City of Tucson Independent Audit and Performance Commission

April 1, 2015

Subject: Review of Tucson Supplemental Retirement System (TSRS) Pension Alternative

Honorable Mayor and Council:

Background

An effort to require the City to implement changes to the TSRS system failed to get the initiative on the November 2012 ballot due to technical irregularities in the signature collection process. Proponents of the initiative believed the changes would, over time, fully fund the existing system's contractual benefits and require that future elected officials only promise benefits by fully funding the cost as incurred. Under the proposal, employees hired after enactment of the proposed changes would receive retirement benefits under a defined contribution type of plan (401 K style), thereby prohibiting elected officials from promising unfunded benefits. Opponents, and some City Staff members, believed that the changes, while resulting in lowered costs in the long term, would significantly increase City costs in the early years following the change, thereby putting the City in greater financial difficulty. City Staff reported their conclusions to Mayor and Council and used Power Point presentations prepared by the TSRS Actuary (Gabriel, Roeder, Smith & Company) to explain their conclusions.

While the issue is not up for voter approval now, it is likely discussions and a possible proposal will occur in the coming years. With this in mind the IAPC established a Subcommittee to quantify potential savings and costs of such a change over the next thirty years.

Scope

The Subcommittee's original scope was to work with City staff and the TSRS actuary to prepare an actuarial forecast of the TSRS and the resulting financial impacts on the City (the baseline), and to compare that with alternatives assuming conversion to a defined contribution retirement plan (implementation of the failed initiative's requirements). The scope would not cover nonfinancial factors such as employee retention and compensation issues, or legality of conversion to a defined contribution plan as it relates to Arizona contract law.

Process

The Subcommittee met with City Staff members in public meetings on five occasions beginning in January 2014 and continuing through February 2015. The TSRS actuary (Gabriel, Roeder, Smith & Company) was in three of the most recent meetings via telephone. The primary purpose of these meetings was to review calculations the actuary had prepared based on the actuarial report for the period ending June 30, 2012. While updated calculations could be prepared using more recent data, staff indicated the IAPC did not have authority to incur the additional cost, per City ordinance. Therefore, the Subcommittee utilized work that had already been conducted for the comparison purposes.[1] The subcommittee attempted to understand and test the accuracy and veracity of all of the data presented by the actuary and used by City Staff in their analysis of the financial consequences of a change from a defined benefit plan (DB) (the current TSRS plan) to a defined contribution plan (DC). The Subcommittee

[1] Since models were not updated utilizing more current data, they do not include system changes reflected in the June 30, 2014 TSRS valuation report, or recent TSRS Board action improving the funding status of the plan.

was only partially successful in this endeavor since no member of City Staff could fully explain how some of the data was derived and the actuary told us that company policy did not allow her to divulge to us or to any City employee all of the formulas and computation methods used in preparing some of the numbers. Based upon this we must assume that the numbers presented by the actuary are valid for the purpose intended.

Assumptions and Calculations

For calculation purposes it was assumed that the TSRS plan would close to new employees on July 1, 2013 (year 1). Existing employees as of June 30, 2013 would continue to participate in the TSRS plan and the City would contribute to it consistent with current funding policies. Employees hired after June 30, 2013 would participate in a new defined contribution plan. The City would make a contribution to individual accounts established for each new employee at an established percentage of payroll. Three City funding levels (5%, 7%, 9%) were calculated for comparison with a City funding baseline (no change to current pension system). We were told by City Staff and by the actuary that under baseline funding the City would annually contribute "normal costs" for the period[2] and "amortize," via additional City contribution, the system's unfunded actuarial accrued liability (UAL) ($344 million at June 30, 2012) over a period of twenty years. Under the closed TSRS assumption, the amortization period was accelerated to a period of 10 years (the projected average working lifetime of TSRS members at June 30 2012). A yearly funding comparison of the Baseline (current defined benefit plan) and the staff-presented Conversion Option (current plan close to new employees who enter into a defined contribution plan) is attached (Attachment A).

Although the subcommittee questioned how the Baseline was computed and how the UAL was amortized several times in 2014 it was not until January 2015 that we were given the UAL projection by year included in the Baseline and the explanation of the amortization method was provided.[3] Under the Baseline projection the "amortization" is not reducing the unfunded actuarial liability, but rather the UAL

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[2] The "normal cost" of a defined-benefit plan is the annual employer cost of the future liability associated with the benefits earned in that particular year. City contributions for normal costs are based on the annual required contribution rate determined by the Actuary, and are equal to the difference between the recommended total contribution rate and the employee rates, based on a level percentage of payroll method. The contribution rate is determined by the actuary at a level necessary to finance employee participation and to fund the costs of administration.

