Standards of Professional Conduct

I. Professionalism

A. Knowledge of the Law – Members and candidates must understand and comply with all applicable laws, rules, and regulations (including the CFA Institute Code of Ethics and Standards of Professional Conduct) of any government, regulatory organization, licensing agency, or professional association governing their professional activities. In the event of conflict, members and candidates must comply with the more strict law, rule, or regulation. Members and candidates must not knowingly participate or assist in and must dissociate from any violation of such laws, rules, or regulations.

Members and Candidates must adhere to the following principles:

- Members and candidates must comply with applicable law or regulation related to their

professional activities.

- Members and candidates must not engage in conduct that constitutes a violation of the

Code and Standards, even though it may otherwise be legal.

- In the absence of any applicable law or regulation or when the Code and Standards

impose a higher degree of responsibility than applicable laws and regulations,

members

and candidates must adhere to the Code and Standards.

- if a member or candidate has reasonable grounds to believe that imminent a mgomg client or employer activities are illegal or unethical, the member or candidate must distoctary, buse parate, from the activity. In extreme cases, dissociation may require leaving firm. Steps:

- the code and standards to a proceeding members and candidates or report violations to their governmental or regulatory or candidates such disclosure in the and more under applicable law

Recommended Procedures for Compliance: *Members and Candidates:*

1. Stay informed – establish or encourage their employers to establish a procedure by which employees are

regularly informed about changes in applicable laws, rules, regulations and case law.

2. Review Procedures - review or encourage their employers to review written compliance procedures on a

regular basis to ensure that they reflect current law and provide adequate guidance.

3. Maintain Current files - maintain or encourage employers to maintain readily accessible current

reference copies or applicable statutes, rules, regulations and important cases. When in doubt, member or

candidate should seek the advice of compliance personnel or legal counsel concerning legal requirements.

- when in doubt about appropriate action to take, seek advice of compliance or legal counsel

- when dissociating, document violation

Firms:

1. Develop/adopt a code of ethics.

- 2. Make available/distribute to employees pertinent info that highlights applicable laws and regulation.
- 3. Establish written protocols for reporting suspected violations of laws, regulations and company policies

with client interests. If the firm does not permit disclosure, the member should document the request and may consider dissociating from the activity.

> **B.** *Priority of Transactions* – Investment transaction for his clients and employers must have priority over investment transactions in which a member or candidate is the beneficial owner.

Beneficial Owner: if the member or candidate has a direct or indirect personal interest in the

securities

- Family accounts that are client accounts should be treated like any other firm account and should neither be given special treatment nor be disadvantaged because of an existing family relationship with the member or candidate. If the member or candidate has a beneficial ownership in the account, however, the member or candidate may still be subject to preclearance or reporting requirements of their employer or applicable law.

- the investment professional should not benefit personally from trades undertaken for clients

- investment professional may do actions contrary to advice for personal financial hardships or college tuition payments, a down payment on a house, to meet a margin call

- members or candidates may undertake transactions in accounts for which they are a beneficial owner of after All firms should adopt basic procedures to address the conflict area are follow personal investing such as: - Limited Participation in Equity IPOs - Restriction on Private Investments

- - Establish Blackout/Festric ec Ferroas
 - Reporting Recruitements for investment personne
 - a Lis house of holdings in which the enveloyee has a beneficial trust
 - Provide duplicate con financiens of transaction
 - c. Preclearance 100 d
 - Disclosure of Policies

C. *Referral Fees* - Members and candidates must disclose to their employers, clients, and prospective clients, as appropriate, any compensation, consideration, or benefit received from, or paid to, others for the recommendation of products or services.

- members and candidates must disclose when they pay a fee or provide compensation to others who have referred prospective clients to the member or candidate

- Must advise the client or prospective client, before entering into any formal agreement for services, of any benefit given or received for the recommendation of any services provided by the member or candidate. Must disclose nature of compensation or benefit - cash or non-cash.

VII. Responsibilities as a CFA Institute Member

- **A.** Conduct as Members and Candidates in the CFA Program Members and candidates must not engage in any conduct that compromises the reputation or integrity of CFA Institute or the CFA designation or the integrity, validity, or security of the CFA examinations.
- **B.** Reference to CFA Institute, the CFA Designation, and the CFA Program When referring to CFA Institute, CFA Institute membership, the CFA designation, or candidacy in the CFA Program, members and candidates must not misrepresent or exaggerate the meaning or implications of membership in CFA Institute, holding the CFA designation, or candidacy in the CFA program.

