

# City of McKinney, Texas

## INVESTMENT POLICY

### I. POLICY

It is the policy of the City of McKinney, Texas to invest public funds in a manner which will provide the optimum investment return with the maximum security while meeting the daily cash flow demands of the City and conforming to the statutes, rules and regulations governing the investment of public funds. This policy serves to satisfy the statutory requirements of defining and adopting a formal investment policy. The policy and strategy shall be reviewed by the Investment Committee and the City Council annually. Any modifications will be formally approved by the City Council. This investment policy, as approved, is in compliance with the provisions of the Public Funds Investment Act of the Texas Government Code Chapter 2256 as amended by H.B. 2226.

### II. SCOPE

This policy applies to all aspects of investing the financial assets of the City. These funds are accounted for in the City's Comprehensive Annual Financial Report and include: General Fund, Special Revenue Funds, Debt Service Funds, Capital Project Funds, Enterprise Funds, Trust and Agency Funds, and any new fund created by legislative body, unless specifically exempted or excluded. All funds will be pooled for investment purposes. The strategy developed for this pooled fund group will address the varying needs, goals, and objectives of each fund.

This policy shall not govern funds which are managed under separate investment programs in accordance with Section 2256.004 of the Public Fund investment act. Such funds currently include ~~Retirement/Pension~~ the Other Post-Employment Benefit Fund and the Deferred Compensation Fund.

### III. INVESTMENT OBJECTIVE AND STRATEGY

#### Objective

The primary objectives of the City of McKinney's investment activities, listed in order of priority, shall be as follows:

**Safety:** Safety of principal is the foremost objective of the investment program. Investments of the City shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio. Each investment transaction shall be conducted in a manner to control the risk of capital loss by investing in securities or other investments of high quality. All investment officers shall understand the suitability of investment to the financial requirements of the City. The objective will be to mitigate credit and interest risk.

- Credit Risk and Concentration of Credit Risk – The City will minimize credit risk, the risk of loss due to the failure of the issuer or backer of the investment, and concentration of credit risk, the risk of loss attributed to the magnitude of investment in a single issuer by:
  - Limiting investments to the safest types of investments
  - Pre-qualifying the financial institutions and broker/dealers with which the City will do business

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- Diversifying the investment portfolio so that potential losses on individual issuers will be minimized.
  - Monitoring credit rating changes in investments acquired with public funds and the liquidation of such investments consistent with the provision of Section 2256.021.
- Interest Rate Risk – the City will minimize the risk that the market value of investments in the portfolio will fall due to changes in general interest rates by limiting the maximum weighted average maturity of the investment portfolio to 730 days. The City will, in addition:
- Structure the investment portfolio so that investments mature to meet cash requirements for ongoing operations, thereby avoiding the need to liquidate investments prior to maturity.
  - Diversify maturities and staggering purchase dates to minimize the impact of market movements over time.

**Liquidity:** The City's investment portfolio will remain sufficiently liquid to enable the City to meet all operating requirements that might be reasonably anticipated. Liquidity shall be achieved by matching investment maturities with forecasted cash flow requirements and by investing in securities with active secondary markets. A portion of the portfolio also may be placed in money market mutual funds or local government investment pools which offer same-day liquidity for short-term funds.

**Yield:** The City's investment portfolio shall be designed with the objective of regularly exceeding the average rate of return on six-month U.S. Treasury Bills. The investment program shall seek to augment returns above this threshold consistent with risk limitations identified herein and prudent investment principles. Return on investment is of secondary importance compared to the safety and liquidity objectives described above.

**Strategy:** The City of McKinney maintains portfolios which utilize four specific investment strategy considerations designed to address the unique characteristics of the fund groups represented in the investment portfolios.

**Operating Funds:** Investment strategies for operating funds and commingled pools containing operating funds have as their primary objective to assure that anticipated cash flows are matched with adequate investment liquidity. The secondary objective is to create a portfolio structure which will experience minimal volatility during economic cycles. This may be accomplished by purchasing quality, short to medium term securities which will complement each other in a ladder structure. The dollar weighted average maturity of 730 days or less will be calculated using the stated final maturity dates of each security.

**Debt Service Funds:** Investment strategies for debt service funds shall have as the primary objective the assurance of investment liquidity adequate to cover the debt service obligation on the required payment date. Surplus funds outside the debt service dates will be invested according to the investment guidelines for operating funds.

**Debt Service Reserve Funds:** Funds for Debt Service Reserve should assure the ability to generate a dependable revenue stream from securities with a low degree of credit risk. Securities should be of high quality. Since reserve funds generally do not have a need for liquidity, they may invest in securities exceeding five years if the maturity of such investments is made to coincide as nearly as practicable with the expected use of the funds.

**Capital Projects and Special Purpose Funds:** Funds for capital projects or special purposes should allow for flexibility and unanticipated project outlays by having a portion of their

investments in highly liquid securities. The stated final maturity dates of securities held should not exceed the estimated project completion date.

#### IV. STANDARD OF CARE

##### **Prudence**

Investments shall be made with judgment and care, under circumstances then prevailing, which persons of prudence, discretion and intelligence exercise in 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.

The standard of prudence to be used by investment officers shall be “**prudent person**” standard and shall be applied in the context of managing an overall portfolio. Investment officers acting in accordance with written procedures and the investment policy 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. The governing body of the City of McKinney retains ultimate responsibility as fiduciaries of the assets of the City of McKinney.

##### **Ethics and Conflicts of Interest**

**Ethics:** All participants in the investment process shall seek to act responsibly as custodians of the public trust. Investment officers shall avoid any transaction that might impair public confidence in the City’s ability to govern effectively.

**Conflicts of Interest:** Officers and employees involved in the investment process shall refrain from personal business activity that could conflict with proper execution of investment programs, or which could impair their ability to make impartial investment decisions. Employees and investment officers shall disclose to the Texas Ethics Commission and the City Manager, and the City Manager discloses to the City Council if:

- a) The officer has a personal business relationship with a business organization offering to engage in an investment transaction with the City; or
- b) The officer is related within the second degree by affinity of consanguinity, as determined under Chapter 573 of the Texas Government Code, to an individual seeking to transact investment business with the City.

