CHARTA LEARNING · LESSON NOTES

Planning a portfolio

CFA Level I · Portfolio Management

You will learn: How to set out an investment policy statement, turn a client's goal into a return requirement, separate ability from willingness to take risk, sort constraints, manage drift with rebalancing, and build in ESG wishes.

Running example: Examples follow a made-up client, Priya Nair, aged 40, with $200,000 set aside for retirement in 20 years, plus $40,000 set aside for other needs (total savings $240,000). Inflation is 2% and tax is a flat 20% of returns.

1. The investment policy statement

- The investment policy statement is a written plan made when everyone is calm and read again when markets fall. It decides before the storm, not during it.
- It has two halves in a fixed order. Objectives: the return requirement and risk tolerance. Constraints: liquidity, time horizon, tax, legal and regulatory, and unique circumstances. Only after both are set do you choose the asset mix.
- A full statement also gives the purpose, who is responsible for what (client, adviser, manager), procedures, investment guidelines (target mix and rules for keeping to it), and a review date.
- A statement with a return target alone is incomplete: return and risk must be reconciled, because extra return has to be paid for with risk.

2. The return objective

- The return requirement is what the money must earn to reach the goal (a must). The return desire is what the client would like on top (a wish).
- A return objective can be absolute (7% a year) or relative (beat a benchmark). A bare percentage means little: tie it to spending, inflation or a liability.
- To turn a goal into a number: find the real growth needed, add inflation, then allow for tax by dividing by one minus the tax rate.

> **Required return = [(1 + real) × (1 + inflation) − 1] ÷ (1 − tax)**

PRIYA: DOUBLE $200,000 IN TODAY'S MONEY IN 20 YEARS

Real growth wanted	2^(1/20) − 1	**3.53%**
Add inflation of 2%	1.0353 × 1.02 − 1	**5.60%**
Allow for 20% tax	5.60% ÷ 0.8	**7.00%**

3. Risk tolerance: ability and willingness

- Risk tolerance asks how much loss the client can accept, a different question from what return is needed. Needing a high return does not create the ability to take risk; if a goal is essential, ability is lower.
- A risk objective can be absolute (maximum loss) or relative (distance from a benchmark).
- Ability to take risk is a matter of facts: wealth, time horizon, stable income, and whether a loss would wreck an essential goal. Willingness is a matter of feeling, best judged by what the client did when markets last fell, not by what they say in a calm market.
- When the two differ, the lower one sets the risk level and the adviser discusses the gap with the client. Never average them, and never let a keen client overrule ability.
- Priya has high ability but low willingness (she sold everything in the last fall). Ravi, a retired client, is keen but has low ability. Both get a lower risk level.

WHAT 7% ASKS OF THE MIX (EQUITIES 9%, RISK 18%; BONDS 3%, RISK 6%; CORRELATION 0.2)

Equity weight to earn 7%	3 + 6w = 7, so w = 4/6	**66.7% (bonds 33.3%)**
Portfolio risk	variance formula, then √	**12.55%**
A bad year	7.0 − 2 × 12.55	**−18.1%**
Ravi, 30% market fall	70,000 of 1,000,000 (7.0%) becomes 70,000 of 700,000	**10.0% of the pot**
Priya, 30% market fall	30% of 200,000; 60,000 ÷ 24,000 saved a year	**60,000 = 2.5 years of saving**
Priya's limit: half in equities	0.5 × 9% + 0.5 × 3%	**6.0%, risk about 10%**
Shortfall	pot about 343,800 vs 400,000	**56,200; fix with about 2,150 more saved a year, a later retirement or a smaller goal**

Watch out: Averaging ability and willingness; a return target with no risk limit; trusting words over past behaviour.

4. The five constraints

- Constraints are limits that apply whatever the objectives are. Liquidity: known cash needs plus a reserve for surprises; check it first, because a cash need the portfolio cannot meet overrides everything.
- Time horizon: how long the money is invested, possibly in stages. Tax: affects asset location and trading frequency. Legal and regulatory: rules imposed from outside. Unique circumstances: anything personal the client specifies.
- A long overall horizon does not excuse a near-term need: near-term money is funded on its own terms.
- To sort a case, ask who set the rule and whether it is about cash, time, tax, law or personal choice.
- A law capping one holding at 10% is legal; care fees paid every year are liquidity; refusing tobacco makers is unique; a deposit due in two years is a horizon stage.