- to remain in good standing, members of CFA Institute must submit an annual Professional Conduct Statement; failure to do so can result in suspension

6. The Code of Ethics

- the Code and Standards apply to individuals, not to investment organizations

10.Standard III - Duties to Clients

- when providing advice, covered persons are first directed to inquire about the client's investment experience, objectives, and constraints before they make any recommendations or take any action

- the GIPS standards apply only to investment management firms, and the firms compliance is voluntary. Standard III-D (performance presentation) applies to individual covered persons, and compliance is mandatory.

11. Standard IV - Duties to Employers

- Standard IV-B (additional compensation arrangements) states that covered persons must not accept any form of inducement or recompense that competes with their employer's interest or that might reasonable be expected to produce a conflict between their own and their employer's interest, unless they obtain written consent from all parties involved

Reading 4: The Consultant - for proper implementation, a compliance program must have a number of features: communication education, and compliance procedures.
- Reading 5: Pearl Investment Management (A), (B), and (C) of estimate the second second

an inappropriate transaction; nor should the inn thift the burden to nother portfono or client account. The burden or financial risk must be abact bid by the firm, not by the ment either directly or indirectly)

₩. Reading 6 Asset Manager Code al Conduct

- this code is meant to apply, on a global basis, to firms who manage client assets as separate accounts or pooled funds

I. General Principles of Conduct

- managers have the following responsibilities to their clients

- 1. Act in a professional and ethical manner at all times
- 2. Act for the benefit of clients
- 3. Act with independence and objectivity
- 4. Act with skill, competence, and diligence
- 5. Communicate with clients in a timely and accurate manner
- 6. Uphold the rules governing capital markets

4.2.2 Time Horizon

- generally, time horizons greater than 15 to 20 years can be viewed as relatively long term, <3 years as relatively short term, and 3<x<15 as transition from intermediate to long term

- there are both single-stage and multi-stage horizons

4.2.3 Taxes

- 1. Income Tax generally wages, rent, dividends, and interest earned
- 2. Gains Tax profits based on price appreciation
- 3. Wealth Transfer Tax a tax asses as assets are transferred, without sale, from one owner to another
- 4. Property Tax most often refers to the taxation of real property (real estate)

A. Tax Deferral – many tax strategies seek to defer taxes and maximize the time during which investment returns can be reinvested

B. Tax Avoidance - ideal if can be done legally - Tax exempt is attractive only when $R_{Tax-Free} > [R_{Taxable}^*(1 - Tax Rate)]$

C. Tax Reduction – when income tax rates exceed the capital gains tax, a portfolio manager may emphasize securities and investment strategies whose investment returns are recognized as gains rather than incom

D. Wealth Transfer Taxes – strategies for addressing wealth transfer Course of the transfer of the transfer

- early gifting of higher-grow eration may shelter the subsequent growth of those assets from true to

Additional issues to consider befo re making a permanent transfer include

- the amount of retained wealth needed to ensure the financial security of the primary investor
- possible unintended consequences of transferring large amounts of wealth to younger, possible less mature beneficiaries
- the probable stability or volatility of the tax code

4.2.4 Legal and Regulatory Environment

- in the context of portfolio management for individual investors, legal and regulatory constraints most frequently involve taxation and the transfer of personal property ownership

A. The Personal Trust – is a legal entity established to hold and manage assets in accordance with specific instructions

- funded when the grantor transfers legal ownership of designated assets to the trust

- appeal of trusts lies in the flexibility and control with which the grantor can specify how trust assets are to be managed and distributed, both before and after the grantor's demise

Revocable - any term of the trust can be revoked or amended by the grantor at any time

Irrevocable – the terms of management during the grantor's life and the disposition of assets upon the grantor's death are fixed and cannot be revoked or amended; trust responsible for taxes

B. The Family Foundation - is an independent entity, often governed by family members

Gifting with Retained Interest – grantor's give up legal ownership assets but retain ownership interest in any income generated by the trust

C. Jurisdiction – individual investors may enjoy a limited degree of flexibility in determining the jurisdiction in which their income and assets will be taxed

4.2.5 Unique Circumstances

- such constraints might include guidelines for social or special purpose investing, assets legally restricted from sale, directed brokerage arrangements, and privacy concerns. It is also appropriate to list here any assets held outside the investment portfolio and not otherwise discussed in the IPS.

4.2.6 Peter and Hilda Inger's Investment Policy Statement

5.0 An Introduction to Asset Allocation

- the advisor's challenge is to find a set of asset-class weights that produce a portfolio constraint consistent with the individual investor's return objective, risk tolerance, and constraints.

- this task must be completed from a taxable perspective, taking into consideration the after-tax returns, the tax consequences of any shift from current portfolio allocations, the impact of future rebalancing, and asset location.

