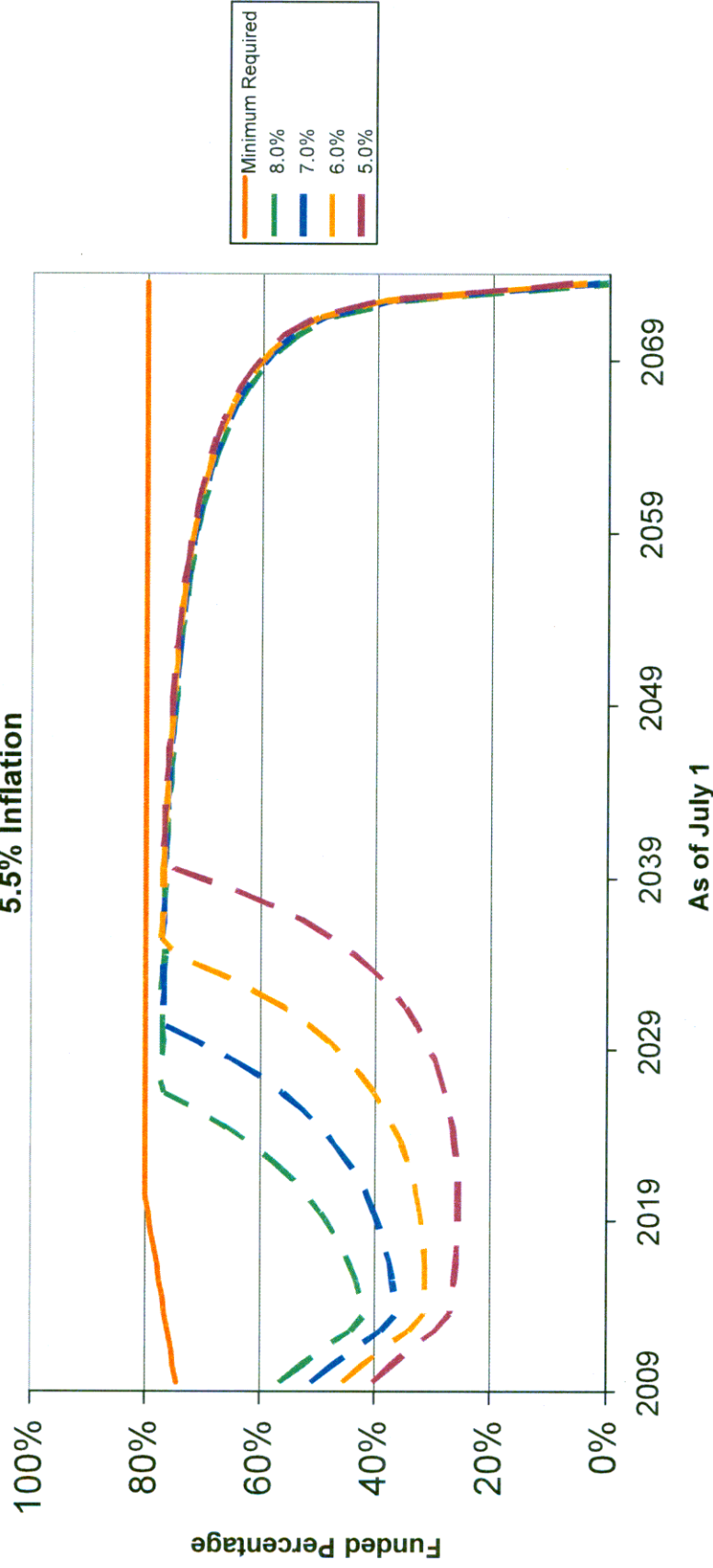
**P<sup>3</sup>** Actuaries you can understand

**Funded Percentage  
When Investment Return Matches Discount Rate  
3.8% Inflation**



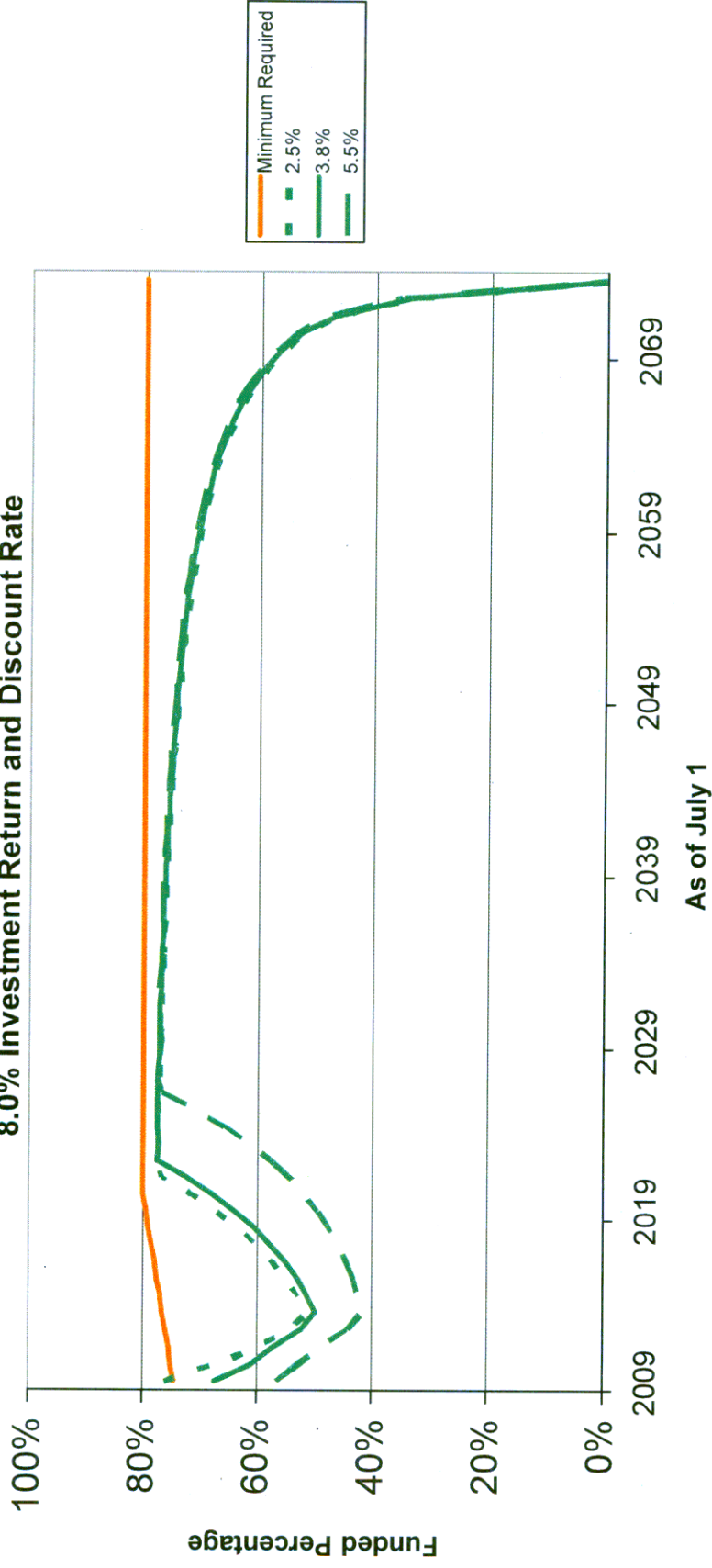
**P<sup>3</sup>** Actuaries you can understand

**Funded Percentage  
When Investment Return Matches Discount Rate  
5.5% Inflation**



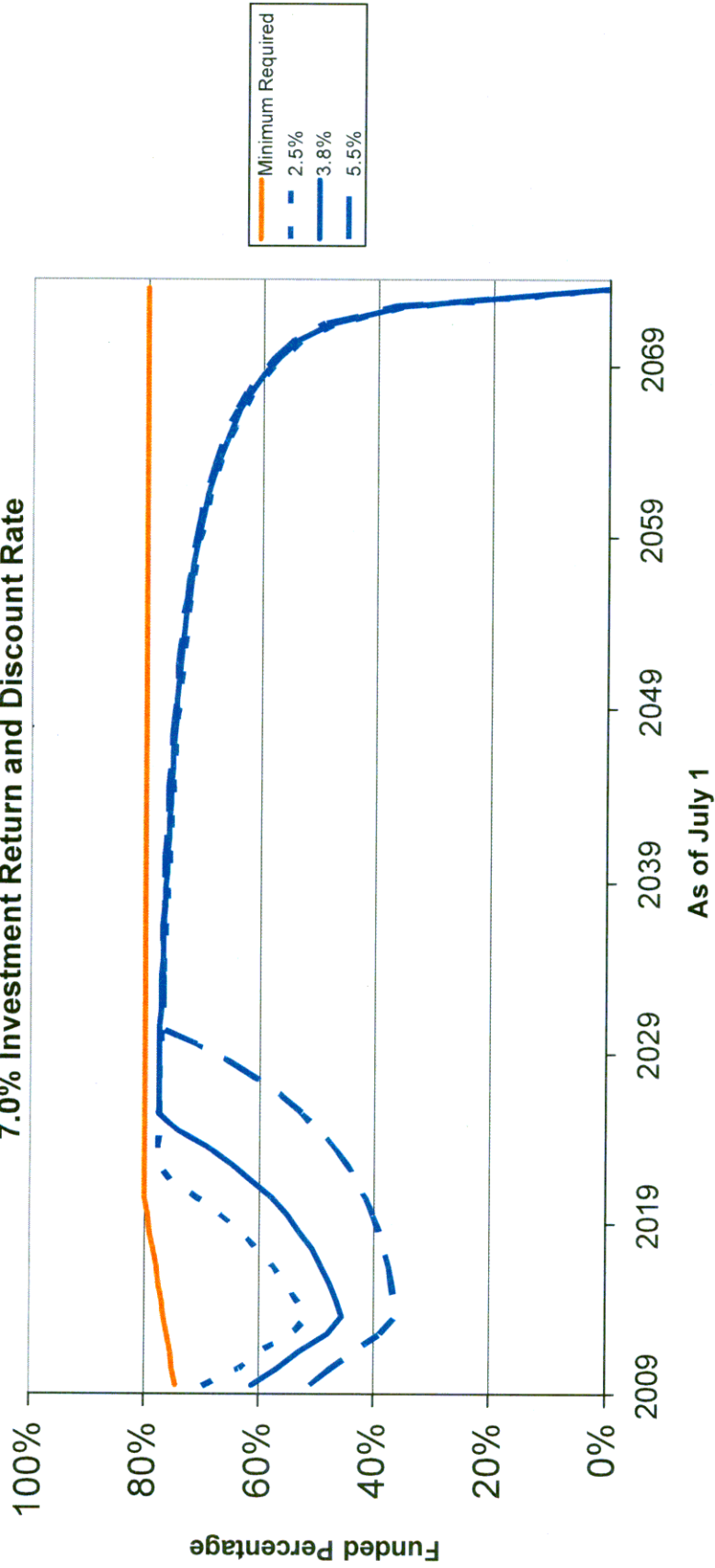
**P<sup>3</sup>** Actuaries you can understand

**Funded Percentage  
at Varying Inflation Rates  
8.0% Investment Return and Discount Rate**



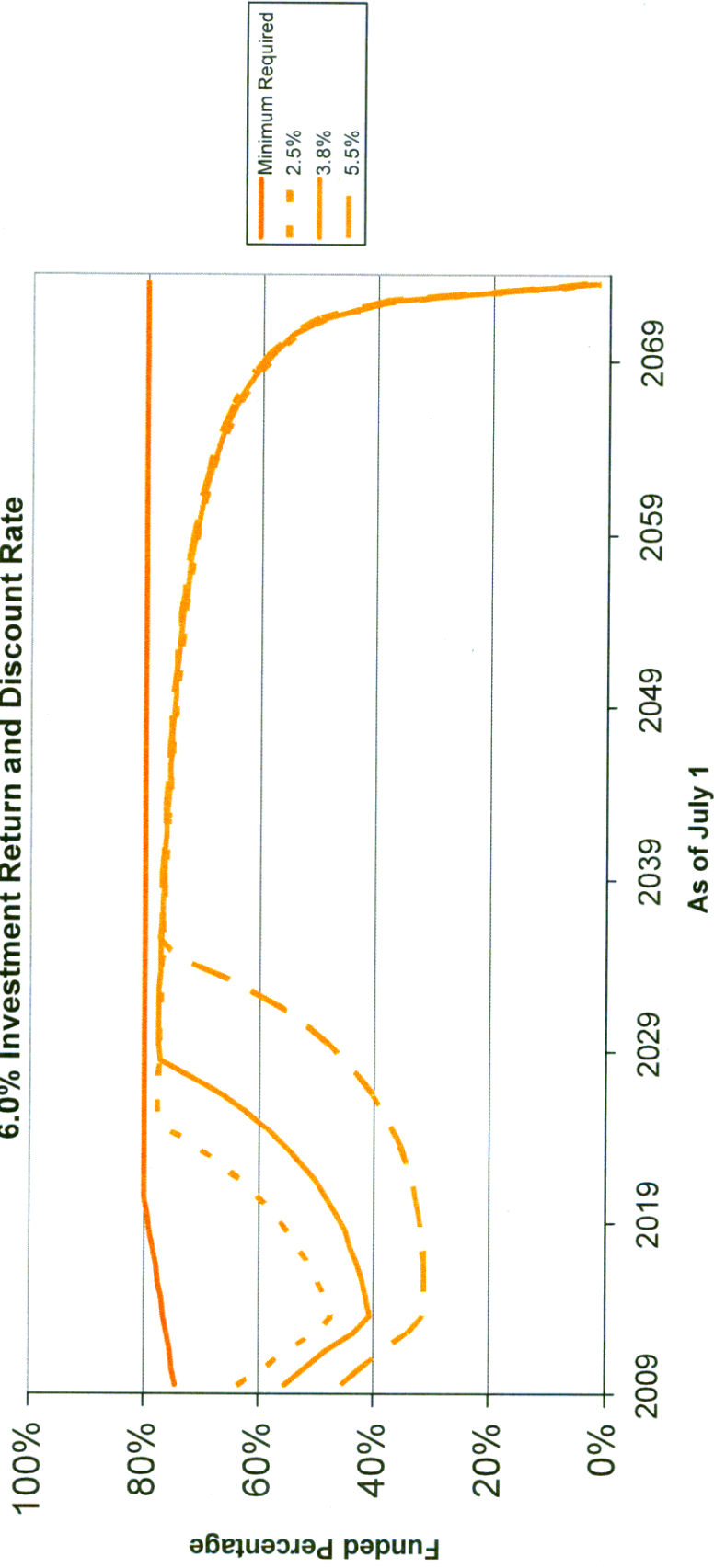
**P<sup>3</sup>** *Actuaries you can understand*

Funded Percentage  
at Varying Inflation Rates  
7.0% Investment Return and Discount Rate



