

**IEEE Investment Operations Manual (IOM)**  
*Approved by the IEEE Board of Directors on 16 November 2003.*  
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**INTRODUCTION**

The purposes of this Investment Operations Manual are to: 1) guide the Board of Directors, Finance Committee, Investment Committee, Staff, asset managers, and consultants in effectively managing, monitoring, and evaluating the IEEE's investments, 2) ensure compliance with fiduciary and prudent investor responsibilities, 3) educate new Directors, Staff, Committee members, and Organizational Units, as well as consultants and investment managers, in order to maintain the consistency in IEEE investment processes necessary to produce good long-term results, 4) set forth a structure for managing IEEE's investments, including a spending rule, strategic asset allocation and permissible ranges, that, when combined, are expected to produce an adequate level of return at an acceptable level of risk, which will be mitigated through sufficient diversification and 5) provide transparency and understanding of the IEEE's investment policies.

The procedures in this Investment Operations Manual support the implementation of IEEE policies governing the IEEE Organizational Units, volunteers, and staff activities with respect to financial policies, as stated in Section 11 of the IEEE Policies. These procedures shall be developed and approved by the various responsible standing committees, primarily the IEEE Investment Committee, with oversight and coordination by the IEEE Finance Committee. In accordance with IEEE Policies related to the financial operations of the IEEE, the IEEE Finance Committee shall inform the members of the IEEE Board of Directors of changes to the Investment Operations Manual thirty days (30) prior to implementation. Operational policies and procedures of the respective organizational units shall not conflict with these procedures.

For ease of use of this manual, the bylaws, policies, and procedures pertinent to investments have been inserted in the appropriate sections. They appear in ***Bold / Italic font***, and are to be hyperlinked to the underlying documentation.

**Prudent Person Rule**

***It is IEEE policy to operate reasonably and prudently. The standard by which all aspects of operations of a not-for-profit organization are tested is reasonableness and prudence. (Policy 11.1.B)***

***A fiduciary is a person who has responsibilities in connection with the administration, investment, or distribution of property or assets that belong to someone else. This range of duties is termed fiduciary responsibility. The standard underlying fiduciary***

***responsibility is prudence, and the standard of behavior for a fiduciary is known as the “prudent-person rule.” This rule charges fiduciaries with conducting themselves with the same degree of judgment... reasonableness and prudence... in administering the affairs of the organization, as they would their personal affairs. (FOM 1.B)***

## **IOM.1 - THE IEEE INVESTMENT FUND AND ITS PURPOSES**

### **1. The Fund**

***The Investments of the IEEE are its largest asset and a function of its cash flow and all the other Assets, Liabilities and Reserves.*** IEEE funds may be invested only in the IEEE Investment Fund. (Policy 11.3.A.1) ***The Long Term Investment Fund and the Operational Cash Fund constitute the IEEE Investment Fund.*** The overall Investment Fund is made up of two components. One is the “reserve” component which is equal to the Total Net Assets of the IEEE and is also equal to the sum of the reserves of the IEEE Organizational Units. The other is the “non-reserve” component which is the remainder of the Fund. This has implications in setting the investment policy since investment of funds in excess of the reserves means that investment results will be magnified when reflected back into the reserves. The Defined Benefit Plan, while not an IEEE Investment asset of the IEEE, does impact the net income of the IEEE due to changes in market value and the impact upon the benefit liability.

#### **A. Long Term Investment Fund**

The Long Term Investment Fund shall be invested in an asset allocation mix approved by the Board of Directors- based on the recommendation of the Investment Committee.

#### **B. Operational Cash Fund**

Operational Cash Fund is the amount of funds the IEEE needs to meet its operational cash flow requirements in a given year. The balance of this Fund will fluctuate throughout the year according to the Institute’s operational cash flow needs and will be invested in cash equivalent investments that incur no risk of capital loss. Each year, the Operational Cash Fund amount is determined at the end of the preceding calendar year. Once that is accomplished, the Board will decide if any excess cash generated by operations during the course of the prior year should be invested in the Long Term Investment Fund. Similarly, for any excess cash consumed by operations during the course of the prior year, the Board will decide if funds should be transferred from the Long Term Investment Fund to the Operational Cash Fund.