5.1 Asset Allocation Concepts
so called "Safety First" rules provide a means of reasonably approximating and controlling to vns te rik

- for a normal distribution of returns, the probability of a return that is now ban two standard deviations below the mean or expected return is 2.5%

6

The process of selecting the most satisfactory from among everal direction strategic asset allocations generally consists of the following even:

1 Dependence the asset allocations due are time investor's return requirements
 2 Eminate asset allocations a that to meet quantitative risk objectives or are otherwise inconsistent with the investor's risk tolerance

3. Eliminate asset allocations that fail to satisfy the investor's stated constraints

4. Evaluate the expected risk-adjusted performance and diversification attributed of the asset allocations that remain after Steps 1 through 3 to select the allocation that is expected to be the most rewarding for the investor

5.2 Monte Carlo Simulation in Personal Retirement Planning

- is the process by which probability "distributions" are arrayed to create path-dependent scenarios to predict endstate results. It is useful when trying to forecast future results that depend on multiple factors each with a unique distribution of probable outcomes

- Monte Carlo analysis provides a probability estimate, as well as other detailed information, that allows the investor to better asses risk

Benefits of Probabilistic Monte Carlo Approach

a probabilistic forecast more accurately portrays the risk-return tradeoff than a deterministic approach
 a probabilistic simulation can give information on the possible tradeoff between short-term risk and the risk of not meeting a long-term goal

3. Monte Carlo analysis can capture the variety of portfolio changes that can potentially result from tax effects

4. Monte Carlo analysis is well suited to model a stochastic process and its resulting alternative outcomes

Risks: be wary of a simulation tool that relies only on historical data and choose simulations that simulate the performance of specific investments, not just asset classes and all simulations should take into account tax consequences of investments

- the amount of money accumulated for each unit of currency invested after n years, assuming that returns (after taxes at rate t are paid) are reinvested at the same rate of return, r, is simply

$$FVIF_{i} = [1 + r(1 - t_{i})]^{n}$$

- the tax drag on capital accumulation compounds over time when taxes are paid each year

- when investment returns are taxed annually, the effect of taxes on capital growth is greater than the nominal tax rate

- the adverse effects of taxes on capital growth increase over time
- the tax drag increased as the investment return increases, all else equal

- return and investment horizon have a multiplicative effect on the tax drag associated with future accumulations

3.1.2 Returns-Based Taxes: Deferred Capital Gains

- if the tax on an investment's return is deferred until the end of its investment horizon, n, and taxed as a capital gain at the rate t_{err}, then the after-tax future accumulation for each unit of currency can be represented by:

$$FVIF_{cg} = (1 + r)^{n} - [(1 + r)^{n} - 1]t_{cg}$$
$$FVIF_{cg} = (1 + r)^{n} (1 - t_{cg}) + t_{cg}$$

- the after-tax investment gain = pretax investment gain *(1-t)

ale.co.uk - the tax drag from deferred capital gains is a fixed percentage the investment return or time horizon

- it is important to note that the adv eliminated if securities taxed on an accrual basis have great

- cost basis is generally the amount that was paid to acquire an asset, which serves as the foundation for calculating a capital gain

- the after-tax cash flow from liquidation increases as cost basis increases, all else equal

- if the cost basis is expressed as a proportion, B, of the current market value of the investment, then the future aftertax accumulation can be expressed by simply subtracting this additional tax liability from these

expressions:
$$FVIF_{cgb} = (1 + r)^{"} (1 - t_{cg}) + t_{cg} - (1 - B) t_{cg}$$

- if cost basis is equal to initial investment, then B = 1 and the last term simply reduces to:

$$\text{FVIF}_{\text{cgb}} = (1+r)^{n} (1-t_{cg}) + t_{cg}B$$

3.1.4 Wealth-Based Taxes

3.1.3

Cost Basis

- if wealth is taxed annually at a rate of t_, then after n years each unit of currency accumulates to

$$\text{FVIF}_{w} = [(1+r)(1-t_{w})]'$$

- because wealth taxes apply to the capital base, the absolute magnitude of the liability they generate is less sensitive to investment return than taxes based on returns; a wealth tax consumes a greater proportion of investment growth when returns are low

4.1 Tax-Deferred Accounts

- the future after-tax accumulation of a contribution to a tax deferred account is

$$\text{FVIF}_{\text{TDA}} = (1+r)^{"}(1-T_{n})$$

4.2 Tax-Exempt Accounts

- the future accumulation of a tax-exempt account is

 $\text{FVIF}_{\text{TaxEx}} = (1+r)^n$

4.3 After-Tax Asset Allocation

- this may skew actual portfolio weights and needs to be investigated to get a more holistic view of the portfolio

