6.

Advisory Relationships

6.1-1 Advisory Relationships

There are number of key individuals that are available to assist Pension Trustees as they perform their fiduciary responsibilities.

This section will present each one and a description of what you should expect from each one of them.

6.2-1 Actuary

An **actuary** is a person trained in mathematics, statistics and legal accounting methods who uses knowledge of the demographics and economics to help defined benefit pension plans determine how much needs to be contributed each year for a plan to provide all the promised retirement benefits to current employees, retirees and their beneficiaries. The Actuary employs life expectancy table projections, financial projections and related data of the pension plan to predict funding.

The actuary must figure what level of contributions the employee and/or the employer must make when combined with expected investment income, to provide adequate funding to meet the plan’s benefits over the long term.

6.2.1-1 Actuary: The Role of the Actuary (Drew James, FSA)

SOURCE:
"Role of the Actuary" by Drew James, FSA

INTRODUCTION
The actuary has traditionally held a somewhat mysterious role. He or she gathers financial and census data, then goes off to stir it into a concoction of magic formulas and strange assumptions to produce a prediction of the future. Actually, this shroud of mystery generally comes not so much from the process the actuary follows, but his or her inability to communicate it. This paper is another attempt to lift the mysterious shroud and expose the pension actuary's methods to the light of day.

6.2.1-2 Actuary: The Role of the Actuary (Drew James, FSA)

RESPONSIBILITY OF THE ACTUARY

A retirement system is a long-term proposition. It contains promises that extend many decades into the future. A trustee of the system (or a member, or the employer sponsor) needs to be sure that someone understands what this promise will cost and how to structure a solid financial plan to pay for it. As we watch the ebbs and flows of government finance, it doesn't take long to realize that we cannot risk waiting until these promises become due before seeking out the money we'll need to pay for them. *The actuary's primary responsibility is to structure such* a *financial plan and to monitor its performance.* The actuary cannot do this in a vacuum. The board of trustees carries the ultimate fiduciary responsibility to ensure that the financial plan is sound and that it succeeds in practice. The actuary must effectively communicate the financial plan to the trustees and support a strong understanding of how their decisions may impact its operation. This financial plan is more commonly referred to as *an actuarial funding method.*

6.2.1-3 Actuary: The Role of the Actuary (Drew James, FSA)

STRUCTURING THE ACTUARIAL FUNDING METHOD

In order to structure the actuarial funding method, the actuary needs a way to calculate long term costs. A simplified pension plan example may help to illustrate why. Let's assume we have a group of 100 thirty-year-old employees for whom we want to make a future "pension" promise. Suppose we will give each employee a one-time check for $1,000 when (and if) they live to age 65. We have some choices.

We can either:

1. Wait 35 years and seek out the money we'll need at that time; or

2. Put a little away each year so that we will have accumulated enough to payoff these people by the end of 35 years

The first choice is risky.

Who knows what one's financial situation will be in 35 years? We could find ourselves with an immediate debt of as much as $100,000 without the means to pay.

Let's assume we take the second choice - to pay off the debt a little each year, using what amounts to an actuarial funding method!

6.2.1-4 Actuary: The Role of the Actuary (Drew James, FSA)

In order to implement our actuarial funding method, we need to answer two questions:

Question #1
How much money will we ultimately need to payoff this promise - that is, how many of the 100 will live to age 65?

Question #2
What can we earn on the money we put away (i.e., invest) each year?

According to our actuarial tables, we expect 94 of these people will be alive at age 65. This means we can expect to ultimately pay $94,000 in pensions. Let's say our actuary tells us that according to our investment plan, we can expect to earn 8% per year on average over the 35-year period.

All we need is an amortization table to tell us that, if we invest $546 at the end of each of the next 35 years and earn 8% per year on our investment, we will have accumulated $94,085 by the end of 35 years. Now, $546 per year is much easier to budget for than $94,000 at one time. Our actuary tells us that the $546 contribution is called our ***normal cost.***

We now have a solid financial plan to meet our promise.

