* LOS 1
  + Focus shifts in L3 to firm and compliance, recommended procedures, and portfolio management.
  + Schweser or CFA material OK
  + Pay attention to principles
  + GIPS part of portfolio mgmt.?
  + Investment management firm-level issues, not just individuals
  + Don’t waste too much time. If no way to know, move on.
* LOS 2
  + Review Code, Standards, violations, and recommend practices and procedures designed to prevent them
    - Standard I(A): Professionalism
      * Guidance
        + Members and Candidates are responsible for violations in which they **knowingly** / unknowingly assist.
        + If a member or candidate has reasonable grounds to believe 3333that imminent or ongoing client or employer activities are illegal or unethical, the member or candidate **may** / must dissociate from the activity.
        + CFA Institute **strongly encourages** / requires members and candidates to report potential violations of the Code and Standards committed by fellow members and candidates.
        + CFA Institute encourages members and candidates / **members, nonmembers, clients, and the investing public** to report violations of the Code and Standards by CFA Institute Members or CFA candidates.
      * Recommended practices and procedures
        + See table
    - Standard I(B): Independence and Objectivity
      * Guidance
        + Modest gifts OK
        + Distinguish between gifts from clients and gifts from entities trying to influence a member’s behavior
        + May accept gift from clients – disclose to employer—get permission if for future performance (e.g., if you beat the market by 40 bp, etc.)
        + Members responsible for hiring outside managers **should not** accept travel, gifts, or entertainment that could impair their objectivity
        + Investment banking relationships – **do not** bow to pressure to issue favorable research (from IBD side)
        + For issuer-paid research, **flat** fee structure is preferred; **must** disclose
        + Members working for credit rating firms should avoid influence by issuing firms
        + Users of credit ratings should be aware of this potential conflict
        + Best practice is for analysts to pay for their own commercial travel to firms being analyzed or to firm events
    - Standard I(C): Misrepresentation
      * Do not make misrepresentations relating to investment analysis, recommendations, actions, or other professional activities
      * Guidance
        + Standard covers oral, written, and electronic returns
        + Do not knowingly omit or misrepresent qualifications, services of self or firm, or performance record, characteristics of an investment

“Knowledge”: Members and candidates either know or should have known that the misrepresentation was being made or that the omitted information could have altered the

* + - * + Do not guarantee a certain return
        + No plagiarism
        + M&C (Members and candidates) must disclose their intended use of external advisors
      * Investment manager Kim, confident in her outside advisors’ use of diligence and reasonable basis in their research, uses their reports as her own. Having only recently hired these advisors to write her reports, she does not tell clients of the changes made to her investment process and reports. How have the Standards been violated here?
        + Standard **V(B): Communication with Clients. Kim should have communicated the changes in her investment process.**
        + Standard **I(C): Kim’s representation of her advisors’ research as her own.**
    - Standard I(D): Misconduct
      * Do not engage in any professional conduct involving dishonesty, fraud, deceit, or commit any act that reflects adversely on professional reputation, integrity, or competence
      * Guidance:
        + Aimed at conduct and actions related to M&C’s professional, not personal, lives
        + Conduct that influences M&C’s ability to perform her responsibilities (e.g., drinking on the job) could violate Standard I(D)
        + M&C: Understand the nature and risks of an investment before making an investment recommendation. This goes to maintaining the trust that clients place on M&Cs.
        + Do not use CFAI enforcement of the Code and Standards to settle personal disputes
    - Standard II(A): Material Nonpublic Information
      * M&C who possess material nonpublic information that could affect the value of an investment must not act or cause others to act on the information
      * Guidance:
        + “Material”: If the disclosure would probably have an impact on the price of a security or if reasonable investors would want to know the information before making an investment decision
        + “Nonpublic”: If information has not been disseminated or is available to the marketplace in general (as opposed to a select group of investors)
        + A company provides material information to analysts in a briefing or conference call before that information is released to the public. Is the information yet “public”? (No.)
        + A company has legitimately provided an M&C insider information for the specific purpose of conducting due diligence according to the business agreement between them, which covers potential activities such as mergers, loan underwriting, etc.

Can the M&C use this material information for these purposes without violating Standard II(A)? (Yes.)

Can the M&C use this material information ewith the purpose to trade or entice others to trade the securities of the firm? (No.)

* + - * + **True** / False: A financial analyst may use significant conclusions derived from the analysis of public and nonmaterial nonpublic information even if those conclusions would have been material inside information had they been communicated directly to the analyst by a company. (This is “mosaic theory”.)
        + **True** / False: A financial analyst does not violate Standard II(A): Material Nonpublic Information, when she reaches conclusion about a corporate action or event through an analysis of public information and items of material nonpublic information.
        + Why save and document research while putting together mosaic information? **Evidence of the analyst’s knowledge of public and nonmaterial nonpublic information about a corporation strengthens the assertion that the analyst reached his or her conclusions solely through appropriate methods rather than through the use of material nonpublic information.**
        + In the context of material nonpublic information, and social media activity, what should M&C watch out for when participating in groups with membership limitations? **M&C should verify that material information obtained from these sources can also be accessed from a source that would be considered available to the public (e.g., company filings, web pages, and press releases).**
        + M&C must complete all appropriate regulatory filings related to information distributed through social media platforms.
        + Can M&Cpay industry experts or their insights without violating Standard II(A): Material Nonpublic information? If so, under what circumstances?  **Yes. However, M&C must ensure they are not requesting or acting on confidential information received from external experts.**
        + An industry expert has told an M&C some material nonpublic info; can the M&C act on the associated firm, and if not, until when? **No. The M&C cannot act on the firm until the information becomes publicly known to the market.**
        + **True** / False: Analysts’ conclusions don’t have to be made public, even though the impact of her conclusions would have a material impact on the market.
        + A prohibition on all types of proprietary trading activity when a firm comes into possession of material nonpublic information is NOT appropriate. Why not? **Liquidity in markets must be maintained in the context of market-making, and such a ban would be counterproductive in that light. Firms, however, can remain passive with respect to the market – take only the other side of unsolicited customer trades. NOTE: In risk-arbitrage trading, a trading prohibition makes more sense.**
    - Standard II(B): Market Manipulation
      * Members and Candidates must not engage in practices that distort prices or artificially inflate trading volumes with the intent to mislead market participants
      * **TRUE** / FALSE: Securing a controlling, dominant position in a financial instrument to exploit and manipulate the price of a related derivative and/or the underlying asset is a type of Market Manipulation
    - Standard III(A): Loyalty, Prudence, and Care
      * Members and Candidates have a duty of loyalty to their clients and must act with reasonable care and exercise prudent judgment. Members and Candidates must act for the benefit of their clients and place their clients’ interests before their employer’s or their own interests
      * Members and Candidates must exercise **the same** level of prudence, judgment, and care that they would apply in the management and disposition of their own interests in similar circumstances.
      * TRUE / **FALSE:** Standard III(A) renders all M&Cs fiduciaries
      * **TRUE** / FALSE: An M&C who does not provide advisory services to a client but who acts only as a trade execution professional must prudently work in the client’s interest when completing requested trades
      * **TRUE** / FALSE: M&C offering both trade execution services and client advisory on a limited set of investment options must apprise the client upfront about the advisor arrangement and limitations. (This helps clients understand whether they want to work with M&C operating under such restrictions.)
      * TRUE / **FALSE**: When an M&C is serving as PM for pension plans or trusts, the real client is not the beneficiaries of the trust, but the person or entity who hired the manager
      * **TRUE** / FALSE: When M&C cannot avoid potential conflicts between their firm and clients’ interests, they must provide clear and factual disclosures of the circumstances to the clients.
      * **TRUE** / FALSE: An M&C investment manager who has discretion over the selection of brokers executing transactions, and pays a higher brokerage commission than he or she would normally pay violates the duty of loyalty to the client
        + **TRUE** / FALSE: The exception to this is when the client directs the M&C to choose a suboptimal broker fee schedule
      * **TRUE** / FALSE: M&Cs who have the responsibility to vote proxies, but do not vote, or vote blindly, violate the duty of loyalty to their clients
    - Standard III(B): Fair Dealing
      * Why does Standard III(B) emphasize “fair” and not “equal” in “fair dealing”?
        + Because M&C could not possibly reach all clients at exactly the same time thru forms of communication
      * **TRUE** / FALSE: M&C may provide more personal, specialized, or in-depth service to clients who are willing to pay for premium services through higher management fees or higher levels of brokerage.
      * What are the two conditions under which M&C can offer different levels of service to those clients?
        + Different levels of service must not disadvantage or negatively affect clients
        + Different service levels should be disclosed and available to all clients and prospective clients
      * **TRUE** / FALSE: M&C are obligated to ensure that information is disseminated in such a manner that all client have a fair opportunity to act on every recommendation. HINT: This is perhaps more true when M&Cs change their recommendations than when recommendations are first being disseminated.
      * When making investments in new offerings or secondary financings, M&C should distribute the issues to **all** / select customers for whom the investments are appropriate in a manner consistent with the policies of the firm for allocating blocks of stock. If the issue is oversubscribed:
        + the issue should be prorated to **all** / premium subscribers
        + M&C should forgo any sales to themselves / **themselves or their immediate families** in order to free up additional shares for clients
      * M&C should disclose to clients/ **clients and prospective clients** the documented allocation procedures they or their firms have in place **and** / but not necessarily how procedures would affect the client or prospect
      * An M&C’s duty of fairness and loyalty to clients can sometimes with exceptions / **never be overridden by** client consent to patently unfair allocation procedures.
      * In “hot issue” securities, M&C are **prohibited from withholding** / can selectively withholdsuch securities for their own benefit and must not use such securities as a reward or incentive to gain benefit.
    - Standard III(C): Suitability
      * M&Cs in an advisory relationship with a client must:
        + Make a reasonable inquiry into the client’s or perspective client’s investment experience, risk and return objectives, and financial constraints prior to making any investment recommendation or taking any investment action. **TRUE** / FALSE: M&C must update this information regularly.
        + Determine that an investment is suitable to the client’s financial situation and consistent with the client’s written objectives, mandates, and constraints before making an investment recommendation or taking investment action
        + Judge the suitability of investments in the context of the client’s total portfolio.
      * M&Cs responsible for managing a portfolio to a specific mandate, strategy, or style must most of the time / **only** make investment recommendations or take only investment actions consistent with the stated objectives and constraints of the portfolio
      * How often should an IPS be updated?
        + At least annually, and also prior to material changes to any specific investment recommendations or decisions on behalf of the client.
      * M&Cs who are in an investment advisory relationship with clients should carefully consider the needs, circumstances, and objectives of the clients when determining the appropriateness and suitability of a given investment or course of investment action
        + What determines suitability of an investment product for a client? Aspects of:

Client’s knowledge

Client’s experience related to investing

Financial situation

* + - * + …which include

Risk profile of the investment compared to constraints of the client

Impact of the investment on the diversity of the portfolio

Whether the client has the means or net worth to assume the associated risk

* + - * If M&Cs are not in an advisory relationship with a client (i.e., simply executing specific instructions for retail clients), are they required to determine investment suitability for clients? **NO** / YES
      * If client withholds information about their financial portfolios from an M&C, can M&Cs be responsible for determining suitability of investments for the client on the basis of the information withheld? YES / **NO**
      * In the context of unsolicited trading requests from the client that do not properly align with IPS risk and return objectives, M&C **will need to make reasonable efforts to balance** / do not have to follow their clients’ trading requests **with** / because of their responsibilities to follow the agreed-upon IPS
      * In cases of unsolicited trade requests that M&C know are unsuitable for a client, the M&C **should** / should not refrain from making the trade until he or she discusses their concerns with the client
      * How should the M&C handle unsolicited trade requests if:
        + Minimal impact: Educate client on deviation form IPS
        + Material impact: Update IPS
        + Client’ doesn’t listen: Reconsider their services to the client
      * M&C who manage pooled assets to a specific mandate (instead of for individuals) **are** / are not responsible for determining the suitability of the fund as an investment for investors who may be purchasing shares in the fund. (Reason: This only applies to advisory relationships with clients.)
    - Standard III(D): Performance Presentation
      * When communicating investment performance information, M&C must make reasonable efforts to ensure that it is **fair**, **accurate**, and **complete**
      * M&C must provide credible performance information to clients and prospective clients and **to avoid misstating performance or misleading** clients or prospective clients about the **investment performance** of members or candidates **or their firms.**
      * Covers any practice that would lead to misrepresentation of a member’s or candidate’s performance record, whether the practice involves performance presentation or **performance measurement**
      * True / **False**: Members cannot state but can imply that clients will obtain or benefit from a rate of return that was generated in the past
      * Showing past performance of funds managed at a prior firm as part of a performance track record is allowable as long as the performance record shown is accompanied by **appropriate disclosures about where the performance took place**, and the person’s **specific role in achieving that performance**.
      * Performance history must include **both active and terminated** accounts
    - Standard III(E): Preservation of Confidentiality
      * M&C must keep information about current, former, and prospective clients confidential unless:
        + The information concerns illegal activities on the part of the client
        + Disclosure is required by law
        + The client or prospective client permits disclosure of the information
      * When is this standard applicable?
        + When the M&C receives information because of his or her special ability to conduct a portion of the client’s business or personal affairs
        + When the M&C receives information that arises from or is relevant to that portion of the client’s business that is the subject of the special or confidential relationship.
      * **TRUE** / FALSE: Client information is confidential even if the client person or entity is no longer a current client of the M&C
      * **TRUE** / FALSE: If applicable law requires disclosure of client information in certain circumstances, members and candidates must comply with the law. BACK: As a general matter, M&C must comply with applicable law. Conversely, if applicable law requires members to maintain confidentiality, even if the information concerns illegal activities on the part of the client, M&C should not disclose such information.
      * **TRUE** / FALSE: M&C need to be particularly aware of possible accidental disclosures of confidential information. They should encourage their firm to conduct regular periodic training on confidentiality procedures for all firm personnel, including associates, receptionists, and all staff that have routine contact with clients and their records
      * M&C are / **are not** in violation of the client confidentiality standard when they forward confidential information to the CFA Institute Professional Conduct Program (PCP). They **should** / should not treat the PCP as an extension of themselves for this purpose.
      * Example. Lynn Moody is an investment officer at Lester Trust Company. She has an advisory customer who talked to her about giving USD 50,000 to charity to reduce her income taxes. Moody is also treasurer of the Home for Indigent Widows, which is planning its annual giving campaign. HIW hopes to expand its list of prospects, particularly those capable of substantial gifts. Moody recommends that HIW’s VP for corporate gifts call on her customer and ask for a donation in the USD 50,000 range. Was there a violation of Standard III(E)?
        + Yes: Even though the attempt to help HIW was well-intended, Moody violated the standard by revealing confidential information about her client
    - Standard IV(A): Loyalty
      * In matters related to their employment, M&C must act for the benefit of their employer and not deprive their employer of the advantage of their skills and abilities, divulge confidential information, or otherwise cause harm to their employer.
      * In matters related to their employment, M&C must not engage in conduct that harms the interests of their employer. Implicit in this standard is the obligation of M&C to comply with the policies and procedures established by their employers that govern the employer-employee relationship – **to the extent that** / even if such policies and procedures **do not** / do conflict with the applicable laws, rules, or regulations or the Code and Standards
      * Employers **are not** / are obligated to adhere to the Code and Standards
      * Standard IV(A): Loyalty **does not preclude** / precludes M&C from entering into an independent business while employed.
      * M&C who engage in independent practice for compensation must notify their employer and describe which following aspects about their independent work to their employers beforehand?
        + **Service type**
        + **Service duration**
        + **Service compensation**
        + When can M&C begin rendering services? **Only after they have received employer consent.**
        + Can M&C make preparations to begin such independent practice before receiving employer consent? **Yes.**
      * Can a departing employee make preparations to go into a competitive business before terminating the relationship with his or her employer? **Yes** / No. **Yes, as long as such preparations don’t interfere with employee’s duty of loyalty.**
      * Can an M&C who is contemplating seeking other employment contact existing clients or potential clients prior to leaving his or her employer for the purposes of soliciting their business for the new employer? Yes / **No**.
      * Once M&C employees have left, how does Standard IV(A): Loyalty prohibit former employees from contacting clients of their previous firm? **Only when the contact information 1) comes from the records of the former employer or 2) violates an applicable “noncompete” agreement. But generally contacting clients is permitted otherwise.**
      * Only under what circumstances can M&Cs take records or files to a new employer? **With the written permission of the previous employer.**
      * Once an employee has left the firm, the skills and experience that an employee obtained while employed are **not** / still “confidential” or “privileged” information.
      * Firm records or work performed on behalf of the firm that is stored in paper copy or electronically for the M&C’s convenience while employed **should** / does not have to be erased or returned to employer. The EXCEPTION is **when employer gives permission to keep those records after employment ends.**
      * Which social media accounts are considered part of the employer’s assets? What needs to be done with them when M&C leave their employers?
        + Firm-approved business-related accounts that are created by M&Cs solely for professional reasons are considered part of employer’s assets. They must be transferred or deleted by M&Cs as directed by their firms policies and procedures upon leaving employer
      * Standard IV(A): Duties to Employers states that under certain circumstances, M&C may have to act contrary to their employer’s interest in order to comply with their duties to markets and clients. What is the underlying principle behind this, and an example instance of this?
        + **An M&C’s personal interests and those of his or her employer are secondary to the protection of the integrity of capital markets and the interests of clients.**
        + Example: **When the employer is engaged in illegal or unethical activity**
    - Standard IV(B): Additional Compensation Arrangements
      * M&Cs must not accept gifts, benefits, compensation, or consideration that competes with or might be reasonably expected to create a conflict of interest with their employer’s interest unless they obtain **written consent from all parties involved.** What is the underlying principle?
        + Underlying principle: M&C must obtain permission for additional compensation / benefits **because such arrangements may affect loyalties and objectivity and create potential conflicts of interest.**
      * **T** / F: M&Cs must make an immediate written report to their supervisor they propose to receive for services in addition to the compensation or benefits received from their employer. The details of the report should be confirmed by the **party offering the additional compensation**, which should include **performance incentives offered by clients**. The report should also state following terms:
        + **Nature of the compensation**
        + **Approximate amount of the compensation**
        + **Duration of the agreement**
    - Standard IV(C): Responsibilities of Supervisors
      * M&C must make reasonable efforts to ensure that anyone at the company / **subject to their supervision or authority** complies with applicable laws, rules, regulations, and the Code and Standards
      * **T** / F: Supervising M&C’s responsibilities can be delegated to subordinates who directly oversee other employees. Follow up: Under what circumstances? **When there are too many employees, and there isn’t a way to evaluate their conduct on a continuing basis**.
      * Supervising M&Cs sometimes may not have the authority to set or modify firm-wide compliance policies and procedures or incentive structures. Still, what does Standard IV(C) encourage them to do? **Even if authority to change firm-wide policies is not available, they should strive still to develop and implement effective compliance tools.**
      * **T** / F**:** To be effective supervisors, M&Cs should implement education and training programs on a recurring or regular basis for employees under their supervision.
      * Under Standard IV(C), an M&C with supervisory responsibility should bring inadequate compliance systems to the attention of the firm’s senior managers and recommend corrective action. However, this may not always be possible because of firm conditions. What should M&C supervisor do when they cannot effectively discharge supervisory responsibilities because of the absence of a compliance system or because of an inadequate compliance system? **The supervisor must decline supervisory responsibilities, until the firm adopts reasonable procedures to allow adequate exercise of supervisor responsibility.**
      * What must supervising M&Cs do to prevent violations of the law and Code & Standards / ensure that violations will not be repeated?
        + Review model compliance procedures or other industry programs to ensure that the firm’s procedures meet the minimum industry standards.
        + Once an M&C supervisor learns that a potential violation or violation has occurred, promptly undertake an assessment and determine the extent of the wrongdoing
        + Take steps to ensure that the violation will not be repeated (e.g., limiting the violating employee’s activities or increasing the monitoring of the employees’ activities)
        + Which actions are not enough, per the book?

Simply relying on the employee’s statements about the extent of the violation or assurances that the wrongdoing won’t reoccur

Reporting the misconduct up the chain and warning the employee to cease the activity

* + - * T/ F: If a M&C has adopted reasonable procedures and taken steps to ensure a good compliance program, then the M&C may not be in violation of Standard IV(C) if he or she does not detect violations that occur despite these efforts.
        + Follow up: When would supervising M&Cs be in violation of Standard IV(C)? If he / she knows that the procedures designed to promote compliance, including detecting and preventing violations, were not being followed
      * Under Standard IV(C), how do M&Cs with supervisory responsibility demonstrate reasonable supervision? By establishing and implementing written compliance procedures and ensuring that those procedures are followed through periodic review.
    - Standard V(A): Diligence and Reasonable Basis
      * M&Cs must:
        + Exercise **diligence**, **independence**, and **thoroughness** in analyzing **investments**, making investment **recommendations**, and taking investment **actions**
        + Have a **reasonable and adequate basis**, supported by research and investigation, for any **investment analysis, recommendation, or action**.
      * **T** / F: If M&Cs rely on secondary or third-party research, they must make reasonable and diligent efforts to determine whether such research is sound.
        + What is the difference between secondary and third party?

Secondary: **Research compiled by someone else in the M&C’s firm**

Third-party: **Conducted by entities outside the M&C’s firm**

* + - * If an M&C has reason to suspect that either secondary or third-party research or information lacks a sound basis the member **must not** / can with disclosures rely on that information.
        + FOLLOW UP: Can an M&C rely on others in his firm to determine whether the secondary or third-party research is sound, and use the information? **Yes, unless the M&C has reason to question its validity.**
      * What does an M&C have to do to ensure the quality of research at the firm meets necessary standards? **Verify that the firm has a policy about the timely and consistent review of approved research providers to ensure the quality of the research continues to meet necessary standards.**
      * What three aspects of models used in M&C’s investment recommendations must M&Cs understand?
        + **Assumptions**
        + **Limitations**
        + **How the results are used**
      * M&Cs **should** / are not required to use reasonable efforts to test the output of investment models and other pre-programmed analytical tools they use.
      * M&Cs involved in the development and oversight of quantitatively oriented models, methods, and algorithms **must** / are encouraged to understand the technical aspects of the products they provide to clients.
        + Follow up: What technical aspects do this include?

**Source of inputs**

**Time horizon of data used as inputs**

* + - * M&Cs must review managers **as** / more diligently than they review individual funds and securities.
    - Standard V(B): Communication with Clients and Prospective Clients
      * According to Standard V(B), what must M&Cs always disclose to clients and prospective clients?
        1. Disclose to clients and prospective clients the basic format and general principles of the investment processes they use to analyze investments, select securities, and construct portfolios and must promptly disclose any changes that might materially affect those processes
        2. Disclose to clients and prospective clients significant limitations and risks associated with the investment process
        3. Use reasonable judgement in identifying which factors are important to their investment analysis, recommendations, or actions and include those factors in communications with clients and prospective clients
        4. Distinguish between fact and opinion in the presentation of investment analysis and recommendations

Underlying purpose: Developing and maintaining clear, frequent, and thorough communication practices is critical to providing high-quality financial services to clients.