### **2. Purposes**

The purposes of the IEEE Investment Fund are to:

- Enhance IEEE’s financial condition;
- Enable IEEE to maintain fiscal solvency, particularly in the face of unusual or catastrophic internal or external business and financial events
- Fund initiatives
- Grow reserves to a prudent level. ***The minimum recommended goal is to have IEEE Reserves at least equal to one half of the total budgeted yearly expenditures. (FOM 4.C)***

### **3. Objectives of the Investment Policy**

***The primary objective of IEEE’s investment policy shall be the protection of IEEE’s (inflation adjusted) assets. In a manner that is consistent with the primary objective, the secondary objective shall be to maximize the total return on the IEEE Investment Fund’s assets.***

### **4. Investment Time Horizon**

The investment policy is based on the following investment time horizons:

Long Term Investment Fund: 10 years  
Operational Cash Fund: less than one year

The strategic asset allocation of the Long Term Investment Fund (Appendix B) is based on this ten-year perspective. The Board recognizes that market performance can vary widely in the short-term and that any specified rate of return target will not be obtained during all periods.

## **IOM.2 - DIVISION OF RESPONSIBILITIES**

### **1. Board of Directors**

The IEEE Board of Directors has fiduciary responsibility.

### **2. IEEE Treasurer**

***In addition to the duties specified in the Constitution, the Treasurer shall also make a report to the IEEE Board of Directors semi-annually concerning the status of the IEEE investments. (IEEE Bylaw I-302.4)***

### **3. IEEE Investment Committee**

***The Investment Committee shall be appointed by and shall report to the Board of Directors. The Investment Committee shall advise and assist the IEEE Board of Directors on matters relating to IEEE investments. The Investment Committee shall meet and act pursuant to such rules as it shall determine, but no report or recommendation shall be implemented without the approval of the Treasurer. The Investment Committee may recommend to the Board of Directors the appointment of one or more asset managers who shall have the authority to invest, manage, or control IEEE assets subject to the terms of their appointment, and to restrictions and specifications therein. The Investment Committee Chair may create subcommittees to address specific issues. The Chair and the members-at-large of each subcommittee must be members of the Investment Committee.***

***Membership. The Investment Committee shall consist of not more than eleven members including a Chair; the IEEE Treasurer; one member appointed by the IEEE President; one member appointed by the Vice President, Technical Activities; and from four to seven members-at-large. The members-at-large, including the Chair, shall be appointed by the Board of Directors on the recommendation of the Treasurer. In view of the expertise required, with the exception of the appointments made by the President and the Vice President, Technical Activities who shall be IEEE members, nonmembers of IEEE shall be eligible for appointment as voting members of this Committee. The Chair of the Investment Committee shall be appointed for an initial one-year term, with the possibility for reappointment for up to four additional one-year terms. Members-at-large of the Investment Committee shall be appointed for an initial one-year term, with the possibility for re-appointment for two additional three-year terms, for a maximum of seven years of service. When deemed in the best interest of the IEEE, the Board of Directors may re-appoint a member-at-large for an additional three-year term. The maximum term of service for any member of the Investment Committee shall be ten years. (IEEE Bylaw I-305.15)***

As specified in the Investment Committee Charter, the Committee develops and recommends to the IEEE Board of Directors investment management policy and activities, including:

- Asset allocation guidelines and strategies.
- Investment guidelines / objectives for the Investment Fund\* and external asset managers.
- Manager and sub-advisor (including consultants) selection, retention, and termination.

The Investment Committee also:

- Consults with and reviews actions, results, and philosophies of the external IEEE asset managers on a periodic basis. (It is not, however, the function of the Committee to approve specific investments.)
- Evaluates the performance of the IEEE asset managers and advises the IEEE Board of Directors, as appropriate.
- Monitors compliance with policy.

\* The investment guidelines and objectives are available on the IEEE website to members of the IEEE.

#### 4. IEEE Finance Committee

***The Finance Committee shall be appointed by and shall report to the Board of Directors. The Finance Committee shall be responsible for annually providing a statement concerning the IEEE's short-term and long-term financial strategy; providing a list of all financial issues affecting the IEEE; developing the Capital and Operating Budgets; and providing a statement of allocated and unallocated operating and capital reserves of the IEEE, subdivided by individual organizational unit.***

***Membership. The Finance Committee shall consist of not more than nine members including the Treasurer, past Treasurer; and the financial representatives from the Awards Board, Educational Activities Board, Publication Services and Products Board, Member and Geographic Activities Board, Standards Association, Technical Activities Board and IEEE-USA. Travel support for these representatives shall be the responsibility of the appointing organizational unit. All members of the Finance Committee shall have voting rights. The Treasurer shall act as Chair. (IEEE Bylaw I-305.8)***

