Segal Consulting

CITY OF HOUSTON STUDY OF RETIRED EMPLOYEES' HEALTH BENEFITS

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OPEB Study

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Caveats

- This presentation is intended for the use of the City of Houston. The study is of the City's OPEB Plan, and is a supplement to Segal Consulting's full valuation report for the Fund as of June 30, 2016.
- Certain options studied herein may not be feasible, either due to legal restrictions or due to union or other contracts. It is up to the City and its legal counsel to decide if the options studied could actually be implemented.
- We have not included any projected changes in retirement or turnover as a result of the changes that might be made, other than those specified. **The demographic and trend assumptions match those of the June 30, 2018 disclosures**, except where noted. We have assumed a level population. For projections, only benefits payable in relation to non-disability retirements were modeled. Future impact of the ACA excise tax was not included. The liabilities that were not modeled make up 3% of the TOL measured as of June 30, 2017.
- Please refer to the full valuation report for a description of assumptions and plan provisions reflected in the results shown in this presentation. The discount rate used for the projections was 3.80%. The report also includes more comprehensive information regarding the Plan's membership and experience during the most recent plan year.
- Timing will impact the actual short-term results. The effect of plan changes as if they were implemented before 2018 is reflected here, but the effect might be delayed a year or more.
- Long-term forecasts are generally good for relative magnitude, but are unlikely to produce exact results.
- Actual projected liabilities will vary greatly based on interest rates, employee count, demographic changes, medical inflation, legislation, federal law, and many other factors.
- Sensitivity to changes with all other things kept constant can reveal the direction and relative magnitude of expected changes.
- The calculations included in this presentation were completed under the supervision of David Berger, FCA, ASA, MAAA, EA.

Executive Summary

- The City has some options with regard to controlling OPEB liabilities
  - 2018 balance sheet liability was $2.4 billion
  - Balance sheet liability is projected to be over $9 billion in 30 years
- Objectives:
  - Try to keep the Total OPEB Liability under $3 billion forever
  - Minimize the impact upon current employees whose pension benefits were recently reduced
  - Target changing benefits for prospective employees starting after 2020
  - Do not target a single group for changes; specifically do not change benefits solely for firefighters, police officers, or municipal employees
  - Try not to materially change the employment/retirement patterns
- Utilize Trust to further reduce unfunded liability

Background

Current State

- Number of Participants as of June 30, 2016

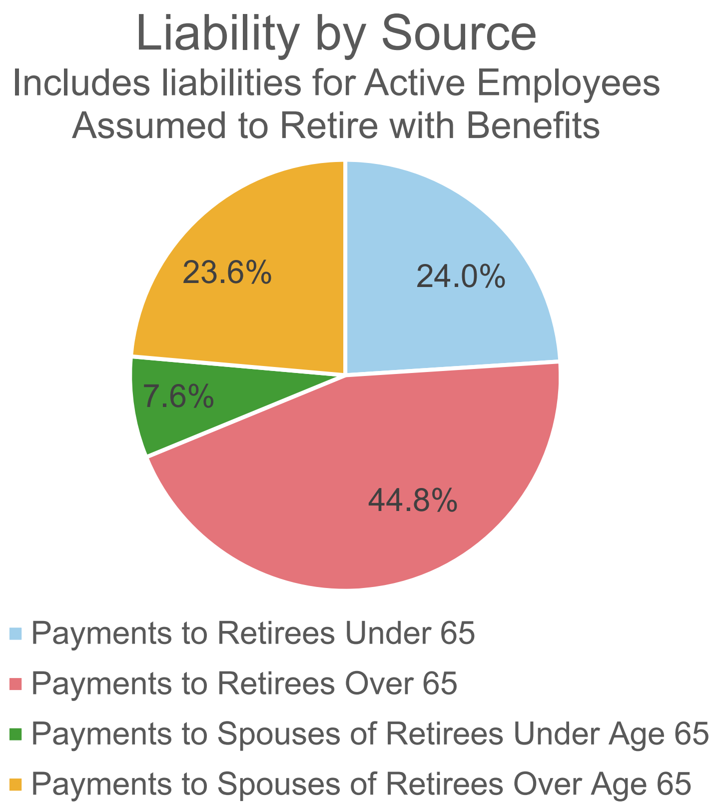
Retired members or beneficiaries currently receiving benefits	12,304
Vested terminated members entitled to but not yet receiving benefits	0
Active members	21,499
Total	33,803

- Balance Sheet Liabilities

Reporting Date for Employer under GASB 75	June 30, 2018
Measurement Date for Employer under GASB 75	June 30, 2017
The components of the Net OPEB Liability are as follows:	
Total OPEB Liability	$2,438,572,186
Plan Fiduciary Net Position	- -
Net OPEB Liability	$2,438,572,186

- The Valuation Date is June 30, 2016. Liabilities are adjusted for the passage of time to the Measurement Date of June 30, 2017. These figures were reported on the City's 2018 Consolidated Annual Financial Report.