6.2.1-5 Actuary: The Role of the Actuary (Drew James, FSA)

MONITORING THE PERFORMANCE OF ACTUARIAL FUNDING

Suppose our plan has been in place for 15 years and we have diligently put away $546, each year. There are now 99 people left from our original group (which our actuary tells us is what we expected). But, we discover that, to date, our pension fund (which now totals $13,720) has only earned 7% rather than our expected 8%. Nonetheless, our actuary tells us that we can still expect an 8% investment return in the future.

If we would have earned 8% over the last 15 years, we would have accumulated $14,825. Our actuary tells us that this $14,825 "target assets" is called our *actuarial accrued liability.* Our actuary reports to us that "the funding ratio is 92.5% ($13,720 divided by $14,825) and we have an *unfunded actuarial accrued liability* of $1,105 ($14,825 - $13,720)." As a result, we need to make additional contributions to avoid a funding shortfall. Here's why. If over the next 20 years we earn 8% on investments, our fund of $13,720 will grow to $63,948 and our annual $546 normal cost contributions will accumulate to $24,986, leaving us a shortfall of $5,066 ($94.000 - $24,986 - $63,948). Our actuary says that we must make $111 annual *contributions to the unfunded actuarial accrued liability, which* will accumulate to $5,080 by the end of our remaining 20 year funding period and payoff our unfunded liability. Our total future contribution is now $657 ($546 + $111) per year.

6.2.1-6 Actuary: The Role of the Actuary (Drew James, FSA)

Note that other events could also have led to an unfunded actuarial accrued liability and an increase in our required annual contributions, such as:

• Discovering that after 15 years all 100 of our original people were still alive, upping our expected payout to $95,000; or

• Granting an increase in the $1,000 benefit to $1,100. This would increase our original expected payout to $103,400.

We rely on our actuary's communication skills to help us understand the causes of this $5,066 *actuarial* loss and why our contribution needs to increase by $111. Once he or she explains this to us, we understand the importance of having our actuary come in each year to do an *actuarial valuation,* to report on our funding progress and to recommend ''fine tuning" adjustments to the annual contributions that will keep our funding on track.

6.2.1-7 Actuary: The Role of the Actuary (Drew James, FSA)

ENTER THE COMPLICATIONS

Over the years our simplified pension plan grows more complex:

- Our group is comprised of many thousands of employees and retirees at varying ages

- Employees also contribute to the plan

- Pension benefits are paid monthly and are based upon an employee's salary and years of employment

- The benefits, once payable, will increase annually with cost of living

- The benefits are optionally available at retirement ages earlier than 65

- Death, disability, and termination benefits are added

6.2.1-8 Actuary: The Role of the Actuary (Drew James, FSA)

Fortunately, our actuary is equipped to handle each new layer of complexity by expanding his or her formulas and adding new assumptions. Our actuary also brings us a range of acceptable actuarial funding methods that allow our contributions to be expressed as a percentage of our total employees' payroll and to vary how we pay off unfunded actuarial accrued liabilities. But the basic actuarial funding process remains the same:

1. Calculate the funding target (e.g., the $94,000 in our example);

2. Determine a periodic contribution to get to the target (e.g., our $546 annual normal cost); and

3. Review the process periodically to see if it is on track (calculate the funding ratio, the unfunded liability and any required changes in the periodic contribution).

6.2.1-9 Actuary: The Role of the Actuary (Drew James, FSA)

FROM ACTUARY TO ADVISOR

The actuary's expertise should serve a broader role than merely a calculator. His or her training allows the actuary to provide trustees valuable insight on the funding and general financial implications of:

- Benefit modifications
- Human resource actions, such as layoffs or early retirement incentives
- Alternative financing arrangements, such as pension obligation bonds
- Asset allocation decisions
- Asset/liability and cash flow management; and
- Legal compliance issues

The list can go on and on depending upon the experience of the actuary and his or her span of professional training.