##### **Delegation of Authority**

**Investment Committee:** An Investment Committee, consisting of the City Manager, ~~Chief Financial Officer~~ ~~Director of Finance~~, Deputy / Assistant Finance Director, and at least two other members appointed by the City Manager, shall meet quarterly to determine general strategies and to monitor results. The Investment Committee shall include in its deliberations such topics as: performance reports, economic outlook, portfolio diversification, maturity structure, potential risk to the City’s funds, authorized brokers and dealers, and the target rate of return on the investment portfolio. The Committee will review and approve the list of authorized broker/dealers at least annually. Any two members of the Investment Committee may request a special meeting, and three members shall constitute a quorum. The Investment Committee shall establish its own rules of procedures.

**Investment Officer and Training:** Management responsibility for the investment program is hereby delegated to the ~~Director of Finance~~Chief Financial Officer, who shall establish written procedures for the operation of the investment program, consistent with this investment policy. Such procedures shall include explicit delegation of authority to persons responsible for investment transactions.

The ~~Director of Finance~~Chief Financial Officer, Deputy / Assistant Finance Director, Investment & Treasury Manager, and Accounting Manager, are hereby designated as "Investment Officers" pursuant to the Public Fund Investment Act Section 2256.005 subsection f. Authority granted to a person to invest the funds on behalf of the City shall remain in effect until rescinded by the City or until the person resigns from or is terminated by the City. 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~~Chief Financial Officer. The ~~Director of Finance~~Chief Financial Officer shall be responsible for all transactions undertaken and shall establish a system of controls to regulate the activities of subordinate officers. The City shall provide periodic training in investments for the investment personnel through courses and seminars offered by professional organizations and associations in order to insure the quality and capability of the City's investment personnel. Such training shall be a minimum of ten hours within 12 months after taking office or assuming duties and thereafter not less than once in a two year period that begins on the first day of the City's fiscal year and consists of the two consecutive fiscal years after that ~~date and date and~~ shall be sponsored by an independent source and approved by the City Investment Committee. Training must include education in investment controls, security risks, strategy risks, market risks, diversification of investment portfolio, and compliance with the Public Funds Investment Act.

#### **Internal Control**

The ~~Director of Finance~~Chief Financial Officer, or designee, shall establish and maintain a system of internal controls to ensure that the assets 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.

Accordingly, the investment officer shall establish a process for an annual independent review by an external auditor to assure compliance with policies and procedures. The internal controls shall address the following points:

- Control of collusion
- Separation of transaction authority from accounting and record keeping
- Custodial safekeeping
- Avoidance of physical delivery securities
- Clear delegation of authority to subordinate staff members
- Written confirmation of transactions for investments and wire transfers
- Development of a wire transfer agreement with the depository bank or third-party custodian.

A compliance audit will be performed annually as part of the annual audit to assure compliance with the Public Funds Investment Act and this policy.

#### **V. AUTHORIZED INVESTMENTS AND INVESTMENT PARAMETERS**

### **Active Portfolio Management**

The City intends to pursue an active versus a passive portfolio management philosophy. That is, securities may be sold before they mature if market conditions present an opportunity for the City to benefit from the trade.

### **Authorized Investments**

Assets of funds of City of McKinney may be invested in:

- A. US Treasury obligations with stated maturities not to exceed five (5) years and not to exceed 80% of the overall portfolio.
- B. Obligations of US Government agencies and instrumentalities with stated maturities not to exceed five (5) years and not to exceed 80% of the overall portfolio.
- C. Obligations of the States (other than Texas), agencies thereof, Counties, Cities, and other political subdivisions of any state having been rated as investment quality by a nationally recognized investment rating firm, and having received a rating of not less than "A" or its equivalent by at least one nationally recognized investment rating firm, with maturities not to exceed three (3) years and not to exceed 80% of the overall portfolio.
- D. Fully insured or collateralized certificates of deposit at commercial banks doing business in Texas or obtained through a broker that has a main or a branch office in this state and is on the qualified broker/dealer list approved by the governing body and meets specific registration requirements as stated in the Public Funds Investment Act. These instruments shall have stated maturities not to exceed five (5) years and not to exceed 20% of the overall portfolio. The bank/broker must contractually agree to place the funds in federally insured depository institutions in accordance with the conditions prescribed in Section 2256.010 (b) of the Public Funds Investment Act are authorized investments.
- E. Repurchase agreements and reverse repurchase agreements as defined by Public Fund Investment Act and secured by a combination of cash and collateralized by US Government Obligations and obligations of US Government agencies and instrumentalities, undertaken under an executed Master Repurchase Agreement with a primary dealer or a financial institution doing business in Texas and not to exceed six (6) months (except flex repurchase agreements for bond funds which may not extend past the expenditure plan of the bond funds). The portfolio may not contain more than 80% repurchase agreements. A signed copy of the City's Master Repurchase Agreement must be on file before the City will enter into any repurchase agreement or reverse repurchase agreement with an issuer.
- F. Investment Pools which invest in instruments and follow practices allowed by current law. A thorough investigation of the pool is required prior to investing, and on a continual basis. The City Council must approve a formal agreement to participate (by resolution) in each pool providing services to the City. The pool must be continuously rated no lower than AAA or AAA-m or at an equivalent rating by at least one nationally recognized rating service.

A public funds investment pool created to function as a money market mutual fund must mark its portfolio to market daily and, to the extent reasonably possible, stabilize at a \$1 net asset value. It must also maintain a maximum average dollar-weighted maturity that does not exceed 90 days. Any investment pool that does not meet the requirements of one that is created to function as a money market mutual fund, must maintain a maximum average dollar-weighted maturity that does not exceed 365 days (or 366 days in the case of a leap year) and must provide a fixed interest rate and fixed maturity term for each pool position. The pool can only use money market mutual funds whose authorized investments are

consistent with their own investment policy and authorized investments. The pool must provide monthly reports that contain:

- The types and percentage breakdown of securities in which the pool is invested;
- The current average dollar-weighted maturity, based on the stated maturity date of the pool;
- The current percentage of the pool's portfolio in investments that have stated maturities of more than one year;
- The book value versus the market value of the pool's portfolio, using amortized cost valuation;
- The size of the pool;
- The number of participants in the pool;
- The custodian bank that is safekeeping the assets of the pool;
- A listing of daily transaction activity of the entity participating in the pool;
- The yield and expense ratio of the pool;
- A statement on how yield is calculated
- Report yield in accordance with SEC regulations
- Disclose fee breakpoint or state the lowest possible level of return based on the smallest level of funds invested
- The portfolio managers of the pool; and
- Any changes or addenda to the offering circular.

