# City of Naperville, Illinois Investment & Cash Management Policy

## I. SCOPE

This policy applies to the cash management and investment activities of the City of Naperville. With the exception of the police and fire pension funds or other financial assets bound by separate governance documents held by various fiscal agents and trustees, all funds of the city shall be administered in accordance with the provisions of this policy. The police and fire pension funds or other financial assets bound by separate governance documents held by fiscal agents and trustees, shall be administered according to the contractual and statutory requirements of the respective funds.

Except for cash in certain restricted and special funds, the City will consolidate cash balances from all funds to maximize investment earnings. Investment income will be allocated to the various funds based on their respective participation and in accordance with generally accepted accounting principles.

### II. DELEGATION OF AUTHORITY

Authority to manage the investment program is granted to the Director of Finance derived from the following: 30 ILCS 235 et. seq. The Director of Finance or designee establishes written procedures and internal controls for the operation of the investment program that is consistent with the investment policy. Procedures should include references to safekeeping, delivery vs. payment, investment accounting, repurchase agreements, wire transfer agreements, and collateral/depository agreements. No person may engage in an investment transaction except as provided under the terms of this policy and the procedures established by the Director of Finance. The Director of Finance shall be responsible for all transactions undertaken and shall establish a system of controls to regulate the activities of subordinate officials, including outside investment managers. Internal controls over investment transactions shall be reviewed by the City's internal auditor, for ultimate review by the City's external auditor, at least annually. Any exceptions noted by the internal or external auditor shall be reported to the Financial Advisory Board.

## III. OBJECTIVES

The primary objectives of investment activities shall be Safety, Liquidity, and Total Return:

## A. Safety

Safety of principal is the foremost objective of the investment program. Investments shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio. The objective will be to mitigate credit risk and interest rate risk.

#### 1. Credit Risk

The City will minimize credit risk, the risk of loss due to the failure of the security issuer or backer by:

- a. Investing City assets in the safest types of securities; as defined in *Section V. A. Permissible Investments*
- b. Pre-qualifying the financial institutions, brokers, intermediaries and advisers with which the City will do business,
- c. Diversifying the investment portfolio so potential losses on individual securities will be minimized.

### 2. Interest Rate Risk

The City will minimize the risk that the market value of the securities in the portfolio will fall due to changes in general interest rates by:

- a. Structuring the investment portfolio so that securities mature to meet cash requirements for ongoing operations, thereby avoiding the need to sell securities on the open market prior to maturity,
- b. Investing operating funds primarily in shorter-term securities or investment pools.

## **B.** Liquidity

The investment portfolio shall remain liquid to meet all operating requirements that may be reasonably anticipated. This is accomplished by structuring the portfolio so that securities mature concurrent with cash needs to meet anticipated demands. A portion of the portfolio also may be placed in local government investment pools which offer same-day liquidity for short-term funds.

### C. Total Return

The investment portfolio shall be designed with the objective of attaining a market rate of return throughout budgetary and economic cycles, taking into account the investment risk constraints and liquidity needs. The core of investments is limited to relatively low risk securities in anticipation of earning a fair return relative to the risk being assumed.

## IV. PRUDENCE

The standard of prudence to be used by investment officials shall be the "prudent person," which states, "Investments shall be made with judgment and care, under circumstances then prevailing, which persons of prudence, discretion and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be

derived" and shall be applied in the context of managing the entire portfolio.

Investment officers acting in accordance with written procedures and exercising due diligence shall be relieved of personal responsibility for an individual security's credit risk or market price changes, provided deviations from expectations are reported in a timely fashion and appropriate action is taken to control adverse developments.

### V. INVESTMENT MANAGER INVESTMENT GUIDELINES:

### A. Permissible Investments:

Pursuant to home rule authority, below is a summary of acceptable investments as determined by the Director of Finance in compliance with the applicable statutes:

- 1. Bonds, notes, certificates of indebtedness, treasury bills or other securities guaranteed by the full faith and credit of the United States of America, its agencies, or its instrumentalities.
- 2. Interest-bearing savings accounts, interest-bearing certificates of deposit or interest-bearing time deposits or any other investments that are direct obligations of any local banks.
- 3. Interest bearing bonds of any county, township, city, village, incorporated town, municipal corporation, or school district, of the State of Illinois, of any other state, or of any political subdivision or agency of the State of Illinois or of any other state, whether the interest earned thereon is taxable or tax-exempt under federal law. The bonds shall be owned in the name of the municipality and shall be rated at the time of purchase within the 2 highest general classifications established by the following rating agencies: Moody's Investors Service, Standard & Poor's, and Fitch are allowed so long as they make up no more than 35% of the total portfolio at the time of the purchase.
- 4. Commercial paper with a maturity of no longer than 270 days and must have a minimum rating of A 1, P-1, or F-1 by at least two of the following rating agencies: Moody's Investors Service, Standard & Poor's, and Fitch. In the event that the rating assigned by the rating agencies falls below the required level as stated above, the City or its investment agent shall take steps to preserve the capital of the investment.
- 5. Securities legally issued by state or federal savings and loan associations which are insured by the F.D.I.C.
- 6. Money-market mutual funds registered under the amended Investment Company Act of 1940 provided that the portfolio is limited to bonds, notes, certificates of indebtedness, treasury bills, or other securities

- which are guaranteed by the full faith and credit of the United States of America, its agencies, and its instrumentalities or agreements to repurchase these same types of obligations under 30 ILCS 235 et seq.
- 7. Repurchase Agreements through any bank or other financial institution, or a regional investment pool, or the State of Illinois Treasurers Investment Pool. (Physical possession of the collateral security shall be obtained or a safekeeping receipt describing the collateral from the safekeeping bank shall be received.)
- 8. Non-agency bonds defined as loans with balances or credit underwriting standards that may or may not fall within the limits set by FHFA and do not qualify as collateral for securities that are issued by Ginnie Mae, Fannie Mae or Freddie Mac, and are sponsored by private companies other than government sponsored enterprises. Such bonds may make up no more than 10% of the total portfolio at any time.
- 9. Collateralized Mortgage Obligations (CMO) and Mortgage pass-throughs rated within the 2 highest general classifications established by the following rating agencies: Moody's Investors Service, Standard & Poor's, and Fitch are allowed so long as they make up no more than 35% of the total portfolio at the time of purchase. Leveraged, interest only, principal only, and companion tranche CMO's are strictly prohibited from purchase.
- 10. Commercial Mortgage-Backed Securities ("CMBS") rated within the 2 highest general classifications established by the following rating agencies: Moody's Investors Service, Standard & Poor's, and Fitch are allowed so long as they make up no more than 10% of the total portfolio at any time.
- 11. Investment Grade Corporate Bonds defined as any bond rated BBB or better by Standard & Poor's or an equivalent grade rating from Moody's Investors Services or Fitch. Such bonds may make up no more than 30% of the total portfolio at any time.
- 12. Bank Loans and/or securitized pools of bank loans, otherwise know Collateralized Loan Obligations ("CLOs"). Such bonds may make up no more than 10% of the total portfolio at any time.
- 13. Asset-backed securities (ABS) whose underlying collateral consists of loans, leases or receivables, including but not limited to auto loans/leases, credit card receivables, student loans, equipment loans/leases, or home-equity loans. Such ABS may make up no more than 10% of the total portfolio at any time.

- 14. Any open-end mutual fund whose Principal Investment Strategy is investing in a diversified pool of fixed income instruments.
- 15. Local government investment pools rated AA or better by Standard & Poor's or an equivalent grade rating from Moody's Investors Services or Fitch. (Referred to Illinois Fund) Permissible pools include: Illinois Trust, The Illinois Funds, or any other investment pool authorized under the statutes so long as they are approved by the Director of Finance
- 16. No single issuer, except those guaranteed by the United States government or its agencies, may exceed 5% of the fund's total market value.
- 17. Other types of investments may be added to this list as changes to the statutes governing such investments are revised.

#### **B.** Portfolio Duration:

The investment manager shall be responsible for selecting the maturities of individual fixed income securities within the account. Effective or modified duration of the account should, under normal circumstances, not deviate from the duration of the benchmark by more than  $\pm 1.20\%$  of the benchmark duration.

#### C. Use of Derivatives:

Agency structured notes, index amortizing notes, and other derivative securities, except the CMO's and mortgage pass-throughs described in section A.9, are specifically prohibited under this policy. At no time may any derivative be utilized to leverage the portfolio for speculation.

