INVESTMENT TIPS & TECHNIQUES for SMALL GOVERNMENTS

2018 Auditor of State, Local Government Officials Conference

March 22, 2018

Presented by
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Senior Public Funds Advisor
Meeder Investment Management

AGENDA

• Cash vs. Core Portfolio
• Bank Fees vs. Balances
• Collateralization of Public Deposits
• Yield Measures
• Commercial Paper
• Step-up Bonds
• Municipal Securities
• Brokered CDs
• Service Providers
• The Fed & Interest Rate Outlook

Cash vs. Core
CASH VS. CORE

- Cash Management - “Cash” Portfolio
  - Operating needs for current year
  - Funds with uncertain time horizon

- Investment Management – “Core” Portfolio
  - Time horizon greater than one year
  - Apply investment strategy to maximize earnings

CASH VS. CORE

Year-end Balances per CAFR

<table>
<thead>
<tr>
<th>Year</th>
<th>Balances</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$6,500,000</td>
</tr>
<tr>
<td>2013</td>
<td>$7,000,000</td>
</tr>
<tr>
<td>2014</td>
<td>$7,500,000</td>
</tr>
<tr>
<td>2015</td>
<td>$8,000,000</td>
</tr>
<tr>
<td>2016</td>
<td>$8,500,000</td>
</tr>
</tbody>
</table>

CASH VS. CORE

Month-end Balances

<table>
<thead>
<tr>
<th>Month</th>
<th>Balances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>$8,000,000</td>
</tr>
<tr>
<td>Feb</td>
<td>$8,500,000</td>
</tr>
<tr>
<td>Mar</td>
<td>$9,000,000</td>
</tr>
<tr>
<td>Apr</td>
<td>$9,500,000</td>
</tr>
<tr>
<td>May</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>Jun</td>
<td>$10,500,000</td>
</tr>
<tr>
<td>Jul</td>
<td>$11,000,000</td>
</tr>
<tr>
<td>Aug</td>
<td>$11,500,000</td>
</tr>
<tr>
<td>Sep</td>
<td>$12,000,000</td>
</tr>
<tr>
<td>Oct</td>
<td>$12,500,000</td>
</tr>
<tr>
<td>Nov</td>
<td>$13,000,000</td>
</tr>
<tr>
<td>Dec</td>
<td>$13,500,000</td>
</tr>
</tbody>
</table>
CASH VS. CORE

Current

Cash
$7.5 million
Earning 1.00%

Core
$6.0 million
Earning 2.50%

Projected Additional Interest Income of $90,000

Right-Sized

Cash
$1.5 million
Earning 1.00%

Core
$6.0 million
Earning 2.50%

Bank Fees vs. Balances

BANK ACCOUNT ANALYSIS STATEMENT

Local Bank

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Ledger Balance</td>
<td>$4,333,333.00</td>
</tr>
<tr>
<td>Less Average Float</td>
<td>$0.00</td>
</tr>
<tr>
<td>Average Collected Balance</td>
<td>$4,333,333.00</td>
</tr>
<tr>
<td>Less Reserve Requirement</td>
<td>$433,333.00</td>
</tr>
<tr>
<td>Average Available Balance</td>
<td>$3,900,000.00</td>
</tr>
<tr>
<td>Earnings Credit Allowance</td>
<td>0.35%</td>
</tr>
<tr>
<td>Total Charge for Services</td>
<td>$1,100.00</td>
</tr>
<tr>
<td>Net Charge for Services</td>
<td>$0</td>
</tr>
</tbody>
</table>
**BENEFITS OF REDUCING BANK BALANCES**

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>Reduced Balances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Ledger Balance</td>
<td>$4,333,333.00</td>
<td>$1,833,333.33</td>
</tr>
<tr>
<td>Earnings Credit Allowance (0.35%)</td>
<td>$1,144.00</td>
<td>$440.00</td>
</tr>
<tr>
<td>Total Charge for Services</td>
<td>($1,100.00)</td>
<td>($1,100.00)</td>
</tr>
<tr>
<td>Alternative Investment Earning (2.50% annually)</td>
<td>$0</td>
<td>$5,208.00</td>
</tr>
</tbody>
</table>