Benefit Liabilities for the June 30, 2018 CAFR



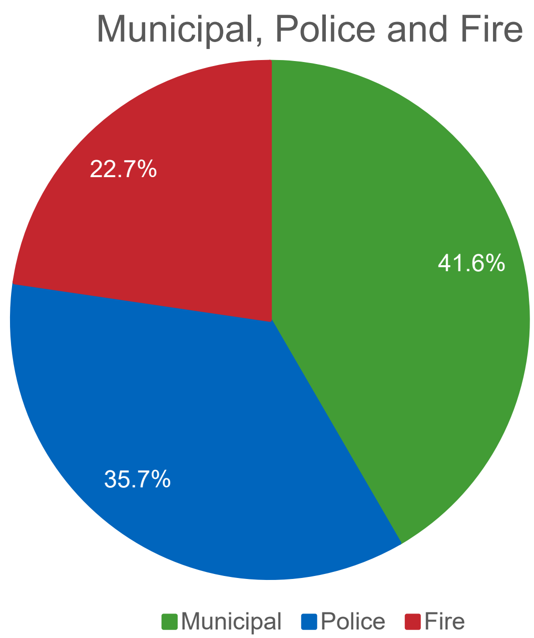
A Comprehensive Annual Financial Report (CAFR) is a set of U.S. government financial statements comprising the financial report of the City that complies with the accounting requirements promulgated by the Governmental Accounting Standards Board (GASB).

Post-65 Liabilities comprise 68% of the Total OPEB Liability, which means changing the post-65 benefits will result in a larger change in benefit liabilities than a similar change to the pre-65 benefits.

Based on the June 30, 2016 valuation results, measured June 30, 2017, for reporting on the June 30, 2018 CAFR. See page 2 and our valuation report for information about the participant data, plan provisions, and assumptions.

Payments to Retirees Under 65	Payments to Retirees Over 65	Payments to Spouses Under 65	Payments to Spouses Over 65	Total
$584,677,574	$1,092,916,644	$185,510,097	$575,467,872	$2,438,572,186

Benefit Liabilities for the June 30, 2018 CAFR

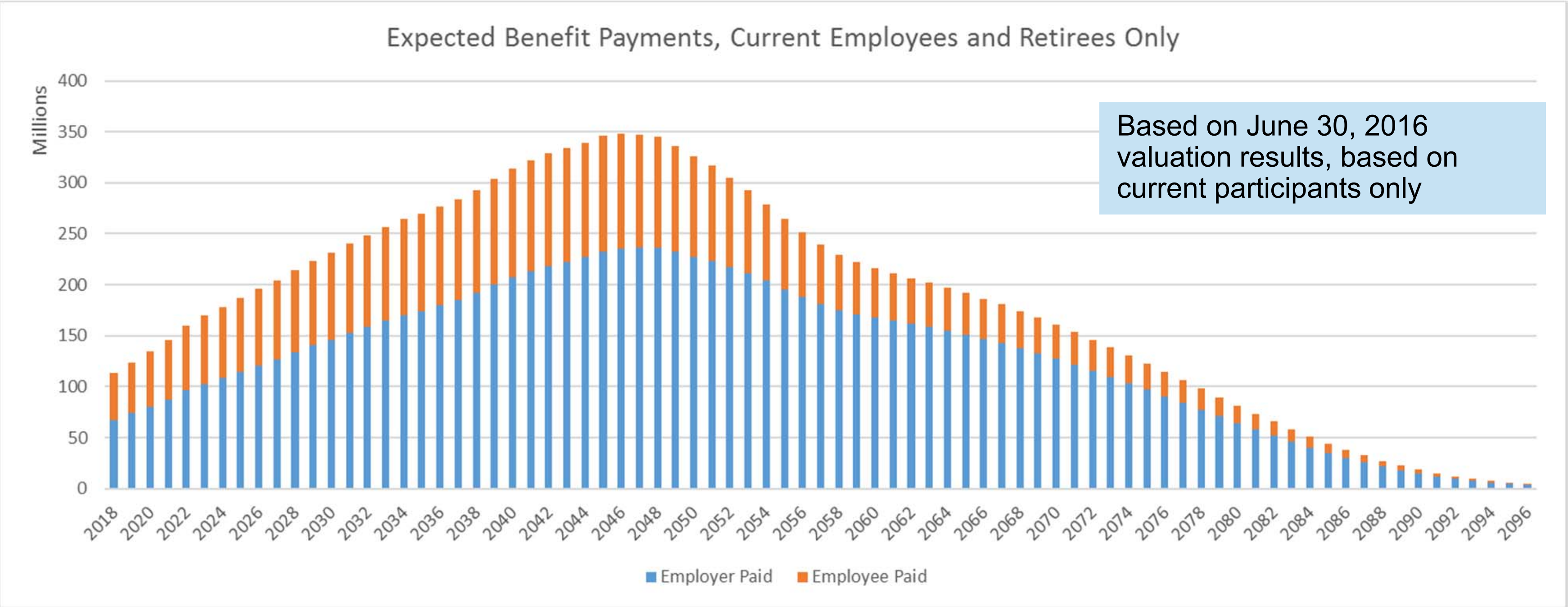


Municipal	Police	Fire	Total
$1,015,168,094	$870,408,708	$552,995,384	$2,438,572,186

Liabilities for Uniformed Employees comprise 58% of the Total OPEB Liability

Based on the June 30, 2016 valuation results, measured June 30, 2017, for reporting on the June 30, 2018 CAFR. See page 2 and our valuation report for information about the participant data, plan provisions, and assumptions.

