EAST BAY MUNICIPAL UTILITY DISTRICT

Annual Employees' Retirement System Update

Finance/Administration Committee
May 25, 2021

Agenda

- Experience Study
- Actuarial Valuation Data
- Contribution Rates
- Portfolio Performance
- CEM Benchmarking
- Environmental, Social, Governance Update

Experience Study

- Periodic review of actuarial assumptions
  - Economic: inflation, assumed rate of return, etc.
  - Non-economic: mortality, salaries, retirements, etc.
- Ensures assumptions and experience data are more closely matched
- Helps reduce the financial impact of the difference between assumptions and experience over time
- May lead to significant adjustments as market conditions or data change

Experience Study

- Recent Timeline
  - 2016: Full review of assumptions
  - 2018: Review of economic assumptions
  - 2020: Full review of assumptions
- *Future Timeline*
  - *2022: Review of economic assumptions*
  - *2024: Full review of assumptions*

Experience Study

- Key Updates for 2020
  - Mortality tables
    - Updated with public sector-specific table
    - Increased longevity assumptions for members
  - Salary increases
    - Updated from experience, as pace of increases was greater than previous assumptions
  - Retirement Rates
    - Assumed rate of retirements adjusted to experience data

Actuarial Valuation Data (as of June 30, 2020)

EBMUD

Select Plan Data	Pension	Health Insurance Benefit	Total	Overall Annual Change
Market Value (MVA)*	$1.81b	$44m	$1.86b	+$20m
previous year data	*$1.79b*	*$41m*	*$1.83b*	----
Valuation Value (VVA)	$1.87b	$41m	$1.91b	+$97m
previous year data	*$1.78b*	*$40m*	*$1.82b*	----
Funded Ratio (VVA)	73.7%	35.9%	71.9%	-1.9%
previous year data	*75.9%*	*33.0%*	*73.8%*	----
Unfunded Liability (VVA)	$666m	$81m	$747m	+$101m
previous year data	*$564m*	*$82m*	*$646m*	----

**Total MVA as of May 11, 2021: $2.26 billion*

Employer Contribution Rates

- Effect of Updated Assumptions
  - Significant increase in employer contribution rates for pension plan
  - Softened by conservative rates adopted in prior years
- District Contribution Rates for FY22:

	1955/1980 Plan		2013 Plan	
FY22	**Rate**	**Increase / (Decrease)**	**Rate**	**Increase / (Decrease)**
Pension	*42.37%*	*4.51%*	*33.32%*	*2.08%*
HIB	*4.79%*	*(0.53%)*	*4.52%*	*(0.40%)*
Total	**47.16%**	**3.98%**	**37.84%**	**1.68%**

Employee Contribution Rates

- 1955/1980 Plan
  - Set by Memoranda of Understanding (MOUs)
  - No change for FY22 as a result of the updated data in the FY20 valuation
- 2013 Tier
  - Governed by Public Employees' Pension Reform Act (PEPRA)
  - Increased back to 50% of Normal Cost

Portfolio Performance (as of March 31, 2021)

Asset Class	1-year	3-year	5-year	10-year	20-year
Domestic Equity	62.2%	17.5%	17.2%	14.0%	9.2%
International Equity	49.5%	6.0%	9.4%	5.5%	6.6%
Fixed Income	5.4%	4.9%	4.0%	3.8%	4.9%
Covered Calls	38.1%	10.5%	10.3%	--	--
Real Estate	19.8%	9.2%	7.0%	10.6%	--
Total Portfolio	**36.0%**	**10.3%**	**10.8%**	**9.4%**	**7.7%**
*Peer Group Percentile Ranking**	*31*	*26*	*29*	*12*	--

**Peer group includes select public funds with over $1billion in assets.*

Updated Cash Flow Projections

- Initially Presented in July 2017
  - Showed benefit payments outpacing total contributions from Employees and District
  - Expected feature of a mature plan
  - Gap expected to grow in the short term
- 2020 Update
  - Confirmed pattern of contribution shortfall
  - Project shortfall smaller than assumed rates of return (i.e., portfolio still expected to grow)

CEM Benchmarking

- 6th year of participation
- Calendar year 2019 data used
- Benchmarking
  - 134 other U.S. pension funds
  - Including 46 public funds

CEM Benchmarking

- Results

Calendar Year 2019 Data	Retirement System	Median	Above/Below Median
Net returns	19.2%	19.0%	Above median
Investment costs	30.5bps	52.1bps	Below median
Net value added from active management	-0.1%	-0.2%	Above median
Asset Risk*	11.0%	9.6%	Above median
Asset-liability Risk*	12.6%	12.2%	Above median

