

# Principles of Banking, Cash Management, and Investments

Vermont Municipal Clerks' & Treasurers' Association



Vermont State Treasurer's Office

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# *Treasury/Cash Management Goals*

- Cash management is the movement of funds
  - to optimize liquidity
  - to increase interest income earned by maximizing investments
  - reduce the cost of short-term borrowings
- Cash management utilizes information about the organization's cash flow, its receipts, disbursements, and balances to manage operating capital

Source: Adapted from C.J. Volk Associates, Inc., Cash Management Primer: An Introduction to the Fundamentals, 2002.

## *In other words . . .*

- Get the funds in the bank as soon as possible
- Hold onto the funds as long as possible
- Make the best use of the funds while you have them
- Provide safe and secure environment for your assets

# **Seven Components of Cash Management**

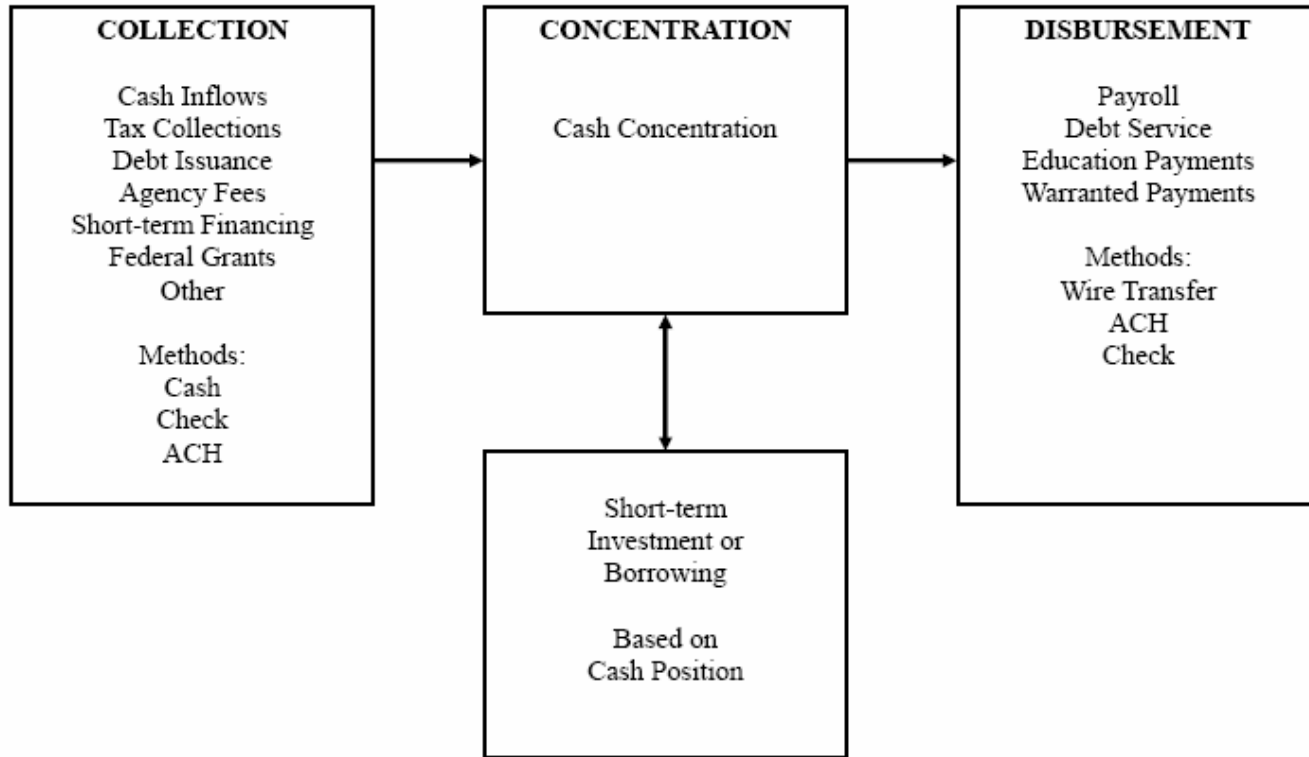
- **Collection:**
  - Includes the collection of customer remittances and depositing of receipts into the bank account as quickly as possible
  - Collecting adequate information to correctly identify the source of the payment
  - Movement of these funds into a concentration account where they are available for use and/or short-term investment
- **Concentration:**
  - Mobilizing funds deposited at various collection points so that they are available for use
  - Objective is to get operational use of the funds as soon as possible
  - Depends on the number of collection points, their frequency of use, and the dollar amounts associated with them
- **Cash Position Management:**
  - Daily monitoring of cash inflows and outflows to determine whether internal sources of cash are available to fund the organization's cash requirements
  - Daily cash position management is then extended to weekly, monthly, quarterly, and annual cash forecasts and projections
  - Objectives associated with this component are to reduce the cost of borrowings and maximize short-term investment of funds
  - Three functions:
    - Monitoring
    - Short-term Borrowing
    - Investments