The Increasing Nature of the Benefit Payments



- Because of the Health Trend rates, projected benefit payments for the current participants are projected to continue to increase for nearly 30 years, much further in the future than a similar projection for a pension plan. This has the effect that the retiree health liabilities are much more sensitive to changes in assumptions.
- If this graph included future hires, the benefit payments would increase indefinitely. Changes to provisions applicable to new participants will have a very long delay to have an effect on benefit payments.

Current Plan Design

- Houston provides Other Post-Employment Benefits (OPEB):
  - Provides Medical, Prescription Drug, and Life Insurance
  - Retiree contributions are about 27% of the cost of the medical and prescription drug coverage (21% post-65)
  - Spouse contributions are about 42% of the cost of the medical and prescription drug coverage (25% post-65)
  - Pre-65 Health is offered via Cigna Limited Network, Cigna Open Access, Retirees of Texas Option Plus, or a CDHP
  - Post-65 Health includes four Medicare Advantage Plans and one Medicare Supplement Plan
  - Some Post-65 Plans have $0 deductible and 0% coinsurance
  - Spouse is covered for medical and prescription drug for life
  - Life Insurance is $5,000 or $10,000

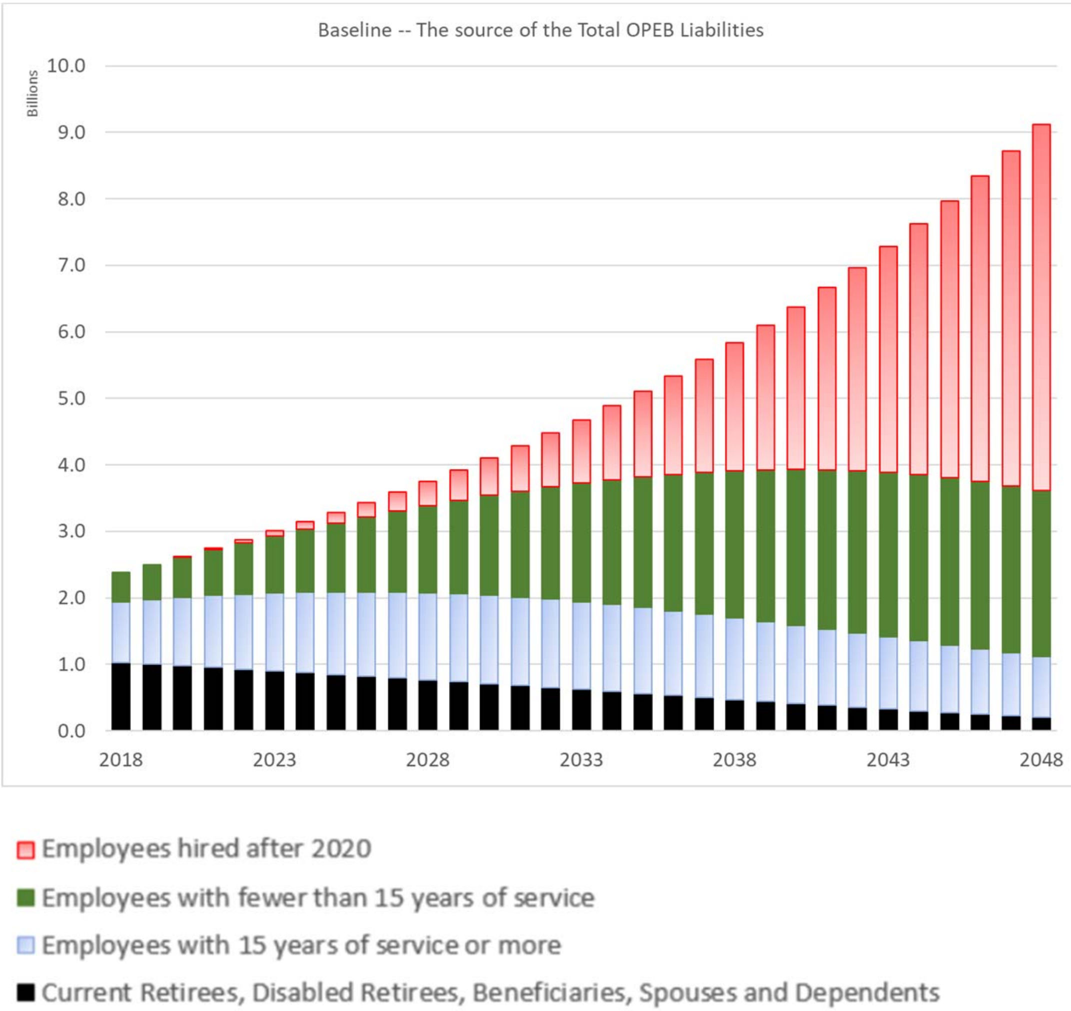
Eligibility for Benefits			
Retirement (meet one of three conditions)			
Firefighters*			
Age	Any		
Pension Service	20		
Police Officers			
Hired Before 2004	Y	N	
Age	40	55	
Pension Service	20	10	
Municipal			
68 Points as of 2005	Y	Y	N
Age	Any	62	50
Service	Any	5	Any
Age + Service	70	Any	75
Disabled 5 years of service, or in the line of duty			

* Eligibility change to Rule of 70 as of July 1, 2017 has not been valued here.