* *In CEM survey, covered calls are categorized as equity vs. as hedge against equities and no private investments allocation for the ERS increases volatility since private investment values are updated less frequently.*

Environmental, Social, and Governance (ESG) Engagement

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- Proxy Voting
  - Second annual review presented to the Retirement Board in November 2020
    - Glass-Lewis (GL) votes the Retirement System's proxies for actively-managed accounts
    - Northern Trust Asset Management (NTAM) votes the Retirement System's proxies for passively-managed accounts
  - FY20 proxy voting data
    - 57,227 proxies voted (GL: 8,746, NTAM: 56,566, Both: 8,085)

Environmental, Social, and Governance (ESG) Engagement

EBMUD

- ESG Survey of Investment Managers
  - Second annual report presented to the Retirement Board in March 2021
    - Continued variability in ESG implementation
  - Included additional questions on managers' Diversity and Inclusion (D&I) statistics, and efforts to combat racism in the investment management industry
    - All managers reported having a D&I policy
    - All managers reported some action against racism in the past year

Summary

- Experience Study
  - Large changes in contribution rates
    - Both for District and for 2013 Tier employees
      - 1955/80 Plan employees not affected (effect of MOUs)
    - Updated assumptions more closely match ERS experience data
    - Funded ratio decreased for pension, increased for HIB
- Markets
  - Strong performance through one year of COVID, more volatility ahead

EAST BAY MUNICIPAL UTILITY DISTRICT

Water Infrastructure Finance and Innovation Act (WIFIA) Loan Application

Finance/Administration Committee

May 25, 2021

About WIFIA

- WIFIA is a federal loan program that provides financing to water and wastewater projects
- District has examined relative costs and benefits of a WIFIA loan compared to revenue bonds
- Analysis included financial and non-financial considerations such as impacts to construction and project design

WIFIA Process Overview

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Submitted Letter of Interest (LOI)
- $445M over 10 years
- October 2020

EPA evaluates LOI
- This is the competitive step

EPA notified District it was selected for funding in Jan. 2021
- Approx. $209M for five years of projects

District submits application
- Planned for June, if Board approves payment of $100,000 non-refundable application fee

Application is evaluated by the EPA
- Expecting questions and further work with the EPA for Engineering and Finance
- 1-3 months

Term sheet and loan agreement development
- Will require more indirect costs (bond counsel, MA)
- 2-6 months

Approval and closing
- Will need Board approval
- More indirect costs, including from EPA ($200,000-$600,000)
- 1-3 months

Ongoing reporting and monitoring
- Project & construction monitoring
- Credit monitoring

WIFIA Potential Savings and Advantages vs. Revenue Bonds

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- Lower cost of financing under reasonable interest rate scenarios
- Additional financing flexibility, including 35-year loan term, deferring loan repayment until after project completion, and subordinating loan
- Locks in interest rates without drawing on loan immediately
- Participation demonstrates the District's commitment to federal priorities

WIFIA Potential Costs and Disadvantages vs. Revenue Bonds

- American Iron and Steel (AIS) projected to increase costs by 1-3 percent
- Increased costs and other risks associated with tracking compliance with AIS and the Davis-Bacon Act (prevailing wages)
- Potential schedule delays and increased costs due to AIS-compliant material availability
- Added expenditures to the U.S. Environmental Protection Agency (EPA) through the life of the loan

WIFIA Interest Rates

- Compared costs of WIFIA loans and revenue bonds using reasonable assumptions
- WIFIA loans could provide present value (PV) savings of $27 million, or 4.5% of debt service costs
- If revenue bonds could be refunded in future years at current interest rates, WIFIA increases PV costs by $24 million, or 4% of debt service
- WIFIA loans more likely to produce savings if interest rates increase above today’s historically low levels, although scenarios exist where revenue bonds will be advantageous

WIFIA Interest Rate “Lock”

- Interest rate for WIFIA loan will be “locked in” at the time the loan closes (estimated Dec. 2021)
- If interest rates increase after loan closing, the “relative savings” could be significantly better than 4%
- If interest rates decrease before we use the loan, we can request to reduce the rate, which could also increase savings

Next Steps

- Board consideration to authorize $100,000 application fee payment to the EPA to accompany WIFIA application
- Continue to negotiate terms with the EPA and seek to maximize benefits of WIFIA