



TO: Members of the Legislative Commission on Pensions and Retirement
 FROM: Ed Burek, Deputy Director
 RE: Review of Minnesota Defined Benefit Public Employee Retirement Plan Post-Retirement Adjustment Mechanisms: Retiree Cohort Information
 DATE: October 14, 2013

Introduction

At the September 12, 2013, meeting of the Legislative Commission on Pensions and Retirement, Commission staff was asked to provide information about whether various cohorts of retirees were maintaining their purchasing power, given the post-retirement adjustments received and the rates of inflation over time. This memo updates a 2006 Commission staff memo on this topic by adding more recent information and by expanding the analysis.

Overview: Major Plan Post-Retirement Adjustments and Inflation Rates

We begin by looking at the major plans and demonstrating that post-retirement adjustments rarely matched inflation; some adjustments were excessive, at other times too small. Thus, the adjustments rarely provided amounts needed to maintain purchasing power.

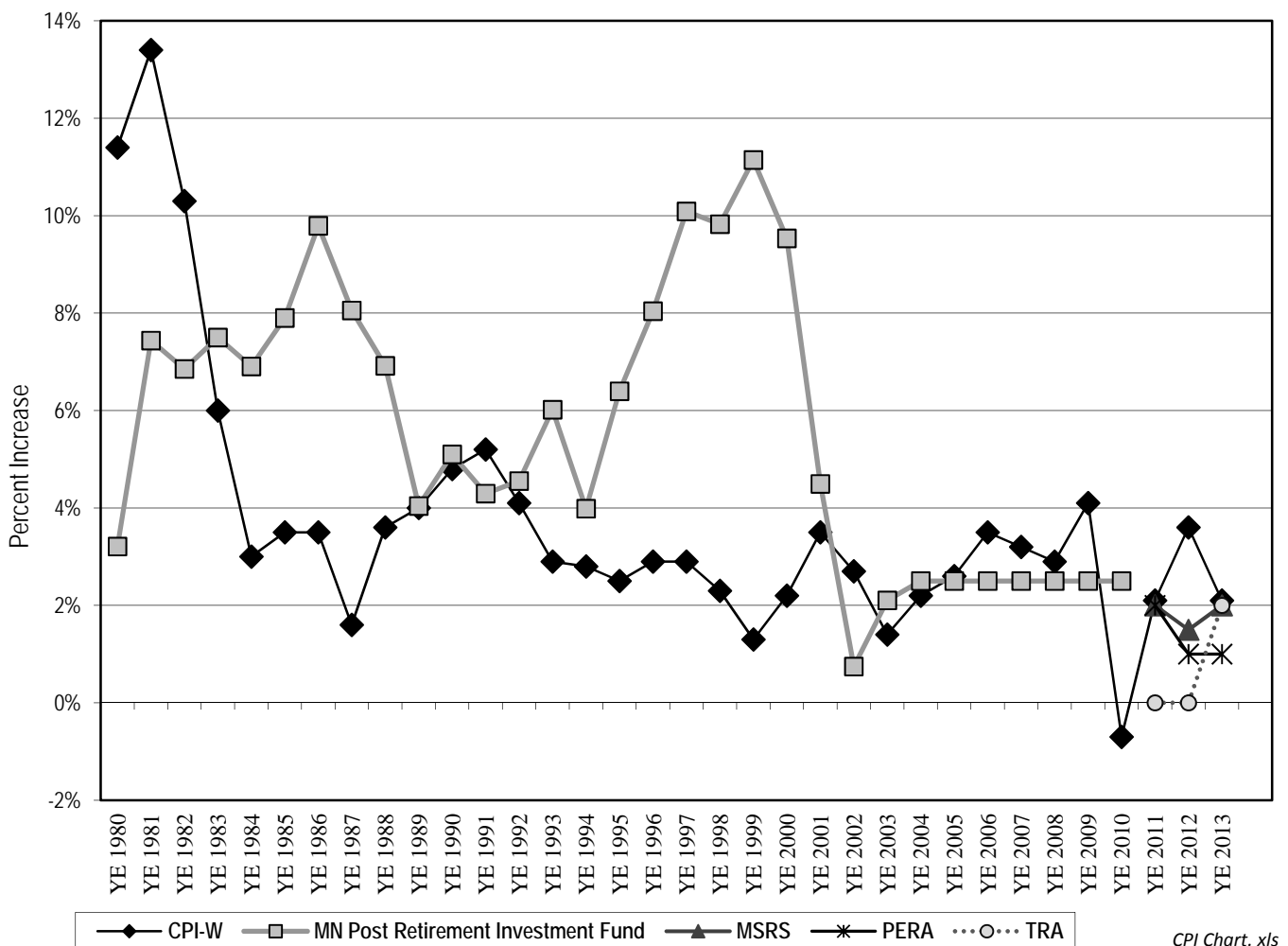
Table 1 and the accompanying graph compare inflation with post-retirement increases provided to retirees of Minnesota State Retirement System (MSRS) plans, Public Employees Retirement Association (PERA) plans, and the Teachers Retirement Association (TRA). The years covered in the table are 1980 through 2012. The adjustments shown for nearly all the covered years are those generated by the Post Retirement Adjustment Fund (Post Fund) or its processor. The Post Fund was dissolved in 2008, and the post-retirement adjustment provision was revised to provide 2.5% adjustments annually. In 2010, under the Financial Sustainability Provisions (Laws 2010, Ch. 359, Art. 1), post-retirement adjustment law was again revised, and each of the major systems began paying adjustments (if any) which differed between systems and, in some cases, differed by plan within each system. The first adjustments under the Financial Sustainability Provisions were provided on January 1, 2011. For 2011 and 2012, the law specified that TRA would provide no increases, while PERA-General provided 1.0% increases and MSRS-General provided 2.0% increases. Some public safety plans within these systems paid adjustments which differ from those just mentioned. Looking at the information in the table, it is clear that the post-retirement adjustment rarely matched the inflation rate.