### **D.** Transactions:

Fixed income security purchase and sale transactions must be executed on a "best effort" basis with brokers selected by the investment manager. The manager's selection of a broker or dealer shall take into account such relevant factors as: (a) price and commission; (b) the broker's facilities, reliability, and financial responsibility; and (c) the ability of the broker to effect securities transactions, particularly with regard to such aspects thereof as timing, order size, and execution of orders. The manager shall make all reasonable efforts to obtain the most competitive rate.

## **E.** Subsequent Events:

If at any time, due to major fluctuations in market prices, abnormal market conditions, or any other reason outside the control of the investment manager, there shall be a deviation from the specific guidelines described herein, the investment manager shall not be in breach of these guidelines so long as it takes such actions over such period of time as the investment manager determines are prudent and in the interests of the City to return the investments to compliance with these guidelines. It is the duty of each investment manager to notify the

Director of Finance, Financial Advisory Board, and the investment consultant in writing whenever such deviations occur and when they believe the current policy should be altered.

### VI. CONTRACTS WITH FINANCIAL INSTITUTIONS

All depositories of the City of Naperville, holding funds managed by City staff, including the "operating bank" shall execute a contract with the City of Naperville for an initial term not to exceed five years. The contract may include up to a total of four extension years for consideration. Contracts shall designate the requirements of serving as a depository for the City, including collateralization of City funds invested at such depository and the related safekeeping requirements of the pledged securities. The City shall initiate a Request for Proposal process to identify and support a recommendation to the City Council to award the City's contract for banking and depository services.

Such financial institutions shall provide such financial data to the Director of Finance as may be required by the City to evaluate the financial condition of the institution. Such data will be in the form of audited financial statements, Federal Deposit Insurance Corporation regulatory reports, and shall be provided at least annually by the financial institutions to the Director of Finance. Any refusal to provide such information to the City may cause termination of the depository contract with such institution.

**A. Safekeeping of Securities** - Collateral for certificates of deposits and repurchase agreements will be registered in the City's name. The Director of Finance will hold all safekeeping receipts of pledged securities used as collateral for certificates of deposits and repurchase agreements. A third party institution will hold pledged securities in trust on behalf of the City's financial institution.

Safekeeping receipts of pledged securities may be "faxed" or e-mailed to the City Finance Department in order to accommodate timely and legal investment transactions. The financial institution will mail the original safekeeping receipt of pledged securities within two business days after the facsimile is sent.

**Collateralization** - The City requires full collateralization of all City investments in accordance with the City's collateral agreement. The City will allow the use of FDIC coverage as part of the calculation of full collateralization. Bank Qualification - To be considered as a depository for investments of City idle funds, the bank must be in compliance with Federal Regulatory Standards for a "well capitalized institution". Reports shall be provided to the Director of Finance on a quarterly basis.

B. Funds managed by outside money managers will be held in trust for the City by a custodial bank under separate contract and will be administered in concurrence with the City's Investment and Cash Management Policy.

The Director of Finance or designee will monitor the adequacy of collateralization periodically, but not less often than monthly. The City requires monthly reports with market values of pledged securities from all financial institutions with which the City has investments requiring collateral to be pledged.

## VII. INVESTMENT LIQUIDITY AND DURATION

- **A.** The City's demand for cash shall be projected using reliable cash forecasting techniques. To ensure liquidity, the appropriate maturity date and investment option available will be chosen. The City's investment portfolio can be divided into four categories:
  - 1. Sweep funds,
  - 2. Operating funds,
  - 3. Bond Funds, and
  - 4. Other Reserve Funds.
- **B.** The liquidity requirement for each category will vary with the final maturity that matches the need for use of the funds.
  - 1. Sweep funds: These funds primarily consist of City-managed Investments which are intended to cover day-to-day operating expenses of the City. All funds are to be held in interest bearing overnight securities, which may include:
    - a. Repurchase Agreements The maximum maturity for repurchase agreements shall not exceed 330 days. The Repurchase Agreements shall be collateralized with approved securities in accordance with this policy. Repurchase agreements will normally be used when deemed appropriate to achieve the highest return while protecting principal of the portfolio.
    - b. Money market mutual funds that meet the criteria of the State of Illinois investment statutes.
  - 2. Operating Funds: All operating funds are to be held in an investment portfolio with a weighted average duration no more than four (4) years. The Financial Advisory Board, upon the advice and counsel of the City's investment consultant, will monitor the duration level and recommend changes as appropriate.
  - 3. Bond Funds: No investment shall have a maturity exceeding the final principal and/or interest payment date.

