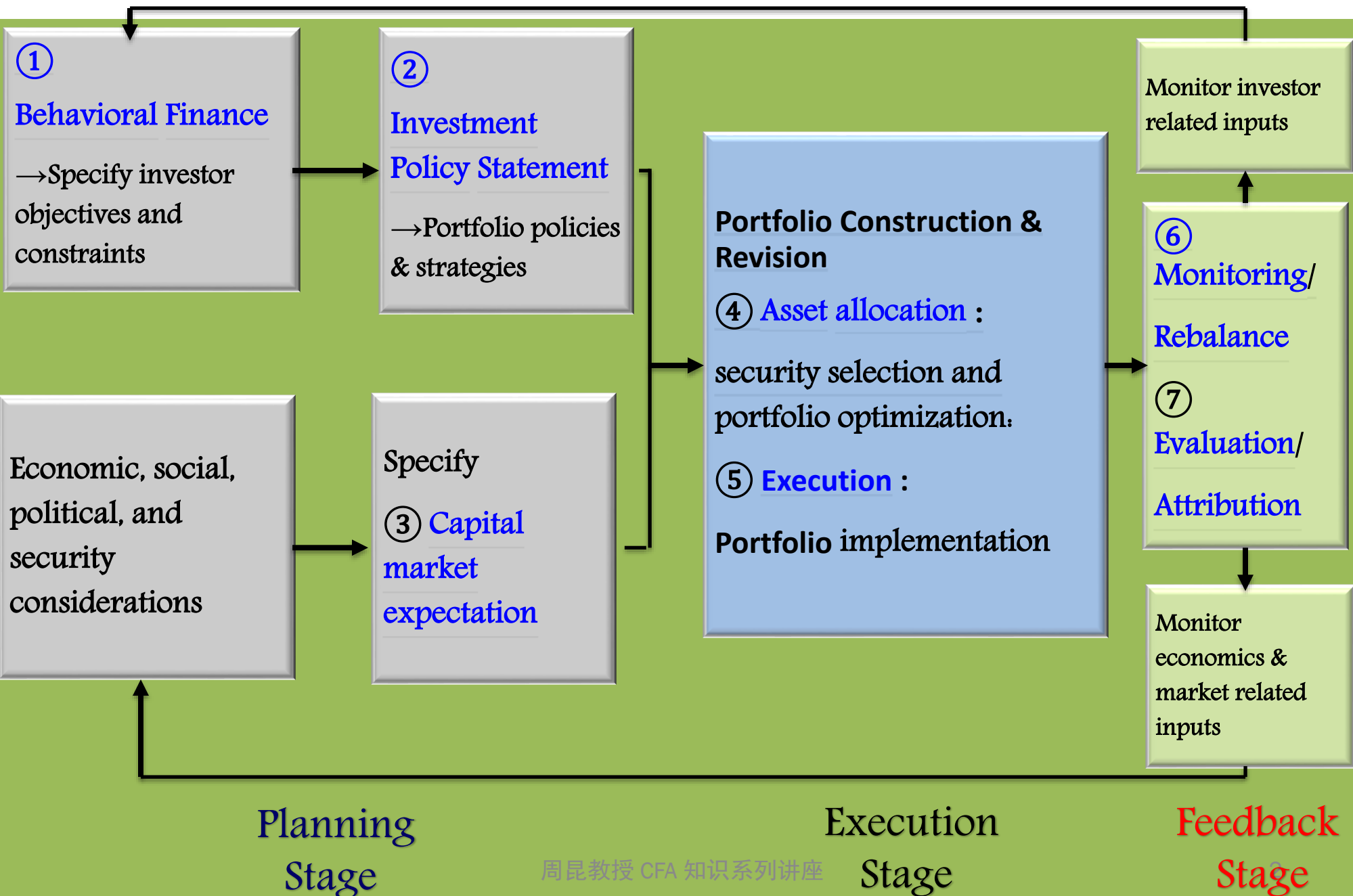