4.4 Choosing Among Account Types

- the future value of a pre-tax dollar invested in a tax-exempt account is $(1-T_{a})(1+r)^{n}$

- the future value if a pre-tax dollar invested in a tax deferred account is $(1 + r)^{n}(1 - T_{r})$

- if the prevailing tax rate when funds are withdrawn is less than the tax rate when they are invested, the UPA will

5.0 Taxes and Investment Risk - a fundamental premise regarding taxes and risk is that by taxel, the sument returns, a government shares risk as well as return with the investor - in a TDA, the investor matched the risk associated with Jearns - because the return

- because the returns on assets he i in taxable accounts are typically annually in some way, investors bear only a fraction of the risk associated with these assets

- the standard deviation of after-tax returns for a taxable account is $\sigma(1 - \underline{t})$; taxes not only reduce the investor's returns, but also absorb some investment risk

- portfolio volatility with taxes

$$\boldsymbol{\sigma}_{PAT} = W_1 \boldsymbol{\sigma}_1 (1-t) + \dots + W_n \boldsymbol{\sigma}_n (1-t)$$

6.0 Implications for Wealth Management

Tax Alpha - the value created by using investment techniques that effectively manage tax liabilities

6.1 Asset Allocation

- the choice of where to place specific assets (in TDA or Tax-exempt accounts, etc) is called the asset location decision

- individual investors should place in TDAs and tax-exempt accounts those securities that would otherwise be heavily taxed if held in taxable accounts. Investors should borrow to weight their portfolios appropriately

6.2 Trading Behavior

Trader – trades frequently and recognizes all portfolio returns in the form of annually taxed short term gains Active Investor - trades less frequently so gains are longer term in nature Passive Investor - passively buys and holds stock Exempt Investor - not only buys and holds stock, but they never pay a capital gain tax

- all else equal, the trader accumulates the least amount of wealth, and the tax exempt investor accumulates the most

- if shares being transferred represent a minority interest in the privately held company, an additional discount is taken for lack of control

- liquidity and control discounts are not additive

4.5 Deemed Dispositions

- rather than impose an estate or inheritance tax on the amount of capital bequeathed at death, some countries treat bequests as deemed disposition, that is, as if the property were sold

- it triggers realization the realization of any previously unrecognized capital gains and liability for the associated capital gains tax

4.6 Charitable Gratuitous Transfers

- the relative after-tax future value over n years of a charitable gift compared to a taxable bequest

16.8 RVCharitableGift = $\underline{FV}_{\underline{CharitableGift}} = (\underline{1 + r}_{\underline{e}})^{\underline{n}} + \underline{T}_{\underline{oi}} [\underline{1 + r}_{\underline{e}} (\underline{1 - t}_{\underline{ie}})]^{\underline{n}} (\underline{1 - T}_{\underline{e}})$ $FV_{Bequest}$ $[1 + r_{e} (1 - t_{\underline{ie}})]^{\underline{n}} (1 - T_{e})$ 5.0 Estate Planning Tools 5.1 Trusts - a trust is not a legal entity, it is a relationship in which the trustee holds and a ways the assets for the benefit of the beneficiaries

Revocable Trust – the settlor retain the relation to rescind the trust relationship and regain title to the trust assets; settlor is considered owner and responsible for tax come thence

Irrev cable Trust – settler has no coll @ a bet oke trust relationship; trustee responsible for tax payments and reporting in his or her capacity as owner of the trust assets for tax purposes

Fixed Trust – distributions to beneficiaries in a fixed trust are prescribed in the trust document to occur at certain times

Discretionary Trust - trustee determines whether and how much to distribute

5.1.1 Control

- a common motivation for using a trust structure is to make resources available to a beneficiary without yielding complete control of those resources to them

5.1.2 Asset Protection

- just as irrevocable trusts can protect assets from claims against the settlor, discretionary trusts can protect assets from claims against the beneficiaries

- under a discretionary trust, the beneficiaries have no legal right to income generated by the trust or to the assets in the trust itself; therefore the creditors of the beneficiaries cannot reach the trusts assets

5.1.3 Tax Reduction

- trusts can be used to reduce taxes for either the settlor or the beneficiaries

5.2 Foundations

- foundations are typically set up to hold assets for a particular purpose; they survive the settlor

- all retirement plans are governed by laws and regulations that affect investment policy

2.1.7 Unique Circumstances

- investment in alternative investments (i.e. PE, hedge funds, natural resources)
- some plans self impose constraints about investing in certain industries

