Impact on Cash Management and Investment Strategies

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City Treasurer
City of Anaheim

C.M.T.A.
San Diego
April 21, 2011
Impact on Cash Management and Investment Strategies

- Elements of a Portfolio Management Program
  - Investment Policy
    - Return on Investment
    - Diversification
    - Cash Flow
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- Elements of a Portfolio Management Program

- Order of Priority:
  - Cash Flow - Liquidity
  - Diversification - Risk Mitigation / Safety
  - Return on Investment - Yield
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• Cash Flow
  – Ensures you have funds to pay the bills

• Issues that affect Cash Flow
  – Budgetary
  – Economic Environment
  – Political Agendas
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Anaheim’s Portfolio Balances

Monthly Portfolio Balance (market value in $mm)
December 2006 to December 2010

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- **Investment Management Focus:**
  - Safety
  - Liquidity
  - Yield
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Risk Factors for Fixed Income Investors

- Credit Risk
- Absence of Diversification
- Interest Rate Risk
- Reinvestment Risk
- Inflationary Risk
- Duration of Portfolio
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• Safety = Risk Mitigation

• Diversification by:
  – Security Classification
  – Issuer
  – Maturity Date
  – Dollar Amount of Investment
  – Credit Rating / Quality
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- Diversification by Securities / Issuers
  - Short-Term:
    - L.A.I.F.
    - Money Markets
    - Treasury Bills
    - Agency Discount Notes
    - Commercial Paper / Bankers Acceptances
    - Repurchase Agreements
    - Time Certificates of Deposits
    - Negotiable Certificates of Deposits
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• Diversification by Securities / Issuers
  – Long -Term:
    • U.S. Treasury Notes / Bonds
    • Federal Agency Notes / Bonds
    • Medium Term Corporate Notes (MTNs)
  • Asset Backed Securities
  • Mortgage Backed Securities
  • Mutual Funds (Bond)
  • Certificates of Deposits
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• Diversification: by Maturity / Duration
  – Portfolio Structure

  • Laddered
  • Bar Bell
  • Modified Laddered
  • Two Portfolio Structure
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Laddered Portfolio

- Immediate
- 30 Days to 1 Year
- 1 to 2 Years
- 2 to 3 Years
- 3 to 4 Years
- 4 to 5 Years

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Bar Bell Portfolio

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Modified Laddered Portfolio

- Immediate: $10,000,000
- 30 Days to 1 Year: $15,000,000
- 1 to 2 Years: $20,000,000
- 2 to 3 Years: $25,000,000
- 3 to 4 Years: $10,000,000
- 4 to 5 Years: $5,000,000

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Two Part Portfolio Structure

City of Anaheim
February 28, 2011

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Interest Rate Risk – Market Rates

U.S. Treasury Yield Curve - February 28, 2011
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2 Year Treasury Notes

February 2007 and February 2011

Fed Funds 3 mo 6 mo 2 yr 3 yr 5 yr 7 yr 10 yr 30 yr

5.25% 5.13% 5.11% 4.65% 4.56% 4.52% 4.56% 4.57% 4.68%

0.25% 0.14% 0.16% 0.68% 1.17% 2.14% 2.84% 3.43% 4.50%

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2 Year Treasury Historical Interest Rates
February 2007 to February 2011
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Risk Factors for Fixed Income Investors

- Credit Risk
- Absence of Diversification
- Interest Rate Risk
- Reinvestment Risk
- Inflationary Risk
- Duration of Portfolio
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• **Duration:**
  – Is a measure of a bond’s price sensitivity to changes in interest rates.

  – **General Rule:**
    Assume the duration of a bond is 5.0 years. If the yield on the bond were to change by 100 basis points (1.0%), the price of the bond would change by approximately 5.0%
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### Duration: Impact on the Price of a Single Security

<table>
<thead>
<tr>
<th>Par Value</th>
<th>Security Duration</th>
<th>Market Interest Rate Change</th>
<th>Security Price Change</th>
<th>Dollar Price Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 1,000,000</td>
<td>2 years</td>
<td>1.00 %</td>
<td>2.00 %</td>
<td>$ 20,000</td>
</tr>
<tr>
<td>$ 5,000,000</td>
<td>2 years</td>
<td>1.00 %</td>
<td>2.00 %</td>
<td>$100,000</td>
</tr>
<tr>
<td>$10,000,000</td>
<td>2 years</td>
<td>1.00 %</td>
<td>2.00 %</td>
<td>$200,000</td>
</tr>
<tr>
<td>$ 1,000,000</td>
<td>5 years</td>
<td>1.00 %</td>
<td>5.00 %</td>
<td>$ 50,000</td>
</tr>
<tr>
<td>$ 5,000,000</td>
<td>5 years</td>
<td>1.00 %</td>
<td>5.00 %</td>
<td>$250,000</td>
</tr>
<tr>
<td>$10,000,000</td>
<td>5 years</td>
<td>1.00 %</td>
<td>5.00 %</td>
<td>$500,000</td>
</tr>
</tbody>
</table>

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City of Anaheim – Duration

Two Year Treasury to Portfolio Duration

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City of Anaheim – Historical Yield to Duration

