Balanced Retirement Plan with Commodity Hedge & Fixed-Income Stability

❖ *Introduction & Client Profile*

This retirement plan has been developed for **Mr. A. Sharma**, a 35-year-old professional employed in international capital markets.

- **Age (Current):** 35
- **Planned Retirement Age:** 60 (25-year horizon)
- **Current Savings:** ₹10,00,000
- **Annual Savings (Year 1):** ₹4,80,000 (₹40,000 per month)
- **Savings Growth Rate:** 5% per year (in line with salary growth)
- **Risk Tolerance:** Moderate – accepts volatility, but prioritizes stability in retirement
- **Target Retirement Income:** ~70% of current salary = **₹21,00,000 annually** (inflation-adjusted)

❖ *Retirement Planning Goals & Assumptions*

Goals	Assumptions
• Accumulate a corpus sufficient to provide **₹21,00,000 per year (inflation-adjusted)** post-retirement. • Balance **growth, income, and inflation hedging** through a diversified portfolio. • Implement **risk controls** to protect wealth against market shocks.	• Inflation: **5% p.a.** • Investment Horizon: **25 years** • Withdrawal Rate: **4% of corpus** annually in retirement. • Tax impact ignored for simplicity (assume tax-advantaged investment vehicles).

❖ *Investment Strategy*

A **Core-Satellite Portfolio** approach is adopted:

- **Core (50%)** → Fixed Income (Govt + Corporate Bonds): Provides steady income and lower volatility.
- **Satellite (40%)** → Commodities & Equities: Provides growth and acts as an inflation hedge.
- **Cash (10%)** → Maintains liquidity buffer and emergency needs.

Expected Returns (nominal):

- *Government Bonds: **6%***
- *Corporate Bonds: **7.5%***
- *Commodities Basket: **5%***
- *Equities (Global Large Cap Index): **9%***
- *Cash: **3.5%***

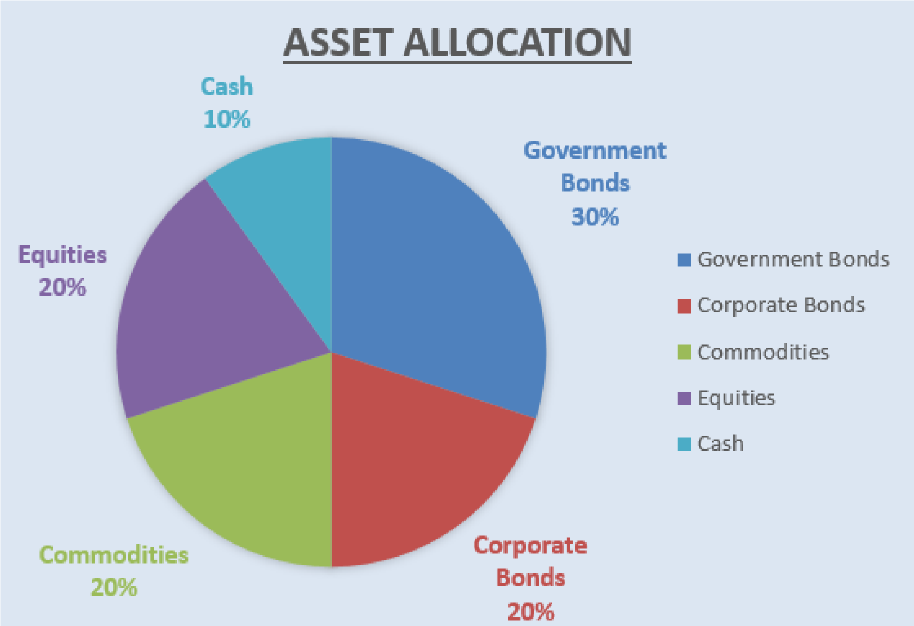
Rationale:

- **Fixed income** provides stability and predictable cash flows.
- **Commodities** (gold, crude oil, natural gas) hedge inflation — critical in international markets.
- **Equities** provide growth to beat inflation.
- **Cash buffer** ensures liquidity and margin for unexpected needs.