2.1.8 Corporate Risk Management and the Investment of DB Pension Assets Two important concerns:

- managing pension investments in relation to operating investments

- coordinating pension investments with pension liabilities

- a portfolio that diversifies sponsor operational risk increases the chance that, if the sponsor needs to increase contributions to support the payment of plan pension benefits, the sponsor will be in a position to do so

- from an ALM perspective, the characterization of risk in the IPS needs to be stated in relative terms

2.2 Defined-Contribution Plans: Background and Investment Setting

- the principal issues for DC plans are diversification and company stock

2.2.1 The Objectives and Constraints Framework

2.3 Hybrid and Other Plans - hybrid plans include cash balance plans, pension equity plans, targarbent quans, and floor plans which seek to combine the most highly valued features of DC and DC name

tment risk however it looks like a DC plan Cash Balance Plan – is a DB alan, i ars th because they are pr me their account balance, an annual contribution credit, onalized state and Contribution Credit - % f pay based on age

Earnings Credit - % increase in the account balance that is typically tied to long-term interest rates

ESOP - are DC plans that invest all or the majority of plan assets in employer stock

- ESOPs can be used to thwart takeover attempts by giving employees controlling stakes

3.0 Foundations and Endowments

Foundations – are typically grant-making institutions funded by gifts and investment assets Endowments - are long-term funds generally owned by operating non-profit institutions such as universities and colleges, museums, hospitals, and other organizations involved in charitable activities

3.1 Foundations: Background and Investment Setting

- foundations provide essential support of charitable activity; types:

a. Independent - grant making funded by an individual donor and generally required to pay out a minimum of 5% of assets annually

b. Company Sponsored - tend to be short-term focused to facilitate philanthropic funding the corporate guarantees

c. Operating - provide income to support specific projects

d. Community - draw upon board support for donations to fund a variety of grants - see exhibit 2 pg. 381

- all vary in their investment goals and time horizons

- for non-life companies, business cycles not interest rate cycles, per se, determine a company's need for liquidity through appropriate durations and maturities of assets

4.2.1 Risk Objectives

- the ability to meet policyholders' claims is a dominant consideration influencing investment policy. In setting risk objectives, casualty companies must consider both cash flow characteristics and the common stock to surplus ratio

Cash Flow Characteristics – for the portion of investment portfolio relating to policyholder reserves, casualty companies have low tolerance for loss of principal or diminishing investment income

Common Stock to Surplus Ratio - the amount of stock held by insurance companies in their investment portfolios

4.2.2 Return Objectives

- factors influencing return objectives include competitive pricing policy, profitability, growth of surplus, tax considerations, and total return management

Competitive Policy Pricing – low insurance policy premiums rates, due to competition, provide an incentive for insurance companies to set high desired investment return objectives

Profitability – investment income and the investment portfolio return are primary determinants of control ing profitability for the typical casualty company and the industry

- casualty insurance portfolios are managed to maximize returned a geland surplus to the extent that prudent/liability management, surplus adequacy considerates and management preferences will allow

Combined Ratio – the percentage of promising that an increase Combany spends on claims and expenses Grouth of Suppus – growth of stratus, to be the opportunity to expand the volume of insurance the company can

Tax Considerations – insurance companies typically favor tax-exempt bonds, especially when underwriting is profitable to achieve the highest after tax return

- for non-US insurance companies taxes are more of a constraint as US companies can benefit from NOLs and using tax-exempt bonds

Total Return Management

- active management has become more common as GAAP mandates unrealized G/L flow through IS'

- the return of casualty companies differing is because of the latitude permitted by insurance regulations, differences in product mix, a particular companies tax position, the emphasis placed on capital appreciation vs. income component of investment return and strength of company's capital and surplus positions

4.2.3 Liquidity Requirements

- given uncertainty of CFs for casualty companies, liquidity is extremely important. They find it necessary to increase tax-exempt portions of portfolios of periods of underwriting profits and non-tax exempt portions during periods of losses

- T-Bills and CP are often maintained for short-term liquidity

4.2.4 Time Horizon

- time horizon function of durations of casualty liabilities and underwriting cycles

$$V_L = V_{Ls} - V_{Ld}$$
 or

$$V_{L-FW} = \underline{B} * ((\underline{1+g})^{\underline{s}} - \underline{1}) * ((\underline{1+r})^{\underline{d-s}} - \underline{1})$$

(r-g) (1+r)^d

Reading 21 Notes:

- an asset-only approach assumes there is not market-related liability risk and focuses only on the return and risk of the investment portfolio

- changes in the retirees' savings rate have no impact on the company's pension liabilities

- the higher the correlation the investment has to the company's pension liability, the more likely the company will be able to meet its pension obligations