# *Seven Components of Cash Management*

*(continued)*

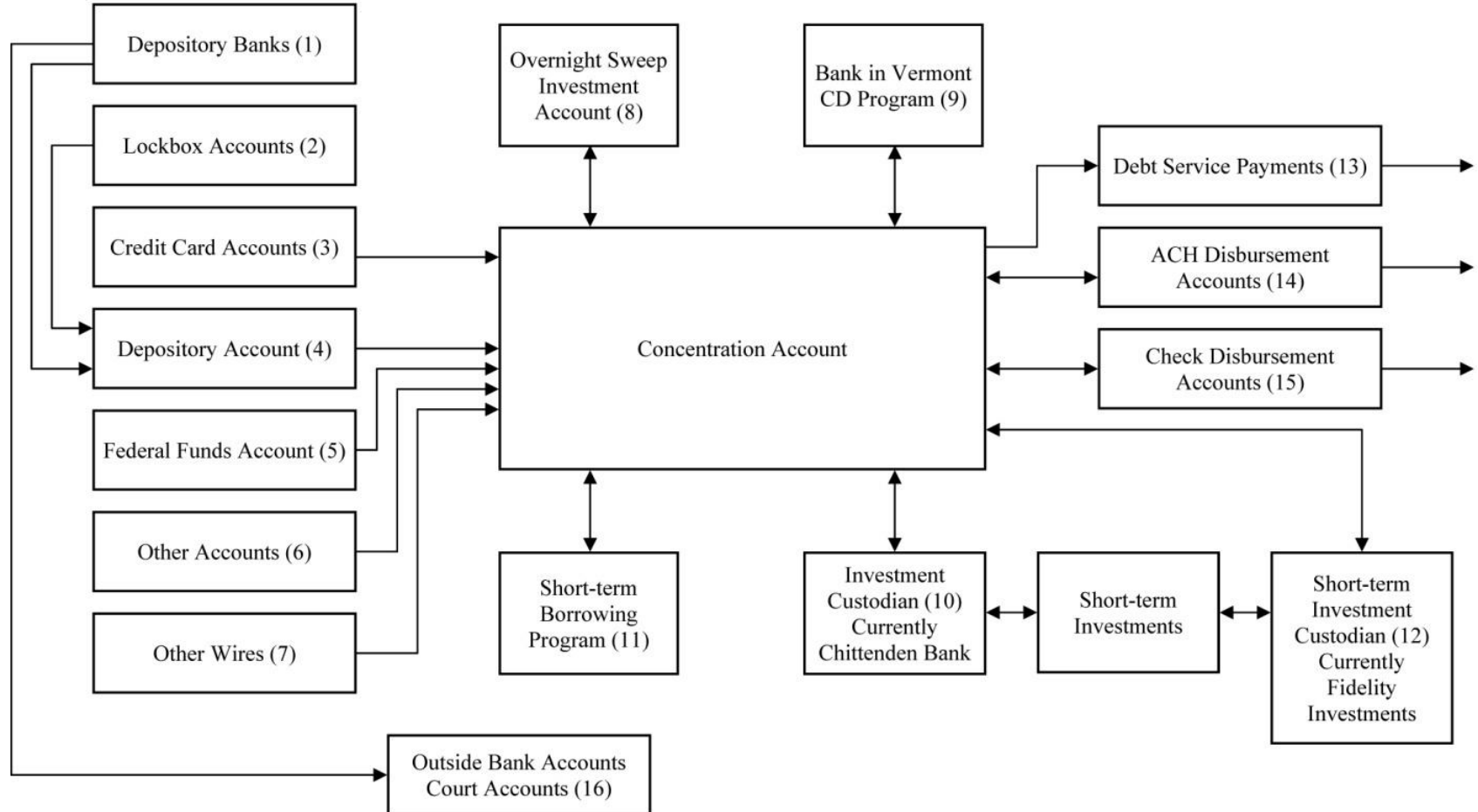
- **Disbursement:**
  - Component includes activities related to the funding of the disbursement accounts, including the timing and dollar amount funded
  - Managing check or disbursement float
  - Objectives are to maximize check float, where appropriate to the function of a governmental entity, and to minimize excess balances in disbursement accounts
- **Information Management:**
  - includes the obtaining of bank balances, deposit and disbursement data to support the collection-concentration-disbursement components
  - Information to assist in developing accurate cash position management decisions
  - Objectives include the receipt of data in an accurate and timely manner with the least available cost
- **Reconciliation:** Involves the collection of data from bank and accounting systems to verify that all transactions are properly accounted for in a timely manner
- **Risk Management:** Incorporates the development of various procedures to minimize or reduce the likelihood of loss of assets through operational risk, fraud risk, systemic risk, and investment risk

