Ethical and Professional Standards

I (A) Knowledge of the law: comply with the strictest law; disassociate from violations.

I (B) Independence and objectivity: do not offer, solicit, or accept gifts that might compromise independence and objectivity.

I (C) Misrepresentation: do not guarantee performance; avoid plagiarism.

I (D) Misconduct: do not behave in a manner that affects your professional reputation or integrity.

II (A) Material nonpublic information: do not act or cause others to act on this information; to act on a mosaic of information is not a violation.

II (B) Market manipulation: do not manipulate prices/trading volumes to mislead others; do not spread misleading information.

III (A) Loyalty, prudence, and care: act with reasonable care and exercise prudent judgment; place client's interest before employer's or your own interests.

III (B) Fair dealing: treat all clients fairly; disseminate investment recommendations or take investment action without discrimination.

III (C) Suitability: in advisory relationships, understand client's risk profile, develop and update an IPS periodically; in fund/index management, ensure investments are consistent with stated mandate.

III (D) Performance presentation: do not misstate performance; make detailed information available on request.

III (E) Preservation of confidentiality: maintain confidentiality of clients: unless disclosure is required by law; information concerns illegal activities; client permits disclosure.

IV (A) Loyalty: do not cause harm to your employer; obtain written consent before starting an independent practice; do not take confidential information when leaving.

IV (B) Additional compensation arrangements: do not accept compensation arrangements that will create a conflict of interest with your employer; unless written consent is obtained from all parties involved.

IV (C) Responsibilities of supervisors: prevent employees under your supervision from violating applicable laws.

V (A) Diligence and reasonable basis: have a reasonable and adequate basis for any analysis, recommendation, or action.

V (B) Communication with clients and prospective clients: distinguish between fact and opinion; make appropriate disclosures.

V (C) Record retention: maintain records to support your analysis.

VI (A) Disclosure of conflicts: disclose conflict of interest in plain language.

VI (B) Priority of transactions: client transactions come before employer transactions that come before personal transactions.

VI (C) Referral fees: disclose referral arrangements to clients and employers.

VII (A) Conduct as participants in CFA Institute programs: do not compromise the integrity of the CFA institute; keep exam information confidential.

VII (B) Reference to CFA Institute, the CFA designation, and the CFA program: do not state that the holders of CFA charter are better than others; references to partial designation not allowed.

Overview of the Global Investment Performance Standards (GIPS)

The nine provisions of the GIPS standards are:
1. Fundamentals of Compliance
2. Input Data
3. Calculation Methodology
4. Composite Construction
5. Disclosure
6. Presentation and Reporting
7. Real Estate
8. Private Equity
9. Wrap Fee/Separately Managed Account (SMA) Portfolios

Know the requirements and recommendations for each provision. Review the study notes.

Important formulas from this section:

Time weighted return: $r_{twr} = (1 + r_{t,1}) \times (1 + r_{t,2}) \times \ldots \times (1 + r_{t,n}) - 1$

Original Dietz method

$$r_{Dietz} = \frac{V_1 - V_0 - CF}{V_0 + (CF \times 0.5)}$$

Modified Dietz method

$$r_{ModDietz} = \frac{V_1 - V_0 - CF}{V0 + \sum_{i=1}^{n}(CF_i \times w_i)}$$

$$w_i = \frac{CD - D_i}{CD}$$

Composite returns

Sum of beginning assets and weighted external cash flows =

$$V_p = V_0 + \sum_{i=1}^{n}(CF_i \times w_i)$$

Beginning assets weighting method composite return =

$$r_C = \sum \left[r_{pi} \times \frac{V_{0,pi}}{\sum_{pi=1}^{n} V_{0,pi}} \right]$$

Beginning assets plus weighted cash flows method composite return =

$$r_c = \sum \left(r_{pi} \times \frac{V_{pi}}{\sum V_{pi}} \right)$$

MIRR: Modified IRR = value of r that satisfies the following equation: EV =

$$\sum_{i=1}^{n} [CF_i \times (1+r)^{w_i}] + BV(1+r)$$

Behavioral Finance

Traditional finance assumes that individuals are perfectly rational, risk-averse, and self-interested; they have perfect information; markets are efficient; price is right; there is no free lunch.

Behavioral finance assumes investors are not consistently risk averse; markets are not necessarily efficient; anomalies do exist.

Bounded rationality theory.
- Decisions are based on a limited set of important factors and/or heuristics: mental shortcuts, also called "rules of thumb."
- People satisfice (satisfy + suffice).

Traditional and behavioral perspective on portfolio construction
Traditional portfolio theory: Investor uses the MVO framework; considers different sources of money/wealth to be fungible. Behavioral portfolio theory: A BPT investor maximizes expected wealth subject to a safety constraint. BPT investor exhibits mental accounting bias and self-control bias.

Behavioral bias categories
Cognitive
Conservatism bias: Maintain prior views by inadequately incorporating new information.
Confirmation bias: Look for and notice what confirms beliefs.

