INVESTMENT TIPS & HOT TOPICS

2019 Auditor of State, Local Government Officials Conference

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AGENDA

• Cash Flow Planning
• Earnings Credit Rates
• Collateralization of Public Deposits
• Permissible Investments
• Safekeeping of Investment Securities
• Economic Outlook

Cash Flow Planning
OBJECTIVES OF CASH FLOW PLANNING

- Cash Management – “Cash” Portfolio
  - Regular operating needs
  - Funds with uncertain time horizon
  - Compensating balance to cover bank service charges
- Investment Management – “Core” Portfolio
  - Cash balance with time horizon typically greater than 6-12 months
  - Apply investment strategy to maximize earnings

HISTORICAL CASH

Year-end Balances

<table>
<thead>
<tr>
<th>Year</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>2014</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>2015</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>2016</td>
<td>$8,000,000</td>
</tr>
<tr>
<td>2017</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>2018</td>
<td>$12,000,000</td>
</tr>
</tbody>
</table>

HISTORICAL CASH

Operating Funds

<table>
<thead>
<tr>
<th>Month</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>Feb</td>
<td>$6,500,000</td>
</tr>
<tr>
<td>Mar</td>
<td>$7,000,000</td>
</tr>
<tr>
<td>Apr</td>
<td>$7,500,000</td>
</tr>
<tr>
<td>May</td>
<td>$8,000,000</td>
</tr>
<tr>
<td>Jun</td>
<td>$8,500,000</td>
</tr>
<tr>
<td>Jul</td>
<td>$9,000,000</td>
</tr>
<tr>
<td>Aug</td>
<td>$9,500,000</td>
</tr>
<tr>
<td>Sep</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>Oct</td>
<td>$10,500,000</td>
</tr>
<tr>
<td>Nov</td>
<td>$11,000,000</td>
</tr>
<tr>
<td>Dec</td>
<td>$11,500,000</td>
</tr>
</tbody>
</table>
CASH ALLOCATION

<table>
<thead>
<tr>
<th>Current</th>
<th>Right-Sized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>Cash $1 million</td>
</tr>
<tr>
<td>$5 million</td>
<td>Liquidity Reserve $1 million Earning 2.00%</td>
</tr>
<tr>
<td></td>
<td>Core $8 million</td>
</tr>
<tr>
<td></td>
<td>Earning 3.00%</td>
</tr>
</tbody>
</table>

Projected Additional Interest Income of $140,000

Earnings Credit Rates

EARNINGS CREDIT RATES

- Bank A
- Bank B
- Bank C
- 90 day US T-bill

- 0.00%
- 0.50%
- 1.00%
- 1.50%
- 2.00%
- 2.50%
- 3.00%
BANK A – EARNINGS CREDIT RATE 0.30%

Public Entity Depositor
- Cost of Banking Services per month: $1,000.00
- Bank Balance: $5,000,000

BANK B – EARNINGS CREDIT RATE 0.75%

Public Entity Depositor
- Cost of Banking Services per month: $1,000.00
- Bank Balance: $5,000,000

BANK C – EARNINGS CREDIT RATE 1.25%

Public Entity Depositor
- Cost of Banking Services per month: $1,000.00
- Bank Balance: $5,000,000
### BENEFITS OF INVESTING EXCESS BALANCE

<table>
<thead>
<tr>
<th></th>
<th>Bank A</th>
<th>Bank B</th>
<th>Bank C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings Credit Rate</td>
<td>0.30%</td>
<td>0.75%</td>
<td>1.25%</td>
</tr>
<tr>
<td>Balance to Cover</td>
<td>$4,000,000</td>
<td>$1,600,000</td>
<td>$960,000</td>
</tr>
<tr>
<td>Banking Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess Balance</td>
<td>$1,000,000</td>
<td>$3,400,000</td>
<td>$4,040,000</td>
</tr>
<tr>
<td>Additional Interest</td>
<td>$30,000</td>
<td>$102,000</td>
<td>$121,200</td>
</tr>
<tr>
<td>Income at 3.00%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### COLLATERALIZATION OF PUBLIC DEPOSITS