Forecasting OPEB Liabilities

- Long-term forecasts are generally good for relative magnitude
- Actual liabilities will vary greatly based on interest rates, employee count, demographic changes, medical inflation, legislation, federal law, and many other factors
- Sensitivity to changes with all other things kept constant can reveal the direction and relative magnitude of expected changes

Identifying the Sources of the Projected Liabilities



This stacked bar graph shows the various sources of the projected Total OPEB Liability (TOL) for the current plan.

The intent is to identify the liability by demographic group, using service as a proxy for proximity to retirement, and subsequently a measure of sensitivity to plan changes.

Presumably employees with fewer than 15 years of service would be less sensitive to changes in the retiree medical program that those about to retire.

Please see page 2 for caveats

Financial Implications of the OPEB Plan

- Recent percentage growth in medical and prescription drug costs has exceeded the percentage growth in tax revenues
- Prospective percentage growth in OPEB costs is expected to be at least 4.5% (exceeding the per capita growth in tax revenues)
- The accounting change to GASB 75 brings the OPEB liabilities to the forefront, and could impact the City's credit rating
- The City has reviewed comparable liabilities for other cities, based on 2017 Consolidated Annual Financial Reports

Historical Survey Data on Selected Medical, Outpatient Rx and Dental Trends Shows Dramatic Changes Over Time

Although *projected* Rx trends far outpace medical and dental trends, the gaps have generally been less dramatic for *actual* trends, as shown in the table below that presents data for the last 15 years.

Selected Medical,[1] Outpatient Rx[2] and Dental Trends: 2005–2017 Actual and 2018 and 2019 Projected[3]

	Year	Open-Access PPOs/POS Plans	PPOs/POS Plans with PCP Gatekeepers	HMOs	MA HMOs	Outpatient Rx	DPOs
Actual	2005	10.4%	11.1%	10.6%	8.4%	10.5%	5.0%
	2006	9.6%	10.0%	10.2%	7.2%	9.5%	5.1%
	2007	8.9%	9.5%	9.8%	7.0%	7.9%	5.0%
	2008	9.7%	9.4%	9.7%	7.7%	7.4%	5.5%
	2009	9.5%	9.7%	10.2%	4.0%	7.9%	4.7%
	2010	7.6%	8.3%	8.7%	3.6%	6.4%	3.0%
	2011	7.5%	7.8%	8.0%	4.5%	5.0%	3.1%
	2012	7.3%	8.4%	6.7%	3.0%	5.5%	2.6%
	2013	5.7%	6.7%	6.1%	3.1%	5.5%	2.8%
	2014	6.5%	7.6%	6.3%	1.9%	10.7%	2.9%
	2015	6.8%	6.9%	6.4%	4.2%	11.1%	3.0%
	2016	7.1%	7.4%	6.3%	5.3%	8.1%	2.9%
	2017	5.7%	5.8%	6.6%	1.8%	5.2%	2.3%
Projected	**2018**	**7.7%**	**7.8%**	**6.9%**	**3.4%**	**10.3%**	**4.1%**
	2019	**7.1%**	**7.3%**	**6.6%**	**4.0%**	**7.5%**	**3.7%**

[1] Medical trends exclude prescription drug coverage.

[2] Prescription drug trend data for 2005–2007 only reflects retail. Data for 2008–2019 is for all prescription drugs (non-specialty and specialty combined). These results do not include the impact of rebates from PBMs.

