soleadea

LEVEL 1: PORTFOLIO MANAGEMENT

Reading 48 (1st out of 8): PM – INTRODUCTION

Difficulty: **easy**

Benchmark Study Time: **2h**

2022

INTENTIONALLY EMPTY

THIS E-BOOK:

- is a selective summary of the corresponding Reading in your CFA® Program Curriculum,
- provides place for your own notes,
- helps you structure your study and revision time!

How to use this e-book to maximize your knowledge retention:

1. **Print** the e-book in duplex and bind it to keep **all** important info for this Reading **in one place.**
2. **Read** this e-book, best twice, to grasp the idea of what this Reading is about.
3. **Study** the Reading from your curriculum. **Here add** your notes, examples, formulas, definitions, etc.
4. **Review** the Reading using this e-book, e.g. write your summary of key concepts or revise the formulas at the end of this e-book (if applicable).
5. **Done?** Go to your study plan and change the Reading's status to **green**: (it will make your Chance-to-Pass-Score™ grow ☺).
6. **Come back** to this e-book from time to time to **regularly review for knowledge retention!**

NOTE: While studying or reviewing this Reading, you can use the tables at the end of this e-book and mark your study/review sessions to hold yourself accountable.

PORTFOLIO APPROACH

Portfolio approach - definition

Questions:

- Should investors look at each investment separately and analyse only the potential return on the investment and the risk of loss? **OR**
- Should investors take a comprehensive approach to the problem?

The comprehensive approach is called a **portfolio approach** and is based on the collective evaluation of all assets included in an investment portfolio. One of the biggest advantages of the portfolio approach is portfolio diversification. When an investor diversifies his or her portfolio, he or she selects a number of assets to include in the portfolio.

Expected rate of return and risk

Investments in individual securities and portfolios are characterized by:

- the expected return, and
- the risk.

The biggest advantage of diversification is the reduction of portfolio risk.

Risk can be perceived as:

- a probability that a project will fail, or
- an unknown outcome of a project.

The most common measures of volatility and risk are:

- standard deviation,
- variance.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

Portfolio return and risk

The **expected return** on a portfolio **is equal to** the weighted average of the expected returns on individual assets included in the portfolio. The weights in the weighted average are the proportions of the assets in the portfolio.

Portfolio risk measured by standard deviation **is lower than or equal to** the weighted average of the standard deviations of individual assets included in the portfolio.

Diversification

The **lower the correlation** between the assets

↓

the **stronger** the effect of **diversification**

When markets are weak and declining:

- the correlation between assets becomes stronger,
- it is hard to find assets independent of each other,
- the effect of diversification is reduced,
- the possibility of loss is more dependent on the overall economic situation.

<u>Diversification ratio:</u>

If the **diversification ratio = 80%**

↓

The risk of the equally-weighted portfolio is **20% lower** than the risk of randomly selected security

The diversification ratio is defined as the ratio of the standard deviation of an **equally weighted portfolio** to the standard deviation of a randomly selected asset.

The **lower** the diversification ratio:

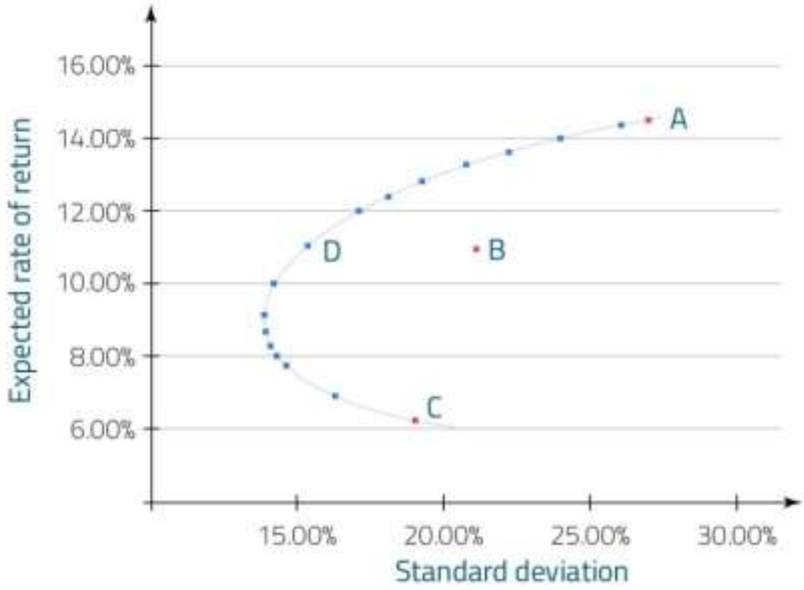
- the <u>lower</u> the portfolio's volatility
- the <u>greater</u> the benefits of portfolio diversification

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

Risk-return trade-off

The graph shows that if the investor selects assets and their weights in the portfolio properly, he or she can get portfolios whose:

- expected rates of return are the same (Portfolio D and Asset B),
- risk is lower as compared to investing in individual assets A, B and C (Portfolio D).



