UpperMark™ Study Handbook

CAIA® Level I

Volume 3

Topic 6: Hedge Funds

Topic 7: Digital Assets

Topic 8: Additional Strategies

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It is recommended that candidates use any exam preparation product together with the original reading materials suggested in the CAIA Study Guide.[1]

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Preface

Volume 3 of the UpperMark™ *Study Handbooks* provides a comprehensive and concise account of each learning objective (L.O.) in Topics 6-8 of the CAIA Level I Study Guide. The *Study Handbook* is compiled using the reference materials recommended by the CAIA Association and, as in Volume 1, is organized as follows.

- Each Reading in the Study Guide is presented as a separate chapter, keywords are indicated in ***bold italics***, and learning objective sub-bullets are indicated by underlined, capitalized subheadings (e.g., <u>ROLE OF INVESTMENT OBJECTIVES AND CONSTRAINTS).</u>
- The lists of learning objectives and keywords are provided at the start of each chapter.
- Space is provided at the end of each chapter for you to record your *Personal Study Notes*.
- A set of sample exam questions with a detailed answer key is presented at the end of each chapter.

Supplementary information is included in footnotes.

We wish you the best with your exam preparation.

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Topic 6

Hedge Funds

Topic 6 is composed of five Readings on hedge funds.

1. Reading 6.1 is an introductory reading that provides an overview of the hedge industry, hedge fund fee structures, and several hedge fund strategies.

   The remaining Readings each focuses on a specific hedge fund strategy.

2. Reading 6.2 covers the macro hedge fund strategy and managed futures funds.
3. Reading 6.3 covers event-driven hedge fund strategies.
4. Reading 6.4 covers relative value hedge fund strategies.
5. Reading 6.5 covers equity hedge fund strategies.

Reading 6.1

Structure of the Hedge Fund Industry

This Reading provides an overview of the hedge fund industry, reviewing its significant growth and consolidation, and examines hedge fund fee structures and their potential effects on hedge fund manager behavior. The Reading discusses distinguishing characteristics of hedge funds and introduces several types of hedge fund strategies. The Reading also reviews the process of designing a hedge fund program and discusses components of hedge fund indices.

Learning Objectives

6.1.1 Demonstrate knowledge of the distinguishing features of hedge funds and their growth and concentration over time as well as various types of hedge funds.

i. Describe the primary elements of hedge funds
ii. Summarize the investment flexibilities offered by hedge funds
iii. Discuss the reasons for hedge fund industry growth and concentration
iv. List hedge fund strategies
v. Contrast single-manager hedge funds, funds of funds, and multistrategy funds

Keywords

1. Fund mortality
2. Multistrategy fund
3. Safe harbor

6.1.2 Demonstrate knowledge of hedge fund fees.

i. Understand typical hedge fund fee arrangements
ii. Calculate annual hedge fund fees
iii. Calculate hedge fund fees under different high-water marks (HWMs) and hurdle rates
iv. Discuss the potential effects of incentive fees on hedge fund manager behavior
v. Apply the annuity view of hedge fund fees

Keywords

1. Asymmetric incentive fees
2. Excessive conservatism
3. High-water mark
4. Modified high-water mark
5. Perverse incentive

6.1.3 Demonstrate knowledge of manager behavior as it relates to hedge fund fees.

i. Apply the option view of incentive fees and its implications on manager behavior
ii. Describe the empirical evidence regarding hedge fund fees and managerial behavior

Keywords

1. Closet indexer
2. Lock-in effect
3. Managing returns
4. Pure asset gatherer

6.1.4 Demonstrate knowledge of hedge fund returns and asset allocation.

i. Discuss the process of analyzing a hedge fund program
ii. Identify strategies grouped by systemic risk
iii. Discuss equity strategies in hedge funds
iv. Discuss event-driven and relative value strategies in hedge funds
v. Discuss event risk and volatility strategies in hedge funds
vi. Discuss event risk and insurance-type strategies in hedge funds
vii. Discuss absolute return strategies in hedge funds
viii. Discuss diversified fund strategies in hedge funds