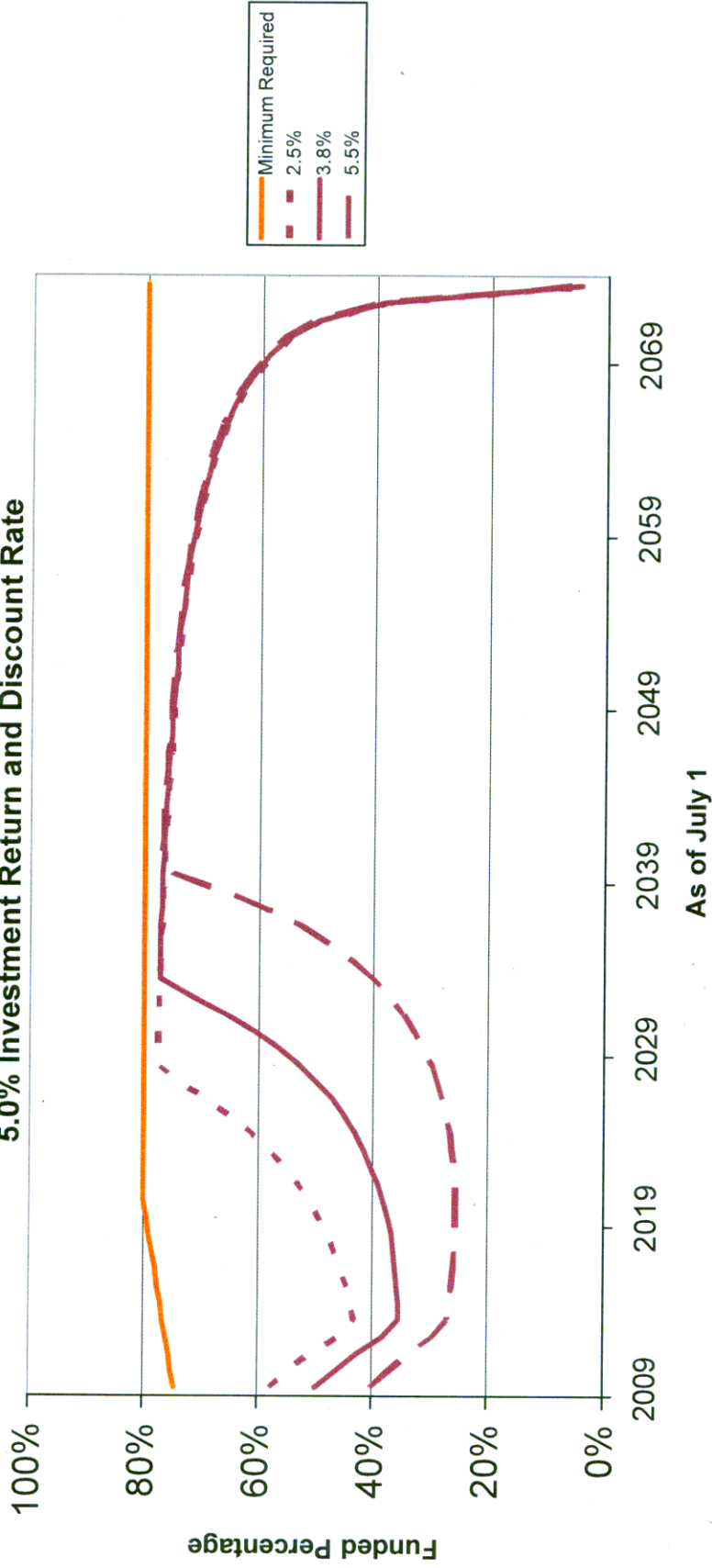
**P<sup>3</sup>** Actuaries you can understand

Funded Percentage  
at Varying Inflation Rates  
6.0% Investment Return and Discount Rate

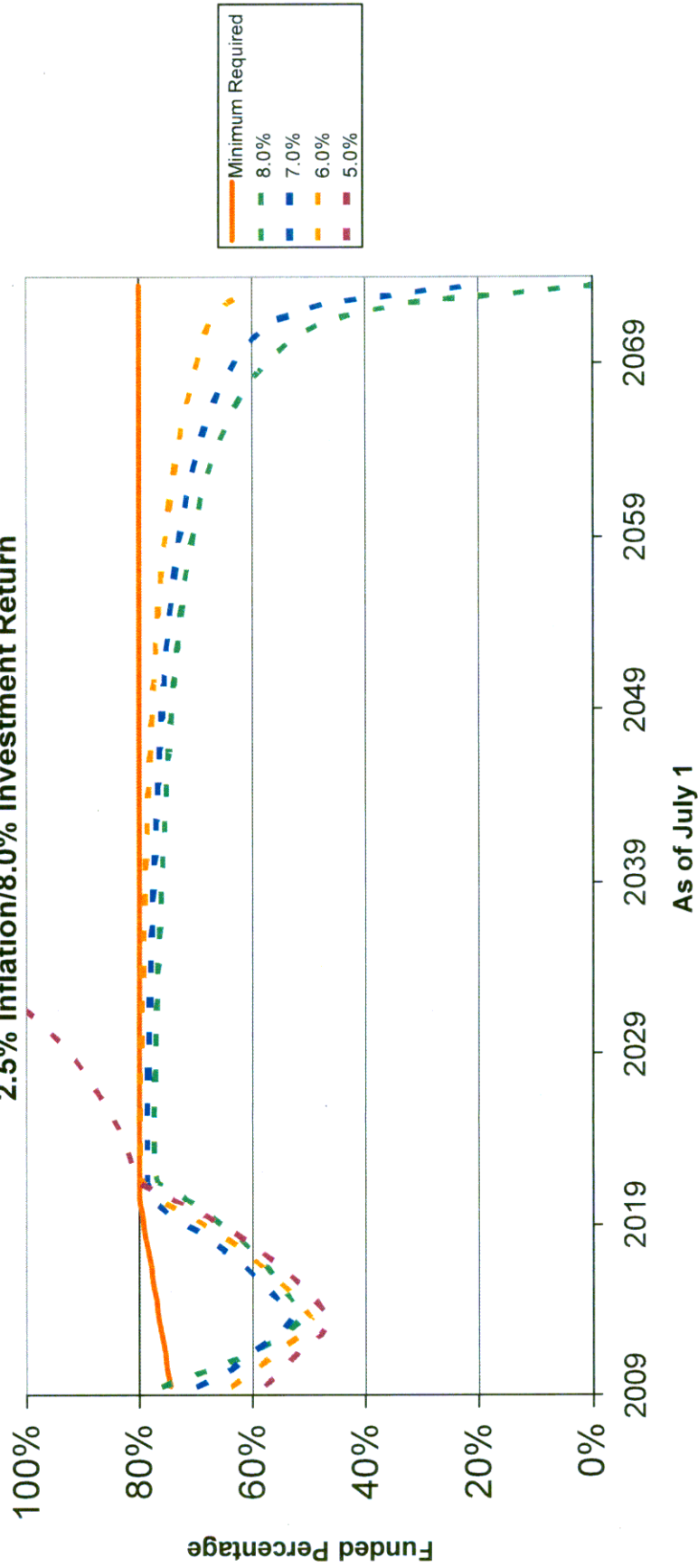




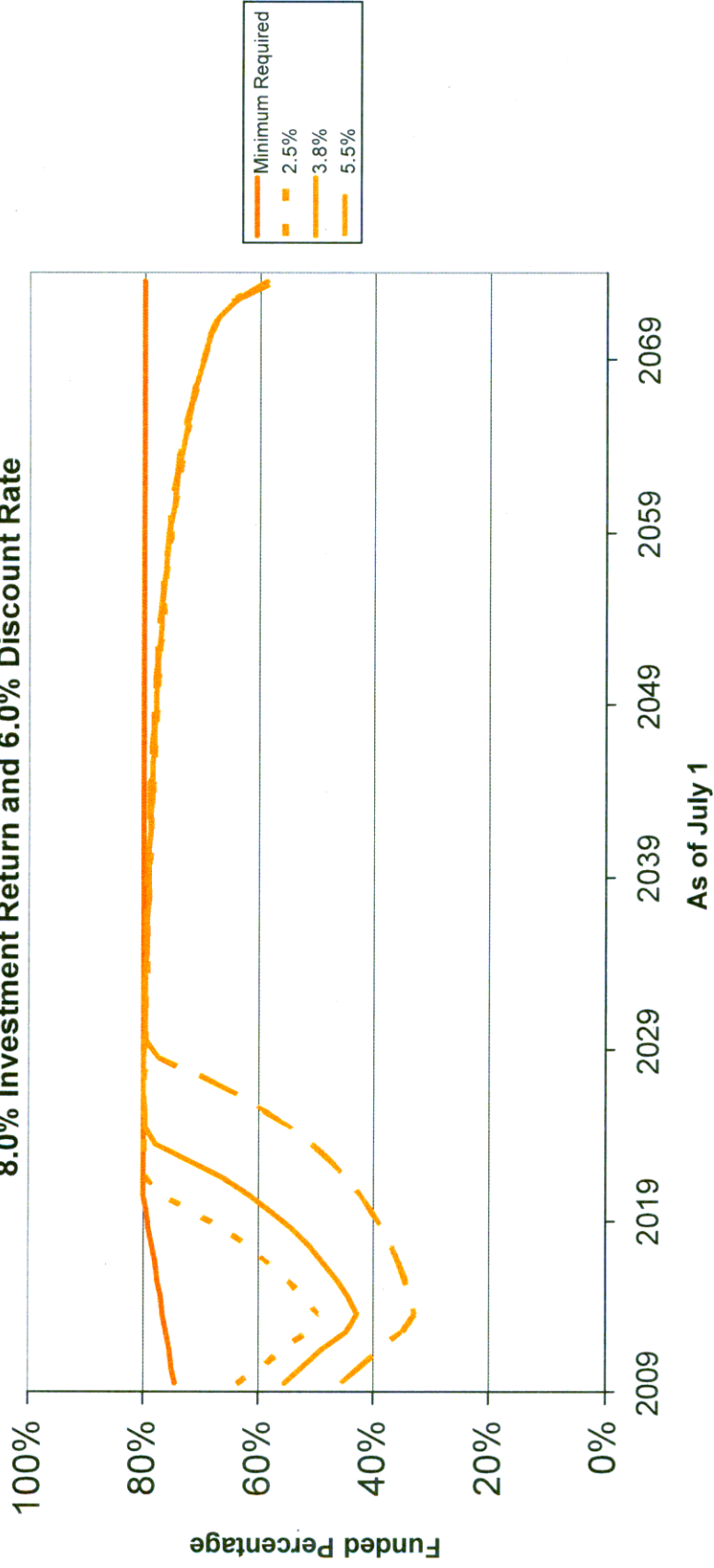
Funded Percentage  
at Varying Inflation Rates  
5.0% Investment Return and Discount Rate



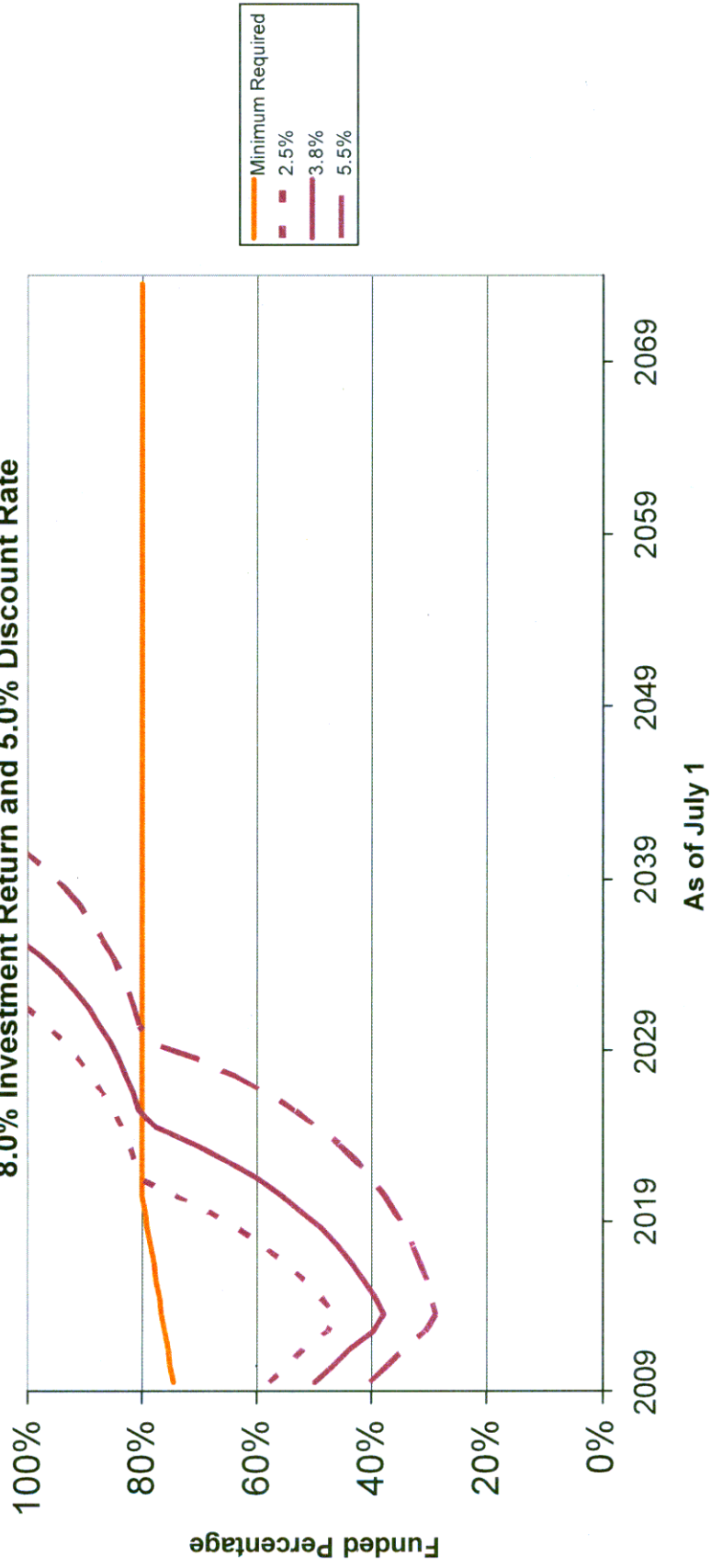
**Funded Percentage  
at Varying Discount Rates  
2.5% Inflation/8.0% Investment Return**