### VIII. PROCEDURES FOR BIDS AND OFFERS

Investment bids (solicitation of *offers* from brokers or financial institutions) will be taken by the Director of Finance or designee for funds managed by the City at times when investment of idle funds would be in the best interest of the City or as required by federal regulations regarding arbitrage rebate on bond proceeds. Such bids requests will be made orally and confirmed in writing with the investment instrument and related collateral being forwarded to the City no later than 48 hours after bids are taken.

## IX. DAILY CASH MANAGEMENT PRACTICES AND POLICIES

It is the policy of the City of Naperville Finance Department that all departments collecting cash receipts, whether in cash or other forms of payment, must turn in such receipts to the Finance Department on a daily basis together with records required to verify the accuracy of such collections. No receipts will be held overnight at any location for any reason, except for those departments accepting payments on weekends or holidays. In those instances, all receipts held overnight shall be securely stored and turned in to the Finance Department on the next business day. All receipts shall be deposited at the bank daily by the Finance Department. Checks are scanned delivered by courier daily to the bank for electronic deposit daily; cash is securely stored in the City Hall vault and delivered by an employee designated by the Director of Finance secured courier to the bank twice a week. Investment of any idle funds will be made in accordance with Section V. of this policy. Any violation of this section of this policy by any employee of the City may result in disciplinary action.

## X. INTERNAL CONTROLS

The Director of Finance is responsible for establishing and maintaining an internal control structure designed to ensure that the assets of the City are protected from loss, theft, or misuse. The internal control structure shall be designed to provide reasonable assurance that these objectives are met. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived, and the valuation of costs and benefits requires estimates and judgments by management.

## XI. MARKING TO MARKET

The market value of the portfolio shall be calculated at least quarterly and a statement of the market value of the portfolio shall be issued at least quarterly. In defining market value, the City will follow applicable GASB pronouncements.

## XII. REVIEW OF INVESTMENT PORTFOLIO

The Director of Finance or designee shall review the investment portfolio at least quarterly. Such review shall examine the general performance of the portfolio, as well as determining that current levels of safety, liquidity, rate of return and diversification meet or exceed minimum levels contained herein. A series of appropriate benchmarks

shall be established against which portfolio performance shall be compared on a regular basis.

The Director of Finance or designee has authority to give specific direction to the money managers regarding the need to add funds to or remove from the manager's portfolio, based upon cash flow needs of the City, and the authority to terminate a money manager at any time.

### XIII. FINANCIAL ADVISORY BOARD

- **A.** The Director of Finance or designee shall provide a copy of the quarterly investment report to the Financial Advisory Board. The report will include but not be limited to the following:
  - 1. The market value of all securities
  - 2. The market value of the underlying collateral for repurchase agreements and certificates of deposit
  - 3. Listing of individual securities held at the end of the reporting period
  - 4. Realized and unrealized gains or losses and the cost and market value of securities
  - 5. Average weighted yield to maturity of portfolio on investments as compared to applicable benchmarks
  - 6. Listing of investment by maturity date
  - 7. Percentage of the total portfolio which each type of investment represents
- **B.** In addition, an approved listing of the City's authorized financial institutions shall be provided to the Board on a quarterly basis. After the quarterly review of the investment report by the Financial Advisory Board, the Director of Finance will submit the report to the City Council.
- **C.** The Financial Advisory Board shall review this policy and recommend any proposed changes to the City Council every three years.

### XIV. ETHICS AND CONFLICTS OF INTEREST

The City Manager, Director of Finance, Financial Reporting Team Leader, or other financial officer employed by the City shall refrain from personal business activity that could conflict with the proper execution and management of the investment program or could impair their ability to make impartial decisions. Prohibited activities include, but are not limited to, the following:

- **A.** Having any interest, directly or indirectly, in any institution in which investments are permitted, except for a market rate mortgage or loan on his or her personal residence or personal property.
- **B.** Having any interest, directly or indirectly, with the management of any institution or company in which the City of Naperville has a depository relationship or investment management contract.
- C. Receiving compensation of any type, including preferred treatment from any institution or company with which the City has a depository relationship or investment management contract.