* + - * Follow up communication of significant changes in the risk characteristics of a security or an asset strategy is **required** / recommended.
      * In their ongoing communication with clients and prospective clients, what must M&Cs be sure address re. investment risks and limitations, and why is it useful?
        + **Changes to investment process**
        + **Newly identified significant risks and limitations**

Only by thoroughly understanding the nature of the investment product or service can a client determine whether changes to that product or service could materially affect his or her investment objectives

* + - * Why is it important that M&Cs inform clients about the specialization or diversification expertise provided by the external advisers? **Because this allows clients to understand the full mix of products and strategies being applied that may affect their investment objectives.**
      * For the purposes of Standard V(B), communication is not confined to a written report, similar to classical analyst findings. What does communication include in addition? **In-person recommendation or description, telephone conversation, media broadcast, or transmission by computer (internet).**
      * In the context of Standard V(B), what is the greatest consideration when providing information using new technologies (i.e., via social media)? To ensure that all clients are treated fairly, given that they might lack equal access to all technologies.
      * With respect to the identification of significant risks and limitations to client:
        + The use of leverage should be disclosed. **TRUE /** FALSE.
        + Risks and limitations highlighted should revolve around:

Analysis contained in M&C’s own investment products and recommendations

General market-related risks (e.g., counterparty risk, country risk, sector or industry risk)

Decision-making process itself (In adequate liquidity of certain parts of client portfolio, and capacity – the investment amount beyond which returns will be negatively affected by new investments)

* + - * Can M&C be expected to disclose risks which were not known at the time the recommendations or investment actions were made? YES / **NO**.
      * When presenting, the M&C must include those elements important to the analysis so that reader can follow and challenge the report’s reasoning. (**TRUE** / FALSE)
      * When an M&C doesn’t identify the limits of statistically developed projects, why could this be a violation of Standard V(B)? **Because not highlighting limits leaves readers unaware of the limits of the published projections.**
    - Standard V(C): Record Retention
      * Should an M&C keep records of the review of a prior published report, even if review doesn’t lead to a change in position? **YES** / NO. Why? **Because record retention substantiates the scope of one’s research and the reasons for one’s actions or conclusions.**
      * Does the type of media (e.g., Instagram, analyst report) exempt an M&C from the duty of record retention? YES / **NO**.
      * **TRUE** / FALSE: As a general matter, records created as part of an M&C’s professional activity on behalf of his or her employer are property of the firm. FOLLOWUP: When is it OK to take originals or copies of supporting records of the M&C’s work to a new employer? **Only with the express consent of the previous employer.**
    - Standard VI(A): Disclosure of Conflicts
      * By placing the disclosure burden on M&Cs re. actual and potential conflicts of interest, whom is Standard VI(A) designed to protect? **M&C’s** **employers, clients, and potential clients**
      * What should always be disclosed to client and employers? Hampers to:
        + **Independence and objectivity**
        + **Respective duties to clients, prospective clients, and employers**
      * FOLLOWUP: Why is this important? **Once an M&C has made disclosure, M&C’s employer, clients, and prospective clients will have the information needed to evaluate the objectivity of the investment advice or action taken on their behalf**
      * **TRUE** / FALSE: An M&C must take reasonable steps to determine whether a conflict of interest exists and to disclose to clients any known conflicts of the M&C’s firm.
      * **TRUE** / FALSE: Fee arrangements, subadvisory agreements, and other situations involving nonstandard fee structures should be disclosed to clients as it pertains to members only / **and their firms**. BONUS: What other arrangements re. firm needs to be disclosed to clients? **Disclosure of arrangements in which firm benefits directly from investment recommendations.**
      * Some obvious relationships between the issuer and the M&C or his firm that would cause conflicts of interest and should be disclosed include:
        + Directorships / consultancy by a member
        + Investment banking, underwriting, and financial relationships
        + Broker/dealer market-making activities
        + Material beneficial ownership of stock
      * Service as a director poses which three conflicts of interest?
        + **Between duties owed to clients and duties owed to shareholders of company**
        + **Director compensated with shares or options presents a potential incentive to inflate value of company’s equity**
        + **Board service creates the opportunity to receive material nonpublic information involving the company**
      * Where should disclosures be made re. fee arrangements?
        + **Firm’s promotional literature**
        + **In the footnotes to any research reports**
    - Standard VI(B): Priority of Transactions
      * **TRUE**  / FALSE? A M&C’s having the same investment positions or being co-invested with clients does not always create a conflict. TRUE – some clients in certain investment situations require M&Cs to have aligned interests.
      * M&Cs may undertake transactions in accounts for which they are a beneficial owner before / at the same time as / **only after** their clients and employers have had adequate opportunity to act on a recommendation.
      * Analyst Joe is arguing that family accounts that are client accounts can be treated differently from other client accounts. Is he right or wrong? (**Wrong**.)
    - Standard VI(C): Referral Fees
      * M&C must disclose to their **employer**, **clients**, and **prospective clients**, as appropriate, any **compensation**, **consideration**, or **benefit** received from / paid to / **received from or paid to** others for the recommendation of products or services.
      * Why it is important to disclose referral fees?
        + **Such disclosure allows clients to determine 1) any partiality shown in any recommendation of services and 2) the full cost of the services.**
      * M&C must advise client or prospective client, before entry into any formal agreement of services, of **any benefit given or received for the recommendation of any services provided by the M&C**. FOLLOWUP: M&C must disclose the nature of the consideration or benefit, as examples:
        + Flat fee or percentage basis
        + One-time or continuing benefit, based on performance
        + Other forms of benefit –provisions of research or other noncash benefit
        + The estimated dollar value of such benefits
      * Kim changes a marketing fee with marketing consultant Akagi to a referral fee, where he is paid a % for each client brought to Kim. Akagi agrees to this agreement, and Kim make sure to disclose this to her prospective clients by verbally telling them that her hedge fund compensates Akagi to find investors for the fund. This is the first time her clients are made aware of this agreement. Akagi also discloses to each client the fee he expects to earn from this arrangement once an investment management agreement is signed. How have the Standards been violated?
        + Akagi: **Standard VI(C): Referral Fees. Akagi should have disclosed in writing, and prior to the execution of any agreements, the referral fee arrangements in place including the nature and value of the benefit.**
        + Kim: **Standard IV(C): Responsibilities of Supervisors. Kim has a responsibility to oversee Akagi and ensure the appropriate disclosures are made regarding referral fees. In addition, Kim’s verbal communication of the referral fee to prospective clients is not sufficient to meet disclosure requirements.**
    - Standard VII(A): Conduct as Participants in CFA Institute Programs
      * Standard VII(A): Conduct as Participants in CFA Institute Programs, covers / **does not cover** expressing opinions regarding CFA Institute, the CFA Program, or other CFA Programs
        + When expressing a personal opinion, a candidate is prohibited from disclosing content-specific information, including any **actual exam question** and the information as to **subject matter** covered or not covered on the exam.
      * What parts of Standard VII(A): Conduct as Participants in CFA Institute Programs, constitutes information that cannot be disclosed by candidates sitting for an exam?
        + **Specific details of questions appearing on the exam**
        + **Broad topical areas and formulas tested or not tested on the exam**
      * Travis Nero serves as a proctor for the administration of the CFA exam in his city. In the course of his service, he reviews a copy of the Level 2 exam, and provides information concerning the exam questions to two candidates, who use it to prepare for the exam. How many parties have violated the Standards? **All three.**
    - Standard VII(B): Reference to CFA Institute, the CFA Designation, and the CFA Program
      * Which of these statements are allowed under Statement VII(B)?
        + **Allowed** / Prohibited. Statements that highlight or emphasize the commitment of CFA Institute Members, CFA charterholders, and CFA candidates to ethical and professional conduct or mention the thoroughness and rigor of the CFA Program
        + Allowed / **Prohibited**. Statements that refer to the CFA Institute, the CFA designation, or the CFA program that overstate the competency of the individual, or imply that superior performance can be expected from someone with a CFA designee.
      * To which forms of communication does Standard VII(B) apply?
        + Electronic
        + Written

Letterhead

Business cards

Professional biographies

Directory listings

Printed advertising

Firm brochures

Personal resumes

* + - * + Oral statements
      * Joe’s CFAI membership has been deactivated. Can he present himself as:

1. An active member (YES / **NO**)
2. Past CFA Institute member (**YES** / NO)
   * + - Pseudonyms or online profile names created to hide a member’s identity can / **should not be** tagged with the CFA designation.
       - What must not CFA candidates imply when referring to participation in the CFA program?
         * Partial designation
         * Expected completion date of level
       - Sam has passed each level of the exam in consecutive years, and wants to state that he did so. This is / **is not** a violation of Standard VII(B).
       - What are the “CFA marks”, and when can you use them?
         * “Chartered Financial Analyst”®
         * CFA®
         * CFA logo
         * FOLLOWUP: How should the marks be used? **Never as nouns; adjectives only**

Recommended practices and procedures to prevent violations of the Code of Ethics and Standards of Professional Conduct:

|  |  |
| --- | --- |
| Recommended Procedures for Compliance | Standard |
| * Members and Candidates: Stay informed of changes in applicable laws, rules, regulations, and case law. (Forms of keeping informed: Internal company memos, external continuing education program.) * Members and Candidates: Review the firm’s written compliance procedures on a regular basis to ensure that the procedures reflect current law and provide adequate guidance * Members and Candidates: Maintain or encourage their employers to maintain readily accessible current reference copies of applicable statutes, rules, regulations, and important cases * Distribution Area Laws: Understand the applicable laws (country and regional) applicable to investment products, both in country of origin and final destination * Legal Counsel: When in doubt about the appropriate action to take, seek advice of compliance personnel or legal counsel concerning legal requirements. * CFA Video: Have written procedures for reporting suspected violations * CFA Video: Members strongly encouraged to report violations by other members | **I(A) Professionalism: Knowledge of the Law** |
| * Members, Candidates, and Firms: Protect the integrity of opinions. Establish policies stating that every report should reflect the unbiased opinion of the analyst. Design compensation systems that protect the integrity of the investment decision process by maintaining the independence and objectivity of analysts * Members and Candidates: Create a restricted list. (I.e., Firms for which shares should not be temporarily traded.) Encourage the firm to remove a controversial client from the research universe, and disseminate only factual information about it. * Members and Candidates: Pay for commercial transportation and hotel charges when attending meetings with external agents that could compromise M&C’s independence and objectivity. * Members and Candidates: Limit gifts. Note that ordinary business-related entertainment is not forbidden, so long as its purpose is not to influence or reward M&Cs * Firms: Limit gifts. Consider a strict value limit for acceptable gifts * Members and Candidates: Restrict investments. Encourage firms to develop formal policies related to employee purchases of equity * Members and Candidates: Review procedures. Members and Candidates should encourage firms to implement effective supervisory and review procedures to ensure that analysts and portfolio managers comply with policies relating to their personal investment activities * Members, Candidates, and Firms: Establish a formal written policy on the independence and objectivity of research. Implement reporting structures and review procedures to ensure that analyst independence and objectivity are not compromised * Firms: Appointed officer. Appoint a senior officer to oversee compliance with its code of ethics, and all regulations concerning its business. Provide every employee with the procedures and policies for reporting potentially unethical behavior | **I(B) Professionalism: Independence and Objectivity** |
| * Firm can assist employees by providing written list of firm’s available services and a description of the firm’s qualifications * Maintain records of materials used to prepare research reports, and quote source, except for “recognized financial and statistical reporting services” * Models and analysis of others at the firm may be used **without** attribution * Should encourage firm to establish procedures by verifying marketing claims of third parties recommended to clients | **I(C) Professionalism: Misrepresentation** |
| * M&C: Encourage firms to develop / adopt a code of ethics to which every employee is subject * Firms: Disseminate to all employees a list of potential violations and associated disciplinary sanctions * Firms: Check the references of potential employees to ensure that they are of good character and not ineligible to work in the investment industry | **I(D) Professionalism: Misconduct** |
| * M&C: Make reasonable efforts to achieve public dissemination of information deemed material. If M&C cannot exhort firm to publicly disseminate, communicate the material information to supervisory or compliance folks for further action. Do NOT knowingly engage in any conduct that may induce company insiders to privately disclose material nonpublic information. * M&C: Encourage firms to adopt compliance procedures to prevent the misuse of material nonpublic information. (E.g., reviewing employee and proprietary trading, and reviewing investment recommendations). * M&C: Inform supervisor and compliance personnel of suspected inappropriate use of material nonpublic information as the basis for security trading or recommendations being made within the firm. * M&C: Encourage firms to develop and follow disclosure policies designed to ensure that information is disseminated to the marketplace in an equitable manner. (E.g., Analysts ensuring that small and big firm analysts receive information equally) * Companies: Issue press releases prior to selective meetings (e.g., analyst meetings and calls). If material nonpublic information is ever disclosed for the first time in a selective setting, promptly issue a press release or otherwise make the information publicly available. * Companies: Improve the documentation of internal enforcement of firewall procedures * Companies: Physically separate departments and files to prevent the sharing of information that should not be shared (e.g., Chinese wall) * Companies: Consider restrictions or prohibitions on personal trading by employees, and carefully monitor both proprietary trading and personal trading by employees * Firms; Maintain written records of communications between various departments * M&C: Encourage employers to circulate written compliance policies and guidelines to all employees, with goal being to enable employees to recognize material nonpublic information. | **II(A) Integrity of Capital Markets: Material Nonpublic Information** |
| * None provided. DON’T DO IT | **II(B) Integrity of Capital Markets: Market Manipulation** |
| * M&C with control of client assets should submit to each at least quarterly a statement showing all funds and securities, as well as movements in them over that period, and their location. Client assets should be separated from any other party’s assets * If an M&C is uncertain about the appropriate course of action for a client, act as if the M&C were the client. Disclose the questionable matter to the client and obtain client approval * M&Cs should encourage their firms to adopt policies around the following topics:   + Diversification   + Regular reviews of investments   + Dealing fairly with all clients with respect to investment actions   + Disclose conflicts of interest   + Disclose compensation arrangements   + Vote proxies   + Maintain confidentiality   + Seek best execution   + Place client interest first | **III(A) Duties to Clients: Loyalty, Prudence, and Care** |
| * M&C should encourage their firms to establish compliance procedures requiring all employees who disseminate investment recommendations or take investment actions to treat customers and clients fairly * M&C should make management aware of possible violations of fair-dealing practices within the firm when they come to the attention of the M&C * M&C must make reasonable efforts to limit the amount of time that lapses between the conception of an investment recommendation and its dissemination * M&C should encourage firms to develop guidelines that prohibit personnel who have prior knowledge of an investment recommendation from discussing or taking any action on the pending recommendation * M&C should establish procedures for the timing of dissemination of investment recommendations so that all clients are informed at the same time * M&C should maintain a list of all clients and securities or other investments each client holds in order to facilitate notification of customers or clients of a change in investment recommendation * M&C should develop a set of guiding principles that ensure fairness to clients (in respect to both priority of order of execution, and price obtained in execution of block orders), timeliness and efficiency in execution of orders, and accuracy of the M&C’s records as to trade orders and client account positions * M&C should disclose to clients and prospective clients how they select accounts to participate in an order and how they determine the amount of securities each account will buy and sell * M&C supervisors should review each account on a regular basis to ensure that no client or customer is being given preferential treatment and that the investment actions taken for each account are suitable for each account’s objectives * M&C should disclose to all clients whether the organization offers different levels of service to clients for the same fee or different fees (i.e., not offer different levels of service selectively) | **III(B) Duties to Clients: Fair Dealing** |
| * M&C must set up IPS to consider clients’   + Client identification   + Investor objectives   + Investor constraints   + Performance measurement benchmarks * M&C should compare client constraints with capital market expectations to arrive at an appropriate asset allocation * M&C should encourage their firms to develop policies and procedures to pass regulatory required suitability tests | **III(C) Duties to Clients: Suitability** |
| * M&C should encourage their firms to comply with GIPS standards * M&C can also meet their obligations under Standard III(D) by:   + Considering the knowledge and sophistication of the audience to whom a performance presentation is addressed   + Presenting the performance of the weighted composite of similar portfolios vs. using a single representative account   + Including terminated accounts as part of performance history with a clear indication of when those accounts were terminated   + Including disclosures that fully explain the performance results being reported (e.g., disclosing whether performance is gross or net of fees, when performance shown is of a prior entity) | **III(D) Duties to Clients: Performance Presentation** |
| * M&C should avoid disclosing any information received from a client except to authorized client employees * M&C should make reasonable efforts to ensure that firm-supported communication methods and compliance procedures follow practices designed for preventing accidental distribution of confidential information. M&C should regularly review such privacy protection measures * M&C should be diligent in discussing with clients the appropriate methods for providing confidential information. | **III(E) Duties to Clients: Preservation of Confidentiality** |
|  | **IV(A) Duties to Employers: Loyalty** |
|  | **IV(B) Duties to Employers: Additional Compensation Arrangements** |
|  | **IV(C) Duties to Employers: Responsibilities of Supervisors** |
|  | **V(A) Investment Analysis, Recommendations, and Actions: Diligence and Reasonable Basis** |
|  | **V(B) Investment Analysis, Recommendations, and Actions: Communication with Clients and Prospective Clients** |
|  | **V(B) Investment Analysis, Recommendations, and Actions: Record Retention** |
|  | **VI(A) Conflicts of Interest: Disclosure of Conflicts** |
|  | **VI(B) Conflicts of Interest: Priority of Transactions** |
|  | **VI(C) Conflicts of Interest: Referral Fees** |
|  | **VII(A) Responsibilities as a CFA Institute Member of CFA Candidate: Conduct as Participants in CFA Institute Program** |
|  | **VII(B) Responsibilities as a CFA Institute Member of CFA Candidate: Reference to CFA Institute, the CFA Designation, and the CFA Program** |

Review for Ethics

* Standard I(A): Knowledge of Law.
  + Recommended procedures
    - Written procedures
* LOS 3: Applications of the Code and Standards
  + When Locke, hired to investigate a firm’s compliance with the Standards and having grown compliance with his findings, allows and does not suspend the firm from continuing to manage fund assets until he has investigated further, why is this not a violation of the Standards?
    - **Until Locke’s investigation is complete, he has no obligation to suspend the manager or take any other action.**
    - **Until the analysis is complete, it would not be practical, and Locke would be violating his duty to act in his client’s best interests, by suspending the manager and leaving the assets unmanaged**
  + Client suitability for an investment must be reviewed **prior to** / after an allocation of IPO shares.
  + A firm **cannot** adopt the CFAI Code and Standards; a firm can adopt the CFAI Asset Manager Code of Conduct.
  + A manager recommends that 1) violations of the Standards be reported to the president, and 2) employees should discuss outside compensation with supervisors going forward. In what ways are the above wrong:
    - Violations need to be investigated by **supervisor**, who should take steps to ensure that violations will not be **repeated**
    - Outside compensation needs to be discussed with employers, and **written permission** obtained before compensation or benefits from third parties can be accepted. Why? **So they do not create a conflict of interest with employee’s responsibilities**.
  + For unavoidable conflicts of interest **regardless** / that the employee judges to be material, employees must disclose the conflicts of interest to clients prominently, and in plain language.
  + Employees should disclose to employers all client gifts **regardless of value**
  + Per Standard V(C), Record Retention, records can be maintained in **either hard copy or electronic** form.
  + When reporting performance, and mention of fees is omitted, is this a violation of the Standards? What types of disclosures must be made around fees? 1) Yes. 2) Whether returns are before or after fees
* LOS 4: Asset Manager Code of Conduct
  + **TRUE**: Is the CFA Asset Manager Code of Conduct voluntary?
  + Whereas the CFA Institute Code of Ethics and Standards of Professional Conduct address individual conduct, the AM Code of Conduct outlines the ethical and professional responsibilities of **firms that manage assets on behalf of clients**.
  + Adoption of or compliance with the AM Code of Conduct **does not** require a firm to amend its existing code of ethics or other policies and procedures as long as **they are consistent with the principles and provisions set forth in the Code**.
  + Can an Asset Manager represent that it is in compliance with the AM Code of Conduct if they have not complied with each of the principles of the Code? **No**.
  + Once a Manager has met each of the requirements of the Code, the firm must make the following statement whenever the firm claims compliance with the Code:
    - **“[Name of firm] claims compliance with the CFA Institute Asset Manager Code of Professional Conduct. This claim has not been verified by CFA Institute.”**
  + Asset Manager Code of Conduct
    1. Loyalty to Clients
       - Place client interests before their own.
       - Preserve the confidentiality of information communicated by clients within the scope of the Manager–client relationship.
       - Refuse to participate in any business relationship or accept any gift that could reasonably be expected to affect their independence, objectivity, or loyalty to clients.
    2. Investment Process and Actions
       - Use reasonable care and prudent judgment when managing client assets.
       - Not engage in practices designed to distort prices or artificially inflate trading volume with the intent to mislead market participants.
       - Deal fairly and objectively with all clients when providing investment information, making investment recommendations, or taking investment action.
       - Have a reasonable and adequate basis for investment decisions.
       - When managing a portfolio or pooled fund according to a specific mandate, strategy, or style:
         * Take only investment actions that are consistent with the stated objectives and constraints of that portfolio or fund.
         * Provide adequate disclosures and information so investors can consider whether any proposed changes in the investment style or strategy meet their investment needs.
       - When managing separate accounts and before providing investment advice or taking investment action on behalf of the client:
         * Evaluate and understand the client’s investment objectives, tolerance for risk, time horizon, liquidity needs, financial constraints, any unique circumstances (including tax considerations, legal or regulatory constraints, etc.) and any other relevant information that would affect investment policy.
         * Determine that an investment is suitable to a client’s financial situation.
    3. Trading
       - Not act or cause others to act on material nonpublic information that could affect the value of a publicly traded investment.
       - Give priority to investments made on behalf of the client over those that benefit the Managers’ own interests.
       - Use commissions generated from client trades to pay for only investment-related products or services that directly assist the Manager in its investment decision making process, and not in the management of the firm.
       - Maximize client portfolio value by seeking best execution for all client transactions.
       - Establish policies to ensure fair and equitable trade allocation among client accounts.
    4. Risk Management, Compliance, and Support
       - Develop and maintain policies and procedures to ensure that their activities comply with the provisions of this Code and all applicable legal and regulatory requirements.
       - Appoint a compliance officer responsible for administering the policies and procedures and for investigating complaints regarding the conduct of the Manager or its personnel.
       - Ensure that portfolio information provided to clients by the Manager is accurate and complete and arrange for independent third-party confirmation or review of such information.
       - Maintain records for an appropriate period of time in an easily accessible format.
       - Employ qualified staff and sufficient human and technological resources to thoroughly investigate, analyze, implement, and monitor investment decisions and actions.
       - Establish a business-continuity plan to address disaster recovery or periodic disruptions of the financial markets.
       - Establish a firmwide risk management process that identifies, measures, and manages the risk position of the Manager and its investments, including the sources, nature, and degree of risk exposure.
    5. Performance and Valuation
       - Present performance information that is fair, accurate, relevant, timely, and complete. Managers must not misrepresent the performance of individual portfolios or of their firm.
       - Use fair-market prices to value client holdings and apply, in good faith, methods to determine the fair value of any securities for which no independent, third-party market quotation is readily available.
    6. Disclosures
* Communicate with clients on an ongoing and timely basis.
* Ensure that disclosures are truthful, accurate, complete, and understandable and are presented in a format that communicates the information effectively.
* Include any material facts when making disclosures or providing information to clients regarding themselves, their personnel, investments, or the investment process.
* Disclose the following:
  + Conflicts of interests generated by any relationships with brokers or other entities, other client accounts, fee structures, or other matters.
  + Regulatory or disciplinary action taken against the Manager or its personnel related to professional conduct.
  + The investment process, including information regarding lock-up periods, strategies, risk factors, and use of derivatives and leverage.
  + Management fees and other investment costs charged to investors, including what costs are included in the fees and the methodologies for determining fees and costs.
  + The amount of any soft or bundled commissions, the goods and/or services received in return, and how those goods and/or services benefit the client.
  + The performance of clients’ investments on a regular and timely basis.
  + Valuation methods used to make investment decisions and value client holdings.
  + Shareholder voting policies.
  + Trade allocation policies.
  + Results of the review or audit of the fund or account.
  + Significant personnel or organizational changes that have occurred at the Manager.
  + Risk management processes.
  + Per the AM Code of Conduct, when a client directs the Manager to place trades through a specific broker or through a particular type of broker, Managers **should** alert the client that by limiting the Manager’s ability to select the broker, the client may not be receiving the best execution.
  + Per the AM Code of Conduct, Where possible, the compliance officer should be **independent** from the investment and operations personnel and should report directly to the **CEO or board of directors**
  + Per the AM Code of Conduct, a critical consideration is employing **only qualified staff**. (I.e., No buddies.). Managers must ensure that client assets are invested, administered, and protected by **qualified and experienced** staff.
  + When considering business-continuity planning under the AM Code of Conduct, the level and complexity of continuity planning depends on the size, nature, and complexity of the organization. At a minimum, Managers, should consider having the following:
    - Adequate backup, preferably off-site, for all account information
    - Alternative plans for monitoring, analyzing, and trading investments if primary systems become available
    - Plans for communicating with critical vendors and suppliers
    - Plans for employee communication and coverage of critical business functions in the event of a facility or communication disruption
    - Plans for contacting and communicating with clients during a period of extended disruption
  + Per the AM Code of Conduct, at a minimum, Managers should provide clients with **gross** and **net-of-fees** returns and disclose any **unusual expenses**
  + Managers should also retrospectively disclose to each client the actual fees and costs charged to the clients, together with the itemizations of such charges when requested by clients. This disclosure should include the **specific management fee**, **any incentive fee**, and the amount of **commissions managers paid on behalf of clients** during the period. In addition, Managers must disclose to **prospective** clients the **average or expected expenses or fees** clients are likely to incur
  + Managers must provide regular, ongoing performance reporting. Managers should report to clients at least **quarterly**, and when possible, such reporting should be provided within **30 days** after the end of the **quarter**.
  + Mehta’s firm enforces the below policies: 1) All disclosures are accurate and complete, 2) All calculations are shown, no matter how complicated, and 3) The client sees some sort of communication annually, and the marketing material sent to them is checked by the compliance department for accuracy and completeness. Which of these is consistent with the AM Code?
    - Types of disclosures: **Not compliant. Disclosures should be truthful, accurate, complete, and understandable.**
    - Communication timing: **Not consistent. Annual communication not timely.**
    - Marketing materials: **Consistent. Portfolio information provided to clients should be reviewed by independent third party. Compliance group counts as an independent third party.**
  + A manager is being asked by a client to disclose fee breakdown. Must manger respond to every request, and what breakdown is required? 1) **Yes**. 2) **Specific management fee**, **incentive fee**, and **amount of commissions paid on client’s behalf** during period.
  + Why is it important to disclose a change in investment process to client before executing upon it? **So clients who disagree can pull their funds in advance.**
* LOS 5: Behavioral Finance Perspective
  + Traditional finance
    - Prescriptive, not descriptive
    - Investors
      * Rational
      * Make decisions consistent with utility theory’s 4 axioms
        + Completeness
        + Transitivity
        + Independence
        + Continuity
      * **Revise** expectations consistent with Bayes’ formula
      * **Self-interested**
      * Risk-**averse**
        + Utility functions are **concave** and exhibit **diminishing** marginal utility
      * Have access to **perfect** information
      * Possess cognitive ability to process **all** available information in an unbiased way
  + More tenets of Traditional Finance
    - Rational decisionmakers follow rules of preference consistent with the four Axioms of Utility Theory as they maximize utility:
      * Completeness: An individual has well-defined preferences and can decide between any two alternatives
      * Transitivity: Given choices A, B, and C, if an individual prefers A to B, and is indifferent between B and C, then she prefers A to C.
      * Independence: Let A and B be two mutually exclusive choices, and let C be a third choice that can be combined with A or B. If A is preferred to B, and C is added to A and B, then A + C is preferred to B + C.
      * Continuity: Indifference curves are continuous, such that an individual is indifferent between all points
    - Rational economic man (REM):
      * Traditional finance assumes that after gathering information and analyzing it according to Bayes’ formula, individuals will try to obtain the highest utility given all budget constraints
  + Behavioral finance
    - Descriptive, not prescriptive
    - Based off of psychology
    - Decision Theory
      * Normative
      * Use of probability, expected values, and other uncertainties to come up with an optimal decision (e.g., project with highest expected value)
    - Traditional finance generally assumes that individuals are risk-averse and prefer greater certainty to less certainty. Behavioral finance assumes that individuals may be **risk-averse, risk-neutral, risk-seeking, or any combination of the three**.
    - Bounded rationality
      * Assumes
        + Knowledge capacity limits
      * Relaxes assumptions:
        + Perfect information is available
        + Rational decision-making
        + Consistent utility maximization
      * Notion that people **are not** fully rational / lack cognitive skills to make decisions.
      * Assume that people do not optimize, but rather “satisfice”, when arriving at their **adequate** / optimal decisions
        + Satisfice: Satisfy + Suffice. Outcomes that offer sufficient satisfaction, but not optimal utility, are sufficient.
    - Prospect theory
      * Assumes
        + Individuals are loss-averse
      * Relaxes assumptions:
        + Individuals risk-averse
      * Decisions are made in two phases:
        + Editing: Economically identical outcomes are grouped and a reference point is established to rank the proposals. Goal: Simplify the number of choices that must be made before final decision.
        + Evaluation: Use loss aversion rather than risk aversion to decide between alternatives
        + Framing / Edited: Prospects are perceived based on their framing, alternatives ranked. Different from expected utility theory in rigor. (Don’t get caught up – just simplifies process)