Table 1
 Post-Retirement Adjustments: 1980-2013
 MSRS, PERA, and TRA

Year	Post-Retirement Adjustment Percentage Increase	Inflation Rate (CPI-W)	Year	Post-Retirement Adjustment Percentage Increase	Inflation Rate (CPI-W)
1980	0%	11.4%	1997	8.0%	2.9%
1981	3.2%	13.4%	1998	10.1%	2.3%
1982	7.4%	10.3%	1999	9.8%	1.3%
1983	6.9%	6.0%	2000	11.1%	2.2%
1984	7.5%	3.0%	2001	9.5%	3.5%
1985	6.9%	3.5%	2002	4.5%	2.7%
1986	7.9%	3.5%	2003	0.7%	1.4%
1987	9.8%	1.6%	2004	2.1%	2.2%
1988	8.1%	3.6%	2005	2.5%	2.6%
1989	6.9%	4.0%	2006	2.5%	3.5%
1990	4.0%	4.8%	2007	2.5%	3.2%
1991	5.1%	5.2%	2008	2.5%	2.9%
1992	4.3%	4.1%	2009	2.5%	4.1%
1993	4.6%	2.9%	2010	2.5%	-0.7%
1994	6.0%	2.8%	2011	0.0-2.0%	2.1%
1995	4.0%	2.5%	2012	0.0-2.0%	3.6%
1996	6.4%	2.9%	2013	2.0%	2.1%

The failure of the provided increases to track inflation is visually evident from the following graph of the information provided above.