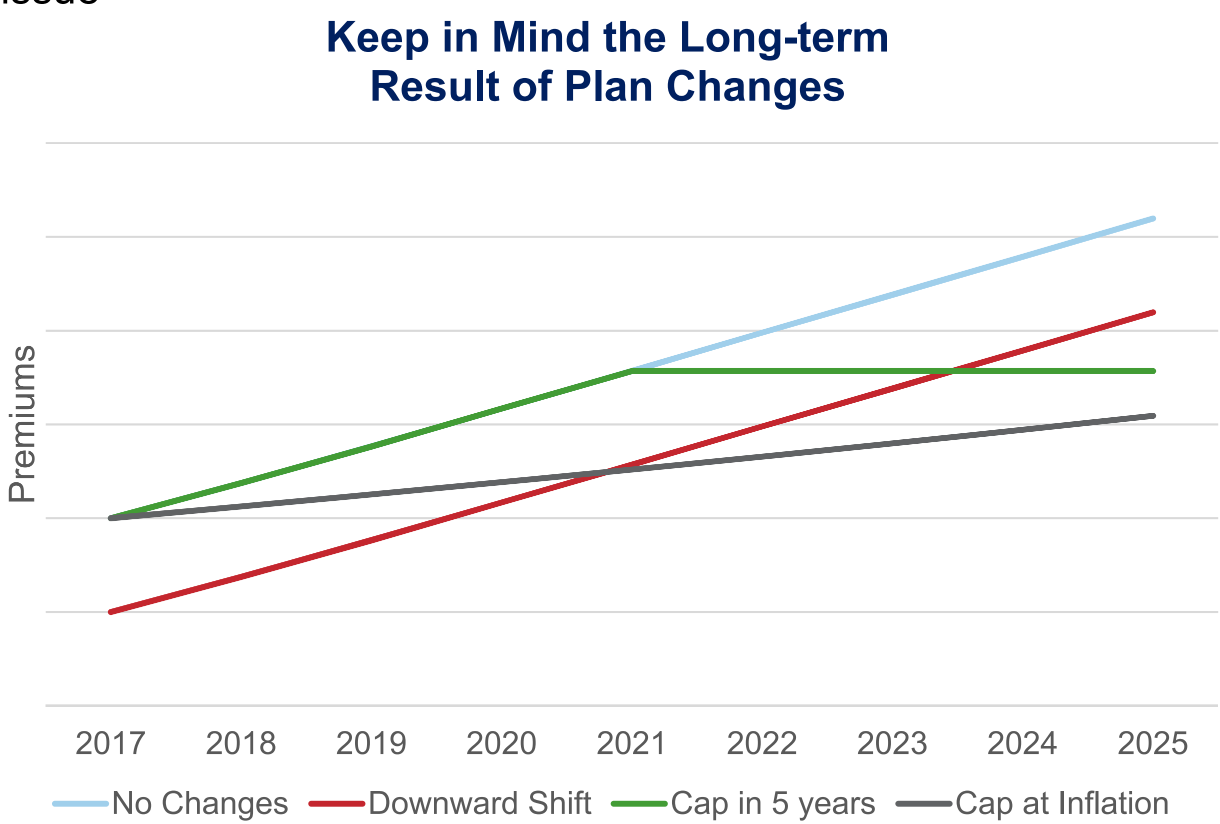
[3] All trends are illustrated for actives and retirees under age 65, except for the MA HMOs. (A graph comparing 15 years of survey data — 2005 through 2017 actual trends and 2018 and 2019 projected trends — is available as a supplement to this report.)

Source: Segal Consulting, 2018

Methodology

Possible Actions

- Reducing Immediate Costs helps the short-term cash flow, but does not solve the long-term issue