**INCREASED INTEREST INCOME OF $62,500 PER YEAR BASED ON INVESTING THE $2.5 MILLION TO YIELD 2.50%**

**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

Yield Measures
YIELD MEASURES

Coupon Rate  Annual interest payment to be received
Current Yield  Yield based on market price and coupon rate
Yield at Cost or Yield to Maturity  Yield based on purchase price and coupon rate
COMMERCIAL PAPER
OHIO REVISED CODE 135.14

7) Up to forty per cent of interim moneys available for investment in either of the following:
   (a) Commercial paper notes issued by an entity that is defined in division (D) of section 1705.01
       of the Revised Code and that has assets exceeding five hundred million dollars, to which notes all
       of the following apply:
       (i) The notes are rated at the time of purchase in the highest classification established by at least
           two nationally recognized standard rating services.
       (ii) The aggregate value of the notes does not exceed ten per cent of the aggregate value of the
           outstanding commercial paper of the issuing corporation.
       (iii) The notes mature not later than two hundred seventy days after purchase.
       (iv) The investment in commercial paper notes of a single issuer shall not exceed in the aggregate
           five per cent of interim moneys available for investment at the time of purchase.
   (b) Bankers acceptances of banks that are insured by the federal deposit insurance corporation and
       that mature not later than one hundred eighty days after purchase.

No investment shall be made pursuant to division (B)(7) of this section unless the treasurer or
governing board has completed additional training for making the investments authorized by
division (B)(7) of this section. The type and amount of additional training shall be approved by the
treasurer of state and may be conducted by or provided under the supervision of the treasurer of
state.

COMMERCIAL PAPER
RATE COMPARISON

Commercial Paper rates for 270 days. Rates on all other securities for 1 year maturity. Rates as of 2/23/18. For
illustration purposes only.
**COMMERCIAL PAPER**

**INCOME COMPARISON PER $1.0 MILLION INVESTED**

Income calculated for 370 day term for all investment options. For illustration purposes only.

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**STRAIGHT CALLABLE VS STEP (INTEREST RATES)**

Straight Callable: 3136CAC8 (0.00% 12/30/21) vs. Step Callable: 3133AMAN8 (1.50% 12/30/21)

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**Step-up Bonds**
STRAIGHT VS STEP (CUMULATIVE INTEREST)

MUNICIPAL SECURITIES

OHIO REVISED CODE 135.14

(4) Bonds and other obligations of this state, or the political subdivisions of this state, provided that, with respect to bonds or other obligations of political subdivisions, all of the following apply:

(a) The bonds or other obligations are payable from general revenues of the political subdivision and backed by the full faith and credit of the political subdivision.

(b) The bonds or other obligations are rated at the time of purchase in the three highest classifications established by at least one nationally recognized standard rating service and purchased through a registered securities broker or dealer.

(c) The aggregate value of the bonds or other obligations does not exceed twenty percent of interim moneys available for investment at the time of purchase.

(d) The treasurer or governing board is not the sole purchaser of the bonds or other obligations at original issuance.

No investment shall be made under division (B)(4) of this section unless the treasurer or governing board has completed additional training for making the investments authorized by division (B)(4) of this section. The type and amount of additional training shall be approved by the treasurer of state and may be conducted by or provided under the supervision of the treasurer of state.
MUNICIPAL SECURITIES: TAX-EXEMPT ISSUE
City of Avon Water System Revenue Bonds, 1.25% 2/2/17 priced 1/20/16 to yield 0.73%

Rate Comparison

MUNICIPAL SECURITIES: TAXABLE ISSUE
Lake County Community College District, OH Facilities Bonds, 2.00% 12/1/17
Priced 1/27/16 to yield 1.30%

Rate Comparison

MUNICIPAL SECURITIES
Credit Risk

U.S. Treasury Obligations
U.S. Government Agencies and Instrumentalities
Revenue Bonds
Municipal Obligations (State, County, City)
Corporate Obligations (AAA, A1)

Lower
Credit Risk
Higher
CERTIFICATES OF DEPOSIT

135.144 Investment of interm frozen certificates of deposit.

(a) In addition to the authority granted in section 135.143 of the Revised Code, the treasurer of state or the treasurer or
governing board of a political subdivision may invest funds held in a political subdivision or a political subdivision of
this state in the following:

1. The treasurer of state or the political subdivision's governing board is authorized to invest, to the extent of funds
available, in an investment fund of the Ohio Association of County Treasurers as provided in section 357.93 of
the Revised Code.