Modern Portfolio Theory (MTP)

In 1952, Markovitz published his article entitled Portfolio Selection and this gave rise to the modern portfolio theory (MPT) later developed by Sharpe, Lintner, and Treynor. Markowitz observed that even diversified portfolios can have different levels of risk for a given level of profit.

<u>MTP conclusions:</u>

- investors should not focus on individual assets but on the correlation between the assets,
- rational investors should try to minimize the investment risk, which is possible thanks to portfolio diversification.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

MARKET PARTICIPANTS & INVESTMENT PRODUCTS

Financial market

Financial market is a place where transactions in financial instruments are conducted.

Market participants:

- investors,
- deficit entities that seek funding,
- financial intermediaries.

<u>Institutional investors</u>: pension plans, endowments, banks, insurance companies, investment companies.

<u>Individual investors</u>

Individual investors have a wide range of expectations and investment limitations. <u>Therefore</u>:

- risk tolerance, time horizon for investments, income needs, and liquidity needs

are characteristic of an individual investor and cannot be generically described for individual investors as a group.

Defined contribution pension plans vs Defined benefit pension plans

In the case of **defined contribution pension plans** (DC pension plans), the employee is expected to make regular payments (contributions). 401(k) plan in the United States is an example of a defined contribution pension plan. Usually, an employee can choose one of a few funds (that differ in assets, time horizon, risk, etc.) to invest in in a given year, e.g. retirees would invest in coupon bonds to meet their cash flow needs, however, younger employees who expect to retire in many years from now are more keen to choose growth stocks and the like. As far as DC pension plans go, the investment risk is borne by the employee.

As part of **defined benefit pension plans** (DB pension plans), employers are required to pay annual benefits to their retired workers. The manager of such a fund must adjust the time horizon of the portfolio to the age of an employee. In the case of DB pension plans, the investment risk is borne by the employer.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

Defined pension plans are characterized by:

- high risk tolerance,
- long-term time horizon for investments,
- income needs that depend on how long the fund operates,
- low liquidity needs.

University endowments

The main goals of university endowments are to:

- maintain the real value of assets,
- generate income.

University endowments are characterized by:

- long-term time investment horizon,
- high risk tolerance,
- income needs that are differentiated depending on objectives,
- low liquidity needs.

Banks

Banks have:

- low risk tolerance,
- short-term time horizon,
- high income needs,
- high liquidity needs.

Insurance companies

Insurance companies have:

- low risk tolerance,
- high liquidity needs,
- usually low income needs.

Life insurance companies are characterized by a relatively long time horizon.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

Investment companies

Because investment companies manage investment funds intended for a wide range of clients, the objectives of such companies vary.

Sovereign wealth funds

Sovereign wealth funds are established and managed by a government and invest mainly in foreign assets.

Examples:

- The Government Pension Fund of Norway,
- Abu Dhabi Investment Authority,
- China Investment Corporation.

Portfolio management process

Steps in the portfolio management process:

1. the planning step,
2. the execution step,
3. the feedback step.

The planning step

In the planning step, the client and his or her needs are characterized and the Investment Policy Statement (IPS) is prepared.

The IPS includes the client's:

- investment objectives,
- financial situation,
- risk profile.

The execution step

The execution step consists of:

- asset allocation,
- analysis of particular securities,
- creating the portfolio.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

Asset allocation determines the overall portfolio construction based on major asset classes.

Asset classes:

- fixed-income securities,
- variable-income securities,
- commodities,
- real estate.

Then, there's the **analysis of particular securities** where a manager does research in many market sectors and chooses securities and assets. At this stage, the manager concentrates primarily on the expected return.

Finally, while **creating the portfolio**, the manager seeks the best possible diversification and concentrates mainly on the risk.

The feedback step

The feedback step consists of:

- monitoring the portfolio,
- assessing the performance of portfolio managers.

The stage of **monitoring the portfolio** includes:

- portfolio monitoring,
- introduction of appropriate alterations.

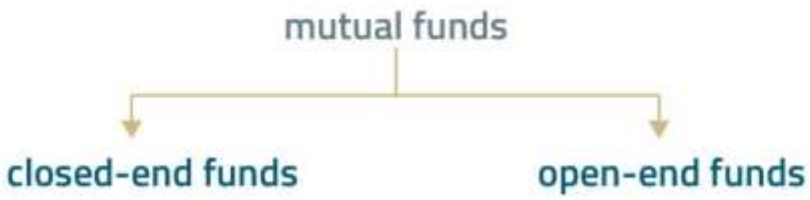
The stage of **assessing the performance of portfolio managers** includes:

- assessment of the portfolio performance in comparison with a benchmark,
- summary of the portfolio performance,
- presentation of the portfolio performance to investors.

Mutual funds

Mutual funds are based on the idea of collective investment which dates back nearly 240 years. Such funds were created for people who wanted to increase their savings but didn't know enough about financial markets to invest their money safely. Currently, mutual funds are an important element of the whole financial system. They are used not only by individual investors but also by institutional ones. The Investment Company Institute (**www.ici.org**) reports that at the end of the fourth quarter of 2012, there were over 73 000 mutual funds in more than 41 countries and their total assets exceeded USD 26.84 trillion.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.