#### 5. Asset Managers

The Asset Managers are responsible for the day to day management of the investments, which includes:

- Evaluating market conditions
- Developing and executing strategies
- Executing trades
- Preparing monthly reports

#### 6. Consultants

The Consultant provides the Investment Committee with quarterly reports on the performance of the Investment Fund, including: total fund analysis versus policy target and peers; asset class analysis versus benchmarks and peers; and the investment managers' relative performance, and their performance versus benchmarks and style groups. The Consultant also provides advice on the hiring and termination of asset managers.

#### 7. Staff

***With respect to these policies, wherever a Staff function is identified, such activities shall be performed by Staff designated and authorized by the IEEE Executive Director. (Policy Section 11 - Introduction)***

Staff is responsible for overseeing policy execution, monitoring investment activity for compliance with policy, and recording and reporting performance.

## **8. Auditors**

Staff, including the Internal Audit Department, is responsible for monitoring adherence to policy and reporting on investment management process controls and policy compliance.

The external auditor evaluates the control environment relative to the investment policies and procedures.

### **IOM.3 - SPENDING RULE**

A "spending rule" has two major functions:

1. It provides an organization with a disciplined approach for determining the amount of money the organization can make available each year from reserves in order to support ongoing operational needs, and fund planned and ongoing initiatives.
2. It establishes a nominal (after inflation) required rate of return for the investment portfolio which reflects the IEEE's risk tolerance. The required rate of return is equal to the IEEE's expected rate of spending, expressed as a percentage of the average of the investable assets at the end of each of the preceding three calendar years, plus the anticipated rate of inflation.

The expected rate of return on the Investment Fund may be equal to or greater than the required rate of return, provided that the risk of such a portfolio is consistent with IEEE's objectives as stated in Section 3.

The actual rate of return on the portfolio for any given years will include dividends, interest and realized and unrealized gains and losses.

The Finance Committee is responsible for recommending to the IEEE Board of Directors the appropriate level of spending for each year. To preserve the purchasing power of IEEE's reserves, the level of spending should be such that, over a five-year period, the actual rate of return minus spending is greater than or equal to the inflation rate.

Please refer to Appendix A for IEEE's current Spending Rule.

There is no stated rate of return target for the Operational Cash Fund portion of the Investment Fund. The amount required to be in the Operational Cash Fund for cash flow purposes shall be calculated annually at the end of the preceding calendar year. This amount shall be reviewed monthly by the Treasury Department.

### **IOM.4 - ASSET ALLOCATION, PERMISSIBLE RANGES, AND RE-BALANCING.**

The strategic asset mix targets for the Long Term Investment Fund shall be approved by the IEEE Board of Directors upon the advice of the Investment Committee. Appendix B contains the current strategic asset allocation and permissible ranges for the Long Term Investment Fund.

The Long Term Investment Fund should be diversified among multiple asset classes. Staff will monitor external manager compliance with the asset mix ranges on a monthly basis.

In the event that a Manager exceeds the asset class ranges as outlined in the Guidelines, Staff will advise the Manager to take corrective action. If the Manager feels that there is just cause for staying outside the Guidelines, Staff will report same to the Investment Committee Chair, who will then recommend if remedial action, including a conference call with the Investment Committee, is necessary. (Investment Guidelines & Objectives - Investment Fund)

The Operational Cash Fund shall be invested in cash equivalent investments that incur no risk of capital loss - as approved by the IEE Board of Directors based on the recommendation of the Investment Committee. (Appendix B).

#### **IOM.5 - ASSET QUALITY, ASSET DIVERSIFICATION, INVESTMENT RESTRICTIONS**

*The following is a summary of the permitted investments and constraints as approved by the IEE Investment Committee in March 2007.*

