Public Funds Investment Act Workshop

TEXAS MUNICIPAL LEAGUE - AUSTIN

JULY 2026

LINDA T. PATTERSON

TREASURY CONSULTING

AUSTIN , TX

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Cities Need Revenue

- You have funds that can work for you in the portfolio
- You can find the best rates and keep needed liquidity
- You can contain costs like banking and merchant services

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The Investment Process Helps You Reach Your Goals

- Cash flow analysis
- Risk analysis
- Policy development
- Strategy development
- Controls and procedures
- Structuring a resilient portfolio
- Reporting and reviewing

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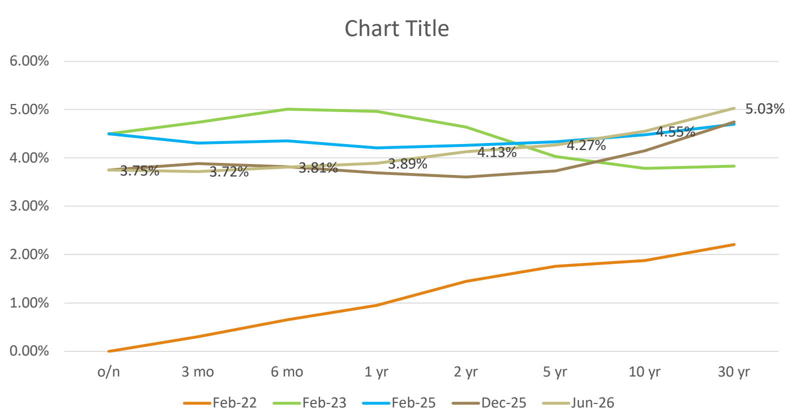
Change is Constant



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The Economy Now
A Bewildering Place

- Where are we now in the economy? In rates?
- What does that mean?

- Fed sits firm about mounting inflation but always *data dependent*
- Inflation remains elevated but… and consumer continues to buy…how?
- Confidence shaken and consumers dig themselves in debt
- Growth and inflation has been affected *globally*
- *C*hallenges and uncertainty are high regarding geo-politics
- US debt is larger than its GDP

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Looking at the Current Economic Landscape

- Fed actions and market expectations…
  - From cuts to possible hikes in 20206
- Washington meltdowns and decisions weigh on the markets
  - Market expectations and possible reactions?
- Iran and additional hot spots and villains
  - Too many to count – and more serious
- Employment – strong but when does it stop?
  - As strong as needed?
- Inflation is about 4.2% and going up
  - It's here and could continue growing

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Add on the Dollar’s Plight

- Investor’s assumed the US and Treasuries were stable and safe
- Doubts about the bonds reflects doubts about the dollar (now down 4%)
- The world doubts our economic acumen (and tactics)
- Hedge funds and other countries look for alternatives for trade (TXSE)
- An effective downgrading of US securities – now seen as ‘risk assets’
- Global trade is being sabotaged without a coherent strategy
- Dollar role as made it an enabler of global economic distortions
- Alternative sanctuaries may not exist – perhaps a euro ‘sanity’ bond
  - Perhaps China as the reserve currency?

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Other factors? Where is the Tipping Point?

- Global and National Politics
  - US Mid-term election takes center stage
  - Immigration fears and their economic impacts
  - Federal Reserve Leadership Changes
  - Gaza, Ukraine, G7, G20, Taiwan, India/Pakistan. Lebanon
  - China’s Aspirations and Actions
- Inflated US stock markets correction?
- Consumer and US Debt
  - Debt ceiling show will return and be contentious
  - US Reserve currency real threats
  - AAA credit ratings lost

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Key Issues for You to Watch Going Forward

- Inflation
- Employment
- Central Bank Accommodation
- Geo-politics and markets
- Debt

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The Federal Reserve's Role

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ROLE OF CENTRAL BANKS

- Sovereign central banks control the flow of liquidity to control inflation
  - Central banks raise overnight interest rates to keep inflation in check but keeping them too high for too long may result in recession
  - Central banks lower rates to boost the economy but keeping them too low too long can cause deflation
  - Central banks provide liquidity and trading to market sectors
  - Central banks support and regulate (some) banks

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TOOLS OF MONETARY POLICY

- **Fed Funds and Fed Funds Rate**
  - Overnight trading rate between banks on excess cash from reserves
  - **Discount Rate**

    interest rate charged by the Federal Reserve to banks that borrow on short-term (usually overnight) basis
- **Reserve Requirements**
  - amount of money banks must keep on reserve at the Fed
- **Open Market Operations**
  - Buying and selling Treasury securities between the Fed and selected financial institutions in the open market
  - The most important tool; directed by the FOMC
  - Functions through the NY Fed
  - Creates the flow of funds in the system

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When Rates Drop…

where should your portfolio be?

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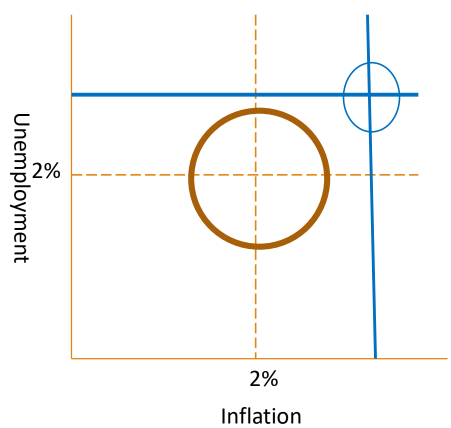
WHAT ARE THE FED'S GOALS?

- Fed's **Dual Mandate**
  - Price stability – controlled inflation
  - Maximum employment
- What do they look at?
  - US economic data and conditions
    - Current and future
    - Liquidity in the system
  - International conditions impact
  - Impact of US policies



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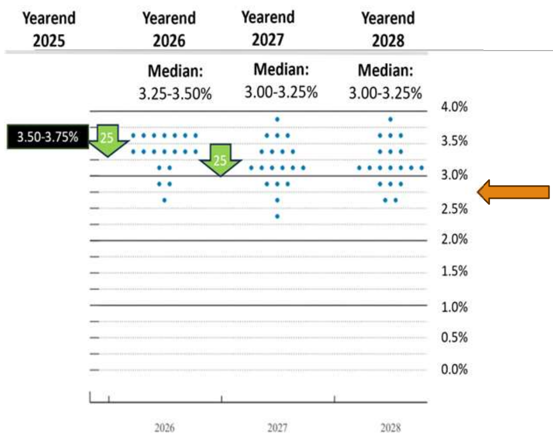
The FOMC's Dot Plot



The Fed FOMC looks to lower rates real slowly then changes course

Inflation is the major factor in the decisions

If jobs stay steady …

But a new class of college educated unemployed develops

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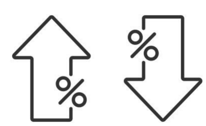
Rates may be secondary



- Rates are important <u>but</u>
- Public portfolios are <u>buy-and-hold</u>
- Public portfolios are there to assure payments/liquidity
- Public portfolios have responsibility to earn at market levels

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Rates Only Partially Define Your Strategy

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A PFIA Requirement: A Macro Written Strategy

Dependent on your cash flow and fund type
– describing funds or "pooled fund groups"

Dependent on your risk tolerance

Dependent on your policy limits

Requires an analysis, plan, and thought

Partially dependent on <u>your economic view</u>
- Will rates go up?
- When will it go up?
- How far will it go?

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As a Strategy, Public Funds have to be 90% Buy and Hold

- Securities are bought to match cash flow needs
- Assures funds availability and requires minimum time
- Works well with a laddered portfolio
- Effective when used in conjunction with a formal cash flow.
- Keeps transaction costs down
- Proven to outperform "active management" on a total cost basis.

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PFIA Required Macro Strategy

Your Macro Strategy

- A statement on the passive to pro-active range
- Directed to or the whole portfolio or sub-portfolios – or both
- Must includes a maximum WAM (overall or by sub-portfolio/fund)
- Requires annual review and adoption
- Must be flexible enough to adjust to market and internal conditions
- Included in your policy to keep both in sync
- Assure that resolution approves both policy <u>and</u> strategy (plus brokers??)

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A Macro Strategy?

Keep it simple

Not all fund/sub-portfolios are alike in cash flows

The City may maintain one commingled portfolio (or not) for investment purposes which incorporates the specific uses and the unique characteristics of the funds in the portfolio.

The investment strategy has as its primary objective assurance that anticipated liabilities are matched and adequate liquidity provided. The City shall pursue a pro-active but conservative portfolio management strategy using a buy-and-hold strategy.

This may be accomplished by creating a laddered maturity structure with some extension for yield enhancement.

The Strategy must be adopted annually. State approval in the resolution.

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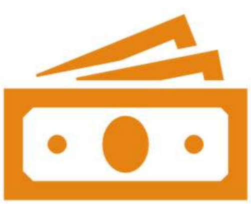
Why Different Strategies?



- Strategies are dependent on
  - the use of the funds and
  - its cash flows
- What would differentiate the 'strategy' be for these?
  - Debt Service Fund?
  - Operating Fund?
  - Bond Proceeds?

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Sample Strategy for a Short Conservative Portfolio

The primary objective is liquidity and reasonable yield.

Authorized securities or the pool used will be of the highest credit quality. When not matched to a liability it will be short term and liquid.

The portfolio will be diversified to avoid market and credit risk.

Diversification requirements can be met through a pool.

Maximum WAM is one year.

Sample Strategy for a Short Conservative Pro-active Portfolio

The primary objective is to invest in accordance with cash flow needs to produce a market yield. All securities will be of the highest credit quality to manage risk.

The portfolio will be structured as a ladder to match known liabilities and providing for a reasonable liquidity buffer for unexpected needs.

The portfolio will be diversified to avoid market and credit risk.

The maximum weighted average maturity will be one year.

Common Portfolio Macro Strategies

- 100% Cash
  - (pools, bank deposits, money markets) - opportunity cost
- Ladder
  - Matching known liabilities with a liquidity buffer
- Barbell
  - Split maturities add capture yield – liquidity risk possibility
  - Could be used in a commingled portfolio effectively

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Strategy of Full Liquidity

- All funds held in fully liquid cash instruments
  - bank deposits, local government investment pools, money market funds

This strategy is beneficial when:
- Interest rates are rising quickly
- The yield curve is flat or inverted
- No clear understanding of cash flow

Disadvantages:
- Very low yields
- *Lacks diversification by market sector*
- *Left at mercy of rates if the market shifts directions and yields drop*

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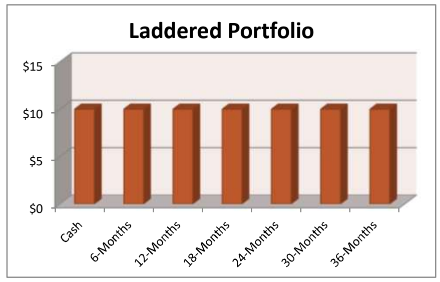
A Ladder Strategy

- In a laddered portfolio securities are positioned to match liabilities so maturities occur in regular intervals to provide a known stream of cash.
- The laddered portfolio may, or may not, correspond with expected future expenditures.
- Regardless of interest rates move, you will be reinvesting at the prevailing market yield.



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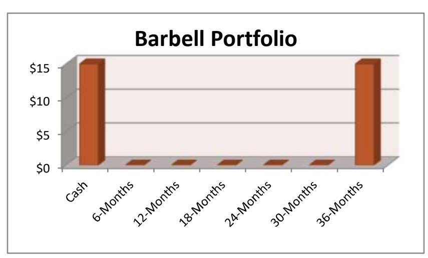
The Barbell Strategy

- A barbell maintains some of the portfolio in liquid deposits then invests a portion in longer, higher yielding securities (usually 18 to 36 months)
- Disadvantage and Danger:
- Rates will impact the portfolio directly and immediately.
- If rates fall longer end will support shorter.
- If rates rise liquidity has to cover all needs because long end will be at unrealized loss.



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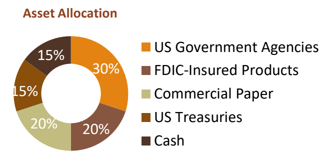
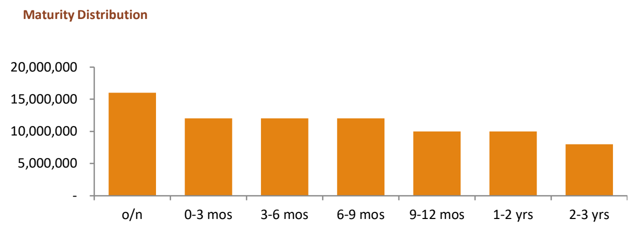
A Strategy Plan Can Add Diversification, Flexibility, and Earnings





Review and change, if necessary, quarterly

YIELD AND INTEREST INCOME INFORMATION IS ANNUALIZED. ALL YIELD INFORMATION IS SHOWN GROSS OF ANY ADVISORY AND CUSTODY FEES AND IS BASED ON YIELD TO MATURITY AT COST.
PAST PERFORMANCE IS NOT A GUARANTEE OF FUTURE RESULTS.

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The Strategy of Commingling

- Think through the portfolio structure
  - *Radically* different fund types need a separate policy
- Separate portfolios
  - Require separate accounting
  - May cause liquidity problems
  - Can reduce yield by requiring liquidity balances
- Commingled portfolios
  - Can still address unique needs of funds
  - Smaller liquidity needs may allow more extensions
  - Reporting is simpler

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PFIA OVERVIEW

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What is the PFIA designed to do?

- Provide **Guidelines**
  - Provide guidelines and best practices for safety
  - Guidelines which you customize for your situation
- Provide for **Flexibility**
  - Provide the flexibility to match the entity's needs
  - Allows for setting your own parameters
- **Apply** to all public funds
  - The Act applies to all governmental entities
  - You tailor it to your needs

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The Act Touches all Your Steps

- Cash flow analysis
- Risk analysis
- Policy Development
- Strategy Development
- Procedural Backup Development
- Structuring the Portfolio
- Reporting
- Reviewing

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A Brief History of the PFIA

- 1987
  - The Act split investing and banking
    - Prior to 1987 only *Home Rule* cities had market access
  - The Act gives access to the markets for every entity
- 1989
  - Investing caught on and everyone wants to participate – pools created
  - Pool outlines basically followed SEC money market funds
  - The Collateral Act was written and passed
- 1993
  - Agency CMOs specifically added by Counties
    - Rates were falling slowly but ready for a reversal unfortunately

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1994 The Perfect Storm

- Rates rose quickly – prices fell
  - Entities with high MBS percentage felt the brunt
- Orange County CA public investment pool sunk
  - Concentrated use of long-term MBS
  - Due to 5 times leverage
  - Due to board ignoring its responsibilities

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1995 Reaction

- Elements Added
  - Training for state and local officials
  - Investment officers' designation and ethics requirements
  - Policy certification to anyone selling investments (brokers, banks, pools)
  - Compliance audit requirement
  - GICs as an investment
  - Pools must stabilize at $1 NAV with safety collar
  - Pool boards require an advisory board
  - Procedure for loss of required credit rating

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1997 – Controls Continue to be Added

- Unauthorized certain MBA CMOs
- Reverse repos restricted to 90 days and funds used for authorized securities
- Commercial paper was added with credit rating
- Mutual funds added with stiff restrictions
- Procedure for investments which become unauthorized

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2000s – No Major Changes

- 2001 Letters of credit added to reduce bank expense
- 2003 Banks add securities lending
- 2005 CDARS added as spread product under CDs
- 2007 Hedging further defined for cities
- 2009 letters of credit added as investment (to link to PFCA)
- 2015 training not applicable if entity does not invest (??)
- 2017 certification only applicable to pools - broker CDs and short duration funds added

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Lessons from History

- Not all legal changes affect – or should - affect you
- Not all changes are necessarily good or beneficial
- The devil is in the details

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PFIA Standard of Care

- **The Prudent Person Rule is Our Standard**

  Investments shall be made with judgment and care under circumstances then prevailing that persons of prudence, discretion and intelligence exercise in the management of their own affairs not for speculation but for investment considering probable safety as well as probable income.

- Addresses the cyclical nature of investing

- Periodic required reviews/reports address changes

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Actions Required by the Act

- Annually
  - Governing body adoption of policy
  - Governing body adoption of written macro strategy
  - Adoption of broker list
- Quarterly
  - Quarterly reporting *presented* to governing board
- One-time actions
  - Designation of investment officers
  - Approved training sources

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Action Item #1 – Write a Policy

- Emphasize safety and liquidity
- Address diversification, yield, maturity and capability of officers
- List authorized investments
- Include a procedure to monitor credit rating changes
- Set a **maximum maturity** for any security
- Set a **maximum weighted average maturity**
- Tell how market prices are monitored (independently)
- Require **delivery versus payment** (DVP)
- Review and adopt policy annually

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Key Policy Elements

- Scope and Objectives
- Responsibilities
- Authorized investments
- Maximum maturity of any or each security type
- Maximum weighted average maturity of Portfolio (or sub-portfolio)
- Controls and procedures
- Safekeeping/custody requirements
- Reporting requirements
- Annual adoption requirement

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Three Key Policy Controls

- Maximum maturity
- Maximum weighted average maturity
- Delivery versus payment (DVP)

- All are unique to your situation and found through cash flow analysis

Action Item #2 – Write a Strategy

- Strategies are dependent on
  - the use of the funds and
  - its cash flows

- What would differentiate the 'strategy' be for these?
  - Debt Service Fund?
  - Operating Fund?
  - Bond Proceeds?

Strategies

- An important yet overlooked control
- Each sub-portfolio varies so must the strategy
- Strategies must include how you will obtain:
  - Objectives of the fund/sub-portfolio
  - Safety – high credit quality, DVP, and safekeeping
  - Liquidity – cash flow and liquidity buffer
  - Diversification – competition and market monitoring
  - Yield – competition, laddered structure
  - *Suitability* of instruments – high credit quality
  - *Marketability* of instruments – high credit quality

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Strategies Reflect Risk Tolerance

- Keep it simple
- The *City* *may* maintain one commingled portfolio (or not) for investment purposes which incorporates the specific uses and the unique characteristics of the funds in the portfolio.
- The investment strategy has as its primary objective assurance that anticipated liabilities are matched and adequate liquidity provided. The *City* shall pursue a pro-active but conservative portfolio management strategy using a buy-and-hold strategy.
- This may be accomplished by creating a laddered maturity structure based on cash flow needs with some extension for yield enhancement.
- The Strategy must be adopted annually. State its approval in your resolution

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Action Item #3 Reporting

- Describes the investment position of the entity in **detail**
- Is prepared jointly by investment officers
- Is **signed** by each investment officer
- **Is presented** to governing body and chief executive quarterly
  - On a timely basis within a reasonable time (*usually 45 days is reasonable*)
- Contains **summary** information
  - Beginning and ending market value
  - Fully accrued interest (net earnings)
- **Details** each position by book/market, maturity date, fund
- States **compliance** with Policy and PFIA

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Action Item #4 Two Audits

- Portfolio Audit by an external auditor
  - If you invest in other than CD and pools
  - Auditor must review the quarterly reports
- Internal Compliance Audit by investment officer
  - Compliance to your policy
  - Compliance to the PFIA

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Action Item #5

Safety Ratings Required

Rating required

- Pools, Municipals, CP, BA, Corporates

Insurance required

- FDIA on time and demand bank deposits
- Collateral above FDIC coverage
- CU Share certificates
- Brokered CDs FDIC

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Action Item #6 Quarterly Reporting

- describe the investment position of the entity in **detail**
- be prepared jointly by investment officers
- be **signed** by each investment officer
- Be **presented** to governing body and chief executive quarterly
  - On a timely basis within a reasonable time (*usually 45 days is reasonable*)
- contain **summary** information
  - Beginning and ending market value
  - Fully accrued interest (net earnings)
- **detail** each position by book/market, maturity date, fund
- state **compliance** with Policy and PFIA

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Action Item #7 DVP

Delivery versus payment (DVP)

Never release funds before receiving the security into your safekeeping

Always use an independent custodian/safekeeping agent

Never let a broker hold a security

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Action Item #8 Investors

- Governing Body Formally Designates Investment Officer(s) by rule, order ordinance or resolution
  - Governing body may choose anyone as the Investment Officer
  - Officer is responsible for investment consistent with policy
  - A contracted adviser/entity can also be an IO
  - Designation is effective until rescinded or terminated from employment
  - Officer must follow Prudent Person Rule
  - Governing body must provide for the training of officers
  - Officer can deposit, withdraw, transfer or manage funds
  - Regional Planning Commission can only serve Commission as IO
  - **The governing body retains ultimate fiduciary responsibility by statute**

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Procedures Required by the Act

Change of credit rating
- A security which falls below its required credit rating is unauthorized and must be liquidated in a reasonable time

Change in authorization
- A security which becomes un-authorized may be retained and proceeds reinvested in authorized securities

Change in merger/acquisition
- On brokered CDs or time and deposit banks mergers and acquisitions causing loss of insurance must be liquidated

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Procedure #1 Loss of Credit Rating

The Officer shall monitor on a monthly basis:

The credit rating on all authorized investments requiring a rating

Based on independent information from a nationally recognized rating agency.

If the security falls below the minimum rating

The Officer will notify ------ of:
- The loss of rating
- Conditions affecting the rating and possible loss of principal
- Along with liquidation alternatives available for action.

Within two weeks of the loss of rating.

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Procedure #2
Loss of Legal Authorization

- If a security loses authorization status in the PFIA or in your own policy
- The security need not be liquidated
- But, at maturity, proceeds must be invested in currently authorized investments

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Procedure #3
Specific Security Mergers

- Mergers and acquisitions can reduce or eliminate FDIC coverage
- Important on depository CDs and Critical on brokered CDs
  - The Investment Officer shall monitor, on no less than a weekly basis, the status and ownership of all banks issuing brokered CDs owned based upon information from the FDIC.
  - If any bank has been acquired or merged with another bank in which brokered CDs are owned, the Investment Officer shall **immediately liquidate** any brokered CD which exceeds the FDIC insurance level.