**Funded Percentage  
at Varying Inflation Rates  
8.0% Investment Return and 6.0% Discount Rate**



**Funded Percentage  
at Varying Inflation Rates  
8.0% Investment Return and 5.0% Discount Rate**



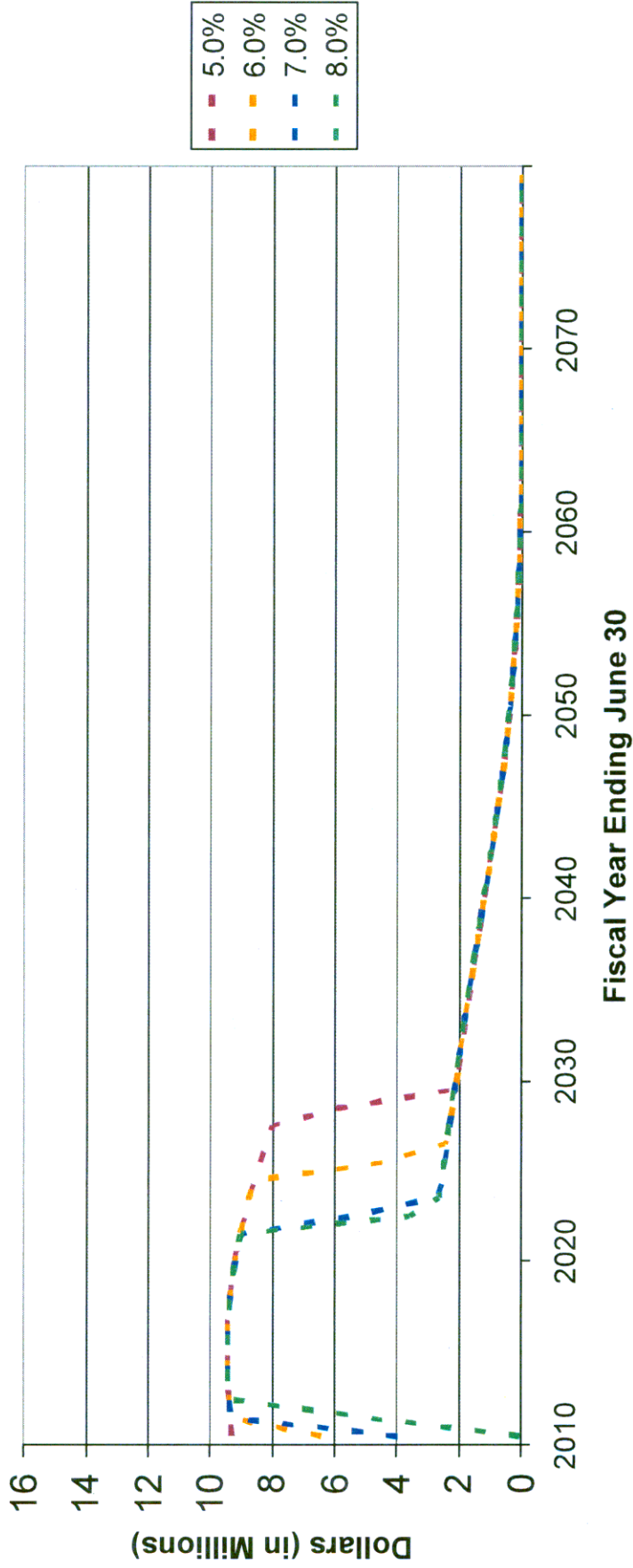
# City Contributions

- Annual amount the City is required to contribute to the Fire and Police Retirement System under Contribution Agreement #16,900

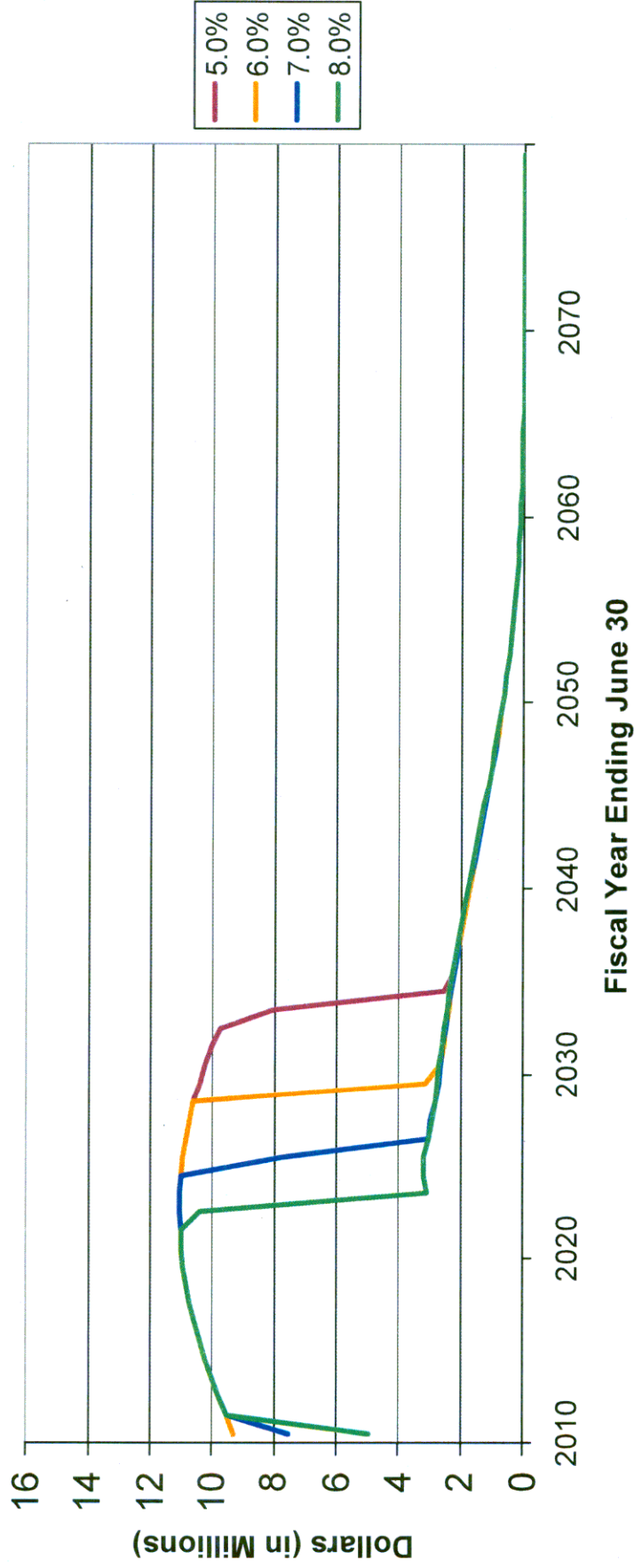
# City Contributions

- Will vary based on changes in Inflation, Discount Rate or Actual Investment Return
- Graphs show results by:
  - Inflation (3 graphs),
  - Discount Rate (4 graphs), and
  - Actual Investment Return (2 sets of 7 graphs)

**Contributions**  
**When Investment Return Matches Discount Rate**  
**2.5% Inflation**



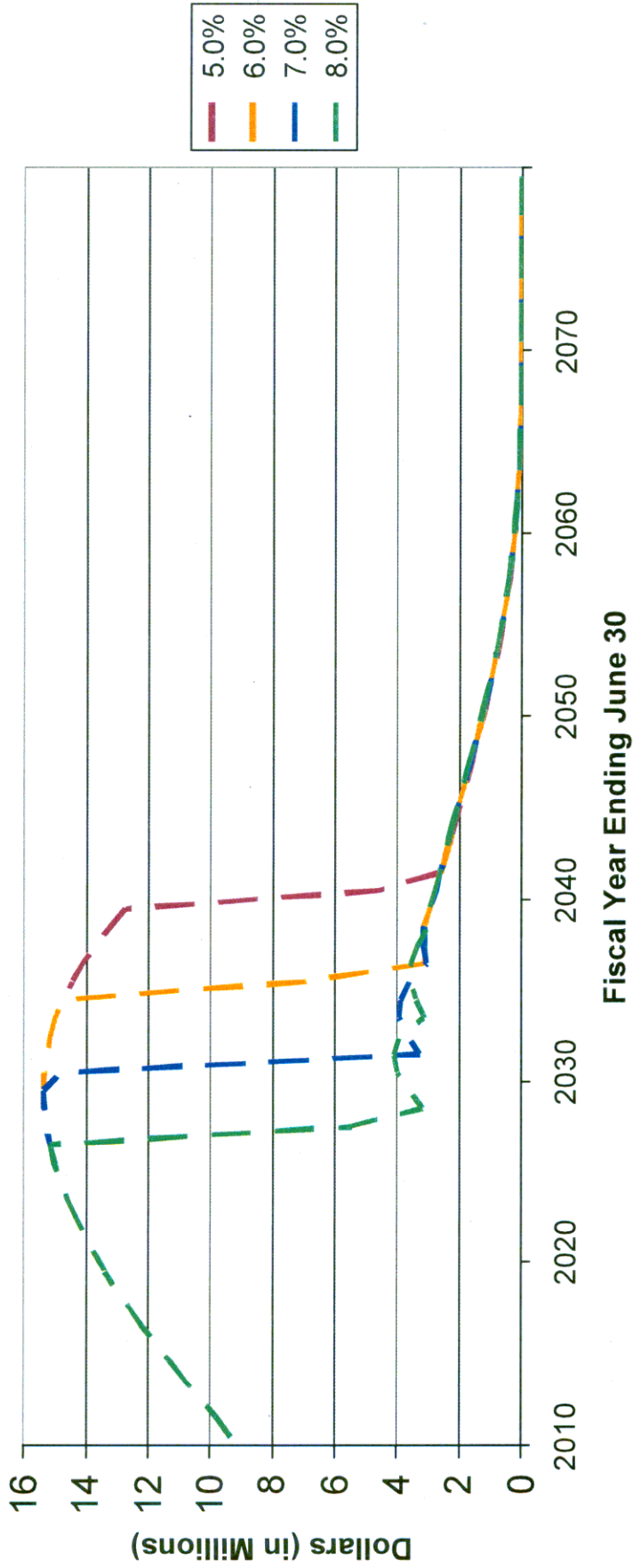
**Contributions**  
**When Investment Return Matches Discount Rate**  
**3.8% Inflation**



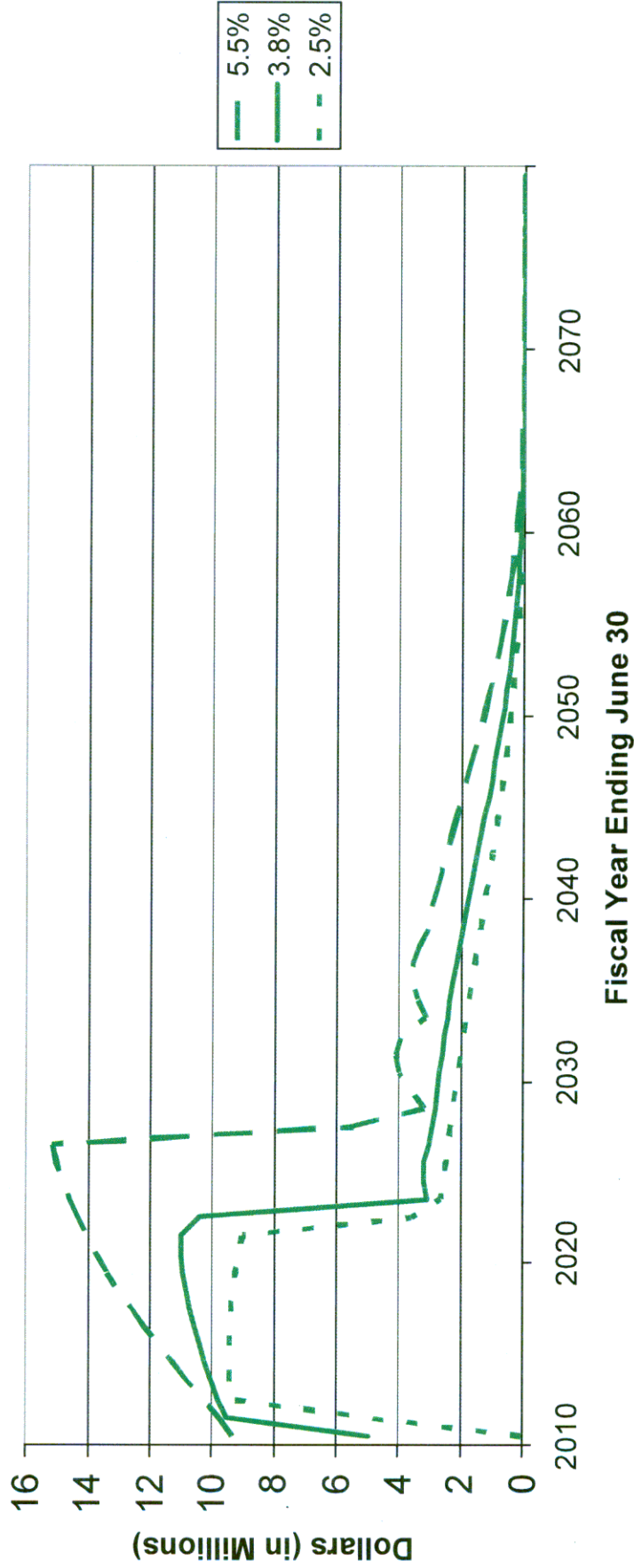
**P<sup>3</sup>** *Actuaries you can understand*



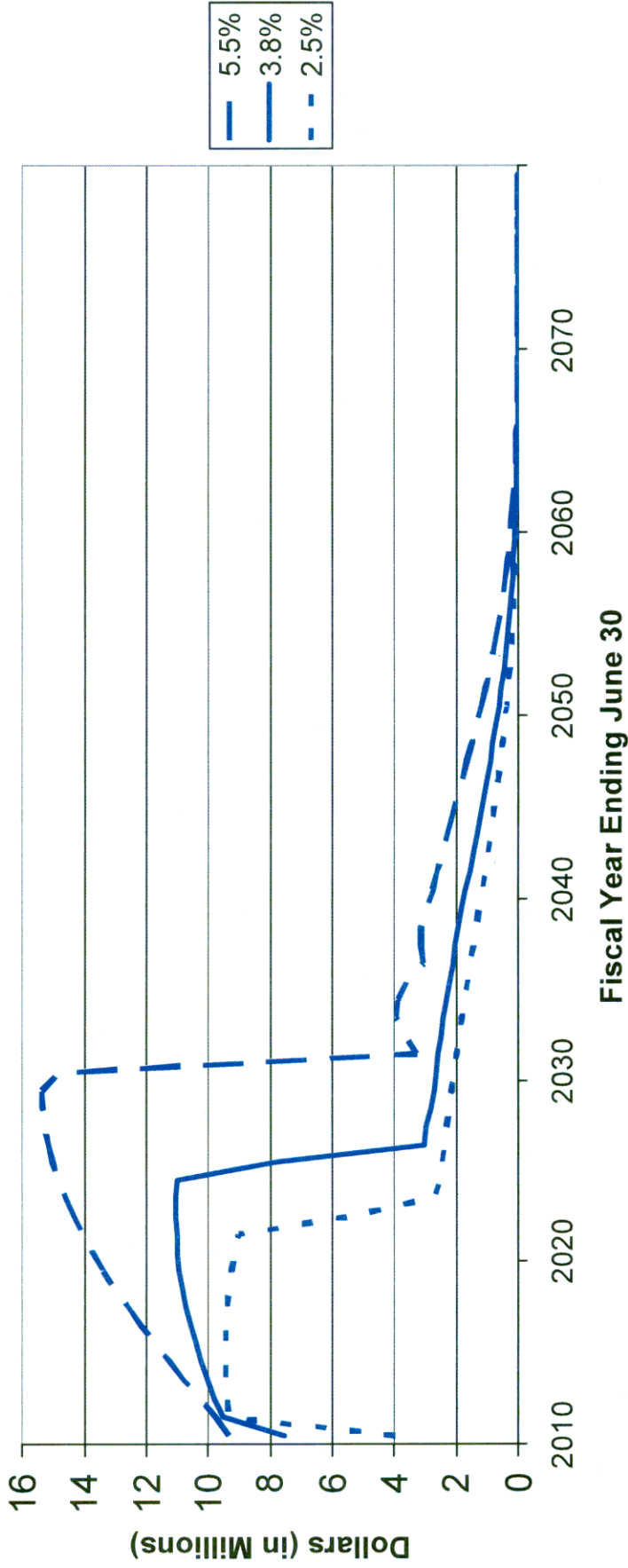
**Contributions**  
**When Investment Return Matches Discount Rate**  
**5.5% Inflation**