Keywords

1. Absolute return strategies
2. Convergent strategies
3. Diversified strategies
4. Equity strategies
5. Event-driven strategies
6. Off-balance-sheet risk
7. Relative return product
8. Relative value strategies
9. Short volatility exposure

6.1.5 Demonstrate knowledge of opportunistic hedge fund investing.

i. Explain the approach and benchmarks of opportunistic hedge fund investing

6.1.6 Demonstrate knowledge of investing in multistrategy funds.

i. Evaluate fee-related advantages of multistrategy funds
ii. Evaluate flexibility and transparency in the context of multistrategy funds
iii. Evaluate potential advantages related to manager selection and operational risk management by funds of funds

Keyword

1. Fee netting

6.1.7 Demonstrate knowledge of research studies on hedge funds.

i. Discuss the evidence regarding findings on hedge fund performance
ii. Discuss the evidence regarding the market impact of hedge funds during the Asian currency crisis of 1997
iii. Discuss the evidence regarding the market impact of quantitative hedge funds during the crisis of 2007

Keyword

1. Headline risk

6.1.8 Demonstrate knowledge of hedge fund indices.

i. Describe hedge fund indices
ii. Understand the structure of management and incentive fees on hedge fund indices
iii. Contrast asset weighted hedge fund indices and equally weighted hedge fund indices
iv. Understand representativeness and data biases in hedge funds
v. Understand and apply strategy definition and style drift
vi. Discuss index investability of hedge funds

Keywords

1. Fee bias
2. Instant history bias or backfill bias
3. Investability
4. Liquidation bias
5. Participation bias
6. Representativeness
7. Style drift
8. Synthetic hedge funds

L.O. 6.1.1 **DEMONSTRATE KNOWLEDGE OF THE DISTINGUISHING FEATURES OF HEDGE FUNDS AND THEIR GROWTH AND CONCENTRATION OVER TIME.**

The first hedge fund was established by Alfred Winslow Jones in 1949. The A.W. Jones & Co. hedge fund took long and short positions in U.S. stocks with the intention of limiting market risk while focusing on stock selection. An article published in *Fortune* magazine in 1966 highlighted Alfred Jones, which then spurred interest in his product. Within two years, the number of hedge funds in the U.S. had increased to 140. The bear market in the early 1970s witnessed the demise of many hedge funds, and interest in the industry was not renewed until late 1980s, with growth attributed in part to investors appreciating HFs' ability to manage bear markets and overcome crises better than traditional long-only strategies. The number of hedge funds grew considerably during the 1990s, and, by 2024, there were about 9,100 hedge funds with over $4 trillion in total assets. In contrast, mutual funds, money market funds, and exchanged-traded funds had over $31 trillion in total assets in 2024.

The ability to short assets contributed significantly to capital markets. Hedge funds generated returns on both long and short investments and provided institutional investors benefits such as diversification in their asset allocation with new approaches to portfolio construction, portfolio management, risk management, and risk mitigation. The hedge fund industry introduced a new set of skills to traditional managers.

PRIMARY ELEMENTS OF HEDGE FUNDS

A hedge fund is an investment pool or vehicle with the following characteristics.

1. Privately organized
   - Hedge funds are generally privately organized and unlisted investment vehicles that use pooled resources of institutional and other qualified investors to invest in securities and derivative instruments.
   - Hedge funds provide investment opportunities that are not available through traditional, regulated investment pools or are more easily or cost-effectively executed.
2. Performance-based fees
   - In addition to asset-based management fees, hedge funds typically charge incentive-based fees to attract and motivate top-performing financial professionals who are skilled at implementing sophisticated trading strategies and providing investment opportunities distinct from those available with traditional investments.
   - The fees are intended to align the interests of managers and fund investors.
   - Managers' compensation can alter the nature of an investment, including its risks and returns and potential alignment between limited and general partners.
3. Leverage, derivatives, short, structured products, and concentrated
   - Hedge funds can apply leverage, actively trade derivatives, establish short positions, invest in structured products, and hold relatively concentrated positions.