- a) Investments shall be limited to readily marketable securities. There shall be no SEC unregistered securities, private placement except those classified as 144(a), venture capital, or investments in real or personal property.*
- b) There shall be no leverage used in the Fund.*
- c) No purchases shall be made in securities issued by the investment manager or any of its affiliates.*
- d) All money market securities shall have a rating of "A1" or "P1" or equivalent at the time of purchase.*
- e) No equity securities of a single issuer, or its affiliates, shall comprise more than 5% of the equity portion of any investment manager.*
- f) Equity holdings in American Depository Receipts (ADR's) and other U.S. dollar denominated foreign securities, listed on U.S. exchanges or on NASDAQ, must not exceed 20% of the portfolio, measured at market value.*
- g) All equity portfolios are to be fully invested at all times, with Cash and Cash Equivalents not to exceed 5% of the total market value of the account. This maximum of 5% may be temporarily (not to exceed 30 calendar days) exceeded as a result of a sale of securities, or when newly allocated funds are received into the account. The Investment Managers cannot exceed these guidelines, except as noted above, without the prior written approval of an authorized IEE representative.*
- h) IEE may invest in commingled, pooled or mutual funds. Investments in commingled, pooled or mutual funds are governed by the guidelines, prospectus or characteristics of the fund. The investment guidelines contained herein should be interpreted as manager expectations by IEE. (Investment Guidelines and Objectives - Investment Fund).*

#### **IOM.6 - SAFEKEEPING AND CUSTODY**

To safeguard the investment assets of the IEE, the investments shall be held in custody at a bank or financial institution approved by the IEE Board of Directors.

#### **IOM.7 - MONITORING AND REPORTING**

*Reports on investments in the IEE Investment Fund shall be provided to the appropriate IEE Organizational Units in a format and on a schedule approved by the IEE Finance Committee. (Policy 11.2.D)*

- 1. Internal – Monthly reports on the performance of the IEE Investment Fund shall be provided by the IEE Treasury Department to the participating IEE units.*

2. ***External – Monthly and quarterly investment reports shall be provided to the Investment Committee and to the IEEF investment performance measurement consultant.***
3. ***Reports of IEEF Investment Fund performance shall include the expenses of the Fund, including both the internal and external expenses, the expense ratio, and the gains or losses after the expenses are deducted from the assets. The expenses charged to infrastructure costs shall also be included in the report. (FOM 2.D.)***
4. Reports shall include: a) the return on the Long Term Investment Fund, b) the returns on the Operational Cash Fund, c) the return on the total Investment Fund and d) the effect of the IEEF Investment Fund on the IEEF's reserves. The effect of the IEEF Investment Fund on the IEEF's reserves = [dollar amount of the returns on the Long Term Investment Fund + the dollar amount of the returns on the Operational Cash Fund] divided by the dollar amount of the net assets of the IEEF.

The custodian calculates investment performance each month. The consultant shall independently provide the Investment Committee with quarterly reports on the performance of the Investment Fund. Both these calculations are before the deduction of fees and expenses. The bank's calculation shall be the basis for the performance reporting to the organizational units. Staff shall adjust these calculations to include the fees and expenses and shall report the net investment performance to the organizational units.

#### **IOM.8 - CONFLICT OF INTEREST POLICY**

***A. Definition. Conflict of interest is defined as any situation in which a member's decisions or votes could substantially and directly affect the member's profession, personal, financial or business interests.***

***B. Responsibility. It is the responsibility of all IEEF members in any elected, appointed, or other decision-making authority to determine if a real or perceived conflict of interest may exist. Any such recognized conflict shall be disclosed in writing immediately to the person in charge of the activity (or the next higher authority if the member is in charge) who, after consultation with other individuals in the activity, shall advise the member of the proper course of action and cause a notation of the action to be entered in the activity's record. A copy of the disclosure statement shall be reviewed by the Audit Committee.***

***C. Conflict of Interest Disclosure Statement. IEEF members or non-members in an elected or appointed position and volunteers, editors and others involved in making procurement decisions or other activities that could represent a potential conflict of interest as determined by the IEEF Audit Committee shall submit annually a completed Conflict of Interest Disclosure Statement to the Director, Operations Audit, at the Operations Center. Forms shall be on file within 30 days of assuming his/her position or, in the case of elected positions, within 30 days of acceptance of the nomination, or as otherwise determined by the IEEF Audit Committee. The IEEF staff shall notify every individual requested to file a Conflict of Interest of the applicable deadline. Failure to submit a form shall result in automatic removal from service on the committee, board or election slate, as the case may be. It shall be the responsibility of the Board or Committee Chair or, in the case of nominations, the Chair of the appropriate nominations committee to inform such individuals that they have been removed from service or an election slate, as the case may be, for failure to complete the form and to notify the IEEF Audit Committee of such action. The IEEF Audit Committee shall notify the IEEF Board of Directors of all individuals removed from service or an election slate, as the case may be, at the next regularly scheduled Board meeting.***

Staff who have authority to make or incur financial expenditures or who have other responsibilities that could represent a potential conflict of interest as determined by the Audit

**Committee shall submit a Conflict of Interest Disclosure Statement by 1 February of each year. (Policy 9.8)**

The following additional guidelines are intended to be more specific to the activities of the Investment Committee, and to strengthen and support the principles embodied in Policy 9.8, which is provided to Investment Committee members on an annual basis. These guidelines are a part of the Investment Committee Charter.

