Module 3 : Overview of Asset Allocations

3.a : Elements of effective investment governence
- investment objectives
- rights & responsibilities
- IPS
- Strategic asset allocation
- reporting framework
- governance audit

3.2 Economic B/S
3.b. implications for asset allocation
→ contains non-financial assets & liabilities applicable to asset allocation decisions.

Extended Port Asset example :
PV of expected earnings / pension income

3.3 : Approaches to asset allocation
1. Asset-only approach ← doesn't care about obligations
e.g. Mean-variance optimitization (MVO)
(incorporates expected return, volatility, correlation)
goal : maximize E(R)
risk measure : S.D. of return, relative risk, downside risk, tracking error

VaR, max drawdown, monte carlo

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2. Liabilities - relative approach

e.g. Surplus optimization

definition (surplus) = asset value − PV(liabilities)

goals: funding liab. + paying liab. when they come due

can model liab. by shorting comparable bonds w/ durations & PV

risk = asset < liab.

risk measure: S.D of surplus

3. Goal - based approaches

- focused on sub-portfolios to help achieve lifestyle & aspirational financial objectives

3.a. Relevant Risk Concepts

MODULE QUIZ 3.1, 3.2, 3.3

1. Which of the following investment objectives would *most likely* be associated with a defined benefit pension fund?
   A. Plan assets should meet current and future plan liabilities.
   B. Assets should provide for retirement subject to each investor's constraints and risk tolerance.
   C. The rate of return should meet the current distribution rate plus future inflation.
2. Which of the following investments would *most likely* be part of the extended portfolio of the assets and liabilities sections on an economic balance sheet?
   A. Human capital.
   B. Financial assets.
   C. Financial liabilities.
3. Which of the following asset allocation approaches is focused on achieving lifestyle and aspirational financial objectives?
   A. Asset-only approach.
   B. Goals-based approach.
   C. Liability-relative approach.
4. The asset allocation approach that is concerned with the risk of not having enough assets to pay liabilities when they come due is known as:
   A. asset-only.
   B. goals-based.
   C. liability-relative.

1. B
2. A
3. B
4. C

3.4. Allocation by Asset class / Risk Factor

3.e: how asset classes are used to represent exposure to systematic risk & discuss criteria for asset class specification

3 categories of "super asset classes":
1. capital assets (provide continuous source of value)
2. Consumable / transformable assets. (e.g. commodities)
3. Store-of-value assets (e.g. currencies, art)

Asset classes have been approx. specified if:
- assets in the same asset class have similar charactertistics
- assets cannot be specified into >1 classes
- low correlation b/w asset classes
- asset class contains a sufficiently large % of liquid assets

3.f: Common Risk Factors
using asset classes in MVO may be problematic b/c of overlapping risk factors

→ FOCUS ON RISK FACTORS not asset classes
e.g.

3.g. Strategic Asset Allocation

Strategic Asset Allocation combines cap market expectations w/ investor's risk, return & investment constraint.
Strategic Asset Allocation is long term by nature. Weights are called targets, portfolio represented by the strategic asset allocation .= policy portfolio / target portfolio / BM.

Selecting & justifying a strategic asset allocation based on investor objectives & constraints is outlined in 9 steps:

1. determine investor objectives.
2. determine investor tolerances. for risk.
3. determine investor time horizon
4. determine investor constraints.
5. Select the asset allocation approach
6. Specify the asset classes
7. Develop potential asset allocation
8. simulate results of potential asset allocations.

MODULE QUIZ 3.4

1. Which of the following statements identifies one criterion for specifying an asset class when making asset allocation decisions?
   A. Assets may be classified into more than one asset class.
   B. Asset classes cover all possible investable assets.
   C. Asset classes should be highly correlated in order to provide desired diversification.
2. Duration and convexity would *most likely* be risk factors for which type of asset class?
   A. Domestic equities.
   B. Domestic real estate.
   C. Domestic fixed income.

1. B
2. C

content is available online.