State of Vermont, Office of the State Treasurer  
Cash Flow



# State of Vermont, Office of the State Treasurer

## Detailed Cash Flow Structure



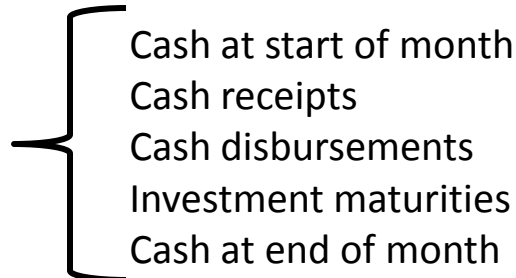
See Notes to the Detailed Cash Flow Structure on following page

# **Cash Flow Projection**

- Used to make short-term borrowing and investment decisions
- Actual cash flow will vary from projection
  - Develop historical base
  - Update forecast frequently
- Use to determine optimal borrowing and investment strategy
  - Amounts available for investment
  - Period of time to hold the investment
  - Assists with overall investment strategy
  - Goal: Maximize maturity schedule but leave a reserve on hand to handle unforeseen cash needs

# **Steps to Preparing a Monthly Cash Flow Forecast**

- **Examine historical cash flow data**
  - Bank statements
  - Cash peaks and valleys
  - “Core” cash accounts
- **Cash flow receipts**
  - For existing operations, receipts from the same month in a previous year, adjusting for any current known variances
  - Property taxes and/or utility payments are major revenue source for most municipalities
  - Cash receipts can be predicted by taking into consideration tax bill due dates, tax sale dates, and expected payment dates of transfers from other governments
  - For new operations, the average monthly revenues of a similar size municipality or operation can be compared as a benchmark
- **Consider cash flow disbursements**
  - Cash disbursements can be predicted by using past year’s payroll information and pay dates for the coming year, information on transfers to other governments and their due dates, and information on vendor and other contractual payments
  - Cash disbursements not expenditures
- **Review operating budget and capital budget for any adjustments to receipts and disbursements**
  - Changes in capital projects plan
- **Design a cash flow work sheet**
- **Compare/Update to actual**



# ***Objectives of the Investment Function***

- **Safety:** The safety of principal is the most important objective of the investment program. All investments are made in a manner that safeguards principal.
- **Liquidity:** The investment portfolio must be carefully managed to ensure that sufficient funds remain available to meet all operational requirements, which can be reasonably estimated.
- **Yield or Return:** Funds should be invested so as to attain a market average rate of return throughout budgetary and economic cycles, taking into account risk and cash-flow constraints.

# *Investment Considerations*

- Diversify the use of instruments to avoid incurring unreasonable risks inherent in over-investing in specific instruments, individual financial institutions, or maturities.
- Maturities should be matched to known and anticipated cash needs.
  - Liquid Funds needed for short-term operations
  - Core Funds: Not needed for immediate liquidity (6+ months)
- Investments maturity schedules and types of holdings will vary based on purpose of funds, underlying liabilities, and risk tolerance.
  - Operating funds – short-term money market instruments
  - Restricted funds – short-term money market instruments; may reside at slightly longer end of maturity range
  - Trust Investment Account – intermediate fund, primarily fixed income bond funds (70%) and equities (30%)
  - Pension and related benefit trusts – accumulated for future benefits; have higher risk tolerance (not part of today's discussion)
- Investment transactions should only be conducted with brokers and dealers who are highly rated, have a significant positive record of trading in the public sector, and are well capitalized.
- Develop a broker/dealer question and review process.

# **Investment Considerations**

**(continued)**

- The local government should have an adopted investment policy.
- Written procedures governing investments should be available and reviewed on a regular basis.
- Procedures should be communicated to staff.
- Due diligence should be conducted on all banks, broker/dealers, and investment managers.
- Develop a collateralization policy:
  - Deposits in excess of FDIC coverage should be secured, in whole or part, by a pledge of securities
  - Security agreements should be in place
  - CDARS may be an available option
  - Use a custodial bank for investments
  - Utilize “Delivery vs. Payment,” or DVP
- Use cash-flow projections to determine amounts and time periods for investments.

# **Vermont State Treasury Permitted Investments**

State Statutes and additional guidelines for short-term investments dictate the investment parameters. 32 VSA § 433, Investment of state money, specifically identifies the following as eligible instruments:

- (1) obligations of the United States, its agencies and instrumentalities, which have a liquid market with readily determinable market value;
- (2) certificates of deposit and other evidences of deposit at banks and savings and loan associations approved by the treasurer;
- (3) bankers' acceptances issued by domestic banks where the guaranteeing bank is rated in the highest tier assigned to the investments by at least two nationally recognized rating agencies;
- (4) commercial paper rated in the highest tier by at least two nationally recognized rating agencies;
- (5) investment-grade obligations of state or local governments, instrumentalities, and public authorities;
- (6) repurchase agreements whose underlying purchased securities consist of any of the investments specified in subdivisions (1) through (5) of this subsection;
- (7) investment agreements or guaranteed investment contracts rated or guaranteed by a financial institution whose senior long-term debt obligations are rated, at the time such agreement or contract is entered into, in the highest tier assigned to such investments by a nationally recognized rating agency, and where the treasurer has the option to terminate each agreement in the event such rating is downgraded below the highest rating tier; and
- (8) money market mutual funds that either are regulated by the securities and exchange commission and whose portfolios consist only of dollar-denominated securities or are managed in a manner consistent with Rule 2a-7 of the Investment Company Act of 1940.