**Guidelines:**

- A. In all instances regarding potential conflicts of interest, materiality should be considered.**
- B. If a member has either a direct or indirect personal interest in any item under the purview of this committee, it should be disclosed to the next higher authority as appropriate.**
- C. In cases where new business may be awarded to a firm in which a member has either a direct or indirect personal interest, the member should excuse himself / herself from the meeting, and refrain from voting.**

To reference IEEE's more general statement related to conflicts of interest please see **IEEE Bylaw I-300.2. Conflict of Interest.**

**IOM.9 – INVESTMENT BUSINESS CONTINUITY PLAN (IBCP)**

***Investment Business Continuity Plan. If at the close of business in New York, New York on Friday of any calendar week, there is a 15% decline in the value of IEEE's investment assets, which includes the Long Term Investment Fund, and the Operational Cash Fund, as well as the Defined Benefit Plan assets from the highest amount reached in the previous thirty six month-end period, then the Finance Committee and the Investment Committee, along with the IEEE President, Treasurer, appropriate staff, and other key participants designated by the President shall hold an emergency meeting to review whether the decline in the value of such assets, has major negative implications for the IEEE's near term (1 to 3 years) business operations. Discussion topics shall include, but not be limited to, (1) whether the level of the Operational Cash Fund is sufficient for any changed business or investment conditions affecting the IEEE, (2) whether the IEEE's short-term investments, including the assets in the Operational Cash Fund, are liquid and reasonably accessible, and (3) whether IEEE's investment assets should continue to be invested in a manner consistent with the most recently approved investment decisions.***

***If a decline in the value of IEEE's investment assets because of deterioration in the investment and financial markets exceeds the 25% range from the highest amount reached in the previous thirty six month-end period, then the IEEE President, IEEE Treasurer, and Chair of the Investment Committee shall call a meeting of the Investment Business Continuity Plan Advisory Committee (IBCPAC). The IBCPAC shall meet only when the financial situation as described has occurred. Members of the IBCPAC shall include the IEEE President, who shall be Chair, IEEE President-Elect, IEEE Past President, IEEE Treasurer, and all IEEE Directors then currently serving as members of the Investment Committee and the IEEE Past Treasurer.***

***Any recommendations by the IBCPAC shall be reported to the IEEE Board of Directors within 24 hours of the meeting. When warranted a special meeting of the IEEE Board of Directors may be called in accordance with IEEE Bylaw I-301.5.***

***The IEEE Treasurer and the Chair of the Investment Committee may invite members of the Finance Committee and the Investment Committee to participate at these IBCP meetings. Further meetings of the IBCPAC during any one-year period shall not be required unless the investment assets further decline in value by an increment of 10% since the last IBCP-triggered meeting, but a***

**meeting may be called at any time at the discretion of the IEEE President, or IEEE Treasurer. (Policy 11.3.A)**

## **REFERENCES**

The IEEE Bylaws, IEEE Policies, Finance Operations Manual in .PDF format, Investment Operations Manual in .PDF format are available on the IEEE website and accessible at <http://www.ieee.org/portal/pages/iportals/aboutus/whatis/index.html>

Consumer Price Index (CPI), <http://www.bls.gov/cpi/home.htm>

## **Appendix A Spending Rule**

The spending rate assumed for the Spending Rule shall be expressed as a percentage of the average of the investable assets at the end of the preceding three calendar years. The spending rate is currently set at 4.5%. The required rate of return is equal to IEEE's expected spending rate plus the anticipated rate of inflation. The rate of return shall be the net return, i.e., after the fees and expenses are deducted. The recommended minimum goal is to have IEEE Reserves at least equal to one half of the total budgeted yearly expenditures. (FOM 4.C). When Reserves are below the recommended minimum goal, spending should be curtailed.