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Internal Procedures

- Procedures may be required in *your* operation specifically
  - Authorities
  - Authorizations
  - Record keeping
  - Signons and access codes
  - Additional reporting
  - Report maintenance
  - Safekeeping verification
  - Pool certifications

Specific Authorities by Sector

Schools districts are authorized to buy corporate notes if:
- It is rated no less that "AA-"
- It is not convertible to stock and is secured
- The District has an average of over 50,000 students

Higher Education may invest in corporate securities
- Common funds defined by IRS Code (26 USC Section 501 (f)
- Negotiable CDs from banks rated A1/P1 short term
- Corporate debt rated in top two highest long-term ratings
- **Higher education as defined by ED Code Section 61.003**

Hedging is authorized for cities in several instances if:
- It complies with CFTC
- It is segregated and accounted for separately
- It is an "eligible entity" and uses for "eligible projects"

Create your checklist for Compliance

TEXAS PUBLIC FUNDS INVESTMENT ACT COMPLIANCE ITEMS FOR LOCAL GOVERNMENTS 2022

Act Ref.	***Compliance Point***	***Are you in compliance?*** Yes	No	N/A
2256.004	Applicability does not apply to retirement funds, state funds, higher ed endowments over $150 million, VLB, County registry funds, deferred compensation funds or specially donated funds			
2256.005(a)	Governing body shall adopt a written policy at least annually			
2256.005(b)	Investment policy must:			
	-be written			
	- primarily emphasize safety of principal and liquidity			
	- address diversification, yield, maturity			
	- address quality and capability of investment management (the IO's training)			
2256.005((b)	Investment policy must include:			
	- a list of authorized investments			
	- maximum allowable stated maturity of any investment (overall or by security type)			
	- maximum dollar-weighted average maturity authorized - based on stated maturity dates			
	- method to monitor market price ('independent pricing' required)			
	- requirement to settle all transaction (except pools/funds) delivery versus payment			
	- include a procedure to monitor credit rating changes			
2256.005(c)	*Policy may provide for CD bids to be solicited orally, in writing, or electronically*			
2256.005(d)	Governing body must adopt a strategy for each portfolio (called *pooled fund group* in Act)			
	Strategy must include a maximum WAM for each portfolio (*pooled fund group*)			
	Strategy must describe the objectives and how they will be met in the following priority order:			
	- understanding the suitability of the investments to financial requirements of the entity			
	- preservation of principal			
	- liquidity			
	- marketability of the investment if liquidity needs arise			
	- diversification of the portfolio			
	- yield			
2256.005(e)	Governing body shall review and adopt by resolution policy and strategies not less than annually			
	Resolution adopting policy/strategy must show changes made to documents			

PFCA Compliance

An Action Item from PFCA

- The PFCA *assumes* a written collateral policy
- Putting the Collateral Policy within the investment policy guarantees notification and compliance
- Collateral Policies require:
  - Authorized collateral types
  - Responsibilities of entity and pledgor and custodian
  - Margins requirement of 102%
    - (110% for ISDs with MBS)
  - Monthly reporting (bank or custodian)
  - Execution under FIRREA

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Keys Points for Collateral

FDIC insurance covers by tax id not account

Collateral is pledged to you not owned

Margin at 102% protects you from price volatility
- PFCA only requires 100%

Independence of parties assures custody for safety

Requires independent monthly reporting
- PFCA requires you request the monthly report

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Sample *Pledged* Collateral Policy

The City must require pledged collateral with a *market value* of 102% on all time and demand deposits above the FDIC daily.

- Authorized collateral includes only:
  - *Obligations of the US Government, its agencies and instruments including mortgage-backed securities passing the bank test,*
  - *Obligations of any US state or subdivision with a rating of A or better/equivalent,*
  - *Irrevocable letters of credit of a FHLB.*
- Collateral shall be held by a designated independent custodian.
- Monthly reporting is required, preferably provided by the custodian.
- Substitution must be approved by the City.

Daily collateral will be calculated on prior day's balances.

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A Move to Money Center Custodians

- Many banks are moving to money center banks
  - Bank of New York as custodian (primarily)
  - US Bank may move into the space
- Process and requirements remain the same
- Online access to collateral reporting
  - Market values and daily pricing
- Safeguards remain the same
  - Contractually controlled
  - Collateral management control groups in banks

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Changes in *Substitute* Collateral

- Many banks are changing to Bank of New York as custodian
  - More efficient for banks in transfers and substitutions
  - Possible lower costs for banks
- Non-approval of substitution may be requested
  - Blanket approval covers any substitution
- Beneficial move giving City daily inquiry access to market value and faster custodian reporting

The Monthly Collateral Report

DATE COMPLETED:	January 05, 2023	COLLATERAL ANALYSIS AS OF:	December 31, 2022
CONTRA NUMBER:	PL-0000725	COLLATERAL ACCOUNT NUMBER:	WU2295
COLLATERAL WHEREHELD:	Bank of New York Mellon		

CUSIP	Description	CPN	Maturity Date	Original Face	Current Par	Market Value	Collateral Value
140XDN85	FN FM9414 3.500% 05/01/2047	3.50	5/1/2047	2,032,305.00	1,510,322.60	1,407,668.18	1,407,668.18
	Total for Collateral Account Number:		WU2295	$2,032,305.00	$1,510,322.60	$1,407,668.18	$1,407,668.18
	Total for PL-0000725 :			$2,032,305.00	$1,510,322.60	$1,407,668.18	$1,407,668.18

A Bit More on Bank Controls

- Bank Safety is based on collateral and that is based on FIRREA
- **"Financial Institutions Resource, Recovery and Enforcement Act"**
  - Regulation used by FDIC in bank closures
  - Key components must be followed

- FIRREA Requirements:
  1. depository/collateral agreement be in writing
  2. agreement be approved by resolution of the *Bank Board or Bank Loan Committee*
  3. resolution must be in 'official' bank records
  4. must not contain a list of specific securities pledged

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You Need Investment Controls

- Outline the operational controls you need for safety, liquidity and yield
- Provide for flexibility to match your portfolio to your situation and staff
- Document internal and external controls/procedures

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Who is Covered by the Act?

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PFIA Governing Body Duties

- **The Governing Body**
  - retains ultimate fiduciary responsibility by law
  - designates the investment officers
  - reviews and approves policy annually
  - reviews and adopts strategy annually
  - receives quarterly reports
  - approves broker/dealer list annually
  - approves training sources

  - *can* designate an Investment Committees (optional and limited authority)

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Investment Officers Designation

- Governing Body Designates Investment Officer(s) by rule, order ordinance or resolution
  - Governing body may choose anyone as IO
  - A contracted adviser/entity can also be an IO
  - Designation effective until rescinded or terminated from employment
  - Resolution provides
    - No person can deposit, withdraw, transfer or manager unless authorized by law
  - Council has the option to chose officers (no necessary set position)
  - Regional Planning Commission can only serve Commission as IO
  - **The governing body retains ultimate fiduciary responsibility by statute**

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PFIA Investment Officers' Duties

Investment officers

- Must disclose any personal blood/money conflicts
- Must prepare and sign quarterly reports
- Must attend to training every 2 fiscal years
- Must comply with the Policy
- Must suggest and monitor broker/dealers and certification
- Must monitor credit ratings
- Must advise the Council
- Must do or arrange for an annual compliance review
- Must provide for documented competitive transactions

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PFIA Training Requirements

- Applicable to the Treasurer and investment officer(s)
  - And CFO if Treasurer is not the CFO
- Must be an independent source approved by governing body resolution
  - Not an annual designation
- All officers take 10 hours of training within 12 months of officer designation
  - City and ISDs take 8 hours each successive *fiscal* year
- Training must include responsibilities, controls, types of risk, diversification and compliance to the Act

Investment Officer Ethics

- IO must be a local and designated (and 'Treasurer' if there is one)
- Must disclose personal/business relationships by officer
  - Refers to personal business relationships
  - IO must file a statement disclosing the relationship
  - **If IO relationship is within two levels of blood or marriage and**
    1. If IO owns >10% of voting stock/shares or >$5,000 in fair market value of firm
    2. If IO received >10% of IO's prior year income from the firm
    3. If IO received >$2,500 in investments in prior year for his personal account
    - If these limits are met then file with the Texas Ethics Commission
  - Specific income limits are set but full disclosure is safer/easier

TEXAS ETHICS COMMISSION

Promoting Public Confidence in Government

Counter-party Duties

Pool Policy Certification

- "**Business Organizations**" are defined only **as pools** and 'discretionary investment firms'
- These must review and certify to the Policy

Auditors

- Must review the quarterly reports
  - If investments in more than CD and pools are made

RIA: Non-discretionary Investment advisors

- Should receive and certify to the Policy
- Can assume all investment officer responsibilities
  - May be designated as the entity's investment officer
- Complies to a higher "prudent expert" standard

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PFIA Broker Requirements

- Broker/Dealers
  - Governing body must annually review, revise and adopt list of authorized broker/dealers
  - List is for broker/dealers only not banks
  - Can be approved by *governing body designated* investment committee (a committee established by the Council)
- Broker/Dealer policy certification is no longer required
  - Best practice is to send the policy to any broker/dealer

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PFIA Policy Certification Requirement

Pools Only

- The certificate effectively states:
  - Organization has implemented control procedures except where:
    - Policy requires an interpretation of subjective investment standards
    - Policy relates to funds not invested through the organization
- The certificate must be received before any transaction takes place
- Policy certification must be *acceptable* to both parties – language is <u>not</u> set by PFIA
  - Nothing relieves entity of responsibility to monitor investments
  - Pools now have standard certificates – use them

DEFINE THE POOLS YOU WANT IN POLICY 79

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So where do you start?

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Cash Flow is Always First

- Identifies when funds are needed
- Protects your liquidity
- Improves investment returns
- Establishes policy parameters
  - Maximum maturity
  - Maximum weighted average maturity
  - Risk benchmarks
- Promotes safe maturity extensions
- Defines your portfolio

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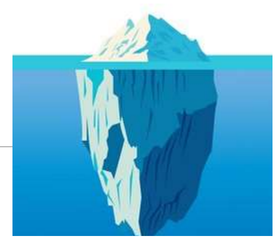
Take the Macro View



- Stay to the 80-20 % Rule
  - Limit the categories
- Look at a monthly basis
- Find the net cash position each month
- You are looking for gaps to fill with investments
- Add year by year to get a solid average

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Building a Cash Flow

	Mo1	Mo2	Mo3	Mo4	Mo5	Mo6
REVENUES	8,000,000	9,000,000	3,000,000	2,000,000	7,000,000	5,000,000
EXPENSES	4,500,000	5,000,000	4,000,000	5,500,000	5,000,000	6,000,000
NET	3,500,000	4,000,000	-1,000,000	-3,500,000	2,000,000	-1,000,000

Look month-to-month focusing NET to invest to negative months.

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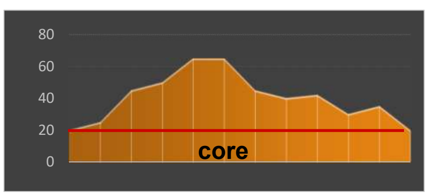
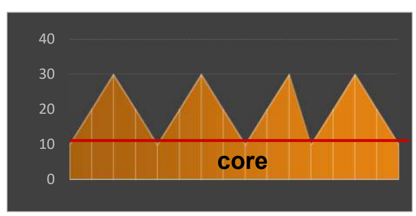
Everyone has a CORE Portfolio

Measuring and Using the Core





What is the apparent maximum maturity and WAM of each of these?

A core is money you have not touched for an extended period

- allows you to extend the portfolio

If you have no core you have a maximum maturity of one year or less

Your WAM should fit the cycles of your cash flow

Your WAM will set a benchmark to compare risk

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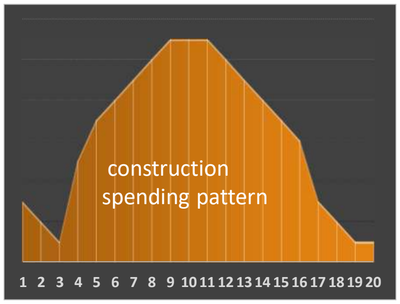
Strategies are a must on capital projects



-Slow start setting contracts
-Building takes place
-Building slows
-Funds live on…..

Often a large nonrecurring expenditure
- unique cash flow
- like projects can show trends

Preliminary work with departments
- Set expenditure plan before funds arrive
- Bond documents contain basic plans

Explain to generate support
- Impact of additional earnings
- Arbitrage impacts

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Now Use It as an Investor

Focus on balances required to pay expenses
- Use historical needs to set investment requirements
- Keep a *small* liquidity buffer
  (ex: 1-month normal expenditures)
- Ongoing use builds on the traditional information

You can create the basic cash flow in your head
- How much is your payroll each month?
- How much is your accounts payable each month?
- When are your debt service payments? How much?

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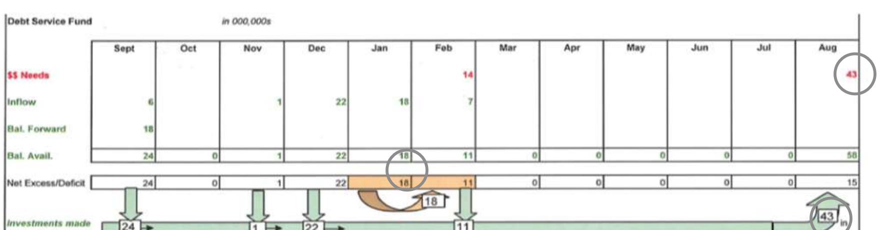
This city needs $3 million each month but only needs one investment

S	M	T	W	TH	F	S
1	2	3 	4 Payables $250,000	5	6 Payroll $1mm	7
8	9	10	11 Payables $250,000	12	13	14
15	16	17	18 Payables $250,000	19	20	21
22	23	24	25 Payables $250,000	26	27 Payroll $1mm	28

Making a Plan Using the Information – I&S


Debt Service Fund in 000,000s

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
$$ Needs						14						43
Inflow	6		1	22	18	7						
Bal. Forward	18											
Bal. Avail.	24	0	1	22	18	11	0	0	0	0	0	58
Net Excess/Deficit	24	0	1	22	18	11	0	0	0	0	0	15

An overview of the cash flow needs allows the investor to look ahead.

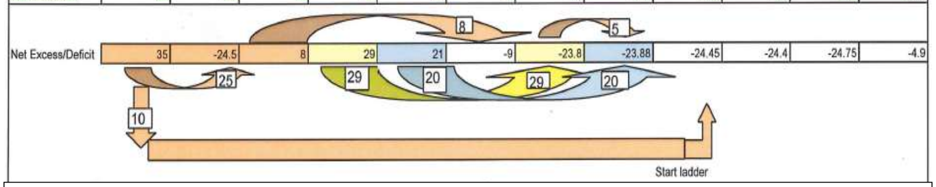
The flow in Jan. alone covers the February payment.

The net balances of each other month can be invested 11, 9, 8 and 6 months.

Using the Info
A General Fund Sample

GENERAL FUND PORTFOLIO *in 000,000s*

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
$$ Needs	25	25	25	25	25	25	25	25	25	25	25	25
Tax Inflow		0.5	3	54	46	16	1.2	1.12	0.55	0.6	0.25	0.1
State Payments	35		30									20
Bal. Forward	25											
Bal. Available	60	0.5	33	54	46	16	1.2	1.12	0.55	0.6	0.25	20.1
Net Excess/Deficit	35	-24.5	8	29	21	-9	-23.8	-23.88	-24.45	-24.4	-24.75	-4.9



We use the excess balances not needed for the next month and extend.

Three excess balances result in 3-month investments.

The cash flow knowledge allows Sept. to be extended to 8-month investment.

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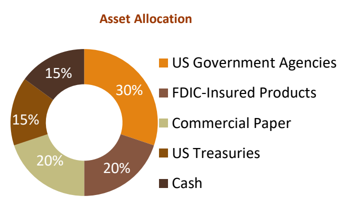

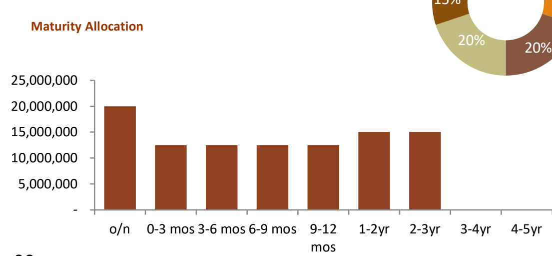

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A Strategy Based on Cash Flow Creates Diversification

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Plan and execute with your tax dollars…

- Identify your core/reserves
- Identify your low months in coming fiscal year
- How much is needed in each of the low months
- Identify debt service payment amounts

- Invest the funds out to meet those needs
- Lock in rates while they are here

- Our horizon for falling rates may have lengthened **but they will fall**

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Next, Of Course, A Policy

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The Policy

- Who are you writing it for?
  - Keep it clear and concise
- Some policy sections can be backed up by procedures
- Strategies are broad in scope and usually in the policy
- Keep the policy and strategy in sync

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Legal Policy 'Must haves'

- Written and approved annually
- Maximum maturity and WAM authorization
- Authorized Securities/Investments
- Address diversification and yield
- Investment officer capabilities (training)
- Method to monitor credit
- Require delivery versus payment (DVP)

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Key Policy Elements

- Scope
- Objectives
- Responsibilities
- Authorized Investments
- Maximum maturity
- Maximum weighted average maturity
- Controls and Procedures
- Collateral Policy
- Safekeeping
- Reporting requirements
- Annual adoption

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Specific Policy Requirements

Write and adopt a policy annually which must: (2256.005)

- Must be adopted by resolution
- The resolution must show any changes made

- Be written
- Primarily emphasize safety and liquidity
- State the maximum stated maturity authorized
- Address diversification, yield, maturity & capability of officers
- List your authorized investments
- Include a procedure to monitor credit rating changes
- Set a maximum weighted average maturity (WAM)
- Method to monitor market prices
- Require delivery versus payment (DVP)
- Policy may 'un-authorize' any type investment

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Policy Elements

- Introduction
  - Emphasizing safety, compliance and reference to Acts

- Scope
  - *This investment policy applies to all financial assets of the City and any new funds created unless specifically exempted by the City Council and this Policy.*

- Objectives
  - Safety, liquidity, diversification and yield
  - State and define objectives
  - *It is the policy of the City that all funds shall be managed and invested with four primary objectives, listed in order of their priority: safety, liquidity, diversification and yield. Investments are to be chosen in a manner which promotes diversity.*

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Policy Elements

- Delegation of Responsibilities
  - Investment Officer duties and training
  - Governing body duties
  - *Broker/dealers requirements (separate section)*
  - Auditors
  - Advisers (if applicable)

  - *The **City Council holds ultimate fiduciary responsibility for the portfolio**. It will designate investment officer(s), receive and review quarterly reporting, approve and provide for investment officer training, annually approve broker/dealers, and annually review and adopt the Investment Policy and Strategy.*

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Prudence and Policy Control

- Prudent Person Rule
- Internal Controls
  - Cash flow analysis/plan
  - Control of collusion
  - Separation of authority and duties
  - Clear delegation of authority
  - Written confirmations and records for all transactions
  - Maintenance of security procedures
  - Safekeeping custody
  - DVP – Delivery versus Payment
  - Competitive bidding on all transactions
  - Monitoring credit rating on rated securities
  - Monitoring FDIC status on brokered CDs
- Annual requirement for a *compliance audit*

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Policy Elements

- Authorized investments – choose wisely for your needs
  - Define clearly and set maximum maturities (avoid legalese)
  - Define any credit rating required

Assets of the City may be invested only in the following instruments as further defined by the Act. If changes are made to the Act they will not be authorized until this Policy is modified and adopted by the City Council. All investment transactions will be made on a competitive basis.

- *A.* *Obligations of the United States Government, its agencies and instrumentalities with a maximum stated maturity of __ year, excluding mortgage-backed securities*
- *B.* *Fully insured or collateralized depository certificates of deposit from banks in Texas, with a stated maximum maturity of __ year insured by the Federal Deposit Insurance Corporation, or its successor, or collateralized in accordance with this Policy.*
- *C.* *Fully NCUSIF insured share certificates of Texas credit unions not to exceed __ years to stated maturity.*

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Basic Suggested Securities

- US Treasuries, Agencies and Instrumentalities
- Depository CD in TX banks
- Local Government Investment Pools ($1)
- Money market mutual funds ($1)
- Demand deposits in TX banks
- Brokered CD Securities
- Commercial paper

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Legalese Can Be Confusing - Clarify the PFIA Language

- Sec. 2256.010 **Authorized Investments: Certificates of Deposit and Share Certificates.**
- (a) A certificate of deposit or share deposit is an authorized investment under this subchapter if the certificate is issued by a depository institution that has its main office or a branch office in this state and is:
  - (1) guaranteed or insured by the Federal Deposit Insurance Corporation, or its successor or the National Credit Union Share Insurance Fund or its successor;
  - (2) secured by obligations that are described by Section 2256.009(a), including mortgage backed securities directly issued by a federal agency or instrumentality that have a market value of not less than the principal amount of the certificates, but excluding those mortgage-backed securities of the nature described by Section 2256.009(b); or
  - (3) secured in accordance with Chapter 2257 or in any other manner and amount provided by law for deposits of the investing entity.
- (b) In addition to the authority to invest funds in certificates of deposit under Subsection (a), an investment in certificates of deposit made in accordance with the following conditions is an authorized investment under this subchapter:
  - (1) the funds are invested by an investing entity through:
    - (A) a broker that has a main office or a branch office in this state and is selected from a list adopted by the investing entity as required by Section 2256.025; or
    - (B) a depository institution that has its main office or a branch office in this state and that is selected by the investing entity;
  - (2) the broker or the depository institution selected by the investing entity under Subdivision (1) arranges for the deposit of the funds in certificates of deposit in one or more federally insured depository institutions, wherever located, for the account of the investing entity;
  - (3) the full amount of the principal and accrued interest of each of the certificates of deposit is insured by the United States or an instrumentality of the United States; and
  - (4) the investing entity appoints the depository institution selected by the investing entity under Subdivision (1),
  - an entity described by Section 2257.041(d), or a clearing broker-dealer registered with the Securities and Exchange Commission operating pursuant to Securities and Exchange Commission Rule 15c3-3 (17 C.F.R. Section 240.15c3-3) as custodian for the investing entity with respect to the certificates of deposit issued for the account of the investing entity.