Open-end fund:

- issues shares in return for money paid by investors,
- sells and repurchases shares whenever requested by the client,
- the number of shares is changing and their price depends on the NAV (net asset value).

Closed-end fund:

- issues shares in return for money paid by investors,
- shares are traded in the market,
- the number of shares doesn't change.

<u>Load mutual fund VS No-load mutual fund</u>

No-load fund:

- only annual fee is charged.

Load fund:

- annual fee is charged,
- fee is charged when the investor invests in the fund,
- fee is charged when the investor redeems from the fund.

Types of mutual funds

Mutual funds:

- money market funds,
- bond mutual funds,
- stock mutual funds.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

Money market funds

Money market funds:

- are the most secure funds,
- rates of return are low,
- invest in e.g. treasury bills, bank deposits,
- invest in financial instruments whose maturity rarely exceeds 90 days.

Bond mutual funds

In the case of bond mutual funds:

- the risk and the rate of return is higher than in the case of money market funds,
- the maturity of financial instruments is usually longer than 1 year.

Types of bond mutual funds:

- mutual funds investing in treasury bonds,
- mutual funds investing in corporate bonds,
- mutual funds investing in municipal bonds.

Stock mutual funds

Stock mutual funds:

- are the most common funds,
- invest in various stocks,
- are characterized by high risk and return.

Hybrid or balanced funds

Hybrid or balanced funds:

- invest in various assets in different proportions,
- portfolios usually consist of shares and bonds.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

Other investment products

Other investment products:

- exchange traded funds (ETFs),
- separately managed accounts (SMAs),
- hedge funds,
- buyout funds,
- venture capital funds.

Exchange traded funds

The objective of exchange traded funds is to track a stock index. ETF funds issue ETF shares, which are traded on stock exchanges just like shares or bonds.

Compared to a typical index fund, very often an ETF requires a lower initial payment and so it is attractive to less wealthy investors.
Advantages of ETFs:

- low costs,
- high liquidity.

Separately managed accounts

In the case of separately managed accounts:

- the manager decides on the portfolio's construction together with the client,
- the client has a significant influence on the portfolio and its assets.

Hedge funds

Hedge funds:

- don't have to meet many formal requirements,
- involve high risk,
- are characterized by a high profit potential.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

Buyout funds

Buyout funds:

- invest in public entities and transform them into private companies,
- are actively involved in the restructuring process of acquired companies,
- resell the acquired company after several years,
- are characterized by high risk, high expected rates of return, and low liquidity.

Venture capital funds

Venture capital funds:

- invest in new businesses,
- provide capital and guidance for acquired companies,
- are characterized by high risk, high expected rates of return, and low liquidity.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

HERE KNOWLEDGE RETENTION HAPPENS | WRITE: notes, examples, formulas, definitions, relations, etc.

Summarizing key concepts:

☐ Portfolio approach

My summary:

☐ Risk-return trade-off

My summary:

☐ Modern Portfolio Theory (MTP)

My summary:

☐ Financial market & market participants

My summary:

☐ Defined contribution pension plans vs Defined benefit pension plans

My summary:

☐ Institutional investors: pension plans, endowments, banks, insurance companies, investment companies

My summary:

☐ Steps in the portfolio management process: 1. the planning step, 2. the execution step, 3. the feedback step

My summary:

☐ Mutual funds: open-end funds, closed-end funds

My summary:

☐ Types of mutual funds: money market funds, bond mutual funds, stock mutual funds

My summary:

☐ Other investment products: exchange traded funds (ETFs), separately managed account (SMAs), hedge funds, buyout funds, venture capital funds

My summary:

Keeping myself accountable:

TABLE 1 | STUDY

When you sit down to study, you may want to **try the Pomodoro Technique** to handle your study sessions: study for 25 minutes, then take a 5-minute break. Repeat this 25+5 study-break sequence all throughout your daily study session.

Tick off as you proceed.

POMODORO TIMETABLE: study-break sequences (25′ + 5′)													
date		date		date		date		date		date		date	
25′		25′		25′		25′		25′		25′		25′	
5′		5′		5′		5′		5′		5′		5′	
25′		25′		25′		25′		25′		25′		25′	
5′		5′		5′		5′		5′		5′		5′	
25′		25′		25′		25′		25′		25′		25′	
5′		5′		5′		5′		5′		5′		5′	
25′		25′		25′		25′		25′		25′		25′	
5′		5′		5′		5′		5′		5′		5′	

TABLE 2 | REVIEW

Never ever neglect revision! Though it's not the most popular thing among CFA candidates, regular revision is what makes the difference. If you want to pass your exam, **schedule & do your review sessions.**

REVIEW TIMETABLE: When did I review this Reading?													
date		date		date		date		date		date		date	
date		date		date		date		date		date		date	