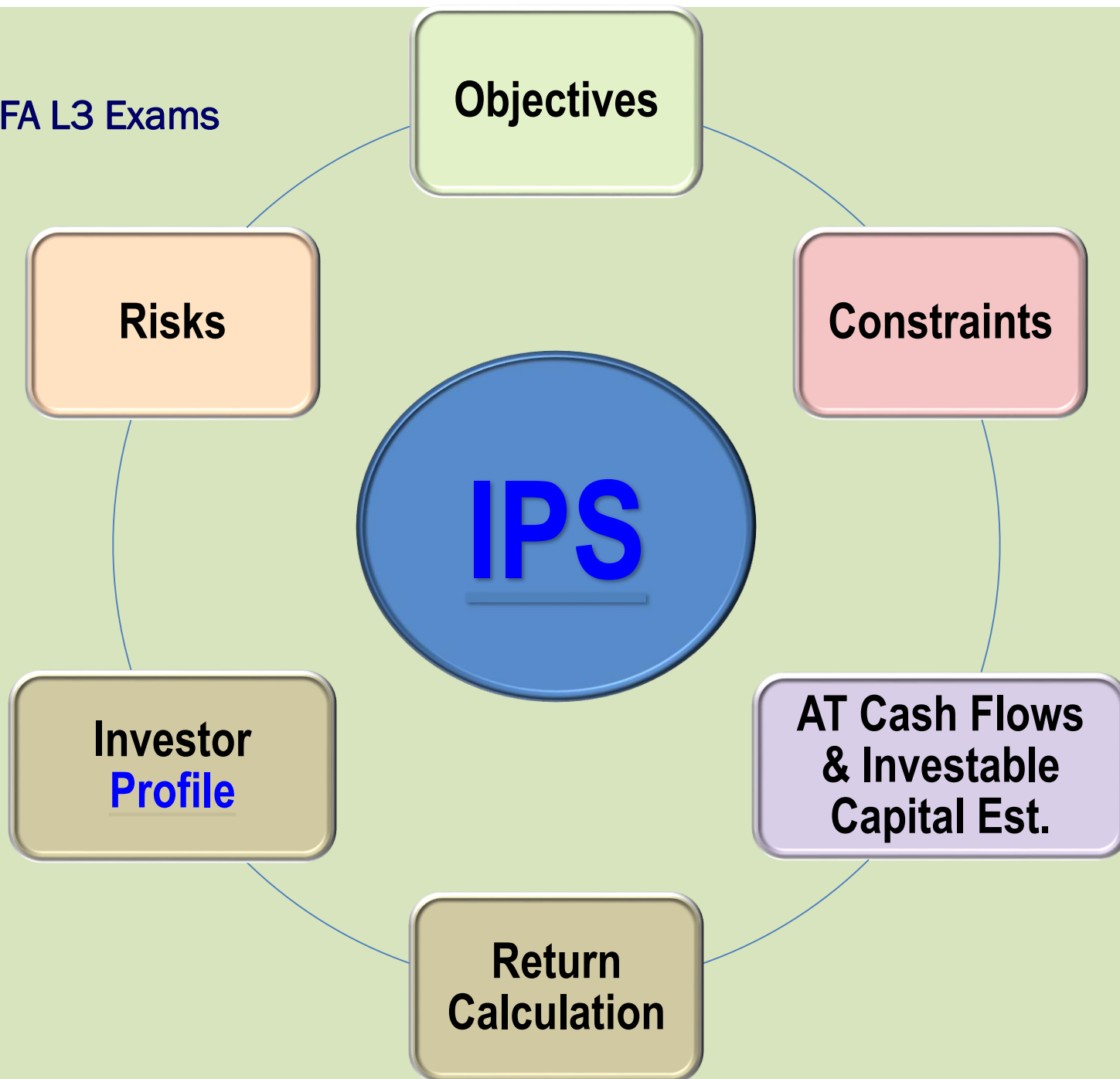