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Clarify Policy Language

TRANSLATES TO THIS >>>

Condensing and clarifying the legalese for everyone

- Fully FDIC insured or collateralized depository certificates of deposit from banks doing business in Texas
- Fully insured share certificates of credit unions doing business in Texas
- Fully FDIC insured brokered certificate of deposit securities from any US state, delivered versus payment to the district's safekeeping

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Policy Elements

- Reporting
  - PFIA requirements – can just be referenced but…

Quarterly Reporting

- *The Investment Officers shall prepare and present a signed quarterly investment report to the City Manager and Council in accordance with the Act giving detail information on each portfolio and bank position and summary information to permit an informed outside reader to evaluate the performance of the investment program. The report will include the following at a minimum as of the end of the reporting period:*

- *A full description of each individual security or bank/pool position held*
- *the amortized book value and market value at the beginning and end of the period,*
- *Unrealized gains or losses (book value minus market value),*
- *Weighted average yield of the portfolio (and its applicable benchmarks,)*
- *Earnings for the period (accrued interest plus accretion minus amortization)*
- *Asset allocation analysis of the total portfolio by market sector and maturity, and*
- *Statement of compliance of the investment portfolio with the Act and the Investment Policy*

- *Market prices for the calculation of market value will be obtained from independent sources.*

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Policy Elements

- Designated Banking Services Depository
  - *At least every five years, a banking services depository shall be selected through a competitive RFP or bid in accordance with the Texas Government Code 105.*
  - *In selecting a depository, the services, cost of services, credit worthiness, earnings potential, and collateralization by the institutions shall be considered. The depository contract will provide for collateral if balances exceed the FDIC insurance balance per tax identification number and be executed under FIRREA.*
- Broker/Dealers
  - Broker/dealer requirements and broker list
- *All financial institutions, and broker/dealers who desire to transact business with the City must supply the following documents to the Investments Officer(s).*
- *Financial Industry Regulatory Authority (FINRA) certification and CRD #*
- *Proof of Texas State Securities registration (if brokers)*
- *Each broker/dealer will be sent a copy of the City's investment policy. If material changes are made to the policy, the new policy will be sent to the entities.*

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Policy Elements

- Collateral Policy
  - For Time and Demand Deposits
- *Time and Demand Deposits Pledged Collateral*
- *All bank time and demand deposits shall be collateralized above the FDIC coverage by pledged collateral. In order to anticipate market changes and provide a level of security for all funds, collateral will be maintained and monitored by the pledging depository at a market value of **102%** of the total principal and accrued interest on the deposits. The bank shall monitor and maintain the margins on a daily basis.*
  - *Include what is authorized as collateral*
- Safekeeping
- Policy adoption by governing body
  - *The City's Investment Policy shall be reviewed and adopted by resolution of the City Council no less than annually. Any changes made to the Policy must be noted in the adopting resolution.*

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Policy Elements

- Security Safekeeping/Custody
  - If you buy marketable securities

- *All purchased securities are to be cleared to the City's safekeeping agent/custodian on a delivery versus payment (DVP) basis.*
- *All safekeeping relationships shall be approved by the Investment Officer and an agreement of the terms executed in writing.*
- *The independent third-party safekeeping agent shall be required to report or issue safekeeping receipts to the City listing each specific security, rate, description, maturity, cusip number, and other pertinent information on a timely basis.*

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Your Banking Partner

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Banking Changes

- Significant changes in bank regulations
  - Technology improvements
  - Mergers and acquisitions
  - Banks aimed at stability and liquidity
  - More changes may be coming (easier regs)?
- Most large banks focus on services not deposits
- State chartered banks may be more open to deposits but lack technology

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Liquidity and Leverage Impacts

- Public entities require expensive collateral above FDIC insurance
- Collateral is normally securities owned by the bank
  - Securities used for collateral reduce liquidity available to the bank
  - Their securities are being leveraged
- Therefore:
  - Public entities decrease the liquidity ratio which is to be raised
  - Public entities increase the leverage ratio which is to be lowered
- Public entities have wide swings in balances creating unstable deposits

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Impacts on Public Entities

- Banks try to reduce collateral costs
  - Using letters of credit instead of securities
- Banks add balance fees to cover costs
  - Addressing regulatory burdens
  - Addition of balance-based fees
- Banks are not always bidding for the business
  - The appetite is not there
- Banks move to being service providers
  - Providing service not just depository duty

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Why Letters of Credit

- Many banks *require* use of LOC
  - So inclusion in your collateral policy should be considered
- Cost differential for banks
  - Securities cost about 10-12 bps. and a LOC 5 bps.
- What is a LOC? Should I care??
  - FHLB is a banker's bank owned by the member banks
  - Credit backing comes from the member banks
  - Delayed time requirements for amount changes can be critical

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What is a Balance Based Fee?

Banks react to large balances

- Not all banks pass through fees – but ask! – and verify
- It goes by many names - check

Based on bank but basically 0.10% to 0.12%

- On $5mm that's $5,000 year

Higher balances hurt you if the fee assessed

- Reduce balances through moving funds or sweeps

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Do You Pay a Balance Based Fee?

Sample Account Analysis Detail

SUMMARY OF ACCOUNT SERVICES

SERVICE DESCRIPTION	AFP CODE	VOLUME	UNIT PRICE	TOTAL PRICE	COLLECTED BALANCE REQUIRED
DEMAND DEPOSIT RELATED SERVICES					
ACCOUNT MAINTENANCE	01 00 00	7	4.9000	34.30	55,642.16
ACCOUNT BALANCE FEE	00 02 30	21,839	0.1420	3,101.14	5,030,731.33
REGULAR DEPOSIT TICKET	10 02 00	212	0.1750	37.10	60,184.36
DEPOSIT ITEMS-ON US(N)	10 02 20	25	0.0353	0.88	1,427.55
DEPOSITED ITEMS-TRANSIT	10 02 00	477	0.0420	20.03	32,493.07
PAID ITEMS	15 01 00	413	0.0630	26.02	42,210.17
RETURNS	10 04 00	5	2.4500	12.25	19,872.20
RECLEARS	10 04 02	6	2.5000	15.00	24,333.30
BLOCKED CHECKS	01 99 99	1	16.0000	16.00	25,955.52
				$3,262.72	$5,292,849.66

Reducing the balance-based fee:

reduce your balances

review your account structures

bank rates are probably below the pool rates

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Ask for Carry-Over Management

- Require it in your RFP/bid
- Manage it with the bank monthly
  - Insist on quarterly/semi-annual carry-over – account analysis total
  - Adjust your balances monthly accordingly
- Eliminated by use of an automatic sweep
  - Sweep excess funds to a money market fund and pay fees
  - Have the sweep set at either:
    - Compensating balance amount
    - Zero

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Structure Matters

- INTEREST BEARING ACCOUNTS
- MONEY MARKET ACCOUNTS*
- HYBRID STRUCTURE
- SWEEP TO A MONEY MARKET FUND
- SWEEP TO INTRAFI

**New changes in MMA may affect you*

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Use Different Bank Account Types

- Non-interest-bearing accounts
- Interest Bearing Accounts
- Money Market ACCOUNTS *
- Sweeps to Money Market FUND
- Spread Accounts

* A money market accounts is a bank account not an outside fund.

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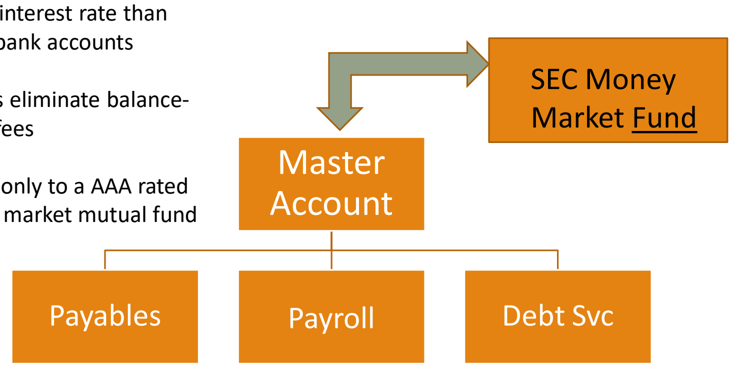
Sweep Accounts

Sweeps normally provide a higher interest rate than inside bank accounts

Sweeps eliminate balance-based fees

Sweep only to a AAA rated money market mutual fund



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IntraFi (ICS) as a bank account

Some banks use as a 'Sweep'

- Insured Cash Sweep (ICS) has been renamed IntraFi
- Check if "spread" depository funds are authorized in your policy – if not add it
- ICS is a *money market account which may have* withdrawal limits
  - It may not give daily liquidity
  - This is more normally a *savings account* option – banks are adopting as a sweep

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Repo Sweep Caution

- Repo Sweeps pose a unique risk – don't allow them
  - Segregation of assets not a statute defined 'buy-sell' transaction
- Here collateral is *segregated* not bought and sold
  - As a sweep, repo must be established as buy-sell
- FDIC sweep construction by bank could cause loss
  - It may be in the bank's account not yours

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How You Pay for Bank Services Must Depend on Rates

- The method hinges on investment rates
  - **Compensating balance basis**
    - Traditional for public entities
    - You leave money in bank which earns $$ and pays the bill
    - You never see the charge – it looks "free"
    - The cost is the use of your money and its potential earnings
  - **Fee Basis**
    - You pay the fees for the service by debit to the account

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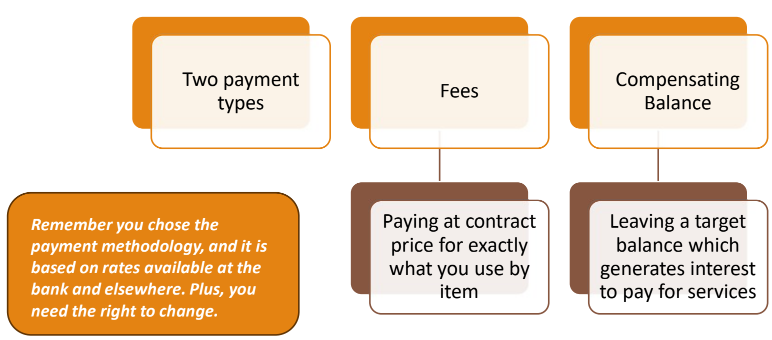
Your Payment Method Matters



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Comparing Rates

- If you use compensating balances compare your ECR to outside options
- A 0.90% ECR on $7 million balance will generate $5,250/month
- If rates outside give you 5.00% the same $7 million generates $ 29,166/ month
- Invest the funds outside
  - pay $5,250 directly and keep $ 23,916 ($286,992/year)

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Different Rates Control

- Move to Fee Basis if rates outside better
  - Pay the bank and keep the earnings
  - Watch out for the "free services" and balance fee
- Use investment options through the bank
  - Sweeps take money out of bank
  - Eliminates regulatory fee
  - Does not require bank to hold collateral
  - Sweep your own funds from money market accounts to interest bearing
- Use investment options outside the bank
  - Pools are just as liquid – transfer in as needed

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The Rates Say It All

	Comp Balance	Fee Basis	Fee Basis
ECR	1.00 %	1.00 %	1.00 %
Bal. Required	$ 4,000,000	00	00
ECR Earnings	$ 3,333	00	00
Sweep %	00	3.75 %	3.75 %
Sweep Amount	00	$ 4,000,000	$ 1,500,000
Sweep Earnings	00	$12,500	$ 4,687
Pool %	4.50 %	4.50 %	4.50 %
Pool Amount	00	00	$ 2,500,000
Pool Earnings	00	00	$ 9,375
Net to Bank (fee)	$ 3,333	$ 3,333	$ 3,333
Net to You	00	$ 9,167	$ 10,729
Net Annual Earnings	00	$ 110,004	$ 128,748

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Add in a *Balance Based Fee*

	Comp Balance	Fee Basis	Fee Basis
ECR	1.00 %	1.00 %	1.00 %
Bal. Required	**$ 4,560,000**	00	00
ECR Earnings	**$ 3,833**	00	00
Sweep %	00	3.75 %	3.75 %
Sweep Amount	00	$ 4,000,000	$ 1,500,000
Sweep Earnings	00	$12,500	$ 4,687
Pool %	4.50 %	4.50 %	4.50 %
Pool Amount	00	00	$ 2,500,000
Pool Earnings	00	00	$ 9,375
Net to Bank (fee)	**$ 3,833**	$ 3,333	$ 3,333
Net to You	00	$ 9,167	$ 10,729
Net Annual Earnings	00	$ 110,004	$ 128,748

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THE ACCOUNT ANALYSIS

- Your invoice for services
- Your opportunity to see how and how much you use the bank services
- Your opportunity to compare rates for best value for your funds

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ACCOUNT ANALYSIS ELEMENTS

SUMMARY INFORMATION COMES FIRST

- RELATIONSHIP SUMMARY
- CARRY-OVER POSITION
- BALANCES BY ACCOUNT
- ECR = EARNINGS CREDIT RATE
- NET-NET POSITIONS

DETAIL BY FEE TYPE/CATEGORY

- BY RELATIONSHIP AND BY ACCOUNT
- TYPE OF CHARGE – VOLUME USED – FEE DUE – OR – BALANCE REQUIRED

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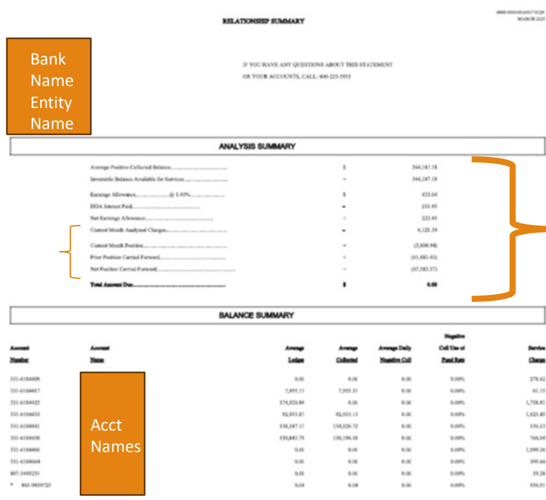

The Relationship *Summary*

Fee Basis Structure with Carry-over

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Terms and *Calc* on the Summary Section

- Collected Balance
- Earnings Allowance (%)
- DDA Interest Paid
- Net Earnings Allowance
- Current Month Charges
- Current Month Position
- Prior Position Carried Forward
- Net Position Carried Forward
- Amount Due

Earnings at ECR	**433.04**
Minus IB Accounts earnings	**-211.95**
= Net Earnings Allowance	**222.43**
Fees for Month	**(6,121.39)**
Minus Net earnings Allowance	**- 222.43**
= Current Month Position	**(5,898.94)**
Prior Carry-Overall Position	**(61,483.43)**
Net Position Carry-Over	**(67,387.37)**

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A Smaller Bank Variation

AVERAGE DAILY LEDGER BALANCE	970,091.29
LESS AVERAGE DAILY FLOAT	.00
AVERAGE DAILY COLLECTED BALANCE	970,091.29
LESS REQUIRED RESERVES	.00
AVERAGE NET COLLECTED BALANCE	970,091.29

EARNINGS ON	$970,091.29 AT 4.530000%	3,722.12

SERVICE	ACTIVITY	UNIT PRICE	ACTIVITY CHARGE	REQUIRED BALANCES
Monthly Service Charge	1	12.5000	12.50	3,257.85
Bank Administration Fee			1.59	414.40
ACH Debits	7	.1000	.70	182.44
ACH Credits	2	.1000	.20	52.13
TOTAL SERVICES AND REQUIRED BALANCES			14.99	3,906.82
CURRENT MONTH NET EXCESS			3,707.13	
CURRENT NET PROFIT			3,707.13	

FEES = BALANCE X ECR% / 12

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BALANCE INFORMATION

	$15,781,757.58
	$47,131.01
Average Collected Balance	$15,734,626.57
Average Negative Collected Balance	$0.00
Average Positive Collected Balance	$15,734,626.56
Positive Collected Balance	$15,734,626.56
Less Legal Reserve	$1,573,462.66
Investable Balance for Earnings Allowance	$14,161,163.90

EARNINGS ALLOWANCE INFORMATION

	Average Balances	Rate	Amount
Earnings Allowance on Positive Balance	$14,161,163.90	0.3400%	$4,078.13
Expenses on Negative Collected Balance	$0.00	3.2500%	$0.00
Net Earnings Allowance			$4,078.13

ACCOUNT POSITION

Less Price of Services Used	$2,569.42
Equalization Factor	$0.00
Amount Due	$0.00

The All-important
Account Analysis

Your invoice for service

City earned $4,078 but needed only $ 2,569

Left $1,509 behind

You can use 'carry-over' to cure this – it's in your RFP

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Detail Listings on the Analysis

- Service Code
- AFP Code *(Assoc. of Financial Professionals)*
- Service Description
- Unit Price (*should equal you contract*)
- Volume
- Service Charge
- Required Balance

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Get Familiar with Your Analysis

CURRENT MONTH'S EARNINGS CREDIT RATE = 0.35%		CURRENT MONTH'S MULTIPLE = $3,476.19		
SERVICE	NUMBER OF UNITS	UNIT PRICE	SERVICE CHARGE	BALANCE REQUIRED
BALANCE RELATED SERVICES				
FDIC ASSESSMENT	531,494		57.70	200,576.19
DEPOSITORY SERVICES				
ACCOUNT MAINTENANCE	6	7.0000	42.00	146,000.00
VAULT DEPOSIT	178	.2500	44.50	154,690.47
ITEM PROCESSING DEPOSIT	3	.2500	.75	2,607.14
DEPOSIT CORRECTION-NON-CASH	4	3.0000	12.00	41,714.29
GENERAL CHECKS PAID TRUNCATED	172	.0700	12.04	41,853.33
DIRECT DDA STMT PER ACCT	10	.0000	.00	0.00
ZBA MASTER ACCOUNT MAINT	1	.0000	.00	0.00
ZBA SUBSIDIARY ACCOUNT MAINT	2	10.0000	20.00	69,523.81
RETURNS-CHARGEBACK	14	1.0000	14.00	48,666.66
RETURNS-RECLEAR	22	1.0000	22.00	76,476.19
RETURNS-RECLEAR SERVICES	4	.0000	.00	0.00
CKS DEP UN-ENCODED ITEMS	1,047	.0700	73.29	254,770.00
STOP PAY AUTOMATED<=12 MONTHS	1	3.0000	3.00	10,428.57
DEBITS POSTED-ELECTRONIC	79	.0500	3.95	13,730.95
CREDITS POSTED-ELECTRONIC	330	.0500	16.50	57,357.15
DEPOSIT ACCOUNT STATEMENTS	7	.0000	.00	0.00
GEN DISB CKS PD-IS FRONT IMG	30	.0700	2.10	7,300.00
IMAGE DEPOSIT	44	1.0000	44.00	152,952.38
IRD DEPOSITED ITEMS-RDSO	9	.0867	.78	2,711.43
IMAGE DEPOSITED ITEMS-RDSO	9,704	.0450	436.68	1,517,982.85
DIRECT ACCOUNT TRANSFER	5	.0000	.00	0.00
COMMERCIAL DEPS-CASH VAULT				
CURR/COIN DEP/$100-VLT	2,366	.0500	118.30	411,233.34
COIN DEPOSIT-NON STD BAG-VLT	2	5.0000	10.00	34,761.91
DEPOSIT CORRECTION-CASH	1	3.0000	3.00	10,428.57
MAIL NOTIFICATION-DCN-VLT	1	.0000	.00	0.00
GENERAL ACH SERVICES				
ACH OPTIONAL RPTS-ELECTRONIC	7	1.0000	7.00	24,333.33
ACH RETURN ITEM	37	1.0000	37.00	128,619.05
ACH RECLEARS	31	1.0000	31.00	107,761.90

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Here’s the Meat

SERVICE DETAIL

Svc Code	AFP Code	Service Description	Unit Price	Volume	Service Charges
IAMIB	00 0230	RECOUPMENT MONTHLY IB	0.08300	389.92	32.36
IAMTH	00 0230	RECOUPMENT MONTHLY	0.08300	174.92	14.52
		BALANCE & COMPENSATION INFORMATION			**46.88**
15007	01 0101	DESKTOP DEPOSIT-DEPOSIT CREDITED	0.40000	100.00	40.00
22051	01 0000	ACCT MAINTENANCE	4.00000	2.00	8.00
22404	01 0010	ACCT MAINTENANCE CHEXSTOR-PLUS	4.00000	8.00	32.00
DS001	01 0021	ZERO BALANCE MONTHLY BASE	5.00000	6.00	30.00
CK021	01 0100	DEBITS POSTED	0.05000	238.00	11.90
		GENERAL ACCOUNT SERVICES			**121.90**

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And the Nitty-Gritty

CURRENT MONTH'S EARNINGS CREDIT RATE = 0.35%

SERVICE	NUMBER OF UNITS	UNIT PRICE	SERVICE CHARGE	BALANCE REQUIRED
BALANCE RELATED SERVICES				
FDIC ASSESSMENT	531,494		57.70	200,576.19
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Look at the Multiple Layers of Details