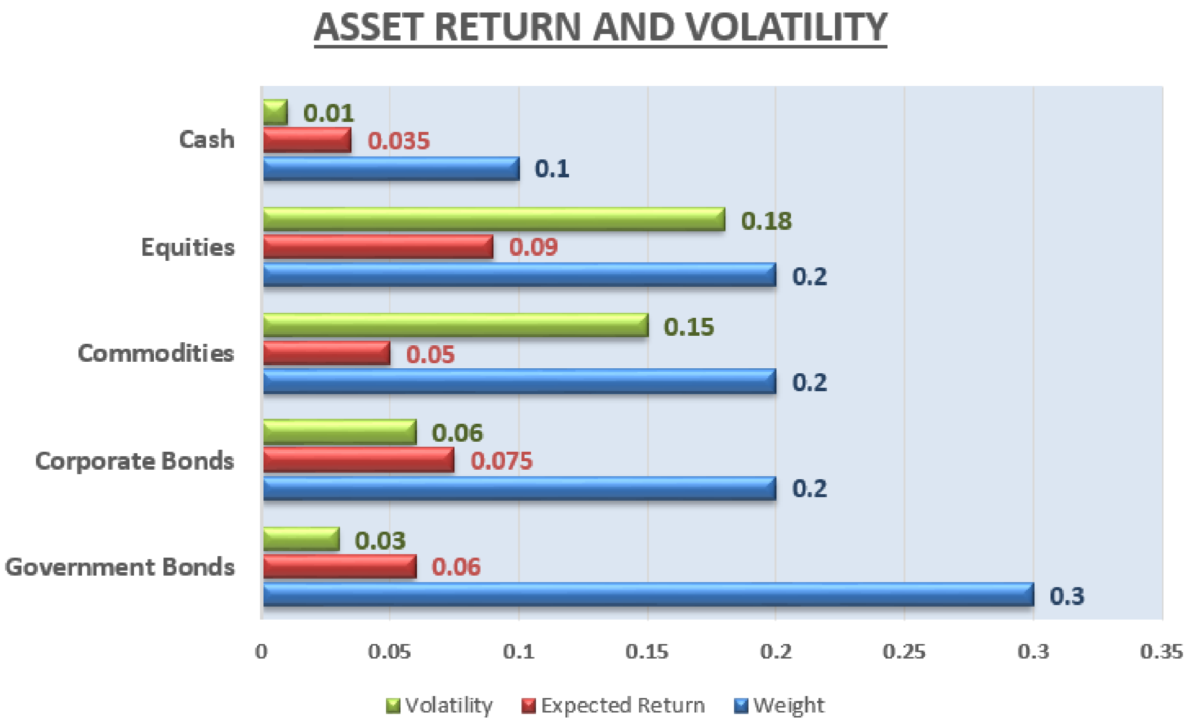
❖ ***Asset Allocation***

Proposed Allocation (aligned to client's moderate risk profile):

Asset Class	Allocation %	Rationale
Govt Bonds	30%	Stability, lower risk
Corporate Bonds	20%	Higher yield than govt bonds
Commodities	20%	Inflation hedge
Equities	20%	Long-term growth
Cash/Short-term	10%	Liquidity buffer



- **Portfolio Expected Return:**
  = (0.30*6%) + (0.20*7.5%) + (0.20*5%) + (0.20*9%) + (0.10*3.5%)
  = **6.45% p.a.**
- **Portfolio Expected Volatility (approx):** 4.9% (after covariance adjustment).
- **Sharpe Ratio:** 0.60