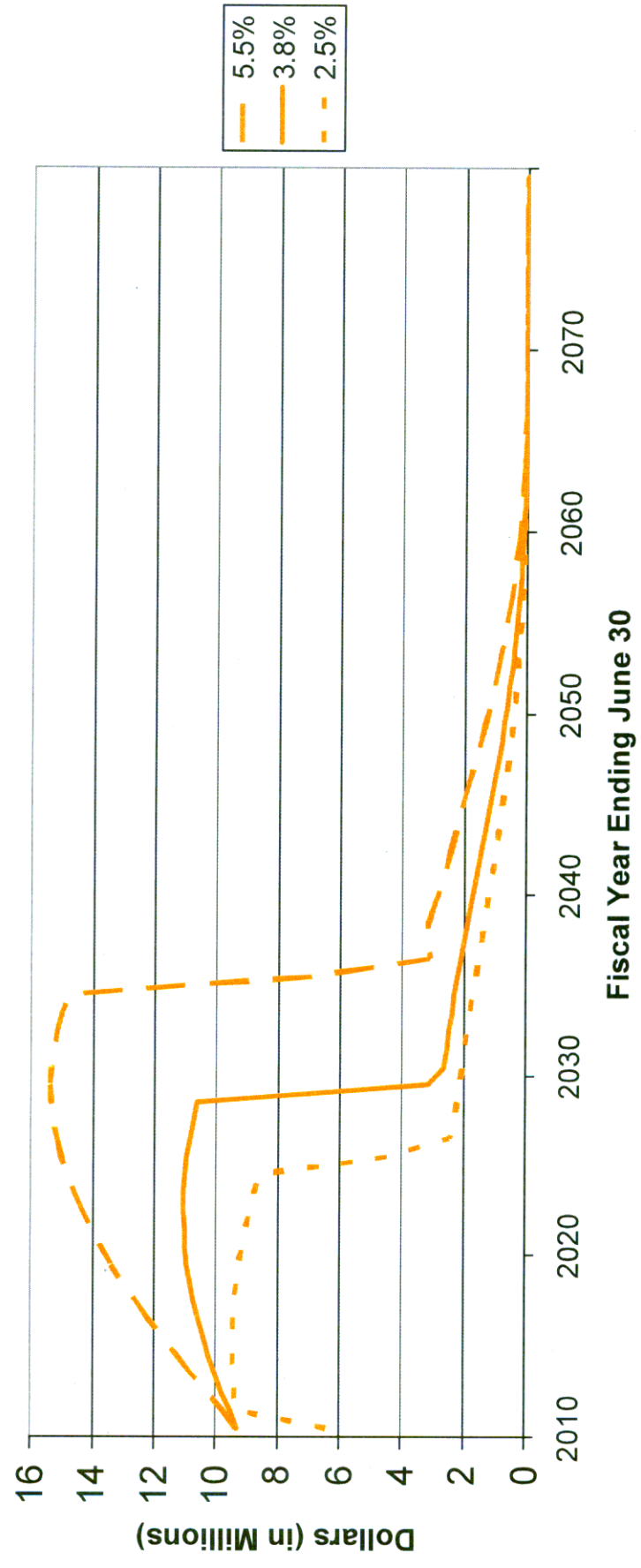
**Contributions  
at Varying Inflation Rates  
8.0% Investment Return and Discount Rate**



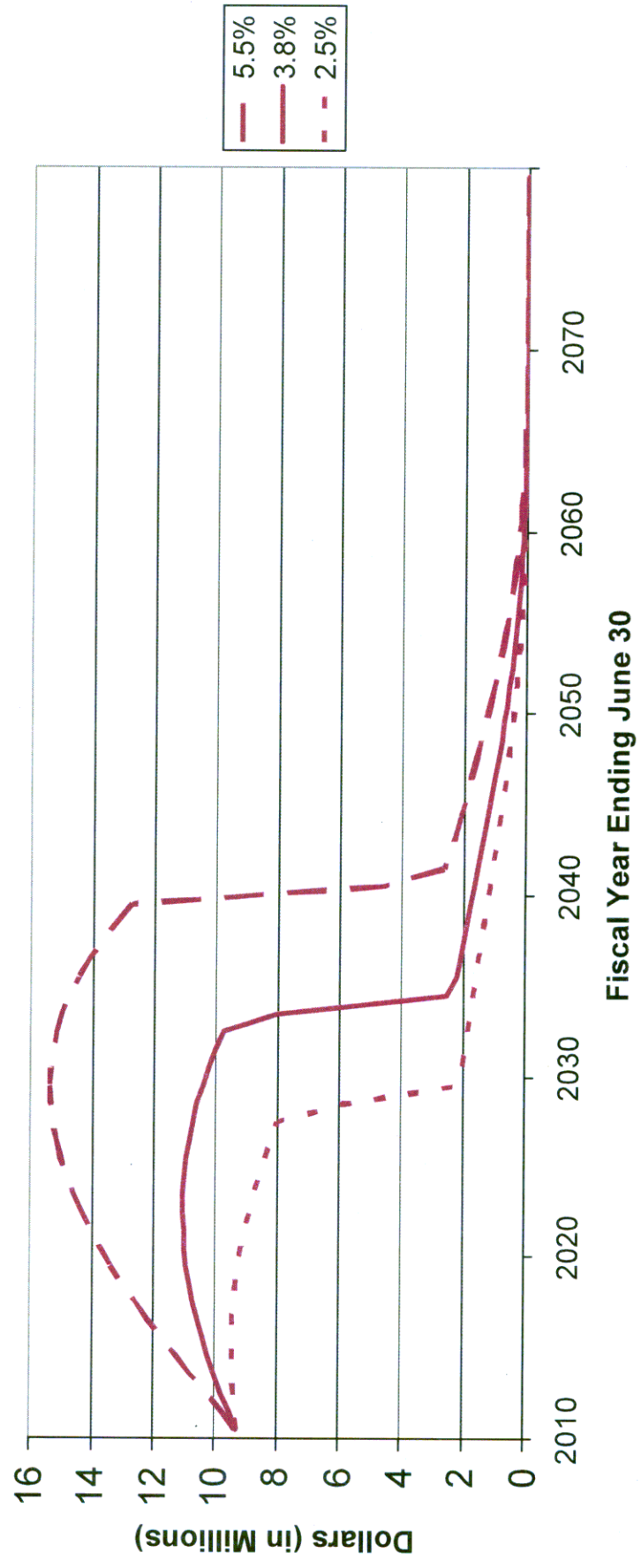
**Contributions  
at Varying Inflation Rates  
7.0% Investment Return and Discount Rate**



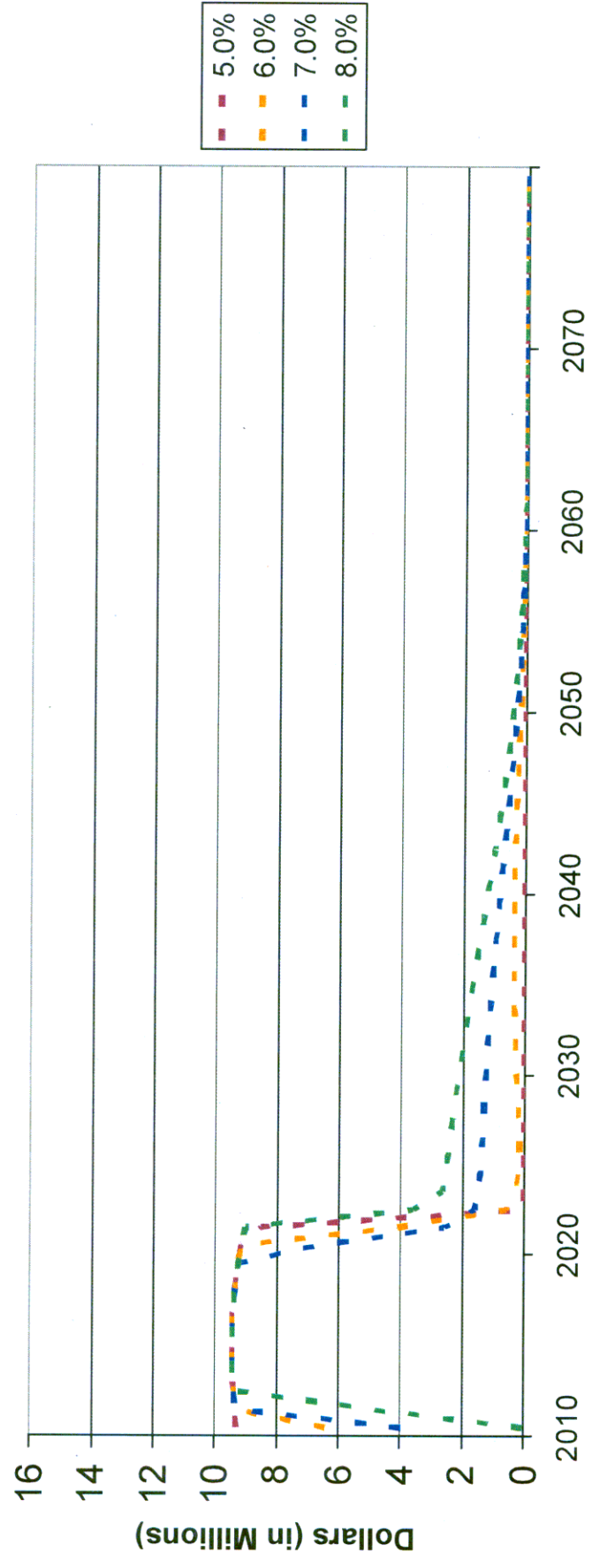
**Contributions  
at Varying Inflation Rates  
6.0% Investment Return and Discount Rate**



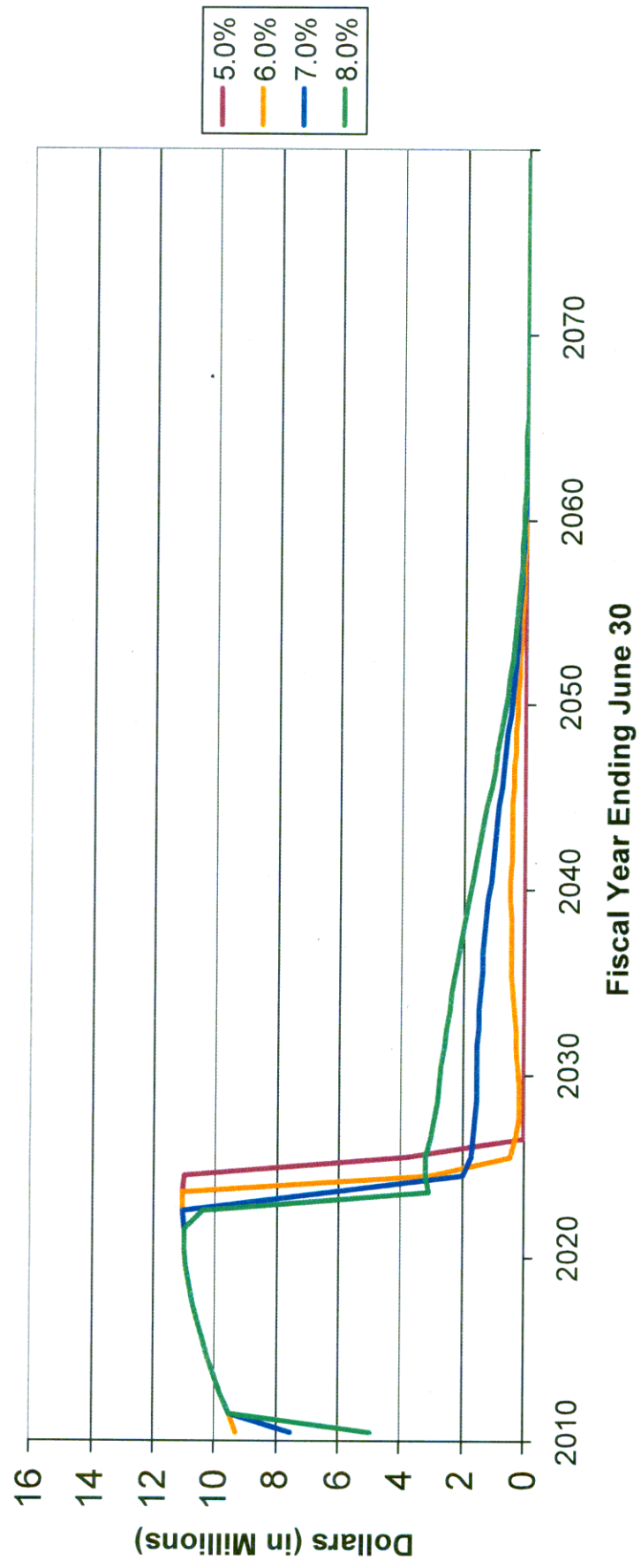
**Contributions  
at Varying Inflation Rates  
5.0% Investment Return and Discount Rate**



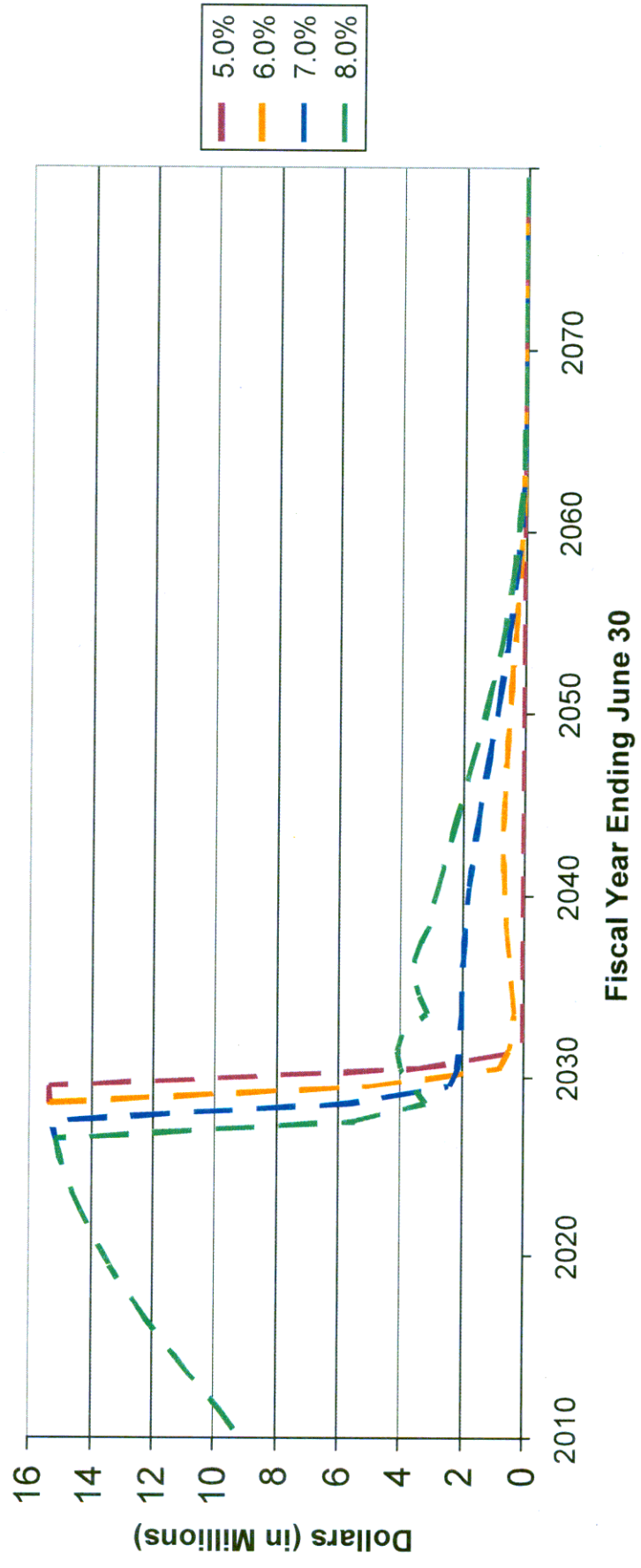
**Contributions  
at Varying Discount Rates  
2.5% Inflation/8.0% Investment Return**