# The Investment Management Process





# Principle of Developing Investment Policy Statement

## I. Profile

### A. *Situation*

- |                     |                                                                                   |
|---------------------|-----------------------------------------------------------------------------------|
| 1. Source of Wealth | Active creation vs. Passive Inheritance                                           |
| 2. Wealth Level ↑   | Risk Tolerance ↑;<br>Perception of their capital size ↑                           |
| 3. Stage of Life    | Foundation Phase<br>Accumulation Phase<br>Maintenance Phase<br>Distribution Phase |

### B. **Psychological**

- |                  |                            |
|------------------|----------------------------|
| 1. Individualist | Low Risk Averse ; Thinking |
| 2. Spontaneous   | Low Risk Averse; Feeling   |
| 3. Methodical    | High Risk Averse; Thinking |
| 4. Cautious      | High Risk Averse; Feeling  |

# Psychological Profiling

More Subjective :		Method of Action	
Confidence		Thinking	Felling
	Low Risk Averse (Confidence)	<b>Individualist</b> <u>Self-assured</u> ; ( <i>DON'T seek outside counsel</i> ) Make own decision; Willing to do research; Willing to take advice;	<b>Spontaneous</b> Fear to miss profit opportunities; Excessive trading & costs; Regret aversion;
	High Risk Averse (Anxious)	<b>Methodical</b> Conservative; Look for new information; Collect data as much as possible.	<b>Cautious</b> Focus on minimizing risk; Hard to make decision; Status Quo bias; <u>Regret Aversion</u> ; <u>Buy and Hold</u> ;

Private Wealth Management (CFA Level III Exam: Morning Session)							
Year	Individuals/ Family	Age	Retire Age	Dependents	Required Return	Debt	Minutes (Points)
2013	Retired middle-age couple	45	--	No	Open-end AT-Nominal	No	20
	Retired entrepreneur	70	--	Wife (Age 45) & Three Sons	Estate Planning		15
2012	Single father	40	55	Teenage children	Closed-end BT-Nominal	No	36
2011	Retires CEO	75	--	N/A	Estate Planning		15
	Retiring Couple	50	51	No	Open-end AT-Nominal	Yes but pay off next year	23
2010	Widow	34	60	Two Children (Age 10 & 6)	Closed-end BT-Nominal	No	35
2009	Married Couple	59	60 or 65	Twin sons	Open-end BT-Nominal	No	35
2008	Married Couple (now)	30		Two Children (Age 4 & 2)	Open-end AT-Nominal	Mortgage	36
	Married Couple (25 year later)	55	60		Closed-end AT-Nominal		
2007	Retired Married Couple	50	--	One Child (age 22) well-paid	Closed-end BT-Nominal	No	33
				Concentrated Portfolio Adjustment			20
2006	Soccer Player (divorced)	34	35	One Child (Age 7)	Open-end AT-Nominal	No	34
2005	Widowed Executive	55	56	One Child (going to college next year)	Open-end AT-Nominal	No	47

## II. Objective (RR)

### A. Return

1. Required vs. Desired
2. Real vs. Nominal (Inflation adjusted)
3. Pre- vs. Post-Tax Total
4. ***Open-end*** Required Return

Real Return  
After Tax

$$r_1^{at} = \frac{NCF_1}{TIA_0}$$

Real Return  
Before Tax

$$r_1^{bt} = \frac{NCF_T / (1 - tax)}{TIA_0}$$

Nominal Return  
After Tax

$$R_1^{at} = (1 + r_1^{at})(1 + inf) - 1$$

Nominal Return  
Before Tax

$$R_1^{bt} = (1 + r_1^{bt})(1 + inf) - 1$$

5. ***Close-end*** Required Return (***Calculation***)

- ***IRR*** or ***YTM***
- $TIA_0 = CF_T \times PVIFA(R, T)$

# Open-end Required Return Calculation

Be careful before tax & after tax issues; For individuals, not firms, we MUST consider that:

1. Calculate  $ATCIF_{t+1}$ ;
2. Calculate  $ATCOF_{t+1}$ ;
3.  $ATNCF_{t+1} = ATCIF_{t+1} - ATCOF_{t+1}$ ;
4. Calculate  $TAI_t$ ;
5.  $ATRR_{t+1} = ATNCF_{t+1} / TAI_t$ ;
6.  $BTRR_{t+1} = ATRR_{t+1} / (1 - \text{TaxRate})$
7.  $BTNR_{t+1} = BTRR_{t+1} + \text{Inflation}$

	Time = t	Time = t+1
<b>ATCIF</b>		<b>After Tax:</b> Salary + Bonus; Rental / Interest Income; Pension Income; Trust / Inheritance; Other Income;
<b>ATCOF</b>		<b>After Tax:</b> Living Expenses; Mortgage Payment; Interest Payment; Annuity Payment; Insurance Premium; Child Support/Education Expenses; Other Expenditures; <b>Do NOT include Asset (Home) Purchase.</b> <b>Do NOT include Inflation.</b>