Applied to each prospect

Codification

Combination

Segregation

Applied to two or more prospects

Cancellation

Simplification

Detection of Dominance

* + - * + Evaluation

People are loss-averse, not risk-averse

Different attitudes to gains / losses

Probabilities are replaced by decision weights – not empirical probabilities per se, but those that people come up with.

* + Efficient markets hypothesis
    - Weak form efficient: All security market data is incorporated in security price
      * Implication: Cannot make excess return thru technical analysis
    - Semi-strong form efficient: All public information is incorporated in security price
      * Implication: Cannot make excess return thru fundamental analysis
    - Strong form efficient: All privileged nonpublic information as well as all public information is incorporated in security price
      * Implication: Cannot make excess return through inside or public information
    - Anomalies both fundamental and technical can challenge EMH
      * Fundamental anomalies
        + Violations of both semi-strong and strong forms
        + Evidence

Value stocks (low P/E, P/B, P/S ratios, and higher E/P, B/P, dividend yield) outperform growth stocks

Small-cap stocks exhibit abnormal returns

* + - * Technical anomalies
        + Violations of all three forms of efficiency
        + Evidence

Calendar anomalies show that stocks have abnormally high returns in January

* + Traditional perspectives on Portfolio construction
    - Rational portfolio is **mean-variance** efficient
  + Behavioral models proposed
    - Short-term satisfaction at the expense of long-term benefit
    - Asset pricing models: Need to add a risk premium for sentiment to discount rate
    - Behavioral Portfolio Theory (BPT): Investors construct portfolios in layers and expectations of returns and risk perceptions vary between the layers; diversification is not the objective with these layers
    - Adaptive Market Hypothesis (AMH): High competition for scarce resources + low adaptability = You will not survive
  + Adaptive markets hypothesis: States that similar to ecological systems, markets are influenced by competition for scarce resources and the adaptability of participants. As the result of informational, intellectual and computation limitations, individuals use judgment to gather sufficient information, to adequately process the information, to identify with satisfactory sub-goals and limited objectives rather than try to achieve an optimum, and to make decisions that meet these sub-goals and directives.
  + Savage’s subjective expected utility theory: expected utility theory is only possible in a world of subjective probabilities. Human rationality is limited by the complexity of the world we live in, the incompleteness and inadequacy of human knowledge, the computational inadequacy of people, the inconsistencies of individual preference and beliefs, and the conflicts of value among individuals and groups
  + Shefrin’s behavioral stochastic discount factor-based asset pricing model
  + What is this graph show, and what point is it trying to get across. (Show graph). **This is the Friedman-Savage utility function. It shows that investors can have risk-taking and risk-averse parts of their utility functions, with the ultimate function being dependent on the individual circumstances (e.g., wealth) of the decisionmaker. Friedman and Savage note that this seems to explain why people buy lottery tickets, in which expected utility is low, but people participate in the purchase anyways. Generally, people must be paid a premium to take on a risk, but if an investment offers a few extremely large prizes, its attractiveness is increased far beyond the aggregate level of the prizes. This contrasts with the traditional finance utility function, which assumes that decisionmakers are uniformly risk-averse.**
  + A person affected by self-control bias pursues **short-term** satisfaction over **long-term** financial security. A rational economic individual uses **self-control** to pursue **long-term** goals rather than **short-term** satisfaction. He/she maximizes **expected utility** over his/her own life.
  + If a person displaying mental accounting bias behaved more like a rational economic individual, she would not use mental accounts, but would treat money and wealth as **fungible**, and view all assets in a **portfolio context**, considering **correlations** between assets to construct an **optimal portfolio**.
* LOS 6: Behavioral Biases of Individuals
  + What biases are displayed?
  + Implications of bias on investment decision making?
  + Better to accommodate or mitigate a bias?
  + Behavioral Finance: Two types of errors and biases that depart from traditional finance “rational economic men” assumption
    - Cognitive errors: Due to faulty reasoning
      * Belief perseverance: Desire to stick with a previous decision
        + Conservatism bias
        + Confirmation bias
        + Representativeness
        + Illusion of control bias
        + Hindsight bias
      * Information processing: Information analysis process is flawed
        + Anchoring and adjustment bias
        + Mental accounting bias
        + Framing bias
        + Availability bias
    - Emotional biases: Stem from feelings or impulses
      * Loss-aversion bias
      * Overconfidence bias
      * Self-control bias
      * Status quo bias
      * Endowment bias
      * Regret-aversion bias
    - Other biases (not cognitive or emotional)
      * Self-attribution bias: Bias in which people take credit for successes and assign responsibilities for failure
      * Illusion of knowledge bias: People do a poor job of estimating something, but still believe they do it well because they believe that they are smarter and more informed than they actually are

|  |  |  |
| --- | --- | --- |
| **Bias / Error** | **Symptom** | **Mitigant** |
| Conservatism bias | Market participants rationally form an initial view, but then fail to change that view as new information becomes available | Become aware of own biases |
| Confirmation bias | Market participants look for new information or distort new information to confirm an existing view | Seek out contrary views and information |
| Representativeness | Market participants believe that the past will persist and new information is classified based on past experience or classification | Start with better understanding of laws of probability and statistical analysis |
| Illusion of control bias | Market participants think they can control or affect outcomes when they cannot | Realize that investment results are probabilistic |
| Hindsight bias | Market participants have a selective memory of past events, actions, or what was knowable in the past | Start by asking questions like “Do I really remember what I predicted and recommended?” |
| Anchoring and adjustment bias | Market participants select an arbitrary initial value to estimate an unknown, and make changes in relation to the initial view (i.e., “anchor point”), instead of objectively considering new data. | Start with asking questions such as “Do I continue to recommend this stock because I like the previous price I recommended, or am I open to an analysis process like the first time?” |
| Mental accounting | Market participants treat money differently based on how they categorize it | Examine what the portfolio could have achieved if the entire client assets were examined as one portfolio considering the effects of correlation among ALL parts of the whole |
| Framing bias | Market participants allow the way in which questions or data is “framed” to influence their decisions | Ask questions such as “Is my decision based on realizing a gain or a loss?” |
| Availability bias | Market participants place undue emphasis on the information that is readily available, solely for convenience purposes | Maintain a carefully researched and constructed Investment Policy Statement (IPS) through appropriate research and analysis of all decisions, and a long term focus |
| Loss-aversion bias | Market participants feel more pain from a loss than pleasure from an equal gain | Maintain a disciplined, well-thought out process based on future prospects of an investment, not perceived gain or loss |
| Overconfidence bias | Market participants overestimate their own intuitive ability or reasoning | Establish long-term financial goals with a budget to assure adequate savings and investments are made to meet all goals |
| Self-control bias | Market participants lack self-discipline and favor immediate gratification over long-term goals | Establish an appropriate investment plan and a budget to achieve sufficient savings |
| Status quo bias | Market participants allow their comfort with the existing situation to maintain their existing choices | Hard to overcome. Education re. reasonable risk/return combinations and the dangers of overconcentration is essential |
| Endowment bias | Market participants feel that an asset is special and more valuable, outside of the sole merits of its performance | Start a disciplined diversification program |
| Regret-aversion bias | Market participants do nothing out of excess fear that actions could be wrong | Communicate effectively the benefits of diversification, the risk / return trade offs, and the consequences of not meeting critical long-term investment goals |

* + Using heuristics or “rules-of-thumb” in asset allocation decisions is characteristic of which behavioral theory model? **Bounded rationality.**
* LOS 7: Behavioral Finance and Investment Processes
  + - Models:
      * Barnewall two-way behavioral model
        + Active vs. Passive investors

Active investors risk their own capital

Usually have a higher risk tolerance

Passive

Gained wealth passively

Can risk capital of others (e.g., executives)

Usually have lower risk tolerance

* + - * Bailard, Biehl, and Kaiser Five-Way Model
        + Investors approach life along two dimensions:

Confidence (Range: Confident to anxious)

Method of action (Range: Careful to Impetuous)

* + - * + Investors can be categorized into five different types along these two dimensions
        + People can change over time; this model is not a panacea, rather is a useful tool
      * Pompian approach
        + Investors can be classified into four behavioral investor types (BIT). (Ranked by risk tolerance)

Emotional, Low risk tolerance: Passive preserver

Cognitive, Low risk tolerance: Friendly follower

Cognitive, High risk tolerance: Independent Individualist

Emotional, High risk tolerance: Active accumulator

* + - * + To determine the investor’s BIT, advisers should follow the below steps:

Interview client to determine active or passive

Plot investor or risk tolerance scale

Test for behavioral bias

Classify investor into one of the BITs

* + - BF insights improve advisor-client relationship, and help clients meet long-term goals. Most people are not just “show me the number”
    - L3 focuses more on the investment business
    - BF: Irrational behaviors (aka beating this to death)
      * Employer stock: Clients hold too much
      * Excessive trading: 401k accounts show inertia, but brokerage accounts show too much trading(!) plus regret avoidance
      * Behavioral portfolio theory: People use mental accounting to invest along low or high priority themes
      * Analysts: Overconfidence, confirmation bias
  + How does one talk to behavioral investor types?
    - Passive Preservers: These are more receptive to “big picture” advice that does not dwell on such details as standard deviations and Sharpe ratios. Since these investors are more emotional, excessive cognitive detail will lose their attention. Advisors should instead focus on what the money will accomplish, such as family legacy goals.
    - Friendly Followers: These might be a bit more difficult to advise because they overestimate their risk tolerance. Biases tend to be cognitive. Advisers should educate these investors on the benefits of portfolio diversification, and challenge them to be introspective.
    - Independent Individualists: Biases are mostly cognitive. Out of all behavioral investor types, these are most likely to be contrarian. Advisers should present sound advice in a way that respects their intelligence. Education is essential to changing their behavior.
    - Active Accumulator: These clients are the most entrepreneurial. Biases are emotional. Illusion of control bias is particularly strong. Some need to be monitored for excessive spending. The best approach is to take control of the situation.
  + What are some limitations of classifying investors into various behavioral types?
    - Individuals may exhibit both cognitive errors and emotional biases
    - Individuals may exhibit characteristics of multiple investor types
    - Individuals will likely go through behavioral changes as they age
    - Individuals are likely to require unique treatment even if they are classified as the same investor type because human behavior is so complex
    - Individuals act irrationally at different times and without predictability
  + Risk tolerance questionnaires work better for cognitive than emotional-based individuals
  + Which bias is a potential concern for analysts conducting research? Confirmation bias
  + What is the difference between gambler’s fallacy and social proof?
    - Social proof: Bias in which individuals tend to follow beliefs of group
    - Gambler’s fallacy: Misunderstanding of probabilities in which people wrongly predict a reversal to a long-term trend.
  + Regret aversion bias causes investors to avoid the pain of regret resulting from a poor investment decision, whether the loss comes from an investment that goes down or a perceived loss resulting form a stock that went up that they did not own. Actively buying equities as the market rises is **consistent** with regret aversion bias.
* LOS 8: Managing Individual Investor Portfolios
  + Most important study session in Level 3!
  + Center of investment: Investment Policy Statement (IPS)
  + Centerpiece in the investment management industry
  + L3: Need to adjust thinking process vs L1, L2
  + CFA video: How to pass the exam. Also 2 videos devoted to essay section (directed response), which recommend watching
  + Exam format: Morning constructed response. IPS questions have been in the morning.
  + Taught process to follow to build the IPS
  + IPS creation
    - 5 constraints
      * TTLLU
      * Time horizon
      * Tax concerns
      * Liquidity needs
      * Legal and regulatory requirements
      * Unique circumstances
    - Risk and Return are functions of these
      * Risk
        + Willingness
        + Ability
      * Return
  + IPS is a good process
  + IPS must simultaneously determine
    - Constraints
    - Client’s return objectives
    - Client’s risk tolerance
    - The appropriate strategic asset allocation
  + Risk sets limits on reasonable return
  + Constraints
    - Time horizon
      * Often very important input to IPS
      * Single or multi-stage
      * Stage may affect the return objectives
      * 15-20 years is considered long term
      * Shorter time horizons reduce ability to bear risk
      * Longer time horizons **may allow** for more risk (i.e., ablity, not willingness)
    - Tax
      * Goal: legal ways to maximize after-tax returns
    - Liquidity
      * Higher liquidity needs reduce ability to take risk
      * Need to meet ongoing expenses (but for retirement, mostly a returns issue)
      * Emergency reserves will be here
      * Large blocks of restricted stock: Might be under Legal instead
      * Recommendation for test: list liquidity needs in answers, but don’t go overboard
    - Legal and Regulatory
      * The Code and Standards will apply
      * List anything else that comes up, such as:
        + Individual is an insider, and therefore restricted in some action
        + Complex trust issue
        + Complex situations: state need to seek qualified advice
    - Unique
      * Anything material that does not fit
        + List house or private business, not a part of investable asset base. However, should be discussed strategic asset allocation (SAA).
        + Constraints against certain investments (e.g., socially responsible investing)
    - Consider ability, willingness, and conclusion. Give a specific, measurable risk objectives if the fact support one.
    - If ability and willingness conflict, the conclusion is generally the more conservative of the two. State the conflict and the need for further discussion with the client
    - Ability to take risk: Determined by objective data
      * Modest financial goals in relation to financial assets means increased ability to take risk
      * Longer time horizons: Increase ability
    - Willingness to take risk: Based on more subjective data
      * Active or passive?
      * Psychological profile
      * Past life experiences of the client
      * Client statements:
        + Their perceived level of wealth
        + Concern with shortfall risk / losses
      * Actions speak louder than words: Investment actions?
    - Return objective
      * Having examined the constraints and risk considerations, we come here
      * List (state) the objectives
      * Quantify the investable asset base
      * Pay attention to pre-tax and after-tax
      * Total return is used to meet the objectives. (I.e., If $100,000 is needed, it does not matter if it comes from income or capital appreciation.)
      * Maintaining real value is the default assumption
      * Examples:
        + See CFA video 8 (3 of 5): Future nominal return example. REVIEW!
        + House is stripped out of investable asset base.
        + Calculate the after-tax nominal return:
        + Default assumption is living expenses are after-tax
        + After-tax real to nominal return conversion (CFA preferred):

Addition for individuals

Compounded for institutions

* + - * + Converting pre-tax to after-tax returns

Gross up nominal for taxes – produces relatively high rate of return.

This is recommended approach; use on exam unless directed otherwise.

DO NOT GROSS UP to arrive at post-tax before adding back inflation

* + - * Strategic Asset Allocation (SAA)
        + Listen to client on asset mix
        + Eliminate portfolios that don’t make sense
        + When looking at portfolio xx, are you looking using a deterministic or Monte Carlo approach?

Monte Carlo: Show investor the probability of their outliving the money

* + - * + Level 3: Not just knowledge, but also how to communicate
        + Typical IPS question (Bob Jones)

Review, print, and mark up. Will feel tough.

* + - * Example: Bob Jones
        + 1 minute is 1 point of value. Direction to you in how to answer questions
        + What are the: Questions, Case Facts, Taught Material?
        + 7 point question. Grader is looking for work, labeled.
  + For a normal distribution of returns, the probability of a return that is more than two standard deviations below the mean or expected return is approximately 2.5 percent. If the client is more risk averse, the advisor can choose a larger number for standard deviation. Therefore if we subtract two standard deviations from a portfolio’s expected return and the resulting number is above the client’s return threshold, the client may find the resulting portfolio acceptable.
  + Bob is a net saver (i.e., cash inflows exceed cash outflows). Do his expenses represent liquidity needs when portfolio planning? **No. Only when expenses exceed cash inflows is this regarded as a liquidity need for exam.**
  + A client wants to grow 700,000 into 2,610,264. Contributing 6000 per month over 120 months. What are the FV, PV, PMT in i calc?
    - **PV = -700,000**
    - **FV = 2,610,264**
    - **PMT = -6000**
    - **N = 120**
    - If 0.65% is the monthly return, derive annualized return. **(1.0065)^12 -1 = 8.09%**
  + What are some of the benefits and shortcomings of historical Monte Carlo for a client that believes the market environment will be very different in the coming times, and expects a capital gains tax rate change?
    - Benefits
      * **Provides a distribution of probable outcomes rather than a point estimate. This allows investors to determine likelihood of reaching retirement goals**
      * **Captures the multi-period effects of tax changes**
    - Shortcomings
      * **Simulations based on history may not accurately forecast future market environment**
* LOS 9: Taxes And Private Wealth Management In A Global Context
  + ANKI: Accrual and capital gains tax formulas.
    - Accrual: Why is the tax term where it is in FV formula?
    - Capital gains: Why add back Btcg?
  + B: >1.0 means built-in loss (higher basis then than now); <0 means built-in gain
  + Wealth taxes can be levied even if returns are negative
  + Wealth tax: Tax drag actually decreases at higher rates of return. Why? ANKI
  + Blended taxation: Complex
    - Wartr: Weighted average realized tax rate (excluding deferred taxes and resulting after realized tax return).
    - r\* = r(1- wartr). “r” is pre-tax return
    - T\* = tcg[p deferred cg / (1- wartr)]
    - ANKI: Review T\* formula for blended taxation, including deferred taxes. Remember will apply capital gains tax on deferred gains
  + Trading behavior: Increase tax alpha by putting higher-taxed items (e.g. bonds) in these accounts. (Equity usually can be held longer, so can be capital gain-centric.
  + Tax loss harvesting: Use unrealized losses to offset capital gains owed elsewhere
    - Caveat: Emphasize that we save the ATCF now, rather than later
  + Tax lot accounting: Take the benefit of losses now using HIFO (highest in, first out). Generally HIFO minimizes gains and taxes.
    - In special case, where you think taxes will be higher in future, use LIFO (lowest in first out)
  + …
  + Tax drag ($) = gain lost to taxes = gain with no taxes – gain after taxes
  + Tax drag (%) = % of gain lost to taxes = tax drag ($) / gain with no taxes
  + Which factors increase tax drag under accrual taxes, out of n, t, r, PV? **N, r**.  **Rationale: Effects of lost pretax compounding opportunity**
  + For capital gains taxes:
    - No / Little / Significant lost compounding of return.
    - Tax drag amount tin **increase** / decrease with n and r.
    - Cost basis B affects:
      * No initial unrealized gain, B = 1; tax drag % <- tax rate
  + Wealth tax drag
    - Minimized under:
      * Short / **moderate** / long n, and low / **moderate** / high r
    - Maximize under:
      * **Short** / moderate / long n, and **low** / moderate / high r
  + Tax alpha: The value created by effective tax management of investments
  + A portfolio generates a total return of 15%. The tax rates on interest, dividends, and capital gains are 35%, 20%, and 20%, respectively. The proportions of the portfolio return from interest, dividends, and realized capital gains are 10%, 25%, and 35%, respectively. Using the data, the net return all taxes is closest to **12.68**%.
* LOS 10: Estate Planning In A Global Context
  + Could spend most part of career doing this, so introduction here
  + Gifts / lifetime gratuitous transfer / inter vivos transfer
    - Made while donor is alive, can be subject to gift tax
    - Law determines if taxable to giver or receiver. Question will specify
  + Bequests / **testamentary gratuitous transfer**:
    - Made at death, can be subject to estate tax
    - **Estate tax** if paid by transferor; **Inheritance tax** if paid by recipient
  + Limitations on disposition
    - Forced heirship rules
    - Community property rights
    - Separate property rights
    - Clawback provisions
  + Example rule: Surviving spouse entitled to higher of one-half of marital estate or one-third of total estate
  + Core capital vs Excess capital
    - Core capital: Amt of capital required to maintain the current lifestyle plus a reserve for unexpected needs
    - Excess capital: Individual’s total assets less total liabilities
  + Mortality tables
    - Real annual spending coupled with real risk-free rate
  + Ruin probability table
    - Review Exhibit 3. How to use this?
  + Gifting vs Bequesting
    - Distributing excess capital
    - Comparing a gift now vs. future bequest requires some assumptions:
      * G: the gift receiver
      * E: the gift giver
    - Scenarios of RV
      * Gift subject to no tax
      * RV formula
      * Gift subject to tax paid by receiver
        + (1-Tg) new term
      * Gift subject to tax paid by payer
        + (1-Tg + TgTe). Add back cross product. Since giver pays, the the reciver gets more money. Also, estate tax will be reduced. Don’t worry about proving this term
      * Giving to a tax-exempt entity
        + Conclusion: Want to make the gift **now.**
        + Caveat: Sometimes you don’t want to give them all the nest eggs
  + Estate planning strategies
    - Generation skipping: Pay a transfer tax once, not twice
    - Spousal exemption: Most countries allow an unlimited or large transfer to the surviving spouse with no gift or estate tax
    - Deemed disposition: Some countries treat a bequest as if the assets were sold
      * Similar to a capital gains tax
      * Instead of a wealth tax on full value
    - Trusts
      * Legal mechanism by which Grantor / Settlor can operate in ways when grantor is not there
      * Fixed vs. Discretionary. Difference? ANKI
    - Life Insurance
      * Policy holder makes premium payments with after-tax funds
      * Insurance company makes policy payout at death of insured
      * Policy beneficiary is paid; payment is generally tax free
      * Aggregate policy payouts are expected to exceed premium payments reflecting an untaxed rate of return earned on the funds
    - Cross Border Taxation Issues
      * Residence jurisdiction:
        + A country taxes all income earned by its residents, regardless of where the income is generated
        + The most common method
      * Source (Territorial) jurisdiction:
        + A country taxes all income generated within its borders, regardless of citizenship or residence of recipient
      * ANKI: What is the difference?
      * Both can apply to both income and wealth transfers
      * Double taxation: Income from source country; recipient is in a residence country, both claiming authority over and tax on the same income
        + Residence-Residence conflict: Two countries claim residence for and taxing authority on the same individual’s world-wide assets and income
        + Source-Source: Two countries claim taxing authority over the same income
        + Relief forms