- INFO SYSTEMS
  - INQUIRIES AND SEARCHES
  - PRIOR DAY AND INTRA-DAY
- E-LOCKBOX
  - E-LOCKBOX PAYMENT
  - E-LOCKBOX REPORTING MONTHLY FEE
  - E-LOCKBOX REVERAL REPORTING MONTHLY FEE
  - E-LOCKBOX VALIDATION FILE MONTHLY
  - E-LOCKBOX SUSPENDED PAYMENT
  - E-LOCKBOX TRANSMISSION
- ACH
  - MONTHLY BASE, SUBSCRIPTION, RETURN BASE
  - RETURNS (ITEM OR ADMINISTRATION)
  - SAME DAY
  - FUTURE DATED
  - ADDENDUM (RECEIVED/SENT)
  - REVERSALS
  - BATCH RELEASE
  - FRAUD FILTERS
  - STOPS
  - NOC

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Account Analysis Monthly Check

SERVICE TYPE	VOLUME	CONTRACT PRICE	FEE TOTAL
ACCOUNT MAINT.		15.0000	
DEBITS POSTED		0.1000	
ELECTRONIC CREDITS		0.0700	
BRANCH DEPOSIT		1.2500	
DEPOSITED CHECK		0.2500	
REMOTE CHECKS DEPOSIT		0.0500	
RETURN ITEM		1.5000	
POSITIVE PAY EXCEPTION		0.1000	
POSITIVE PAY MONTHLY		50.0000	
ACH CREDIT		0.0500	
ACH DEBIT		0.0500	
FRAUD FILTER REVIEW		50.0000	
WIRE IN DOMESTIC		7.5000	
BASIC BANKING		50.0000	

Monthly Fees Should be Checked

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Bank Safety is Founded on FIRREA

- **"Financial Institutions Resource, Recovery and Enforcement Act"**
  - Regulation used by FDIC in bank closures
  - Key components must be followed

- Requirements:
  1. depository/collateral agreement be in writing
  2. agreement be approved by resolution of the *Bank Board or Bank Loan Committee*
  3. resolution must be in 'official' bank records
  4. must not contain a list of specific securities pledged

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Use FDIC Coverage to your Advantage

- Based on type of account – a change in definitions
  - All <u>time and savings</u> accounts = $250,000
    - Includes *NOW* and money market accounts
  - All <u>demand</u> accounts = $250,000
    - Includes interest bearing and non-interest bearing
- Based on location of bank
  - If the bank is <u>outside</u> the state all deposited are lumped together
  - This has changed from 'headquarters"

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Monitor Your Bank

- Know your depository
- Understand the collateral terms and agreement
- Check collateral report monthly from custodian
- Take action if necessary

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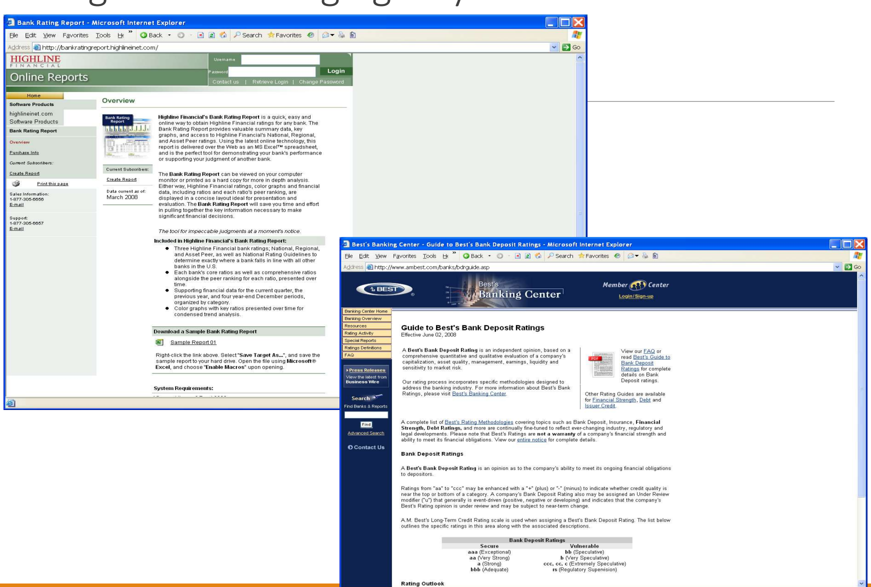
Using a Bank Rating Agency



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Keys to Maintain Banking Controls

- Reconciliation – Partial or Full
- Account analysis review
- Payment methodology according to rates
- Timely Reporting
- Independent safe-keeping of collateral
- Written FIRREA collateral agreement

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RISKS

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MANAGING RISK

- All investments involve risk
- Risk cannot be avoided
- Risk must be managed
- You are now the risk manager
- A balance must be established between risk and return – your comfort zone
- There is a minor risk of losing money, but there is a greater risk of not earning all available.

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CREDIT RISK

The risk of value loss due to issuer default or delays on payment of interest or principal on a timely basis

Minimized by:

- Buying high credit quality securities
- Monitoring credit rating
- Diversifying between issuers
- Using investments and deposits that are collateralized
- Pre-qualifying the financial institutions and intermediaries

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LIQUIDITY RISK

The risk that the entity will need the money before the investment's maturity date restricting access to money.

Minimized by:

- Accurate cash flow projecting
- Laddering maturities
- Maintaining a small liquidity buffer for unanticipated needs

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COLLATERAL RISK

The risk of insufficient collateral to compensate the entity if a bank fails. The risk that ownership of collateral is not perfected or not available.

Minimized by:

- Requiring a minimum of 102% market security value
- Ensuring confirmation of the pledged collateral
- Ensuring security collateral is PFIA and policy authorized
- Monitoring the collateral at least monthly

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Banking Safety: Founded on FIRREA

- **"Financial Institutions Resource, Recovery and Enforcement Act"**
  - Regulation used by FDIC in bank closures
  - Key components <u>must</u> be followed

- Assure you execute under its terms

- Requirements:
  1. depository/collateral agreement be in writing
  2. agreement be approved by resolution of the *Bank Board or Bank Loan Committee*
  3. resolution must be in 'official' bank records
  4. must not contain a list of specific securities pledged

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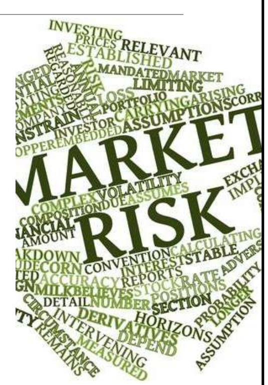
Market Risks

Market Risk
- The risk that market prices will fall
- Lower prices threatens liquidity
  - If you can not sell at a loss
- If sold you might recognize a loss of principal
  - If not sold it is an "unrealized" loss and no threat



Volatility Risk (the "Fear Index")
- The risk of significant changes in market prices
- Higher volatility = higher risk
- Volatility increases with longer maturities, low credit and structured securities

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The Rare Event Risk

Is the risk when markets move in unexpected directions

- An unforeseen event can cause markets to turn quickly
- Markets move especially with *uncertainty*
- Or, a risk at your bank!

Minimized by:

- Diversification
- Remembering that you are a buy and hold portfolio
  - You are matching liabilities that do not change
- Your events risks are internal more often than not

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Security Structure Risk

Extension Risk

- Risk that securities lengthen in maturity unexpectedly
- Primarily in *mortgage backed* securities
  - when mortgage rates rise people do not refinance

Re-Investment Risk

- Risk that reinvestment will be at lower rates
- Represented when rates are falling – especially in liquidity
- Primarily in *callable* securities
  - when they are called as rates fall

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Technology's Risks

Employee controls
- Pin numbers and separation
- Limited access to applications
- Stand alone computer access

PCI control

Bank fraud controls
- Filters/blocks on ACH
- Payee positive pay

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Non-Market Risks

Counterparty risk
- Check for FINRA registration (FINRA.org, broker check)
- Require independent safekeeping outside brokerage

Banking risks
- Reconcile within 30 days
- Verify availability of funds
- Monitor cost of services and account structure with account analysis

Employee risk
- Separation of duties
- Oversight and cross training
- Cash controls like numbered receipts, safes, assigned tills

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Safekeeping/Custody Risk

Minimize the risk
- Must be delivery versus payment
- Requires independent safekeeping away from the trade
  - No broker safekeeping

Securities owned by the City will be safe-kept at its banking services depository or an approved custodian and all security transactions will be made delivery versus payment.

The safekeeping bank/custodian will not be used as a broker.

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Safekeeping versus Custody

Preservation in a safe financial institution
- Includes record keeping, management of actions, reporting
- Requires delivery versus payment

Safekeeping
- Fiduciary responsibility
- Safekeeping of securities you own
- Includes proof of ownership

Custody
- Higher fiduciary responsibility – more comprehensive service
- Custody of owned securities, or
- Custody of pledged securities
- Includes proof of the pledge
- Risk to control of the pledge
- May include cash mgmt. or securities lending

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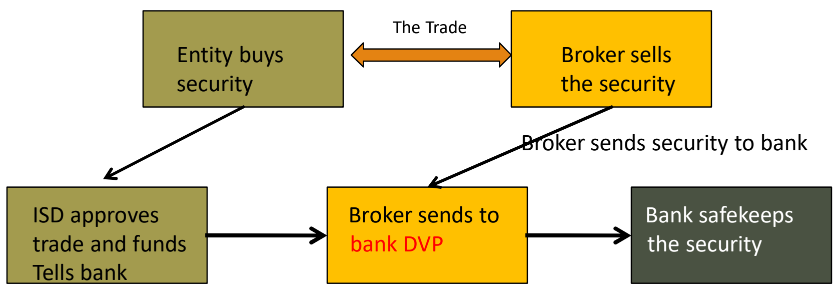
What is Settlement and Safekeeping

- An institution holding securities owned by you.



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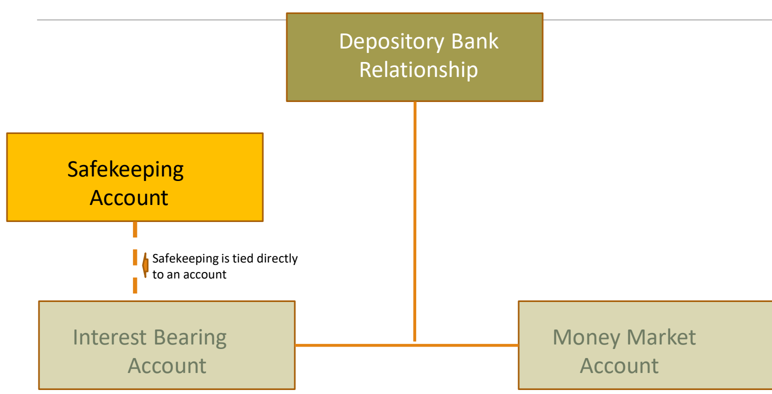
Safekeeping Bank Accounts



Safekeeping accounts are not regular bank accounts but must be tied to a demand deposit account (DDA) so that money that buys a security can only flow back to the same account. These accounts are in the securities clearing section of the bank and assigned by name.

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Sample Safekeeping Fees

Account maintenance	$10.00/month/account ✓
Safekeeping Online (Safekeeping Docs, Messenger, Safekeeping Extract)	$50.00/month – 3 services $10.00/month – basic service
Per Item Charges	
Fixed income book entry per receipt	$0.60
Equity book entry per receipt	$1.50
Physical per receipt	$2.00
Book entry per $10,000 at par at month-end	$0.01/month
Physical entry per $10,000 of par at month-end	$0.10/month

Receipt Fees		
Security receipt and clearance fees	On-us Transactions	Not On-US Transactions
FRB non-ABS/MBS	–	$20.00
FRB ABS/MBS	–	$25.00
Non-FRB, non-ABS/MBS	–	$30.00
Non-FRB, ABS/MBS	–	$35.00
Physical items	–	$75.00
Late delivery instructions	–	$25.00
Change delivery instructions	–	$25.00

Transactional Fees	
Interest payment – credit to account	$1.00
Principal payment – credit to account	$8.00
Called bond redemptions – credit to account	$10.00
Maturities – credit to account	$10.00
Wire fee	$11.00
Cashier's check	$10.00

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Key Collateral Custody Safety Factors

Custodian must be independent

Custodian should report to you directly

Custodian verifies authorized collateral but not margins

Custodians may/should mark-to-market

You chose your safekeeping agent

You approve your custodian

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Expand Policy with Procedures

- Written procedures can supplement policy
- They provide room to explain rationale and define terms
- They record online references and sign-ons, etc.
- They provide continuity and safety
- They don't have to go back to the governing body

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Investment Employee Controls

Separation of transaction authority

- Separate transaction, accounting, and recordkeeping

Delegation of authority

- Investment decision-making
- Subordinate staff limitations
- mandatory vacations/job rotation
- perform work during period

Get and match written confirmations on all transactions

Limit access to cash

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Risk, Return and Strategy Belong Together

Your strategy and opportunities will depend on:

- Your resources and risk tolerance
- Your cash flow
- The time you spend

You are basically a BUY AND HOLD portfolio

Controls can help minimize risks

You more on cash flow than economic or geo-political conditions

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SEE YOU TOMORROW

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TML's
Public Funds
Investment Act
Workshop

Building on the
Fundamentals

Day Two

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Yesterday

- Legal Compliance
- Cash Flow
- Strategies
- Risk Controls
- Collateral Policy and Control
- Safekeeping and Custody
- Investment Policy
- Banking Challenges

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So How Do I Reach My Policy Objectives?

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How I Achieve Safety

- Documentation
- Competition in all transactions
- Delivery versus Payment
- Independent counter-parties
- Tight collateral and bank controls
- Review account analyses regularly
- Diversify to spread risk
- Understand your investments and authorize appropriately
- Report and review regularly
- Recognize changes in the market and internally

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How do I achieve Liquidity?

- Create and understand your cash flow
- Invest to fund known liabilities
- Maintain a small cash buffer for emergencies
- Use liquidity alternatives like pools, spread product or MMMF
- Buy high credit quality securities for an active secondary market

How do I achieve Diversification?

Create competition in every transaction

- Never rely on one institution or broker
- Do not allow a broker to do competitive bidding for you

Diversify by type of security

- Knowledge of the alternative securities
- Use securities that make sense for the period

Diversification maturity

- Create a ladder to meet your liabilities

How do I achieve Yield?

- Invest to your cash flow needs
- Reduce lower yielding balances at bank
- Know the securities and use appropriate ones
- Assure there is always competition
- Know, compare and use your alternatives
- Monitor bank costs and structures

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INVESTMENT REPORTING

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Purpose of Portfolio Reporting

Risk identification Component
- Show Gain/Loss (liquidity)
- Volatility risk (change in market value)

Accounting/Archiving Component
- Detail for holdings
- Summarize for information

Compliance Component
- Compliance with policy parameters

Performance Component
- Yield
- Benchmark comparison

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Keys in Investment Reporting

- Accuracy
- Timeliness
- Compliance
- Risk Identification
- Pricing and Value Representation
- Information at multiple levels

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Reports Reflect Policy Parameters

- Key report parameters reflect your policy compliance
  - Maximum maturity limitations
  - Maximum average maturity limitations
  - Diversification goals and limits
  - Performance benchmarks
  - Philosophy (Strategy) on the portfolio
  - Volatility (change in market value)
    - not required by PFIA as of 2011
- Reports reflect risk tolerance

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Two types of securities

Discount securities

Fixed income securities (with a coupon)

Two values

Market value = price of you sell it

Book value = your value net of amortization

Each change daily

Three computations

Interest accrual (coupons)

Accretion (from a discount is earnings)

Amortization (from a premium is an expense)

Keys to Investment Accounting

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Securities Earn Only Two Ways

Earnings come only from:

Principal
- The value of the principal increases

Interest
- A coupon accrued then pays on a schedule
- Rate accrues then pays on a fund/pool

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Funds in liquid or semi-liquid accounts earn each day at the set rate

Pools

Bank accounts

Money market funds

Earnings accrue each day the funds are held usually at a varying rate

Securities which carry a *coupon* also earn on the coupon rate

Any security originally set to mature over 1 year will have a coupon

The coupon rate will 'pay' accrued interest at that rate for the year

The accrual payments are made semi-annually

Your earnings accrue each day and are reported each month

Interest Accrual

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Accounting follows the Principal

- One single rule: Principal must equal par (100) at maturity
  - You may buy a security at par, below par or above par
  - Over its life we adjust the value to get to 100 at maturity
  - This is the Book Value adjusting what you own in the security

- If bought above par (price) the premium paid must be reduced through amortization

- If bought below par (price) the discount must be accreted

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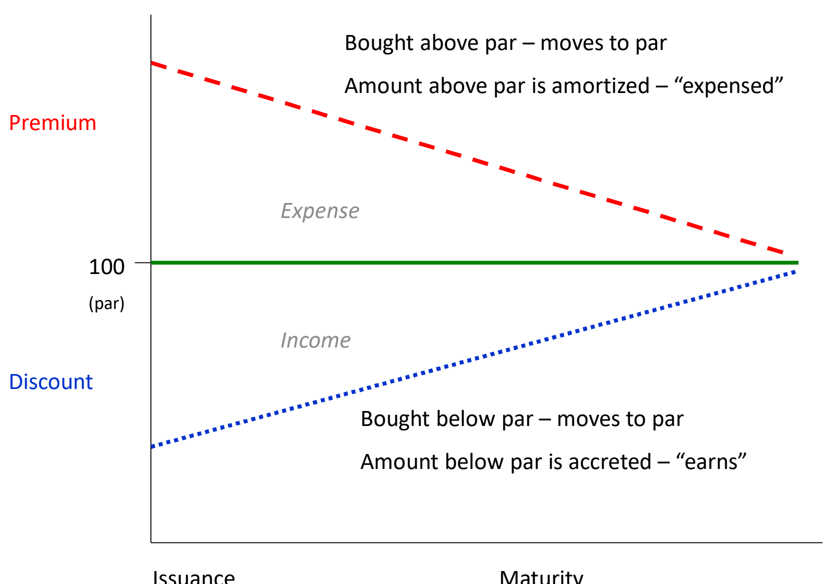

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Accruals: Cash versus Earnings

- On a security the coupon will *always* pay semi-annually at that rate
  - But net earnings are impacted by the principal cost
  - Cash is nice but not earned on the day it is paid

- The rest of the story

- The *value* of the investment will be changed by the premium/discount
  - Amortization will decrease your net earnings (yield)
    - A 5% coupon at a premium might actually earn a net 4.5%
    - The premium subtracts from your coupon cash
  - Accretion will increase your net earnings (yield)
    - A 5% coupon at a discount might actually earn a net 5.5%
    - The discount adds to your coupon cash

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So, What Does a Portfolio Earn?

- **Earnings = accrual + accretion - amortization**
  - Earnings do not reflect cash flows from coupons or maturities
  - Earnings happen everyday as principal and interest move

- Amortization from notes bought above par decreases earnings

- Accretion from notes bought below par increases earnings

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What is Yield?

- A common denominator for reflecting and measuring value. Consider it *net value!*
- The income return on a bond if held to maturity
  - Expressed as annual rate
  - Includes coupons and original price calculation
- Yield incorporates coupon and price
  - It is what you ultimately earn
- Bonds have various types of yields – compare the same yields
  - Coupon, current, YTM and tax equivalent yields

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Market Yields Change – Your Purchase Yield Does Not

- Bonds are issued or auctioned at price of 100
- Bonds have a **coupon "fixed"** for life at issuance
- As markets change the market yield moves
- That move shows your unrealized gain/loss
- The rates reflect the market yield
- yields are going up now what did that do to your portfolio? To your securities?

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WHEN RATES MOVE

- If rates have been going UP market prices drop
  - Securities you hold will have an unrealized loss
  - It is only a loss if you take it – sell it –
  - But you are a buy-and-hold investor

- If rates have been going DOWN market prices drop
  - You will have an unrealized gain
  - If you take the gain you probably will have to re-invest at lower rates!

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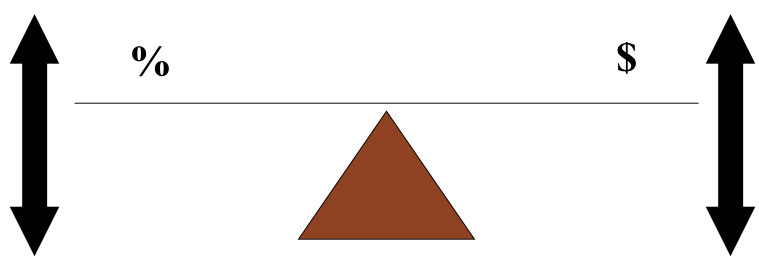
Prices and Yields
Move Inversely



A new bond is auctioned with a 5% coupon at par (100)

Coupon = 5% **Yield = 5%**

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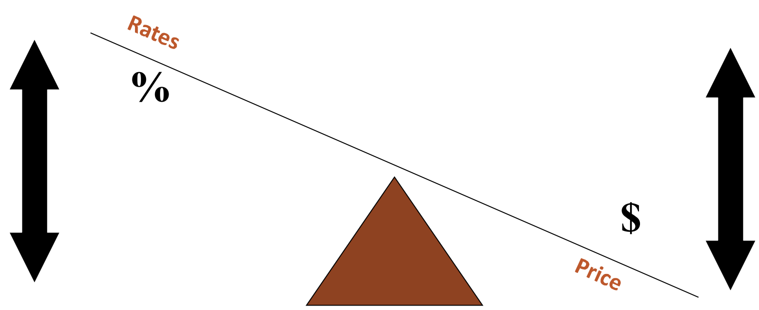
If Rates Go Up Accretion Kicks In



A 5% coupon is not worth as much. To get the 6% yield it is sold as a discount.

Coupon = 5 %   **Yield = 6 %**

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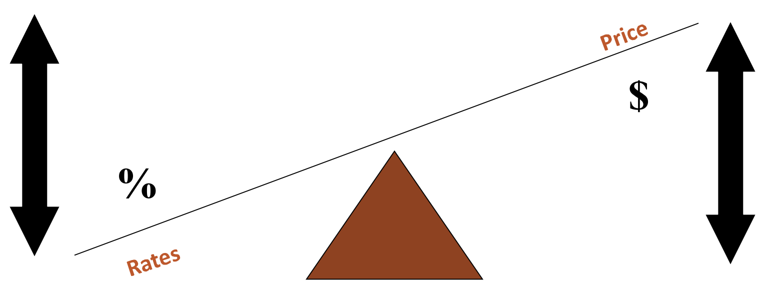
If Rates Go DOWN - Amortization



A 5% coupon is worth yield so the adjustment is to sell at a premium.