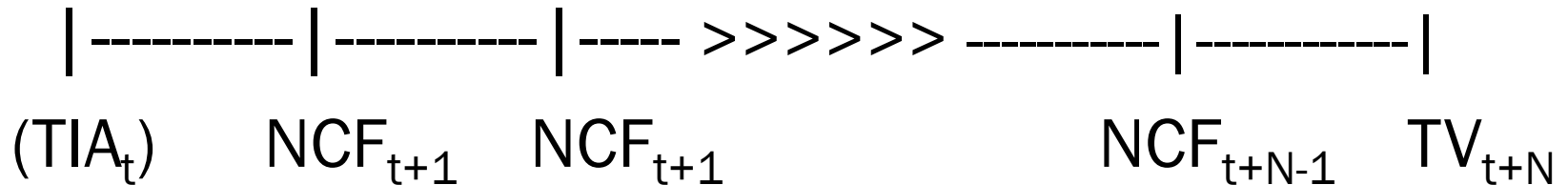
	Time = t	Time = t+1
<b>TIA</b>	<p> <b>Cash</b>  <b>Inherited Asset</b>  <b>Stock/Bond Portfolio</b>  – (PV of Debt)  – (PV of Home Purchase)  – (PV of Payout Mortgage)  – (PV of Donations) </p> <p> <b>Do NOT include existing houses as assets.</b> </p>	

# Open-end Required Return Calculation

Be careful before tax & after tax issues; For individuals, not firms, we MUST consider that:

1. Calculate  $ATCIF_{t+1}$ ;
2. Calculate  $ATCOF_{t+1}$ ;
3.  $ATNCF_{t+1} = ATCIF_{t+1} - ATCOF_{t+1}$ ;
4. Calculate  $TAI_t$ ;
5.  $ATTR_{t+1} = ATNCF_{t+1} / TAI_t$ ;
6.  $BTRR_{t+1} = ATTR_{t+1} / (1 - \text{TaxRate})$
7.  $BTNR_{t+1} = BTRR_{t+1} + \text{Inflation}$

# Close-end Required Return Calculation



<b>N</b>	<b>Number of Time period to Maturity</b>
<b>PMT</b>	<b>Liquidity Need (Positive)</b> <b>Saving (Negative)</b>
<b>FV</b>	<b>Required (desired) Terminal Value (TV) at time <math>t+N</math> (N-period later)</b>
<b>PV</b>	<b>Total Investable Asset at time <math>t</math></b>
<b>IRR, Yield (I%)</b>	<b>Required Return (Yield to maturity)</b> <b>This is what you calculate for!</b>

## B. Risk Tolerance

### 1. Ability ↑

(above/below average)

Time Horizon ↑

Capital (Equity) Size ↑

Wealth Level ↑

Spending Needs ↓

Goal Importance ↓

Flexibility (timing, capital expenditure) ↑

### 2. Willingness

(above/below average)

Relates to client's psychological profiles.

Attitude can be contradictory and volatile.

Given conflict between willingness and ability, honor the less risk tolerant of the two.

### III. Constraints (TTLLU)

#### A. Time Horizon

1. One Stage or Multiple Stages
2. Affect "Ability to Take Risk"
3. Length of each stage is important
4. New time horizon each time an investor's environments change significantly
5. Family obligations affect time length and stage. (Children education expenses)

#### B. Tax Consideration

1. Is individual taxpayer?
2. Pay attention to different *types* of Tax:
  - Income tax
  - Capital Gain tax
  - Property tax
  - Wealth Transfer tax
  - Estate tax
3. Tax payment is cost → Try to minimize that cost
4. Is there any tax-deferred tool? Use it.
5. Use loss harvesting → Defer tax payment

### **C. Liquidity Needs**

1. Only Cash flow needs that met by the portfolio; not met by salary and other income sources.
2. Emergency needs must be included: 3-6 months of living expenses to cover extra medical expenses, uninsured losses, and potential unemployment, etc.
3. Ongoing expenses (living cost, mortgage/debt payment, education expenditure, etc.) exceeding salary and other income sources.
4. Planned outlays (buy new home, donations, vocation) could be included.

### **D. Legal & Regulatory**

1. Regulation on Tax Relief and/or Wealth Transfer (Estate).
2. Wealth Transfer Vehicle: Personal Trust & Foundations.
3. Prudent Investor Rule
4. Conflict of Interest Issues (insider trading or activities)
5. Legal Counsel is encouraged.

## **E. Unique Circumstance**

1. Other factors or restrictions could affect asset allocation & portfolio optimization.
2. Hold large amount of family stocks (Concentrated Position).
3. Socially Conscious Investment; No alcohol & tobacco stocks.
4. Restriction on the sale of assets.
5. Psychological/Behavioral factors: e.g. strong averse to debt; highly loss averse.
6. Desired Bequests.