[3] Email received from actuary on January 30, 2015:

*"In regards to the amortization, for the valuation and most of the projection scenarios, the amortization is calculated as a **20-year open level-percentage-of-pay amortization** where the discount rate used is 7.25% and the wage inflation is 3.00%. The "open" part of the description means that we re-amortize the unfunded at each future valuation date using 20 years (so it doesn't go down to 19 next year). The "level percentage of pay" part of the description means that we assume the payments will increase by wage inflation each year (the dollar amount will increase, but the cost relative to payroll will be the same).*

*If it is helpful, the actual factor that is used based on the current assumption set (post-experience study) = 13.715 =(1-((1+3%)/(1+7.25%))^20)/LN((1+7.25%)/(1+3%)) I know this formula is a bit much. If the reader is familiar with the present value function in Excel, it is similar to using this formula =-PV(0.0725-0.03,20,1,0,1). Looking at the first year, the unfunded is $356.4 million. We divide that by the 13.715 to get a dollar payment of $25.99 million. Then we divide by the covered payroll of $126.64 to get the 20.52% of payroll. Basically if 25.99 were paid in the first year, 25.99*1.03 in the second, 25.99*1.03*1.03, then the $356.4 debt would be paid off in 20 years.*

This numbers are all based on the 2014 projections. I know some of the studies have been around for quite a while and are based on old valuations and pre-experience study assumptions. This process gets repeated at each future valuation year. The factor does not change. The exception being in the projection scenarios we gave you where things get amortized over the remaining working lifetime of the actives. In that case the amortization period started at 10 and ratchets down by about 0.25 each year. The inflation used is 0% (because we use level dollar, not level percentage of pay), and those scenarios actually date back to the June 30, 2012 valuation so the interest used was 7.75%. The amortization factor starts at 7.06 and ratchets down about 0.10-0.15 in each projection year (rather than remaining static like in the 20 year open)."

actually increases from $344 million in 2012 to $427 million by 2041. Under the Conversion Option the UAL is substantially paid off.

No City staff member in attendance was able to explain why an amortization of the $344 million debt actually caused an increase in the debt in the projection each year from 2012 to 2041 of over $80 million. A member of Staff told the subcommittee that they had explained to Council members that it was like only paying the minimum on a credit card balance. We are unaware of any credit card issuer that allows their minimum payment to be less than the current interest amount due plus a small principal payment so we did not accept this explanation as being accurate.

Findings

1. The City of Tucson would save money by offering all future employees a defined contribution plan, while keeping all current and retired employees in the existing defined benefit plan.

2. The UAL as of June 30, 2014 was $356.4 million dollars. This liability exists no matter what changes are made to plans for future employees. Although the actuary and the City Staff included repayment of the UAL in their prepared scenario of the effect of changing plans from DB to DC for future employees, it is a separate and serious issue that must be addressed on its own.

3. Funding alternatives for such a conversion were not provided to the Subcommittee. Rather a cash heavy, front-ended scenario (unfunded liability being fully funded over a ten year period) was shown. Alternatives to mitigate the large cash contribution shown in this scenario exist and should be explored.

4. A present value analysis of the scenario reveals that the City would not have to experience the significant increases in annual contributions over the baseline to fully repay the UAL by 2041. Options exist to this scenario. The actuary explained that she recommended a 10 year amortization of a UAL but that she was aware of some cities that had chosen other amortization methods or none at all.

Our findings have focused ONLY on the financial calculations and analysis presented.

Future Issues

The IAPC Subcommittee intends to continue to meet and address and analyze other issues to include:

1. Why in the Baseline projection does the UAL increase from $344 million in 2012 to $427 million by 2041 (in apparent violation of the funding policy to have the plan paid for by the generation benefiting from the plan)?
2. The subcommittee will work with the City staff to:
    a. Review the contract between the City and the actuary to understand why the City is denied access to information used by the actuary in preparing reports to the City;
    b. Review the City Attorney's opinions regarding pension spiking to understand their application, if any, to the TSRS;
    c. Review, on a very limited selected basis, the computations used to calculate a retiree's pension amount.

