UPS vs NPS Calculator - User Guide

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1 Introduction

This calculator helps compare the University Pension Scheme (UPS) with the National Pension Scheme (NPS) by estimating retirement benefits under both schemes. It takes into account current salary, growth rates, and existing NPS corpus to provide a comprehensive analysis.

2 Running the Calculator

You can run the calculator in two ways:

2.1 Browser Interface (Recommended)

1. Open the index.html file in a web browser
2. Fill in the values in the form or use the default values
3. Click the "Calculate Results" button to see the analysis

The browser interface provides a user-friendly form with:

- Clear sections for different types of inputs
- Pre-filled default values
- Instant results without needing to install Python
- Formatted output that's easy to read

2.2 Command Line Interface

Alternatively, you can use the Python command line interface:

1. Open a terminal
2. Navigate to the directory containing upsnpscalculator.py
3. Run: python upsnpscalculator.py

3 Input Parameters

The calculator will prompt for various inputs. You can press Enter to use the default values shown in brackets. Here are the parameters with their default values and explanations:

3.1 Basic Information

- Current Age [53]
- Retirement Age [60]
- Current Annual (Basic + DA) in Lakhs [36.00]
  This is your current Basic Pay plus Dearness Allowance
- Annual Salary Growth Rate [7%]
  Historical average growth rate in government sector
- Current NPS Corpus in Lakhs [120.00]
  Your accumulated NPS amount so far
- Expected Years of Life After Retirement [20]
  Number of years employee is expected to live after retirement
- Additional Years Spouse May Live [10]
  Number of additional years spouse may live after employee's death

3.2 NPS Parameters

- Employee Contribution Rate [10%]
  Standard employee contribution rate as per government rules
- Employer Contribution Rate [14%]
  Current government contribution rate to NPS
- Expected Annual Return on NPS [8%]
  Conservative estimate based on historical NPS returns
- Annuity Conversion Rate [5%]
  Current market rate for pension annuities

3.3 Post-Retirement Parameters

- Post-retirement UPS Pension Growth [5%]
  Based on historical DA increase patterns
- Return on Remaining NPS Corpus [8%]
  Expected return on the 60% lump sum amount if invested

4 Output Explanation

The calculator provides:

- Final basic salary at retirement
- Monthly pension under UPS scheme for:
  - Employee (50% of final basic salary)
  - Spouse (50% of employee's pension after employee's death)
- Total NPS corpus at retirement
- Monthly pension from NPS annuity (40% of corpus)
- Lump sum amount available (60% of corpus)
- Year-by-year analysis showing:
  - Separate phases for employee and spouse periods
  - UPS pension amount (reducing to 50% for spouse)

  - NPS annuity amount (remains constant for both phases)
  - Yearly difference to be covered by corpus
  - Interest earned on remaining corpus
  - Remaining corpus balance
- Analysis of whether the corpus will last through both employee and spouse lifetimes

5 Important Notes

- All monetary inputs (salary and corpus) are in lakhs for convenience
- Rates should be entered as decimals (e.g., 0.07 for 7%)
- UPS pension calculation:
  - Employee receives 50% of final basic salary
  - Spouse receives 50% of employee's pension after employee's death
  - UPS pension grows at specified rate (default 5%) for both phases
- NPS features:
  - Only 40% of NPS corpus is mandatory for annuity purchase
  - Annuity amount remains constant for both employee and spouse
  - The remaining 60% lump sum can be invested to cover UPS-NPS difference
  - The calculator shows if this corpus will last through both lifetimes

6 Browser Interface Features

The browser interface includes several convenient features:

- Input validation to prevent errors
- Clearly organized sections for:
  - Basic Information
  - NPS Contribution Rates
  - Return Rates
  - Life Expectancy
- No need to press Enter for defaults - values are pre-filled
- Immediate recalculation with new inputs
- Results displayed in a clean, formatted layout
- Ability to easily try different scenarios by changing values