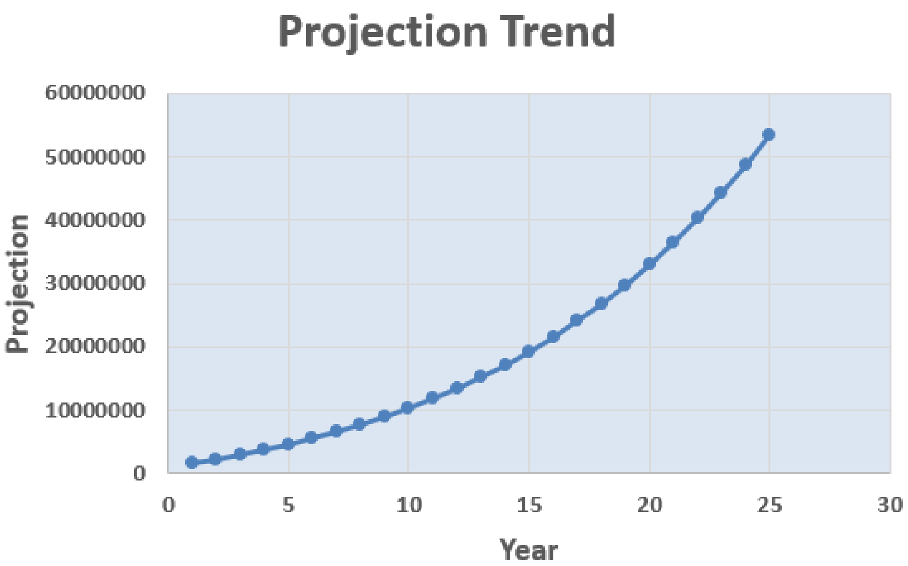


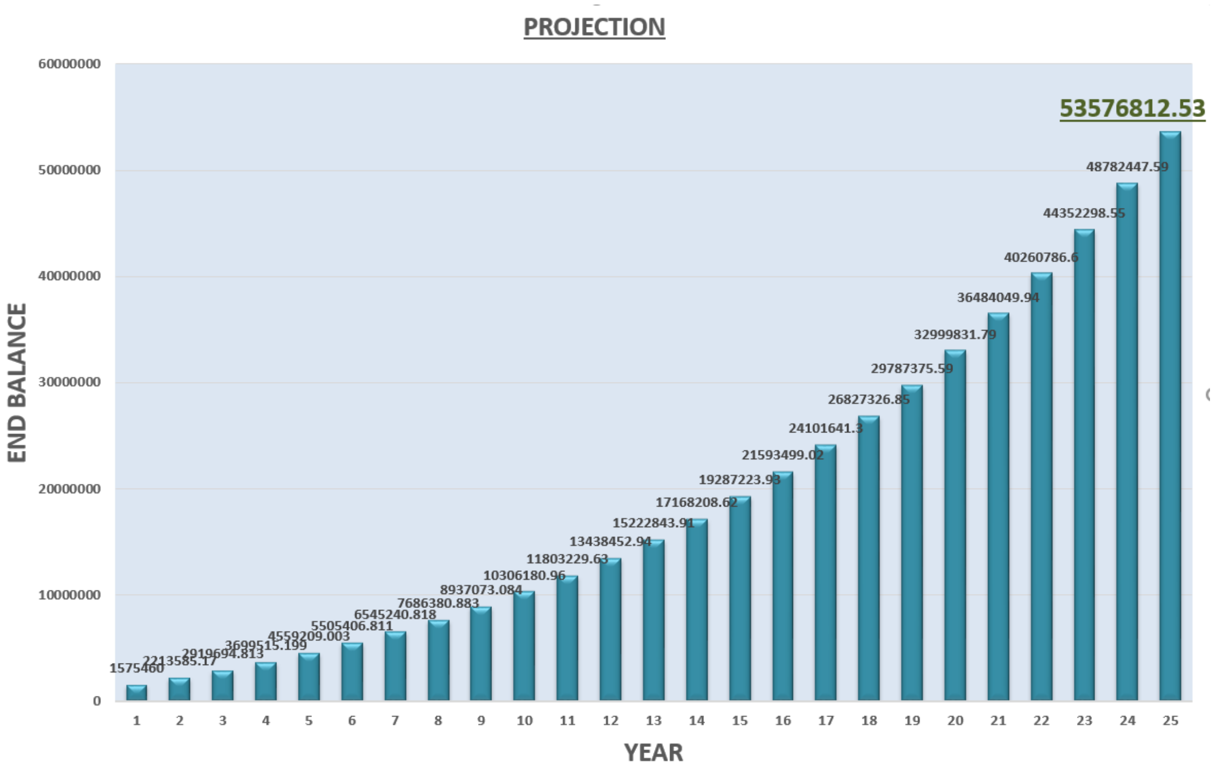
❖ ***Corpus Projection (25 Years)***

Using Excel-based projections:

- Starting Corpus = ₹10,00,000
- Annual Contribution (Year 1) = ₹4,80,000
- Contribution Growth = 5% per year
- Portfolio Return = 6.45% annually

Projected Retirement Corpus at 60 Years:≈ ₹5.5 Crores





Graph: Corpus grows exponentially, from ₹10 lakh to ~₹5.5 crore over 25 years.

❖ *Retirement Income Planning*

Using the **4% withdrawal rule**:

- Annual Income Available = 4% × 5.5 Cr = **₹22 Lakhs**
- This **meets and slightly exceeds** the target income of ₹21 Lakhs.

Thus, the plan successfully fulfills the client's retirement income needs.

❖ *Risk Management*

Risk Controls Applied:

1. **Diversification** → Across bonds, commodities, equities, and cash.
2. **Quarterly Rebalancing** → If allocation deviates >8% from target.
3. **Liquidity Buffer** → 6 months of expenses in cash.
4. **Drawdown Rule** → If corpus falls >20% from peak, increase bond allocation by 10%.
5. **Value at Risk (VaR):**
   - Historical 95% VaR ≈ **-10%** (annual).
   - Interpretation: 95% confidence that annual loss will not exceed 10%.
6. **Stress Scenarios:**
   - *Bear Market:* Equities –30%, Commodities –20%, Bonds +5% → Portfolio impact ≈ –12%.
   - *Inflation Shock:* Commodities +40%, Bonds –10% → Portfolio impact ≈ +5%.

❖ *Implementation Roadmap*

1. **Year 1:** Begin with proposed allocation. Contributions ₹40k/month.
2. **Years 2-10:** Increase contributions 5% annually, monitor portfolio annually.
3. **Year 11-20:** Rebalance quarterly; ensure commodities hedge against inflation.
4. **Year 21-25:** Gradually shift +10% from equities to fixed income to lock gains.
5. **At Retirement:** Adopt systematic withdrawal (4% rule) adjusted annually for inflation.

❖ *Conclusion*

- This retirement plan **meets the client's goal** of ₹21 Lakhs annual post-retirement income.
- A final corpus of **₹5.5 Crores** is achieved through disciplined contributions and a **balanced portfolio**.
- **Risk is managed** via diversification, VaR, drawdown rules, and scenario analysis.
- **Strengths:** Goal achievement, inflation hedge, stability.
- **Risks:** Market shocks may reduce corpus temporarily, but allocation and rebalancing mitigate impact.

- **Recommendation:** Continue increasing contributions annually and strictly follow rebalancing rules.

❖ Key Results

- **Corpus at Retirement (25 years):** ≈ ₹5.5 Crores
- **Expected Return: 6.45% p.a.**
- **Expected Volatility: 4.92%**
- **Sharpe Ratio: 0.60**
- **Annual Contribution Growth:** 5% per year (₹40k/month → ~₹1.55 lakh/month in final year).

This retirement plan balances **stability and growth** by integrating fixed income (50%), commodities (20%), equities (20%), and cash (10%).

- **Strengths:** Diversification, inflation hedge, risk controls (VaR, rebalancing, stop-loss).
- **Weakness:** Retirement income gap vs goal → requires either higher savings or longer horizon.
- **Recommendation:** Gradually increase annual savings and slightly raise equity allocation to 30% to meet the ₹21 lakh/year retirement target.

Appendices (Excel file)

1. **Cumulative Corpus Growth Chart** (yearly until age 60).
2. **Portfolio Allocation Pie Chart** (Govt Bonds, Corporate Bonds, Commodities, Equities, Cash).
3. **Risk Metrics Table** (Sharpe ratio, VaR, Max Drawdown).