Additionally, the pool must provide an annual audited financial statement and if the pool operates a website it must provide all information required in the offering circular 2256.016(b), monthly newsletter 2256.016(c)(2), and standardized SEC 7 day net yield 2256.016(f) on their website.

- G. Commercial paper as defined by the Public Funds Investment Act with stated maturities not to exceed 270 days and rated not less than A1/P1 or its equivalent by one nationally recognized rating agency plus fully secured by an irrevocable letter of credit issued by a domestic bank and not be exceed 20% of the overall portfolio.
- H. No-load money market mutual funds registered with and regulated by Securities Exchange Commission, which has a dollar-weighted average portfolio maturity of 90 days or less whose investment objectives includes the maintenance of a stable net asset value of \$1 for each share. Each fund must provide the City with a prospectus and other information required by federal law. The portfolio may not contain more than 20% of money market mutual funds.
- I. Obligations that are fully guaranteed or insured by the Federal Deposit Insurance Corporation or have the explicit full faith and credit of the United States as defined by the Public Funds Investment Act.

All prudent measures will be taken to liquidate an investment that is downgraded to less than the required minimum rating. The City is not required to liquidate investments that were authorized investments at the time of purchase.

Other types of investments which may become authorized through amendment to the Public Funds Investment Act will not be authorized investments until approved by City Council in amendment to this Policy.

### **Prohibited Investments**

The Investment Officer shall not knowingly permit City funds to be invested with any of the following investment instruments that are strictly prohibited:

- A. Obligations whose payment represents the coupon payments of the outstanding principal balance of the underlying mortgage-backed security collateral and pay no principal;
- B. Obligations whose payment represents the principal stream of cash flow from underlying mortgage-backed security collateral and bears no interest;
- C. Collateralized mortgage obligations that have a stated final maturity date of greater than 10 years;
- D. Collateralized mortgage obligations the interest rate of which is determined by an index that adjusts opposite to the changes in a market index; and
- E. Any other restricted instruments or limitations that involve outright speculation.

The practice of "leveraging" whereby funds are borrowed for the sole purpose of investing shall not be practiced.

### **Diversification**

The City of McKinney recognizes that investment risks can result from issuer defaults, market price changes or various technical complications leading to temporary illiquidity. Risk of issuer default is controlled by limiting investment to those instruments allowed by the Act, which are described herein. Risk of market price changes shall be controlled by avoiding over-concentration of assets in a specific maturity, specific issuer, or specific class of securities. Diversification limits are shown in the Authorized Investment Section above.

The Investment Committee shall conduct a quarterly review of these diversification guidelines and shall evaluate the probability of market and default risk in various investment sectors as part of its considerations.

### **Maximum Maturities**

To the extent possible, the City of McKinney will attempt to match its investments with anticipated cash flow requirements. The average maturity of investments of the City's operating funds shall not exceed two years. Unless matched to a specific cash flow, the City will not directly invest in securities maturing more than five years from the date of purchase.

Reserve funds may be invested in securities exceeding five years if the maturity of such investments is made to coincide as nearly as practicable with the expected use of the funds.

## **VI. SELECTION OF BANKS AND DEALERS**

### **Depository**

At least once every five years, a qualified depository shall be selected through the City's banking services procurement process, which shall include a formal request for proposal and consistent with state law. In selecting depositories, the service cost and credit worthiness of institutions shall be considered, and the ~~Director of Finance~~Chief Financial Officer shall conduct

a comprehensive review of prospective ~~depositories~~depository's credit characteristics, financial history and ability to meet all requirements in the banking request for proposal. All banks will execute a depository agreement covering collateral issues for sale of time deposits if not covered by the competitively bid bank services agreement.

#### **Authorized Brokers/Dealers**

Brokers and dealers are approved by the Investment Committee. At least once annually, the Committee will review, revise and adopt a list of qualified brokers that are authorized to engage in investment transactions with the City. Evaluation of security dealers and financial institutions are based upon (1) Financial conditions, strength and capability to fulfill commitments; (2) overall reputation with other dealers or investors; (3) regulatory status of the dealer; (4) background and expertise of the individual representatives. All brokers and dealers must be on the approved dealer list in order to transact business with the City.

All financial institutions and broker/dealers who desire to be on the approved dealer list must supply the Investment Committee a broker questionnaire, financial statements, proof of state registration, certification of having received and reviewed the City's Investment Policy and acknowledged that the business organization has implemented reasonable procedures and controls in an effort to preclude investment transactions that are not authorized by the City's Investment Policy.

#### **Competitive Bids**

It is the policy of the City to require competitive bidding for all individual security purchases and sales except for transactions with money market mutual funds and local government investment pools, which are deemed to be made at prevailing market rates.

All security transactions will be competitively bid with at least three competitive offers or bids.

#### **Delivery vs. Payment**

All investment transactions, except investment pools and mutual funds must be settled on a delivery versus payment basis. That is, funds shall not be released or paid until verification has been made that the collateral or security was received by the Trustee or custodian.

### **VII. CUSTODIAL CREDIT RISK MANAGEMENT**

#### **Safekeeping and Custody**

Safekeeping and custody of securities and collateral shall be in accordance with state law. Securities and collateral will be held by a third party custodian designated by the City, and held in the City's name as evidenced by safekeeping receipts of the institution with which the securities are deposited. The original copy of the safekeeping receipts shall be delivered to the City.

#### **Collateralization and Repurchase Agreements**

~~The City's depository bank shall comply with Chapter 2257 of the Government Code, Collateral for Public Funds, as required in the City's bank depository contract,~~

All time and demand deposits and repurchase (and reverse) agreements of the City shall be secured by pledged collateral with a market value equal to or not less than 102% of deposits plus accrued interest less an amount insured by FDIC and evidenced by original safekeeping receipts. Evidence of the pledged collateral shall be maintained by the ~~Director of Finance~~Chief Financial Officer and held by an independent third party with whom the City has a current custodial agreement.

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Any financial institution requesting substitution of collateralized securities must contact the Investment Officer for approval and settlement. The substituted security's value will be equal to or greater than the required security value. Written notification of the substitution must be provided to the bank or safekeeping agent prior to any security release.

Repurchase agreements shall be documented by a specific Master Repurchase Agreement noting the authorized collateral required. Bank collateral shall be reviewed monthly to assure the market value of the securities pledged equals or exceeds the related bank balances. Repurchase securities will be priced daily.