EXAMPLE: Strategic asset allocation

Nathan Tillman is a 50-year-old entrepreneur who plans to retire in five years. He is considering purchasing an annuity for retirement. He has a $5 million portfolio with $1 million in real estate and $700,000 in mortgage debt. He would like to eliminate all mortgage debt before retirement. His son, David, is 18 years old and starting college this year with eventual plans for medical school. Tillman estimates he will contribute $500,000 to his son's education. Tillman is generally conservative with his investments, does not like portfolio volatility, and does not have any social or environmental investment constraints. For Asset Allocation A and then for Asset Allocation B:

- **State** whether it is most consistent with (1) an asset-only, (2) a liability-relative, or (3) a goals-based approach to asset allocation.
- **Give** *one* reason based on Tillman's situation that the approach is appropriate for Tillman.

Do not draw any conclusion as to the optimal overall approach to allocation for Tillman.

Asset Allocation	Cash	Global Equities	Global Fixed Income	Diversifying Strategies
A	45%	15%	35%	5%
B	5%	50%	20%	25%

Asset Allocation A is consistent w/ a goal-based approach b/c:
- it has more than sufficient cash for liquidity needs of $1.2 MM to pay the mortgage & education expense. or used for possible annuity purchase.
- The high allocation to cash reduces port. vol.
- It fits conservative investment views.

Asset Allocation B is consistent w/ an asset-only approach:
- it emphasizes higher growth equity.
- it provides diversification w/ alt. investments & some FIs.

Module 3.6: Other approaches & issues

3.h: use of global market portfolio as baseline in portfolio

The first asset allocation to consider should be the global market portfolio.

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Strategic Implementation Choices

3.i : passive/active choices & vehicles for implementing mandates

Passive / Active Choices for Asset class weights

Tactical Asset allocation (TAA) is an active management strategy that deviates from strategic asset allocation (SAA)

A multiperiod view of the investment horizon is sometimes referred to as dynamic asset allocation (DAA)

Passive & Active Choices within Asset class.

As portfolio moves from passive to active, tracking error & expected active return relative to BM will increase.

Risk Budgeting

- addresses types of risk to take & the amount of risk to take.
- would be quantified w/ S.D. of returns & VaR. if risk focus is vol. & tail risk.

MODULE QUIZ 3.5, 3.6

1. Jack Manning, CFA, and Tess Brown, CFA, have just joined a financial planning firm. They will work as a team assessing and managing the portfolios of individual clients. Manning will specialize in forming long-term capital market expectations. Brown focuses on relative value models to assess shorter-term over- and undervaluation. Based on this information, we would define the focus of:

A. both Manning and Brown as tactical asset allocation.
B. both Manning and Brown as strategic asset allocation.
C. Manning as strategic asset allocation and Brown as tactical asset allocation.

2. Which of the following statements is *most correct* regarding the global market portfolio as the baseline portfolio in asset allocation?

A. The market portfolio contains most investable risky assets.
B. The market portfolio minimizes total risk since it is the most diversified portfolio.
C. Investors can use a proxy to represent the market portfolio, such as a portfolio of exchange-traded funds (ETFs).

3. Deviation from strategic asset allocation due to short-term capital market expectations is *most correctly* called:

A. active management.
B. tactical asset allocation (TAA).
C. alpha management.

1. C ✓
2. C ✓
3. B ✓

4. Which of the following asset allocation rebalancing techniques provides discipline without need for constant monitoring?

A. Range-based balancing.
B. Corridor-based rebalancing.
C. Calendar-based rebalancing.

4: A C Cal. rebalancing provides the discipline w/o the req. for constant monitoring.
Range-or-corridor based rebalancing provides the benefit of minimizing the degree to which asset classes can violate

3.j. Rebalancing

primary benefit: maintain desired exposure to systematic risk factors

Rebalancing also requires discipline (investors will see significant gains in equity & "let it ride".

Rebalancing approaches:

1. Calendar rebalancing
2. Percentage-range rebalancing

Strategic Considerations:

- Transaction costs
- Risk Tolerance
- Correlations
- Momentum
- Liquidity
- Derivatives
- Taxes

  Cap gain taxation suggests setting asymmetric rebalancing. (e.g. 28 ~ 35% range around a 30% target weight)