Thanks to Staff and others

The subcommittee wishes to express its sincere thanks to the City Staff members who have all cooperated fully and completely in the analysis that went into this report. The biggest single unrecorded asset the City has is its employees, and the subcommittee believes that our experience in dealing with a limited number of them is evidence that the value of this asset is immeasurable.

Respectfully submitted,

Kevin Oberg
IAPC Chair

Attachments:
A – Savings in City Pension Contribution: Transition to Defined Contribution Plan

c: Martha Durkin, Interim City Manager
Albert Elias, Assistant City Manager
Ron Lewis, Assistant City Manager
Julie Hughes, Assistant City Manager
Silvia Amparano, Finance Director
Joyce Garland, Budget and Internal Audit Program Director

SAVINGS IN CITY PENSION CONTRIBUTION: TRANSITION TO DEFINED CONTRIBUTION PLAN *

$$ in millions

** Excludes Public Safety and Elected Officials Retirement Plans*

		TSRS CLOSED TO NEW HIRES /DEFINED CONTRBUTION PERCENTAGE					
	Baseline	5%	Variance @ 5%	7%	Variance @ 7%	9%	Variance @ 9%
YEAR							
1	$ 33.9	$57.9	-$24.0	$57.9	-$24.0	$57.9	-$24.0
2	$ 36.1	59.3	-23.2	59.5	-23.4	59.6	-23.5
3	$ 35.5	55.1	-19.6	55.4	-19.9	55.7	-20.2
4	$ 35.1	51.5	-16.4	52.0	-16.9	52.4	-17.3
5	$ 35.9	50.5	-14.6	51.1	-15.2	51.8	-15.9
6	$ 36.1	48.2	-12.1	49.0	-12.9	49.8	-13.7
7	$ 36.3	46.1	-9.8	47.0	-10.7	47.9	-11.6
8	$ 36.5	43.8	-7.3	45.0	-8.5	46.1	-9.6
9	$ 36.7	41.5	-4.8	42.8	-6.1	44.1	-7.4
10	$ 37.0	39.4	-2.4	40.9	-3.9	42.3	-5.3
11	$ 37.2	37.4	-0.2	39.1	-1.9	40.7	-3.5
12	$ 37.5	35.4	2.1	37.3	0.2	39.1	-1.6
13	$ 37.8	33.5	4.3	35.5	2.3	37.6	0.2
14	$ 38.1	31.6	6.5	33.9	4.2	36.1	2.0
15	$ 38.4	29.8	8.6	32.3	6.1	34.8	3.6
16	$ 38.8	28.1	10.7	30.8	8.0	33.5	5.3
17	$ 39.2	26.5	12.7	29.4	9.8	32.3	6.9
18	$ 39.6	25.0	14.6	28.1	11.5	31.3	8.3
19	$ 40.0	23.7	16.3	27.0	13.0	30.4	9.6
20	$ 40.4	22.5	17.9	26.1	14.3	29.7	10.7
21	$ 40.9	21.5	19.4	25.3	15.6	29.1	11.8
22	$ 41.4	20.6	20.8	24.7	16.7	28.7	12.7
23	$ 41.9	19.8	22.1	24.1	17.8	28.4	13.5
24	$ 42.5	19.1	23.4	23.7	18.8	28.2	14.3
25	$ 43.1	18.6	24.5	23.4	19.7	28.2	14.9
26	$ 43.7	18.3	25.4	23.3	20.4	28.3	15.4
27	$ 44.3	18.1	26.2	23.4	20.9	28.6	15.7
28	$ 45.0	18.1	26.9	23.6	21.4	29.1	15.9
29	$ 45.6	18.2	27.4	24.0	21.6	29.7	15.9
30	$ 46.3	18.5	27.8	24.4	21.9	30.4	15.9
Subtotal	**$ 1,180.8**	**$ 977.6**	**$ 203.2**	**$ 1,060.0**	**$ 120.8**	**$ 1,141.8**	**$ 39.0**
Remaining Unfunded Liability	**$ 427.7**	**$ 11.7**	**$ 416.0**	**$ 11.7**	**$ 416.0**	**$ 11.7**	**$ 416.0**
Total	**$ 1,608.5**	$ **$ 989.3**	**$ 619.2**	**$ 1,071.7**	**$ 536.8**	**$ 1,153.5**	**$ 455.0**

Attachment A