4. Subject to fewer regulations than its traditional counterparts, which generally enables an unconstrained investment strategy and investment universe (i.e., can invest in any public or private securities).
   - Hedge funds are typically less regulated than public investment vehicles. However, in some jurisdictions, a hedge fund's management company needs to be registered in the same way as a mutual fund's management company.
     - ➢ While this discussion focuses on hedge funds intended for institutional investors, as regulation evolves, hedge funds are creating vehicles and strategies suitable for retail investors.
   - They are exempt from certain regulatory requirements if they qualify under a ***safe harbor***, which is a regulatory provision that protects investments from regulations. For instance, in the U.S., hedge funds that are not advertised or offered to the general public are exempt from disclosure requirements under the U.S. 1940 Investment Company Act.

INVESTMENT FLEXIBILITIES OFFERED BY HEDGE FUNDS

Hedge funds use investment flexibilities that are not typically available to traditional mutual funds.

1. They can invest in nonpublic, unlisted securities.
2. They often use significant amounts of leverage; significantly more than mutual funds, which, in the U.S., are limited to borrowing at most 33% of their net asset base.
   - Some hedge fund strategies use leverage up to 10 times their net asset base, and, at the extreme, up to 100 times their net asset base.
3. They tend to use derivative securities more often than mutual funds. Derivatives often result in nonlinear cash flows, which call for more advanced risk management techniques and can increase fund leverage and add new risks.
4. They take short positions in public securities to increase return or reduce risk.
   - This is one of the key differences between hedge funds and most traditional funds that are tied to long-only positions.
   - Shorting securities and use of derivatives can also increase the fund's implicit leverage.
5. They trade in riskier investments (e.g., structured assets and digital assets).
6. They are generally more actively managed, with more complex strategies and dynamic risk exposures, than traditional funds that typically have benchmark-linked performance.

Some hedge funds have only one or two of these characteristics. However, hedge funds are a legal structure, not a single strategy that can be clearly distinguished from other investments. In fact, as alternatives have evolved, the lines between hedge funds and other alternative investments have blurred.

Some of the differences between hedge funds and mutual funds are listed in the table below.

	Hedge Funds	Mutual Funds
Manager registration	Required	Required
Offering method (Documentation)	Voluntary – flexible	Established – detailed
Disclosure requirements	Voluntary – flexible	Established – detailed
Investment strategies available	Unrestricted	Restricted
Concentration limits	Unrestricted	Restricted
Use of leverage	Unrestricted	Restricted
Use of derivatives	Unrestricted	Restricted
Permissible investors	Restricted (Accredited only)	Unrestricted

Given that hedge funds have few restrictions, they are available for limited distribution to accredited investors or qualified purchasers, who regulators believe can appropriately assess the risks associated with hedge funds. In contrast, the restrictions on mutual funds enable them to distribute their shares to the general public.

REASONS FOR HEDGE FUND INDUSTRY GROWTH AND CONCENTRATION

There are several reasons for the interest in hedge funds.

1. Hedge funds' potential to serve as diversifiers due to low correlations with traditional asset returns.
    - Bear markets spur interest for investors who suffered losses in their traditional stock and bond portfolios.
2. Hedge funds' investment mandate flexibility in being able to take both long and short positions.
3. Attractive risk-adjusted returns.

After the financial crisis began in 2007, the industry suffered significant decline in both AUM and number of funds, as hedge funds began to yield negative returns and experience the first net asset outflows since 1994. Hedge Fund Research (HFR) Inc., a firm specializing in indexation and analysis of hedge funds, estimates that, from the end of 2007 to the end of 2009, hedge fund assets declined by 25%, as fund losses totaled $176 billion and investors withdrew an additional $285 billion.

The growth and decline in the hedge fund industry are also apparent in Figure 1.

- Each year from 1996 to 2007, new hedge funds were launched.
- 2008 and 2009 experienced significant net attrition.

- From 2009 to 2014, the number of hedge funds grew (with more funds being launched than liquidated).
- 2015 to 2023 witnessed net attrition as absolute performance was challenging relative to strong beta markets.