**Contributions  
at Varying Discount Rates  
3.8% Inflation/8.0% Investment Return**



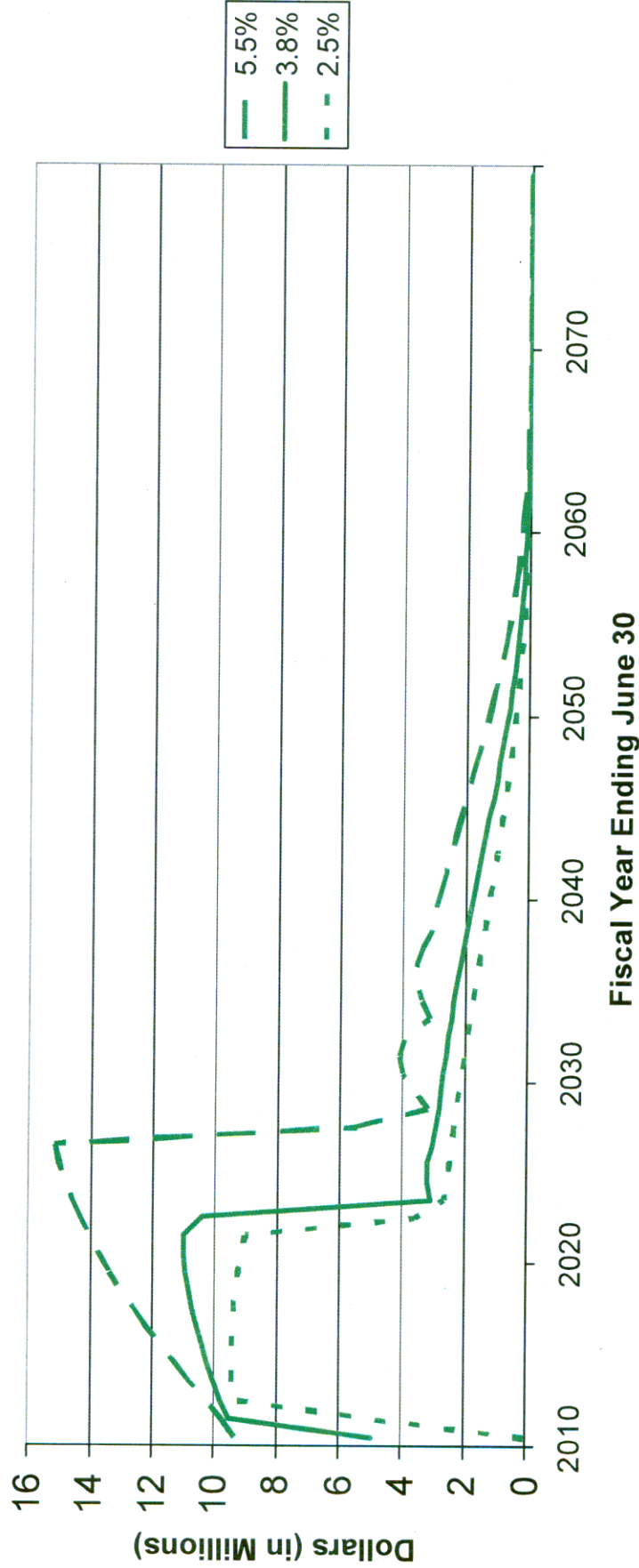
**Contributions  
at Varying Discount Rates  
5.5% Inflation/8.0% Investment Return**



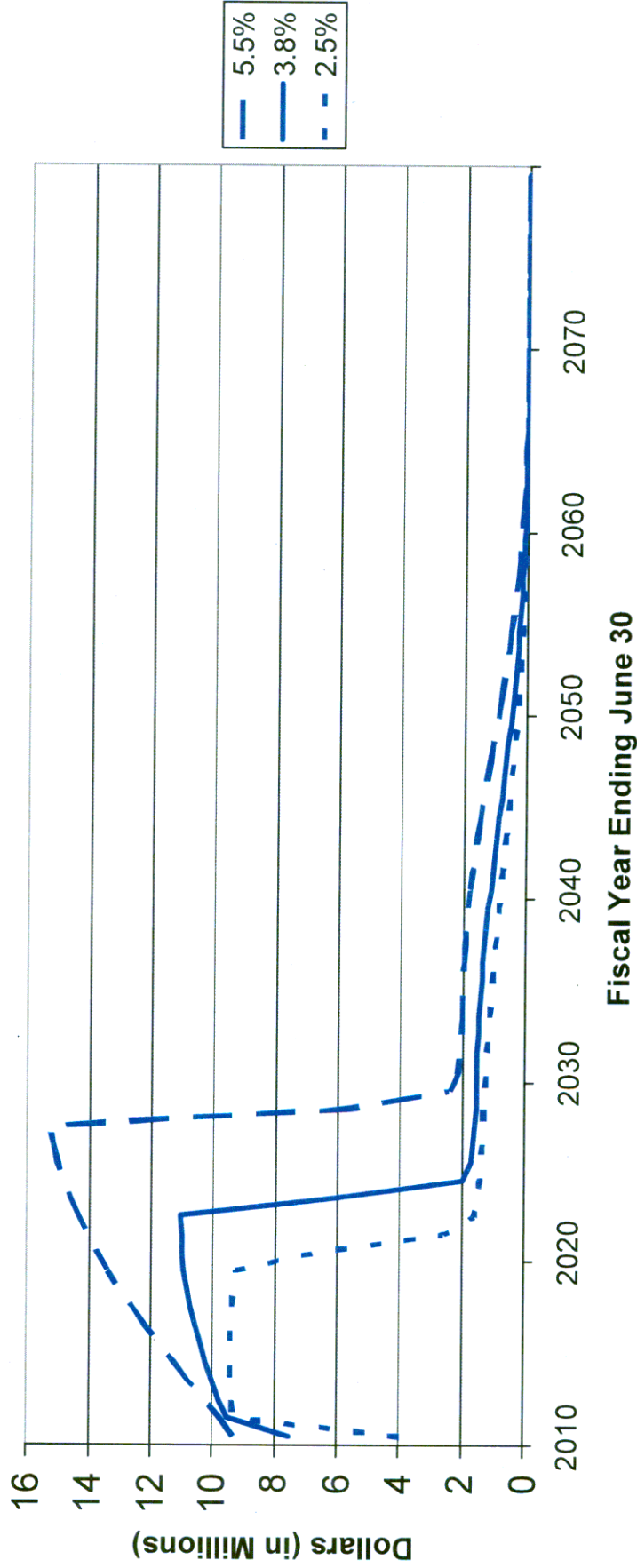
**P<sup>3</sup>** *Actuaries you can understand*



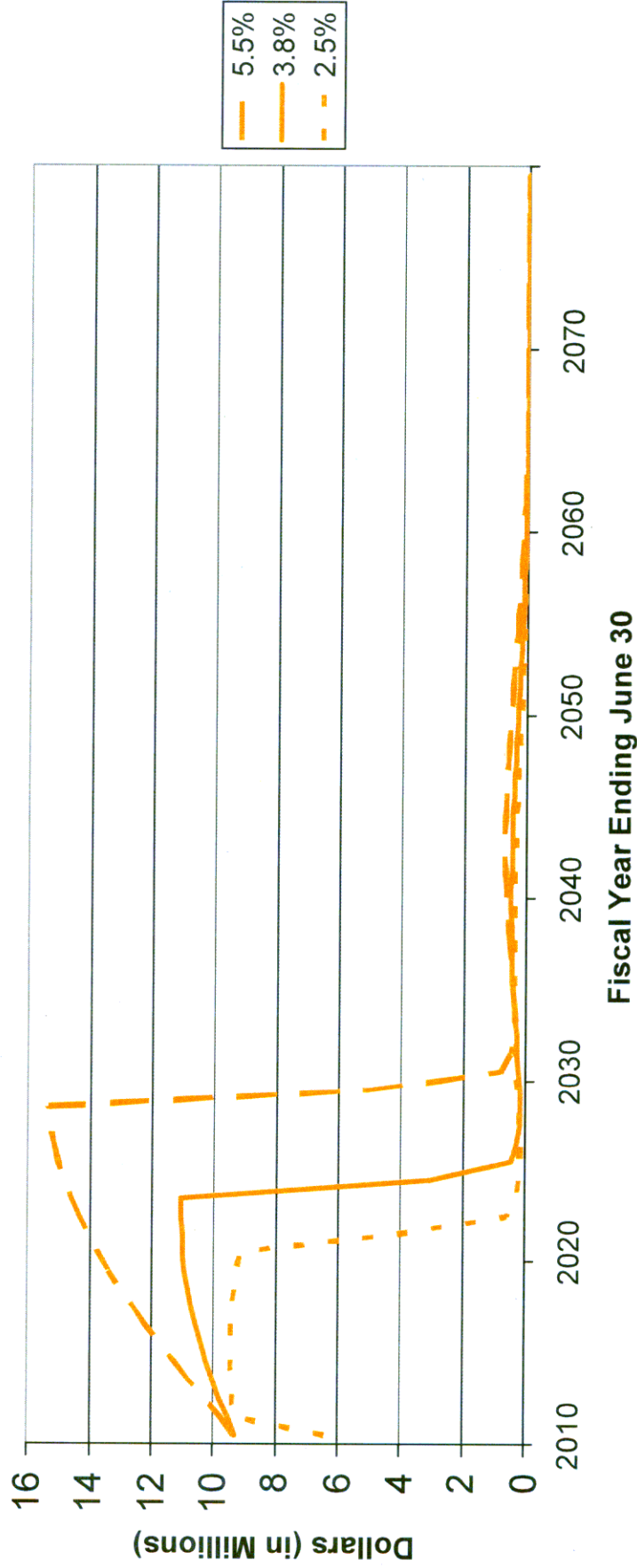
**Contributions  
at Varying Inflation Rates  
8.0% Investment Return and 8.0% Discount Rate**



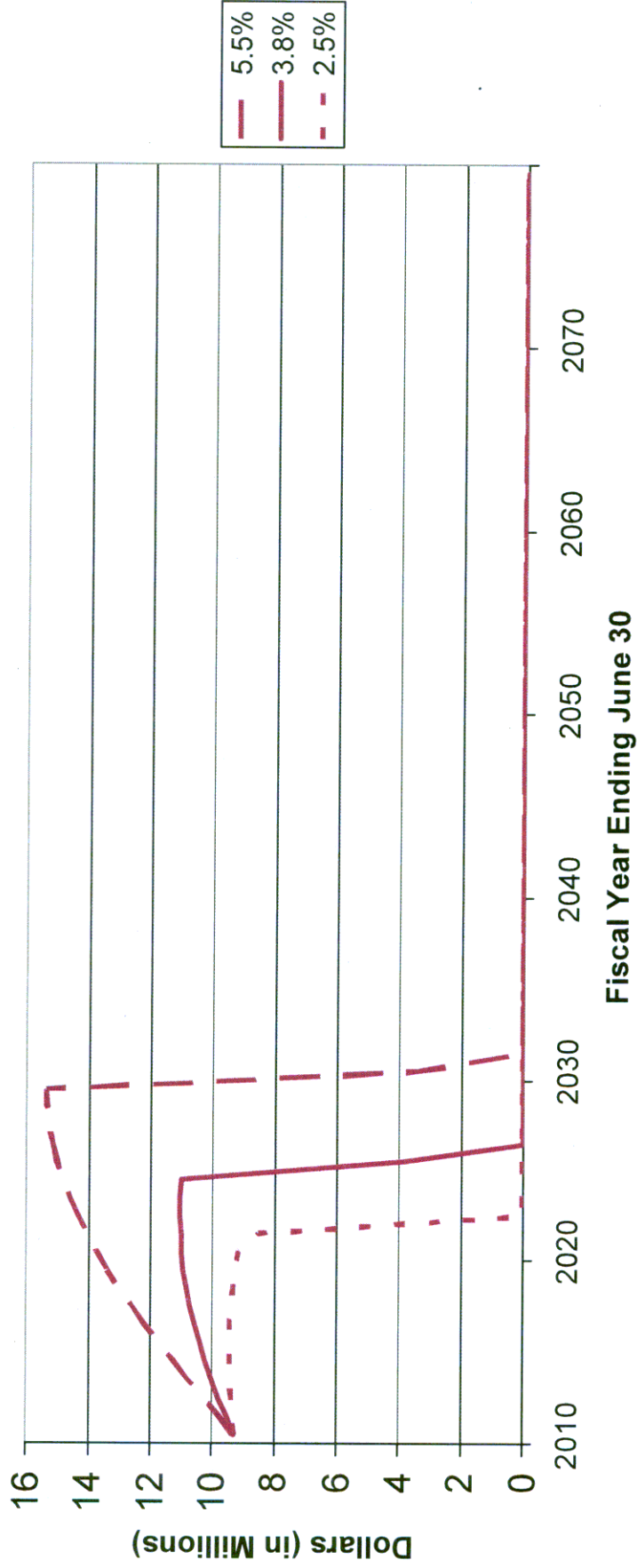
**Contributions  
at Varying Inflation Rates  
8.0% Investment Return and 7.0% Discount Rate**