- Ohio public depositories must provide collateral comprised of securities, bonds or letter of credit
- Methods of collateralization
  - Specific
  - Pooled
- Bank must select one method of collateralization for all public depositors
SPECIFIC COLLATERAL
Ohio Revised Code 135.18

- Collateral held in separate account for each public depositor
- Market value of collateral equal to or greater than 105% of uninsured public deposit
- Public depositor responsible for monitoring

OHIO POOLED COLLATERAL PROGRAM
Ohio Revised Code 135.182

- Effective July 1, 2017
- Lien perfection required
- Ohio Pooled Collateral System (OPCS)
  - TOS sole regulator and monitor of program
  - Market value of collateral equal to or greater than
    - 102% of uninsured public deposits, or
    - Amount determined by rules adopted by TOS
  - Website access for reporting of collateral to public depositor

Permissible Investments
# INVESTMENT OBJECTIVES & GOALS

<table>
<thead>
<tr>
<th>Legal</th>
<th>• Legal may not be suitable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>• Preservation of principal</td>
</tr>
<tr>
<td>Liquidity</td>
<td>• What are your liquidity needs?</td>
</tr>
<tr>
<td>Yield</td>
<td>• Does the investment have a competitive yield?</td>
</tr>
</tbody>
</table>

# OHIO REVISED CODE

- US Treasuries
- US Government Agencies
- Bank Deposits
- Municipal Bonds
- Commercial Paper
- Bankers Acceptances
- Repurchase Agreements
- Money Market Mutual Funds
- Local Government Investment Pools

# SECURITY MARKETS

**Primary (New Issue)**
- Auction
- Negotiated
- Generally issued at par

**Secondary**
- Owned by a prior investor
- Accrued interest may be a factor
- Price based on market rates
- Par, premium or discount
SECURITY STRUCTURE

Maturity
• Bullet
• Callable
  • Issuer redeems at par based on call frequency
  • Continuous, monthly, quarterly, one-time
  • May be a partial call

Coupon
• Fixed
• Floating
• Step-up

AUTHORIZED INVESTMENTS – SHORT TERM

Market Indications as of 2/21/19

2.10% 2.20% 2.30% 2.40% 2.50% 2.60% 2.70% 2.80%
3 months 6 months 9 months 1 year

- US Treasuries
- Certificates of Deposit
- Commercial Paper

AUTHORIZED INVESTMENTS – LONG TERM

Market Indications as of 2/21/19

0.00% 0.50% 1.00% 1.50% 2.00% 2.50% 3.00% 3.50% 4.00%
2 years 3 years 5 years

- US Treasuries
- US Agencies (noncallable)
- US Agencies (callable)
- Certificates of Deposit
SAFEKEEPING OPTIONS
Safekeeping provided by broker or bank acting as a broker
- Securities held in brokerage account
- Broker controls account
- Securities not held in public entity’s name
- Safekeeping cost bundled with other services

Third party custodian
- Securities held in public entity’s account at bank trust department
- Public entity controls account
- Securities held in public entity’s name
- Written custodial agreement
- GFOA best practice

THIRD PARTY CUSTODIAN

OHIO PUBLIC ENTITY INVESTOR

Funds

PUBLIC ENTITY’S ACCOUNT WITH BANK TRUST DEPARTMENT

Securities

Trade details

BROKER/DEALERS

Execute trades

ADVISOR OR FISCAL OFFICER
For the fourth time this year, the Committee voted
to raise the federal funds target to 2.25% – 2.50%

The decision to raise at the December meeting
was a unanimous decision in favor of the rate hike.
Inflation remains near 2 percent while longer term
inflation expectations are 1.9% unchanged.

"Labor market conditions have continued to
strengthen and economic activity has been strong at a
strong pace, with the unemployment rate
remaining low."

The Fed’s statement was dovish, and it appears FOMC
members are and will continue to hike in 2019,
down from the previous dot plot projection of three
rate hikes.

"The Committee judges that risks to the economic
outlook are roughly balanced, but will continue to
monitor global economic and financial developments."

Source: Federal Reserve

FEDERAL RESERVE DOT PLOT

Source: Federal Reserve
HIKE or CUT?

YIELD CURVE COMPARISON

INFLATION
5 Year Breakeven
INTEREST RATE OUTLOOK
US Overnight Interest Rate Swaps

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