# **Money Market Instruments**

- **Treasury Bill** - short-term obligations issued by the U.S. government
- **Federal Agency Securities or Government Sponsored Enterprises (GSEs)** - debt securities by financing entities created by Congress
- **Certificate of Deposit** - bank-issued time deposit with specified interest rate and maturity
- **Commercial Paper** - short-term unsecured promissory notes issued by a company to raise short-term cash
- **Repurchase Agreement** - agreement involving the sale of securities between parties with a promise to repurchase the security at a specific date and price
- **Money Market Mutual Funds** - mutual fund which invests in money market instruments

# Treasuries

- Treasuries are a way for federal government to raise money from the public
- T-Bills are short-term securities
  - mature in 1 year or less from their issue date
  - usually issued with 4-week, 13-week, 26-week, and 52-week maturities
  - sold at a discount to face value, no interest payments
  - On maturity, the investor is paid the face value
    - earns interest by way of a difference in purchase price and face value
- Treasury Notes & Bonds – 2, 3, 5, 7, 10, & 30 years
  - sold at premium or discount depending upon coupon
  - Interest paid semiannually
- Treasury Strips (separate trading of registered interest and principal securities)
  - principal and interest of treasury notes and bonds is “stripped” into individual securities
  - Effectively zero coupons, trade at a discount to face value
- Extremely safe – backed by the U.S. government

# ***Government Sponsored Enterprises (GSEs) and Agencies***

## GSEs

- Federal Home Loan Bank System (FHLB)
- Federal National Mortgage Association, or Fannie Mae (FNMA)
- Federal Home Loan Mortgage Corp., or Freddie Mac (FHLMC)
- Federal Farm Credit System (FFCB)

## Agency

- Government National Mortgage Association, or Ginnie Mae (GNMA)

# *GSEs and Agencies*

- Types
  - Discount notes - buy at less than par and receive par at maturity
  - Bullets - set maturity date and fixed coupon rate
  - Callables - coupon bond that carries an early redemption option, exercisable at the issuer's discretion.
- GSE securities carry no explicit government guarantee of creditworthiness but have an “implicit guarantee.”
- Implicit guarantee now stronger
  - Tested by the subprime mortgage crisis
  - Fannie Mae and Freddie Mac put into conservatorship in September 2008
- Ginnie Maes are explicitly guaranteed (also floating rate)

# *Certificates of Deposit (CD)*

- A CD is a time deposit with a bank
- Like most time deposits, funds cannot be withdrawn before maturity without paying a penalty
- CDs have specific maturity dates and interest rates, and can be issued in any denomination
- The main advantage of CDs is their safety
- Can be matched to liquidity needs (“ladder”)

# *Commercial Paper*

- CP is a short-term unsecured promissory note issued by a company to raise short-term cash, typically for financing day-to-day operations
- Maturities from 1 to 270 days
  - Often issued for under 30 days
  - Longer settlement periods are not recommended
- Purchase through dealer or directly from issuer
- Issuers often back program with a bank line of credit
- Asset-backed CP and the CP market in general adversely impacted during the recent credit crisis.

# *Repurchase Agreements (Repos)*

- An agreement involving the sale of securities by one party to another with a promise to repurchase the securities at a specified price on a specified date
- Many purchasers of repos ask for an over-collateralization of the transaction that equates to 102% or more of the face value of the securities that are on loan
  - Often limited to treasuries and agencies
  - GFOA recommended policy expands types of collateral
- Offers investors the opportunity to keep surplus working capital cash invested with minimal liquidity, credit, or price risk
- Executed Master Repurchase Agreement
  - Securities Industry and Financial Markets Association (SIFMA) standard agreement

# **Money Market Mutual Funds**

- A money market fund is a type of mutual fund that is required by law to invest in low-risk securities-- create a portfolio of money market instruments
- Have relatively low risks compared to other mutual funds and pay dividends that generally reflect short-term interest rates
- Optimal tool to handle residual uninvested cash and meet overnight liquidity requirements
- Unlike a “money market deposit account” at a bank, money market funds are not federally insured
- Typically invest in government securities, certificates of deposit, commercial paper of companies, or other highly liquid and low-risk securities
- Attempt to keep their net asset value (NAV) at a constant \$1.00 per share – only the yield goes up and down
  - During recent economic downturn some funds had losses and “broke the buck”
  - Feds stepped in to guarantee other money market funds on a temporary basis to stabilize markets