Exemption method: Income taxed by the source country is not taxed by the residence country

Credit method: Tax owed to source country reduces the tax that would be owned to residence country on that same income

Deduction method: Tax owed to source country is deducted from world-wide income in the eyes of the resident country

* + - * + HINT: Multiple countries: Analyze source country, then do resident tax returns
    - What are four sources of tax liabilities, which tax planning must consider?
      * Income
      * Spending
      * Wealth
      * Wealth transfer
  + Total estate vs. Marital estate
    - A community property regime entitles a surviving spouse to receive a one-half interest in assets accumulated during the marriage. The forced heirship rules in the same country entitle the spouse to receive a minimum of 25% of the total estate and all children to equally share a minimum of 25% of the estate. Puente’s total estate grew from 12 to 26 million during his current marriage. **What is the minimum amount his wife is entitled to receive? The greater of 50% of accumulated assets ($26 - $12 = $14MM) or 25% of total estate ($26MM) = 50% of $14MM = $7MM.**
* LOS 11: Concentrated Single Asset Positions
  + Undiversified portfolio: lots of unrealized gains
  + Behavioral finance issues: Why did we end up with this large position
  + Sale often results in large bill
  + Case-specific
  + Reducing risk via building liquidity
  + Techniques to get around these problems
    - 1) Hedge the asset to lower risk
    - 2) Borrow against the hedged position
  + Limits on getting out of concentrated single-asset positions
    - Loan-to-value limits
    - Behavioral: Entrepreneurs who can’t separate business from self, as example
      * Generally easier to overcome cognitive, rather than emotional, biases
  + Goal-based planning
    - Primary capital vs. other capital:
      * Primary needs to maintain standard of living
      * Surplus meets remaining aspirational goals
    - Primary capital held in:
      * Personal risk bucket (money-market type assets and personal residence)
      * Market risk bucket: Marketable stocks and bonds
    - Surplus capital: Meets aspirational goals
    - In concentrated single asset cases, too much is in the aspirational risk category
  + Managing Concentrated Stock
    - Use IPS
    - Identify techniques and strategies that best meet these objectives and constraints
    - Identify tax advantages and disadvantages of each technique
    - Identify other (including nonfinancial) advantages and disadvantgges of each technique
    - Document the decisions made
  + Asset Location
    - Use of tax-advantaged accounts in getting out of concentrated assets
  + Wealth transfer strategies
    - Gifting to charity
      * Tax deduction allowable on FMV.
      * Suitable for: Assets with appreciated FMV.
      * Charity is a tax-exempt entity and can retain or sell the asset with no tax consequences
    - Estate tax freeze
      * Aka “corporate estate tax freeze”
      * Transfers future appreciation and associated tax liability to future generations
      * Allows you to keep control (i.e., by not donating FMV to foundation)
      * Procedure:
        + Restructure company into voting preferred and nonvoting common stock
        + You retain preferred stock; you gift common stock
        + Set the initial dividends such that available, initial cash flow goes to the preferred stock
        + Argue that because the common stock doesn’t have a market, the FMV is little; so when you gift common stock, there is no value, so there is no taxable liability
        + After the receivers gain common shares, then have dividends increase on common stock from nonzero
      * Example 3 from Reading 11: The Wilsons.
        + Key words on test – note “retain control”
        + Control later goes to children 🡪 telltale sign of estate tax freeze (i.e., bequest at death)
    - Combine limited partnership, gifting, and valuation discounts
      * Level 3 is NOT just about material. It is seeing how you respond in a less structured environment. Just like in real world. Application is portfolio management, in which you demonstrate synthesis of concepts
      * Procedure:
        + Take stock, put it into your limited partnership.
        + In your capacity as General Partner (GP) you make all decisions and retain control of the asset
        + Gift the limited partnership (LP) positions to others

LPs have limited marketability and no control

Resulting valuation discounts reduce gift taxes

* + - * + Further value and tax liability goes to the LPs
    - Other techniques
      * Sell asset, pay gains taxes, lose control of asset, receive cash
      * Hedge value of asset to remove downside risk, then monetize the asset by borrowing against its value
  + Managing Concentrated Stock
    - Assume investor owns 100,000 shares of MCS stock priced at $100/share. Assume that cost basis is close to $0, meaning that sale would trigger taxable gain.
    - Ways to manage this exposure include:
      * **NOTE**: Local tax authorities might reject any to all of these solutions. Always need to consult a qualified professional familiar with local laws.
      * Short Sale Against the Box
        + NOTE: Based on legal concept that in most countries, if you want to short an asset, need to borrow asset, sell it to someone, then use cash to buy this back.
        + Procedure: Borrow and then short 100,000 shares.

Option 1: Then use the proceeds of the short sale

Option 2: Borrow against the proceeds of the short sale

* + - * Forward Sale Contract: Sell stock forward
      * Forward Conversion with Options:
        + Buy a put and sell a call with same strike price on the shares
        + Stock will be called or put at that strike price establishing a known ending value
      * Total Return Equity swap
        + Might remove some risk, but most of these from tax perspective might be issues
      * Modified hedging
        + Protective put with an at-the-money option
  + Additional Tax Considerations
    - Differential detrimental tax rates (DDT)
      * Taxing authorities like this
      * Example: Zero cost collar, constructed using a call and a put
        + Call option premium of $100 is taxed now at ordrinary income rate of 25%
        + Put option cost of $1000 increases the cost basis of the underlying asset, thus later reducing capital gains taxed at 15%
    - Tax-optimization equity strategies
      * Index tracking with active tax management: Invests cash to track an index pre-tax but emphasizes sources that receive favorable tax treatment
      * Completeness portfolio: Invests the cash and other portfolio assets for maximum portfolio diversification
    - Cross hedge:
      * Way to avoid capital gains
      * Ways to accomplish:
        + Short an index highly correlated with a stock(?)
        + Short a different, but very similar stock
        + Buy puts on a very similar stock
      * Do not eliminate all risk
    - Exchange fund:
      * Contribution of stock
      * Gets a degree of diversifications without triggering capital gain (double check?)
    - Privately held business
      * Behavioral finance issues: Founders psychologically attached, etc.
      * Exit values not as obvious
      * Sale to strategic buyers involve loss of control
  + Given the same % of assets concentrated in a single source, which case benefits more from a reduction in specific risk
    - An executive owning shares of the company where she is employed. The position is 40% of her assets
    - An owner who holds 100% of a private business. The position is 40% of his assets
    - Answer: **Of the two positions, the owner has less reason to diversify because the owner has much more control and is likely to want the risk as a way to build wealth. The executive has less control with the most need to diversity and reduce specific risk.**
  + How does a sale and leaseback of a business asset lose and regain control? **The sale part of the sale leaseback does give up control, but the leaseback then allows a business owner to continuing using the asset and restores a measure of control.**
  + What are the steps to create a cashless collar for stock price S?
    - Buy put with strike K **<** S
    - Sell call with strike K **>** S
    - Put and call prices **must be** equal
  + Formulate a forward conversion with options on stock with price S
    - Buy **put**
    - Sell **call** on **same** number of shares
    - The put and call options have the same **expiration** and **exercise** price.
    - Borrow against the value of the **perfectly hedged** stock position; a **high** loan-to-value ratio is possible
* LOS 12: Risk Management for Individuals
  + An investor’s total wealth is composed of both human capital and financial capital. Human capital (HC) is the **discounted present value of expected future labor income**. Financial capital (FC) is the **sum of all the other assets of an individual.**  This includes items such as **stocks, bonds, alternative investments as well as personal items such as a home, car, and other physical assets**.
  + Per the CFA curriculum, DB benefits are HC or **FC**
  + All others constant, a ski racer has a lower HC than a tenured professor. Why is this? **Because the riskiness of the cash flows is much greater for a ski racer vs. a tenured professor**.
  + HC estimation depends on the following factors:
    - Projected future earnings
    - Future earnings’ real rate of growth
    - Mortality rates
    - Real and nominal risk-free discount rates
    - Relevant risk premia to the real discount rate
  + Net wealth is the sum of individual’s HC and FC less **any liabilities owned by the individual**
  + Financial stages of life for an individual
    - Education: Individual gains knowledge and skills. Minimal emphasis on saving or risk management
    - Early Career: Individual enters the workforce, assumes personal responsibilities. Savings may be difficult and life insurance may be needed to insure substantial HC against death and the cessation of work income to meet continuing financial obligation to the family
    - Career Development: Job skills continue to expand and upward mobility increases. Financial obligations often increase to fund the college education of children. Successful individuals generally build FC and retirement savings over time
    - Peak Accumulation: FC accumulation is typically greatest in the decade before retirement. Earnings and the need to accumulate funds for retirement are high. Financial obligations to educate the children are easing. Investment risk may start being reduced in anticipation of retirement. Career risk can also be high as it can be more difficult to find equivalent employment in the event of unplanned job loss
    - Preretirement: Emphasis continues on accumulating FC for retirement, beginning to reduce investment risk, and tax planning for retirement
    - Early Retirement: Individuals adjust to a new lifestyle. For those with FC and good health, expenses could increase as they make use of the free time. The portfolio emphasis is on managing the portfolio so it will last for the remaining lifetime
    - Late Retirement: This stage is highly unpredictable. Individuals face longevity risk (outliving their assets), increasing health care expenses could be an issue, and cognitive functions used to make decisions could decline
  + An economic (holistic) balance sheet extends the traditional balance sheet assets. How, with respect to assets and liabilities?
    - Assets: HC and DB benefits
    - Liabilities: Consumption and planned requests at death
  + Life insurance Net Premium: Estimated by an insurance company, based on a discount rate. **True** / False: The discount rate is equivalent to the assumed rate of return on investing the premiums
  + Life insurance Gross Premium = Net Premium + **Load**
    - Load: Covers the company’s operating cost and expenses for writing the policy
  + When valuing permanent insurance policies, how do the “net payment cost index” and “net surrender cost index” differ? **The second takes into account the projected policy cash value in determining the FV cost of insurance**
  + Deferred fixed annuities: The longer the delay between the initial premium paid, and the start of payouts received, the lower the cost of the annuity. Why? **The company can invest and increase the funds available before making payouts on the annuity.**
  + What is the difference between an individual’s net worth and net wealth, and why doesn’t net worth tell the whole story?
    - **Net worth: Assets minus liabilities per traditional balance sheet**
    - **Net wealth: Assets minus liabilities per holistic balance sheet**
    - **Net worth doesn’t tell the whole story because a traditional balance sheet fails to consider all of the economic variables affecting the individual (e.g., newly graduated student with lots of debt has negative net worth)**
* LOS 13: Managing Institutional Investor Portfolios
  + Defined benefit (DB) plan vocabulary:
  + Funded status: Value of a plan’s assets vs. plan’s liabilities
    - Fully funded: Plan assets / Plan liabilities <= / **>=** 100%
    - Underfunded: Plan assets / Plan liabilities **<=** / >= 100%
  + Accumulated benefit obligation (ABO): **Total present value of pension liabilities to date, assuming no further accumulation of benefits**
  + Projected benefit obligation (PBO): **ABO** plus PV of **additional liability from projected future employee compensation increases**. The value used in calculating funded status for ongoing / terminating plans.
  + Total future liability: **PBO** plus **PV of expected increase in the benefit due current employees in the future from their service to the company between now and retirement**
  + Active vs. Retired lives: Active is the number of **currently employed plan participants who are not currently receiving pension benefits**. Retired: Number of **retired plan participants receiving benefits from the plan**
  + When discussing portfolios with definable liabilities, what are some considerations when discussing return and risk?
    - Return: Maintain or grow plan surplus
    - Risk: Variability of surplus
  + When evaluating a DB plan’s sponsor, both **lower** debt and **high** profitability indicate an ability to increase plan contributions if investment results are poor
  + **TRUE** / FALSE: A pension plan trustee is a fiduciary and as such must act solely in the best interests of the plan participants
  + Of the below entities, which are better suited to an ALM framework?
    - **Banks**
    - **Insurance companies**
    - **Defined benefit pension plans**
    - Endowments
    - Foundations
  + Of the below entities, which are tax exempt?
    - Banks
    - Insurance companies
    - **Defined benefit pension plans**
    - **Endowments**
    - **Foundations**
  + What is one major difference between foundations and endowments?
    - **Foundations** / endowments have a required minimum spending rule but **endowments** / foundations do not.
  + Under an asset & liability management (ALM) framework, risk is measured by the **standard deviation** of **plan surplus**.
  + With regard to setting return objectives for endowments and foundations, a **nominal** / real return target is preferred, and the inflation rate used is not necessarily a broad inflation rate, but one relevant to the nature of the endowment or foundation’s spend.
  + With regard to life insurance, what is disintermediation risk? Disintermediation risk is the risk that as interest rates increase, policyholders are more likely to withdraw cash vale causing increased demand for liquidity from the portfolio. Additionally, high rates are likely to be associated with depressed market values in the portfolio.
  + With regard to life insurance risk, what happens if there’s a mismatch between asset and liability durations? Mismatches in duration will make the surplus highly volatile as the change in the value of assets will not track the change in the value of liabilities when interest rates change.
  + What kind of entity are “eligible investment” constraints and the “prudent investor rule” applicable to? **Life insurance companies**
  + With regard to setting life insurance return targets, what is a net interest spread? **Net interest spread is a return in excess of the actuarial assumption. The actuarial assumption is a minimum growth rate required to meet projected policy payouts.**
  + Insurance plan’s surplus is called **surplus assets**, which can be invested in a **surplus portfolio**.
  + A potential problem exists in the relationship between a bank’s assets and liabilities. A bank’s liabilities are mostly in the form of long-term loans / **short-term deposits**, while assets (**loans** / deposits) can be fairly **long-term in nature and illiquid** / short term and liquid.
  + A bank’s total assets is made up of a **loan** portfolio and a **securities (investment)** portfolio. The directives of the latter is to:
    - Manage total balance sheet interest rate risk by adjusting the duration of assets to match those of liabilities
    - Maintain adequate liquidity to compensate for the less liquid loan assets
    - Contribute to bank income with interest earned
    - Manage overall credit risk, normally by holding very high quality securities to balance the higher risk of loan assets.
  + With regard to bank risk measures, what is the leverage-adjusted duration gap (LADG)?
    - (Show picture)
    - Leverage-adjusted duration gap: Duration of bank assets less leveraged duration of bank’s liabilities.
    - D assets = **duration of assets**; D liabilities = **duration of liabilities**; L/A = leverage measure (**market value of liabilities over market value of assets**)
    - If LADG is:
      * Zero: Equity (assets less liabilities) should be unaffected by interest rate changes
      * Positive: Equity is **inversely** / proportionately affected by rates. **(Rates up, equity down. Just like a bond.)**
      * Negative: Equity value is inversely / **proportionately** affected by rates. **(Rates up, equity up.)**
  + **A bank IPS’ time horizon** is **short** / long and linked to the duration of the **liabilities** / assets**.**
  + When calculating return objective for endowments, how should arrive at nominal return, given real return and inflation? **Product, not sum**.
  + When planning return objectives for an endowment / foundation, should you consider total return or expected cash flow yield? **Total return; expected cash flow yield is irrelevant.**
  + All else equal, the pension plan of a company with:
    - …lower profitability (net income / sales) and higher debt ratios has a **lower** risk tolerance.
    - …greater proportion of retired lives has **shorter** duration of plan liabilities and **lower** risk tolerance.
  + Under a pension plan deficit (opposite of surplus), if additional contributions are not preferred, how can plan shortfall be corrected under both liability mimicking and asset-only investment approaches?
    - Liability mimicking: **Additional company contributions may be necessary** or **investment returns in excess of the liability mimicking returns**.
    - Asset only: **Set required return high enough** to eventually make up the funding shortfall.
  + These factors support a higher risk tolerance for an institution (or individual, as applicable):
    - A **long** time horizon
    - Expected **ongoing contributions**
    - No **contractually-defined liability stream**
  + A DB pension plan that stops hiring shortens / lengthens its time horizon? **Shortens**
  + As a fund reinvests its surplus it **increases** its ability to maintain purchasing power.
  + For a DB pension plan with a fully funded surplus, the minimum return requirement is the rate that equates the **PV of the plan’s liabilities** with the **PV of the plan’s assets**.
  + An asset-only approach
    - Assumes that the liability has no **risk**.
    - Considers a low-risk pension investment as one having **low** correlation with the portfolio’s existing assets
  + The liability-relative approach
    - focuses on exposure to factors that affect the present value of pension liabilities such as **term structure**, **inflation**, and **productivity growth**.
    - Considers a low-risk pension investment as having **high** correlation with the pension liability.
* LOS 14: Capital Market Expectations CFA Schweser video
  + Going towards a tool that can be used during Asset Allocation
    - Expected return, standard deviation, correlation among assets
  + Developing capital market expectations
    - Beta research (macroeconomics)
    - Alpha research: Adding value within an asset class
    - All kinds of issues associated with assumptions into economic models
    - Issues with forecasting: errors and biases (don’t get bogged down)
      * Time lags; data subject to revision
      * Indexes are rebased
      * Illiquid assets: Prices can get smoothed (read: risk calculations are understated)
      * Ex post (in past) can understate ex ante (upcoming) risk
      * Regime change: Fundamental landscape has changed (e.g., nature of mortgage lending business before financial crisis)
        + This leads to nonstationarity (statistics different before and after period)
      * Failure to condition data (e.g., using past nominal return without regard to change in inflation)
      * Mistaking correlation for causation
      * Psychological biases
      * Model risk (choice of wrong model or inputs)
  + Setting capital market expectations
    - Statistical tools
      * Time series analysis
        + Some markets exhibit **volatility clustering**: In the short run, volatility persists
      * DCF analysis
        + Grinold-Kroner model is an adaptation of the Gordon dividend model. (Note: Only used to project long-term rates of return. Not that scientific.)

% change in shares outstanding: Considers the effect of share repurchases

Change in P/E ratio:

* + - * + For bonds: Use yield-to-maturity (YTM)
      * Financial equilibrium approach
        + Expected return and standard deviation of security I vs world market: related via beta
        + Sigma is total risk. So needs to be multiplied by correlation.
        + ERPM / σM = Sharpe ratio for the world market
        + As long as beta between ith security and world market <1, diversification is possible
        + Singer-Tejar (?) model
      * Surveys, panels, judgment
  + Business cycle
    - Can be source of return expectations
    - Identifying inflections in growth is very useful.
    - Positive business cycle: GDP above potential, and generally increasing inflation
    - Negative business cycle: GDP below potential, generally declining inflation
    - Characteristics of cycles
      * Initial recovery
      * Early expansion / Upswing
        + Output gap shrinks
        + Policy less stimulative
        + Increasing consumer confidence
        + Inflation low
        + ST rates increasing
        + LT rates bottoming or increasing; bond prices start to decline
        + Stock prices increasing
      * Late expansion / upswing(economy can’t continue forever)
        + GDP above trend
        + Growth slowing
        + Consumer confidence excessive
        + Policy becoming restrictive
        + Inflation increasing
        + ST rates increasing
        + LT rates increasing with bond prices declining
        + Stock prices volatile and topping out
      * Slowdown
        + GDP above trend
        + Growth rate below trend and turning negative
        + Consumer confidence peaking
        + Policy turning neutral
        + Inflation increasing
        + ST rates peaking then declining
        + LT rates high and then declining, bond returns favorable
        + Stock prices declining in anticipation of recession
      * Recession
        + Formal definition: two consecutive quarters of negative real growth
        + Output gap increasing
        + Policy easing
        + Consumer confidence weak
        + Inflation peaking (i.e., going away)
        + ST rates declining, bonds to well
        + LT rates declining
        + Stock prices generally turn up later in the recession
  + Inventory cycle as a measure of economic activity
    - Could ramp or damp business cycle
    - Inventory level measured as: Inventory / Sales
    - **Positive** / negative economic sign: Increasing I/S due to I increasing (viewed as voluntary inventory stockpiling by businesses)
    - Positive / **negative** economic sign: Increasing I/S due to S decreasing
    - Factoid: In general I/S has been decreasing, due mainly to efficiency of business
  + Components of GDP
    - GDP = C + I + G + Net exports
      * C: Consumer spending is the largest component and tends to be a more stable component
      * I: Investment is essentially business capital expenditures and inventory accumulation. More volatile component
      * G: Government spending. Generally counter cyclical, meant to dampen business cycle
      * Net exports: X – M
  + Government policy
    - Fiscal and Monetary policy
      * Monetary policy
        + ANKI: Increase / decrease the money supply to lower / increase ST rates and stimulate / slow the economy.
        + **True** / False: ST rates then affect LT rates
        + Deflation is a serious problem. (“If prices will fall, why buy now? Let’s wait.” -> Economic collapse)
      * Fiscal policy
        + Budget deficit = G – T
        + For a countercyclical policy:

**Increase** / Decrease the deficit to stimulate / slow the economy

* + - Taylor Rule: MUST KNOW. Can be used by central banks to implement counter cyclical monetary policy
      * r = the policy neutral rate + 0.5(expected – trend GDP growth) + 0.5(expected – acceptable inflation)
  + Shape of yield curve (YTM of govt securities plotted as a function of maturity). Correlation with economy’s performance
    - Steep yield curve reflects **expansive** monetary and **expansive** fiscal stimulus -> therefore the economy is likely to expand
    - Downward sloping yield curve reflects **restrictive** monetary and **restrictive** fiscal stimulus.
    - Weaker signals (don’t dwell)
      * Monetary policy **expansive**, fiscal policy **restrictive**
        + Yield curve mindly upward sloping
      * Monetary policy **restrictive**, fiscal policy **expansive**
        + Yield curve flat
  + GDP plotted as a function of time. Certain policies have an impact on growth
    - What affects GDP growth?
      * Changes in employment levels
        + Population growth
        + Labor participation rate
      * Changes in productivity and capital
        + Spending on new capital inputs
        + Total factor productivity growth
        + Sound banking system and reasonable governmental policies
  + Consumer spending
    - Tends to stabilize economic growth
    - “Permanent income hypothesis”: Consumer **spending behavior** is driven by their long-run **income** expectations
  + Trend rate of economic growth – in Developing economies
    - Rapid growth in capital is associated with rapid economic growth:
      * TRUE / **NOT NECESSARILY**: High growth in capital and economic growth imply positive return on equity
        + Reason: If capital growth exceeds real economic growth, return on investment (ROI) goes down, which correlates with
      * More likely affecting rate of return in equity market: Balance of rate of growth in capital accumulation and spending vs rate of growth in real economic activity.
  + Pro-growth governmental policies
    - Twin deficit problem: Govt deficit (G > T) associated with large current account deficits (X < M). When govt deficit is high, usually govts stimulating economy, and people are doing well, and can support imports.
      * Usually G > T is correlated with X < M
      * High govt spending has to be financed by borrowing. But Govt spending drives up interests, and crowds out business borrowing
      * Or, if financed with foreign investors, can lead to:
        + Inflation to devalue the debt
        + Lower G and higher T to pay debt, which slows growth
      * Often these spendings are associated with problems down the road
  + Global economic linkages
    - Interest rate / currency linkages: Currency peg. Conduct economic policies to match peg. Pegging country gives up decisions around monetary and fiscal policy, follows that of currency peg. Raise interest rates as tool to manage currency peg. Pegging has become less common
  + Emerging market issues
    - Issues and warning signs
      * Irresponsible fiscal and monetary policies
        + Red flag: Government deficit > 4% of GDP
      * Insufficient real economic growth to satisfy the expectations of the population
        + Red flag: Growth rates <4%. (GDP growth should equal population growth, otherwise have DECLINING standard of living)
      * Overvalued currency supporting a twin deficit problem financed by foreign borrowing
        + Red flag: Current account deficit > 4% of GDP
      * Excessive foreign-denominated debt
        + Red flag: Foreign debt / GDP ratio > 50%
      * Inadequate short-term liquidity to service foreign debt
        + Red flag: Foreign currency reserves / ST foreign currency debt ratio <100%
      * Risky political situation
        + Red flag: Policies not supportive of growth
  + Econometrics
    - Pros and cons
  + Forecasting asset values and currency (READ: Simple economic drivers behind the asset classes)
    - If ST rates decrease/increase, increase/decrease maturity. (Think like a trader. Which would you lock in?)
    - Credit quality:
      * If you think you’re going into recession, do you want to make high or low-credit trades?
    - Default-free bonds (forecast changes in LT rates)
      * If LT rates decrease/increase, increase/decrease maturity.
      * Longer-term investors should focus on inflation
      * Shorter-term investors should focus on the business cycle
    - Credit-risky bonds
      * Forecast changes in credit spread. Avoid widening credit spread
    - Foreign-denominated emerging market debt
      * Forecast the country’s economic and political policies
        + Avoid widening spread.
        + Foreign-denominated bonds cannot be paid by printing money or inflating away the debt
        + Policies should help service the debt
    - Inflation-indexed bonds
      * Forecast changes in real yield and demand for inflation protection
      * If real rates increase / decrease, the bond prices will **decrease / increase.**
      * If the desire for inflation protection increases / decreases, the bond prices will **increase / decrease**.
    - Common stock
      * Forecast changes in earnings and P/E
        + P/Es tend to to increase decrease in times of economic **expansion / contraction**
    - Emerging market stock
      * Returns increase / decrease when developed market economies expand / slow
    - Real estate
      * Lower interest rates decrease capitalization rates and **increase** /decrease prices
  + Forecasting exchange rates (CFA: no approach works all the time)
    - Purchasing Power Parity (PPP): Higher relative inflation is associated with currency **depreciation** / appreciation.
    - Relative economic strength **attracts** / repels capital and is associated with currency **appreciation** / depreciation.
    - Capital flows approach: For any reason, if much capital is flowing into economy, that capital will bid up the currency. More of a long-term approach.
    - Savings-investment imbalances approach: Less a forecasting approach, but can explain why certain currencies diverge from fair value for extended time periods
      * Example: Strong economic expansions usually accompanied by a shortfall in domestic savings and currency appreciation. Why?
        + Why? **Inadequate domestic savings means that the economic expansion will in part have to be funded by foreign savings**
        + Domestic interest rates and currency value must increases to keep attracting capital inflows
  + Describe the three portions of the Grinold-Kroner model, and the terms behind each.
    - D1 / P0: Dividend yield
    - Delta s: % change in shares outstanding
    - g: real growth rate
    - i: expected inflation
    - Delta P/E: repricing return, aka change in price / earnings ratio
  + Relate the correlation and beta of asset i to the global market M given their covariance. Then relate the correlation and beta of asset i to each other.
  + Given the beta of asset i and the ICAPM formula, derive the risk premium of asset i (RPi) in terms of 1) the correlation between i and M, 2a) the market Sharpe ratio, and 2b) the market risk premium.
  + State the covariance of two markets in terms of their betas and the standard deviation of the global investable portfolio
  + How is an equity risk premia (ERP) for a partially integrated, fully integrated, and fully segmented market calculated?
    - Partially integrated: Weighted average of fully integrated and fully segregated ERPs, based on i’s degree of market integration
    - Fully integrated ERP: correlation of i,m \* standard deviation of i \* market Sharpe ratio
    - Fully segregated ERP: (correlation =1 ) \* standard deviation of i \* market Sharpe ratio
  + In the calculation of covariance of two markets i and j from their betas and the variance of global market portfolio, what are the units of variance? **Full percent (i.e., 9.0 = 9%)**
  + What is the difference between disinflation and deflation? Disinflation mean a deceleration in the rate of inflation. (Ex: ) Deflation means falling prices.
  + The inventory cycle in thought to be 2-4 years in length and is measured using the inventory to sales ratio. The longer-term business cycle is thought to be 9 to 11 years in length.
  + The business cycle is characterized by five phases:
    - Initial recovery
    - Early expansion / Upswing
    - Late expansion / upswing
    - Slowdown
    - Recession
  + What are the characteristics of business cycles?
    - Positive business cycle: GDP **above** potential, and generally **increasing** inflation
    - Negative business cycle: GDP **below** potential, generally **declining** inflation
    - Characteristics of cycles
      * Initial recovery
        + Large output gap
        + Business confidence **rising** / stable
        + Government stimulation provided by **low** / high interest rates and/or budget deficits
        + **Falling** inflation
        + **Low or falling** short-term interest rates
        + Bond yields are **bottoming out**
        + Rising stock prices
        + Cyclical, riskier assets such as small-cap stocks and high yield bonds do well
      * Early expansion / Upswing
        + Output gap grows / **shrinks**
        + Policy **less** stimulative
        + **Increasing** consumer confidence
        + **Increasing** growth with inflation **low**
        + ST rates **increasing**
        + LT rates bottoming or increasing; bond prices start to decline
        + Stock prices increasing
      * Late expansion / upswing (economy can’t continue forever)
        + GDP above trend
        + Growth **slowing**
        + Consumer confidence **excessive**
        + Policy becoming **restrictive**
        + Inflation **increasing**
        + ST rates **increasing**
        + LT rates increasing with bond prices declining
        + Stock prices volatile and topping out
      * Slowdown
        + GDP **above** trend
        + Growth rate **below** trend and turning negative
        + Consumer confidence **peaking**
        + Policy turning **neutral**
        + Inflation **increasing**
        + ST rates peaking then declining
        + LT rates **high** and then **declining**, bond returns favorable
        + Stock prices **declining** in anticipation of recession
      * Recession
        + Formal definition: two consecutive quarters of negative real growth
        + Output gap increasing
        + Policy **easing**
        + Consumer confidence **weak**
        + Inflation **peaking (i.e., going away)**
        + ST rates **declining**, bonds do well
        + LT rates **declining**
        + Stock prices generally turn up later in the recession
  + State the Taylor rule.
  + If the government wants to stimulate the economy, it can implement loose fiscal policy by **decreasing** / increasing taxes and /or decreasing / **increasing** spending, thereby increasing the deficit.
  + Verify these statements on fiscal policy:
    - It is / **is not** the level of the budget deficit that matters when stimulating the economy, instead of / **but** the change in the deficit.
    - Changes in the deficit that occur naturally over the course of the business cycle are / **are not** stimulative or restrictive.
    - **TRUE** / FALSE: Only changes in the deficit directed by government policy will influence growth.
  + Shape of yield curve (YTM of govt securities plotted as a function of maturity). Correlation with economy’s performance
    - Steep yield curve reflects **expansive** monetary and **expansive** fiscal stimulus -> therefore the economy is likely to expand
    - Downward sloping yield curve reflects **restrictive** monetary and **restrictive** fiscal stimulus.
    - Weaker signals (don’t dwell)
      * Monetary policy **expansive**, fiscal policy **restrictive**
        + Yield curve mildly upward sloping
      * Monetary policy **restrictive**, fiscal policy **expansive**
        + Yield curve flat
  + Does high growth rate necessarily imply favorable equity returns? No; equity return is related to the rate of return on capital
    - Twin deficit problem: Govt deficit (G > T) associated with large current account deficits (X < M). When govt deficit is high, usually govts stimulating economy, and people are doing well, and can support imports.
      * Usually G > T is correlated with X < M
      * High govt spending has to be financed by borrowing. But Govt spending drives up interests, and crowds out business borrowing
      * Or, if financed with foreign investors, can lead to:
        + Inflation to devalue the debt
        + Lower G and higher T to pay debt, which slows growth
      * Often these spendings are associated with problems down the road
  + For a strong credit position in an emerging economy, where should the level of foreign reserves be relative to short term debt? **More FX reserves than next year’s foreign debt.**
  + What is the definition of cash instruments? **Short-term debt with a maturity of one year or less.**
  + Forecasting exchange rates (CFA: no approach works all the time)
    - Purchasing Power Parity (PPP): Higher relative inflation is associated with currency **depreciation** / appreciation.
    - Relative economic strength **attracts** / repels capital and is associated with currency **appreciation** / depreciation.
    - Capital flows approach: For any reason, if much capital is flowing into economy, that capital will bid up the currency. More of a long-term approach.
    - Savings-investment imbalances approach: Less a forecasting approach, but can explain why certain currencies diverge from fair value for extended time periods
      * Example: Strong economic expansions usually accompanied by a shortfall in domestic savings and currency appreciation. Why?
        + Why? **Inadequate domestic savings means that the economic expansion will in part have to be funded by foreign savings**
        + Domestic interest rates and currency value must increases to keep attracting capital inflows
  + Differentiate between the three major approaches to economic forecasting – Checklist, Economic indicators, and Econometric analysis:
    - **Econometric analysis**: Analysts use statistical methods to arrive at economic forecast
    - **Economic indicators**: Analysts use economic indicators available from public and private organizations to build economic forecast
    - **Checklist**: Analyst uses judgment asking relevant questions and formulates a forecast using a subjective approach
  + Under a labor-only approach to measuring an economy’s aggregate trend growth, aggregate growth = growth from changes in employment + **growth from changes in labor productivity**. Growth from changes in employment can be further broken down into **growth in potential labor force** + **growth in labor force participation**.
  + An analyst forecasts the historical covariance of the returns between Tel-Pal, Inc., stock and Int-Pal, Inc., stock to be 1,024. A newly forecasted covariance matrix predicts the

covariance will be 784. The analyst weights the historical covariance at 30% and the

forecast at 70%. Calculate the shrinkage estimate of the covariance. **70% \* 784 + 83% \* 1024 = 856**

* + When forming capital market expectations, analysts are susceptible to a few psychological traps:
    - In the **anchoring trap**, the first information received is overweighted. If during a

debate on the future of the economy, the first speaker forecasts a recession, that forecast is given greater credence.

* + - In the **status quo trap**, predictions are highly influenced by the recent past. If

inflation is currently 4%, that becomes the forecast, rather than choosing to be

different and potentially making an active error of commission.

* + - In the **confirming evidence trap**, only information supporting the existing belief is considered, and such evidence may be actively sought while other evidence is

ignored. To counter these tendencies, analysts should give all evidence equal

scrutiny, seek out opposing opinions, and be forthcoming in their motives.

* + - In the **prudence trap**, forecasts are overly conservative to avoid the regret from

making extreme forecasts that could end up being incorrect. To counter this trap, consider a range of potential outcomes.

* + - In the **recallability trap**, what is easiest to remember (often an extreme event) is

overweighted. Many believe that the U.S. stock market crash of 1929 may have

depressed equity values in the subsequent 30 years. To counter this trap, base predictions on objective data rather than emotions or recollections of the past.

* + Ex post data is **after** the fact; ex ante data is **before** the fact.
  + A researcher is finding that certain relationships appear within a certain time period of study, but disappear in other time periods. Which bias is this? **Time period bias**. What if by chance, some variables appear to have a statistically significant relationship, but these relationships don’t persist? **Data mining bias**.
  + What is the bond-yield plus risk premium approach method to forecasting returns? YTM on a **long-term government** bond + **equity risk** premium.
    - Expected bond return = real risk-free interest rate +
      * inflation premium +
      * default risk premium +
      * illiquidity premium +
      * maturity premium +
      * tax premium +
      * call risk premium (if applicable)
  + In multifactor model approach to return estimation, returns are forecasted based on **factors (F)** and **factor sensitivities (β)**. A two-factor model takes the form:
    - Followup: The random error term has a mean of **zero** and is **uncorrelated** with the factors.
  + Given a two-factor model for market C, factor sensitivities (β) for factors F1 and F2, their variance, covariance, and the variance of the error term, how can the variance for market C be estimated? (show picture)
  + Output gap: GDP **actual** – GDP **trend**
  + How would the following affect bond pricing?
    - Slowing economic growth -> **positive** for govt bonds in near term
    - Inflation forecast lower than consensus -> **positive** for govt bonds in near term
  + According to purchasing power parity (PPP), the movement in the exchange rate should offset any difference in the **inflation rates** between the two countries.
  + Relative strength focuses on **investment capital** flows, and it **may** be influenced by short-term interest rates
* LOS 15 Equity Market Valuation
  + Cobb Douglas:
    - Estimate Y, total real economic output
    - Linear form of Cobb-Douglas
      * Used to estimate change in real growth in GDP
      * Assumes constant returns to scale
  + What are the drivers of the Cobb Douglas production function, and its first derivative?
  + Which term is the Solow residual in the Cobb Douglas function, and what is its meaning? **%∆TFP**. TFP is the rate of managerial and technological innovation, measuring the ability to produce more output for the same inputs of labor and capital.
  + Which output of the Cobb-Douglas function serves as an input to dividend discount models? **Growth**.
  + What are the Gordon Growth Model for mature economies, and the H-Model for emerging economies?
  + Is r stated in real or nominal terms when used in dividend discount models?
  + What are the strengths and weaknesses of the top-down and bottom-up approaches to economic forecasting?
    - Top-down: Doesn’t incorporate the input of individual managers
    - Bottom-up: Managers starting with DCF approach might be overoptimistic about an individual company’s prospects
  + What do relative value models do, and what are three examples? **Relative value models use the relative values of assets and markets to identify investment opportunities**. **Fed model, Yardeni model, and P/10-year MA(E) model**.
  + What is the Fed model, what does it assume, and what are three criticisms? (show picture) **The Fed model is a relative model that assumes that the expected operating earnings yield on the S&P 500 should be the same as the yield on long-term U.S. Treasuries. If the forward earnings yield on the S&P 500 is higher than the Treasury yield, the index value is too low relative to earnings. Three basic criticisms**:
    - 1) Ignores the equity risk premium
    - 2) Ignores earnings growth
    - 3) Compares a real variable (index level) to a nominal variable (Treasury yield)
  + Which model does the Yardeni model start from, what are the three substitutions made to arrive at the full expression, and how do you interpret the model’s results?
    - **(show pictures) Start from GG model of P0 = D1, r, g.**
    - **Substitute dividends with earnings**
    - **Substitute r with YB, the yield on A-rated corporate bonds**
    - **Substitute g with d(LTEG); d is the weighting factor for the importance of earnings growth; LTEG is a 5-year growth forecast for the S&P 500.**
    - **YB – d(LTEG): Yardeni earnings yield; De1/P0: market earnings yield**
    - Interpretation: If the earnings yield from the Yardeni model is low relative to the market yield, equities are **underpriced**.
  + P/10-year MA(E) model: What do the numerators and denominator mean? P Market price of the S&P 500 price index. 10-year MA(E): Average of the previous ten years’ reported real earnings.
    - **TRUE**: Both numerator and denominator are adjusted for inflation
  + Fill in the components of Tobin’s q and the equity q. What is the interpretation? **Above 1.0, firm’s stock is presumed overpriced; vice versa if below.** Are both ratios mean-reverting? **Yes.**
  + CAPE – cyclically adjusted P/E ratio is considered to be **mean-reverting** and expressed in **real** terms. If current CAPE > long-term CAPE, market is **overvalued**.
* LOS 16: Introduction To Asset Allocation
  + What is the formula for expected utility? UP = E(RP) – 0.005\*RB \* σ2P
  + A client is asking whether adding a new equity portfolio would provide a mean-variance improvement to the current portfolio. What comparison is made compared to tell? **If Sharpe ratio of incoming portfolio > Sharpe ratio of current portfolio \* correlation between return of incoming portfolio and return of current portfolio**
* LOS 17: Principles of Asset Allocation
  + Monte Carlo is a **multi**-period framework; Mean-variance optimization (MVO) is a **single**-period framework.
  + **Monte Carlo** allows the analysis of different rebalancing policies over time; **MVO** does not, given its single-period framework.
  + Monte Carlo **can** incorporate statistical properties outside the normal distribution, such as skewness and excess kurtosis.
  + The 1/N rule allocates an equal weight to each asset **without regard** to

its investment characteristics, **treating all assets as indistinguishable** in terms of

mean returns, volatility, and correlations.