- the pension liability is fully hedged using derivatives and the remaining cash in invested according to an asset-only approach that maximizes return while minimizing volatility with the expectation that the resulting return would be higher than the cost of the derivatives and thereby reduce the amount of future pension plan contributions



Reading 22: Allocating Shareholder Cabinal to rension Plans Introduction 1.0 The Apparent Issue – Turbug Shortfall Underfunded – Warn uncent marked-to-market Calue – the pension assets is less than the current marked-to-market value of the pension liabilities

A. The Real Issue - Risk Mismatch

- balance sheet numbers, whether marked-to-market or not, are static and therefore of limited use as they do not reveal the risk characteristics of the assets and liabilities completely

- a ratio of pension assets to liabilities of 1.0 is fine and you do not need to be overfunded if you always hold assets that precisely hedge the risk of the liabilities

- the risk mismatch is likely to be of greatest concern in cases where the ratio of pension assets to the market capitalization of the companies equity is high

B. Recognizing the Risk

2.0 Accounting for Value Mismatch and Risk Value Mismatch – the size of any pension surplus or shortfall

the greater risk associated with equity-heavy pension plans seemed to show up in more volatile stock prices
2.1 Calculating Weighted Average Cost of Capital
is an average of your debt and equity rates

- WACC = $w_{e_e} + w_{p_p} + w_{d_d} (1-t)$

- D/E into appropriate weights

 $w_d = [(D/E) / (1 + D/E)]$

2.2 Incorporating Pension Risk into WACC

- WACC sometimes fails to take account of the risk of other important assets that are not reflected on GAAP balance sheets

- by failing to take account of their pension assets and pension liabilities when estimating their cost of capital, companies are probably distorting their measures of operating, or project risk in two ways:

1. they are effectively assigning the firm's total risk to its business operations, when a potentially

significant part of that risk could in fact come from the pension fund assets

2. the standard analysis does not take account of the pension liabilities, it understates the firm's leverage ratio

- the two aforementioned distortions typically overstates WACC for an operating project

2.3 Illustrations - stock price multiples are roughly inversely related to required returns or cost of capital

- pension decisions in terms of both asset size and allocation have the potential to affect the management of the entire firm at the most fundamental level

3.0 Strategic Analysis and Policy Development

- lowering the expected returns on assets (by switching pension assets from equities to bonds) also lower the risk of the entire firm and by lowering the risk you create the capacity for the firm to take other risk

Hudgeting process

All Illustration
neglecting the risk of the pension plan can lead to marching in a soft the capital judget
3.2 Considering Alternation To a soft the capital judget sets be ween fixed-income and equities, it changes its risk and the - when a company risk

3.3 Effects of Pension Change on Optimal Capital Structure

- an increase in the allocation of pension assets to equities increases the risk of the total assets, but reduces D/E ratio

3.4 Cushioning Your Risks with Capital

- the analysis shows that a firm should understand how much risk their shareholders are bearing as a result of the risk mismatch, how much capital they are using to support it, and how the cost of capital is affected by it

4.0 Implementation

4.1 Underfunding

- if the firm were underfunded, one possibility is to issue debt to fund the plan

4.2 Overfunding - the question here is do you take risk with the surplus, and if so, what kind of risk?

5.0 Moving from a DB to a DC Plan

- DC plans make a corporations life easier because the moment it pays its fraction of income into the plan, it has seemingly carried out all of its obligations

Reading 22 Notes:

- decreasing equity holdings will lower risk associated with pension plan assets

- lowering equity holdings in the pension means higher fixed income, which will increase the D/E ratio of the company

Book 3. Capital Market Expectations, Market Valuation, and Asset Allocation Study Session VI: Capital Market Expectations in Portfolio Management **Reading 23: Capital Market Expectations**

1.0 Introduction

Capital Market Expectations: the investor's expectations concerning the risk and return prospects of asset classes, however broadly or narrowly the investor defines those asset classes

Macro Expectations - capital market expectations about classes of assets

Micro Expectations - expectations concerning individual assets

2.0 Organizing the Task: Framework and Challenges

- 2.1 A Framework for Developing Capital Market Expectations
- 1. Specify the final set of expectations that are needed, including the time horizon to which they apply
- 2. Research the historical record
- 3. Specify the method (s) and/or model(s) that will be used and their information requirements
- 4. Determine the best sources for information needs

5. Interpret the current investment environment using the selected data and methods, applying experience and iudgment

6. Provide the set of expectations that are needed, documenting conclusions

7. Monitor actual outcomes and compare them to expectations, providing feedback to improve the expectationssetting process

Beta Research – the development of capital market expectations is beta research (research related to systematic risk and returns to systematic risk)

Alpha Research – research related to capturing excess risk-adjusted returns by a particular strategy is typically conducted within particular product groups with the requisite investment-specific expertise

- the first step in the framework for developing CME requires that analysts set but referres to focus their attention on the expectations most relevant for their investment situation otes

- step 2 and 3 in the expectations-setting for a survolve understanding the historical performance of the asset classes and researching their return crivers.