## **Appendix B Strategic Asset Allocation**

The strategic asset allocation mix targets for the Long Term Investment Fund are as follows:

Asset Class	Neutral Point	Ranges	Benchmark
U.S. Equities Large Cap	40%	55-25%	Russell 3000
U.S. Equities Small Cap	7%	5-10%	Russell 3000
Non U.S. Equities	18%	15-25%	MSCI ACWI ex U.S.
U. S. Fixed Income	35%	30-40%	Lehman Aggregate

Approved by the Executive Committee in May, 1998; re-confirmed in November 2002; re-confirmed for the "reserve" portion at the June 2003 Board meeting. Changed by the Board of Directors in June 2006.

As of August 2003, the Investment Committee recommended that the Operational Cash Fund be invested in a money market fund.

## Appendix C Glossary

Following is a glossary of some of the common terms related to the current IEEE Investment Management Program:

**Active Management.** A process whereby securities held in an investment portfolio are frequently examined and traded as conditions change, presenting new market opportunities.

**American Depository Receipts (ADRs)** A stock representing a specified number of shares in a foreign corporation. ADRs are bought and sold in the American markets just like regular stocks. An ADR is issued by a U.S. Bank, consisting of a bundle of shares of a foreign corporation that are being held in custody overseas. ADRs are listed on either the NYSE, AMEX, or NASDAQ

**Annualize.** To convert to an annual basis. For example, if a fund earns 1% in a month, it would earn 12% on an annualized basis, by multiplying the monthly return by 12.

**Annual return.** TOTAL RETURN per year from an investment, including dividends or interest and capital gains or losses but excluding commissions and other transactions costs and taxes. A *compound annual return* represents the annual rate at which money would have to compound to reach the cumulative figure resulting from annual total returns.

**Appreciation.** The increase in an asset's value from one reporting period to another or the date of purchase.

**Asset Allocation.** Apportioning of investment funds among categories of assets, such as between cash, stocks, and bonds.

**Basis point.** A unit equal to 1/100 of one percent. There are 100 basis points in each percentage point.

**Benchmark.** An index derived from database information which allows for comparative performance evaluation within an asset class. For example, a U.S. Equity portfolio may be evaluated against the S&P 500 Index.

**Capital gain.** The amount by which the net proceeds from resale of a capital item exceeds the book value of the asset.

**Cash and Cash Equivalents.** Paper currency and coins, negotiable money orders and checks, and bank balances and instruments or investment of such high liquidity and safety that they are virtually as good as cash. The Financial Accounting Standards Board (FASB) defines cash equivalents as any highly liquid security with a known market value and a maturity, when acquired, of less than three months.

**CPI (Consumer Price Index).** An indicator of the general level of prices. It attempts to compare the cost of purchasing the market basket bought by a typical consumer during a specific period with the cost of purchasing the same market basket during an earlier period.

**Credit Quality.** A measurement of a company's ability to repay a debt obligation. This measurement helps an investor to understand an issuer's ability to make timely interest payments and repay the loan principal upon maturity. Measurement is usually based on ratings from agencies such as Moody's and Standard & Poor's. Each agency has its own system of rating the degree of short- and long-term **credit risk** associated with a particular company or security (e.g., S & P ratings of AAA, AA, A). Generally, the higher the credit quality, the lower the interest rate paid by the issuer because the risk of default is lower. See Appendix B for a fuller explanation of the various debt ratings.

**Credit Risk.** Refers to the risk that the issuer or backer will default in the payment of interest and/or principal on a security.

**Current yield.** Annual income divided by the current price of the security; annual return.

**Custodian.** A financial institution that physically holds and safeguards the security certificates, or other assets of a customer. Custodians often act as intermediaries between the investment purchaser and seller, and provide a number of services including record keeping and settlement of trades.

**Diversification.** The spreading of risk by dividing an investment portfolio into multiple categories of instrument types by sector, maturity and quality rating (e.g., stocks, bonds, and money market funds).

**Duration.** A measure of the price sensitivity of a bond to changes in interest rates. Duration is the average time, in years, to the receipt of all cash flows from a debt security. These cash flows are weighted by their relative value.

**EAFE.** Acronym for the *Europe and Australasia, Far East* equity index calculated by Morgan Stanley Capital International (MSCI) group.

**Emerging Markets.** Capital markets, usually stock markets that are relatively new and underdeveloped. Usually located in countries with lower per capital incomes compared to the more developed Western economies. Although the definition varies from institution, countries such as Mexico, Brazil, Chile, Thailand, Russia, the Philippines, etc. are usually included. One widely used index is the *Emerging Markets Free (EMF) Index* by Morgan Stanley Capital International.