* + Corridor widths:
    - Scale with **volatility** in general (**e.g., more volatility needs wider width**)
    - **Narrower** widths result in more frequent, costly rebalancing
    - Less liquid assets should have a **wider** corridor to avoid frequent rebalancing
    - Higher tax rates on capital gains, for taxable investors, should require **wider** widths.
  + Risk parity asset allocation approach: each asset class should contribute **equally** to total risk of portfolio.
  + The goal of risk budgeting is to maximize **return** per unit of **risk**.
  + **TRUE**: Risk budgeting decomposes total portfolio risk into its constituent parts.
  + During portfolio allocation, the allocation / portfolio that has the highest probability of meeting the target return of annually generates which highest ratio? [**E(r)** – **target return**] / **return volatility**.
  + When leverage is involved, how to choose between portfolios given a return target?
    - 1) Scale down **σ to risky % weight only (I.e., σ = 0.1869, risk-free weight = 0.4935, therefore risk of MVO leveraged portfolio = 0.1869 \* (1-0.4935) = 0.0947**
    - 2) Using target return, run Sharpe ratio with new σ; **highest** Sharpe ratio is selected.
  + MCTR (marginal contribution to total risk) = **β relative to portfolio** \* **σ of portfolio**
  + Weighted MCTR = **portfolio weight** \* **MCTR**
  + If a portfolio is optimal, the ratio of excess return to the marginal contribution to total risk = the **Sharpe ratio** for the portfolio
  + MVO portfolios are more sensitive to measurement errors in the **expected return** than to measurement errors in **correlation** and **risk**.
  + Reverse optimization uses inputs for **risk** and **correlation** to solve for expected return.
* LOS 18: Asset Allocation with Real World Constraints
* LOS 19: Currency Management: An Introduction
  + Unless clearly identified otherwise, the terms buy and sell refer to the base currency. For example, sell spot 1,000,000 at CAD / USD 0.98 is assumed to mean sell for “immediate delivery” 1,000,000 **USD** and buy 980,000 **CAD**.
  + Given the spot quote and forward points, what is the forward price?
  + If I sell AUD forward, given AUD / Currency X, what currency do I deliver and receive? I deliver **AUD**, receive the other Currency **X**. A call option to buy 10,000,000 at a strike price of ZAR / GBP 14.56 is the right to buy 10,000,000 **GBP** and sell 145,600,000 **ZAR**. It is also a put option – the right to sell 145,600,000 **ZAR** and buy 10,000,000 **GBP**.
  + State the formula for a domestic currency return (RDC) given a foreign currency return on an asset (FC), and percentage change in value of the foreign currency itself, (FX). If the DC is in GBP, what quote format is FX in (which base currency is used?) **GBP**.
  + An IPS should address currency risk hedging in which regards:
    - **Target percentage of currency exposure to be hedged**
    - **Allowable discretion for the manager to vary around this target.**
    - **Frequency of rebalancing the hedge**
    - **Benchmarks to use for evaluating the results of currency decisions**
    - **Allowable (or prohibited) hedging tools.**
  + The factors that shift a currency management program to less active currency management are:
    - A short time horizon for portfolio objectives
    - High risk aversion
    - A client who is unconcerned with the opportunity costs of missing positive currency returns
    - High short-term income and liquidity needs
    - Significant foreign currency bond exposure
    - Low hedging costs
    - Clients who doubt the benefits of discretionary management
  + The carry trade is based on a violation of the **uncovered interest rate parity** concept. Investor borrow in the lower interest rate currency (**funding** currency) and invest in the higher interest rate currency (**investing** currency). Traders often exit their carry trade positions when **exchange rate volatility increases significantly**.
  + A **call** on the base currency is a put on the pricing currency.
  + Regarding futures vs forwards for currency hedging:
    - **Forwards** are available for almost any currency pair, while **futures** trade in size only for a limited number of currencies
    - **Futures** contracts require margin which adds operational complexity and can require periodic cash flows
    - Trading volume of FX **forwards** and swaps dwarfs that of **futures**, providing better liquidity.
  + Describe the roll yield would be under these conditions, and whether this encourages or discourages hedging.
  + Construct these FX option structures:
    - Collar on the CHF. **Buy 35-delta puts on the CHF, sell 35-delta calls on the CHF.**
    - Put spread: **Buy a 35-delta put, sell a 25-delta put.**
    - Seagull spread**: Buy a 35-delta put, sell a 25-delta put, and sell a 35-delta call.**
  + The minimum-variance hedge ratio (MVHR) is a way to find the hedge ratio using historical price changes of the **hedging instrument** vs the **underlying portfolio**. (Simple linear regression.)
  + What is the difference between deliverable and non-deliverable forwards (NDFs) in FX transactions? NDFs require a cash settlement of gains or losses in a developed market currency at settlement rather than a full exchange of underlying currencies.
  + A European investor holds a diversified portfolio in USD and GBP. When calculating SD for the investor in terms of USD, what weights should the manager use for wRFX, wRFC? **1 and 1**.
  + A Swiss-fund manager is investing in EUR and AUD investments. Should the manager want to generate a 150% positive weight in AUD, and a 150% negative weight in EUR, how do these effect portfolio standard deviation and returns? RDC EUR = 0.98%; RDC AUD = 5.58%; SD EUR = 21.27%; SD AUD = 31.60%; correlation AUD, EUR = 0.70.
    - Portfolio expected return = -1.5(0.98%) + 1.5(5.58%) = 6.90%
    - Portfolio SD = square root of –(1.5)2(21.27)2 + (1.5)2 (31.60)2 + 2(-1.5)(1.5)(0.70)(21.27)(31.60) = 33.87%
    - (Check out Schweser problem 10, Ch 18 answer).
* LOS 20: Market Indices and Benchmarks
  + What are the seven properties of a valid benchmark? (Think SAMURAI)
    - Specified in advance
    - Appropriate
    - Measurable
    - Unambiguous
    - Reflective of the manager’s current investment opinions
    - Accountable
    - Investable
  + When constructing market indices, **reconstitution** is the process of adding and deleting securities while **rebalancing** is adjusting the weighting of existing securities in an index.
* LOS 21: Introduction to Fixed-Income Portfolio Mgmt
  + Inflation-linked bonds typically display lower return volatility than conventional bonds and equities because **the volatility of real returns is lower than that of nominal returns**.
  + Fixed-income mandates can be categorized into **liability-based** mandates and **total return** mandates. **Total return** mandates look to track or outperform a market-weighted fixed income benchmark; **liability-based** mandates are managed to match or cover expected liability payments.
  + The two approaches to liability-based mandates are **cash flow matching** and **duration matching**. Both attempt to immunize the **variance in the realized rate of return** over a known time horizon – variance which arises from the **volatility of future interest rates**.
    - Cash flow matching: Ensure that all future liability payments are matched precisely by cash flows from bonds or other fixed-income derivatives – such as interest rate futures, options, or swaps.
    - Duration matching: Ensure two conditions are met:
      * Match the duration of the liabilities (**liability portfolio**) to that of the portfolio of assets (**bond portfolio**).
      * The **present value** of the bond portfolio’s assets and liabilities must align at current interest rate levels.
    - FOLLOW UP: What is a crucial limitation of immunization? **Immunization only protects against a parallel change in the yield curve – not against other changes such as steepening, flattening, or curvature.**
  + Immunization is the process of structuring and managing a fixed-income portfolio to minimize the variance in the realized rate of return over a known time horizon.
    - Key considerations:
      * **TRUE:** A portfolio is an immunized portfolio only at a given point in time. As market conditions change, the portfolio will need to be rebalanced periodically to ensure that the portfolio achieves its immunization objective
      * **TRUE:** Rebalancing and the need to liquidate positions can result in high portfolio turnover.
      * Immunization assumes that bond issues **do not** default, and **does not** protect against issuer- or bond-specific interest rate changes that are credit-driven.
      * Immunization can accommodate bonds with embedded options (e.g., corporate bonds, MBS) to the extent that a bond’s duration is replaced by its **effective duration** as a input to the methodology.
  + In a zero-coupon bond portfolio, what risk remains, if no price, reinvestment risk remain? **Credit risk**.
  + Hybrid approaches to cash flow and duration matching are **contingent immunization** and **horizon matching**.
    - **Contingent immunization**: Surplus asset portfolio is actively managed.
    - **Horizon matching**: Short-term liability portion is covered by a cash flow matching approach; long-term liabilities are covered by a duration matching approach.
  + Total return mandates look not to liability matching, but to index tracking / outperformance. Key metrics are active return and active risk.
    - Active return: **Portfolio** return minus **benchmark** return
    - Active risk: Annualized standard deviation of active returns. Also known as **tracking error** and **tracking risk**.
  + A bond position’s yield provides an incomplete measure of its expected return. Expected fixed-income returns consist of a number of different components in addition to yield. The expected return E(R) of a fixed-income instrument ≈ :
    - Yield income
    - +Rolldown return
    - +E(Change in price based on investor’s views of yields and yield spreads)
    - -E(Credit losses)
    - +E(Currency gains or losses)
    - Yield income: The income that an investor receives from coupon payments and reinvestment income, relative to the bond’s price. (NOTE: Assuming that a bond does not have reinvestment income, yield income is equal’s a bond’s annual **current yield**.)
    - Rolldown return: Change in yield of a bond as it rolls towards maturity, assuming **no change in** yield curve. Rolldown return = (bond price at **end** of period – bond price at **beginning** of period) / bond price at **beginning** of period. (NOTE: Bonds trading at a premium to par value will experience capital **losses** during their remaining life, while bonds trading at a discount to par will experience capital **gains**.
    - NOTE: A bond’s rolling yield = yield income + rolldown return.
    - E(Change in price based on investor’s views of yields and yield spreads) = [-**Modified duration** \* ∆Yield] + [1/2 \* **Convexity** \* ∆Yield^2].
    - NOTE: For bonds with embedded options, the duration and convexity measure used in the expected return decomposition need to be **effective duration** and **effective convexity**.
    - E(Credit losses) = % of par value lost to default for a bond
    - E(Currency gains or losses) = Expected currency gains or losses over time horizon.
  + Leverage is the use of borrowed capital to increase the magnitude of portfolio positions. Give return on the portfolio in terms of the cost of borrowing (rB), return on invested funds (rI), the value of the portfolio’s equity (VE), and value of borrowed funds (VB): (show formula)
  + The futures leverage is the ratio of the futures exposure in excess of the margin deposit normalized by the amount of margin required to control the notional amount. What are the parts of future leverage?
  + Interest rate swaps can be viewed as a portfolio of bonds. In an interest rate swap, the fixed-rate payer is effectively **short** a fixed-rate bond and **long** a floating-rate bond.
  + Repurchase agreements (repos) are an important source of short-term financing for fixed-securities dealers and other financial institutions. In a repo, a security owner agrees to sell a security for a specific cash amount while simultaneously agreeing to repurchase the security at a specified future date. A dealer wishes to finance a bond purchase of $15MM with a repo. The repo rate is 5%, and repurchase happens the next day. What is the dollar interest? **Dollar interest = $15,000,000 \* 5% \* (1/360) = $2,083.33**
  + Two bonds are up for sale. The first would generate a capital gain and is considered overvalued; the second would generate a capital loss and is considered undervalued. Which would a tax-exempt or a taxable investor care about? All else equal, taxable investor prefers to realize a capital loss by selling the undervalued; tax-exempt will prefer the overvalued bond.
  + A convexity adjustment is used to improve the accuracy of the index’s estimated price change for large **parallel** changes in interest rates.
  + Which of the below fixed income portfolio mgmt approaches allows duration to deviate from the index:
    - Full replication
    - Enhanced indexing
    - **Active management**
* LOS 22: Liability-Driven and Index-Based Strategies
  + When a bond’s value falls as a result of an increase in the yield curve, the drop in value can be approximated by the **money duration** of the bond, which is bond’s **modified** duration \* its **price**, divided by **100**.
  + When yield curve shifts the price effect and coupon reinvestment effect are in opposition; they cancel each other at the bond’s **Macaulay duration**. Macaulay duration is defined as the vector product of 1) **the number of the bond’s cash flows**, and 2) **their PV weights**.
  + A zero-coupon bond, its Macaulay duration is **its maturity**.
  + A portfolio of three semiannual bonds has a market value of 3.30% by weighting the individual bond’s YTMs, and a cash flow yield of 3.76% annualized (semi-annual yield \* 2) looking at the sequence of cash flows. Why do the two differ, and which is appropriate rate of return to use? **Two differ because of the steepness in the yield curve. The appropriate rate of return is 3.76%, following the sequence of cash flows; cash flow yield is appropriate, and not market value-weighted average yield.**
  + The Macaulay duration for a portfolio of semi-annual bonds is 12; the convexity is 400. What is the annualized Macaulay duration and convexity? Annualized Macaulay duration: **12 / 2 = 6.** Annualized convexity: **400 / 4 = 100**.
  + Whereas Macaulay duration is the weighted average of the times to receipt, dispersion is the weighted **variance**. Dispersion for an individual CF in a series is calculated as the (nth cash flow - **unannualized** duration)2 \* PV weight of that CF (same as used in Macaulay duration).
  + How is a portfolio’s convexity related to its Macaulay duration, dispersion, and cash flow yield? (Show picture)
  + A bond portfolio structured to immunize a single liability must:
    - Have an **initial market value that equals or exceeds the PV of liability**
    - Have a **portfolio Macaulay duration** that matches the liability’s due date
    - Minimize the portfolio **convexity** statistic
  + **TRUE**: An immunized portfolio must be regularly rebalanced over the horizon to maintain the target duration.
  + A client wants to minimize the variance in the realized rate of return prefers a bond with **lower** convexity, all other things equal.
  + What are several approaches to manage liabilities?
    - Cash flow matching
    - Duration matching
    - Derivatives overlay
    - Contingent immunization
  + Portfolio modified duration = **Portfolio Macaulay duration** / (1 + **cash flow yield per period**). It provides an estimate of the percentage price change for a bond given a 1% (100bp) change in its YTM.
  + Money (Dollar) duration = **Portfolio modified duration** \* **market value**. Money duration is measured in **basis point value** **(BPV)**, which is money duration \* **0.0001**.
  + For equal durations, a **more** convex portfolio generally outperforms a **less** convex portfolio. To immunize multiple liabilities, the convexity of the assets needs to be **greater than** the convexity of the liabilities.
  + Given the BPV for assets, liabilities, and futures, state the number of futures needed to close a money duration gap: (show picture).
    - If the number of futures is positive, the asset managers **buys** the required number of futures contracts.
    - If a futures BPV isn’t given, how can it be derived from a cheapest-to-deliver security? (show picture)
  + Broadly, what is the idea behind contingent immunization? Asset manager can pursue active strategies, as if operating under a total return mandate, as long as the surplus is above a designated threshold. The objective is to attain gains on the actively managed funds to reduce the cost of retiring the debt obligations.
  + **TRUE**: If a cash flow is uncertain with respect to amount and timing, yield duration statistics such as Macaulay and modified duration do not apply.
  + What is the formula for effective duration?
  + **PBO** / ABO is better measure for pension plan liabilities.
  + Two disadvantages of hedging with futures as part of derivative overlay strategies are:
    - Need for daily oversight of positions
    - Realized gains / losses on future from daily MTM is offsetting unrealized gains / losses on underlying bonds. The mismatch may not be desirable
  + Holding a receive-fixed (receiver) swap leave you:
    - **Long** / short duration
    - Long/ **short** interest rates
  + Given the BPV for assets, liabilities, and swaps, state the number of swaps needed to close a money duration gap: (show picture).
  + What are some risks in liability-driven investing?
    - **Model risk** around assumptions
    - **Spread risk**: Mismatch in hedging and hedged assets. (Ex: Futures contracts are on 10-yr Treasury notes, while liabilities are corporate debt.)
    - **Counterparty risk**: If interest rate swap is uncollateralized
    - **Asset liquidity**: Significant consideration if active management combined with an otherwise passive fixed-income portfolio
  + Risks to using swaptions include:
    - **Credit risk if swaption is not collateralized**
    - **Collateral exhaustion risk if it is collateralized**
    - **Spread risk between swap fixed fates and corporation’s cost of funds**
  + Define tracking risk and active return:
    - Tracking risk (tracking error): Deviations of returns on selected portfolio from bond market index (i.e., active return)
    - Active return: Portfolio return – Benchmark index return
  + What are the relative pros and cons of pure vs. enhanced indexing:
    - Pure indexing: **Lower tracking risk**
    - Enhanced indexing: In practice it is neither feasible nor cost-effective for investors to pursue a full replication approach with a broad fixed income market index because **the transaction costs are too high**. Enhanced indexing requires purchasing fewer securities, while matching primary risk factors.
  + What is process of pricing illiquid bonds? **Matrix pricing makes use of observable liquid benchmark yields in order to estimate the current market yield and price**
  + How do key rate and effective duration differ? **Key rate duration** considers rate changes in specific maturity along the yield curve while holding the other rates constant. This measure gauges the index’ sensitivity to non-parallel yield curve shifts
  + Identify the components of a total return swap.
  + Relative to mutual funds and ETFs, what are the pros and cons of a total return swap?
    - Pro: Less upfront cost
    - Con: Carries counterparty risk
  + Compared to the bullet and barbell structures, a laddered bond portfolio has:
    - Greater protection from shifts and twists
    - Higher convexity than the **bullet**, lower than the **barbell**, due to the **dispersion** term in the convexity formula
    - Better **liquidity management** than bullet or barbell
  + “Bums problem”: **Value-weighted bond indices assign a larger share of the index to borrowers with the largest amount of outstanding debt. This leads a more leveraged issuer or sector to receive a higher weight. The greater allocation to more-levered borrowers is known as the “bums problem” – with neither creditworthiness or leverage potentially high**.
* LOS 23: Yield Curve Strategies
  + What are the three types of yield curve shifts?
    - **Level (parallel shift)**
    - **Slope (flattening or steepening of yield curve)**
    - **Curvature**
  + What does the butterfly spread measure, and what is its formula? **-(Short-term yield) + (2 \* Medium-term yield) – (Long-term yield**
  + Adding convexity to a portfolio is not free: portfolios with higher convexity are characterized by **lower** yields. Convexity is more valuable when yields are **more** volatile.
  + What are some active strategies under the assumption of:
    - …a stable yield curve
      * **Buy and hold**
      * **Roll down the yield curve**
      * **Sell convexity**
      * **The carry trade**
    - …yield curve shifts in level, slope and curvature
      * **Duration management**
      * **Buy convexity**
      * **Bullet and barbell structures**
  + What are two ways to sell convexity?
    - **Sell puts / calls** on bonds
    - **Own MBS** (loosely like writing options)
  + Selling a **call** would reduce portfolio duration; selling a **put** would increase duration.
  + What does it mean to be long duration, in the context of active management? **Choosing a duration longer than the benchmark.**
  + What are some ways to manage duration of a portfolio?
    - Buy futures
    - Buy bonds
    - Interest rate swaps
  + Barbells (vs. bullets and ladders) benefit from:
    - **Parallel shifts**
    - **Flattening of yield curve (short rates rise)**
    - **Flattening twist of yield curve (short rates rise, long rates fall)**
    - **More** curvature
  + A long butterfly consists of:
    - **Long** wings (barbell)
    - **Short** body (bullet)
    - **Positive** convexity
    - **Neutral** money duration
  + A butterfly that is short in the wings and long in the body is a trade predicated on **stable** interest rates (it is **selling** convexity) or on a yield curve **steepening**. If the manager believes that convexity is overpriced, he would be willing to **sell** the convexity by being **short** the wings and **long** the body. In doing so, he would earn the additional yield of the **less** convex portfolio.
  + What is the difference between a butterfly and a condor? **A condor has an elongated body** (example: long / short / short / long 2s / 5s / 10s / 20s).
  + Because the convexity of shorter maturities is relatively small, it is hard to add convexity without buying **longer**-maturity securities. It is much simpler to **extend** duration and add convexity with **options**.
  + How might a barbell structure offer a potential source of P/L from rolldown yield?: **Greater rolldown yield on the longer-dated bond. (Compared to bullet, for example.)**
* LOS 24: FIXED-INCOME ACTIVE MANAGEMENT: CREDIT STRATEGIES
  + What does a “credit portfolio” consist of? **Securities for which credit risk is an important consideration.**
  + Credit risk is the risk of **loss caused by default**. Credit risk has two components:
    - Default risk: **The probability that a borrower defaults**
    - Loss severity: **Loss given default**
    - A credit loss rate represents the **% of par value lost to default** for a group of bonds
  + The higher credit loss rate means that credit risk is usually the most important consideration for **high-yield** portfolio managers. In contrast, for **investment grade** portfolio managers, other risk inherent in corporate bonds – credit migration, spread risk, interest rate risk – are typically the most relevant considerations.
  + The risk in a portfolio of investment-grade bonds is typically measured in terms of **spread duration,** which measures the effect of a change in credit spread on a bond’s price.
    - A bond trading at 99.60 has a both a modified and spread duration of 4.7 years. If its credit spread decreases by 20 bps, to 60 bps, and interest rates are unchanged, the price will change to approximately **100.54** = **99.60** \* [1 + (-4.70 \* (**0.006** – **0.008**)]
  + For non-callable, **fixed rate** corporate bonds, spread duration is generally very close to modified duration. For **floating-rate** bonds, however, the spread duration can differ substantially from the modified duration.
  + High-yield portfolios usually have greater exposure to **credit risk** than investment-grade portfolios, but investment-grade portfolios have more exposure to **interest rate** risk than high-yield portfolios.
  + In practice, credit spreads tend to be **negatively** correlated with risk-free interest rates.
  + Empirical duration is a measure of interest rate sensitivity that is determined from **market data**.
  + Describe the various credit spread measures:
    - **Benchmark spread**: The yield on a credit security less the yield on a security with little or no credit risk.
    - **G spread**:Spread over an actual or interpolated government bond
    - **I spread:** Interpolated spread. Like G-spread, except it uses swap rates rather than government bond yields as benchmark rates
    - **Z spread**: Yield spread that must be added to each point of the implied spot yield curve to make the present value of a bond’s cash flows equal its current market price.
    - **Option-adjusted price**: More generalized version of the Z spread. The constant spread that, when added to all the one-period forward rates of the interest rate tree, makes the arbitrage-free value of the bond equal to its market price.
    - Which of these is best suited for bonds with embedded options? **OAS**
    - If an bond option is in the money, its **OAS** will be lower than the other spread measures on the bond.
    - Which of these is best studied for a portfolio-level spread? **OAS**
  + What is excess return and excess expected return, in the context of credit risk? **Excess return is the return of a bond after interest rate risk has been hedged**. **Expected excess return adjusts this for the possibility of future default losses.** What are the formulas for each? (show formulas)
    - S = spread at beginning of holding period; t = holding period expressed in fractions of a year; delta s = change in credit spread during holding period; SD = spread duration of bond. P = annualized expected probability of default; L = expected loss severity
  + Recovery rate = 1 – **expected loss severity**
  + Emerging market credit indices have a higher proportion of **commodities** and **banks** than do developed market credit indices
  + **TRUE**: As an interpolated spread measure, the benefit of the G-spread is that when the duration of the credit security differs from that of the benchmark bond, the yields of the two government bonds can be weighted so that their weighted average duration matches the credit security’s duration.
  + **TRUE**:The announcement of new corporate bond issue often the credit spread on existing bonds to increase
  + Which of the indices is better to avoid exposure to credit downgrade events, value or equal weighted? **Equal. A value-weighted index will be more susceptible to credit quality deterioration than an equally weighted index will be**
* LOS 25: Equity Portfolio Mgmt
  + Indexing a portfolio: what are the three approaches?
    - **Full replication**
    - **Stratified sampling**
    - **Optimization**
  + To create an indexed portfolio using **full replication**, all the stocks in the index are purchased according to the weighting scheme used in the index.
  + The advantage of replication is that there is low tracking risk and the portfolio only needs to be rebalanced when the index stocks **change** or **pay dividends**. Cash drag results because a fund must set aside cash for **shareholder redemptions**.
  + An advantage of **stratified sampling** is that the manager does not have to purchase all the stocks in the index. This is particularly useful when the number of stocks in an index is large and/or when the stocks are illiquid.
  + An optimization approach uses a **factor model** to match the **factor exposures** of the fund to those of the index. The advantage of an optimization is that the factor model accounts for the **covariances** between risk factors. (In stratified sampling it is assumed that the factors – e.g., industry, size, price-earnings are **uncorrelated**.)
  + There are three main disadvantages of the optimization approach:
    - Risk sensitivities measured in the factor model are **based on historical data and may change** once the model is implemented.
    - Optimization may provide a misleading model if the sample of data is **skewed by a particular security or time period** **of data**.
    - Optimization must be **updated to reflect** **changes in risk sensitivities**, and this leads to frequent rebalancing.
  + Tracking risk under a stratified sampling approach **decreases** as the number of cell increases.
  + Compare mutual fund and ETFs

|  |  |  |
| --- | --- | --- |
|  | **Mutual funds** | **ETFs** |
| **Trading** | Less frequently | Throughout day |
| **Value calculation** | Once per day | Throughout day |
| **Recordkeeping requirement** | Have to maintain for shareholders. Expenses can be significant | No recordkeeping requirement |
| **License fees** | Lower fees (e.g., to S&P and other index providers | Higher fees |
| **Tax efficiency** | Less tax efficient. Redemption of shares might require the sale of securities for cash, which could be taxable event (costs passed onto shareholders) | More tax efficient. Investors can sell their share to other investors, which is not a taxable event for ETF. ETF may also redeem ETF shares for stocks underlying ETF – also not a taxable event |
| **Ownership costs** | Higher | Lower. Carry brokerage commissions |

* + What are the three categories of investment style?
    - **Value**
    - **Growth**
    - **Market-oriented**
  + Given that portfolio managers don’t always invest along their stated investment style, what are ways to determine / check a portfolio manager’s investment style? (Give names as well.)
    - **Returns-based style analysis**. Regress the returns on a manager’s portfolio against returns on a few indices (e.g., small-cap growth, large-cap growth, small-cap value, large-cap value).
      * What conditions must hold true for the indices in this regression in order to make analysis to be useful?
        + Indices mutually exclusive of one another
        + Indices exhaustively represent manager’s investment universe
        + Represent distinct, uncorrelated sources of risk

What are the sources of risk?