# **Recent Rule Changes to Money Market Funds**

- **Improved liquidity**
  - Daily requirement: For all taxable money market funds, at least 10% of assets must be in cash, U.S. Treasury securities, or securities that convert to cash within one day.
  - Weekly requirement: For all money market funds, at least 30% of assets must be in cash, U.S. Treasury securities, certain other government securities with remaining maturities of 60 days or less, or securities that convert to cash within one week.
- **Higher credit quality**
  - Funds are restricted from investing more than 3% of their assets in lower quality, second-tier securities.
  - Funds are restricted from investing more than one-half of one percent of assets in second-tier securities issued by any single issuer.
  - Funds are restricted from buying second-tier securities that mature in more than 45 days.
- **Shorter maturity limits**
  - The maximum "weighted average life" maturity of a fund's portfolio is restricted to 120 days.
  - The "weighted average maturity" of a fund's portfolio is restricted to 60 days (changed from 90 days).
- **Redemptions**
  - Funds are required to hold sufficiently liquid securities to meet foreseeable redemptions, and they must anticipate the likelihood of large redemptions.

# **What You Should Know About Money**

## **Market Funds *Before* You Invest**

- Fund Objectives
  - NAV
- Eligible investments and current portfolio holdings
- Method of interest calculation and distribution
- Custody/Safeguarding securities
- Eligible investors
- Transaction size limits
- Fee schedule
- Eligible for bond proceeds?

# Other Investments

- **Overnight Sweep Account** - A passive investment strategy whereby excess funds in one bank account are automatically transferred into an overnight interest-earning instrument or fund
  - Repurchase agreements
  - Money market funds (bank or third party)
- **Banker Acceptances** - Time draft payable to seller of goods, with payment guaranteed by a bank
  - Instruments created in course of financing international trade
  - Banker's acceptance is a bank draft, like a check, guaranteeing future payment
  - Dwindling number of issuers
- **Municipal Notes** - Short-term notes issued by municipalities in anticipation of tax receipts or other revenues
- **Corporate Bonds** - Debt obligations issued by private and public corporations; generally longer duration
- **Guaranteed Investment Contracts (GIC)** - Debt instrument issued by an insurance company, usually in a large denomination, that pays a fixed interest rate for a fixed term, typically one to five years
  - Fixed contract and interest rate payout
  - Often bought for retirement plans
  - Also utilized with bond proceeds/debt service reserve funds, lottery prize payouts
  - Credit concerns of insurance companies caused issues in recent economic downturn
  - Should be collateralized

# *Investment Risk Profile*

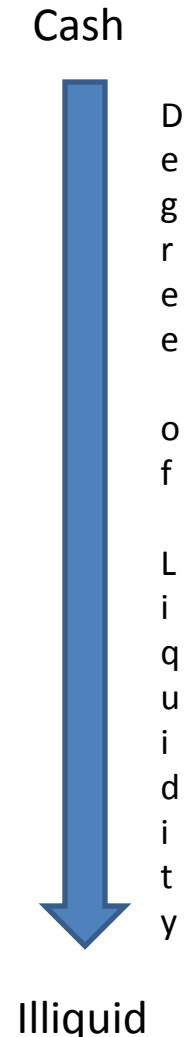
- A useful strategy for managing risk in a portfolio is through diversification
- A government should establish a target risk profile
- Factors to consider in a risk profile:
  - Macro level
    - investment objectives
    - constraints
    - risk tolerances
    - liquidity requirements
    - based on fundamentals of cash flow and risk tolerance
  - Market level
    - current risk/reward characteristics of the market
    - conditions in the market at the current time
    - unique cash flow restraints.
    - re-evaluate continuously

# **Investment Risks**

- **Liquidity Risk** is the risk that the investment portfolio is not sufficiently liquid to meet all operating requirements that may be reasonably anticipated
  - Minimized by:
    - structuring the portfolio so that securities mature concurrent with cash needs to meet anticipated demands (static liquidity)
    - portfolio should consist largely of securities with active secondary or resale markets (dynamic liquidity) or, in the alternative, highly liquid instruments
- **Credit Risk** is the risk of loss due to the failure of the security issuer or backer
  - Minimized by:
    - Limiting investments to approved types of securities, consistent with the risk tolerance and investment policy
    - Pre-qualifying the financial institutions, broker/dealers, intermediaries, and advisors
    - Diversifying the portfolio, minimizing the impact of loss by any one type of security or from any one individual issuer
    - Actively monitoring the investment portfolio holdings for ratings changes, changing economic and market conditions, etc.
- **Interest Rate Risk** is the risk that the market value of securities in the portfolio will fall due to changes in market interest rates
  - Minimized by:
    - Structuring the investment portfolio securities mature to meet cash requirements for ongoing operations, thereby avoiding the need to sell securities on the open market prior to maturity
    - Diversify maturities in portfolio

# *Investments – Liquidity Scale*

- Overnight Repurchase Agreement
- Money Market Mutual Funds
- Treasury Bills
- Other Treasuries
- GSEs and Agencies
- Bankers' Acceptances
- Commercial Paper
- Certificates of Deposit
- Long-Term Government Bonds
- US Agency Bonds