The City of McKinney shall accept only the following securities as collateral:

- A. FDIC insurance coverage.
- B. United States Treasuries and Agencies.
- C. Texas State, county, city, school, or political subdivision bonds with a remaining maturity of ten (10) years or less with investment grade bond rating of AAA from at least one major bond rating agency.

All collateral shall be subject to inspection and audit by the ~~Director of Finance~~Chief Financial Officer or the City's independent auditors.

## VIII. PERFORMANCE STANDARDS

The investment portfolio shall be designed with the objective of obtaining a rate of return throughout budgetary and economic cycles, commensurate with the investment risk constraints and the cash flow needs.

The City intends to pursue an active versus a passive portfolio management philosophy. That is, securities may be sold before they mature if market conditions present an opportunity for the City to benefit from the trade. Given this strategy, the basis used to determine whether market yields are being achieved shall be the average rate of return on six-month U.S. Treasury Bills.

## IX. REPORTING

The Investment Officer shall maintain a current listing of investments for management purposes. In addition, the City Council will be provided quarterly reports which include a listing of individual securities held at the end of the reporting period; original purchase date and final maturity of all investments listed; coupon, discount or earnings rate; par value, amortized book value and market value; and the percentage of the portfolio represented by each investment category and any additional reporting information as required by Section 2256.023 of the Texas Government Code. The report will also include a management level summary review of the portfolio including total book and market value, weighted average maturity and yield information for analysis purposes. The fourth quarter report will summarize activities for the past twelve months. The quarterly reports must be formally reviewed at least annually by an independent auditor and reported to the City Council.

Month-end market prices on each security are obtained from a variety of nationally recognized security databases (e.g., include whatever the City is using, such as Bloomberg or The Wall

Street Journal). These prices are recorded in the City's portfolio database and included in all management reports as well as the City's Comprehensive Annual Financial Report.

## X. INVESTMENT POLICY ADOPTION

The investment policy shall be adopted by resolution of the City Council. The investment policy and investment strategies shall be reviewed at least once annually by the investment committee and any modifications will be recommended for approval to the City Council. The City Council shall review the investment policy and strategies not less than annually.

## XI. FINANCIAL GLOSSARY

### Accretion

An accounting method for realizing the additional income earned through the purchase of a discounted, or zero coupon security where the difference between the discounted purchase price and the par value is credited to an income account, gradually increasing the book value until it reaches par at maturity. *Also see Amortization.*

### Accrued Interest

An accounting term used to describe coupon interest earned, *but not yet paid* to the security holder. Typically, an accounting entry is created to reflect the payable amount.

**Agency:** A category of investments that includes that Government Sponsored Enterprises (GSEs) of Fannie Mae, Freddie Mac, the Federal Home Loan Bank (FHLB) and the Federal Farm Credit Bank (FFCB). Federal agencies are generally considered to be *government securities* and all carry the highest possible senior debt rating from both Moody's and S&P.

### American Call

A type of call provision whereby the issuer of a security has the right to return to the investor par value plus accrued interest at any time after a specific date has passed; also known as a continuous call.

### Amortization

An accounting method for gradually reducing net income when a security is purchased at a premium, or a price that exceeds par. *See Accretion.*

### Ask or Asking Price

The price at which securities are offered by the broker/dealer; the price at which a governmental entity buys a security; also referred to as an "offer" or "offering price".

### Asset-Backed Security (ABS)

A broad term used to describe a security created by pooling certain loans together, whereby principal and interest payments made on the loans are used to pay the security holders. Some common examples of ABS pools are auto loans and credit card receivables.

### Basis Point

The unit of measurement for yield equal to 1/100th of 1 percent; e.g., 1/4 of 1 percent is equal to 25 basis points.

### Bear Market

A prolonged period of falling security prices usually caused by declining economic conditions and/or rising interest rates. A bear market may describe stocks or bonds, but it's important to remember that when bond prices are falling, yields are rising. A person may be "bearish" when they think investment prices will fall in the future, or if

they have a negative outlook for the economy in general.

### **Benchmark**

The performance of a predetermined group of securities, individual security or index used to compare risk and performance to a managed portfolio. A good benchmark should be verifiable, easy to understand and appropriate to the portfolio to which it is being compared. Typical benchmarks used in the public sector include the three-month, six-month and one-year T-bill averages over a similar measurement timeframe.

### **Bermuda Call**

A type of call provision whereby the issuer of a security has the right to return to the investor par value plus accrued interest only on interest payment dates.

### **Bid**

A bid is the price a broker will show an investor when the investor wishes to sell a security. An offer is the price a broker will show an investor who seeks to buy a security (also called the ask price). An investor will always seek the highest bid price when selling a coupon security, but will accept the lowest discount rate on a discounted security when selling. When buying securities we often refer to obtaining three competitive bids, actually we are getting 'competitive offers'.

### **Bond**

A very broad term used to describe a debt obligation. A bond may have a fixed or floating coupon rate; may be issued by the U.S. Treasury or an agency or a corporation; and may be callable or non-callable.

### **Book Entry**

The name given to securities whose ownership resides, and transfer occurs on a computer system. For treasuries and agencies this system is maintained by the Federal Reserve. Years ago, securities were traded in physical form similar to currency.

### **Book Value**

The value at which a security is carried on an inventory list or other financial records of an investor. Book value reflects the

principal price at which the security was originally bought plus/minus net amortization/accretion to that point in time. The book value *may* differ significantly from the security's current market value creating an unrealized gain or loss.

### **Broker**

A broker brings buyers and sellers together in return for a commission (fee). Unlike a Dealer, the broker typically does not own the securities. Often times, the two are combined as "broker-dealer" because most may act in both capacities.

### **“Bullet”**

Slang term for a type of bond that repays the entire principal amount on the maturity date. Bullets are never callable.

### **Bull Market**

A market condition in which prices are rising; a bull market may describe stocks or bonds, but it's important to remember that when bond prices are rising, yields are falling. A person may be "bullish" when they think investment prices will rise in the future, or may be "bullish" in general if they have a positive outlook for the future economy.

### **“Buy-and-Hold”**

A common investment strategy for conservative investors with specific cash flow objectives or cyclical cash flow patterns, whereby securities are purchased with no intention to sell prior to maturity.

### **Call Risk**

A form of investment risk that exists when a bond may be redeemed prior to maturity, leaving the investor to reinvest the principal at a lower yield. This risk increases when interest rates are falling, and it becomes more attractive for the bond issuers to call bonds with higher interest rates and issue new bonds with lower interest rates.