**Contributions  
at Varying Inflation Rates  
8.0% Investment Return and 6.0% Discount Rate**



**Contributions  
at Varying Inflation Rates  
8.0% Investment Return and 5.0% Discount Rate**



# Years of Benefit Payments

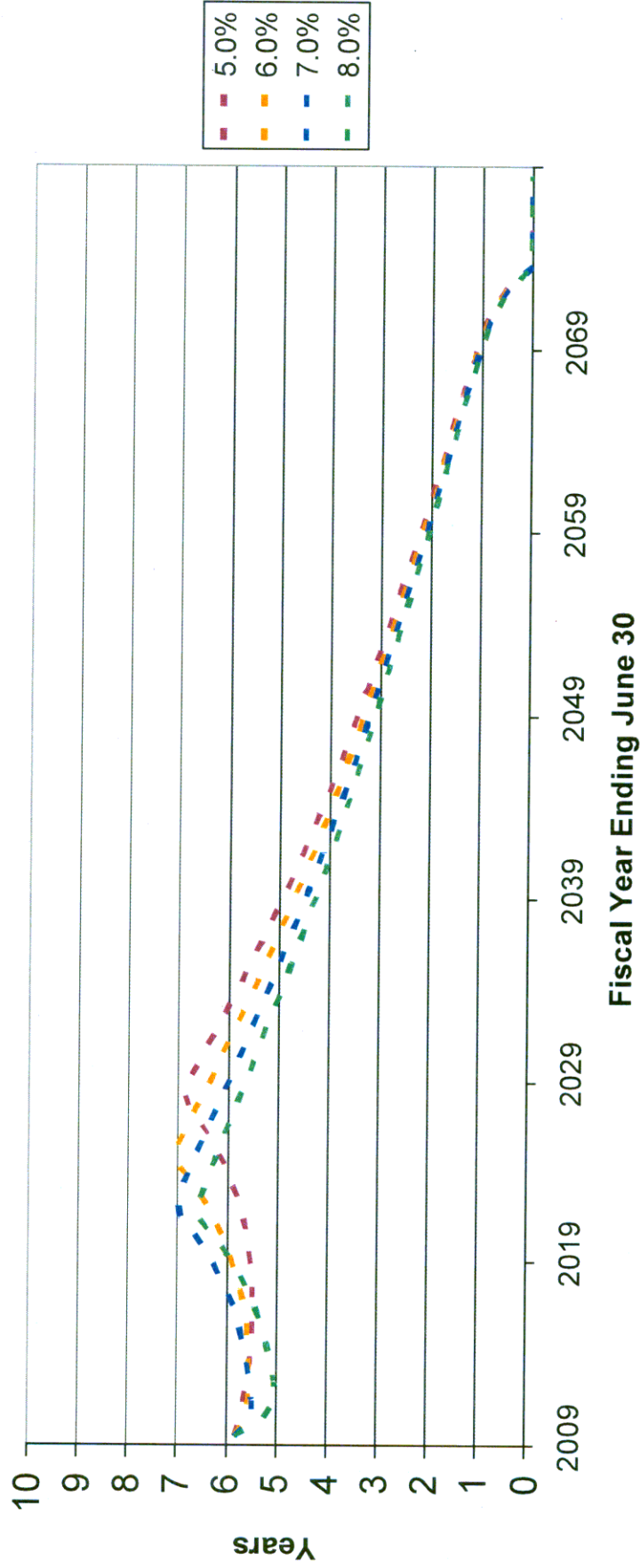
- Measure of Plan solvency

Ratio of Market Value of Assets  
to  
Current Year's Benefit Payments

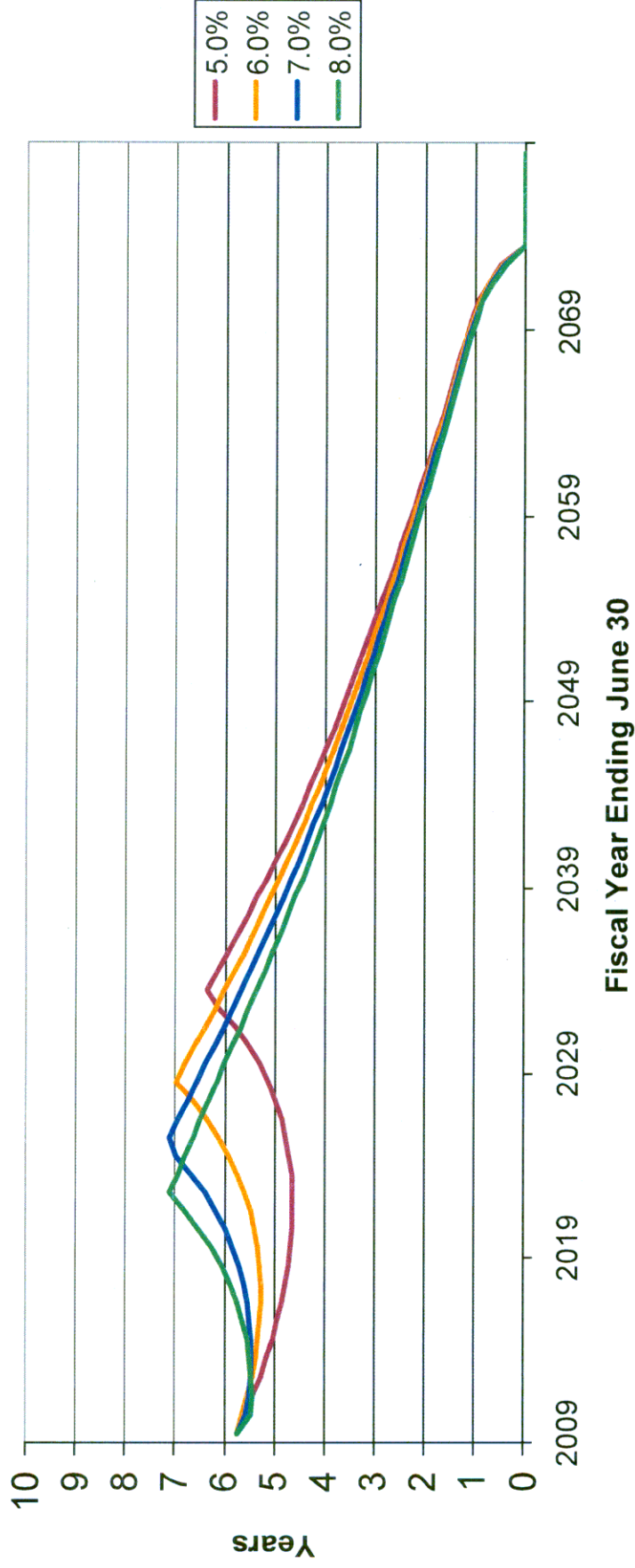
# Years of Benefit Payments

- Will vary based on changes in Inflation, Discount Rate or Actual Investment Return
- Graphs show results by:
  - Inflation (3 graphs),
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**Years of Benefit Payments Available  
When Investment Return Matches Discount Rate  
2.5% Inflation**