# **Custodian Bank**

- Securities should be held by an independent third party custodian
- Customary custodial functions:
  - Security safe-keeping financial assets
  - Collection of income
  - Settlement of trades
  - Collection of proceeds of maturing securities
  - Daily investment of uninvested cash
  - Financial reporting and accounting
  - Corporate actions
- Delivery vs. payment – purchaser pays for securities when they are delivered to custodian

# **Collateralization of Public Deposits**

“The safety of public funds should be the foremost objective in public fund management. Collateralization of public deposits through the pledging of appropriate securities or other instruments (i.e., surety bonds or letters of credit) by depositories is an important safeguard for such deposits.”

- GFOA Best Practices

## **Types of Collateralization**

- Deposit insurance
- Securities pledge
- Letter of Credit/Surety

# **Collateralization - Deposit Insurance**

- Federal Deposit Insurance Corporation (FDIC)
  - Independent federal agency
  - Funded by premiums paid by banks
  - \$250,000 coverage per bank (up from \$100,000)\*
  - Banks pay fees to participate
- Transaction Account Guarantee Program
- CDARS
- State Insurance Pools (not in Vermont)
  - State specific insurance pools
  - Provides insurance on balances which exceed FDIC coverage

\* On 1/14/2014, standard insurance amount will revert to \$100,000 except for certain retirement accounts

# **FDIC Insurance**

- Covers deposit accounts
  - Checking and savings accounts
  - Money market deposit accounts
  - Certificates of Deposit
- Does not cover other financial products a bank may offer at the holding-company level, such as:
  - Mutual fund shares
  - Annuities or securities
  - Stocks
  - Bonds
  - Municipal securities

# **Transaction Account Guarantee Program**

- Part of the Temporary Liquidity Guarantee Program, Transaction Account Guarantee Program. TAGP extended to 12/31/2010
- Covers a business depositor's funds in non-interest-bearing accounts maintained at a participating insured depository institution, and provides a 100% guarantee of those deposits
  - covers DDAs, IOLTAs, and NOW accounts (with interest rates of 0.25% or less)
- Coverage under the Transaction Account Guarantee Program is in addition to and separate from the coverage available under the FDIC's general deposit insurance rules
- Not all banks participate – confirm that your bank has opted to participate

# Certificate of Deposit Account Registry Service (CDARS)


- Allocates deposits through several network banks, making the entire deposit insured through the FDIC
- Program is offered through the Promontory Interfinancial Network.
- CDARS is currently offered through over 2,800 financial institutions
- CDs issued through CDARS are bank deposits
- Members can now offer depositors FDIC coverage in excess of \$50 million
- Early withdrawals are available, but include a penalty
- CDARS is endorsed by the American Bankers Association (ABA) and is a preferred service provider of the Independent Community Bankers of America (ICBA)
- More Information: Promontory Interfinancial Network at [www.promnetwork.com](http://www.promnetwork.com), telephone 703-292-3400

# **Pledging Securities as Collateral**

- Most states have enacted statutes that either require or permit depositories to pledge collateral securities to secure public deposits.
- Typically, high-quality government securities (such as U.S. Treasury obligations, federal agency securities, and municipal bonds) are pledged to protect those funds.
- Some states (not Vermont) have established programs for the pooling of collateral for deposit of public funds.

## *Securities Pledged*

### *Based on Type and Maturity of Security*

- U.S. Treasury Obligations (safest) – 102-105%
  - Federal Agency Notes and Bonds
  - Municipal Bonds
    - State General Obligations
    - Local Government G.O.
    - Revenue Bonds
  - Mortgage Backed Securities – 115%-125%
- 

Form of Pledged Collateral	Collateral Ratio
<b><i>U.S. Treasury Bills, Notes, and Bonds</i></b>	
<ul style="list-style-type: none"> <li>• Maturing in less than 1 year</li> <li>• Maturing in 1-5 years</li> <li>• Maturing in more than 5 years</li> <li>• Zero-coupons Treasury securities (STRIPS etc.) with maturities exceeding 10 years</li> </ul>	102% 105% 110% 120%
<b><i>Actively Traded U.S. Government Agencies</i></b>	
<ul style="list-style-type: none"> <li>• Maturing in less than 1 year</li> <li>• Maturing in 1-5 years</li> <li>• Maturing in more than 5 years</li> </ul>	103% 107% 115%
<b><i>U.S. Government Agency Variable Rate</i></b>	115%
<b><i>GNMA Mortgage Pass-Through Securities</i></b>	
<ul style="list-style-type: none"> <li>• Current issues</li> <li>• Older issues</li> <li>• Issues for which prices are not quotes</li> </ul>	115% 120% 125%
<b><i>Other Federal Agency or Mortgage Pass-Through Securities</i></b>	125%
<b><i>Collateralized Mortgage Obligations and Real Estate Mortgage Investment Conduit Securities</i></b>	(*)
<b><i>Municipal General Obligation Bonds (**)</i></b>	
<ul style="list-style-type: none"> <li>• Maturing in less than 1 year</li> <li>• Maturing in 1-5 years</li> <li>• Maturing in more than 5 years</li> </ul>	120% 107% 110%
<b><i>Municipal Revenue Bonds (***)</i></b>	
<ul style="list-style-type: none"> <li>• Maturing in less than 1 year</li> <li>• Maturing in 1-5 years</li> <li>• Maturing in more than 5 years</li> </ul>	105 - 110% 110 - 120% 120 - 130%