**Style** (growth and value)

**Size** (large, mid, and small cap)

* + - * The coefficient in this regression (R squared) represents the **style fit**, or the amount of the investor’s return explained by the indices. One minus this amount yields the amount of return unexplained by style and due to the manager’s **security selection**. (Active bets away from securities in the style indices.)
    - **Holdings-based style analysis**. Evaluate characteristics of the securities in the manager’s portfolio, based on ratios (e.g., P/E, P/ B for value, EPS growth for growth), and industries
      * Industries used by growth managers: **Tech, healthcare**
      * Industries used by value: **Utilities, financials**
    - See below style box. What do the numbers represent, and what is the style box used for? (show picture). **% of market cap invested. The style box is used to characterize a portfolio’s investment style**
    - Socially responsible investing portfolios tend to be biased towards **growth** and **small-cap** stocks.
    - Compare and contrast long-short and long-only strategies:
      * A long-only strategy can earn one alpha. A long-short strategy can earn **two** alphas, the extra from the **additional short sales**.
      * With regard to risk, a long-only investor is exposed to **both systematic and unsystematic risk**. A long-short investor can eliminate expected **systematic** risk by using **a pair trade in a market neutral strategy**.
      * In a long-only portfolio, the weight of each stock in the portfolio ranges from **0 to 100**%; in a long-short portfolio, the range is outside this because **shorting releases money which can be used to take on larger long positions than otherwise possible.**
    - What are the four reasons for pricing inefficiencies on the short side of equity trades?
      * **Barriers to short sales exist that do not exist for long trades. Example: To short a stock, a seller must find someone who will lend the shares.**
      * **Firm management is more likely to promote their firm’s stock through accounting manipulations and other means 🡪 overvalued stocks**
      * **Sell-side analysts more likely to issue buy than sell ratings because a larger pool of buyers incents them more than the smaller pool of sellers (i.e., folks who already own the stock)**
      * **Sell side analysts face pressures from firm management of the researched stock, management who often have heavy equity exposures to their firms**
    - How much systematic risk exposure to the market does a market-neutral strategy have? **Zero**.
    - In a long-short portfolio, how does a manager size the short and long positions to achieve a market-neutral portfolio? **Balance the betas of the short and long positions**.
    - What is the portfolio weighted average beta of a short extension strategy? **1**
    - While portfolio rebalancing, **substitution** is the act of replacing an existing security with another with brighter prospects.
    - Fundamental law of active management: An investor’s information ratio (IR) is a function of his depth of knowledge about individual securities (IC: information coefficient) and the number of investment decisions (IB: investor’s breadth). The formula is as follows:
      * IR = IC \* sqrt(IB)
      * The IC is measured by comparing the investor’s forecasts against **actual outcomes**. The more correlated they are, the **higher** the IC.
      * The IB is measured by the number of **independent** decisions the investor makes. This **does not necessarily** increase with the number of securities followed.
    - Passive equity management has **zero** active return and **zero** active risk. As one moves from passive to active management, both active return and risk **increase**. Selecting an active manager will involve maximizing utility under the following formula: UA = RA - λAσA2.
      * RA = expected active return of mix of managers
      * λA = investor’s risk aversion
      * σA2 = variance of active return
    - Core-satellite vs Completeness fund approaches to portfolio construction
      * In a core-satellite approach to managing active equity managers, the investor has a core holding of a **passive and/or enhanced** **index** that is complemented by a satellite of **active manager holdings**.
      * Completeness fund: Combine a completeness fund with the active portfolio, so that the combined portfolios have a risk exposure similar to the **benchmark**.
    - An investor has an active risk target of no more than 1.75% and a target information ratio of at least 0.9. Based on the below passive, enhanced, and active index / manager option, calculate the investor’s active return given the above allocations, and determine if the investor has met the targeted active risk and information ratio. (Show picture)
      * Followup: In calculating portfolio risk, what should the correlation between managers’ active returns be? **Zero**.
    - A manager’s total active return against his normal portfolio (benchmark) can be broken down into two parts, to reflect the fact that client investors may wish to use their own benchmarks to the relationship:
      * Manager’s true active return = manager’s total return – manager’s **normal portfolio return**
      * Manager’s misfit active return = manager’s **normal portfolio return** – investor’s benchmark return
      * Therefore total active return = **true active return** + **misfit active return**
    - Identify components of total active risk (show picture)
    - Identify components of the true information ratio (show picture)
    - In an alpha and beta separation approach, the investor gains a systematic risk exposure beta through a **low-cost index fund or ETF**, while adding alpha through a **long-short** strategy. This strategy is referred as a **portable alpha** strategy.
    - Management fees
      * **Ad valorem** fees are charged on total assets under management and may be on a sliding scale. (Ex: 10% on first $10MM managed; 0.40% on assets over $10MM.)
      * A **fee cap** specifies a maximum performance fee
      * A **high water mark** prevents a manager from collecting an incentive fee twice.
    - Optimization will provide **lower** tracking risk than stratified sampling, but it requires **more frequent** rebalancing.
    - A holdings-based style analysis for a mid-cap value manager should speak to: **low** P/E and P/B ratios, **below-average** expected earnings growth, **higher** earnings volatility, and representation in the **financial and utility** industries.
    - Why would an investor want to equitize a long-short portfolio? **An investor would equitize if she thought the stock market was going to do well in the future.**
    - Investors are **more** risk averse when facing active risk. Why?
      * Investor must find and pick out those successful active managers to capitalize on a belief that active returns are possible
      * An active equity stile will also be judged against a passive benchmark
      * It is difficult to generate alpha, and those who don’t face pressure from their superiors
      * Higher active returns means that more is invested with the high return active investor, and this may mean less diversification
* LOS 26: Alternative Investments Portfolio Mgmt
  + Decision risk: Risk of emotionally abandoning a strategy right at the point of **maximum loss**.
  + Primary benefit as alt investments
    - Private equity: **Return enhancement**
    - Commodities: **Diversification**
  + Drawbacks and benefits of alt investments
    - Drawbacks:
      * **High amount of capital required**
      * **Lack of liquidity**
    - Benefits:
      * **Diversification**
      * **Return enhancement**
    - Convertible preferred stock (CPS): used in private equity. Has first claim on cash flow ahead of **founder**, who typically retains **the common stock**
  + Private equity sponsors receive compensation in which two ways?
    - **Management fee**: 2.5%, based on **committed** funds
    - **Incentive fee**: (Also, carried interest). Share of the profits, usually 20%, paid to manager after the fund has returned the outside investors’ capital – often **after** a minimum required return or hurdle rate has been paid on the cash from the outside investors.
  + Which commodities, storable or nonstorable, provide an actual inflation hedge? **Storable**
  + Hedge funds: Fund-of-funds **more highly** correlated with equity markets than those of individual hedge funds.
  + Why does the hedge fund industry view hedge fund performance appraisal as a major concern with many special issues?
    - Many claim HFs are **absolute** return vehicles; no direct benchmark exists
    - Performance evaluation techniques are mostly based on **long-only** positions, and hedge funds use various combinations of long and short positions and leverage
    - To create comparable portfolios, analysts can:
      * Create **tracking portfolios** that have similar return and risk characteristics
  + **TRUE**: Using standard deviation to measure the risk of a hedge fund can produce misleading results. Hedge fund returns are usually skewed with significant **fat tails**, so standard deviation fails to measure the true risk of the distribution.
  + What is the purpose of downside deviation measure in hedge fund performance evaluation? **By focusing on the returns below a certain threshold, the downside deviation attempts not to penalize a fund for high positive returns, which increases measured standard deviation.**
  + What are the limitations of the Sharpe ratio in measure hedge fund performance?
    - Time dependency: The annual Sharpe ratio is estimated using shorter time periods, so annualizing performance can be prone to error
    - Assumes **normality**: Inappropriate for skewed return distributions
    - Assumes **liquidity**: Because of infrequent, missing, or assumed return distributions, illiquid holdings have **upward**-biased Sharpe ratios (i.e., **downward**-biased standard deviations)
    - Assumes **uncorrelated returns**: Returns correlated across time will **lower** the standard deviation. Serially correlated returns result when the asset is illiquid and current prices are not available
    - Stand-alone measure: **Does not automatically consider diversification effects**
  + Convenience yield: A return on holding a commodity that, unlike storage costs, reduce the futures price of a commodity vs. spot.
  + Commodities that trade infrequently have **lower** volatility than commodities that trade more frequently because of **stale** prices.
  + Switching from monthly to daily observations for volatility measurement (shorter measurement interval) would **increase** volatility.
  + What are the advantages and disadvantages of direct real estate investing?
    - Advantages
      * **Many expenses tax deductible**
      * **Ability to use more leverage**
      * **Direct control of properties**
      * **Ability to diversify geographically**
    - Disadvantages
      * **Relative lack of liquidity**
      * **High transaction costs**
      * **High information costs**
      * **High geographical risk. (Lacks diversification benefits)**
  + Unsmoothed NCREIF is best for **direct** RE investments. Unsmoothing corrects for biases in the NCREIF, such as infrequent **appraisal-based calculations**.
* LOS 27: Risk Management
  + The risk management process includes:

1. **Set policies and procedures**
2. **Define risk tolerance**
3. **Identify risks**
4. **Measure risks**
5. **Adjust the level of risk**
   * **Risk governance** is a part of the overall corporate governance system and refers to the overall process of developing and putting a risk management system into use
   * Decentralized vs. centralized risk governance system
     + Decentralized risk governance system places responsibility for execution within **each unit of the organization**. Benefit is it puts risk management in the hands of those **closest to each part of the organization**
     + Centralized risk governance system places execution within **one central unit of the organization**. Benefits are it **provides a better view of how the risk of each unit affects the overall risk borne by the firm,** and **economies of scale**. Individual risks are less than perfectly correlated, so the risk of the firm is **less than** the sum of the individual unit risks.
   * Effective enterprise rick management system
     + Back office, which is responsible for processing transactions, record keeping, and compliance, must be **independent from** the front office, which generates transactions and sales
     + Characteristics: An effective system will
       - **Identify each risk factor to which the company has exposure**
       - **Quantify the factor in measurable terms**
       - **Include each risk in a single aggregate measure of firm-wide risk**
       - **Systematically report the risks and support an allocation of capital and risk to the various business units of firm**
       - **Monitor compliance with the allocated limits of capital and risk**
   * The financial and non-financial risks to a company or portfolio:
     + Financial:
       - **Market**
       - **Credit**
       - **Liquidity**
     + Non-financial:
       - **Operational**
       - **Settlement**
       - **Model**
       - **Sovereign**
       - **Regulatory**
       - **Tax, Accounting and Legal/Contract**
       - **Environmental, Social, Governance (ESG)**
       - **Performance netting**
       - **Settlement netting**
   * The analytical VaR method: Based on the normal distribution and the concept of one-tailed confidence intervals.
     + VaR: Can be stated as either a **% of value** or a **nominal amount**
     + The expected annual return for a $100,000,000 portfolio is 6% and the historical standard deviation is 12%. Calculate VaR at 5% probability. VaR = [**Rp** – **(z)(σ)**]\***portfolio value** = **[6% – 1.65 \* 12%] \* $100,000,000** = **-$13,800,000**
     + 5% VaR is **1.65** SDs below mean; 1% VaR is **2.33** SDs below mean.
     + VaR for periods less than a year are computed with return and SD expressed for the desired period of time. If converting annual to monthly VaR, divide the return by **12**, and the SD by **the** **square root of 12**.
   * VaR should not be used in isolation but in combination with other tools and actions:
     + Stress testing: Reveal extreme scenarios
     + Back testing
     + Credit VaR
     + Cash flows at risk
     + Earnings at risk
   * Scenario analysis: What inputs are being changed, and what is being monitored?
     + Inputs: **Interest rate movements, changes in currencies, changes in volatilities, etc.**
     + Monitored results: **Value of the portfolio before and after events**
   * Credit risk:
     + At any point in time, the potential credit risk of an investment is its **market value**. The party with the positive market value at risk bears the credit risk.
     + In a forward contract, if the value to the short position is positive, and the contract is not settled now, the **short** position bears the **potential** credit risk, but no **current** credit risk.
     + In a swap inception, assuming the swap is correctly priced, the initial value and credit risk are **zero**. As the swap nears its maturity, the credit risk **decreases**.
     + With an option, unlike a forward or swap, only the **long** position faces credit risk.
   * Liquidity is **not considered** in measuring VaR. Implicit in VaR is the assumption that positions can be sold at **their trading or estimated market value**.
   * In addition to VaR, methods for managing market risk include:
     + **Position limits** that place a nominal dollar cap on a given position
     + **Liquidity limits** that may be set as some portion of typical trading volumes
     + A **performance stopout** that sets an absolute dollar limit for losses to the position over a certain period
     + **Risk factor limits** on portfolio managers to control exposure to risk factors
     + **Leverage limits**
     + **Scenario analysis limits**
   * Beyond limiting exposure, what are other ways to manage credit risk?
     + **Mark to market**
     + **Require collateral**
     + **Payment netting**: Net any credit risk among counterparties at all times
     + **Closeout netting**: Subset of payment netting in bankruptcy proceedings
     + Impose **minimum credit standards** on a debtor
     + **Special purpose vehicles** to separate problems with the parent don’t affect credit ratings of the SPV
     + Transfer through credit derivatives
       - Credit default **swap**
       - Credit spread **forward**
       - Credit spread **option**
       - Total return **swap**
     + Risk-adjusted performance measures
       - What two items does the risk-adjusted return on invested capital (RAROC) compare for a portfolio? **Portfolio’s expected return** and a measure of **portfolio risk, such as VaR**
       - What is the principal drawback of applying the Sharpe ratio to portfolios containing the options and other instruments with non-symmetric payoffs? **Assumption of normality in the excess return distribution**
       - What two items does the return over maximum drawdown (RoMAD) compare? Portfolio **annual return** and the **largest percentage drawdown**.
       - Sortino ratio: Excess return is calculated as the **portfolio return** less the **minimum acceptable portfolio return (MAR)**. The denominator of the ratio is the **standard deviation of returns** calculated using only **returns below the** **MAR**.
     + Sigma has a call option with strike price of 65, purchased at a price of 3.50, currently valued at 8.50. What is the credit risk? **8.50. The amount at risk is the current value of the option**.

* LOS 28: Risk Management Applications of Forward and Futures
  + With regard to foreign exchange exposures:
    - Transaction exposure is the risk associated with a foreign exchange rate on a specific business transaction such as a purchase or sale.
    - Translation exposure is the risk associated with the conversion of foreign financial statements into domestic currency.
    - Economic exposure is the risk associated with changes in the relative attractiveness of products and services offered for sale, arising out of the competitive effects of changes in exchange rates.
* LOS 29: Risk Management Applications of Option Strategies
  + A cashless collar involves simultaneously buying a put and selling a call and is typically used to hedge the value of a stock portfolio. The investor buys put with strike price <= current stock price, and sells call with same maturity with strike price >= current stock price. The put and call prices are equal to achieve the **cashless** feature.
  + What are the options used to construct a butterfly spread, given strikes at $20, 25, and 30? (Define short / long, and quantity.)
    - **Long** 1x $20 call
    - **Short** 2x $25 call
    - **Long** 1x $30 call
  + Calculate the effective annual rate of a firm’s loan given the interest rate call, and under the below LIBOR scenarios. (See picture)
  + When calculating the effective interest in period t on a multi-period LIBOR loan, do you use LIBOR from period t, or t-1? **T-1**.
* LOS 30: Risk Management Applications of Swap Strategies
  + Swap duration (fixed-for-floating) = Duration **floating** leg – duration **fixed** leg
    - Duration of fixed leg = (**0.75**) \* (**maturity in years**)
    - Duration of floating leg = (**0.5**) \* (**payment frequency per year**)
  + A floating-rate instrument can have a non-zero duration if **its next cash flow is set**, which is the case with swaps. The convention is to treat the duration of the floating side of the swap as being **half** the reset period. Half is used because it is the simple average of the swap floating side’s duration 1) at inception / just after a settlement, which is its **time to next payment**, and 2) just before the payment date, which is **zero**.
* LOS 31: Execution of Portfolio Decisions
  + A market order has **price** uncertainty; a limit order has **execution** uncertainty
  + In the context of markets:
    - The highest bid price is the **inside** or **market bid**. The best ask price is the **inside** or **market ask**.
    - Subtracting the best bid price from the best ask price results in the **inside** **bid-ask spread** or **market** **bid-ask spread.**
    - The average of the inside bid and ask is the **midquote**.
  + With respect to a market order, what is the difference between an effective spread and a bid-ask spread?
    - **Effective spread**: 2\* actual transaction (execution) price less the midquote of the market bid and ask prices
    - **Bid-ask spread**: Best ask price less best bid price.
    - An effective spread that is **less** than the bid ask spread indicates the execution was superior to the quoted spread or a very liquid market
  + What are the three main categories of securities markets?
    - **Quote-driven**: Investors trade with dealers
    - **Order-driven**: Investors trade with each other without the use of intermediaries
    - **Brokered markets**: Investors use brokers to locate the counterparty to a trade
  + What is the difference between a broker and a dealer? A **broker** has a principal and agent relationship with the trader. The **broker** acts as the trader’s agent, which imposes a legal obligation to act in the best interests of the trader (principal).
  + A liquid market has **small** bid-ask spreads, **market depth**, and **resilience**. **Market depth** allows larger orders to trade without affecting security prices much. A market is **resilient** if asset prices stay close to their intrinsic values, and any deviations from intrinsic value are minimized quickly.
  + Trading involves explicit and implicit costs. What kind of costs do implicit costs include? **Bid-ask** spread, **market or price impact** costs, **opportunity** costs, and **delay** costs.
  + Implementation shortfall (IS) measure transaction costs as the difference in performance of a hypothetical portfolio in which the trade is fully executed at no cost and the performance of the actual portfolio. Given Decision price (DP), Execution price (EP), Revised benchmark price (BP), and Cancellation price (CP), what are the four IS components if:
    - On Wednesday the stock price for ABC closes at $20/share.
    - On Thursday morning before the market opens, the portfolio manager decides to buy and submits an order for 1000 shares at $19.95/share. The price never falls to $19.95 during the day, so the order expires unfilled. The stock closes at $20.05
    - On Friday, the order is revised to a limit of $20.06/share. The order is partially filled as 800 shares are bought at $20.06. The commission is $18. The stock closes at $20.09/share and the order for the remaining 200 shares is cancelled.
    - Missed trade (also opportunity, or unrealized P/L): **│CP – DP|**\* **no. shares cancelled** = **│20.09 - 20│ \* 200 = $18**
    - Explicit costs (commissions and fees): **$18**
    - Delay (also slippage): **│BP - DP│ \* # shares executed delayed** = **│20.05 – 20.00│ \* 800 = $40**
    - Market impact (also, price impact or realized P/L): **│EP - BP│ \* # shares executed** = **│20.06 – 20.05│ \* 800 = $8**
  + When selecting a specific trading strategy for trade execution, the **low** order size relative to average daily volume traded, **low** bid-ask spread, and **low** urgency of the trade all favor a(n) **volume-weighted average price (VWAP)** strategy. If all are high, a(n) **implementation shortfall** strategy is best. If urgency is not high but the others are, a(n) **skilled broker or crossing** strategy can be used.
  + When a floating-rate loan is converted to a fixed-rate loan, the resulting duration is that of a fixed-rate loan. The duration of a fixed-rate loan is normally much higher than that of a floating-rate loan, which has a duration relatively close to zero. Compared with a floating-rate loan, however, a fixed-rate loan has stable cash flows, which reduce cash flow risk, but has a much greater duration, which increases **market value** risk.
* LOS 32: Monitoring and Rebalancing
  + A portfolio manager who is in a position of trust has a fiduciary duty to monitor a client’s portfolio to be sure it continues to meet the client’s needs as client circumstances, capital markets conditions and expectations, and portfolio percentage allocations all change over time. Changes in client circumstances may require **an update of the IPS**, changes in capital market expectations may lead to a change in **strategic allocation**, and changes in portfolio percentage may require **rebalancing**.
  + How is percentage-of-portfolio rebalancing different from calendar rebalancing? PPR: Triggered by changes in **relative asset values** rather than the passage of time.
  + The key determinants of the optimal corridor width of an asset class in a percentage-of-portfolio rebalancing program are below.
    - Higher transaction costs 🡪 **greater** deviation from target allocation required for the benefits to outweigh the costs 🡪 **wider** optimal corridor
    - Higher risk tolerance 🡪 **lower** impact on the investor of deviations from target allocation weights 🡪 **wider** optimal corridor
    - High correlation among asset class returns 🡪 **lower** impact of deviations on portfolio risk from target allocations 🡪 **wider** optimal corridor
    - Higher volatility of asset class returns 🡪 potentially **more costly** deviations from target weights 🡪 **narrower** optimal corridor
    - Higher volatility of other asset class returns 🡪 potentially **more costly** deviations from target weights 🡪 **narrower** optimal corridor
  + Rebalancing strategies:
    - **Buy and hold**: Do nothing
    - **Constant mix**: constantly rebalance back to the initial allocation weights. This is mean-reverting strategy.
    - **Constant proportion (portfolio insurance)**: If the risky asset allocation increases (decreases), buy more (less). This is a momentum strategy.
    - Buy and hold always produces **middle** results.
    - Amount and changes in risky asset translate to investor’s risk tolerance (RT).
    - RT reaches zero when risky allocation reaches **zero**
    - Constant mix
      * Because of constant rebalancing, if risky asset keeps plummeting, what will entire portfolio value equal? **Zero, since keep selling risk-free asset to funding purchases of risky asset to bring its proportion up to balance.**
    - Constant proportion
      * There is a floor. **Higher** than initial value in risk-free rate. This is because after rebalancing if RA decreases, you sell RA to fund RF purchase.
    - Calculating RA as function of portfolio and floor value
      * M >1 : Constant proportion
      * M= 1:
      * M<1: Constant mix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Rebalancing Strategy** | **Rebalancing execution** | **Does best in market** | **Market impact if popular** | **Floor of portfolio value vs. initial value, post-rebalancing** | **Investor appropriateness if risk tolerance** |
| Buy and hold | Do nothing | None | N/A | Same | Increases and decreases with wealth.  RT reaches zero at floor |
| Constant Mix | Constantly rebalance back to the initial allocation weights. A mean-reverting strategy. | Mean reverting | Creates market stability | Less | Independent of wealth  RT reaches zero at floor (but no floor in CM rebalancing) |
| Constant Proportion (Portfolio Insurance) | If the risky asset allocation increases (decreases), buy more (less). A momentum strategy. | Simple trending | Creates market volatility | Greater | High risk tolerance  RT reaches zero at floor |