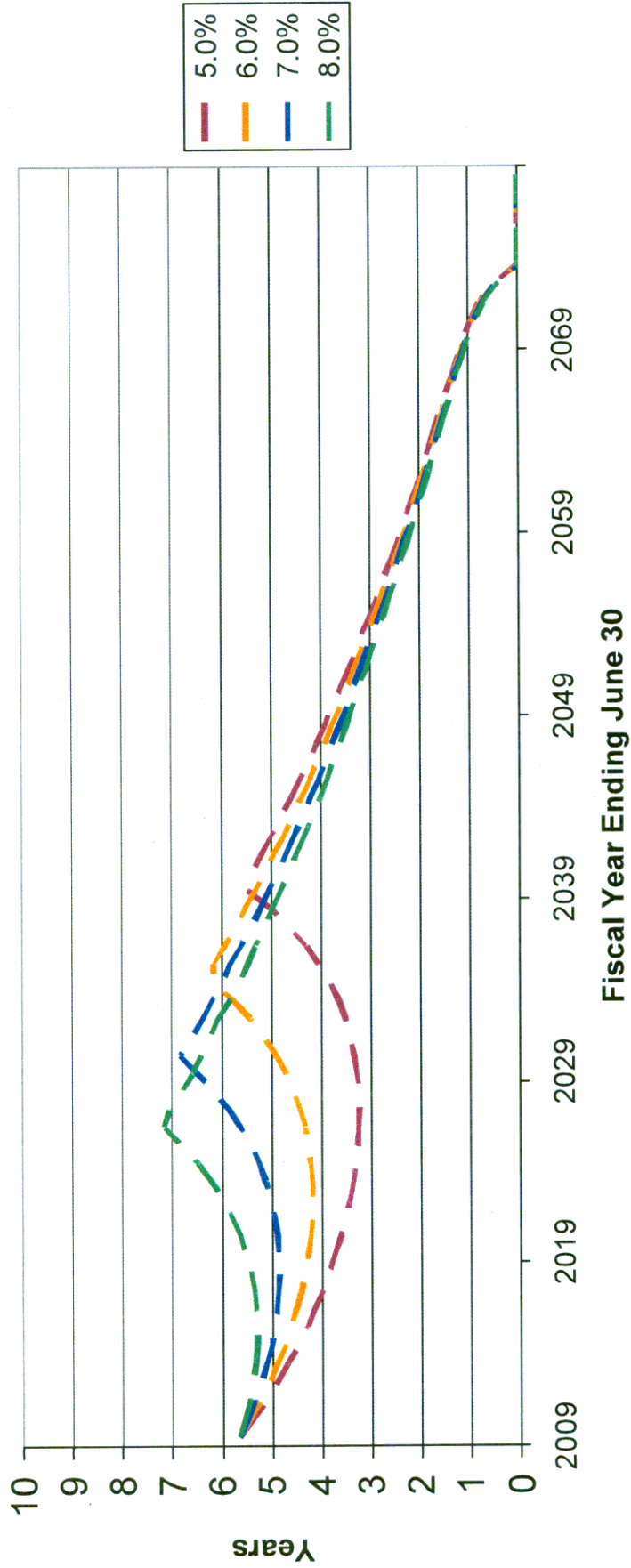


**Years of Benefit Payments Available  
When Investment Return Matches Discount Rate  
3.8% Inflation**

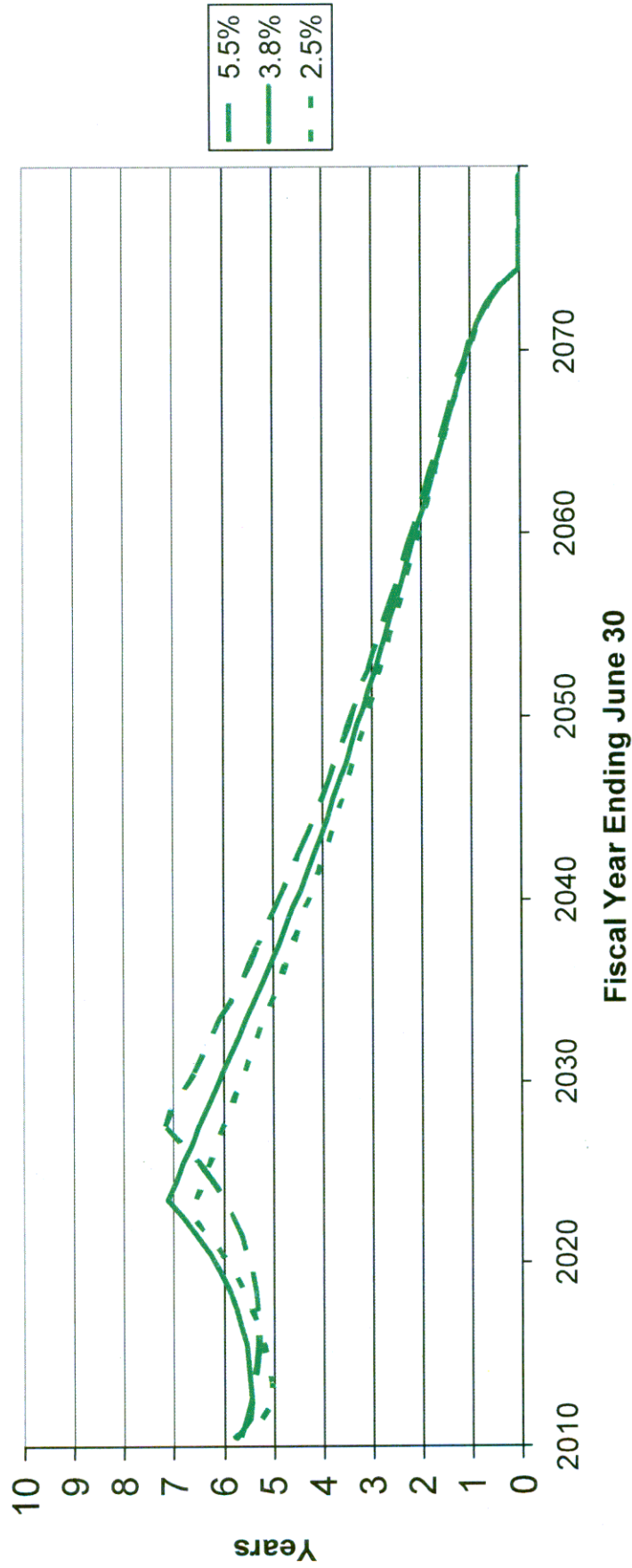




**Years of Benefit Payments Available  
When Investment Return Matches Discount Rate  
5.5% Inflation**

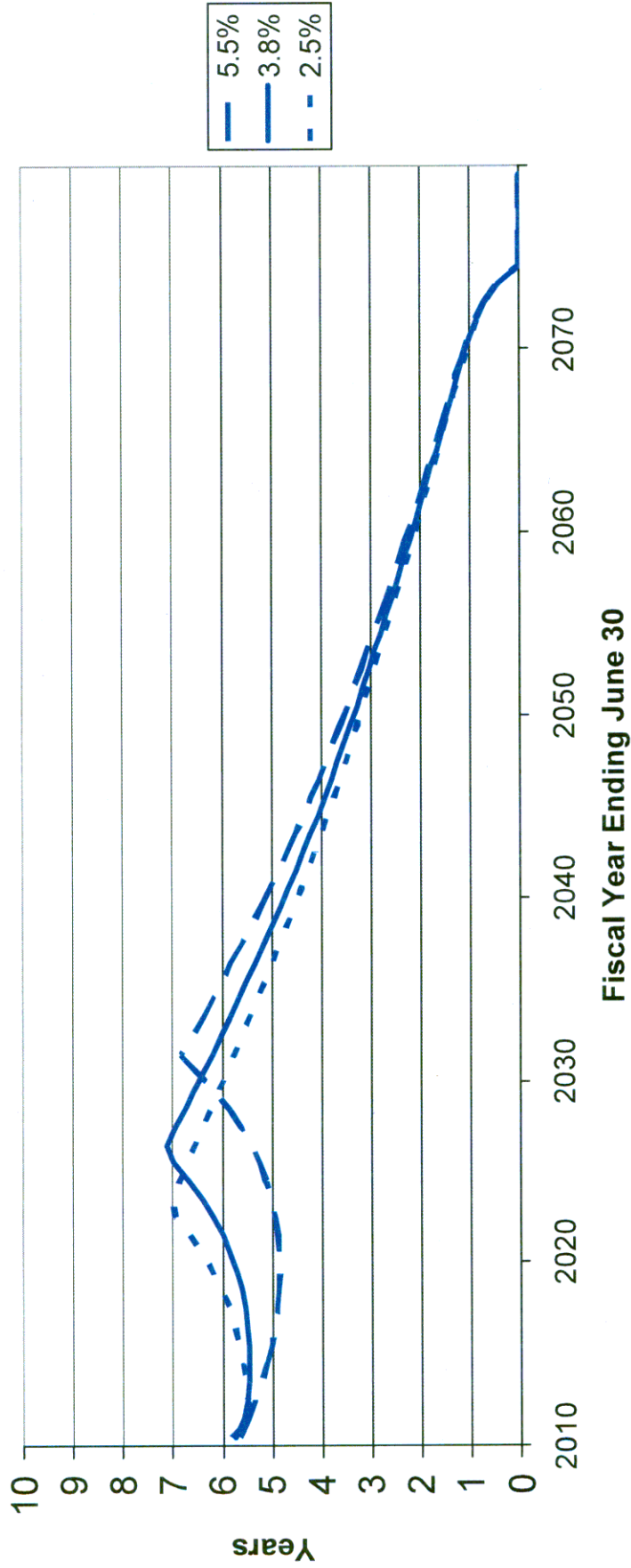


**Years of Benefit Payments Available  
at Varying Inflation Rates  
8.0% Investment Return and Discount Rate**

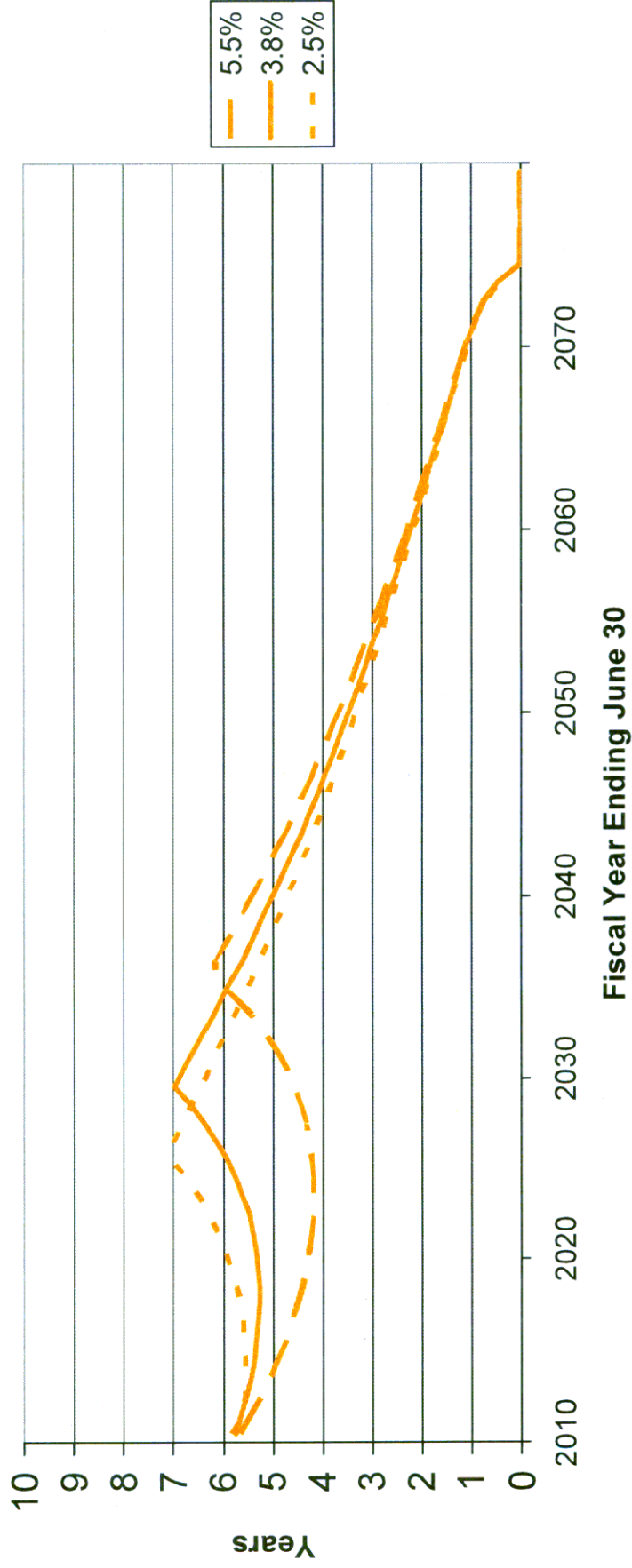


**P<sup>3</sup>** Actuaries you can understand

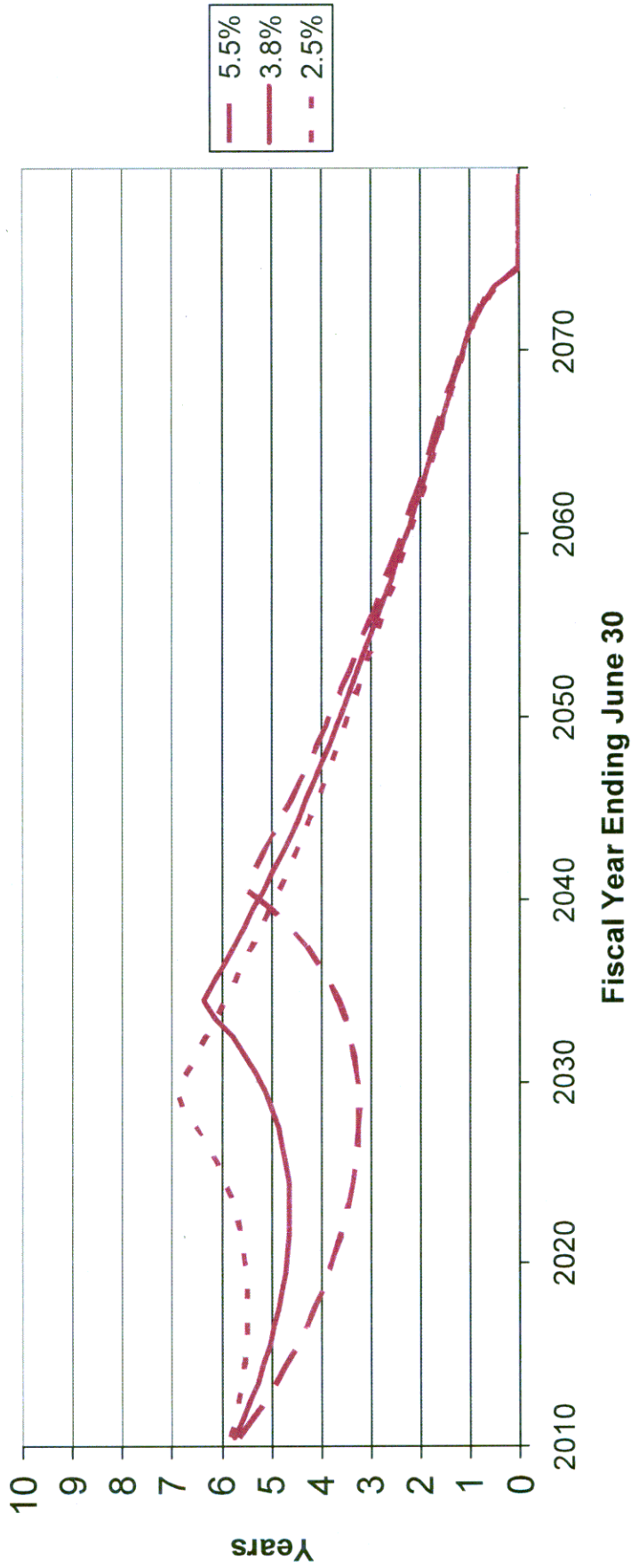
**Years of Benefit Payments Available  
at Varying Inflation Rates  
7.0% Investment Return and Discount Rate**



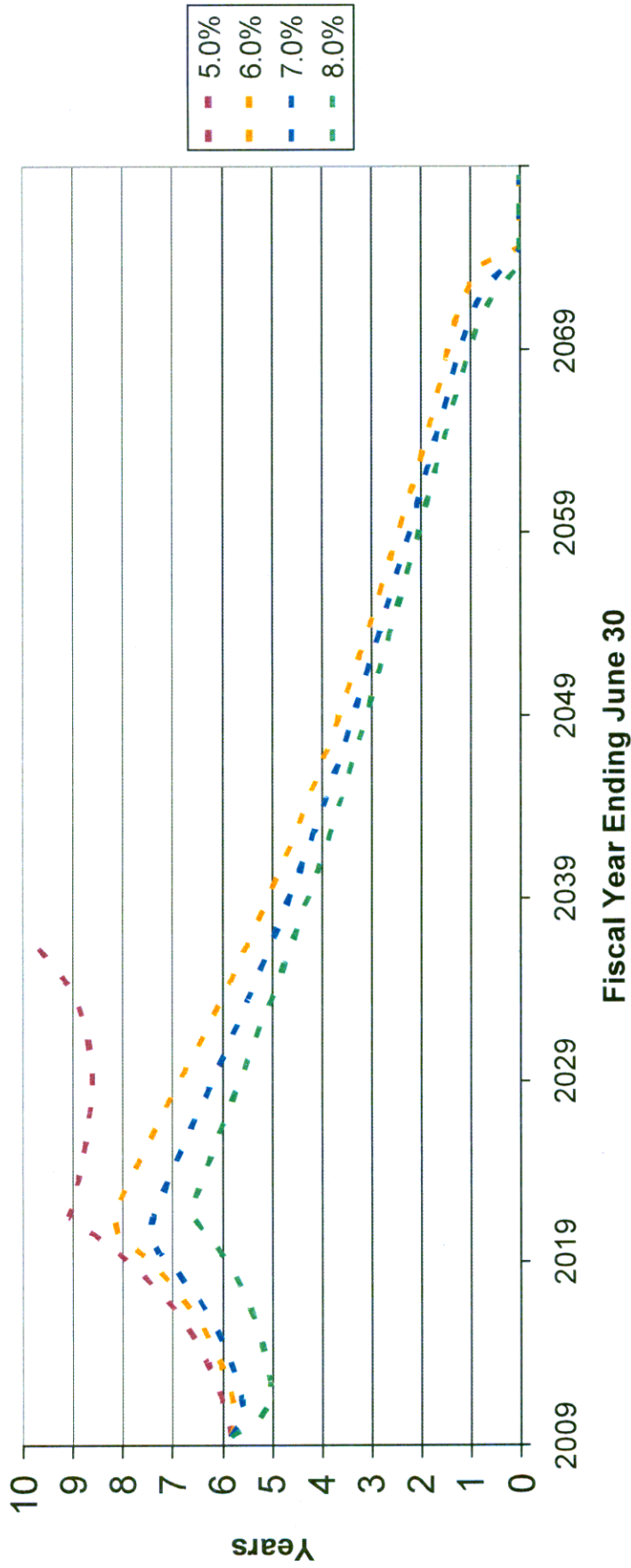
**Years of Benefit Payments Available  
at Varying Inflation Rates  
6.0% Investment Return and Discount Rate**



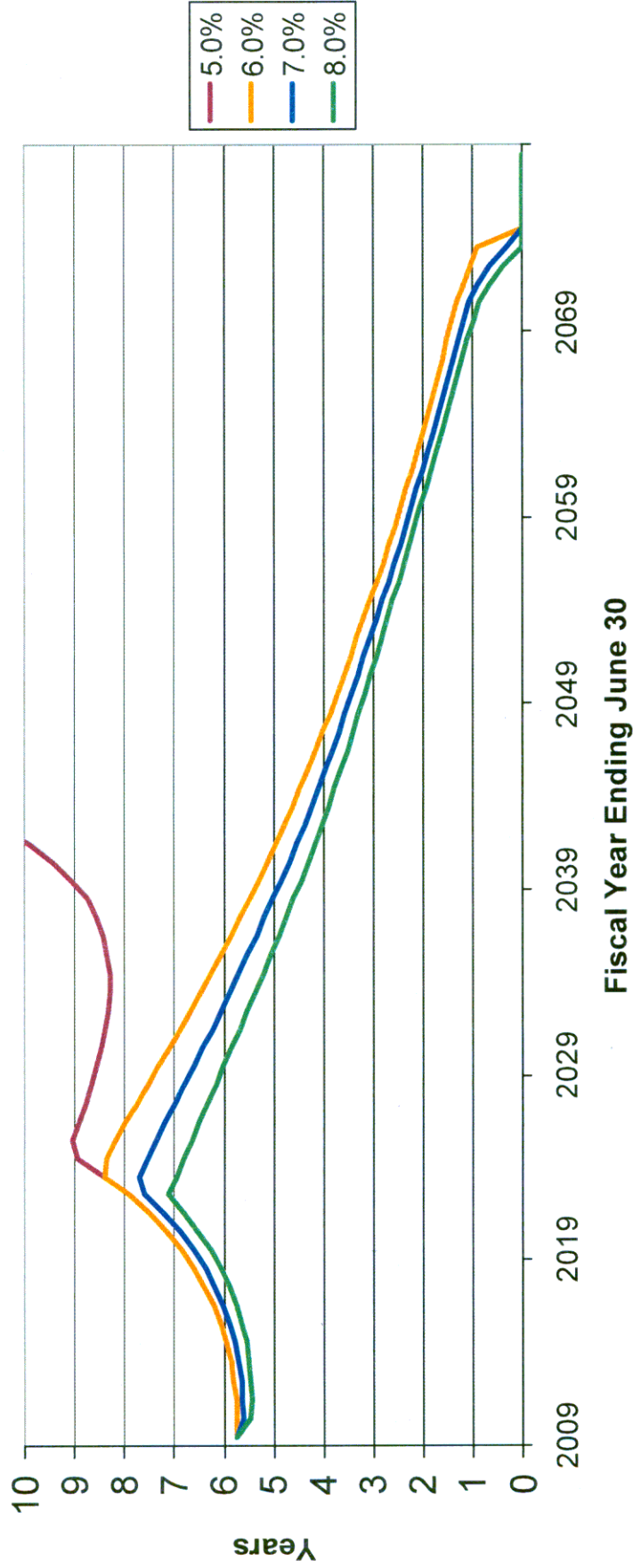
**Years of Benefit Payments Available  
at Varying Inflation Rates  
5.0% Investment Return and Discount Rate**



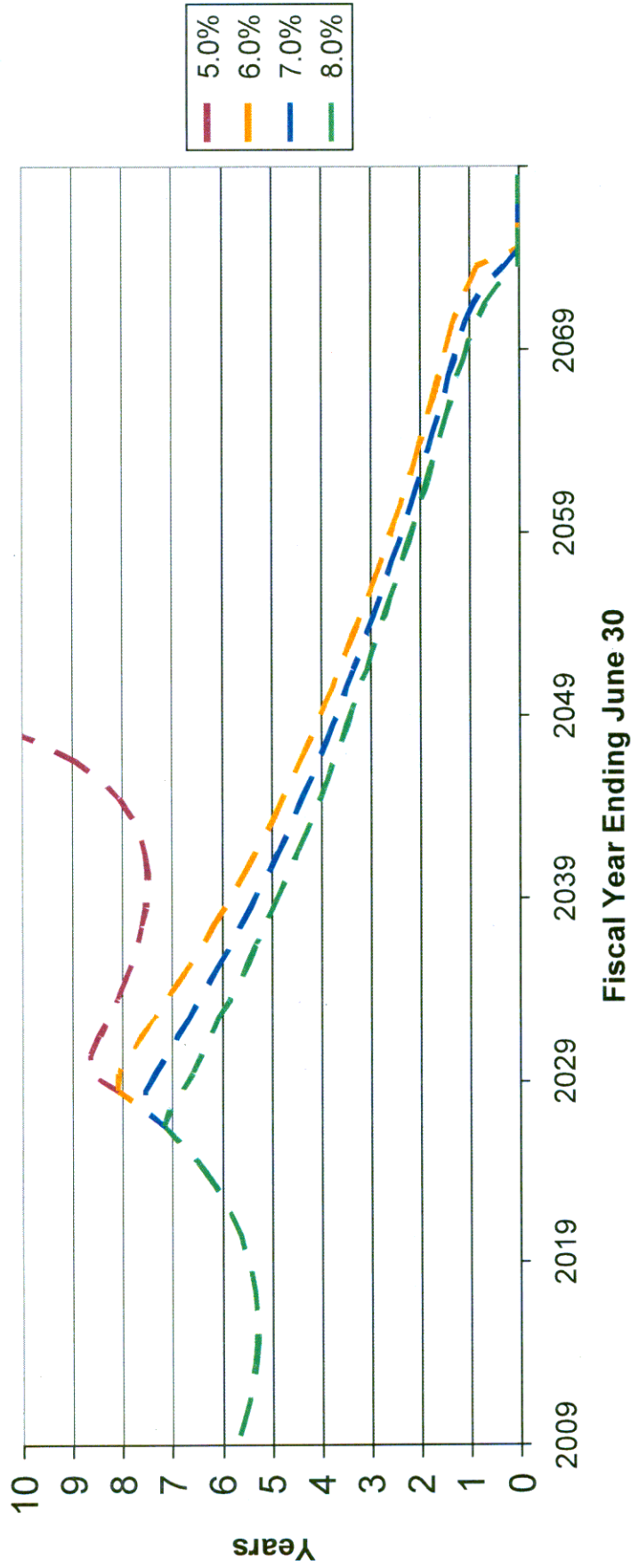
**Years of Benefit Payments Available  
at Varying Discount Rates  
2.5% Inflation/8.0% Investment Return**