# GFOA Suggested Collateral Levels

Notes:

\*Mortgage securities, such as CMOs and REMICS, carry a high degree of market risk and the market prices of these securities can be volatile in periods of rising interest rates. For this reason, high collateral ratios such as 125 percent should be considered.

\*\*"General obligation bonds" refers to bonds issued by an in-state unit of government. Out-of-state municipal bonds may require a higher collateralization ratio unless their credit ratings are in the highest investment grades (e.g., AAA or AA).

\*\*\*Lower investment grade revenue bonds (A or BBB) should be collateralized at higher ratios. Industrial development revenue bonds may not be acceptable due to credit quality, unless guaranteed by a third party. High credit ratings should be demanded if such bonds are pledged for collateral.

Source: Source: GFOA, An Introduction to Collateralizing Public Deposits, Second Edition, GFOA, cited in Treasury Management Newsletter

# **Collateral Level Based on Bank Financial Condition**

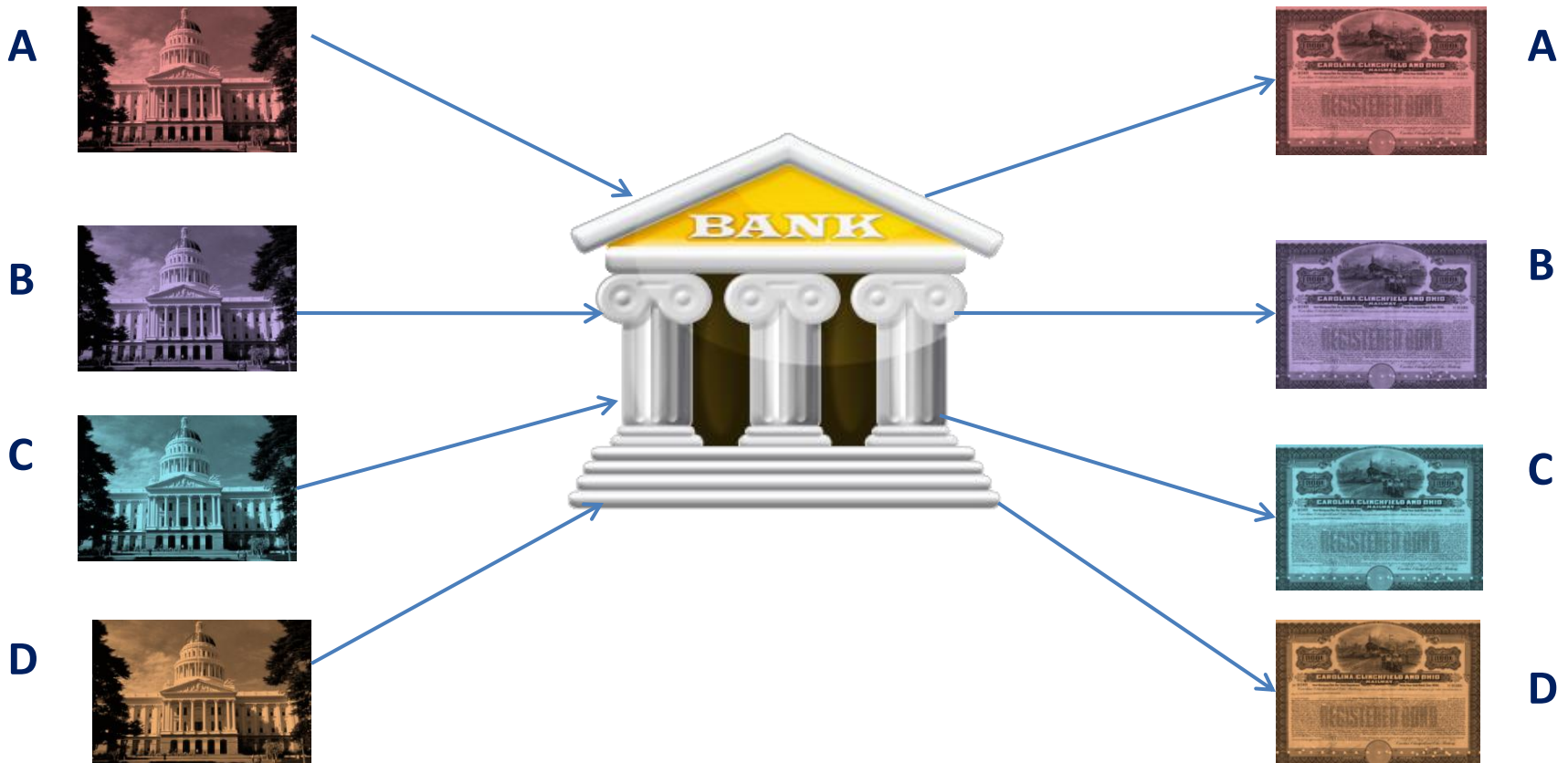
- Rating agencies
- Call Reports
  - Income statement, balance sheet, assets/liabilities, past due/non-accrual loans, regulatory capital
  - Call reports can be accessed from the Central Data Repository Public Data Distribution (CDR PDD) web site, located at <https://cdr.ffiec.gov/public/>
  - Peer Reports/ Uniform Bank Performance Report (UBPR)
    - Federal Financial Institutions Examination Council (FFIEC)
- Bank Rating Services- often use rating based on analysis of financial ratios:
  - IDC
  - Veribanc
  - Others