- unbrased, objective, and well re-
- efficient, in the sense of reducing the magnitude of forecast errors to a minimum
- internally consistent

- if the number of asset classes is n, the analyst will need to estimate $(n^2 - n)/2$ distinct correlations (or the same number of distinct covariances)

2.2 Challenges in Forecasting

- expectations reflecting faulty analysis or assumptions may cause a portfolio manager to construct a portfolio that is inappropriate for the client

2.2.1 Limitations of Economic Data

- the analyst needs to understand the definition, construction, timeliness, and accurary of any data used, including any biases

Re-base – when suppliers of indices change the specific time period used as the base of the index

2.2.2 Data Measurement Errors and Biases

Transcription Errors – errors in gathering and recording data. Such errors are most serious if they reflect a bias Survivorship Bias – arises when a data series reflects only entities that have survived to the end of the period Appraisal (smoothed) data - tends to be less volatile than market-determined values for the idencical assets would be. Consequences include 1) calculated correlations with other assets tend to be smaller in absolute value than the true correlations 2) the true standard deviation of the asset is biased downward

Lagging Index

- a. Average duration of unemployment
- b. Inventory/Sales ratio, manufacturing and trade
- c. Labor cost per unit of output, manufacturing
- d. Average prime rate
- e. Commercial and industrial loans
- f. Consumer installment credit to personal income ratio
- g. Consumer price index for services

4.5.3 Checklist Approach

- checklist approaches require looking into a wide range of data and then making extrapolations; subjectivity is the checklist approaches main weakness

4.5.4 Economic Forecasting Approaches: Summary of Strengths and Weaknesses - see exhibit 25, pg. 91

4.6.1 Cash and Equivalents

4.6.1 Cash and Equivalents

- cash managers make money through selection of the of the paper in their portfolio, or if permitted, by depending on their view of rates investment policy by taking credit is ngthen or shorter man ritie

argeted by and will normally vary only slightly from the target set

Open Market Operations – are the purchase or sale by a central bank of govt. securities, which are settled using reserves, to influence rates and the supply of credit by banks.

- during a period of rising short-term rates, keeping maturities short is a good strategy

4.6.2 Nominal Default-Free Bonds

Nominal Default-Free Bonds - are conventional bonds that have no (or minimal default risk)

- the yield on a govt. bond reflects the expected short-term T-bill yields over the same horizon; or break down into two components, real bond yield and forecast inflation

Real Bond Yield – determined by growth rate of GDP and the supply and demand for capital

- second, yields are affected by forecast inflation over the investment period

- for investors buying and selling long-term bonds over a shorter time period, the emphasis is on how bond yields will respond to developments in the business cycle and changes in short-term interest rates

- strong growth makes yields rise (prices fall), and vice versa

4.6.3 Defaultable Debt

Defaultable Debt - is debt with some meaningful amount of credit-risk, i.e. most corporate debt. Spread of treasuries represents perception of default risk; spreads rise during recession

- fiscal policy is sound
- public sector intrudes minimally on private sector
- competition within the private sector is encouraged
- Infrastructure and human capital development are supported
- Tax policies are sound

Yield on IIB Bonds

- affected by overall economic growth and its corresponding impact on real interest rates
- investor demand for bonds in general has inverse impact on IIB yields

Four Approaches to Forecasting Exchange Rates are as follows:

- PPP (or relative inflation rates), as exchange rate movements should offset inflation differentials
- relative economic strength, because a strong pace of economic growth tends to attract investment

- capital inflows, as net inflows into a country, such as FDI, increase the demand for that country's

currency

- savings-investment imbalances, through their ultimate effect on the need for foreign savings Notesale, CO Notesale, CO from 86 of 112 page 86 of 112 - the effect of higher volatility on required returns might be somewhat mitigated to the extent that 1) market returns are less than perfectly correlated with other international equity markets and 2) cross-border investing and divesting

of equities is freely achievable by investors both inside and outside of a country

3.0 Top-Down and Bottom-Up Forecasting

- in top-down forecasting, analysts use macroeconomic projections to produce return expectations for large stock market composites which can be further refined into return expectations for various market sectors and industry groups within composites

- bottom-up forecasting begins with the microeconomic outlook for the fundamentals of individual companies

Top-Down Analysis

A. Market Analysis: examine valuations in different equity markets to identify those with superior expected returns
 Compare relative value measures for each equity market to their historical values to identify those markets where equities are relatively cheap or expensive