* + What are the benefits and costs of rebalancing?
    - Benefit: **Maintain investor’s desired exposure to systematic risk factors**
    - Costs: **Tax liability** and **transaction costs** when sell equities that have become too large a portion of the portfolio.
* LOS 33: Evaluating Portfolio Performance
  + Performance evaluation involves **measurement** to calculate the rates of return, **attribution** to determine the sources of the account’s performance, and **appraisal** to draw conclusions regarding whether the performance was affected primarily by investment decisions, by the overall market, or by chance.
  + If there is an external cash flow at the beginning and end of a portfolio’s evaluation period, how is the portfolio’s return calculated? (show picture)
  + The time-weighted rate of return (TWRR) calculates the compounded rate of growth over each subperiod that has an external cashflow. The resulting TWRR is **unaffected** by external cash flows. Within a 30-day period, the return on D1-7 is 0.4%; D8-19 is -0.2%; D20-30 is 4.9%. The TWRR over 30 days is **(1+.004)(1-.002)(1+.049) – 1 = 5.1%**
  + **TRUE**/FALSE: Money-weighted rate of return is affected by external cash flows; time-weighted is not.
  + A portfolio return can be broken down into three layers**: market, excess return to style, and active return.** 
    - Return on market index
    - Style: **Manager’s benchmark return** less **market return**
    - Active return: **Manager’s overall portfolio return** less **manager’s benchmark return**
  + What are the seven primary benchmark types?
    - **Absolute**
    - **Manager universes**
    - **Broad market indices**
    - **Style indices**
    - **Factor-model-based**
    - **Returns-based**
    - **Custom security-based**
  + What are some telltale signs of a high quality benchmark for a portfolio?
    - **Regress the historical beta of the account relative to the benchmark (i.e., regress portfolio returns on the benchmark returns)**. A beta near **1.0** indicates sensitivity to the same factors.
    - A manager’s active returns (A) and style returns (S) should be **uncorrelated.**
    - Standard deviation of **(P-B)** **<** **(P-M)** for an appropriately-selected benchmark. This means that the benchmark is capturing important elements of the manager’s investment style.
    - **Similar** risk characteristics to portfolio
    - **High** coverage ratio
    - **Low** benchmark turnover
    - Net **positive** active positions.
    - NOTE P = portfolio return, B = benchmark return, M = market index return
  + Hedge fund benchmark issues arise because 1) hedge funds are **long-short**, making a long-only benchmark **inappropriate**, and 2) hedge funds may be **net market neutral** with a theoretically **0** beginning market value.
  + Compared to performance measurement and appraisal, what is the goal of performance attribution? **To identify and quantify the sources of returns that are different from the designated benchmark.**
  + Follow -up: Macro performance attribution is done at the **fund sponsor** level. Micro performance attribution is done at the **investment manager** level.
  + Micro attribution analysis: Given the below micro attribution, calculate the pure sector allocation, within-sector selection, and allocation / selection interaction effects. (show picture)
    - Pure sector allocation = **(wPj – wBj) \* (RBj – RB)**= **(0.01442 – 0.1794) \* (0.0132 – 0.0066) = -0.00023**
    - Within-sector selection = **(wBj) \* (RPj – RBj)** = **(0.1794) \* (0.0204 – 0.0132) = 0.00129**
    - Allocation / selection interaction = **(wPj – wBj) \* (RPj – RBj)** = **(0.01442 – 0.1794) \* (0.0204 – 0.0132) = -0.00025**
  + Manager evaluation
    - Exposure to risk factors just as important as returns
    - What are the formulae for the below?
      * Ex-post (Jensen’s) alpha
      * Treynor
      * Sharpe
      * M2 (Modigliani – Modigliani)
      * Information ratio
  + Treynor measure: Beta measures **systematic** risk
  + Sharpe ratio vs. Treynor: Which is stated in terms of systematic (i.e., not total) risk? **Treynor**
  + Manager continuation decisions using statistics:
    - What is the null hypothesis used in statistics based manager continuation decision? **H0: The manager adds no value**.
    - When do you keep a manager?
      * **When it is statistically significant that value has been added.**
    - What are errors?
      * Type I: **Rejecting** the null hypothesis when it is **true**.
      * Type II: **Failing** to reject the null when it is **false**.
  + A manager in the energy sector has two clients. The first has a positive view of the sector, and wants to invest all his assets in an energy sector fund. The second holds a well-diversified portfolio and wants to only slightly increase her exposure to the energy sector. Which risk measure and risk-adjusted performance measure are best to use for each, and why? (Choose between Sharpe and Treynor for risk-adjusted performance measure)
    - Client 1: **Total** risk is most relevant; portfolio not fully diversified. **Sharpe ratio** will compare Client 1’s excess return to his **total risk**.
    - Client 2: **Beta** risk most relevant; portfolio’s nonsystematic risk has been diversified away. **Treynor measure** will compare Client 2’s excess return to her **systematic** risk.
  + MWR > TWR when: cash flows are invested in a subperiod whose return is much **higher** than the period.
  + When pure sector allocation is negative, it means the manager **underweighted** a sector that outperformed.
* LOS 34: Overview of the GIPS
  + If serious about exam, need final study. Need 1 month of practice exams. In front of exam day.
  + Haven’t seen it in the essay morning section, but is in afternoon.
  + Treat GIPS like ethics
  + Know the rules, apply them to case specifics, and reach the expected solution. Format is generally multiple choice.
  + **Practice all Schweser, CFA end of chapter questions**
  + “Have a little attitude, you’re gonna need it in this profession.”
  + Applies to investment firms, not individuals
  + Best practices for calculating and presenting investment performance
  + Consistent with Standards of Professional Conduct, but has additional requirements
  + PDF file: Example GIPS report (need to get report)
    - Anatomy
    - Years of analysis
    - Currency(?)
    - Include compliance statement – must be word-for-word
    - Firm description
    - When did the composite start?
  + Governance
    - GIPS standing committee develops and implements GIPS
  + Calculation is based on months; reporting is based on years
  + 9 Sections of GIPS
  + 0. Fundamentals of Compliance
    - Based on defining the firm. Held out and operating as a distinct business entity
    - Compliance with GIPS must be **firm**-wide
    - **TRUE**: Only investment management firms can claim compliance with GIPS, not a pension plan sponsor or a consultant.
    - Do not claim compliance with GIPS “except for”
    - Intent to mislead **is** a violation
    - Do not state “in accordance with GIPS”
      * Except if **presenting performance of a client’s portfolio to that client**
    - Concept of Discretion: **Ability of firm to implement its intended strategy**.
    - Discretionary (accounts)
      * **TRUE:** Includes those managed by a sub-advisor **selected** by the firm
      * **Only discretionary** accounts are included in composites
    - Nondiscretionary
      * Any **material impediment to discretion** makes a portfolio nondiscretionary.
      * Part of **firm assets** but not of composite returns
    - Document and maintain policies and procedures to comply with GIPS
      * **True**: Must verify **existence** and **ownership** of client assets (stops Madoff-like scandals).
    - Changes to the firm’s organizational or corporate structure **do not** change historical composite results
    - **TRUE**: If you “acquire” a firm, then it is part of your record
    - **TRUE**: Any joint marketing by firms must clearly distinguish what is and is not compliant
    - Composites belong to **firms that created them** / managers
  + 1. Input Data: Required
    - Capture and maintain **all** necessary data
    - Use **trade date** accounting
    - **Accrual** accounting for fixed income
    - Value holdings at least **monthly,** as of the **calendar month end** or the last business day of the **month**
    - Value holdings on the date of an **external cash flow (ECF)**. An ECF is an investor contribution or withdrawal (distribution), which should not be factored into return calculations. NOTE: This requires some care with respect to how ECFs are excluded, which will depend on firms’ individual discretion.
    - Use **fair value** accounting to mark assets, under the following hierarchy:
      1. **Market value**
      2. (If it doesn’t trade) **Fair prices of comparable** assets in **actively** traded markets
      3. **Fair prices of identical or comparable** assets in **inactively** tradedmarkets
      4. **Observable, market based** inputs other than price (e.g., based on P/E or dividend yield of stock)
      5. **Subjective, observable** inputs (e.g., a DCF model)
      6. Additional issues with real estate and private equity to be addressed later
    - Defining Fair Value
      * **Document and disclose** valuation policies
      * Determine policies by **composite**
      * Disclose any subjective inputs used in valuation and from the valuation hierarchy
      * If there is any conflict, comply with **local laws and regulations**, and **disclose and describe** the conflict
    - **Do not** use more frequent valuation to pick time periods that make results look better
    - Report composite performance by consistent annual periods. (**Yes** / No: Is cherry-picking forbidden)
    - Terms
      * Gross of fees: After **actual** **trading expenses**
      * Net of fees: After actual trading expenses and **investment management** fees
      * Bundled fee: Any combination of trading, **investment**, and **administrative** fees.
  + 2. Calculation Methods
    - When calculating returns, GIPS requires **total return** (% change in fair value) reporting, defined simply as a portfolio’s **ending value** % change over beginning value.
    - Total return is calculated on portfolio beginning and ending portfolio values that include:
      * **Income earned**
      * **Realized gain and loss**
      * **Unrealized gain and loss**
      * **Value of any cash and cash equivalents the manager chooses to hold in portfolio**
      * **(Fixed Income only) Accrued interest**
    - When calculating returns, and ECF (external cash flows) are involved, **geometrically** link (i.e., time-weight) returns by subperiods to arrive at monthly return. What are the allowed methods over time?
      * Jan 2005 and prior: **Original** Dietz
      * Jan 2005 up to Jan 2010: Daily-weighted ECF (**Modified** Dietz) or **MIRR** (don’t memorize)
      * Jan 2010 forward: Subperiods must be **monthly** or on the date of each large external cash flow (ECF). (Time-weighted.)
    - **TRUE**: When calculating returns under GIPS, the firm must determine and document how to handle external cash flows (ECFs). ECF policies must be **composite** /firm specific. With no ECFs, firms’ methods produce **similar** results. With greater market volatility and larger ECFs, the methods **diverge**.
    - **TRUE**: When the firm controls timing of ECFs, time-weighted return cannot be used, and internal rate of return (IRR) must be used for return computations.
    - **Ex:** Calculate the time-weighted return on account, accounting for ECF, under the time-weighted return, modified Dietz, and original Dietz methods (see example)
    - Cash and cash equivalents: GIPS returns must reflect the effect of cash holdings
      * If a client dictates you must always hold 5% of portfolio in cash, you **do not** have to report that as part of equity return, because that’s a client direction to hold cash. But when this decision comes from the manager, you **would have to**.
    - All return calculations must be **gross** of fees. Estimated trading expense are **not allowed.**
    - When trading fees cannot be separated from bundled fees, and:
      * Presenting gross-of-fees: Reduce return for **entire** bundled fee or **portion of bundled fee** known to include the trading fees
      * Presenting net-of-fees: Reduce return for **entire** bundled fee or **portion of bundled fee** known to include the trading fees and management fees and **disclose the nature** of the bundled fee
    - When reporting composite returns, reportthe **asset value**-weighted average return of the accounts in the composite. Three methods of return calculation can be used:
      * **Beginning-of-period**
      * **Beginning-plus-weighted ECF (external cash flow)**
      * **Aggregate method**
      * NOTE: CANNOT USE **end-of-period** values for weights.
    - (FOLLOWUP) Example: Given portfolio A and B, calculate composite return under each. (See example)
  + 3. Composite Construction
    - A composite is a group of similar accounts managed by the firm in a particular investment style. Firms have some discretion over how to construct them, however there is a suggested composite definition hierarchy in order of preference:
      1. **Investment mandate**
      2. **Asset class**
      3. **Style or strategy**
      4. **Benchmark used**
    - Discretionary vs. Nondiscretionary portfolios
      * What are some client restrictions that might render a portfolio nondiscretionary (i.e., materially hinder portfolio results)?
        + Client must **approve all trades or place unreasonable restrictions on trades**
        + Manager cannot change **existing assets**
        + Client makesregular, significant **additions or withdrawals** that disrupt strategy
      * Account size is too **small** to affect intended strategy
    - Nondiscretionary and non-fee-paying portfolios
      * All actual, fee-paying, discretionary portfolios must be included in **at least one** / only one / at most one composite
      * Nondiscretionary assets **must be** excluded
        + Remove the **entire** portfolio or **only the nondiscretionary portion** of the portfolio from the composite (ex: large position in a single stock cannot be sold. Report on the **remaining** portion; the nondiscretionary portion is **still** part of firm assets)
      * Non-fee-paying discretionary portfolios **may be** included, but firms must disclose the **% of composite assets represented by non-paying portfolios**.
      * If a portfolio changes status from discretionary to non-discretionary, the portfolio **may not** be removed from a composite retroactively, but **must be** removed going forward.
    - Composites must only include assets under management within the **defined firm**.
    - Model or hypothetical results **must be** excluded from actual performance, but can be presented as **supplemental information.**
    - Composite and portfolio changes:
      * When adding new portfolios to a composite
        + Begin reporting at the next **full measurement period**
      * When removing a portfolio from a composite:
        + Removed at **end of last full measurement period (monthly)**
        + Historical composite results **cannot** be changed
        + Presenting an annual return for a terminated portfolio with less than a year’s performance is **not allowed**
      * If an account (portfolio) changes objectives, and changes composites:
        + Use **full month rule** to determine timing
        + **Document the basis** for the change
        + Historical results **remain** in the original composite
      * Changes to composite definitions **must not be** applied retroactively
    - When significant ECF occur that could temporarily render portfolio nondiscretionary:
      * Solutions:
        + **Temporarily remove** the account from composite
        + Or **direct the ECF to a temporary sub account** until all funds are invested in accordance with the style
      * ECFs are significant when they **materially hinder** the ability of the manager to implement the intended strategy
    - Portfolios below a defined minimum size should be **excluded** from the composite (firm defines threshold beforehand). Changes to a composite-specific minimum asset levels **must not be** applied retroactively.
    - Asset carve outs: Carve-out is **optional** and allows additional reporting for portfolios that are pursuing multiple strategies. What are the requirements for the separate reporting of a carve-out account?
      * **Set up as a separate account with its own cash balance**
      * **Separately managed by the composite manager**
  + 4. Required Disclosures
    - NOTE: These required disclosures aren’t everything you have to do – there are other presentation and reporting requirements that must occur for full GIPS compliance (see next chapters)
    - Which Disclosures MUST appear (violation if not)
      * The Compliance Statement. One of three possible compliance statements (Can't change single thing, except the fill-ins.):
        + GIPS compliance **verified**

**[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has been independently verified for the periods [insert dates]. The verification report(s) is / are available upon request.**

**Verification assesses whether (1) the firm has complied with all composite construction requirements of the GIPS standards on a firm-wide basis, and (2) the firm’s policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation.**

* + - * + GIPS compliance **not verified**

**[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has not been independently verified.**

* + - * + GIPS compliance **verified and specified composite performance result have been examined**

**[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has been independently verified for the periods [insert dates]. ~~The verification report(s) is / are available upon request.~~**

**Verification assesses whether (1) the firm has complied with all composite construction requirements of the GIPS standards on a firm-wide basis, and (2) the firm’s policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The [insert name of composite] composite has been examined for the periods [insert dates]. The verification and examination reports are available upon request.**

* + - * Define **firm as used to determine firm** **assets and compliance**
      * Description of **composite**
      * Description of **benchmark**
      * Applicable **fee schedule**
      * Which measure of **composite** **internal dispersion** is being used, as well as the methods used (e.g., range of return for accounts in composite for 2015 was 10.5% to 13.2%). (EXCEPTION: **Less than 6** portfolios for the whole year.) (NOTE: This is because if too small composite, might be revealing confidential client information – GIPS designers aware of this.)
      * **External composite dispersion** measure, including **annualized standard deviation** of trailing **36 monthly** returns for **composite** and **benchmark (do the same thing for comparison)**. Relay the two numbers.
        + Can you use a different risk measure, other than SD? Under which conditions, and what would you need to provide? **If SD is not relevant, explain why and provide a different risk measure.**
      * Composite **creation date**
      * The **currency** used to present performance
      * What must be provided upon request?
        + A **list of composite descriptions**, which must include all composites **terminated** within the last **five** years.
        + Policies for **valuing, calculating, and presenting** performance
    - Which Disclosures should appear ONLY IF RELEVANT
      * If presenting gross of fees, any fees deducted in addition to **direct trading expense**
      * If presenting net of fees:
        + If any fees deducted in addition to **management fees** and **trading expenses**
        + If **model or actual** management fees are used
        + If returns are net of any **performance-based** fees
        + NOTE: Mgmt fees deductions must include performance-based fees and carried interest
      * Presence, use, and extent of **leverage, derivatives, and short** positions if material, including a description of the **frequency and characteristics** of the instruments used (i.e., enough information the client can understand the nature of the risks)
      * **All significant events** that would help prospective client interpret the presentation. (You must meet the intent of GIPS.)
      * For any performance presented for periods prior to 1/1/2000 that does not comply with the GIPS standards, **disclose the periods of non-compliance**. (All performance presented beginning 1/1/2000 must of course be compliant.)
      * Date, description of, and reason for **redefining the firm**
      * Date, description of, and reason for **redefining the composite**
      * Any changes to the **name of the composite**
      * **Minimum account asset level** for inclusion in the composite and any **changes** to that level
      * Treatment of **withholding taxes** on dividends, interest, and capital gains and **whether benchmark returns are net of withholding taxes.** (If the information is material and available). (No standard way to say what this is – that’s why it’s important to disclose.)
      * Any known **material differences in exchange rates** **and** **valuation sources** among portfolios in the composite or between the composite **and the benchmark**
      * If presentation conforms with local **laws or regulation** that conflict with GIPS and the manner of the conflicts
      * Any periods prior to 2010 of carve-out accounting done **by internal computations rather than by setting up separately managed** sub-accounts
      * If the composite contains portfolios with **bundled fees**, the **types of fees** included in bundled fees. (Disclose the heck out of these in general.)
      * Any **use of sub-advisors** selected by the firm and the **periods of usage.**
      * (Old rule) Any periods prior to 2010 using other than **month-end** valuation
      * Starting 1/1/2011, report any material use of **subjective, unobservable portfolio valuation inputs (e.g., dividend discount growth rate, discount rate) (This may be relevant for private equity, distressed debt funds, etc…firms that may come into contact with this.)**
      * If composite valuation hierarchy **differs materially from recommended** hierarchy
      * If the firm has a “significant ECF” policy for the composite: **how the firm defines “significant ECF”**
      * If the firm determines **no appropriate benchmark exists**, explain why
      * If the benchmark changed: **date** of, **description** of, and **reasons why** benchmark changed
      * If a custom benchmark or combination of benchmarks is used: the benchmark **components**, **weights**, and **rebalancing** process
      * Whether performance of a past firm or affiliation is linked and included (e.g., if your firm acquires another firm, then yes you do start reporting their record)
  + 5. Presentation and Reporting Requirements
    - Presentation is by **composite** and for **annual** periods
      * “5 going on 10” rule: If you are just starting to report GIPS-compliant performance, you present **five years of performance history** in your first GIPS report. Eventually, the goal is to have **at least ten** years of performance history.
      * **Since inception** if composite existence isless than five years. (E.g., If you only have three years, you must report these three years. If have more than five years, only obligated to present **at least** **five** in your first GIPS report.)
      * Whatever you start with: Add one year each year until **at least ten** years are presented.
      * **Do not** annualize periods less than a year.
    - All annual returns clearly identified as whether **gross** or **net**-of-fees.
    - Composites with an inception date starting 1/1/2011: When the initial period is less than a full year, present returns from the **composite inception** through the initial **year-end**.
    - Composites terminated starting 1/1/2011: Returns from the **last annual period** through the **termination date**.
    - Report the relevant benchmark returns for **the same** periods you’re reporting a composite
    - **Number of portfolios** by year
      * NOT REQUIRED if less than six portfolios
    - **Composite assets** by year
      * And total firm assets by year
      * Or **composite assets** as a % of **total assets** (allows someone to see importance of composite in relation to total firm assets, over time)
    - GIPS requires some measure of internal dispersion but does not specify what to use
      * NOT REQUIRED if less than **six** portfolios
      * Internal dispersion methods include:
        + **Range** of annual returns
        + **Hi – Low** of annual returns
        + **Interquartile** range
        + **Equal-weighted** standard deviation of annual return
        + **Asset-weighted** standard deviation of annual returns
    - Beginning Jan 1 2011, the three-year **ex post standard deviation** of **monthly** **returns** must also be presented. (E.g., At year end 2013, the last 36 monthly returns of SDGE and its benchmark are presented, along with the **annualized sigma of each**.)
    - If standard deviation is not appropriate, **explain why, select, and present** an additional risk measure
    - Noncompliant returns prior to 1/1/2000: May only be linked to compliant history if 1) firm meets **disclosure requirements for noncompliant performance**, and 2) only **compliant** returns are presented after 1/1/2000.
    - Reporting for the period between 1/1/2006 and 1/1/2011 must disclose the composite portion of **carve-out** data included, if any. (Now, must be able to set up sub-accounts for small cap growth equities, large cap growth equities, etc.)
    - Percentage in the composite of **non-fee-paying** portfolios
    - Percentage in the composite of **bundled-fee** portfolios
    - If noncompliant assets are acquired, the firm has **one** year to bring them into compliance. (Example: Firm A complies with GIPS, and acquires Firm B, which is not compliant with GIPS. Firm A has **one** year to get Firm B compliant with GIPS. During the time Firm B is still not GIPS-compliant, Firm A reports **only on** Firm A’s performance. If Firm A cannot get Firm B GIPS compliant within one year, Firm AB is **not** GIPS compliant.)
    - Composite performance is **not** portable. However, if Firm ABC acquires Firm XYZ, the historical performance record of Firm XYZ must be reported by ABC, provided:
      * **Substantially all decisionmakers are employed** by the new firm
      * The decision-making process remains **independent** and **substantially the same**
      * New firm **has documentation** **of performance history**
    - Skipped: P&R Recommended but NOT Required bullets
  + 6. Special provisions for (some) Real Estate and Private Equity
    - Exist because common questions are “What is the value of the funds we have?” -> NOT conducive to investors
    - Terminology
      * Closed-end fund: **Start date**, **finite** life, **fixed committed** capital
      * Open-end (evergreen): **No finite life** and **no fixed committed** capital
      * Primary fund: Makes **direct** investments
      * Secondary fund: Invests in **other primary and secondary funds**
      * Fund of funds: Mostly invests in closed end funds
    - RE and PE not covered by Special Provisions
      * **Publicly** traded real estate securities (e.g., REITs)
      * **Mortgage-backed securities (MBS)**
      * **Private** debt instruments (e.g., commercial /residential loans)
      * **Open**-end funds that allow continuing investments and withdrawals
    - How can basic GIPS be misleading, and how should managers respond to increase transparency during performance reporting?
      * The manager controls timing of external cash flows: **Use IRR calculations** for performance reporting
      * The assets are highly illiquid and lack objective market value pricing: Disclose **components of return** and **valuation process**
      * The assets are held in closed-end vehicles: Report **“since-inception” returns (SI-IRR)** and **disclose vintage year**
    - Per GIPS returns reporting frequency,
      * Real Estate: **Quarterly** reporting is sufficient
      * Private Equity: **Annual** reporting sufficient.
    - Per GIPS, valuation of real estate assets should occur:
      * Internally: **Quarterly**
      * By third-parties: **Annually**
      * If client agrees: **Every three years**
    - …and what must be disclosed:
      * **Frequency of external valuation** and the **% of composite assets so valued**. (NOTE: Disclosures help clients become aware of the complexity of valuation, how a third party is looking at such hard-to-value assets)
    - Per GIPS real estate return reporting,
      * Portfolios are discretionary if the manager has **sole or sufficient discretion** for major investment decisions
      * Description of discretion: **Required**
      * Total returns can be reported **gross** or **net** of fees. If gross and net are reported only **gross** components are required. (This is because benchmarks don’t have fees, so optically better.)
      * Total returns must be broken down into **income** and **capital** components, both of which should sum to total returns
      * Returns should be presented after the deduction of **transaction costs**, which include actual financial, investment banking, legal, and advisory fees incurred for recapitalization, restructuring buying, and selling properties.
      * Dispersion: Not required if **six** or less portfolios.
      * SI-IRR must use at least **quarterly** cash flows
      * SI-IRR must be reported through **final liquidation date**
    - Per GIPS private equity return reporting,
      * Net-of-fees returns must be presented, which include both management fees and carried interest (fees based on a share of profits **earned** but not yet **paid**)
      * **TRUE**: Private equity: Stock distributions treated as cash distributions
      * Both primary and closed-end funds must be defined by **strategy/style** and by **vintage year**, and a **comparable benchmark** must be used.
      * Fund-of-funds: Report the % of the FOF in **direct investments**
      * Closed-end funds: Annually disclose **CC, cumulative PIC, D, TVPI, DPI, RVPI** (don’t get bogged down)
      * SI-IRR must be stated both **gross** and **net** of fees
      * SI-IRR must use at least **daily** cash flows
      * SI-IRR must be reported through **final liquidation date**
    - Real Estate and Private Equity: Closed end fund terminology
      * Committed capital (CC): Funds investors have **committed and are legally obligated to contribute**
      * Paid in capital (PIC): CC that has **actually been contributed**
      * Distributions (D): **Cash** or **fair value of any assets** distributed by the fund to the investors
      * Residual value (RV): The **estimate value** of the fund
      * Total value (TV): Cumulative **D** + **RV**
      * Ratios
        + Paid-in capital to committed capital (PIC multiple) = **Since-inception paid-in capital** **(PIC)** / **Committed capital (CC)**
        + Cumulative distributions to paid-in capital (realization multiple or DPI) = **Since-inception distributions** **(D)** / **Since-inception paid-in capital (PIC)**
        + Residual value to paid-in capital (unrealized multiple or RVPI) = **Residual value (RV)** / **Since-inception paid-in capital (PIC)**
        + Total value to paid-in capital (investment multiple or TVPI) = **Total value** **(TV)** / **Since-inception paid-in capital (PIC)**
        + TVPI = **RV**PI + **D**PI
  + 7. Wrap Fee Separately Managed Accounts, Advertising Guidelines, Verification
  + Wrap Fee / Separately Managed Accounts (WSFMAs)
    - Apply to case where a GIPS-compliant investment manager serves as the subadvisor to a sponsor, who charges the client a bundled fee (and is in turn the client’s investment advisor). Only applicable where the investment manager has **discretion** to manage the client’s assets.
    - The performance results of the end user client must be **computed, documented, and verified**
    - Returns must be calculated after actual **trading** expenses
    - **All** of the fees that are included in the bundled fee must be disclosed
    - Composite results must disclose the **% of composite assets** **made up of portfolios with bundled fees**
    - There are some more notes – ignore for now.
  + GIPS Advertising Guidelines (“the Guidelines”)
    - For firms that **already** satisfy all the requirements of the GIPS standards on a firm-wide basis and claim compliance with the GIPS standards in an advertisement
    - If an advertisement conforms with legal and/or regulatory requirements that conflict with GIPS standards and/or the Guidelines, firms must disclose this fact and the manner in which they conflict
    - Advertisements include any written or electronic materials addressed to **more than one** / only one **prospective** / current client. “One-on-one” presentations and reports **are not** considered advertisements.
    - Reports must include:
      1. A description of the **firm**.
      2. **How an interested party can obtain a presentation** that complies with the requirements of GIPS standards and/or a list and description of all firm composites.
      3. The GIPS Advertising Guidelines compliance statement: **[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®).**
      4. A description of the **composite** being advertised.
      5. Advertisements that **state compliance** and **present performance** must present one of the following sets of **total** returns:
         1. **1-, 3-, and 5**-year annualized composite returns through the most recent period.
         2. **Period-to-date** composite performance results in addition to **1-, 3-, and 5**-year cumulative annualized composite returns with the end-of-period date clearly identified (or annualized period since composite inception if inception is greater than one and less than five years). Periods of less than one year **are not** permitted to be annualized. The annualized returns must be calculated through the same period of time as presented in the corresponding compliant presentation.
         3. Period-to-date composite returns **in addition to five years of annual composite returns** calculated through the same period of time as presented in the corresponding compliant presentation.
      6. Whether performance is shown gross and/or net of **investment management fees**.
      7. The **benchmark total** return for the same periods for which the composite return is presented and a description of that **benchmark**. **NOTE: (The appropriate composite benchmark return is the same benchmark total return as presented in the corresponding GIPS compliant presentation.) If no benchmark is presented, the advertisement must disclose why no benchmark is presented.**
      8. The **currency** used to express returns.
      9. Describe the extent and use of **leverage, derivatives, and short selling** in sufficient detail to identify the risks involved.
      10. When presenting noncompliant performance information for periods prior to January 1, 2000, in an advertisement, firms must disclose the **period(s)** and **which specific information** is not in compliance with the GIPS standards.
  + 8. After tax return reporting, How to Study GIPS, Example of a Non-compliant report
    - After tax reporting: Completely voluntary
    - Need to make assumptions to arrive at after-tax from pre-tax return. Challenges: What initial tax basis to assume?
    - How to study GIPS
      * Don’t recite dates or make history lesson
      * Use rules, apply to case specifics
      * Work all Schweser and CFA EOC chapter questions
  + Custodial fees charged per transaction are trading or **custody** fees?
  + GIPS verification can only take place on the **firm**, and not **composite** level.
  + Returns on cash and cash equivalents held in portfolios are required on all return calculations, **even if** cash not invested by same person or group.
  + The GIPS state that all actual, discretionary, fee-paying portfolios must be included in **at least** one of the firm’s composites.
  + Composites must include only actual assets under management, **and** the linking of the performance of simulated or model portfolios with actual performance is **prohibited**.
  + The minimum number of portfolios for a composite to comply with GIPS is **zero. There is no minimum number.**
  + The firm must disclose the number of portfolios in a composite unless there are less than **6** portfolios in the composite.