### **Callable Security**

A bond containing an option that grants the issuer of the bond the right to redeem the security early and return the full principal amount to the investor along with all accrued interest. The issuer will only call the bond if rates fall, at which time new bonds can be issued at lower rates. An

investor in a callable security earns a higher yield, but is subject to reinvestment risk.

### **Capital Gain**

The profitable result of the sale of a security or asset, whereby the principal amount exceeds the book value of the security.

### **Capital Loss**

The resulting loss when the principal amount on the sale of a security or asset is less than the book value of the security.

### **Cash Settlement**

Cash settlement occurs when a security is purchased and subsequently delivered on the same day.

“**CHEAP**” (vs. Expensive)

Slang term for securities that are trading at yield spreads higher than would be considered normal relative to similar security types or their own trading history.

### **CMO** or Collateralized Mortgage Obligation

A derivative mortgage-backed security bond created from a large pool of home mortgage loans. A single CMO is divided into a number of different classes or “tranches”, each containing unique risk profiles and characteristics. Most CMOs are not considered appropriate for local governments and other conservative investors.

### **Collateral**

Securities, evidences of deposit, or other property that a borrower pledges to secure repayment of a loan; also refers to securities pledged by a bank or trade counter-party to secure deposits.

### **Commercial Paper (CP)**

Unsecured, short-term obligations with maturities ranging from 1 to 270 days issued by banks, corporations and other borrowers to investors with large temporary cash positions. This type of security is usually issued at a discount and carries a zero coupon. The accounting process is identical to a T-bill. Prime commercial paper carries a short-term rating of A1 P1 or equivalent.

### **Constant Dollar Fund or Pool**

A type of money market fund or investment pool whose stated objective is to offer safety of principal and liquidity by maintaining a \$1 dollar share value for all its participants, meaning that the dollar value of the original deposit is expected to be maintained through conservative management practices; also referred to as a “dollar in / dollar out” fund or pool.

### **Continuous Call**

A type of call option on a security in which the issuer maintains the right to repurchase the bond from the investor, at any time after the initial call date has passed. Also known as an American option.

### **Credit Risk**

The risk that the issuer of a bond will default on its obligation to pay principal and/or interest when due. Credit risk is a primary consideration when purchasing commercial paper, banker’s acceptances and corporate obligations.

### **CUSIP Number**

CUSIP is the acronym for **Committee on Uniform Securities Identification Procedures**, and represents the standard industry identification for individual securities. Each security is assigned a unique CUSIP number.

### **Dated Date**

Date at which interest begins accruing on a newly issued security. The dated date can sometimes differ from the issue date potentially causing accrual discrepancies.

### **Dealer**

A dealer (as opposed to a broker) acts as a principal, by buying and selling for his or her own account. A dealer maintains a portfolio of securities and can trade from that portfolio. Often times, a “broker” will also act in a dealer capacity when selling securities owned by his or her own firm.

### **Debenture**

A general term used to describe a bond secured only by the general credit of the issuer.

### **Deflation**

A rare economic condition characterized by a general decline in prices of goods and services (the reverse of inflation). In a deflationary environment, fixed income securities become very desirable, pushing bond prices up and yields downward. During periods of deflation, there is a disincentive to produce.

**Delivery versus Payment (DVP)**

DVP requires that the delivery of securities is made at the same time payment for those securities is received in account.

**Depository Trust Company (DTC)**

A firm through which members can use a computer to arrange for securities to be delivered to other members without physical delivery of the certificates. The DTC uses computerized debit and credit entries. The system mirrors the FedWire system and was designed to reduce its load. When settling an investment that is DTC eligible, the delivering dealer will request the DTC number of the safekeeping agent.

**“Disco”**

Slang term for an agency discount note.

**Discount**

The difference between the cost or the original purchase price of a security offered below par, and its PAR or face value.

**Discount Note**

An agency note with a zero coupon issued to maturity dates not to exceed 365 days. This is a very common security type purchased by conservative institutional investors, public fund investment pools and money market fund portfolios.

**Discrete Call**

A call structure in which the option can be exercised only on specific dates; usually each quarter.

**Disinflation**

The slowing down of price increases, i.e. a slowing in the rate of inflation. Prices are still rising; they are just rising at a slowing rate.

**Diversification**

Dividing investable funds among a variety of different security types offering independent returns, and maturing at different times throughout the year(s). Diversification spreads an investor’s risk and smoothes earnings. A well-diversified portfolio should perform relatively well regardless of the direction interest rates move.

**D.K.** (sometimes incorrectly thought to be “decay”) - See “Don’t Know”

**Don’t Know (“DK”)**

A term used in the securities clearance process when a bank or safekeeping agent will not accept delivery on a trade because it does not recognize the security being delivered

**DTC** - See Depository Trust Company

**Duration**

A measure of the price volatility of a bond equal to the weighted-average term to maturity of the bond’s cash flows. The greater the duration of a bond, the greater its price volatility. The duration of a portfolio is roughly equivalent to the average maturity of the portfolio, and will vary depending on the size of the cash flows. If there are no actual cash flows, as in the case of a portfolio consisting of zero coupon T-bills or discount notes, the duration will equal the average maturity. Duration will be increasingly less than average maturity as the weighted average coupon of a portfolio increases.

**European Call**

A call structure in which the option may be exercised only on a single predetermined date; also known as a “one-time call”.

**Equity**

Another name for “stock”.

**Fair Market Value**

The likely market price for a security transaction between a willing, unbiased and non-desperate seller and a willing, unbiased and non-desperate buyer.

**Fannie Mae** – the Federal National Mortgage Association (FNMA) commonly referred to as Fannie Mae, was created in 1938 during the Great Depression to

provide a secondary market for mortgage loans by purchasing groups of loans from lenders and packaging them into pools of mortgage-backed securities that can then be sold to investors. To facilitate this process, Fannie Mae also issues debt in maturity ranges from one-day to 30 years. The company's long-term senior debt rating is currently AAA. Although Fannie Mae had operated as a private company since 1968, it was placed under Federal government conservatorship in September 2008 as a result of a significant decline in the underlying market value of the mortgage loans it held and guaranteed.

#### **Fed or Federal Reserve Bank**

The Central Bank of the U.S. responsible for supervising and regulating member banks, providing banking services, providing information and setting monetary policy through the FOMC. Alan Greenspan was Fed Chairman from 1987 to January 2006. Ben Bernanke is the current Fed Chairman.