Coupon = 5 %   **Yield = 4 %**

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What is this coupon? Who Sets It? Why consider it?

- The market sets new coupons
  - which means investors do based on their perspective

- The yield curve reflects the current yields
  - New securities coupons reflect current yields on the current curve
  - Old securities carry the rate from market when the security was created

- If rates had been high then coupons would be high –
  - As rates fall then?
  - You will buy more as premiums

- If rates had been low then coupons were low –
  - As rates rise then?
  - You will buy at more discounts

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Weighting Information is Key

To make data into information

Weighting recognizes impact of
- size of position
- different maturities
- different yields

Book Value	Days Remaining
50,000	70
1,000,000	14
250,000	360
3,000,000	1
500,000	400
2,500,000	180
2,000,000	80
Weighted Avg	99 days

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Weighted Average Maturity

Multiply *book value* by days *remaining to maturity*

Book Value	Days Remaining	Book x Days
50,000	70	3,500,000
1,000,000	14	14,000,000
250,000	360	90,000,000
3,000,000	1	3,000,000
500,000	400	200,000,000
2,500,000	180	450,000,000
2,000,000	80	160,000,000
9,300,000		920,500,000
	=920,500,000/9,300,000	
Weighted Avg	**99 days**	

Weighted Average Yield

- The weighted average yield describes the performance of the entire portfolio.
- Weighted yield is a measure to compare to your benchmark.
- This measure does not consider market value impact. It reflects yield if all securities are held to maturity.
- Calculation requires adjustment for days in month and year.

Weighted Average Yield

Multiply book value by purchase yield

Book Value	Purchase Yield	Book x Yield
6,568,777	0.70%	45,981
3,211,222	1.40%	44,957
5,999,158	0.99%	59,392
1,425,654	1.25%	17,821
12,513,588	2.50%	312,840
2,000,000	1.50%	30,000
1,598,523	0.90%	14,387
33,316,922		525,378
Weighted Avg Yield	**1.58%**	(525,378/33,316,922)

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How to Distribute Interest

- When funds are combined/commingled for investment purposes
- Total interest must be distributed

Use either month-end balance or average balance

Earnings here were $10,000 total

Fund	Balance	% of Ptf	Distribution
Operating	12,541,799	48.34 %	4,834.61
Debt Service	575,123	2.21 %	221.70
Bond proceeds	9,258,951	35.69 %	3,569.13
Reserves	3,565,821	13.74 %	1,374.56

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Specific PFIA Report Requirements

- **Compliance statement and signatures**
  - Reports prepared in compliance with the PFIA and Investment Policy.
  - Every Investment Officer is to sign report
- **Detail**
  - Each investment position (including bank accounts) with maturity date
  - Book and market values of each position *at end of period*
  - Portfolio/fund investment belongs to
- **Summary**
  - Beginning and ending book and market value of portfolio
  - Earnings for the period (accrued + accretion – amortization)
  - Market sector summaries

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What Constitutes A Portfolio Position

- Description of the key elements of the security
  - Type (T-Bill, T-Note, FNMA, CD Bank XX, etc.)
  - Par (face amount)
  - Coupon rate
  - Purchase yield and price
  - Purchase date
  - Maturity Date (and call date if applicable)
- The value at report date
  - Book value – amortized value of the security
  - Market value – price it could be sold
- The earnings for the period
  - Accrued + Net Accretion/Amortization

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Describing Your Overall Portfolio

- PFIA wants beginning and ending values to judge activity

- All Positions – liquid and securitized
  - Securities
  - Bank accounts and Compensating balances
  - Sub-totals

- Description and sub-totals for diversification identification
  - Market sector sub-totals

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Detailing a Position

Purchase Date	Security Type	Par	Coupon	Yield	Maturity Date	Call Date	Book Value	Market Value	Gain or <loss>
xx/xx/xx	T-Note	500,000	0.50 %	0.45 %	xx/xx/xx	-	501,123	502,100	977
xx/xx/xx	CD-Frost	245,000	0.60 %	0.60 %	xx/xx/xx	-	245,000	245,000	00
xx/xx/xx	T-Bill	750,000	0.00 %	0.35 %	xx/xx/xx	-	723,500	720,000	<3,500>
xx/xx/xx	FNMA	750,000	0.75 %	0.90 %	xx/xx/xx	xx/xx/xx	743,200	755,100	11,900
		2,245,000		0.58 %			2,212,823	2,222,200	9,377

From this information you can calculate the WAM and WAY

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Purchase Date	Security	Coupon	Maturity Date	Yield	Par Value	Beginning Book	Beginning Market	Ending Book	Ending Market
xx/xx/xx	T-Bill	-	xx/xx/xx	1.00 %	500,000	490,000	480,000	492,000	488,000
xx/xx/xx	T-Note	1.50 %	xx/xx/xx	1.45 %	500,000			501,000	505,000
xx/xx/xx	T-Note	0.90 %	xx/xx/xx	1.00 %	500,000	499,999	500,000		
	Subtotal				**1,500,000**	**989,999**	**980,000**	**993,000**	**993,000**
xx/xx/xx	FNDN	-	xx/xx/xx	1.15 %	650,000	640,000	643,000	642,000	643,000
xx/xx/xx	FHLB	1.25 %	xx/xx/xx	1.25 %	500,000	500,000	500,000	500,000	501,000
	Subtotal				**1,150,000**	**1,140,000**	**1,143,000**	**1,142,000**	**1,144,000**
xx/xx/xx	CD - Bank A	1.20 %	xx/xx/xx	1.20 %	750,000	750,000	750,000	750,000	750,000
xx/xx/xx	CD – Bank B	1.15 %	xx/xx/xx	1.15 %	500,000	500,000	500,000	500,000	500,000
	Subtotal				**1,250,000**	**1,250,000**	**1,250,000**	**1,250,000**	**1,250,000**
xx/xx/xx	TexPool	0.20 %	xx/xx/xx	0.20 %	1,234,567	1,234,567	1,234,567	1,444,567	1,444,567
xx/xx/xx	Logic	0.20 %	xx/xx/xx	0.20 %	1,765,432	1,765,432	1,765,432		
	Subtotal				**3,199,999**	**3,199,999**	**3,199,999**	**1,444,567,**	**1,444,567**
xx/xx/xx	Int. Bearing	0.15 %	xx/xx/xx	0.15 %	450,000	450,000	450,000	410,111	410,111
xx/xx/xx	Comp Balance	0.50 %	xx/xx/xx	0.50 %	2,121,111	2,121,111	2,121,111	2,121,111	2,121,111
	Subtotal				**2,571,111**	**2,571,111**	**2,571,111**	**2,531,222**	**2,531,222**
TOTAL				0.74 %		8,951,109	8,944,110	7,360,789	7,362,789

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INVENTORY HOLDINGS REPORT

Period Ending: 8/31/2019

Sec Type	Par	Coupon	Maturity	Purchase Price	Purch Yield	Purchase Price	Ending Book Value	Ending Market	Interest Accrued	Remaining D-T-M
POOL										
Texpool	9,000,000	1.85%	09/01/19	0.00	1.85%	100.000	9,000,000.00	9,000,000.00	0	1
Total	**9,000,000**						**9,000,000.00**	**9,000,000.00**	**0.00**	
CDs										
Bank A	1,000,000	2.00%	06/01/20	0.00	2.00%	100.000	1,000,000.00	1,000,000.00	0	275
Total	**1,000,000**						**1,000,000.00**	**1,000,000.00**		
TREASURIES										
Treasury	2,000,000	1.10%	12/15/19	0.00	1.10%	0.000	2,000,000.00	2,000,000.00	0	106
Treasury	2,000,000	1.10%	03/15/20	0.00	1.10%	0.000	2,000,000.00	2,000,000.00	0	197
Treasury	2,000,000	1.10%	06/15/20	0.00	1.10%	0.000	2,000,000.00	2,000,000.00	0	289
Total	**6,000,000**						**6,000,000.00**	**6,000,000.00**		
AGENCIES										
Total										
BANK DEPOSITS										
Bank B	1,000,000	0.40%	09/01/19		0.40%	1.000	1,000,000.00	1,000,500.00		1
TOTAL	**16,000,000**						**16,000,000.00**	**16,000,000.00**	**0**	**0**

Overall Yield	1.60%
Overall WAM	92 Days

Calculation Columns

WAY Book x Yield	WAM Book x D-T-M
166500	9000000
20000	275000000
22000	212000000
22000	394000000
22000	578000000
4000	1000000
256500	**1469000000**
1.60%	91.8125

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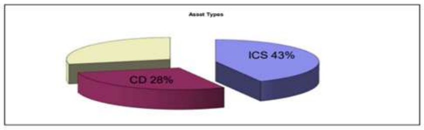
PUBLIC ENTITY
Quarterly Report

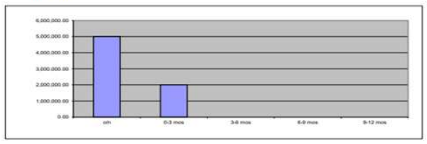
Period Ending 4/30/20xx

Beginning Book Value	14,629,745
Beginning Market Value	14,629,745
Beginning Weighted Average Maturity	1 days
Beginning Yield	2.07%
Ending Book Value	14,100,000
Ending Market Value	14,100,000
Ending Weighted Average Maturity	3 days
Ending Yield	2.26% %
Unrealized Gain/(Loss)	0

Allocation by Type of Investment



Allocation by Maturity Date



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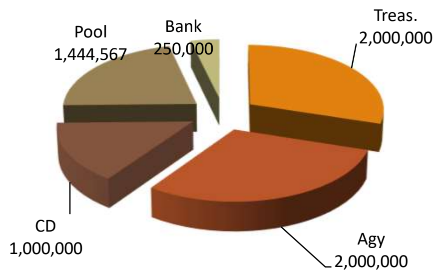
Graphs Make It Information

- Sector Analysis
- Allocation by Sector
- Shows diversification
- Shows competition
- Add yields to explain value and decisions



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Learn from Your Own Reports

Investment	Book Value	% Portfolio	Yield
Treasuries	1,000,000	5.80 %	4.85 %
Agencies	3,000,000	17.60 %	4.99 %
CP	2,000,000	11.76 %	5.10 %
Munis	1,500,000	8.82 %	4.55 %
Pool	4,000,000	23.52 %	4.88 %
Bank	5,500,000	32.35 %	0.90 %
	17,000,000	100 %	3.60 %

Moving $4MM out of the bank to pool or Agencies and CP pushes the yield to 4.56 % and earns an additional <u>$162,200</u>

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BENCHMARKS

Not required but useful to measure risk

Purpose
- Shows risk and performance
- It compares against the market not against another entity!

Choose the right benchmark
- Comparability
- Sector recognition
- Comparable treasury versus index

Normal benchmarks
- Comparable period Treasury security (T-Bills)
- 3-month, 6-month, 1-year

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Pool/Fund Reporting

Pools and Funds price and value
- designed to show risk to investor

Constant dollar (money market equivalents)
- Price is always $1
- Days-to-maturity is always 1 day

Mutual fund equivalents
- Price is the net asset value or share price that day
- Days to maturity is the WAM of the underlying portfolio

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GASB Annual Reporting

- GASB is looking for risk
  - Collateral risk
  - Credit risk
  - Safekeeping
  - Volatility
- Three statements for *annual* reporting
  - Only done on a annual basis
  - For Financial Statement reporting only – not ledger input

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GASB Statement 31

- Fair Market Evaluation
  - Designed to show change in market value (volatility)
  - Ledger entry if made is immediately reversed
  - Too much volatility indicates longer maturities or structured notes
  - Discloses risk created by change of market price
- Only necessary if securities bought were > one year at purchase

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GASB 40 Reporting

- All areas are covered by PFIA and policy
- Reporting Credit Exposures:
  - All Agencies are AAA
  - Credit ratings critical on CP, BA, (Corporates)
  - Procedure to monitor credit in policies required
- Reporting Interest Rate Exposures:
  - Reporting any callables or other structured notes
    - Listing of these notes only
- Reporting Interest Rate Exposures:
  - Maximum Maturity set by policy/law
  - Weighted Average Maturity set by policy
  - Benchmarks (optional)

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Credit Risk
Texas state law and the Judson Independent School District's Board adopted Investment Policy place high credit quality as a priority in its investment process. Credit minimums are set for appropriate investment types and a procedure in included in the policy for monitoring, disclosing and acting on credit downgrades.

All time and demand deposits are required to be FDIC insured or collateralized to 102% (or 110% if mortgage-backed securities). They must be in eligible depositories doing business in Texas and be under the terms of a written collateral agreement. The maximum maturity on depository CD as stated in the Policy is three (3) years. The bank is contractually liable for monitoring and maintaining the collateral margins.

Brokered CD securities must be FDIC insured and delivered versus payment to the District's depository. Maximum maturity is one year.

State law and the Edgewood ISD adopted Investment Policy limit repurchase agreements to Texas banks and primary dealers. State law and the policy require a defined termination date, an industry standard, written master repurchase agreement, independent safekeeping of collateral, and a 102% margin on collateral. Fully collateralized flex repurchase agreements are restricted by Policy to the use of bond funds and are restricted to being matched to bond proceeds expenditure plans. The term of any reverse security repurchase agreement may not exceed ninety (90) days after the date of delivery.

Obligations of the State of Texas or its agencies and instrumentalities or obligations of other states, agencies, counties, cities and other political subdivisions rated as to investment quality by a nationally recognized statistical rating firm (NRSRO) not less than A or its equivalent are authorized. Debt obligations have a maximum maturity of three years.

AAA-rated, local government investment pools striving to maintain a $1 net asset value as defined by state law (2256.016) and approved by the District's adopted policy are authorized. By State law all local government pools are rated AAA or equivalent by at least one NRSRO.

The District's Investment Policy requires SEC registered money market funds to strive to maintain a $1 NAV.

Prime bankers' acceptances are authorized to a maximum maturity of 270 days if eligible as collateral from a Federal Reserve Bank.

The District's policy authorizes commercial paper rated A1/P1 or equivalent with a maximum maturity of 270 days.

As of June 30, 2022:
- holding in local government investment pools that are rated AAA represented 100% of the total portfolio.

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Period Ending Sept. 30, 2022
Segmented Time Distribution Reporting

Investment Type	Fair Value	% Ptf.	Investment Maturities in Years: Less than 1 Year	1-2 Years	2-3 Years	3-5 Years
US Treasury Notes and Bills	$ 33,346,290.00	38.21%	$ 4,834,960.00	$ 14,414,455.00	$ 14,096,875.00	$ -
US Agencies						
FFCB	$ 4,872,144.60	5.58%	$ 4,872,144.60	$ -	$ -	$ -
FHLB	$ 14,495,589.70	16.61%	$ -	$ 9,690,214.25	$ 4,805,375.45	$ -
FHLMC	$ -	0.00%	$ -	$ -	$ -	$ -
FNMA	$ -	0.00%	$ -	$ -	$ -	$ -
FAMCA	$ -	0.00%	$ -	$ -	$ -	$ -
2A-7 like Local Government Pools	$ 20,842,202.53	23.88%	$ 20,842,202.53	$ -	$ -	$ -
Collateralized Demand Deposit Accounts/Money Markets	$ 5,794,639.01	6.64%	$ 5,794,639.01	$ -	$ -	$ -
Certificates of Deposit	$ -	0.00%	$ -	$ -	$ -	$ -
Commercial Paper	$ 4,925,460.00	5.64%	$ 4,925,460.00	$ -	$ -	$ -
Municipal Obligations	$ 3,000,000.00	3.44%	$ 3,000,000.00	$ -	$ -	$ -
Total Value	**$ 87,276,325.84**		**$ 44,269,406.14**	**$ 24,104,669.25**	**$ 18,902,250.45**	**$ -**
% of Total Portfolio		**100.00%**	**50.72%**	**27.62%**	**21.66%**	**0.00%**

Abbreviations:
FFCB Federal Farm Credit Bank
FHLB Federal Home Loan Bank
FAMCA Federal Agricultural Mortgage Corp
FHLMC Federal Home Loan Mortgage Corporation
FNMA Federal National Mortgage Association

GASB 40 Exhibit

Mirror Image of Quarterly

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GASB Statement 72

- Defines fair market value by level of *pricing* risk
- Most PFIA securities are LEVEL ONE
- Only commercial paper could be considered LEVEL 2

	Level 1	Level 2	Level 3	Total
US Agency Obligations	4,992,362.91	0.00	0.00	4,992,632.91
Municipal Obligations	5,154,594.00	0.00	0.00	5,154,594.00
Commercial Paper	0.00	3,988,988.89	0.00	3,988,988.89
Total Fair Value	10,146,956.91	3,988,988.89	0.00	14,135,945.80

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Your Likely Investments

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Liquidity is a Key Investment

Every penny – every day!

Liquid funds are:

- A key portion of your portfolio - so rates are critical
- Designated to cover known the very short term (perhaps one month)
  - Market and internal conditions control amounts
- Can cover some level of unanticipated expenses

Liquid funds must:

- give a reasonable market return
- be easy to use
- give good, timely reporting
- give full information on rates and investments

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Liquidity Choices

Accounts in any Texas bank

- Bank must be FDIC insured or collateralized above FDIC
- Insurance is by tax id number not account
- The case of development corporations

Account in any Texas credit union

- Credit union must be insured by
- National Credit Union Share Insurance Fund
- Credit unions will not provide collateral
- $250,000 maximum by tax id

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Bank Liquidity Choices

- Banks have a range of liquidity choices
  - non-interest bearing checking (target balance)
  - interest bearing checking
  - money market accounts *
  - NOW or savings accounts
  - Sweeps – MMMF and ICS
- Rates are different in each category
  - And will change
- Current best rates and opportunities…?

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IntraFi

National Promontory Network

Banks spread funds to stay under FDIC and reduce collateral
- Maintained in multiple money market accounts
- Know the rules for transferring the funds - timing

If set with Limited Liquidity
- Only 6 draws per month

Funds stay under the FDIC limits in insured institutions

On your books it is one investment
- Backup shows you all the banks

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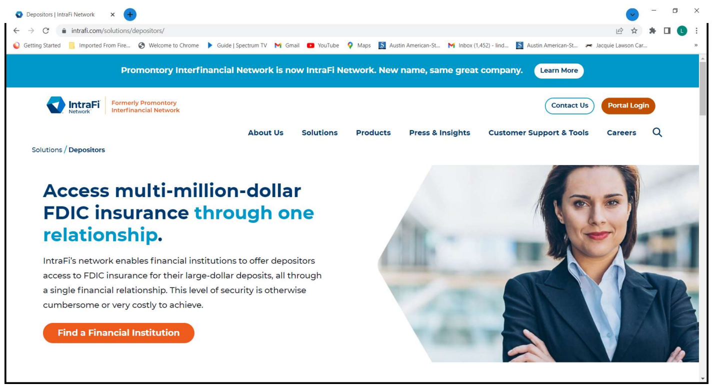
IntraFI (Insured Cash Sweep)



A MONEY MARKET ACCOUNT ALTERNATIVE AS DEMAND ATTRIBUTES

YOUR BANK MUST BE AN INTRAFI MEMBER

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How to Use *IntraFi* to Your Benefit

- In Texas bank – your depository or other bank
- City deposits funds by wire or transfer in bank
- Bank places in INTRAFI system
- Rates are a composite of other banks used
- City receives a monthly statement
- Interest accrues
- Interest sent to DDA account or reinvested
- No collateral worries or costs
  - All FDIC insured

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ICS Statement

Best Deale Bank
123 Main Street
Anytown, US 12345

BestDeale Bank

Contact Us
1-555-123-4567
contact@bestdealebank.com
www.bestdealebank.com

Sample School District
456 Main Street
Anytown, US 56789

Account
Sample School District

Date
01/31/2021

Page
1 of 3

IntraFi® Cash Service, or ICS®, Monthly Statement

The following information is a summary of activity in your account(s) for the month of January 2021 and the list of FDIC-insured institution(s) that hold your deposits as of the date indicated. These deposits have been placed by us, as your agent and custodian, in deposit accounts through ICS. Funds in your deposit accounts at the FDIC-insured institutions at which your funds have been placed will be "deposits," as defined by federal law.

Custom text may be added here.