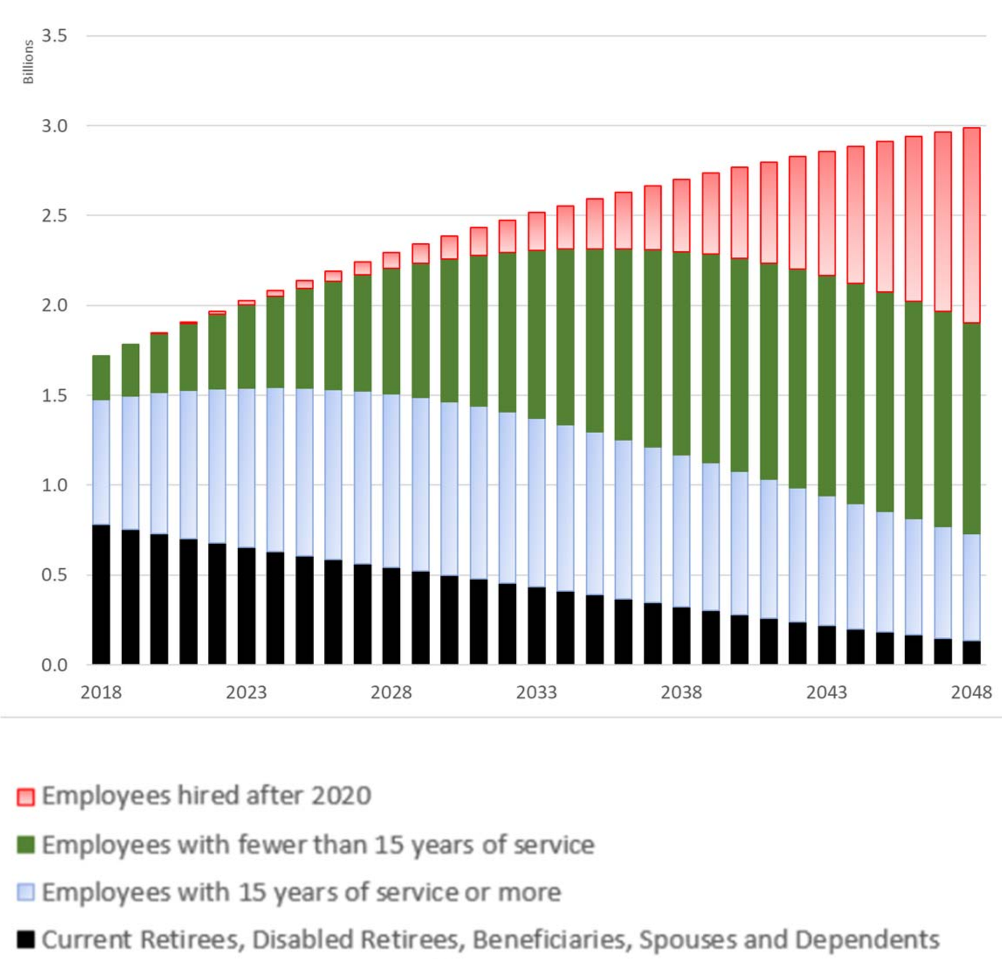


Combinations

- It will likely take a combination of things for Houston to be comfortable with the OPEB Plan
- Shifting the benefit liabilities downward is the best way to change the short-term costs (red line on the graph on the previous page)
- Long-term some sort of limit on the accruals for either new hires or new hires and shorter-service groups is likely the only way to keep the benefit liabilities from growing faster than tax revenues (gray or green lines on the graph on the previous page)
- Funding will reduce the accounting impact, but not change the benefits paid
  - Certain groups, including utilities, could pre-fund, and their liabilities would be valued at a different discount rate
  - Requires setting up a Trust specifically for the groups covered
- Bottom line; consider a variety of strategies