Representativeness bias: Classify new information based on past experiences.
Illusion of control bias: False belief that we can influence or control outcomes.
Hindsight bias: See past events as having been predictable.
Anchoring & adjustment bias: Incorrect use of psychological heuristics.
Mental accounting bias: Treat one sum of money (or source of return) as different from another.
Framing bias: Answer question differently based on how it is asked.
Availability bias: Heuristic approach influenced by how easily outcome comes to mind.
Emotional
Loss-aversion: Prefer avoiding losses overachieving gains.
Overconfidence: Unwarranted faith in one's abilities.
Self-control: Fail to act in pursuit of long-term goals.
Endowment: People value assets more when they hold rights to it.
Regret aversion: Avoid pain of regret associated with bad decisions.
Status quo: Do nothing rather than make a change.

Moderate biases versus adapt portfolio to biases
1) Client's level of wealth
- high wealth → low SLR → adapt to biases
- low wealth → high SLR → try to moderate biases
2) Type of behavioral biases the client exhibits
- emotional → adapt to biases
- cognitive → try to moderate biases

BB&K (Bailard, Biehl, and Kieser) model:

Investor type	Personality axis	Methodology axis	Adviser relationship notes
Adventurer	Confident	Impetuous	Reluctant to take advice
Celebrity	Anxious	Impetuous	May be willing to take advice
Individualist	Confident	Careful	Will listen to advice
Guardian	Anxious	Careful	May seek advice
Straight arrow	Mid-point	Mid-point	Rational

Behavioral investor types

Investor type	Active/Passive	Risk tolerance	Biases (primarily)
Passive preserver	Passive	Low	Emotional
Friendly follower	Passive	Low-moderate	Cognitive
Independent individualist	Active	Moderate-high	Cognitive
Active accumulator	Active	High	Emotional

Impact of behavioral factors on portfolio construction
- Status quo bias → Maintaining default portfolio allocation.
- Regret aversion and framing biases →Naïve diversification or 1/n strategy.
- Overconfidence, naïve extrapolation of past returns, status-quo, framing, loyalty biases → Investing in the familiar.
- Regret aversion, overconfidence, and disposition effect (loss aversion) biases →Excessive trading.
- Availability, illusion of control, endowment, familiarity, and status quo biases→ Home bias, investing in one's home country.

Investor behavior and markets
Momentum or trending effects
- Herding behavior
- Availability bias: more recent events easily recalled and given relatively high weight (recency effect)
- Hindsight bias → regret → trend-chasing effect

- Bubbles: Overconfidence bias (illusion of knowledge and self-attribution)
Crashes: Disposition effect in the context of loss aversion bias.
Value stocks outperform growth stocks in the long run.

Capital Market Expectations

Capital Market Expectations, Part 1 : Framework and Macro Considerations
Application of Growth Analysis to Capital Market Expectations
Aggregate value of equity: $V^e = GDP \times E/GDP \times P/E$
In the long run, total value of equity depends on the growth rate of GDP.
Approaches to Economic Forecasting
Econometric models – Output variable is predicted based on input variables.
- Structural models specify functional relationships among variables based on economic theory.
- Reduced form models more compact versions of the underlying structural models.
Econometric indicators – Economic statistics published by official agencies and/or private organizations. Types include lagging, coincident, and leading indicators. Multiple individual indicators combined → diffusion index.
Checklist approach - subjective and involves putting together information that is considered relevant by the analyst.
Effects of Monetary and Fiscal Policy on Business Cycles
Aspects of fiscal policy can counteract cyclical fluctuations in the economy
Monetary policy is used as a mechanism for intervention in the business cycle
- Maintain price stability and/or growth consistent with potential.
- Suffers from "Long and variable lags."
- Ability to fine-tune the economy is limited.
The Taylor rule is a useful tool for assessing a central bank's stance and for predicting how it will evolve
$$i^* = r_{neutral} + \pi_e + 0.5(\hat{Y}_e - \hat{Y}_{trend}) + 0.5(\pi_e - \pi_{target})$$

		Fiscal Policy	
		Loose	Tight
Monetary Policy	Loose	High Real Rates + High Expected Inflation = High Nominal Rates	Low Real Rates + High Expected Inflation = Mid Nominal Rates
	Tight	High Real Rates + Low Expected Inflation = Mid Nominal Rates	Low Real Rates + Low Expected Inflation = Low Nominal Rates

Macroeconomic, Interest Rate, and Exchange Rate Linkages Between Economies
Macroeconomic Linkages
Macroeconomic linkages between countries are expressed through their respective current and capital accounts.
Four primary mechanisms to keep current and capital accounts in balance:
- Changes in income (GDP)
- Interest rates and asset prices
- Relative prices
- Exchange rates
In the short run, interest rates, exchange rates, and financial asset prices must adjust to keep the capital account in balance with the more slowly evolving current account.
Interest Rate/Exchange Rate Linkages
- Interest rates and currency exchange rates are linked
Two countries will share a default-free yield curve if (and only if) there is perfect capital mobility, and the exchange rate is credibly fixed forever.