### XV. CITY-MANAGED INVESTMENTS

The objective with all investments is to maximize returns. In order to maximize returns, funds should be kept at the money managers and only a minimum amount of cash should be on hand. The minimum amount of cash will be used to provide adequate short-term funding for payroll and accounts payable, and to generate interest necessary to offset depository banking fees. Generally, cash on hand shall not exceed 10% of the annual City budget. The Director of Finance, or designee, shall monitor cash flow to determine the appropriate amount of cash on hand. At the conclusion of each fiscal year, any cash in excess of the minimum amount needed shall be transferred to the money managers. The maximum that will be held is \$22 million, unless a higher balance is required to fully benefit from the available earning credit rate. The investment of certain funds may be prohibited by rule or law (ex. motor fuel tax and grants) and shall be excluded from this policy. Any cash held by the City shall be retained in an account earning interest or interest credits that offset depository banking fees.

## XVI. SEPARATE PROVISIONS OF POLICY AND CONFLICTS WITH ILLINOIS LAWS

The above policies shall remain in full force and effect until revoked by the City Council. If, after adoption of this policy, there are any conflicts of the policy with Illinois laws and/or statutes, current law shall dictate.

### **GLOSSARY OF TERMS**

**Accrued Interest** – The accumulated interest due on a bond as of the last interest payment made by the issuer.

**Agency** – A debt security issued by a federal or federally sponsored agency rated within the 2 highest general classifications established by the following rating agencies: Moody's Investors Service, Standard & Poor's, and Fitch. Federal agencies are backed by the full faith and credit of the U. S. Government. Federally sponsored agencies (FSAs) are backed by each particular agency with a market perception that there is an implicit government guarantee. Permissible federal agencies include: Federal National Mortgage Association, Federal Housing Administration (FHA), Public Housing Boards (HUD), Federal Farm Credit Banks, Farmers Home Administration, Federal Land Banks, Federal Home Loan Banks, Federal Loan Home Mortgage Corporation (Freddie Mac), Student Loan Mortgage Corporation, and other agencies authorized under the statutes so long as they are approved by the Director of Finance.

**Amortization** - the process of paying the principal amount of an issue of bonds by periodic payments either directly to bondholders or to a sinking fund for the benefit of bondholders.

**Arbitrage** - Usually refers to the difference between the interest paid on the tax-exempt securities and the interest earned by investing the proceeds in higher yielding taxable securities. Internal Revenue Service regulations govern arbitrage (reference I.R.S. Reg. 1.103-13 through 1.103-15).

**Arbitrage Bonds** - Bonds which are deemed by the I.R.S. to violate federal arbitrage regulations. The interest on such bonds becomes taxable and the bondholders must include this interest as part of gross income for federal income tax purposes (I.R.S. Reg. 1.103-13 through 1.103-15).

**Assessed Value** - An annual determination of the just or fair market value of property for purposes of ad valorem taxation.

**Average Life** – The average length of time that issues of serial bonds and/or term bonds with a mandatory sinking fund feature is expected to be outstanding.

**Basis Point** - 1/100 of one percent.

**Bid** - The indicated price at which a buyer is willing to purchase a security or commodity.

**Bond** - Written evidence of the issuer's obligation to repay a specified principal amount on a date certain, together with interest at a stated rate, or according to a formula for determining that rate.

**Bond Anticipation Notes (BANS)** - Short-term interest bearing notes issued by a government in anticipation of bonds to be issued at a later date. The notes are retired from proceeds of the bond issue to which they are related.

**Callable Bond** - A bond which permits or requires the issuer to redeem the obligation before the stated maturity date at a specified price, the call price, usually at or above par value.

**Cash Sale/Purchase** – A transaction which calls for delivery and payment of securities on the same day that the transaction is initiated.

**Collateralization** – Process by which a borrower pledges securities, property, or other deposits for the purpose of securing the repayment of a loan and/or security.

**Commercial Paper** - Very short-term, unsecured promissory notes issued in either registered or bearer form, and usually backed by a line of credit with a bank.

**Convexity** – A measure of a bond's price sensitivity to changing interest rates. A high convexity indicates greater sensitivity of a bond's price to interest rate changes.

**Coupon Rate** - The annual rate of interest payable on a coupon bond (a bearer bond or bond registered as to principal only, carrying coupons evidencing future interest payments), expressed as a percentage of the principal amount.