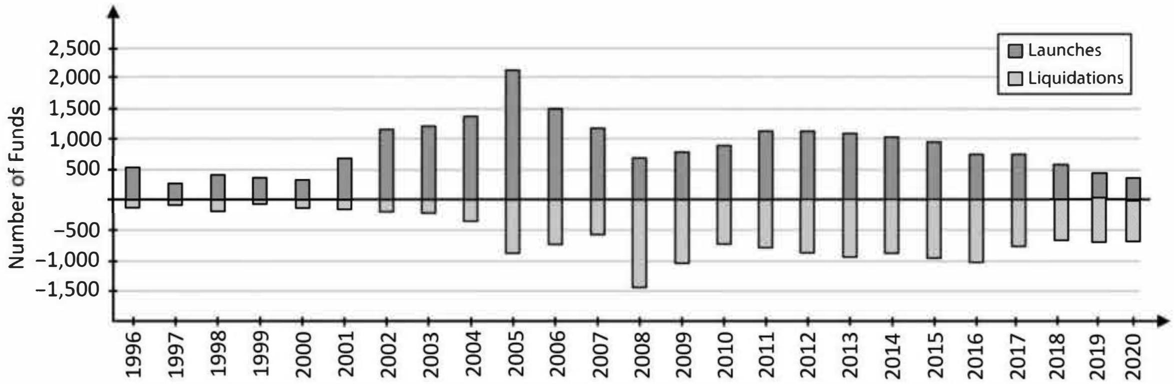

Figure 1: Estimated Number of Funds Launched and Liquidated (1996-2020)

After the 2007 financial crisis, the hedge fund industry experienced significant industry concentration or consolidation (i.e., higher proportion of industry represented by smaller number of participants). This was a result of a number of factors.

- The financial crisis resulted in numerous hedge fund frauds and liquidations and, as a result, institutional investors began to pursue larger hedge funds, considering them less risky.
- The expense associated with facilitating due diligence performed by prospective hedge fund investors. Larger hedge funds can more easily afford this expense.

At the end of 2023, there were more than 9,300 hedge funds and funds of funds. About 20% of hedge fund management firms managed more than $1 billion and about 90% of industry assets; leaving 10% of the industry's assets for about 8,000 hedge funds.

SINGLE-MANAGER HEDGE FUNDS, FUNDS OF FUNDS, & MULTI-STRATEGY FUNDS

The hedge fund industry is composed of single-manager hedge funds and funds of hedge funds.

- A single-manager hedge fund (or single hedge fund) invests in securities and/or derivative instruments.
  - A single hedge fund may be a ***multi-strategy fund*** (i.e., hedge fund that invests in different strategies and with different sub-managers who are part of the same organization).
  - A multi-strategy fund has one layer of fees paid to the fund's manager.
- A fund of funds (FoF) is a hedge fund that invests in other hedge funds.
  - The hedge funds in an FoF have independent managers.
  - An FoF has two layers of fees. Investors pay fees to the FoF manager and they essentially pay fees to the managers of the hedge funds in which the FoF invests.

HEDGE FUND STRATEGIES

Hedge funds are largely differentiated from one another by their trading strategies, which are often organized into a classification of hedge fund strategies. There are different ways to classify hedge funds. The CAIA curriculum classifies them into four groups as presented in Table 1.

Macro and Managed Futures	Event-driven	Relative Value	Equity
1. Macro 2. Managed Futures	1. Activists 2. Merger Arbitrage 3. Distressed 4. Event-Driven Multi-Strategy	1. Convertible Bond Arbitrage 2. Volatility Arbitrage 3. Fixed-Income Arbitrage 4. Relative Value Arbitrage Multi-Strategy	1. Long/Short 2. Market Neutral 3. Short Selling

Table 1: CAIA Classification of Hedge Fund Strategies

Analogies can be drawn between investing in hedge funds and investing in traditional assets.