6.2.1-10 Actuary: The Role of the Actuary (Drew James, FSA)

CONCLUSION

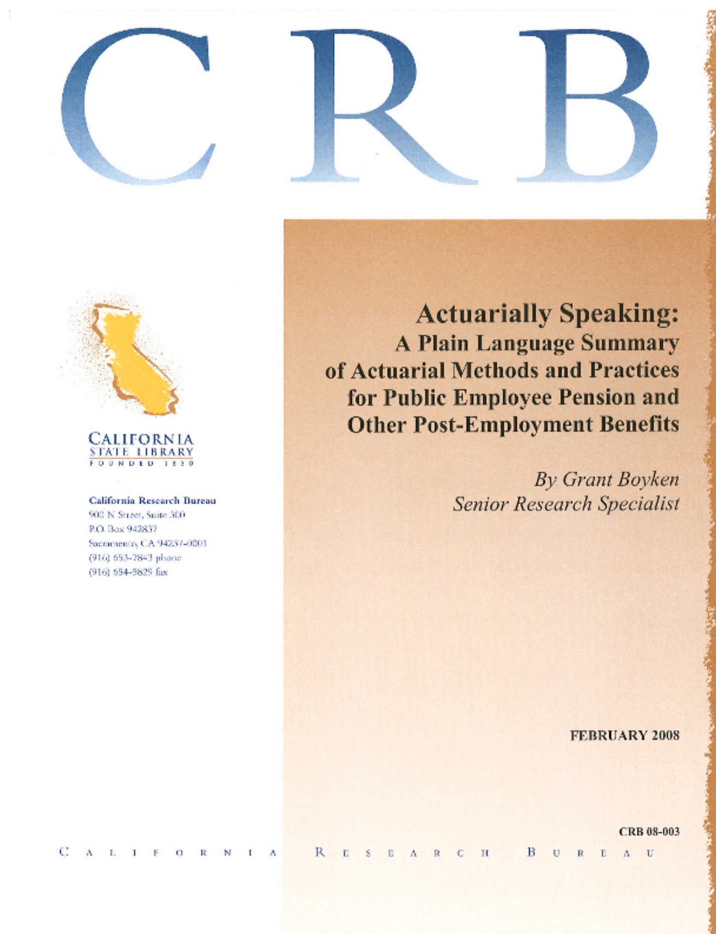
It is not surprising that the actuary is looked upon as the cornerstone which supports the financial integrity of the retirement system. His or her judgment will be critical to its long-term financial survival. It is essential that the trustees obtain a high level of confidence in the actuary's judgment and his or her technical and technological capabilities. It is the actuary's responsibility to clearly communicate the full implications of the funding decisions made by the trustees, and to serve as a general resource on any matter which could have a lasting financial impact on the retirement system.

6.2.2-1 Actuary: Actuarially Speaking

“Actuarially Speaking” by Grant Boyken

Section 6.2.2 is written by Grant Boyken and further explains the important role of the Actuary and his methods and responsibilities.

Please click on the picture below to open this section.



6.3-1 Attorney for the Board

Historically, the district attorney or the county counsel is the **attorney for the board**. In recent years, the boards of retirement have elected to secure legal services of an attorney in private practice when the board determines, after consultation with the county counsel, that county counsel cannot provide the board with legal services due to a conflict of interest or other compelling reason.

This provision notwithstanding, the board may employ an attorney in private practice in carrying out its investment powers and duties. It is not unusual for boards to hire specialized attorneys in the fields of disability, fiduciary counsel, real estate and hedge fund contracting. Some of the larger systems have hired attorneys as part of their staff.

6.4-1 Auditor

By definition an **auditor** is the person appointed to conduct an examination of the records, to form an opinion about the authenticity and correctness of such records, by verifying the correctness and reliability of the recorded transactions from the evidences available, opinion and inference reachable based on his expertise.

6.5-1 Board Medical Advisor

The county health officer or designee advises the board on medical matters. The board may also secure such medical, investigatory and other service and advice as is necessary to make determinations on applications for disability retirement or continuing disability of members previously retired for disability.

6.6-1 Custodian Bank

A **custodian bank**, or simply **custodian**, is a financial institution responsible for safeguarding a firm's or individual's financial assets.