# Dedicated Collateral Method

Each public depositor's deposits are secured separately, which requires the establishing of a separate collateral account for each public depositor.

Public Depositors

Separate Collateral Accounts



# ***Collateral-Pledged Securities***

- Holder of pledged collateral
  - Pledging bank (in name of the government)
  - Independent, third-party bank
  - Federal Reserve Bank
  - Federal Home Loan Bank
- Responsibilities
  - Secure pledged collateral
  - Compute collateral value (daily, weekly, monthly)
  - Monitor collateral sufficiency (% in keeping with agreement)
  - Manage collateral substitutions
  - Provide periodic (when transactions occur) and monthly reports to depositors

# **Other Forms of Collateral**

- Letter of Credit
  - Issued by bank or Federal Home Loan Bank
  - Guarantee to pay principal and interest
  - Irrevocable
- Surety policy
  - Issued by insurance company
  - Guarantee to pay principal and interest

# Arbitrage

# What is Arbitrage?

- Basic definition: the opportunity to buy an asset at a low price and then immediately sell it on a different market for a higher price
- Arbitrage in the tax-exempt municipal bond market refers to “the profit that results from investing the proceeds of tax-exempt bonds in higher-yielding taxable securities.”
  - IRS

## Simple example:

1. Vermont town borrows from Bond Bank at 4.00%
2. Vermont town invests money from borrowing at 5.00%  
(when was the last time you could do this?)
3. Vermont town earns 5.00% minus 4.00% = 1.00% of “arbitrage”

# **What is Arbitrage?**

- Why does the federal government care about arbitrage?
  - State and local governments do not generally pay federal income tax
  - Without limitations could issue debt at low interest rates only for purpose of generating arbitrage earnings
- Arbitrage regulations are intended to prevent issue of excess bonds and discourage issuance of bonds earlier than when needed

*In the current world of near-zero investment rates, arbitrage is less of a practical concern.*

# Arbitrage Rebate

- **Arbitrage Rebate:** If tax-exempt bonds proceeds have been invested and have earned greater than the arbitrage yield, a payment to the IRS may be required.
- **Exceptions:** Issuers may be relieved of the obligation to pay arbitrage rebate:
  - amounts earned on certain debt service funds (such as interest, principal, and prepayment accounts).
  - Small Issuer Exception
    - applies to municipalities with general taxing powers that issue \$5 million or less (\$15 million for public school facilities) of tax-exempt debt during a calendar year
    - Other requirements for refunding
    - Still need to expend bond proceeds (including investment income) within three years

*In most cases, Vermont issuers qualify for the small issuer exception to rebate requirement; should still try to spend money promptly.*

# **Arbitrage Rebate**

- ***Exceptions, generally if not a small issuer***
  - Expenditure (Spend Down) Exemptions -
    - Six-Month Exception: Gross proceeds are spent within six months
    - Eighteen-Month Exception: Gross proceeds spent as follows:
      - 15% within six months
      - 60% within twelve months
      - 100% within eighteen months
    - Twenty-Four-Month Exception: This exception applies to issues when at least 75% of the “available construction proceeds” are to be used for construction expenditures and are spent as follows:
      - 10% within six months
      - 45% within twelve months
      - 75% within eighteen months
      - 100% within two years

# ***Goal of Arbitrage Management***

- Maximize earnings – up to the bond yield
- Spend proceeds as within regulatory timeframes
- Avoid adverse consequences of intentional or unintentional arbitrage:
  - Loss of tax-exemption on the issue
  - Assessment of penalties and interest
- Provide basis for compliance and reporting to IRS
  - Unless exceptions apply, the IRS requires a payment equal to all interest earned on bond proceeds in excess of the bond yield
  - Payments are due every five years and on final redemption date or maturity of the bond issue
  - *If no rebate liability, filing is not required (unlike income taxes)*