- Investing in a single hedge fund manager is analogous to investing in a single stock. They both expose investors to idiosyncratic risks related to the hedge fund or issuing company and, thus, to substantial dispersion in returns.
- Investing in a multi-strategy hedge fund is analogous to investing in the stock of a conglomerate rather than the stock of a firm focused on one line of business.
- Investing in an FoF is analogous to investing in a mutual fund. They both aim to diversify risk. Since FoFs invest across managers and strategies and mutual funds invest across stocks, a loss with one manager or stock will likely be offset by gains by other managers/stocks. These investments result in returns that are less dispersed than a single hedge fund/stock investment.

The risk of investing in individual hedge funds is apparent in the rate of ***fund mortality*** (i.e., liquidation or termination of operations by funds). This is depicted in Figure 1: more than 15,000 hedge funds have liquidated since 1996, including 13,500 that liquidated since 2006. These figures are likely understated for the industry, since they only reflect hedge fund liquidations tracked by the HFR database. HFR estimated that, in 2021, about 75% of the hedge funds were more than five years old, 18% less than three years old, and 15% between three and five years old. Gregoriou et al. estimated the average hedge fund life to be 4.4 years, with funds with larger AUMs and lower volatility tending to have longer lives. Analysis of hedge fund performance should consider survivorship bias.

L.O. 6.1.2 **DEMONSTRATE KNOWLEDGE OF HEDGE FUND FEES.**

Investment professionals are attracted to the hedge fund industry since hedge funds allow them to implement sophisticated strategies and to earn high returns through fees and coinvesting with limited partners (LPs) in funds with performance-based compensation.

TYPICAL HEDGE FUND FEES

Hedge funds' fee structures are commonly 1%-2% management fee and 15%-20% incentive/ performance fee (referred to as the pair, e.g.,: "2 and 20"). However, fees vary; some management fees are 1%-3% and some incentive fees are as high as 30%. Investors can sometimes negotiate with managers to reduce the fees.

- Management fee
    - This is a constant percentage of a fund's net asset value (NAV) [i.e., value of assets minus value of liabilities] typically charged on a monthly basis (and collected monthly, quarterly, semi-annually, or annually).
    - It is also charged by traditional investment vehicles (e.g., mutual funds), but at a considerably lower rate.
- Incentive fee
    - This is a profit-sharing or performance-based fee collected annually and calculated as a percentage of the fund's profits (i.e., difference between end-of-year and beginning-of-year NAV) after the management fee has been deducted. Fund managers receive an incentive fees only if the fund generates a profit during a fiscal year.
    - This fee is not generally charged by, and sometimes prohibited for, traditional investment vehicles.
    - Incentive fees may be subject to other conditions, such as a ***high-water mark*** (HWM), which is the highest NAV of a fund on which an incentive fee has been paid and recorded on incentive fee computation dates.[1]
        - The HWM serves as a benchmark for manager performance. Managers must recoup previous losses by overcoming the HWM before they can collect incentive fees.
        - Paying fees relative to an HWM ensures that fees subsequent to the date on which a fund reached its HWM will not be paid on recouped losses.
            - For instance, a fund with an year-end NAV that fluctuates between $100 million and $110 million has an HWM of $110 million. The manager could earn an incentive fee on the profits generated to reach $110 million the first time. However, if the fund's value decreases and then returns to $110 million, the manager would not earn additional incentive fees on the recouped losses. On the other hand, if the manager had returned earlier incentive fees due to a clawback, then the incentive fees would apply to recouped losses.
        - The HWM is not necessarily the highest overall NAV. If incentive fees are calculated at the end of each year, the HWM would be the highest NAV corresponding to the last day of each year. In practice, the overall highest NAV is unlikely to occur on the incentive fee computation date.

Hedge funds' legal documents include details such as fee calculations and payment dates, and may include other terms such as hurdle rates.

While managers traditionally offered LPs one set of fees (e.g., 2 and 20), they now commonly offer a range of fee options with various lockups or liquidity. For instance, a manager may offer a 0.5 and 30 fee with a 3-year lock-up or a 1.5 and 20 fee with annual liquidity. Esoteric strategies may have higher fees. For example, emerging market managers may require higher management fees, whereas digital asset managers may require higher incentive fees.

[1] The high-water mark is also known as a loss carry-forward provision.