The role of a custodian in such a case would be the following:

- to hold in safekeeping assets such as equities and bonds,
- arrange settlement of any purchases and sales of such securities,
- collect information on and income from such assets (dividends in the case of equities and interest in the case of bonds),
- provide information on the underlying companies and their annual general meetings,
- manage cash transactions,
- perform foreign exchange transactions where required, and
- provide regular reporting on all their activities to their clients.

6.6-2 Custodian Bank

Custodian banks are often referred to as global custodians if they hold assets for their clients in multiple jurisdictions around the world, using their own local branches or other local custodian banks in each market to hold accounts for their underlying clients. Assets held in such a manner are typically owned by pension funds.

6.7-1 Hearing Officer

Whenever, in order to make a determination concerning a disability retirement application, it is necessary to have a hearing, the board may appoint either one of its members, or a member of the State Bar of California, to serve as a referee.

Upon receiving the proposed findings of fact and recommendations of the referee, the board has several options which may include: approve and adopt the proposed findings and recommendations; require a transcript or summary of all testimony, plus all other evidence considered by the referee; or refer the matter back with or without instructions; or set the matter for hearing before itself.

6.8-1 Investment Consultant

An **Investment Consultant** provides investment advice. The (independent) investment consultant is different from a broker or broker consultant in that the consultant is typically paid a flat fee, an hourly fee for services, or – less frequently – a percentage of the assets, while a broker is paid on transactions. The investment consultant differs from the investment manager in that the consultant does not actually invest the funds, while the investment manager does.

The consultant can be an individual or a firm. The advice provided generally includes analysis of portfolio constraints, setting performance objectives, counsel for asset allocation, and services to evaluate, select and monitor investment managers.

Most plans have investment consultants who are part of the client's investment strategy for a long period of time. The consultant actively monitors the client's investments and continues to work with the client as goals change over time.

6.8-2 Investment Consultant

Important considerations for an investment consultant include:

- The fund's fiduciaries (Board and Staff), the investment consultant and the investment manager(s) form a team, each contributing expertise in the cooperative quest to add value to the plan's portfolio from investment operations.
- The improvement in added return and reduced expenses from following in Investment consultant's recommendations often more than pays for the added fees and expenses.
- Calculating investment returns and portfolio characteristics is a place to begin when evaluating an investment manager. The consultant is evaluating an enterprise that is people-intensive and must also allocate time to meet with those players who will most Influence the achievement of return.
- The increasing use of index funds, benchmark portfolios, futures and options has resulted in part from the consulting industry's push for better "mousetraps."

6.8-3 Investment Consultant

History

In the pre-ERISA years of the 1950s and 1960s, most representatives of plan sponsors delegated the management of their pension plan portfolio to the trust department of the local bank. The trust officer supervising the account counseled the sponsor on the asset mix and the selection of the individual bonds and stock positions to be placed in the portfolio. The sponsor was content to meet all his or her investment management needs through one professional organization. The trust officer served in the role of *investment counselor* in the full sense of the term. Had it not been for a combination of relatively poor investment returns and the banks' overdependence on a narrow set of investment classes, single "balanced manager" relationships would be more prevalent today.

6.8-4 Investment Consultant

History

In the 1970s, plan sponsors - seeking broader diversification and improved performance - lifted their horizons toward other management alternatives. Sponsors who wanted to replace their managers or to add managers needed to increase their understanding of the other classes of investments available. They also needed counsel as to how to best weight their portfolios among a broad set of investment opportunities. In such a demanding environment, the ***investment consulting*** industry was born.

Adding impetus to this need outside advice was the passage of ERISA in September 1974 with its requirement that the courses of action pursued by fiduciaries of (corporate) employee benefit plans must be performed at the standard of a "prudent expert."

Investment consultants come in all sizes, shapes and forms. The individual or firm can be fully independent or affiliated with an actuarial or brokerage firm. The consultant may be a subsidiary of a larger financial services firm. In addition to investment consulting specialists, to a lesser degree contract administrators, attorneys, and accountants are often involved in consulting activities, particularly among the smallest plans. Many securities brokers also provide consulting services to the smaller plans.