Summary of Accounts

Account ID	Deposit Option	Interest Rate	Opening Balance	Ending Balance
*********123	Savings	0.15%	$4,726,287.32	$4,726,963.69
*********456	Demand	0.15%	1,738,049.65	1,738,345.38
TOTAL			**$6,464,336.97**	**$6,465,309.07**

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ICS Detail

DETAILED ACCOUNT OVERVIEW
Account ID: *********123
Account Title: Sample School District

Account Summary - Savings

Statement Period	1/1-1/31/2021	Average Daily Balance	$4,726,371.48
Previous Period Ending Balance	$4,726,287.32	Interest Rate at End of Statement Period	0.15%
Total Program Deposits	74.33	Statement Period Yield	0.15%
Total Program Withdrawals	(0.00)	YTD Interest Paid	602.04
Interest Capitalized	602.04	YTD Taxes Withheld	0.00
Taxes Withheld	(0.00)		
Current Period Ending Balance	**$4,726,963.69**		

Account Transaction Detail

Date	Activity Type	Amount	Balance
01/05/2021	Deposit	$74.33	$4,726,361.65
01/29/2021	Interest Capitalization	602.04	4,726,963.69

Summary of Balances as of January 31, 2021

FDIC-Insured Institution	City/State	FDIC Cert No.	Balance
Innerst Savings Bank	Tulsa, OK	**010	248,373.72
First Eagleville Bank	Syracuse, NY	**011	248,381.64
Lockland Bank	San Diego, CA	**012	248,378.59
Southstreet Community Bank	Boston, MA	**013	248,381.64
Winchester County Bank	Pasadena, CA	**014	248,381.64
Southeast Regional Bank	Atlanta, GA	**015	248,381.64
Loring Savings Bank	Lansing, PA	**016	248,366.78
Calera Bank	Clarksville, TN	**017	7,745.56
Port Addison Bank	Uniondale, MT	**018	248,381.64
Alpine National Bank and Trust	Dallas, TX	**019	248,381.64
First Bank of Ogdentown	Auburn Hills, NJ	**020	248,381.64

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Non-Bank Liquidity

- Managed risk versus return
- Local Government Pools striving to maintain a $1 NAV
- Spread product through the banks
- Money market mutual funds which strive to maintain a $1 NAV

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Commingled Investments

- Local Government Pools
- Money Market Mutual Funds
- Mutual Funds
- All provide:
  - Economy of scale
  - Diversification
  - Some extension with total liquidity
  - Reporting
  - Equal ownership of shares

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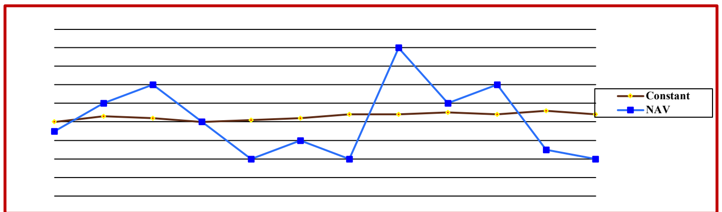
Two Fund/Pool Types

Constant dollar funds/pools
- Money market funds or pool equivalents
- Strive to maintain $1 asset (share) value – built for liquidity

Net asset value funds/pools
- Mutual funds or pool equivalents – built for yield
- Share value fluctuates on market price
- Potential loss of principal
- Not eligible for bond funds



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Alike but Not Identical

$1 NAV Pools	Money Market Funds
Based on ILCA*	It's a security SEC oversight & regulation
Require resolution by governing body	Make it AAA-rated by policy
Rated AAA	Strict regulations Prospectus
Unregulated	No resolution required List as investment in policy
All types	Require NAV of $1

Interlocal Cooperation Act

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Similarities of All Pools and All Funds

Disclosure required

- disclose all ongoing information
- built on SEC requirements for MMMF

Funds are securities – Pools not

- Both must be in your policy with requirements

Disclosure is provided – read it!

- *Information statement* for pools
- *Prospectus* for funds

Confirmations provided

- Transaction History

Reports provided monthly

- Monthly History

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Pools – Know what they are..

- Most Texas pools are constant dollar
  - Some pools are mutual funds or hybrid
  - Some pools are just a broker holding CDs
  - Define which in your policy
- Check the rates and know the calculations
- It's your job to know their make-up and yields
- Potentially have accounts at more than one pool

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Policy Pool and Fund Language

- Language for your policy

- Pool
  - AAA-rated Texas local government investment pool which strives to maintain a $1 net asset value.

- Money Market Mutual Fund
  - AAA-rated, SEC registered money market mutual fund which strives to maintain a $1 net asset value.

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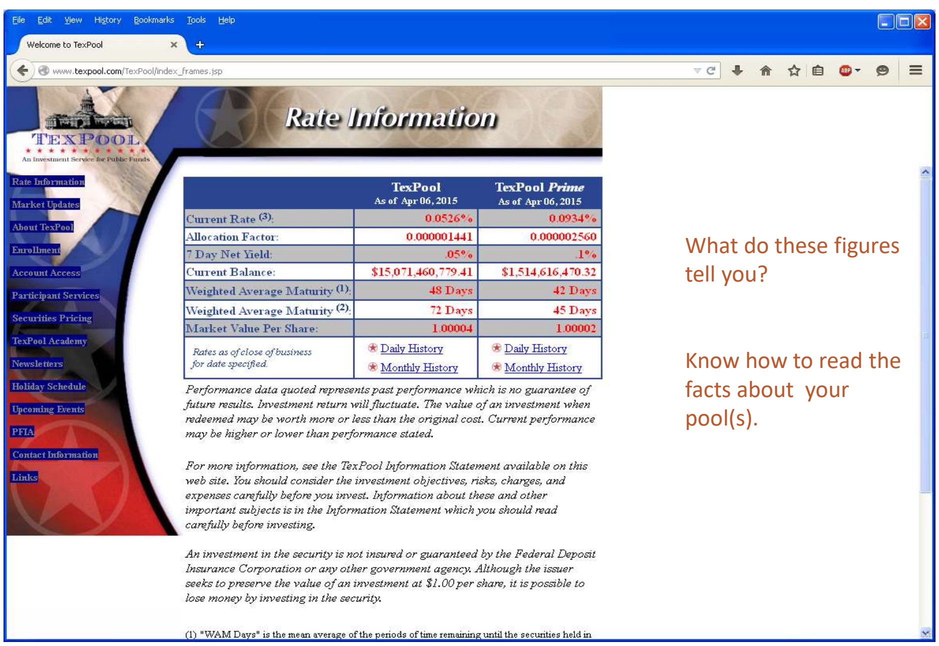

Rate Information

	TexPool As of Apr 06, 2015	TexPool *Prime* As of Apr 06, 2015
Current Rate (3):	0.0526%	0.0934%
Allocation Factor:	0.000001441	0.000002560
7 Day Net Yield:	.05%	.1%
Current Balance:	$15,071,460,779.41	$1,514,616,470.32
Weighted Average Maturity (1):	48 Days	42 Days
Weighted Average Maturity (2):	72 Days	45 Days
Market Value Per Share:	1.00004	1.00002
Rates as of close of business for date specified.	Daily History Monthly History	Daily History Monthly History

Performance data quoted represents past performance which is no guarantee of future results. Investment return will fluctuate. The value of an investment when redeemed may be worth more or less than the original cost. Current performance may be higher or lower than performance stated.

For more information, see the TexPool Information Statement available on this web site. You should consider the investment objectives, risks, charges, and expenses carefully before you invest. Information about these and other important subjects is in the Information Statement which you should read carefully before investing.

An investment in the security is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the issuer seeks to preserve the value of an investment at $1.00 per share, it is possible to lose money by investing in the security.

(1) "WAM Days" is the mean average of the periods of time remaining until the securities held in

What do these figures tell you?

Know how to read the facts about your pool(s).

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Print

TEXPOOL

Overview | Performance | Characteristics | Documents

Performance

Print Section

DAILY PERFORMANCE

AS OF 02-01-2024 View Historical Daily Performance

Daily Net Yield	5.3322%	NAV	$1.00000
Dividend Factor	0.000146089	Daily Assets	$36,671,069,323.27
7 Day Net Yield	5.35%		

MONTHLY AVERAGE PERFORMANCE

AS OF 01-31-2024 View Historical Monthly Average Performance

Average Daily Net Yield	5.3455%	Average WAM	35 Days
Average Dividend Factor	0.000146451	Average WAL	88 Days

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Print

TEXPOOL

Overview | Performance | Characteristics | Documents

ASSETS

MONTHLY as of 01-31-2024		DAILY	
Portfolio	$35,746,685,549	Portfolio	$36,671,069,323

PORTFOLIO COMPOSITION

MONTHLY as of 12-31-2023

Treasurys	36.8
Agencies	30.6
Repurchase Agreements	25.3
Money Market Funds	7.3
Other	0.0
Total % of Portfolio:	100.0

PORTFOLIO PROFILE

MONTHLY as of 01-31-2024

Weighted Average Maturity	30 Days
Weighted Average Life	85 Days

DAILY

Weighted Average Maturity	30 Days
Weighted Average Life	81 Days

LIQUIDITY View 6-Month History

Daily	62.77%
Weekly	74.49%

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Can You use this "Pool"? What is it?

These are brokered CDs bought and held by a broker/pool

Your policy should authorize brokered CDs if used

Bid#: Date: 07/30/2012 12:40PM

Bank Name(City,State,FDIC#)	Principal Amount	# of Days	Gross Rate	Net Rate	Settlement	Maturity	Advisory Fee($)	Advisory Fee(Bps)	Gross Int.@mat.	Gross Maturity Value	Status
Bank Of East Asia Ltd. , (The), New York,NY-(33646)	$248,000.00	182	0.600%	0.450%	07/30/2012	01/28/2013	$185.49	0.15%	$741.96	$248,741.96	
Bank Of The Ozarks, Little Rock,AR- (110)	$248,000.00	182	0.450%	0.300%	07/30/2012	01/28/2013	$185.49	0.15%	$556.47	$248,556.47	
Onewest Bank, Fsb, Pasadena,CA- (58978)	$248,000.00	182	0.450%	0.300%	07/30/2012	01/28/2013	$185.49	0.15%	$556.47	$248,556.47	
Bank Of The West, San Francisco,CA- (3514)	$248,000.00	182	0.450%	0.300%	07/30/2012	01/28/2013	$185.49	0.15%	$556.47	$248,556.47	
Bank Of China, New York,NY- (33653)	$248,000.00	182	0.450%	0.300%	07/30/2012	01/28/2013	$185.49	0.15%	$556.47	$248,556.47	
Privatebank & Trust Co. (The) (Acqd Privatebank, Bloomfield Hills, Mi), Chicago,IL-(33306)	$248,000.00	182	0.400%	0.250%	07/30/2012	01/28/2013	$185.49	0.15%	$494.64	$248,494.64	
Sterling National Bank, New York,NY- (7220)	$248,000.00	182	0.380%	0.230%	07/30/2012	01/28/2013	$185.49	0.15%	$469.91	$248,469.91	
Israel Discount Bank Of New York, New York,NY-(19977)	$248,000.00	182	0.350%	0.200%	07/30/2012	01/28/2013	$185.49	0.15%	$432.81	$248,432.81	
Merchants Bank Of Indiana, Lynn,IN- (8056)	$248,000.00	182	0.350%	0.200%	07/30/2012	01/28/2013	$185.49	0.15%	$432.81	$248,432.81	
TOTALS:	**$2,232,000.00**						**$1,669.41**		**$4,798.01**	**$2,236,798.01**	
Gross Weighted Avg.Rate(182 Days)	**0.43%**										
Net Weighted Avg.Rate(182 Days)	**0.28%**										
GRAND TOTAL :	**$2,232,000.00**						**$1,669.41**		**$4,798.01**	**$2,236,798.01**	

Two Types of Money Market Mutual Funds

- **Know and define what you authorize:**
- **MMMF which *strive to maintain a $1 NAV*** (net asset value – share price)
  - Treasury funds only invest in US Treasuries
  - Government funds invest in US treasuries and agencies
  - Enhanced government (prime) also invest in commercial paper
- **Short Duration Money Market Funds**
  - These are *mutual funds* – not built for liquidity
  - The share value will fluctuate with market rates
  - These represent considerable risk
  - Also known as short duration money market funds

Ultra Short Term Bond Funds

What Role Could/Should They Play

- No bond proceeds allowed in these

- These are NOT money market funds as you know them
  - They are **mutual** funds (volatility)
  - They are not built for liquidity
  - PFIA requirements
    - With a WAM of 1 year or more invested in only Act authorized investments, or
    - With a WAM of 1 year or less and limited to *investment grade securities*
    - Must exclude asset-backed securities
  - You can lose principal dependent on:
    - Credit quality
    - Maturity dates
    - Sensitivity to rates

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The Ubiquitous Repo is Liquidity

Primarily for pools and larger entities except for "flex repo"

Simultaneous "Buy-Sell" Transactions
- Allows full liquidity at market rates
- Uses DVP and independent custody
- Margins (102%) monitored constantly
- Various types include overnight, open & term

"Flex" is designed for capital projects
- Established for the entire expenditure period
- Rate is fixed and normally above issue rate
- Flexibility on draws with xx/month
- Interest on semi-annual basis

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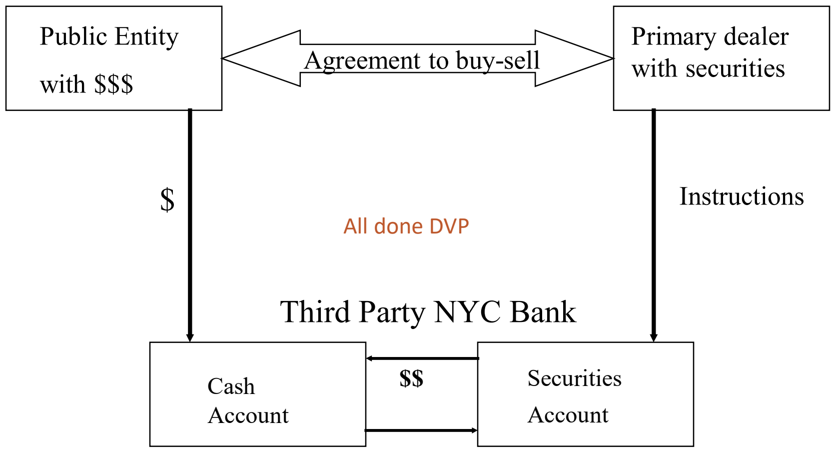
Repo Transactions



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Securities

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Your Market Strategy

Dependent on your cash flow

Dependent on your risk tolerance

Dependent on your policy limits

Dependent on your time availability

Dependent on your understanding of the securities

Partially dependent on your economic view

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Beyond Liquidity are Securities

Short-term, longer-term and core investments

Requires purchase of securities

Requires safekeeping for your securities

All securities need to be safekept but never by a broker

Only depository CDs eliminate safekeeping

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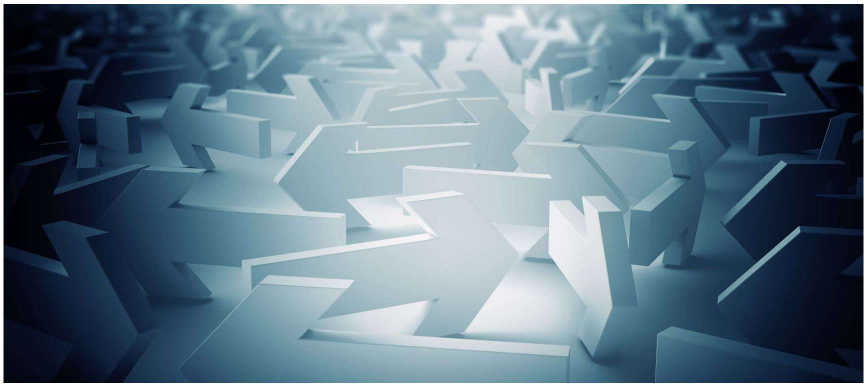

Analyzing the Investment Choices

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Market Sector Analysis

- Market sectors are the different types of securities
  - Treasuries, agencies, CP, CD, pools
  - Comparing yields on different type securities/liquidity
- Sectors differentiated by **risk and issuer credit**
  - US treasuries
  - agencies and new agency issues
  - commercial paper
  - municipals
- Evaluating sectors **requires information** on that sector
  - Understanding of the securities
  - credit decisions for risks
  - historical spread analysis

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Sector Value Analysis

When do you need/want the maturity?
Compare the current rates.
What the rates are going to do counts?
You are comparing at the same maturity point.

	6 month	Rate
Pool	n/a	5.50%
CD	Yes	5.00%
Treasury	Yes	5.40%
Agencies	Yes	5.60%
CP	yes	5.86%

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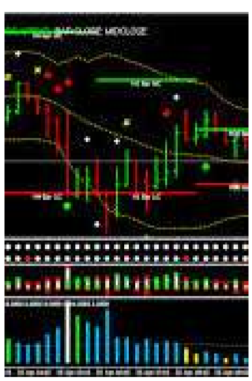
Spread Analysis



Spread means difference
- Difference in rates between securities or whole market sectors

Spreads are dynamic
- Anticipated spreads on credit
- Current spreads
- Historical spreads
- Volume spreads

Spread analysis basically means comparing rates

You must check the rates at that maturity in various sectors – everytime!

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Yield Curve Analysis

Yield curves depict the market conditions and anticipated moves

- The curve tells a story and tries to predict the future
- The curve illustrates the best current value
- The curve must be read in light of current conditions

Pick the best place on the curve

- Your portion of the curve is restricted by policy
- Your portion is restricted by risk tolerance and cash flow

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YIELD CURVES

- Why market decisions i.e. prices generate the ‘yield curve’
  - Acting on investor *expectations*
- Long and short-term rates generally behave independently
  - Short-term rates are primarily driven by Federal Reserve policy and the Federal Funds rate – but also market flows
  - Long-term rates are driven by longer run growth and inflation expectations – but also supply
- Yield curve is a reliable indicator of economic trends and future growth
  - A “compilation of expectations” and expectations drive investors

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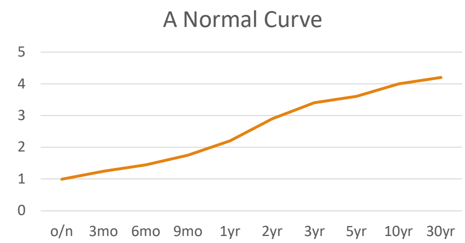
A NORMAL YIELD CURVE

- Long-term rates higher than short-term
  - Produces an upwardly sloping curve
- Indicates expectation of normal positive economic growth
- We measure the 'spread' of the rates at certain key points
- Probably 90% of the time



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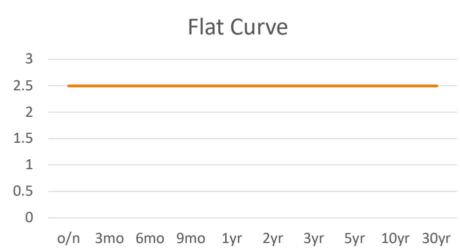
A FLAT YIELD CURVE

- Short and Long ends are relatively the same indicating lower expectation of economic expansion and growth
- Short end 'catches up' due to Fed action as long end escapes positions
- Could predict inverted curve
- Lock in rates!



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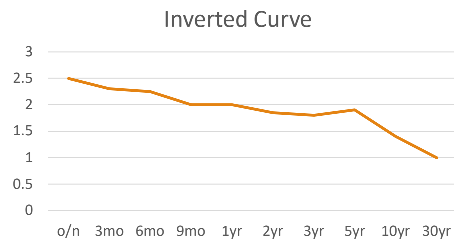
AN INVERTED YIELD CURVE

- Short end outperforms the long end
- Long end has anticipated slow down and lower rates
- Sometimes the market gets ahead of itself



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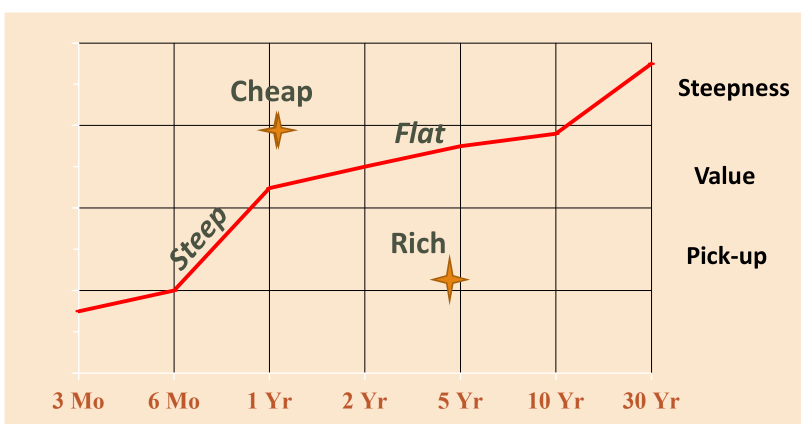
What does this Yield Curve Say to You



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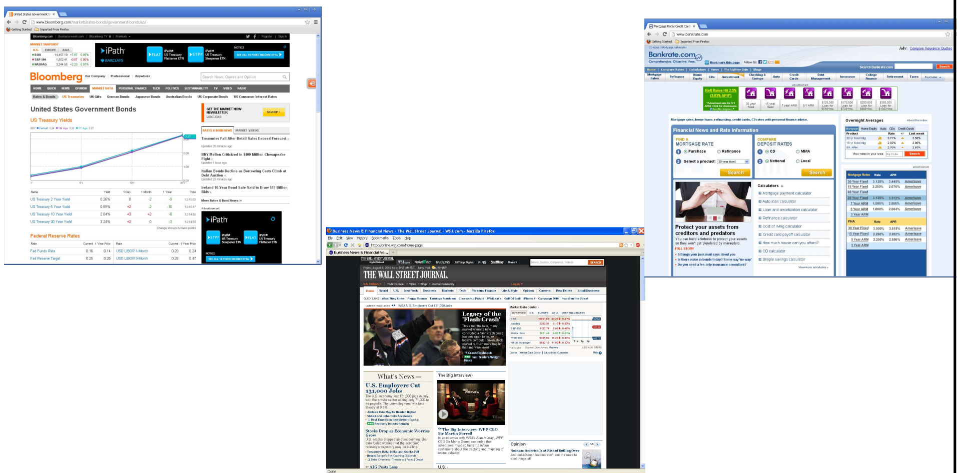

Check the web for market information.

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The Investment Decision

- Where do I need money? (cash flow)
- What can I buy? (authorized securities)
- Am I diversified? (policy)

- Where is the market and yield curve?
- Do I have a view of future events?
- Where might rates going?
- What has the best yield? (relative value)

- **Relative Value Analysis is Comparative Shopping**

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Choosing Investments

- Every penny requires an investment decision
  - Investing is liquidity, short, and long term
- Cash flow needs always control your choice
  - Put money out where you need it
  - Usually ladder to fit municipal needs
- Market conditions also control
  - Current conditions limit extensions
  - Current conditions favor what?