February 2007 to February 2011

Portfolio Yield

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Two Part Portfolio Structure

City of Anaheim
February 28, 2011
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**City of Anaheim**

**Investment Summary - February 2011**

<table>
<thead>
<tr>
<th></th>
<th>Short-term Portfolio</th>
<th>Long-term Portfolio</th>
<th>Total Portfolio Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio Balance (Market Value)</td>
<td>$104,729,248</td>
<td>$236,419,373</td>
<td>$341,248,622</td>
</tr>
<tr>
<td>Effective Yield</td>
<td>0.35 %</td>
<td>2.61 %</td>
<td>1.93 %</td>
</tr>
<tr>
<td>Avg. Weighted Maturity</td>
<td>10 days</td>
<td>2.2 years</td>
<td>1.5 years</td>
</tr>
<tr>
<td>Net Earnings</td>
<td>$28,858</td>
<td>$507,357</td>
<td>$536,215</td>
</tr>
<tr>
<td>Benchmark *</td>
<td>0.07 %</td>
<td>0.72 %</td>
<td>0.42 %</td>
</tr>
</tbody>
</table>

* Benchmark value is the Interpolated Treasury Yield to the Portfolio’s Avg. Weighted Maturity
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### City of Anaheim

**Investment Performance - February 2011**

<table>
<thead>
<tr>
<th></th>
<th>Amount of Funds (Market Value)</th>
<th>Maturity</th>
<th>Effective Yield</th>
<th>Interpolated Yield</th>
<th>Total Return Monthly</th>
<th>Total Return Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term Portfolio</td>
<td>$104,829,248</td>
<td>10 days</td>
<td>0.35 %</td>
<td>0.07 %</td>
<td>0.025</td>
<td>0.401</td>
</tr>
<tr>
<td>Long-term Portfolio</td>
<td>$236,419,373</td>
<td>2.2 years</td>
<td>2.61 %</td>
<td>0.72 %</td>
<td>0.030</td>
<td>2.765</td>
</tr>
<tr>
<td>Total Portfolio</td>
<td>$341,248,622</td>
<td>1.5 years</td>
<td>1.93 %</td>
<td>0.42 %</td>
<td>0.029</td>
<td>2.110</td>
</tr>
</tbody>
</table>

Please note the use of interpolated yield values and total return values are guidelines and not used in the performance evaluation of the portfolio.

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City of Anaheim

Historical Portfolio Statistics

<table>
<thead>
<tr>
<th>Month</th>
<th>Portfolio Balance</th>
<th>Avg. Wgt Maturity</th>
<th>Effective Yield</th>
<th>Inter-polated Yield</th>
<th>Diff: City to IY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun 10</td>
<td>$383 mm</td>
<td>1.47 years</td>
<td>1.87 %</td>
<td>0.45 %</td>
<td>1.42 %</td>
</tr>
<tr>
<td>Jul 10</td>
<td>$365 mm</td>
<td>1.45 years</td>
<td>1.83 %</td>
<td>0.41 %</td>
<td>1.42 %</td>
</tr>
<tr>
<td>Aug 10</td>
<td>$359 mm</td>
<td>1.41 years</td>
<td>1.86 %</td>
<td>0.35 %</td>
<td>1.51 %</td>
</tr>
<tr>
<td>Sep 10</td>
<td>$346 mm</td>
<td>1.37 years</td>
<td>1.87 %</td>
<td>0.30 %</td>
<td>1.57 %</td>
</tr>
<tr>
<td>Oct 10</td>
<td>$320 mm</td>
<td>1.42 years</td>
<td>1.92 %</td>
<td>0.25 %</td>
<td>1.66 %</td>
</tr>
<tr>
<td>Nov 10</td>
<td>$319 mm</td>
<td>1.37 years</td>
<td>1.91 %</td>
<td>0.34 %</td>
<td>1.57 %</td>
</tr>
<tr>
<td>Dec 10</td>
<td>$316 mm</td>
<td>1.29 years</td>
<td>1.90 %</td>
<td>0.35 %</td>
<td>1.54 %</td>
</tr>
<tr>
<td>Jan 11</td>
<td>$342 mm</td>
<td>1.48 years</td>
<td>1.88 %</td>
<td>0.39 %</td>
<td>1.49 %</td>
</tr>
<tr>
<td>Feb 11</td>
<td>$341 mm</td>
<td>1.50 years</td>
<td>1.93 %</td>
<td>0.42 %</td>
<td>1.50 %</td>
</tr>
</tbody>
</table>
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• Resources for Investment Information:
  
  o *Investing Public Funds*, Girard Miller, GFOA
  
  o *The Strategic Bond Investor*, Anthony Crescenzi
  
  o *Bond and Money Market Investments*, Frank Fabozzi
  
  o *Investment Mathematics For Finance and Treasury Professionals*, Gregory Kitter
  
  o *Getting Started in Bonds*, Sharon Saltzgiver Wright
  
  o *Treasury Management*, GFOA newsletter
  
  o *Investment Outlook*, PIMCO, Bill Gross
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Additional Resources:

- GIOA
- CDIAC
- CMTA
- CSMFO
- AFP
- Professional Peers
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Questions ? ? ?

• Contact information:
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  – www.anaheim.net