6.8-5 Investment Consultant

Services Offered by Consultants:

- Analysis of plan constraints
- A plan review process to identify needs and objectives, and to recommend appropriate policy and strategy
- Setting investment goals and objectives
- Development of policy and strategy
- Development of managerial guidelines
- Counsel for asset allocation
- Evaluation, selection and monitoring of manager
- Measurement of performance and analysis of return attribution
- Selection of master trustee/custodian banks

Specific consulting assignments, either one-time or continuing include the following:

- Evaluation of specialty strategies and/or products
- Analysis of portfolio transactions/audit services
- Design of benchmark portfolios
- Creation of software products
- Other specialized studies.

Some larger firms also offer continuing educational opportunities through seminars and the regular dissemination of proprietary research data. Thus the principals of the client funds can avail themselves of as much, or as little, of the input offered by their consultant.

6.8-6 Investment Consultant

Types of Consulting Firms

Large and medium sized employee benefit plans ($50 million and above) often seek consultants who offer a broad range of services. These providers of "one-stop shopping" service generally are regional or national in scope, have significant research and data analysis capabilities, and offer a broad menu of consulting services.

At the other end of the spectrum are the "one person consulting shops" and the smaller "boutique" firms. Many of these consultants either target a specialized set of clients or limit their consulting to limited geographic area. They may generate their own analytical software support or purchase what they need from a firm that maintains a large database. With the proliferation of smaller defined contribution plans, including sizable self-directed IRA rollover accounts, the larger securities brokerage firms are internally organizing and training their brokers in consulting to exploit the growing needs of these smaller clients.

6.8-7 Investment Consultant

The Functions of the Consultant

A consultant can enhance potential return by restructuring the investment management program. The restructuring process may create a similar or preferred risk posture while also reducing expenses. The increasing use of index funds, benchmark portfolios, futures and options has resulted in part from the consulting industry's search for better "mousetraps."

The following question is often raised: If the consultant is so smart, why isn't he or she managing money? Perhaps the consultant would be if he or she chose to concentrate the intensity of his or her efforts on portfolio management. But the resources the consultant provides to his or her clients result from a different discipline than the buy/sell selection process. The consultant's counsel is more multidisciplinary and **multi asset** in nature than the typical investment manager's. The consultant cultivates a broader **“macro” perspective**.

6.8-8 Investment Consultant

The Functions of the Consultant

To succeed, the investment manager must by competitive necessity concentrate on microanalyses within his or her specialized area of the market (like looking at particular investments – particular bonds, stocks or real estate properties). If the consultant is to process information efficiently, then the consultant does not have the luxury of also researching individual investments. Thus the fund's fiduciaries, the investment consultant and the investment manager(s), together form a team, each contributing expertise in the cooperative quest to add value to the plan's portfolio from investment operations.

6.8-9 Investment Consultant

The Functions of the Consultant

How the consultant is structurally positioned to serve the fund is important if his or her contribution is to be fully exploited in the process of decision making. The consultant can be "called alongside" to assist the named fiduciaries (often serving as a co-fiduciary) in the discharge of their investment-related responsibilities; retained as an "extension" of the in-house investment staff to enhance their technical resourcefulness; or hired on a specific assignment basis, ad hoc or continuing, to assure the supervising group that their specific investment responsibilities are professionally addressed.

The investment consultant is engaged in a delicate balancing act. The investment consultant's first priority is to his or her clients; they have the first call on the consultant's time. To serve clients resourcefully, however, the consultant must also spend time evaluating newly emerging strategies and technologies and hundreds of managers. Not only is the consultant selling his or her expertise, but the consultant is also selling his or her time. Thus management of time is a continuing challenge.

6.8-10 Investment Consultant

The Functions of the Consultant

The investment consultant's retainer or project fee is often a small percentage of the investment managers' asset-based fees. A number of the larger investment consulting organizations have chosen in recent years to enter the more profitable money management business by creating commingled investment funds on which they share revenue with underlying mangers (that they retain). The consultants have transitioned to providing investment management services by leveraging both their knowledge of investment managers and their access to their own consulting clients, who are the most logical prospects to whom to sell their new commingled vehicles.