PRIYA'S CONSTRAINTS, AND WHY STAGES MATTER ($25,000 DEPOSIT DUE IN 2 YEARS)

Liquidity	25,000 deposit + 15,000 reserve = 40,000	**16.7% of 240,000**
Time horizon	deposit in 2 years; pot in 20	**2 stages**
Unique circumstances	no tobacco or weapons makers	**exclusion**
Deposit in safe cash at 2%	25,000 × 1.02 × 1.02	**26,010**
Deposit in equity mix, bad year	25,000 × (1 − 0.181)	**20,475, short by 4,525**

5. Strategic allocation, drift and rebalancing

- Strategic asset allocation sets long-term target weights (equities, bonds, cash) from the objectives and constraints. The split between asset classes explains most of the variation in returns, more than picking securities or timing. Tactical tilts are short-term, small bets. For Priya the target is half equities, half bonds.
- Weights drift: each holding grows by its own return, so the best performer becomes a bigger share and portfolio risk rises with nobody deciding anything.
- Rebalancing restores the targets by a calendar rule (trade on set dates; simple but may trade needlessly) or a band rule (trade only when a weight leaves its tolerance band; trades only when drift matters but needs watching).
- It sells the winner and buys the laggard, so it is contrarian. Too often costs fees and tax; never lets risk creep up.
- The targets stay put; the portfolio drifts away from them.

> **Value now = start value × (1 + return); Weight now = value now ÷ total portfolio**

TARGET 50/50, BAND 45% TO 55%, EQUITIES +20% A YEAR, BONDS +2%

Equity weight, start / year 1 / year 2 / year 3		**50.0% / 54.1% / 58.1% / 62.0%**
Year 1	inside the band	**no trade**
Year 2	outside the band	**trade**
Total at end of year 2	144,000 + 104,040	**248,040**
Equity target	50% of 248,040	**124,020**
Sell equities, buy bonds	144,000 − 124,020	**19,980**

6. Building in ESG

- ESG is environmental (climate, pollution), social (workers, customers, communities) and governance (boards, pay, shareholder rights). The wish must be written into the policy statement, usually as a unique circumstance, so every manager is bound by it.
- Changes what you hold: negative (exclusionary) screening removes sectors or companies; best-in-class (positive) screening picks the highest-rated issuers in each sector; thematic investing targets a theme such as clean energy.
- Changes how you decide and act: ESG integration adds material ESG factors to the usual analysis (it does not necessarily remove anything); impact investing seeks measurable benefit alongside return; active ownership uses engagement and proxy voting to change company behaviour, staying invested.
- Screens shrink the investable universe and can raise tracking error against a conventional benchmark. Best-in-class usually keeps tracking error lower; exclusion is simple to state and check. Tell the client the trade-off.

EXCLUDING TOBACCO AND WEAPONS MAKERS (5% OF BENCHMARK)

Scale factor	1 ÷ 0.95	**1.0526**
Technology (benchmark 25%)	25% × 1.0526	**26.3%**
Finance (15%)	15% × 1.0526	**15.8%**
Other (55%)	55% × 1.0526	**57.9%**
Distance from benchmark	half the sum of the gaps	**5.0%**

Key takeaways

- The policy statement comes first: objectives, then constraints, then the asset mix.
- Return requirement is a must, desire is a wish; build it from real growth, inflation and tax.
- The lower of ability and willingness sets the risk level; never average them.
- The five constraints are liquidity, time horizon, tax, legal and regulatory, and unique circumstances.
- Strategic targets stay put while weights drift; rebalance by calendar or band.
- ESG wishes go in the statement; screens shrink the universe and can raise tracking error.

Quick check

1. Low ability, high willingness. Which sets the risk level?
   Answer: Ability: the lower of the two governs
2. 60,000 equities and 40,000 bonds; equities +10%, bonds flat. Equity weight?
   Answer: 66,000 ÷ 106,000 = 62.3%
3. 8% of a benchmark is excluded. A 23% sector becomes what weight?
   Answer: 23% ÷ 0.92 = 25.0%