**Post-Retirement Increases: MSRS, PERA, TRA vs.
Consumer Price Index for Urban Wage Earners and Clerical Workers**



CPI Chart. xls

Impact on Retiree Cohorts

In this section we review the impact of inflation and the post-retirement adjustments that were provided for various cohorts of retirees. We examine the impact on 1975 retirees, and also the groups that retired in 1980, 1985, 1990, 1995, 2000, and 2005. Those results can be summarized as follows:

- **1975 Retirees.** This group lost considerable purchasing power during the early years of retirement. Despite an approximately two decade period starting in about 1982 where post-retirement adjustments exceeded inflation nearly every year, this group did not again have an annual benefit matching the initial purchasing power until 1998, about 23 years after retirement.
- **1980 Retirees.** After a brief period of reduced purchasing power, by 1986 this group was receiving annual benefits which exceeded the original benefit's purchasing power. Given generous increases provided during the late 1980s through the early 2000s, in later years this cohort's purchasing power greatly exceeded the initial benefit.
- **1985 Retirees.** This group has been receiving benefits which exceed original purchasing power from the very first post-retirement adjustment onwards. This group has been very generously treated by the market based adjustment mechanism that was in place during the first two decades of their retirement.
- **1990 Retirees.** After the first two years of adjustments, which essentially matched inflation, this group's benefits were substantially increased through the very large increases provided in the late 1990s and early 2000s. Current benefits greatly exceed the inflation matching amounts.
- **1995 Retirees.** The purchasing power of this group's benefits exceeded the original benefit with the first post-retirement adjustment. The very large increases provided in the late 1990s and early 2000s cause current benefits to greatly exceed the inflation matching amounts.
- **2000 Retirees.** This group benefitted from the last of the generous Post Fund adjustments, which caused the benefits to somewhat exceed initial purchasing power. More recent benefit adjustments have been modest and some have been less than inflation. At the present time, the value of the benefit for an MSRS retiree is somewhat above the initial purchasing power, but not by much. A TRA retiree would be right at the margin, because members of that plan received no increase in 2011 and 2012. The PERA-General retiree would be slightly better off than the TRA retiree, because PERA continued to provide increases, although only 1%. Going forward, all members of the 2000 cohort are

vulnerable, at risk of having benefits which fall below original purchasing power. Even modest inflation will quickly outdistance the 1% adjustments PERA is likely to provide in the near future, and inflation is also likely to exceed the 2.0% adjustments which MSRS-General and TRA are now providing. Unlike the 1985, 1990, and 1995 cohorts, which have benefits considerably in excess of the inflation-matching benefit level, the 2000 cohort of retirees has no cushion. The 2000 cohort will fall below initial purchasing power years before the earlier cohorts would.

- 2005 Retirees. This group has benefits with less purchasing power than the initial retirement benefit. The situation will worsen further if provided adjustments are less than inflation, which appears likely.
- 2010 Retirees. Although 2010 retirees are not formally covered here, it is clear that this group has suffered a loss in purchasing power. Inflation rates have exceeded the 2% adjustment rate in law for MSRS-General, while PERA-General is paying 1%, and TRA provided no increase in 2011 and 2012.

Moving to detailed analysis of each group, for the 1975 retirees it is necessary to briefly mention adjustments and inflation rates in the 1975 through 1979 period, since that information was not provided earlier. For this group we will assume a group of retired TRA teachers. The later 1970s was a period of high inflation, and the TRA-provided adjustments were considerably less than inflation. In 1976 a 2.3 % adjustment was provided, but inflation as measured by the CPI-W was 9.1%. The next year a total adjustment of about 1% was provided, but inflation was 5.7%. In 1978, the adjustment was fairly large, 4%, but that was noticeably less than inflation, which was 6.5%. In 1979 no adjustment was provided while inflation was 7.7%. For 1980 and later, inflation rates and post-retirement adjustment percentages are as shown earlier.