**Federal Farm Credit Bank (FFCB)** – A common issuer of agency securities; FFCB is part of the Farm Credit System, a nationwide network of borrower-owned institutions that lend to agricultural and rural America. The System was created in 1916 and is the oldest Government-sponsored enterprise (GSE). Unlike commercial banks, System banks do not take deposits. Instead, funds for loans are obtained through the issuance of FFCB securities. Common FFCB securities include discount notes, debentures, callables and step-ups.

#### **Federal Funds Rate**

The rate of interest at which banks with excess reserves charge banks lacking reserves for overnight loans to meet reserve requirements. This key overnight rate determines, in large part, the rate at which overnight repurchase agreements will trade. When the Federal Reserve “raises rates”, the target fed funds rate is increased and other short-term security yields follow. Since pools and money market funds invest heavily in short-term securities, their rates often approximate the fed funds rate at any given point in time.

**Federal Home Loan Bank (FHLB)** – A common issuer of agency securities, the Federal Home Loan Banks provide a source of low-cost funding to U.S. banks for all types of lending. With their members, the FHLBank System represents the largest collective source of home mortgage in the United States. The banks do not provide loans directly to individuals, only to other banks. Common FHLB securities include discount notes, debentures, callables and step-ups.

#### **Federal Housing Administration (FHA)**

A Federally sponsored agency that insures lenders against loss on residential mortgages.

#### **Federal Housing Finance Agency (FHFA)**

An independent government regulatory agency created in 2008 to oversee Fannie Mae, Freddie Mac and the Federal Home Loan Bank system. It effectively replaced the Office of Federal Housing Enterprise Oversight (OFHEO) and the Federal Housing Finance Board. James Lockhart was the first director, having served as the director of OFHEO. Its regulatory powers include the ability to place GSEs into government receivership or conservatorship if necessary. The FHFA placed Fannie Mae and Freddie Mac into conservatorship in September 2008.

#### **Financial Industry Regulatory Authority (FINRA)**

FINRA was formed through the merger of the National Association of Securities Dealers, Inc. (NASD) and the regulatory arm of the New York Stock Exchange. FINRA is a self-regulatory organization that is responsible for training, testing, licensing and oversight of registered broker dealers; arbitration and mediation; as well as regulation of the major U.S. stock exchanges.

#### **Fixed Income Market**

The market defined by securities with set (fixed) coupon rates.

#### **Federal Open Market Committee (FOMC)**

A group of Federal Reserve Officials that meet eight times per year to set U.S. monetary policy (raise and lower interest rates). The Committee must balance its two

primary and often conflicting objectives of achieving stable economic growth and keeping inflation at acceptable levels.

**FOMC** – See Federal Open Market Committee

**“Flex Repo”** or Flexible Repurchase Agreement

A type of repurchase agreement used primarily for investment of bond proceeds that has a maturity date corresponding with the last expected construction draw for the bond project. Flex repos pay a fixed rate of interest and allow for cash withdrawals at the buyer’s discretion during the life of the agreement.

**Floater**

A security whose value or coupon is reset on a periodic basis and moves up or down depending on the movement of a specified index like LIBOR or the 91- day T-bill yield.

**Freddie Mac** - the Federal Home Loan Mortgage Corporation (FHLMC) commonly referred to as “Freddie Mac” was created in 1970 to assist its sister company Fannie Mae by purchasing mortgage loans in the secondary market, pooling them together, and selling them to investors in the form of a mortgage-backed security. By providing a secondary market for home loans, Freddie Mac increases the amount of money available for mortgage lending. Like Fannie Mae, Freddie Mac issues debt in maturity ranges from one-day to 30 years. It’s long-term senior debt rating is also AAA, and in September 2008, it too was placed under Federal government conservatorship as a result of a significant decline the underlying market value of the mortgage loans it held and guaranteed.

**GAAP**

Acronym for Generally Accepted Accounting Principles.

**GASB**

Acronym for the [Governmental Accounting Standards Board](#).

**GINNIE MAE** (GNMA) or the Government National Mortgage Association.

GNMA buys Veterans Administration, Farmers Home Administration and Federal

Housing Administration Mortgages, then issues bonds that are secured by pools of the mortgages. An investor in this type of bond receives monthly payments of principal and interest that represent monthly mortgage payments by homeowners. GNMA’s are guaranteed by the full faith and credit of the U.S. Government unlike other agency mortgage-backed securities.

**Inflation**

The effect of generally rising prices of goods and services. Rising inflation will decrease the value of fixed income securities and push yields higher. The Fed seeks to control inflation by raising interest rates to slow the economy. Some degree of inflation is good - the Fed is generally thought to target an acceptable core inflation rate of approximately 2%.

**Interest Rate Risk**

A form of investment risk whereby changes in the general level of interest rates adversely affect the value of a security portfolio. For example, bond prices are likely to decline when market interest rates increase.

**Inverted Yield Curve**

A market condition where the yields on long-term securities are lower than yields on short-term securities. For example, the five-year Treasury-note yield is trading below the six-month Treasury-bill yield. An inverted curve typically occurs when investors expect rates to fall in the future.

**Ladder**

A common investment strategy whereby securities are purchased to mature at regular intervals so that cash is always available to meet known obligations, or be reinvested back into the market at prevailing yields.

**LIBOR**

Acronym for the London Interbank Offered Rate. In England’s Eurodollar market, LIBOR is the interest rate banks charge each other on short-term money; roughly equivalent to the Fed Funds rate in the U.S. In the U.S. market, LIBOR serves as a frequently used floating rate index.

**Liquidity**

The characteristic of an asset that allows it to be converted easily and quickly into cash without a substantial loss of value. Investment pools and money market funds are considered to be “fully liquid” since they can always be converted to cash on demand. Typically, the shorter the maturity, the more liquid the asset. Treasuries are considered the most liquid of all securities due to a continuously traded and efficient market.

**Liquidity Risk**

A type of investment risk whereby an investment may not be able to be sold quickly at a fair market price when cash is needed. Long-term Treasury Bonds, for example, are publicly traded and have excellent liquidity. Limited partnerships, on the other hand, are often not publicly traded and typically have poor liquidity.

**LGIP**

Acronym for Local Government Investment Pool. Very similar to a money market fund. Professionally managed portfolio of short-term securities owned on a pro rata basis by its local government participants.