A consultant who also provides investment management services runs the risk of being perceived by clients as having lost the objectivity of a third party. Such consultants maintain that, with the proper internal safeguards, they can fold in various collateral business activities without compromising the integrity of their primary consulting business.

6.8-11 Investment Consultant

The Functions of the Consultant

With consulting organizations moving into the business of investment management, and large multi-asset class investment management organizations providing one-stop shopping" opportunities, we may be returning to some degree to the single, balanced manager arrangement. Although this limited relationship of decision making did not work well in the 1950s and 1960s, it may work somewhat better now because of the expanded resources of the "new" balanced managers. Global, multi asset, tactical asset allocation, passive and passive-plus/active management choices are now all available under one management umbrella.

This new breed of balanced manager – whether the consulting firm that evolves into the money management business or the money management firm that has broadly diversified its menu of services – is emerging as competition in providing investment counseling services to employee benefit plans.

6.8-12 Investment Consultant

The Functions of the Consultant

To manage his or her time efficiently, the consultant must absorb, process and evaluate a great deal of information speedily and insightfully. With the recent proliferation of investment management firms, products and strategies, a consulting firm engaged in manager search activities must either build its own investment manager database or pay for the access to a third-party existing one.

Such a reference database is only the beginning. Then the consultant must somehow determine whether a candidate manager can perpetuate past success.

There is no substitute for "kicking the tires" of a candidate firm through onsite visits. These are time consuming but very helpful. The consultant ultimately must assess the philosophy, vision, discipline and management skills of the leadership of a candidate firm for its leadership that controls the destiny of the underlying organization.

6.9-1 Investment Management

The rest of Section 6.9 is a reprint from a recent Wikipedia compilation.

Investment management is the professional management of various securities (stocks, bonds) and “real” assets (e.g., real estate), to meet specified investment goals for the benefit of the investors.

6.9-2 Investment Management

The provision of 'Investment management services' includes elements of financial analysis, asset selection, stock selection, plan implementation and ongoing monitoring of investments.

Investment Manager refers to both a firm that provides investment management services and an individual who directs fund management decisions.

6.9-3 Investment Management

Industry scope

The business of investment management has several facets, including the employment of professional fund managers, research (of individual assets and asset classes), trading, settlement, marketing, internal auditing, and the preparation of reports for clients. The largest investment managers are firms that exhibit all the complexity their size demands. Apart from the people who bring in the money (marketers) and the people who direct investment (the portfolio managers), there are compliance staff (to ensure accord with legislative and regulatory constraints), internal auditors of various kinds (to examine internal systems and controls), financial controllers (to account for the institutions' own money and costs), computer experts, and "back office" employees (to track and record transactions and fund valuations for up to thousands of clients per institution).

6.9-4 Investment Management

Key problems of running such businesses

Key problems include:

- Revenue is directly linked to market valuations, so a major fall in asset prices causes a precipitous decline in revenues relative to costs;
- Strong relative investment performance is difficult to sustain, and clients may not be patient during times of poor performance;
- Successful portfolio managers are expensive and may be hired away by competitors;
- Above-average fund performance appears to depend on the unique skills of the fund manager; however, clients often hesitate to stake their investments on the ability of one individual- they would rather see firm-wide success, attributable to a single philosophy and internal discipline;
- Analyst and portfolio managers who generate above-average returns often become sufficiently wealthy that they retire to manage their personal portfolios.

Many successful investment firms split off physically and psychologically from banks and insurance companies. That is, the best performance and also the most dynamic business strategies have often come from independent investment management firms.

6.9-5 Investment Management

Philosophy, process and people

The 3-P's (Philosophy, Process and People) are often used to describe an investment manager explain why the manager claims to be able to produce above average results.

Philosophy refers to the over-arching beliefs of the investment organization. For example: (i) Does the manager buy growth or value shares (and why)? (ii) Do they believe in market timing (and on what evidence)? (iii) Do they rely on external research or do they employ a research team? It is helpful if any and all of such fundamental beliefs are supported by proof-statements.