Proposed Solution

Proposed Solution – Projected Total OPEB Liability

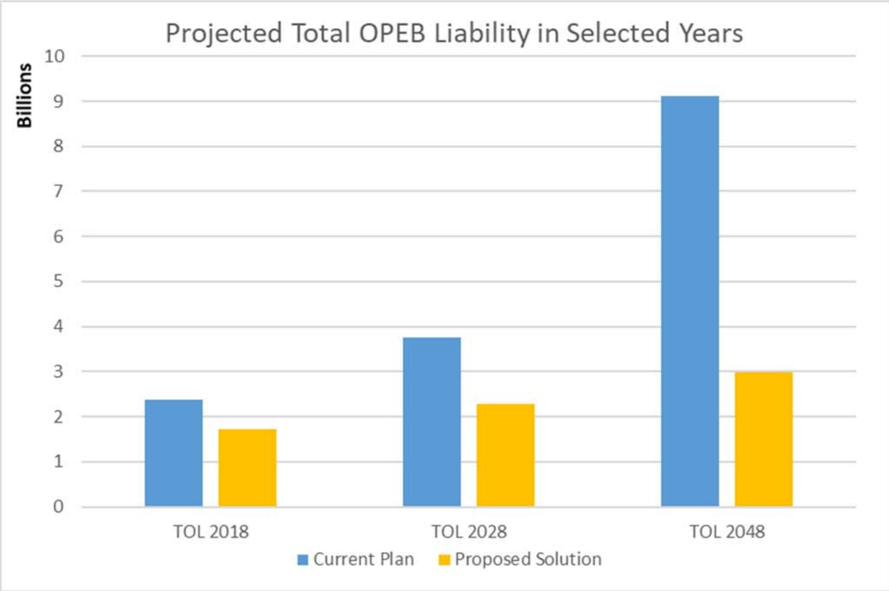


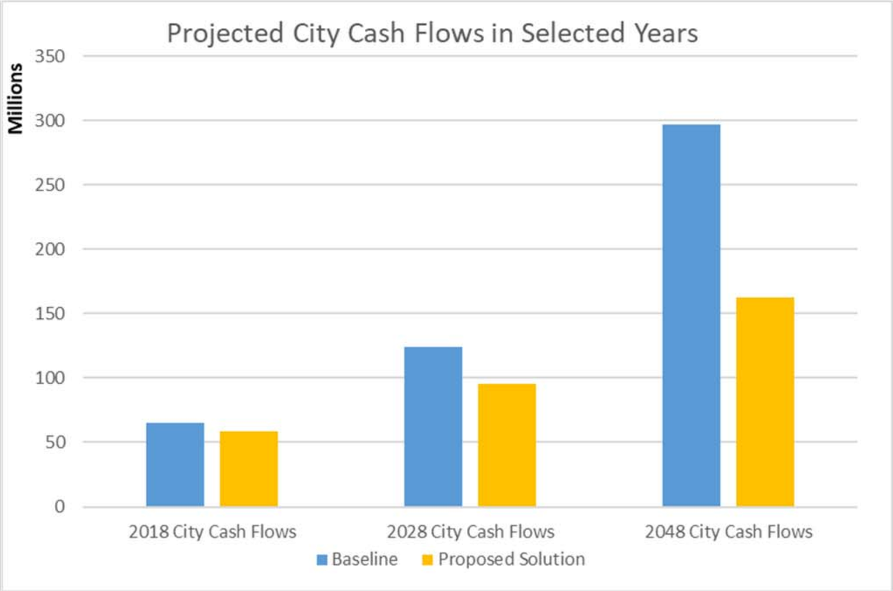
Please see page 2 for caveats

- Design
  - Medicare Supp Plan subsidy = Average Dollar Medicare Advantage Plan subsidy for all participants (current plan has same percentage subsidy)
  - No spouse or dependent subsidy for anyone with currently less than 15 years of service or under 40
  - All subsidies limited to 4% growth, for all employees and retirees
  - No post-65 coverage for new hires
- Results
  - Changing the post-65 subsidy provides an immediate reduction in City cash flow
  - The 4% cap reduces the cash flow in early years some, but has a bigger effect beyond 15 years
  - Removing the spouse subsidy for those far away from retirement and the post-65 subsidy for new hires reduces the later TOL significantly
- Positives
  - Should not disrupt retirement patterns
  - Little disruption in the early years
  - Financial protection for the City against large increases in medical costs
  - Achieves the $3 billion threshold

Current Results vs. Proposed Solution

Basis ($ millions)	1st Year		10th year		30th year	
	Cash (year 1)	NOL	Cash (total years 1 - 10)	NOL	Cash (total years 1 - 30)	NOL
Current Plan	65.5	2,379.9	918.6	3,753.6	4,814.2	9,122.2
Proposed Solution	58.3	1,717.6	750.4	2,292.8	3,299.1	2,989.4





Please see page 2 for caveats

Funding and Setting up a Section 115 Trust

Funding Considerations

- Pre-Funding sets the annual contributions by the employer equal to the current accruals plus a recognition of some of the accumulated accrued benefits. The contributions generally exceed the benefit payments. Contributions are made to a special kind of Trust.
- Benefit payments then can be made directly from the Trust.
- Funding does not change the benefit payments.
- Over the life of the plan, Benefit Payments + Expenses = Contributions + Investment Return
- Promotes intergenerational equity; that is, contributions are made as the benefits accrue
- The Trust can only be used for OPEB purposes
- Pre-funding eventually increases the accounting discount rate, reducing the balance sheet liability and annual accounting costs
- It might be appropriate for some employers to prefund, resulting in lower accounting liabilities for those groups. Specifically, we have seen that some utilities and transportation groups prefer to pre-fund to provide level costs.
  - Funds from the Trust are only available to those groups that fund, and are segregated by group
  - Changes the accounting dynamics
- The impact on accounting liabilities depends on the groups that fund, the type of Trust used, the level of funding, the funding policy and the investment mix of the plan assets.

Accounting Impact of Funding

- A funding policy and a history of funding results in a higher discount rate, and lower benefit liabilities for the same benefit payments
- The discount rate eventually reverts to the expected return on plan assets; that is, about 7.00% instead of 3.80%.
- The liabilities generated at 7% are about 2/3 that of the liabilities at 3.80%
- When valued at 7%, and with a 30-year amortization, the Actuarially Determined Contribution would still be about twice what the current benefit payments are (i.e., twice the pay-as-you-go contributions)
- We see our utility clients prefer to pre-fund
- A few cities have groups that prefund

Examples

Example 1 – Utility in Tennessee

- Has had a funding policy in place for a number of years
- About $400 million in assets
- TOL of about $800 million at 7% would be about $1,400 million at municipal bond rates

Example 2 – City in Georgia

- Only one of three business segments is contributing to the Trust
- Two entities are charged pay-as-you-go costs, and value those liabilities at municipal bond rates
- The third entity pre-funds, and values those liabilities at 7.00%
- This might be attractive to some of Houston's business segments that are looking to maintain a relatively constant percentage of pay contribution

Example 3 – Southern State

- Established an OPEB Trust
- Charges each State "employer" the estimated percent of pay required to cover the estimated retiree medical plan costs for the year, rounded up (e.g., estimated contribution is 7.2% of pay, the charge to the employers is 7.5% of pay)
- This does not count as a long-term funding policy, as the contributions do not exceed the Normal Cost
- The State has accumulated some assets, and is about 5% funded
- The funding level and funding policy have not yet made a significant impact on the blended discount rate, and the result is that the liabilities are, for now, valued at municipal bond rates
- The accumulation of the assets is not being reduced by benefit payments or expenses, and within a few years could become significant