2. The treasurer of state or the political subdivision's governing board is authorized to invest, to the extent of
funds available, in any investment fund that invests solely in certificates of deposit issued by another state agency
that issues such funds only to the extent that the state agency invested in certificates of deposit issued by the
political subdivision or a political subdivision of this state.

3. The treasurer of state or the political subdivision's governing board may invest, to the extent of funds available,
any investment fund that invests solely in certificates of deposit issued by another state agency that issues such
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funds only to the extent that the state agency invested in certificates of deposit issued by the political subdivision
or a political subdivision of this state.
CERTIFICATES OF DEPOSIT

Account carried with National Financial Services LLC, Member NYSE, SIPC

CDs bought at $250,000

Service Providers

THIRD-PARTY CUSTODIAN

- Improved safety
- Centralized reporting
- Facilitates reconciliation
- On-line account access

Execute trades
### WHO WILL HELP YOU INVEST

**Know the Types of Service Providers**

<table>
<thead>
<tr>
<th>STAR:Ohio/Plus</th>
<th>Brokers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• STAR:Ohio</td>
<td>• Acts as a fiduciary in the client’s best interest</td>
</tr>
<tr>
<td>• Know the investments of STAR:Ohio</td>
<td>• Who do they work with?</td>
</tr>
<tr>
<td>• Look over the annual report</td>
<td>• What are their credentials?</td>
</tr>
<tr>
<td>• Plan</td>
<td>• Check them out: <a href="http://www.investor.gov">www.investor.gov</a></td>
</tr>
<tr>
<td>• Understand how program works</td>
<td>• Recommends suitable investments</td>
</tr>
<tr>
<td>• Monitor deposit Banks</td>
<td>• Who do they work with?</td>
</tr>
<tr>
<td></td>
<td>• What do they do and how much do they charge?</td>
</tr>
<tr>
<td></td>
<td>• Check them out: <a href="http://www.finra.org">www.finra.org</a></td>
</tr>
</tbody>
</table>

**Perform Due Diligence Before Investing**

### EXTERNAL MANAGERS - ADVISOR

- **Provides Investment Advice**
- **Fiduciary Responsibility**
- **May or May Not Have Direct Control** (Discretionary vs. Non-Discretionary)
- **Executes Purchases/Sales**
- **Manages or Provides Advice on Overall Portfolio**
- **May Coordinate Safekeeping** (3rd Party Custodian)

*Definition of ‘Fiduciary’ - A fiduciary is a person in a position of trust and confidence to whom the law imposes a duty of loyalty and an obligation to act in the best interests of the person to whom the duty is owed.*

### EXTERNAL MANAGERS – BROKER/DEALER

- Provides investment advice
- No fiduciary responsibility
- Does not have direct control
- Acts as a broker when executing orders on behalf of clients
- Acts as a dealer when trading from its own account
- May provide safekeeping
BENEFITS OF USING EXTERNAL MANAGERS

- Professional manager – that is their business
- Greater access to investment markets/information
- Broker network – potentially more sources to receive best price execution of trades
- Enhanced credit research available for unsecured investments (i.e., commercial paper)
- Can complement internal resources or personnel
- Could increase internal control and “separation of duties”
- Be careful and know what role the provider is playing

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FED POLICY & INTEREST RATE OUTLOOK

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FOMC STATEMENT HIGHLIGHTS

December 13, 2017

- For the third time this year, the committee voted to raise the federal funds target range to 1.25%-1.50%
- Of the 8 voting members, 7 voted for the quarter percent increase, with 1 voting to keep it unchanged
- "Inflation on a 12-month basis is expected to remain somewhat below 2 percent in the near term"
- "Household spending has been expanding at a moderate rate and growth in business fixed investment has picked up in recent quarters"
- The Fed confirmed that it would increase its monthly pace of shrinking the balance sheet to $20 billion starting in January
- "expects that economic conditions will evolve in a manner that will warrant gradual increases in the federal funds rate"
SUMMARY

• Ask questions
• Know the details
• Protect yourself – follow the law
• Seek help when appropriate

ULTIMATELY IT IS YOUR RESPONSIBILITY!

THANK YOU

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estanic@meederinvestment.com
Disclosure

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