Process refers to the way in which the overall philosophy is implemented. For example: (i) What universe of assets is explored before particular assets are chosen as suitable investments? (ii) How does the manager decide what to buy and when? (iii) How does the manager decide what to sell and when? (iv) Who makes the decisions – a single manager or a committee? (v) What controls are in place to ensure that a rogue fund (one very different from others and from what is intended) cannot arise?

People refers to the staff, especially the portfolio managers. The questions are: Who are they? How are they selected? How old are they? Who reports to whom? How deep is the team (and do all the members understand the philosophy and process they are supposed to be using)? And most important of all, How long has the team been working together? This last question is vital because whatever performance record was presented at the start of the relationship with the client may or may not relate to (have been produced by) a team that is still in place. If the team has changed greatly (high staff turnover or changes to the team), then arguably the performance record is completely unrelated to the existing team (of fund managers).

6.9-6 Investment Management

Asset allocation

The most frequently used asset classes divisions are stocks, bonds and real-estate. Others that are also used are private equity and commodities. Some consider hedge funds and currencies to be additional asset classes. There are investment managers who specialize in each of the above. Allocating funds among individual securities within each asset class – and sometimes among these asset classes – is what investment management firms are paid for.

Asset classes exhibit different market dynamics, and different interaction effects; thus, the allocation of monies among asset classes will have a significant effect on the performance of the fund. The skill of a successful investment manager resides in constructing a portfolio of individual holdings to outperform certain benchmarks (e.g., the peer group of competing funds, bond and stock indices).

Those managers with mandates to allocate between asset classes – balanced managers and tactical allocation managers – are judged on their success in their asset allocation choices.

6.9-7 Investment Management

Long-term returns

It is important to look at the evidence on the long-term returns to different assets, and to holding period returns (the returns that accrue on average over different lengths of investment). For example, over very long holding periods (e.g. 10+ years) in most countries over most periods, equities have generated higher returns than bonds, and bonds have generated higher returns than cash. According to financial theory, this is because equities are riskier (more volatile) than bonds, which are themselves more risky than cash.

6.9-8 Investment Management

Investment styles

There are a range of different styles of equity fund management that an investment manager can implement: growth, value, market neutral, small capitalization, indexed, etc. Each of these approaches has its distinctive features, adherents and, in any particular financial environment, distinctive risk characteristics. Clients often attempt to attain diversification by retaining investment managers with different styles to complement each other.

6.9-9 Investment Management

Risk-adjusted performance measurement

Portfolio normal return may be evaluated using factor models. The first model, proposed by Jensen (1968), relies on the CAPM and explains portfolio normal returns with the market index as the only factor. It quickly becomes clear, however, that one factor is not enough to explain the returns and that other factors have to be considered. Multi-factor models were developed as an alternative to the CAPM, allowing a better description of portfolio risks and an accurate evaluation of managers' performance. For example, Fama and French (1993) have highlighted two important factors that characterize a company's risk in addition to market risk. These factors are the book-to-market ratio and the company's size as measured by its market capitalization. Fama and French therefore proposed a three-factor model to describe portfolio normal returns (Fama-French three-factor model). Carhart (1997) proposed to add momentum as a fourth factor to allow the persistence of the returns to be taken into account. Also of interest for performance measurement is Sharpe's (1992) style analysis model, in which factors are style indices. This model allows a custom benchmark for each portfolio to be developed, using the linear combination of style indices that best replicate portfolio style allocation, and leads to an accurate evaluation of portfolio alpha.

6.9-10 Investment Management

Further Reading

David Swensen, "Pioneering Portfolio Management: An Unconventional Approach to Institutional Investment," New York, NY: The Free Press, May 2000.

Rex A. Sinquefeld and Roger G. Ibbotson, Annual Yearbooks dealing with Stocks, Bonds, Bills and Inflation (relevant to long term returns to US financial assets).

Harry Markowitz, Portfolio Selection: Efficient Diversification of Investments, New Haven: Yale University Press

S.N. Levine, The Investment Managers Handbook, Irwin Professional Publishing (May 1980), ISBN 0-87094-207-7.

V. Le Sourd, 2007, "Performance Measurement for Traditional Investment – Literature Survey", EDHEC Publication.