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US Treasuries
US Agencies
Commercial Paper
Bankers Acceptances
Repurchase Agreements
Investment Pools
Certificates of Deposit

Brokered CD Securities
Money Market Funds
Mutual Funds
GICs
State of Israel bonds
Municipal Obligations
Corporate bonds (limited ISDs)

Authorized PFIA Securities

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PFIA Language on CDs Includes

(a) Depository Texas CD

- Insured by FDIC
- Collateralized per PFCA and your collateral policy
  - Should include authorized mortgage-backed securities in PFIA as collateral
  - Agreement is always to be executed under the terms of FIRREA
- Includes spread programs like CDARS/IntraFi
- Includes deposits at credit unions

(b) Brokered CD

- Invest through Texas bank or Texas broker (on broker list)
- Fully insured by US or its instrumentality
- Limited to $250,000 per bank
- Broker *can custody* ---conflict with DVP

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Depository agreements

- This is a direct bank relationship
- Includes only Texas banks
- Requires paperwork to create a deposit
- Funds are left in the bank as a deposit

All MUST BE Insured by FDIC or collateralized

- Above $250,000 requires agreement and collateral
- Texas collateral rules protect you under PFCA
- Different collateral types are legal
- Controlled by PFIA and depository law (Local Gov't Code Ch.105)

DEPOSITORY Certificates of Deposit

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- Fully insured or collateralized depository certificates of deposit of banks doing business in Texas, with a maximum maturity of ----- years guaranteed or insured by the Federal Deposit Insurance Corporation, or its successor, or collateralized in accordance with this Policy.

- Collateralized CD will be created under a written collateral agreement in accordance with FIRREA.

Policy Language Authorizing Depository CDs

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Why Being a Depositor Matters

- Depository certificates of deposit
  - Insured or collateralized

- Share certificates of credit unions
  - Insured only

- **Depository relationships provide protection**

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Buying a Depository CD

- Make it competitive – always
- Check the maturity date
- Check the day count
- Compare to other alternatives
- Use CDARS/IntraFi also as one comparison

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IntraFI CD

CDARS is now under the IntraFi promontory network with **ICS**

Check for CDARS banks in Texas at CDARS.com	Maturities set at 3,6, and 12 months and settling Thursdays	Phone or email several banks for the rates	Chose the best rate and notify the banks
• Currently up to $50 million at $10mm per week	• Don't create an uncollateralized situation at the initiating bank	• Get all in APY (annual percentage yield) • Records will show all banks – you report one combined CD	• Get instructions to send money • Standard CDARS Deposit Placement Agreement • Send money on settlement date

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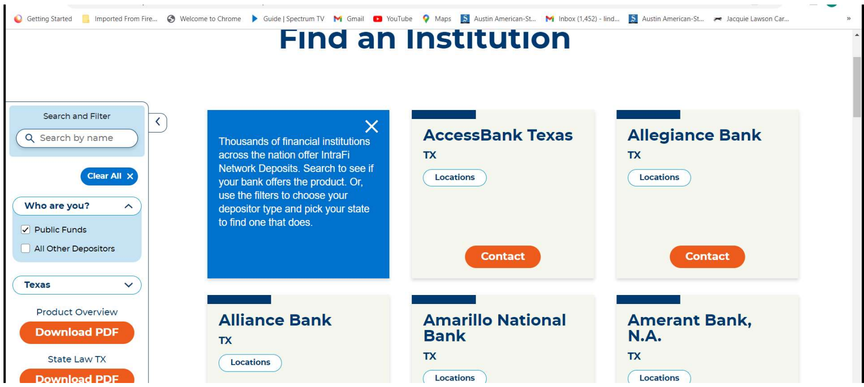

You chose the bank competitors

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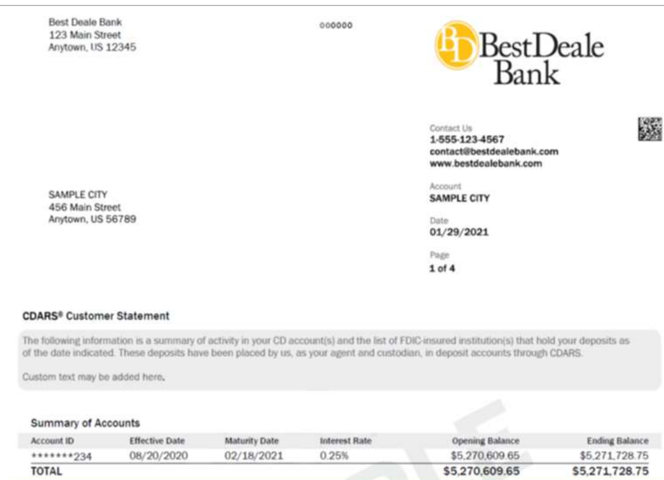
CDARS Monthly Report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123 Main Street
Anytown, US 12345

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BestDeale Bank

Contact Us
1-555-123-4567
contact@bestdealebank.com
www.bestdealebank.com

SAMPLE CITY
456 Main Street
Anytown, US 56789

Account
SAMPLE CITY

Date
01/29/2021

Page
1 of 4

CDARS® Customer Statement

The following information is a summary of activity in your CD account(s) and the list of FDIC-insured institution(s) that hold your deposits as of the date indicated. These deposits have been placed by us, as your agent and custodian, in deposit accounts through CDARS.

Custom text may be added here.

Summary of Accounts

Account ID	Effective Date	Maturity Date	Interest Rate	Opening Balance	Ending Balance
*******234	08/20/2020	02/18/2021	0.25%	$5,270,609.65	$5,271,728.75
TOTAL				$5,270,609.65	$5,271,728.75

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CDARS Monthly Detail

DETAILED ACCOUNT OVERVIEW
Account ID: *******234
Account Title: SAMPLE CITY

Account Summary - CD

Product Term	26-Week Public Fund 365 CD	Effective Date	08/20/2020
Interest Rate	0.25%	Maturity Date	02/18/2021
Account Balance	$5,271,728.75	YTD Interest Paid	$1,119.10
Annual Percentage Yield	0.25%	Interest Earned Since Last Statement	1,119.10

CD Issued by

America West Regional United Savings Bank FDIC Cert. **001

YTD Interest Paid	$52.28	01/01/2021	Opening Balance	$246,225.87
Int Earned Since Last Statement	52.28	01/29/2021	Interest Payment	52.28
		01/29/2021	Ending Balance	246,278.15

Bank of Hudsonville FDIC Cert. **002

YTD Interest Paid	$18.73	01/01/2021	Opening Balance	$88,230.29
Int Earned Since Last Statement	18.73	01/29/2021	Interest Payment	18.73
		01/29/2021	Ending Balance	88,249.02

Bear County Community Bank FDIC Cert. **003

YTD Interest Paid	$51.42	01/01/2021	Opening Balance	$242,168.29
Int Earned Since Last Statement	51.42	01/29/2021	Interest Payment	51.42
		01/29/2021	Ending Balance	242,219.71

Calera Bank FDIC Cert. **004

YTD Interest Paid	$52.28	01/01/2021	Opening Balance	$246,225.87
Int Earned Since Last Statement	52.28	01/29/2021	Interest Payment	52.28
		01/29/2021	Ending Balance	246,278.15

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Credit Union

Credit Unions

- These are 'Share Certificates'
- National Credit Union Share Insurance Fund insurance
  - $250,000 per tax id
- Can not be collateralized
- CU must be in Texas

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Policy Language Authorizing Brokered CDs

- FDIC insured *brokered* certificate of deposit security from banks in any US state, delivered versus payment to the entity's safekeeping depository, and not to exceed one year to maturity.
- Before purchase the Investment Office must verify that the bank is FDIC insured on www.fdic.gov

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Brokered CDs

- This is a security not a deposit
  - You have no relationship to the bank
  - It has little or no secondary market once bought
- Built from one large CD
- Broken into smaller CD securities by a broker
- Sold on the *secondary* market

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Controls on Brokered CDs

- The investment officer must monitor
  - On no less than a weekly basis
  - Status and ownership of the issuing bank based on FDIC information

- If the bank has merged or been acquired where other deposits exist
  - Investment Officer shall immediately liquidate any brokered CD which places the city above the FDIC insurance coverage

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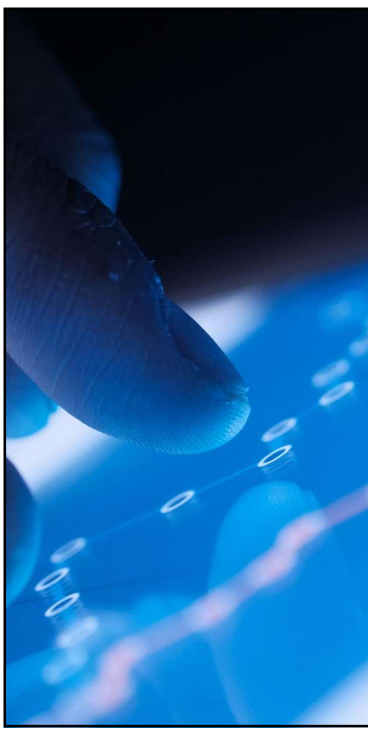

Virtual CD Options ?

- Virtual Banks doing business in Texas
  - State Farm Insurance
  - Ally Bank
  - USAA
  - Others?

- Stay under FDIC insurance levels
- Must make investment directly
- May work for economic development corporations

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What If there is a Bank Default??

- A *default situation* is identified
- The bank has 3 days to *cure*
- After 3 days City notifies custodian of collateral of default
- Custodian holds collateral now under City control
- If not resolved City sells collateral and receives funds
  - Plus any expenses incurred due to the default

- Regulators will normally sell, merge or bridge bank and it reopens
- IF they do not reopen – you need access to funds and ACH quickly

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Beyond One Year

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Safekeeping/Custody Required

- Safekeeping versus custody
- The trend is to custody for security, reconciliation, and reporting
- Costs of safekeeping are normally transactional
- Costs of custody are normally based on assets in place

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Two Basic Types of Securities

- **Money market = < 1 year**

US Gov't	> T-Bills	All are discount notes
Agencies	> Discount Notes	
Local Gov't	> BANs, TRANs	
Corporations	> Commercial Paper	

- **Fixed income = > 1 year**

Gov't	> Treasury Notes/Bond	All have a coupon
Agencies	> Agency Notes	
Local Gov't	> Long-term Bonds	
Corporations	> Corporate Notes	

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Discount Securities

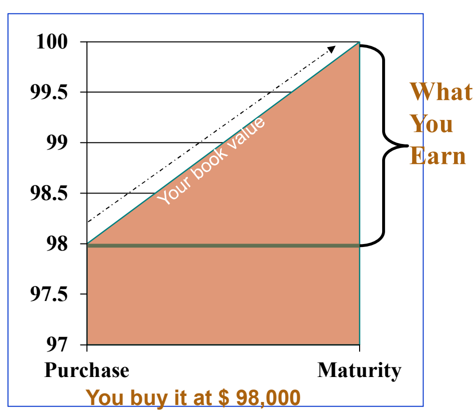
- All securities with original maturities < 1 year
  - Treasury bills
  - Agency discount notes
  - Commercial paper
- Quoted at a discount
  - Often close to yield
  - Ask to be quoted yield for comparison purposes

Discount Securities Have No Coupon Accrete Value Over Life

Always bought at a price less than 100

Earn daily and only through **accretion**

Buying a $100,000 T-Bill
- Price = $ 98,000
- You own it 200 days until maturity
- Discount/# of days
- 2,000/200 days= $ 10 / day



it matures at $ 100,000

Discount Security Choice

- Get a yield quote not the 'discount' for comparison
- Check the only two things that matter to you
  - (a) the date for cash flow
  - (b) the yield

Mat	Bid	Asked	Chg	Yield
6/15/xx	99.5	99.6	-.1	2.15

CHG – change in price from prior day close

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Daily Accretion

You purchased a T-Bill 8/6/xx at a 4.21% yield:

Par	$1,000,000.00	
Principal	$ 997,695.69	(book value day 1)
Discount	$ 2,304.40	
Days-to-Maturity	356 days	
Daily Accretion	**$ 6.47 (2,304.40/356)**	

- Earnings from Accretion only
- Booked monthly

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- Any security with original maturity > 1 year
- All will have a coupon because investors want ongoing income
- It will "coupon" i.e. "pay" every 6 months
  - Coupon rate x par amount = annual income
  - Pay will be half of annual income
  - $1,000,000 1.50% = $15,000/year = $7,500/six months

Security 'Notes'

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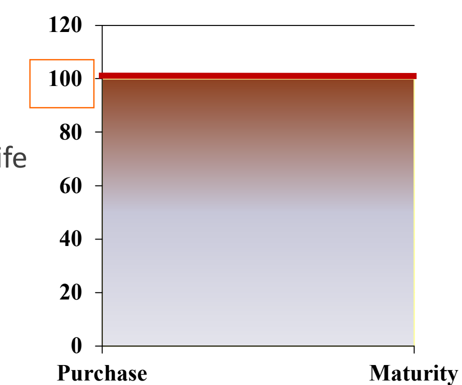
Notes Bought at Par

Buying at par
- $1 for each dollar face amount

Principal stays the same through life

Earnings only through coupons
- Coupons accrue earnings



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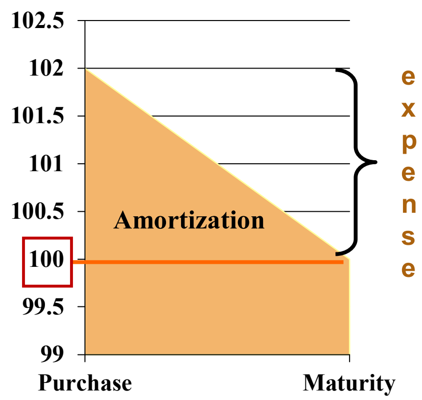
Notes Bought at a Premium

Buying above par ($1=$1)

Market adjusting coupons to lower yields

Daily amortization is an expense
- Book value decreases each day

Premium of $20,000 for 180 days
is an expense of $111.11/day



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Sometimes Mostly Premium Bonds

- Simply put you might have too – rates have risen
- If coupons are set by current yields
- When rates have been high – coupons will be high
- When rates have been low – coupons will be low

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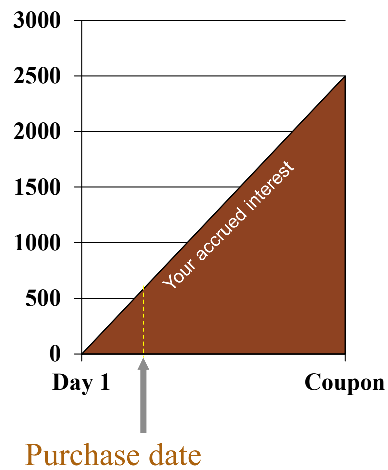
Notes have Fixed Coupons

Coupons accrue daily and pays semi-annually

$1 million 5% Note = $50,000/yr
- Pays $50,000/year
- Paid in 2 payments of $ 25,000

At Purchase you buy any accrued:
- Accrued interest purchased $1,000



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Your Trade Looks Like:

	Description		Settlement
Market Sector	T-Note	Par	1,000,000.00
Maturity Date	11/30/xx	Discount	5,000.00
CUSIP	912828TT3	Principal	995,000.00
Price	@ 99.5	Accrued Interest	138.88
Call?	Non-call	Net Settlement	995,138.88
Trade Date	12/10/xx		
Settlement Date	12/11/xx		

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Choosing a Note

- Your two considerations:
  - Yield to compare to other securities
  - Maturity date to match your cash flow needs
- **Ignore Coupons and Price**
- The yield reflects both
- All costs are net in yield

Coupon	Maturity	Bid	Asked	Yield
2.20	11/15/xx	100.00	100.03	2.18

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US Treasury Securities

- US Treasury obligations
- Full faith and credit of the US
- Auctioned by the Treasury on a set schedule by maturity
- T-Bills - 1 year and under maturities and all discount structures
  - 3month, 6month, and 1 year maturities
- T-Notes – 2 year and over maturities, all carry a coupon
  - 2year, 3 year, 5year, 10year, and 30 year – occasional changes

- Advantage – risk free, regular supply
- Disadvantage – low rates because of safety

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US Treasuries

- Designed and marketed to reduce uncertainty and competitiveness

- Treasury Bills
  - 3mo, 6mo, and 1yr maturities
  - Auctioned weekly
  - Always mature on Thursdays
  - Quoted on yield or *discount price*

- Treasury Notes (and Bond)
  - Maturities in 2, 3, 5, 10 and 30 years
  - All have coupons
  - The longest currently being sold is known as the "bond"
  - All mature on the 15th or last day of the month
  - Quoted as *yield* and priced as *% of par*

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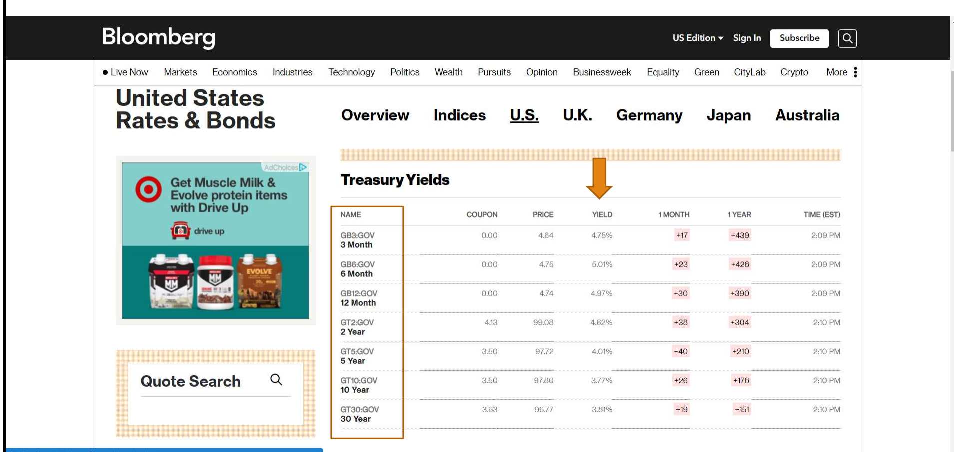
Bloomberg.com or TreasuryDirect are good sources of information



NAME	COUPON	PRICE	YIELD	1 MONTH	1 YEAR	TIME (EST)
GB3:GOV 3 Month	0.00	4.64	4.75%	+17	+439	2:09 PM
GB6:GOV 6 Month	0.00	4.75	5.01%	+23	+428	2:09 PM
GB12:GOV 12 Month	0.00	4.74	4.97%	+30	+390	2:09 PM
GT2:GOV 2 Year	4.13	99.08	4.62%	+38	+304	2:10 PM
GT5:GOV 5 Year	3.50	97.72	4.01%	+40	+210	2:10 PM
GT10:GOV 10 Year	3.50	97.80	3.77%	+26	+178	2:10 PM
GT30:GOV 30 Year	3.63	96.77	3.81%	+19	+151	2:10 PM

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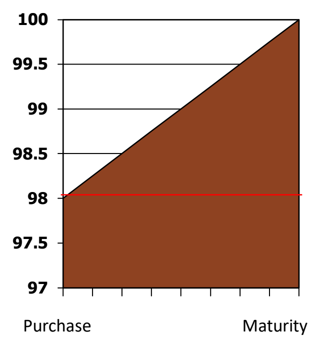
Treasury Bills



No surprises

<u>Always</u> sold at a discount

<u>Always</u> mature Thursday

Earn on principal only – no coupon

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Other Treasury Structures

- Callables
  - Treasury has a right to issue them but rarely does
- Floating Rate (FRN) since 2014
  - 2-year notes with floating interest rates
- Strips (US Government securities)
  - *Separate Trading of Registered Interest& Principal*
  - zero coupon, wireable, like a long T-Bill
- TIPS (Treasury Inflation Protected Securities)
  - Adjusts with CPI inflation but adjustment is on principal

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US Agencies and Instrumentalities

Take advantages of lower credit with little or no risk.

- Treasuries give markets standardization
- Agencies are *usually* higher yielding and give structural choices
  - Reflective of higher implied risk
  - FNMA and FHLMC are currently full faith and credit of the US
- All 'good day' maturities
- Flexible maturity date choices on short term
- Flexible structures using puts/calls

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Agencies/Instrumentalities

Higher yields

High liquidity

Steady supply

Issued not auctioned

Date tailored

Non-standard coupons

No bad end date

Many varieties:
- Bullets
- Callables
- Floaters
- Strips
- Variable Rate
- Step-Ups

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Instrumentalities

- An instrumentality is a non-governmental agency that acts independently but whose obligations are backed by the government because of its role in providing a public services
- qualified and can obtain tax benefits
- FNMA, GNMA, FHLMC and SLMA are instrumentalities
  - They were created to serve a public service
  - Much like a local library, hospitals or school may be considered an instrumentality

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Most Common Market Agencies

- FNMA and FHLMC are currently full faith and credit of the US
- These agencies are in the market most of the time with large issues.