**Credit Risk** – The risk to an investor that an issuer will default in the payment of interest and/or principal on a security.

**Current Yield (Current Return)** – A yield calculation determined by dividing the annual interest received on a security by the current market price of that security.

**Derivative Security** – Financial instrument created from, or whose value depends upon, one or more underlying assets or indexes of asset values.

**Discount** -The amount by which the par value of a security exceeds the price paid for the security.

**Diversification** – A process of investing assets among a range of security types by sector, maturity, and quality rating.

**Duration** – A measure of the timing of the cash flows, such as the interest payments and the principal repayment, to be received from a given fixed income security. This calculation is based on three variables; term to maturity, coupon rate and yield to maturity. The duration of a security is a useful indicator of its price volatility for given changes in interest rates.

**Enterprise Funds** - Funds that are financed and operated in a manner similar to private business in that goods and services provided are financed primarily through user charges.

**Federal Funds (Fed Funds)** – Funds placed in Federal Reserve banks by depository institutions in excess of current reserve requirements. These depository institutions may lend to Fed Funds to each other overnight or on a longer basis. They may also transfer funds among

each other on a same-day basis through the Federal Reserve banking system. Fed funds are considered to be immediately available funds.

**Federal Funds Rate** – Interest rate charged by one institution lending federal funds to the other.

**Government Securities** – An obligation of the U.S. government, backed by the full faith and credit of the government. These securities are regarded as the highest quality of investment securities available in the U.S. securities market.

Interest Rate - See "Coupon Rate."

**Interest Rate Risk** – The risk associated with declines or rises in interest rates which cause an investment in a fixed – income security to increase or decrease in value.

**Liquidity** – An asset that can be converted easily and quickly into cash.

**Local Government Investment Pool (LGIP)** – An investment by local governments in which their money is pooled as a method for managing local funds.

**Mark-to-Market** – The process whereby the value of a security is adjusted to reflect its current market value.

**Market Risk** – The risk that the value of a security will rise or decline as a result of changes in market conditions.

**Market Value –** Current market price of a security.

**Maturity** - The date upon which the principal of a municipal bond becomes due and payable to bondholders.

**Net Asset Value** – The market value of one share of an investment company, such as a mutual fund. This figure is calculated by totaling a fund's assets which includes securities, cash, and any accrued earnings, subtracting this from the fund's liabilities, and dividing this total by the number of shares outstanding.

**Net Interest Cost (NIC) -** The traditional method of calculating bids for new issues of municipal securities. The total dollar amount of interest over the life of the bonds is adjusted by the amount of premium or discount bid, and then reduced to an average annual rate. The other method is known as the true interest cost (see "true interest cost").

**Par Value or Face Amount** - In the case of bonds, the amount of principal which must be paid at maturity.

**Principal** - The face amount or par value of a bond or issue of bonds payable on stated dates of maturity.

**Prudent Person Rule** – An investment standard outlining the fiduciary responsibilities of public funds investors relating to investment practices.

**Ratings** - Evaluations of the credit quality of notes and bonds, usually made by independent rating services, which generally measure the probability of the timely repayment of principal and interest on municipal bonds. The only ratings that will be acceptable are from Moody's, Standard and Poor's and Fitch Investor Services.

**Repurchase Agreement** – An agreement of one party to sell securities at a specified price to a second party and a simultaneous agreement of the first party to repurchase the securities at a specified price or at a specified later date.

**Short-Term Debt -** Short-term debt is defined as any debt incurred whose final maturity is three years or less.

**Swap -** Trading one asset for another.

**Term Bonds** - Bonds coming due in a single maturity.

**Total Return** – The sum of all investment income plus changes in the capital value of the portfolio.

**Volatility** – A degree of fluctuation in the price and valuation of securities.

**Weighted Average Maturity (WAM)** – The average maturity of all the securities that comprise a portfolio.

**Yield** – The current rate of return on an investment security generally expressed as a percentage of the security's current price.

**Yield to Maturity** - The rate of return to the investor earned from payments of principal and interest, with interest compounded semiannually and assuming that interest paid is reinvested at the same rate.

**Zero Coupon Bond** - A bond which pays no interest, but is issued at a deep discount from par, appreciating to its full value at maturity.