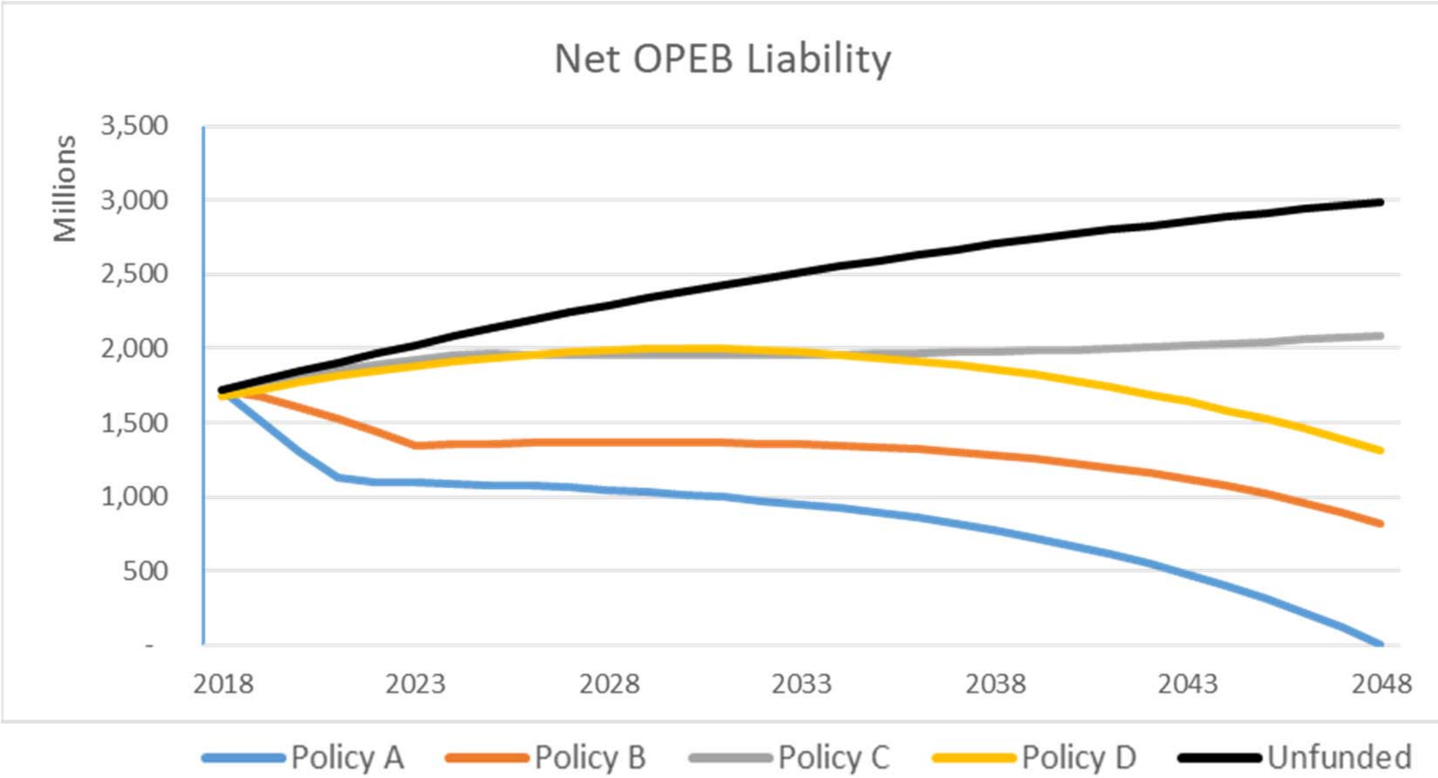
Sample Funding Policies

Goal	Funding Policy, including Pay-as-You-Go City Costs
Funding Policy A: Fully fund the trust to eliminate the unfunded liability by year 30 (Actuarially Determined Contribution)	$90 million year one contributions (including $58.3 million in pay-as-you-go costs). After year one, a Normal Cost plus 30-year, closed, level payroll amortization
Funding Policy B: Goal of 75% funding by year 30	$75 million year one contributions (including $58.3 million in pay-as-you-go costs). After year one, increases by $5 million per year for 5 years. After year six, then Normal Cost plus a 25-year closed, level payroll amortization, but not less than 10 years.
Funding Policy C: Goal of Unfunded Liability at $2B by year 30	$65 million year one contributions (including $58.3 million in pay-as-you-go costs). After year one, the contribution increases by $5 million per year for 6 years. After year seven, then Normal Cost plus a 30-year closed, level payroll amortization, but not less than 20 years
Funding Policy D: Benefit payments plus $5M in the first year, with contributions increasing by 4% annually.	Pay-as-you-go costs, plus $5 million increasing by 4% annually. About $63 million year one contributions include $58.3 million in pay-as-you-go costs.

Assumed Discount Rate Based on Funding Policy and Percent Funded on the 7% Funding Basis

	Percent Funded on the 7% Funding Basis										
Funding Policy	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
A	3.80%	5.40%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
B	3.80%	5.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
C	3.80%	3.80%	4.00%	4.20%	4.40%	4.80%	5.60%	6.20%	6.80%	7.00%	7.00%
D	3.80%	4.85%	5.50%	5.95%	6.30%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%

Funding Policy Estimates



Estimates are based on rules of thumb and general tendencies. The contributions and funded status are subject to legislative changes, actual benefits paid, administrative policies, investment policies, actual returns, and Proposed Solution benefit liabilities at the 3.80% discount rate, with estimated discount rate adjustments at other discount rates.

Establishing a Section 115 Trust

- A Trust is a legal document, prepared by legal staff
- Establish a Trust design
- Reflect that design in a document (which satisfies GASB rules and state law on irrevocable trusts)
- Decide who will have governing authority
- Secure a custodian
- Secure an administrator
- Determine the investment consultant and executor of investment decisions
- Fiduciary Responsibilities Planning Meeting
- Monitor with quarterly investment committee meetings