- Examine the trends in relative value measures for each equity market to identify market momentum

- Compare the expected returns for those equity markets expected to provide superior performance to the expected returns for other asset classes, such as bonds, real estate, and commodities

B. Industry Analysis: Evaluate domestic and global economic cycles to determine those industries expected to be top performers in the best-performing equity markets

- Compare relative growth rates and expected profit margins across industries
- Identify those industries that will be favorably impacted by expected rend in interest rates, exchange rates, and inflation

C. Company Analysis: Identify the best stocks in those in ustries there expected to be top-performers in the bestperforming equity markets

Bottom-Up Analysis A. Company Analysis 12 https://www.cetail.socks.should be expected to outperform, without regard to the prevaiing tractoeconomic concision

- Identify reasons why a company's products, technology, or services should be expected to be successful

- Evaluate the company's management, history, business model, and growth prospects
- Use discounted cash flow models to determine expected returns for individual securities

B. Industry Analysis: Aggregate expected returns for stocks within an industry to identify the industries that are expected to be the best performers

C. Market Analysis: Aggregate expected industry returns to identify the expected returns for every equity market

3.1 Portfolio Suitability of Each Forecasting Type

- if a portfolio focuses primarily on tactical asset allocation among different market composites (and/or different industry groups within such composites), a top-down forecast may not need to focus all the way down to the relative merits of individual securities

3.2 Using Both Forecasting Types - when each method produces different results, investigate assumptions to check for consistency

3.3 Top-Down and Bottom-Up Forecasting of Market Earnings per Share

Bottom-Up Earnings Estimate - adding up the individual estimates of the companies in an index

- bottom up forecasts may be biased by managers thinking their company's prospects are better than those for the economy as a whole

- alternative to the above, bottom-up estimates may be correctly detecting signs of a cyclical economic and profit upturn

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Study Session VIII: Asset Allocation Reading 26: Asset Allocation 1.0 Introduction

1.0 Introduction

2.0 What is Asset Allocation

- in strategic asset allocation an investor's return objectives, risk tolerance, and investment constraints are integrated with long-run capital market expectations to establish exposures to IPS-permissible asset classes with the aim of satisfying IPS objectives and constraints

- strategic asset allocation is the first element of the portfolio management process to focus on selecting investments

- tactical asset allocation involves making short-term adjustments to asset-class weights based on short-term expected relative performance among asset classes

2.1 The Role of Strategic Asset Allocation in Relation to Systematic Risk- it fulfils an important role as a discipline for aligning a portfolio's risk profile with the investor's objectives

- the strategic asset allocation specifies the investor's desired exposures to systematic risk

2.2 Strategic versus Tactical Asset Allocation

- strategic asset allocation sets an investors desired long-term exposures to systematic risk

- strategic asset allocations are reviewed periodically or when an investor's needs and circumstances change significantly

2.3 The Empirical Debate on the Importance of Asset Allocation Cross Sectional Variation of Returns - the proportion of variation among funds' performance explained by funds' different asset allocations

- investors need to keep in mind their own specific risk and return objectives and establish a strategic asset allocation that is expected to satisfy both

3.0 Asset Allocation and the Investor's Risk and Return Objectives 3.1 Asset-Only and Asset/Liability Management Approaches to Strategic Asset Allocation

Asset/Liability Management (ALM) Approach - involves explicitly modeling liabilities and adopting the optimal asset allocation in relationship to funding liabilities

Asset-Only (AO) Approach - does not explicitly involve modeling future liabilities

le.co.uk rs elisia has the default strategic asset Black-Litterman Model - takes a global market-value weighted allocation for investors

o match (offset) future liabilities or quasi-Cash Flow Matching – appro in sin the risk relative to funding liabilities liabilities. When

ctures investments in bonds to match (offset) the weighted-average duration of Immunization – approach that str liabilities

Dynamic Approach - recognizes that an investor's asset allocation and actual asset returns and liabilities in a given period affect the optimal decision that will be available next period

Static Approach – does not consider links between optimal decisions at different time periods

- ALM approach results in higher allocations to fixed-income instruments

- exhibit 2 pg. 231 3.2 Return Objectives and Strategic Asset Allocation Qualitative Return Objectives - describe the investor's fundamental goals

- portfolio managers should prefer the multiplicative formulation for strategic asset allocation purposes

3.3 Risk Objectives and Strategic Asset Allocation

26.1 Asset Allocation Mix Evaluator

 $U_m = E(R_M) - 0.05R_A \sigma_m^2$

 U_{m} = investor's expected utility for asset mix m