Federal Agricultural Mortgage Corporation (Farmer Mac) [www.farmermac.com]
- Federal Farm Credit Bank (FFCB) [www.farmcredit-ffcb.com]
- Federal Home Loan Bank (FHLB) [www.FHLB-of.com]
- Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac) [www.freddiemac.com]
- Federal National Mortgage Association (FNMA or Fannie Mae) [www.fanniemae.com]
- Government National Mortgage Association (GNMA or Ginnie Mae) [www.ginniemae.gov]
- Tennessee Valley Authority (TVA) [www.tva.gov]

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Agency Structures

- A **discount note** is a direct issuance and are sold at a discount and a maturity limit of <u>one year</u>
- An **agency note** is a direct issuance with a semi-annual coupon and maturities from <u>2 – 30 years</u>
- A **callable** gives the issuer the right to call back the bond on a certain schedule
- A **floater** or indexed bond moves parallel to the stated index or **variable rate notes**
- A **zero coupon** is a note from which the coupons have been stripped
- A **step-up** is a callable for rising rates – it *steps up* in coupon rather than being called

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Agencies Come in Varieties

Clarify and differentiate in your policy to include/exclude

- *Obligations of the US Government, its agencies and instrumentalities, <u>excluding</u> mortgage backed securities*

Agency Notes

- **debentures** of the agency
- backed by the credit of the agency

Mortgage Backed Agencies

- **backed by mortgages**
- affected by interest rates and mortgage pay-downs

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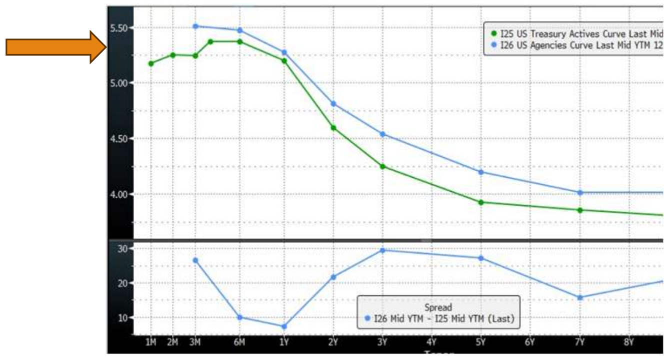
What is the spread?
When to Buy Them



Agencies

Treasuries

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Agency "Derivatives"

A "derivative" is any security "derived" from a basic security

- Not all derivatives are bad or are based on mortgages
- Agencies create derivatives to add value
- Options (puts/calls) are *embedded* in the security to create structures

Simple structure derivatives

- Callables
  - have a call option allowing the issuer to refinance at lower rates
- Floaters
  - *float* with some defined index
- Indexed
  - are priced according to some defined index (like T-Bill auctions)

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Callable Structures

Critical factors for callables

- Lock-out period when the agency is prohibited to call the bond
  - A 3/1 would be a stated maturity of 3 years with a one year option to call
- Call dates and frequencies will vary dependent on structure
- Almost always called at par (100)

Various common structures – 2/1; 3/1; 5/2; 10/3

- European – one-time call
- Bermuda – "Discrete call", callable only on interest payment dates
- American – "Continuous call", callable anytime with # of days notice
- Step-up callables
  - Fixed coupon to next call date
  - At call bonds either called or coupon "steps up"/increases
  - Multiple steps

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Floating-Rate Notes

- "Floaters" reset rates periodically
  - Treasuries and agencies issue floaters
  - Tied to an Index (like T-Bill auction)
  - Often priced on a specific spread
- Advantages
  - Good when rates are increasing
  - You get paid for the risk you are taking
- Disadvantages
  - Bad when rates are dropping
- Consider:
  - Reset Periods
  - Day Count Periods
  - Payment Periods
  - Maturity
  - Valuation

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Municipal Obligations

State and local obligations
- Most are callable

Sometimes offer super value over other securities
- Taxable and non-taxable issuers
- In any US state
- Rated A or above (you may want higher!)

Compare various issuance types
- General Obligations or Revenue bonds have different risks

Some represent credit and liquidity issues

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Commercial Paper

Commercial Paper
- High quality and good short-term investment option
- Unsecured promissory notes of a company or non-commercial banks
- A1/P1 or equivalent rating required
- Defined as 270 days maximum maturity
- Secondary market usually or directly placed paper

Points to ponder:
- Liquidity risk
- Credit monitoring critical
- Spread off treasury bills/notes or agency discount notes
- Stick to known names and investigate
- Diversify
- Set a maximum % of portfolio by policy – perhaps 20%

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Private Placement CP is available but represents more risk

- Maturities from 271-365 days not liquid - not a company's credit
- The issuer is financing 'non-current' transactions
- Sold to 'accredited investors' only
- Not intention to resell the security (or sell in 'exempt transaction')

Asset backed CP Caution

- Based on underlying securities or assets - not a company's credit
- Know what backed the securities
- Currently \$717.3 B outstanding (55% of all CP outstanding)
- high concentrations have threatened funds/pools in the past

Dangerous CP Variations

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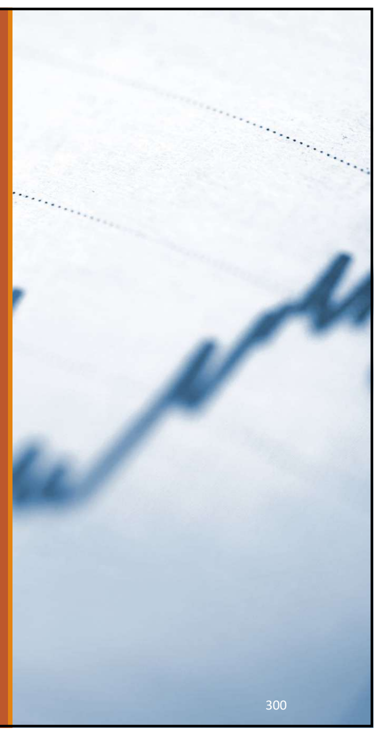
Bankers Acceptances

Bankers Acceptances
- A promised future payment by a bank
- International trade primarily
- Structure reduces credit to all parties and therefore lower yield
- Defined as 270 maximum maturity
- Around since the 12th century!!

Points to ponder:
- Illiquid and a relatively small supply
- Measure spread vs CP
- Credit issues
- Foreign versus domestic names



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Bond Mutual Funds

The structure is key – not liquid securities
- Moves on market prices of security holdings
- Under the Act must have a maximum WAM of 2 years
- Not permitted by law for bond funds because of risk
- Little reason to use
  - Potential of principal loss

Check for fees

Use no-load funds (load = fees)

Know the earnings history

Read the prospectus
- Size
- Goals and policy restraints

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PFIA Bond Fund Restrictions for Your Safety

- Must be NO-load
- Must be registered with the SEC
- Must provide a prospectus – read it
- Must have a WAM less than 2 years
- Restrictions on entity fund types
  - Not more than 15% of monthly average fund balance
    - without bond proceeds, reserves, debt services
  - NO investment with bond proceeds, debt service funds or reserve funds
- Short Duration Fund Restrictions from the Acct
  - If duration > 1 year must invest in PFIA authorized securities
  - If duration < 1 year is limited to *investment grade* securities

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Limited-Use Securities in the Act

- **GIC**
  - Guaranteed Investment Contracts
  - Basically insurance contracts
  - Sold on a GIC platform and carries a hefty fee by brokers
- **Specialized funds [IRS Code Sec 501(f)]**
  - Like a national investment pool for institutions of higher education
- **Israel Bonds**
- **Municipal Utilities Hedging Contracts**
  - Distributors of electricity or natural gas only
  - Hedging contracts traded on unique exchange under CFTC
- **City Mineral Rights Funds**
  - Funds received for mineral rights (primarily oil and gas)
  - Directed for reserves and open for investment under the *Trust Code*

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Mortgage-Backed Securities

- Built from pools of home mortgages
  - "Pass-through" securities
  - Passes through P&I from homeowner
- Various reporting 'maturities'
  - Stated maturity and expected maturity
- Performance of pool
  - dependent on mortgage payments
  - Dependent upon interest rates
- Subjective pricing so priced on rate assumptions

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Mortgage-backed Securities

- Agencies buy mortgages and put like mortgages together in a pool
- As mortgagee pays monthly the funds flow through the pool
- The owner of the security gets monthly payments of P&I

- Because these are mortgages, they change *markedly* with rates

- If rates fall, then people will re-finance and funds increase to owner
- If rates increase, people hold the mortgage and your security extends

- As a result, you have a *stated* maturity and an *expected* maturity

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A Special Mortgage

- Collateralized mortgage Obligations or CMO
  - Created for investors clamoring for more yield and accepting more risk

- The original pool of mortgages is divided
  - Each piece (tranche) is structured differently
  - Some tranches carry more risk
  - All have the monthly cashflow which banks like

- CMO differ in risk
  - TAC, PAC, Jump-Z, Inverses
  - As collateral the PFIA restricts riskier tranches

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The Trade

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You

- The authorized investment officer makes the decision
- The decision is based on when you need funds
- The decision is based how much you need to mature on that date
- You will decide and monitor clearing and settlement

Your bank safekeeping or your custodian

- The custodian will take delivery and confirm settlement

A broker/dealer (or bank for a CD)

- The broker will do research for best current value
- The broker will offer you a selection for your decision
- The broker will arrange for delivery to your custodian

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Trade Procedures

Do your prep → Contact B/D → Receive offers

→ Evaluate offers → Award the offer → Inform losers → Prepare documents - file

The trade requires preparatory work as well as timely, clear and concise communications.

The preparation will take more time than the trade itself

Act in a timely manner!

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Evaluating the Offer

- Does it fit my **policy** restraints?
- Do I understand **what it is**?
- Does it fit my maturity need (time horizon)?

- **Compare the YIELD**

- Sample CD offers for "*not past* November 2025"

Maturity	Coupon	Yield
11/01/25	**4.50 %**	**4.50 %**
08/22/25	**4.75 %**	**4.75 %**

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The Beauty of YIELD

- Yield is the <u>common denominator</u> of all securities
  - With yield we can compare <u>any</u> securities
- Use the yield to determine the highest return
  - Yield captures the effect of coupons and price
  - <u>Never look at the coupon</u> – it is affected by price
- Our offers:

	Maturity	Price	Coupon	**Yield**
T-Bill	11/15/xx	99.5	0.00 %	**4.40 %**
FNMA	11/01/xx	100.6	1.50 %	**4.25 %**
CD	11/09/xx	100.4	1.40 %	**3.95 %**
FHLMC/C	11/11/xx	99.9	1.50%	**4.70 %**

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Award the Offer

- Make your evaluation <u>quickly</u> – time is of the essence
- Respond to the winner quickly
- Tell him your will buy it (he must already have delivery instructions)
- He will call or email you with "the numbers"
- He is going to tell his "trader" that it is done
  - The trader may have to then go buy the security

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Inform the Losers

- Professional courtesy
- Brokers want to know the competition
- Knowing what you bought helps for next time

- Call the losers to let them know
  - "Sorry, I bought a ------ at 5.45%"
  - That's all they need to know
  - Don't make it a long conversation
    - Time is money for you both

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The Trade Documentation

- The broker will 'work up the numbers' for the confirmation of the trade
  - Usually emails the information breakdown – unless online

- There will never be a broker fee of any kind
  - You are an institutional account, so all is net in the yield

- You need a document
  - To document the trade fully – all details
  - To alert your safekeeping agent/custodian
  - To verify that the trade is as your required

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Trade Ticket Information

- Trade Information matches your confirm
  - Security description (type, cusip, settlement date, maturity date)
  - Fund for which it was bought
- Accounting Information
  - Par amount
  - Premium or discount amount
  - Principal
  - Accrued interest purchased
  - Net settlement amount
  - Trade and settlement dates
- Competitive bidding documentation
  - Three offers and the offer yields for each

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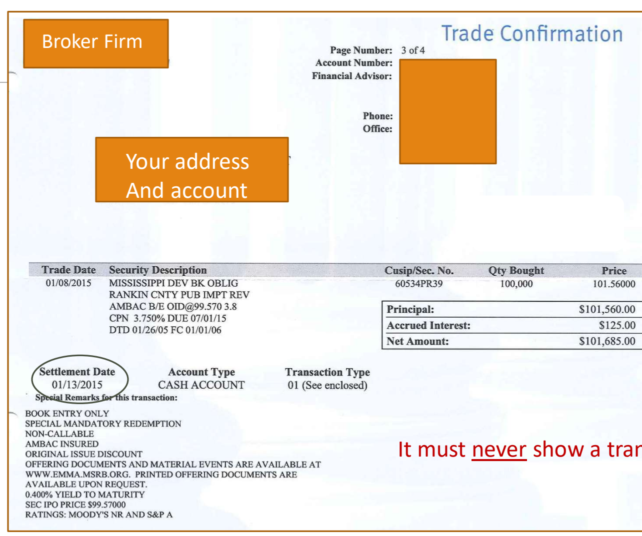
Reading a Broker Confirmation



Broker Firm

Trade Confirmation

Page Number: 3 of 4
Account Number:
Financial Advisor:

Phone:
Office:

Your address
And account

Trade Date	Security Description	Cusip/Sec. No.	Qty Bought	Price
01/08/2015	MISSISSIPPI DEV BK OBLIG RANKIN CNTY PUB IMPT REV AMBAC B/E OID@99.570 3.8 CPN 3.750% DUE 07/01/15 DTD 01/26/05 FC 01/01/06	60534PR39	100,000	101.56000

Principal:	$101,560.00
Accrued Interest:	$125.00
Net Amount:	$101,685.00

Settlement Date	Account Type	Transaction Type
01/13/2015	CASH ACCOUNT	01 (See enclosed)

Special Remarks for this transaction:

BOOK ENTRY ONLY
SPECIAL MANDATORY REDEMPTION
NON-CALLABLE
AMBAC INSURED
ORIGINAL ISSUE DISCOUNT
OFFERING DOCUMENTS AND MATERIAL EVENTS ARE AVAILABLE AT WWW.EMMA.MSRB.ORG. PRINTED OFFERING DOCUMENTS ARE AVAILABLE UPON REQUEST.
0.400% YIELD TO MATURITY
SEC IPO PRICE $99.57000
RATINGS: MOODY'S NR AND S&P A

It must <u>never</u> show a transaction fee!!

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Language of the Trade

- Settlement types
  - Cash – settlement on same day as trade (must be an early trade)
  - Regular – settles the next day from the trade
  - Skip – settles out on a agreed to date (helpful when $ comes from pool)
  - WI – when issued – buying before the security is actually on market

- Bid - ask for it if you are selling a security SELLING
- Offer – ask for it if you are buying a security BUYING

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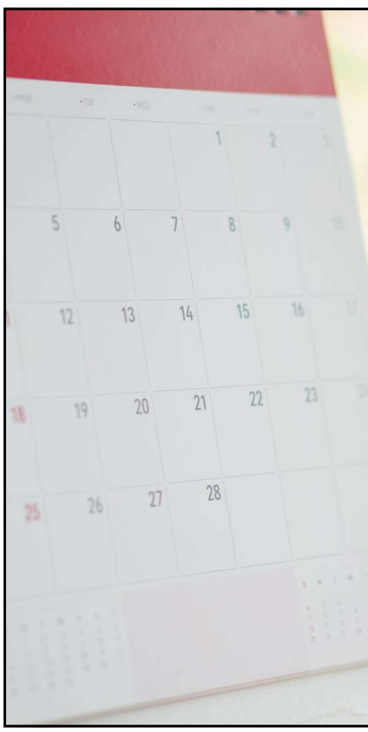

All Trades Need Preparation

- Do *cash flow* to know when you need a maturity.
  - Set your *time horizon, i.e. when you need the money.*
    - Unless you need a specific date say "not past xx/xx/xxxx"
  - Decide how much you need at maturity

- A security needs safekeeping
  - Know your delivery instructions (give to all brokers)
  - Do DVP delivery

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Selecting a Broker

- Determined by portfolio needs and types of securities
- Institutional versus retail
- Institutional will rarely be local
- Primary versus secondary
- Banks are used only for CDs
- How many brokers do you need for competition?
- What is my initial due diligence?

NEVER use broker safekeeping
- move securities to your bank safekeeping/custodian

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How to Use a Broker

Only broker/dealers get you market access

To make an investment
- Set your time horizon
  - Set the maximum maturity date
- Tell *multiple* brokers what you need/want
  - "I need the best rate not past xx/xx/xx in an agency or treasury"
- Wait for them to do the research and respond with options
  - They will bring back alternatives for you to chose from
- You compare and make the decision
  - Inform them all what you bought (the "cover")
  - Feedback is important

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Broker/Dealers

Services
- Access to markets
- Market analysis
- Security analysis
- Credit research

Risks
- Default of firm – not with DVP
- Transaction time
- Safekeeping by broker is not safe
- Safekeeping by broker loses control

The brokers job is to SELL you not advise you.

Only advisers are registered to give advice.

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Broker or Dealers

Broker
- No inventory
- Transaction based
- FINRA Regulation
- Capitalization
- Retail -Institutional

The difference is in the coverage and maybe the price – you can do business with any if registered in Texas.

Dealer
- Maintains inventory
- FINRA Regulation

Primary Dealer
- Reports to NY Fed
- Capital monitored
- Open market trading for NY Fed
- Liquidity provider
- FINRA

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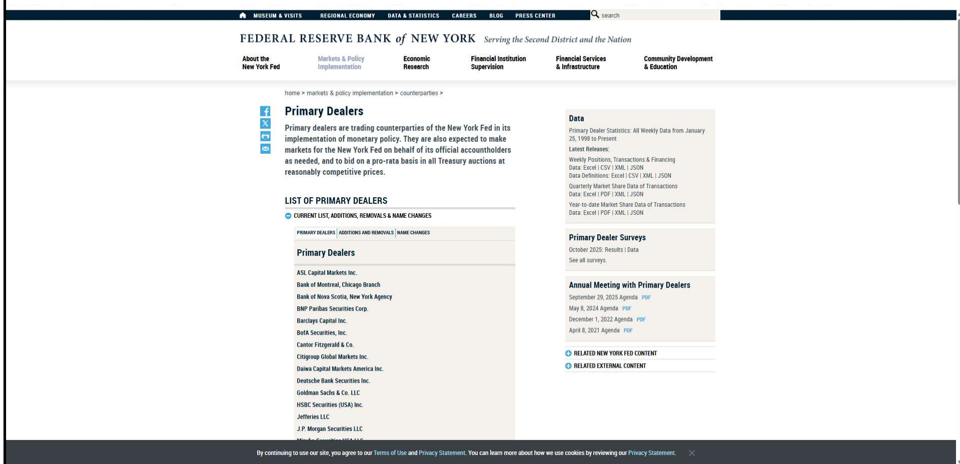
Primary Dealer List

Currently 26 primaries



List is found at newyorkfed.org/markets/primarydealers

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Document Broker Info for Your Files

- FINRA registration
  - Central Registration Depository Number (CRD#) then look up the details yourself
- Texas Registration – State Securities Board
- Annual Financial Statement
- Short questionnaire information – backup, contacts, delivery instructions
- You do not need a 1295 nor certification
- Send them your policy as due diligence
- You do not use an RFP for brokers

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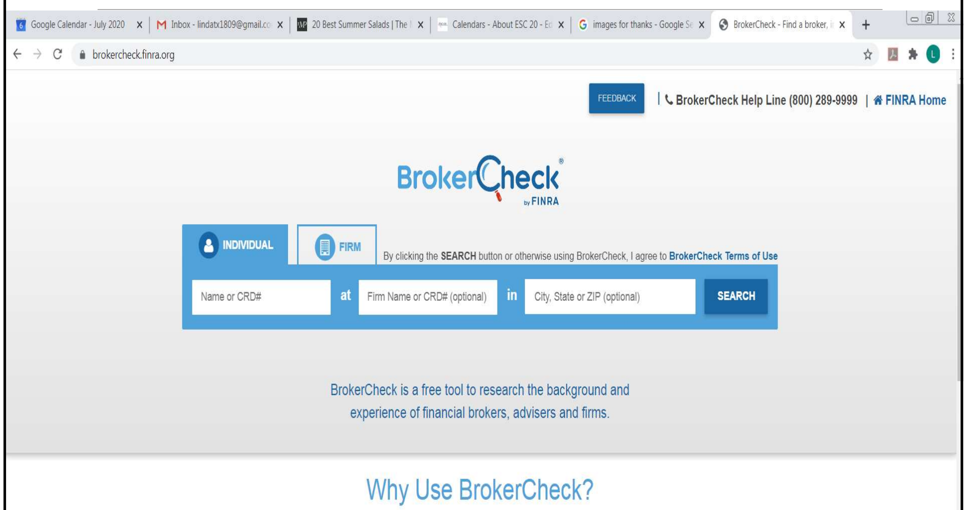
Check Brokers on FINRA

finra.org



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Your Trade Protection

Review and Approve Broker/dealer list annually

- Broker/dealers only on list not banks or pools
- Add or subtract ones that are working well for you

Peer Experience and References

SIPC ONLY APPLIES TO BROKER HELD SECURITIES –not applicable here

FINRA (Financial Industry Regulatory Authority) get the skinny from the regulators

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Making a Purchase Decision

- Need: $500,000 payroll out 9 months
- Choices: Treasuries, CD, Agency, Pool
- Curve: Stable and normal upward slope
  No big news or change anticipated
- Yields:
  - CD 4.70 %
  - T-Bill 5.14 %
  - FNMA DN 5.25 %
  - Pool 5.25 %

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Making a Purchase Decision

- Need: $500,000 payroll out 9 months
- Choices: Treasuries, CD, Agency, Pool
- Curve: Stable and normal upward slope
  Economy is very strong and inflation is growing
- Yields:
  - CD 4.70 %
  - T-Bill 5.14 %
  - FNMA DN 5.25 %
  - Pool 5.25 %

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Making a Purchase Decision

- Need: $500,000 payroll out 9 months
- Choices: Treasuries, CD, Agency, Pool
- Curve: Stable and normal upward slope
  Economy is weakening with little inflation
- Yields:
  - CD 4.70 %
  - T-Bill 5.14 %
  - FNMA DN 5.25 %
  - Pool 5.25 %

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Which do you choose? And Why?

Rate	Maturity	Bid	Asked	Yield
5 3/4	May 20	97:16	97:18	6.61
10 3/4	May 20	111:14	111:16	6.61

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Buy the discount

5 3/4 Apr xx		10 3/4 Apr xx	
Price	97/16	Price	111/14
Yield	6.61 %	Yield	6.61 %
PAR	1,000,000	PAR	1,000,000
Prin	975,625	Prin	1,116,875
Acc	19,271	Acc	31,600
Settlement	994,896 *	Settlement	1,148,145

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Your job as an investment officer

- Meet known asset/liability requirements.
- Prepare for unexpected liabilities with buffer.
- Balance yield with liquidity and flexibility.
- Read *major* market trends for applicability.
- Read the curve and markets for rate direction.
- Enhance yield.
- Protect principal
- Have a strategy and act on it.

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Relax – we're done…

Thanks!

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REMEMBER INVESTING IS RISK MANAGEMENT!

MANAGE THE RISKS AND GET STARTED.

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