**“Long Bond”**

Slang term for the most current issue of the 30-year Treasury bond.

**Margin**

The amount of additional collateral above 100% pledged to an entity in order to accommodate changes in market prices. A ~~de~~deposit or repo collateralized at 102% has a two-percent margin.

**Market Risk**

Risk that the price of a security will decrease with an overall decline in the market. This risk cannot be diversified away, but can be minimized by purchasing securities with shorter maturity dates. A decline in the market value of a security may not be considered a problem if that security can be held to maturity.

**Market Value**

The current value of a security determined by multiplying par value by the current market price. The unrealized gain or loss on a security can be calculated by

subtracting the book value from the market value.

**Master Repurchase (Repo) Agreement**

The standard written agreement covering a repurchase or reverse repurchase agreement that establishes each party's rights in the transaction. A master agreement will specify among other things, the right of the buyer-lender to liquidate the underlying securities in the event of default by the seller-borrower.

**Mortgage-Backed Security**

A security backed by pools of home loan mortgages. Investors in mortgage-backed certificates receive monthly payments derived from the income stream of interest and principal on the underlying mortgages in the pool. A standard mortgage-backed security is referred to as a “pass-through”. When a number of pass-through securities are combined and subsequently divided into separate classes of new securities with unique investment characteristics, these are called “collateralized mortgage obligations” or CMOs.

**National Association of Securities Dealers (NASD)** – See Financial Industry Regulatory Authority (FINRA)

**Net Asset Value (NAV)**

The value of a mutual fund share as determined at the close of each business day. The NAV is determined by summing the market value of all securities in the portfolio, deducting expenses and dividing this total by the number of shares outstanding.

**Offer Price**

The price at which investor will buy a security. When seeking to purchase a security, an investor will ask the broker for an offer.

**Off-the-Run Securities**

Previously issued Treasury securities not generally used for benchmarking or pricing purposes. They tend to be somewhat less active and less liquid than the most recent issues, but may offer more attractive yields as a result.



### **On-the-Run Securities**

The most recently issued Treasury security in each maturity range. Often used as benchmarks. A Treasury yield curve will generally include “on-the runs”.

### **Open Market Operations**

Purchases and sales of government and certain other securities in the open market by the New York Federal Reserve Bank as directed by the Federal Open Market Committee (FOMC) in order to influence the volume of money and credit in the economy. Open market operations are the primary tool that the Fed uses to raise and lower interest rates.

### **Overnight Repo**

A type of repurchase agreement that is negotiated or renegotiated (rolled over) each day at a new interest rate. This investment type is heavily used by pools and money market funds. The daily repo rate tracks very closely with the fed funds target rate. Banks and dealers use repurchase agreements as a primary source of cash to finance their inventory positions.

### **Par Value**

For bonds, the par value is the face amount on which interest is calculated and equals the amount of principal due at maturity.

### **Premium**

1) The difference between a security’s price and par (face amount) if the security is selling above its par value. 2) An amount that must be paid above par in order to call or refund an issue. 3) The price paid for an option.

### **Primary Dealer**

A group of government securities dealers who submit daily reports of market activity and inventory positions to the Federal Reserve Bank of New York and are subject to its formal oversight. Primary dealers are required to “make a market” in U.S. Government securities, participate in Treasury auctions, provide the Fed with market information and analysis, and work with the Fed to implement monetary policy. As of October 2009, there were 18 Primary Dealers. A current list is available at –

[http://www.newyorkfed.org/markets/pridealers\\_current.html](http://www.newyorkfed.org/markets/pridealers_current.html)

### **Put**

An option that gives the buyer of a security the right to sell that security back to the issuer (or put holder) at a specified time at a specified price.

### **Quantitative Easing**

A method of increasing the money supply through open market operations of the Fed. Money is essentially created when the Central Bank purchases securities and credits the accounts of the sellers. With interest rates near zero, this is an alternative used by the Fed to free up credit for the financial markets.

### **Rally**

A sharp rise in the general price level of the market, or a particular market or security; a rally implies higher prices for securities, and thus lower yields on fixed income securities. Example: “Stocks *rallied* today on better than expected earnings reports.” Or “bonds *rallied* today after the Fed unexpectedly cut the target fed funds rate.”

### **Rate of Return**

A standard performance measurement that considers the coupon interest a security or portfolio of securities receives, along with any realized gain or loss, along with any change in unrealized market gain or loss. Depending on market volatility, the rate of return could differ significantly from the average yield of a portfolio.

### **Regular or “Reg” Settlement**

Regular or “Reg” settlement is when cash and securities are exchanged on the day after trade date for Treasuries, agencies and commercial paper. Also see *Cash Settlement*.

### **Reinvestment Risk**

The risk that funds will have to be reinvested in a security with a lower interest rate if the original security is called away.

### **“Repo” or Repurchase Agreement**

A type of agreement in which an investor exchanges cash for securities with a

primary dealer or bank and earns a fixed rate of interest for a specified period. At the end of the period, securities are returned for principal along with accrued interest. Dealers and banks use repo proceeds to finance their inventory positions.

#### **Reset Date**

The date on which a floating security's coupon rate is reset based on an established index and schedule

#### **“Reverse Repo” or Reverse Repurchase Agreement**

The opposite side of a repo transaction. In a “reverse”, the investor accepts cash from the dealer in exchange for securities, agreeing to return the principal with interest in exchange for the security at a later date.

#### **Safe Harbor**

The shifting of financial assets to less volatile areas to reduce risk. Example: When the stock markets crashes, fearful investors sell stocks and invest sale proceeds in the “safe harbor” offered by the U.S. Treasury market. This action is also referred to as a “flight to quality”.

#### **Secondary Market**

A market existing for the purchase and sale of securities that were originally sold to investors days or even years earlier.

#### **Securities Industry and Financial Markets Association (SIFMA)**

SIFMA is a security industry trade group that represents banks, securities dealers, asset management companies in the U.S. and around the world. It was created by the merger of the Bond Market Association (BMA) and the Securities Industry Association. Its stated mission is to promote effective and efficient regulation, facilitate more open, competitive, and efficient global capital markets, champion investor education, retirement preparedness, and savings, as well as ensure the public's trust in the securities industry and financial markets.

#### **“Selling Off” (sometimes known as “trading off”)**

A condition in which stock or bond prices move gradually lower following a rally.