**Fiduciary.** The designation of a person who holds something in trust for another. It defines the level of responsibility of trustees, advisers, managers and consultants who act in a co-fiduciary capacity to their institutional clients. ERISA defines a fiduciary as any person who: (1) exercises any discretionary authority or control over a plan's management or disposition of its assets; (2) renders investment advice for a fee or other compensation with respect to plan funds or property; or (3) has any discretionary authority or responsibility in a plan's administration.

**Futures.** An agreement to buy or sell a specified amount of a commodity or financial instrument at a particular price on a stipulated future date.

**GAAP (Generally Accepted Accounting Principles).** Accounting guidelines established by the Financial Accounting Standards Board (FASB).

**Index.** Composite measure of returns for securities in a specific market or market sector. Various benchmarks to measure a portfolio's performance. Each is composed of a group of assets that have a common quality or purpose, and are intended to represent that sector of the market that has those similar qualities.

**Interest Rate Risk.** The risk that market value will fall due to changes in general interest rates. This could cause an investment in a fixed-income security to increase or decrease in value inversely to the change in interest rates.

**Investment.** The outlay of money usually for income or profit. Also, property or another possession acquired for future financial return or benefit. The IEEE's investments at year-end are the amount shown on the audited financial statements.

**Investment Time Horizon.** The length of time a sum of money is expected to be invested. An organization's investment horizon depends on when and how much money will be needed, and the horizon influences the optimal investment strategy. In general, the shorter the investor's horizon, the less risk the investor should be willing to accept.

**Leverage.** Any process that compounds a risk. More specifically, it is any process that increases exposure to a source of risk. Derivative instruments are effective tools for leveraging a portfolio, because they provide exposure to an underlying security for little or no capital investment. Purchasing securities with borrowed funds is another means of leveraging a portfolio. The use of debt or debt-like instruments to enhance the financial position is also leverage. In investments, it is a means of enhancing return or value without increasing the equity position. Buying securities on margin is an example of leverage with borrowed money. If the investment makes a higher return than the cost of the debt, then the leverage increases return. On the other hand, leverage increases risk, since if the investment makes less than the cost of the debt, returns are reduced or, at the extreme, the investment is wiped out.

**Liquidity.** The ability of an organization to convert assets into cash in a timely manner without a significant risk of loss. The amount of liquidity needed will vary based upon each organization's needs and may depend on the industry to which it belongs. For example, brokerage firms typically need more day-to-day liquidity than wholesale distribution companies.

**Long Term Investment Fund.** The portion of the IEEE Investment Fund.

**Market Risk.** The part of a security's total risk that is related to movements in the market portfolio and, therefore, cannot be diversified away. Also called systematic risk.

**Mark to Market.** The adjustment of the value of a security or portfolio to reflect current market values.

**Net return.** Returns to investors net of fees to advisers or managers

**Non-Reserves.** Funds available for investment in addition to the reserves. At year end, for example, the non-reserves consist primarily of prepaid subscriptions and membership dues.

**Operational Cash Fund.** The amount of funds the IEEE needs to meet its operational cash flow requirements. In a given year the balance of this Fund will fluctuate according to the Institute's operational cash flow needs and will be invested in cash equivalent investments that incur no risk of capital loss.

**Operational Risk.** The risk of losses resulting from inadequate or failed internal processes, people and systems or from external events.

**Performance Measurement.** The measurement of an investment's performance, in terms of individual assets, advisers/managers, or portfolio

**Relative Returns.** Returns that are measured against an established benchmark.

**Reserves.** The total accumulated surpluses of all IEEE Organizational Units. These are generally comprised of all the items in the IEEE Balance Sheet including Investments, Receivables, Inventory and Fixed Assets (PP&E). These items are offset by Liabilities including Payables, Deferred Income from Subscriptions and Membership Dues, prepaid by customers, members and other various Accrued Liabilities.

**Return.** The earnings (interest and dividends +/- capital appreciation) resulting from invested capital. This is often stated in percentage terms as the ratio of earnings to principal (adjusted for time).

**Risk Tolerance.** An organization's willingness to assume additional risk in order to increase the potential return on an investment.

**Total Return.** The combination of cash flow income received and appreciation or depreciation in price of the security over a period of time.

**Volatility.** The size and frequency of movement in the price or value of a security or other investment instrument.