**Years of Benefit Payments Available  
at Varying Discount Rates  
3.8% Inflation/8.0% Investment Return**

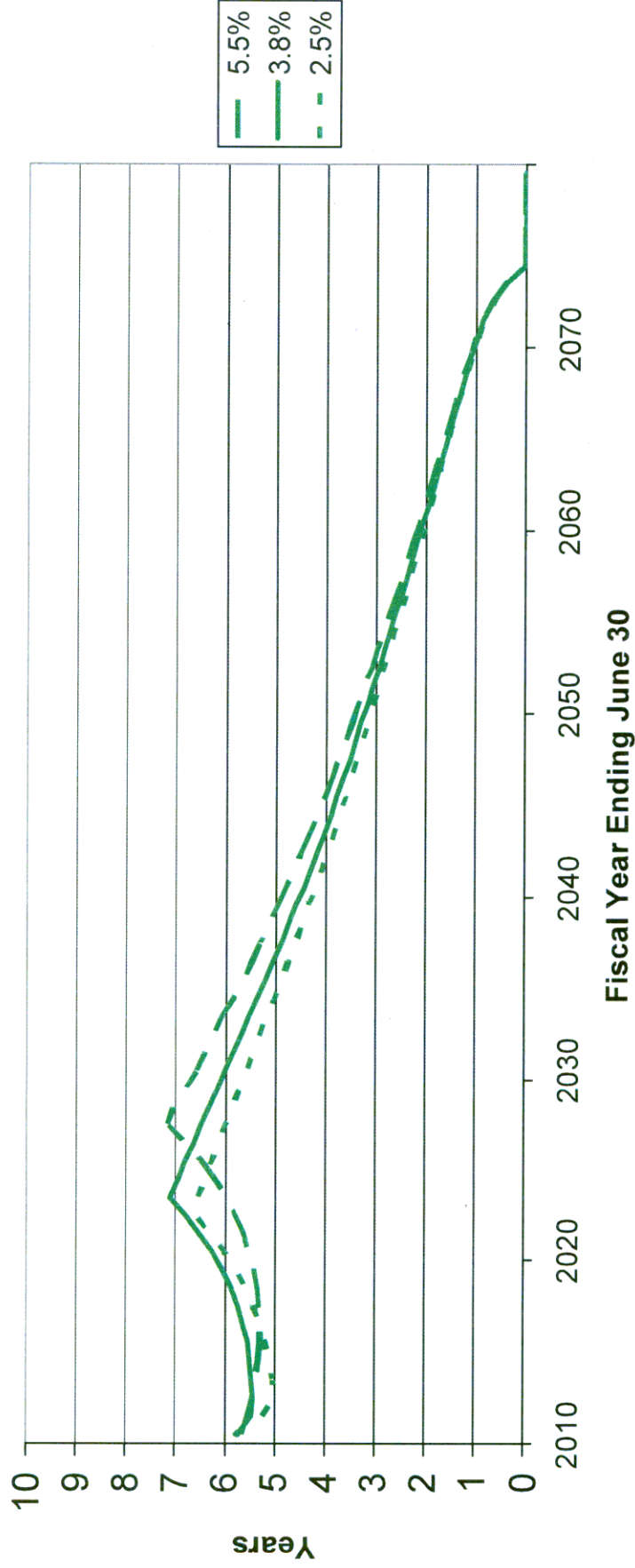


**Years of Benefit Payments Available  
at Varying Discount Rates  
5.5% Inflation/8.0% Investment Return**

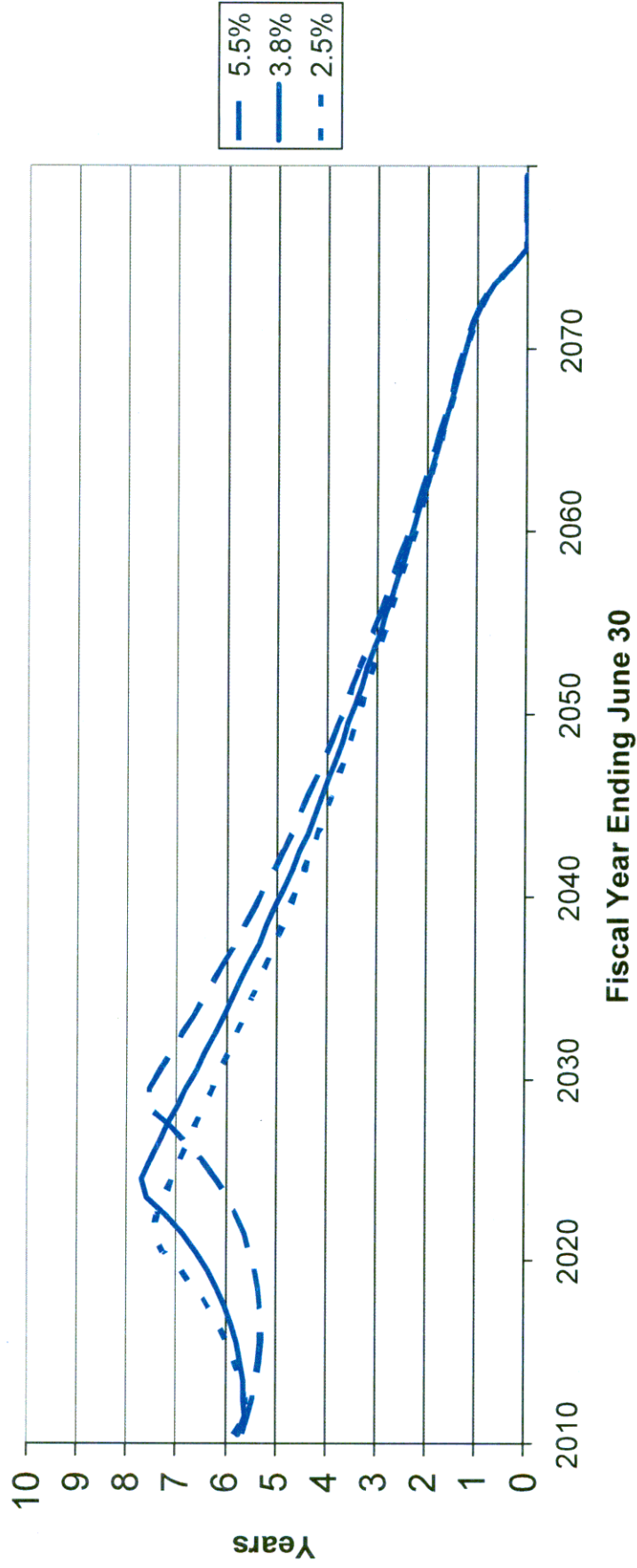




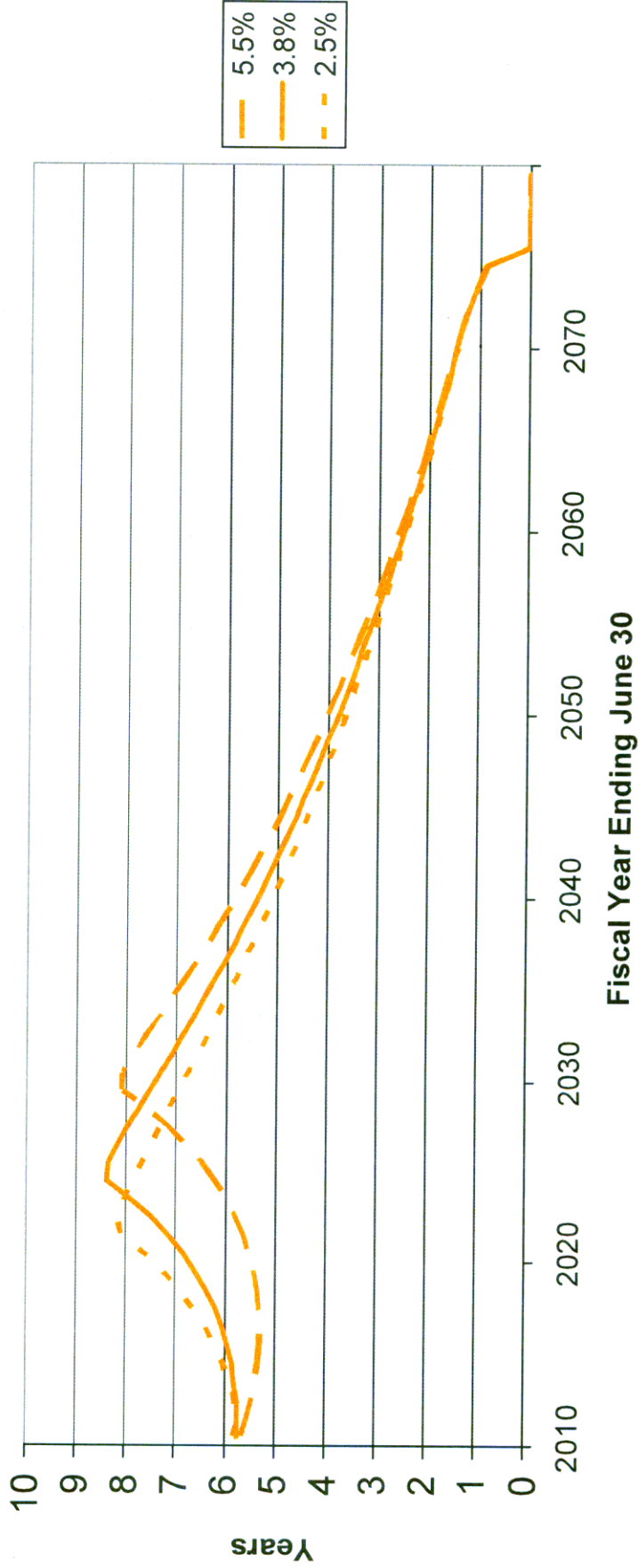
**Years of Benefit Payments Available  
at Varying Inflation Rates  
8.0% Investment Return and 8.0% Discount Rate**



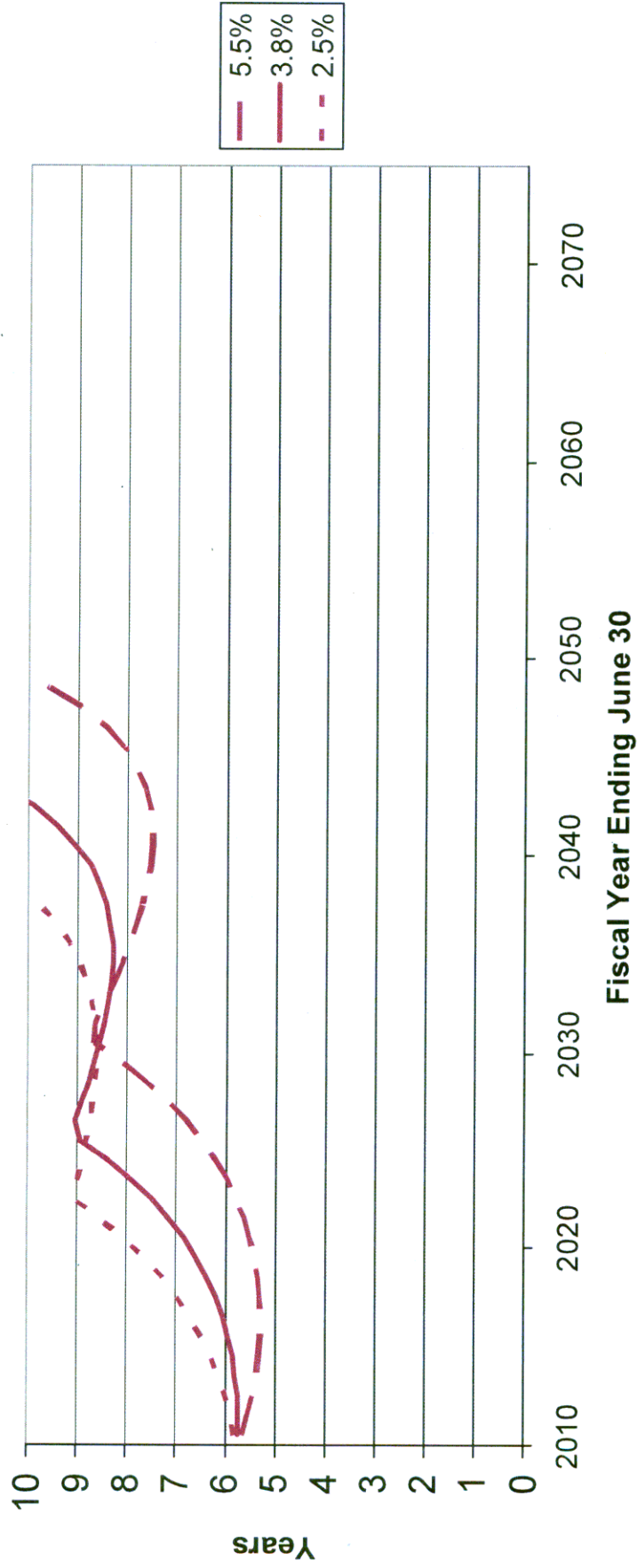
**Years of Benefit Payments Available  
at Varying Inflation Rates  
8.0% Investment Return and 7.0% Discount Rate**



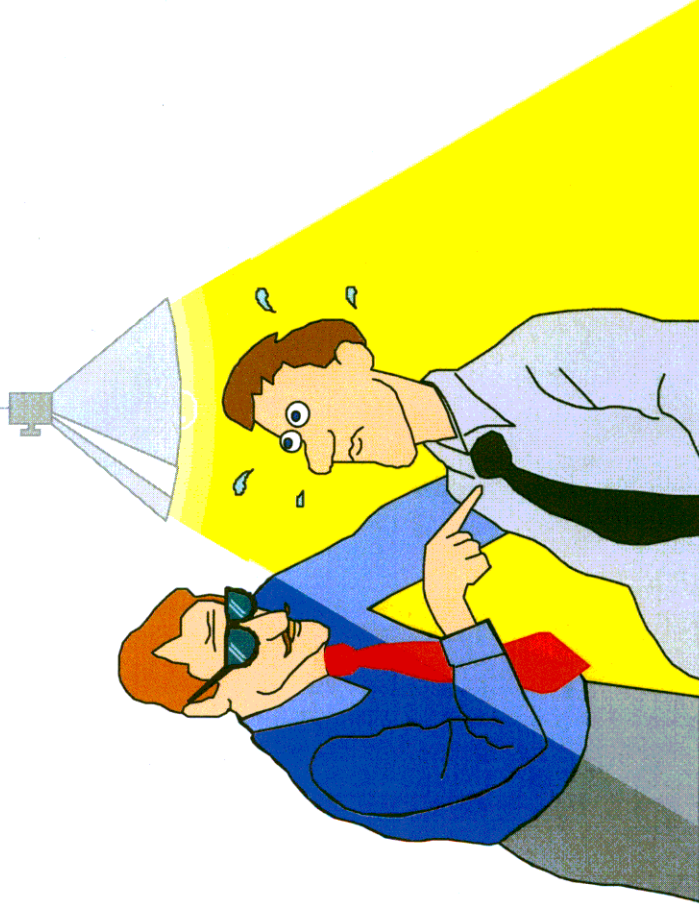
**Years of Benefit Payments Available  
at Varying Inflation Rates  
8.0% Investment Return and 6.0% Discount Rate**



**Years of Benefit Payments Available  
at Varying Inflation Rates  
8.0% Investment Return and 5.0% Discount Rate**



# Questions



**P<sup>3</sup>** *Actuaries you can understand*