#### **Settlement Date**

The purchase (or sale) date of a security on which the money actually changes hand (see also Trade Date)

#### **Short**

The practice of selling a security without owning it, in anticipation of subsequently purchasing it back at a lower price and making a profit. Not permitted by governmental entities.

#### **Skip Day Settlement**

Skip Day or “Skip” settlement is when cash and securities are exchanged *two days after* trade date for Treasuries, agencies and commercial paper.

#### **Spread**

The difference between the current bid price and the current ask price of a given security, or between yields on similar securities; the additional yield over and above yields on Treasury securities, expressed in basis points, that can be earned by investing in non-Treasury securities.

When buying an agency, the offer will typically be presented in term of “spread to the comparable Treasury issue”. For example, a two-year agency bullet may be offered at “plus 25 to the Treasury”. What this means is that if the two-year Treasury note were yielding 1.00%, the agency would be offered 25 basis points higher to yield 1.25%.

#### **Step-Up**

A type of agency callable bond with a coupon rate that climbs higher as the security moves toward its maturity date. This security type offers some protection against rapid increases in interest rates, but may be called away before the coupon has a chance to “step” higher.

#### **Strip**

A security in which all the interest coupons have been removed, leaving only the principal. The new “strip” is a deeply discounted security which pays no interest, but returns all principal at maturity. The process of creating a principal strip also creates a corresponding interest strip. Although any fixed rate bond can be stripped, a Treasury strip is most common.

**Swap**

Trading one security for another with the objective of increasing overall return while maintaining similar risk and maturity characteristics in the new security. A typical swap may involve the sale of Treasury securities, which become expensive as they near maturity, and the purchase of higher yielding discount notes or commercial paper.

**Temporary Liquidity Guaranty Program (TLGP)**

This program allows banks and certain other financial institutions to issue senior unsecured debt that carries an FDIC guarantee. Participating companies pay the FDIC a fee in exchange for the insurance. The FDIC's guarantee is backed by the full faith and credit of the United States.

**Term Asset-Backed Loan Facility (TALF)**

The Term Asset-Backed Securities Loan Facility (TALF) was announced in November, 2008, but working through the complicated operational details delayed the program until March 2009. The objective of the \$1 trillion dollar program (originally \$200 billion) is to free up funds for additional auto, student and small-business loans. The TALF hopes to accomplish this by encouraging big investors (\$10 million minimum) to buy up newly issued AAA-rated pools of auto, student and business loans. Buyers pledge those securities as collateral in exchange for low-cost government funded loans of up to three years. The Wall Street Journal reported that prior to the beginning of the credit crisis, about 40% of consumer lending had been generated through the securitization process. At its peak, Wall Street issued \$1 trillion a year in securities backed by consumer credit loans and trillions more backed by mortgages. In the final three months of 2008, only \$8 billion in consumer loan-backed securities were issued. The Fed hopes the TALF program will reignite the securitization process and by extension the consumer lending market.

**Trade Date**

The date on which the agreement to buy or sell a security is made (see also Settlement Date).

**Treasury Bill**

A highly liquid, short-term, US Government debt security issued at a discount from par value auctioned weekly by the U.S. Treasury with maturities ranging 30 days to 12 months. A Treasury bill is generally considered to be a risk-free investment.

**Treasury Bond**

A marketable, long-term, fixed coupon U.S. Government debt security with a maturity of more than 10 years.

**Treasury Note**

A marketable, medium-term, US Government debt security issued with a fixed coupon with an original maturity of two to 10 years.

**Troubled Asset Relief Program (TARP)**

After considerable debate, during what many considered to be an extremely dire liquidity crisis in the global financial markets, the TARP program became law on October 3, 2008. The original plan was for the U.S. Treasury to purchase or insure up to \$700 billion of illiquid or "troubled" assets from banks and other financial institutions that were difficult to price because the secondary market had frozen up. A large number of these illiquid assets were mortgage-backed securities created by pooling together residential mortgage loans. When home foreclosures began to rise rapidly in 2008, the value of the mortgage-backed securities containing the troubled loans plummeted. Because there were virtually no ready buyers, it was nearly impossible to establish a fair trading market. The TARP was originally intended to purchase these illiquid assets, but the reality was that financial institutions were not willing to sell securities at severely distressed prices. On October 14, 2008, Treasury Secretary Paulson announced that the Treasury would instead purchase senior preferred stock and warrants in the nine largest American banks as well as in smaller banking institutions with the first \$250 billion. The theory was that this would bolster the bank's capital positions, thereby enabling them to expand their lending activities. In reality, much of the capital injected into these banks was gobbled up by growing losses.

**Unrealized Gain or Loss**

The amount of profit (or loss) that would be reflected on the sale of a security if that security were sold. The unrealized gain or loss is calculated by taking the difference between book value and market value of the security at a given point in time.

**Weighted Average Maturity (WAM)**

This common term, usually expressed in number of days, represents a dollar-weighted average of the remaining term to maturity of all assets in a pool or securities portfolio. A longer WAM generally indicates higher market risk. An SEC-registered money market fund has a 90-day WAM limitation, while a constant dollar investment pool is limited to a 60-day WAM.

**Yield**

The return, expressed as a percentage, that a security will earn as a result of both the coupon rate and any discount earned or premium paid. A yield will exceed the coupon if purchased at a discount (and vice-versa).

**Yield Burning**

An illegal activity whereby a security provider charges more than the fair market price for a security, lowering the yield, thereby diverting arbitrage away from the IRS.

**Yield Curve**

The Relationship between yields and maturity dates for a set of similar bonds,

usually Treasuries, at a given point in time. A yield curve is a standard measure of risk and return, and answers the question "how much additional yield will I earn if I extend my maturity and assume additional market risk?"

**Yield-to-Call (YTC)**

The expected yield to maturity of a bond if it is called on the scheduled exercise date.

**Yield-to-Maturity (YTM)**

The expected rate of return of a bond if it is held to its maturity date; calculated by taking into account the current market price, stated redemption value, coupon payments and time to maturity and assuming all coupons are reinvested at the same rate; equivalent to the internal rate of return (IRR).

**Zero Coupon Bond**

A bond that does not make interest payments but instead is sold at a deep discount. On the maturity date of the bond, the full-face amount is due. The difference between the amount paid at purchase and the face amount at maturity represents the income earned by the investor. Common examples of zero coupon bonds include Treasury strips, Treasury bills and agency discount notes.