For an individual who retired in 1975, the high inflation in the latter half of the 1970s and the minimal adjustments caused a considerable loss of purchasing power. Table 1 and the above graph showed that post-retirement adjustments provided in the 1980s and 1990s were often in excess of inflation. But because of the large loss in purchasing power in the first five years of retirement, it was not until more than two decades after retirement that the individual who retired in 1975 was receiving a benefit amount with purchasing power comparable to the original retirement benefit, as shown in Table 2:

Table 2
\$12,000 Initial Annual Benefit – 1975 Retirement Date

Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference	Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference
1975	\$12,000	\$12,000	--	1995	\$31,596	\$35,232	-\$3,636
1976	\$12,276	\$13,092	-\$816	1996	\$33,624	\$36,264	-\$2,640
1977	\$12,396	\$13,836	-\$1,440	1997	\$36,312	\$37,308	-\$996
1978	\$12,900	\$14,736	-\$1,836	1998	\$39,948	\$38,172	+\$1,776
1979	\$12,900	\$15,876	-\$2,976	1999	\$43,848	\$38,664	+\$5,184
1980	\$12,900	\$17,688	-\$4,788	2000	\$48,684	\$39,516	+\$9,168
1981	\$13,308	\$20,052	-\$6,744	2001	\$53,304	\$40,896	+\$12,408
1982	\$14,292	\$22,116	-\$7,824	2002	\$55,704	\$42,000	+\$13,704
1983	\$15,276	\$23,448	-\$8,172	2003	\$56,100	\$42,588	+\$13,512
1984	\$16,428	\$24,144	-\$7,716	2004	\$57,276	\$43,524	+\$13,752
1985	\$17,232	\$24,996	-\$7,764	2005	\$58,704	\$44,664	+\$14,040
1986	\$18,948	\$25,872	-\$6,924	2006	\$60,168	\$46,224	+\$13,944
1987	\$20,796	\$26,280	-\$5,484	2007	\$61,672	\$47,703	+\$13,069
1988	\$22,488	\$27,228	-\$4,740	2008	\$63,214	\$49,087	+\$14,127
1989	\$24,036	\$28,320	-\$4,284	2009	\$64,794	\$51,099	+\$13,695
1990	\$24,996	\$29,676	-\$4,680	2010	\$66,414	\$50,741	+\$15,673
1991	\$26,268	\$31,224	-\$4,956	2011*	\$66,414	\$51,807	+\$14,607
1992	\$27,408	\$32,496	-\$5,088	2012*	\$66,414	\$53,672	+\$12,742
1993	\$28,668	\$33,444	-\$4,776	2013	\$67,742	\$54,799	+\$12,943
1994	\$30,384	\$34,380	-\$3,996				

** TRA law provided no benefit increases in 2011 and 2012.*

In this, and all later tables, we assume the retiree has an initial benefit of \$1,000 per month or \$12,000 per year. For the 1975 retirees that annual benefit would have increased to \$12,276 in 1976, but because of inflation the amount needed to keep pace with inflation was \$13,092. In a single year, the person has lost \$816 of purchasing power. In each succeeding year we apply the applicable inflation rate to the previous amount needed to keep pace with inflation to obtain the new result, and similarly we apply the post-retirement adjustment percentage to the previous benefit to obtain the new benefit level. It is not until 1998, 23 years after retirement, that the person’s annual benefit amount has comparable purchasing power to the benefit initially received. Actually, in 1997 the person’s purchasing power lagged by \$996. Due to the next adjustment, in 1998 the benefit amount was \$1,776 more than necessary to achieve the initial purchasing power. So 1998 is the “flip” point. From that date forward the annual benefit the individual receives is considerably more than needed to match the original purchasing power.

Further comments on the 1998 flip point may be helpful. First, that date is not influenced by the initial benefit we assumed, \$12,000 per year. The flip point depends only on the percentage adjustments that were provided compared to the inflation rates occurring over time. If we had assumed an individual began with a \$6,000 annual benefit the numbers would be half those shown in the table, while if the individual had a \$24,000 annual benefit the numbers would be twice those shown in the table. But the general result would be the same: it is not until 1998 that the individual finally has an annual benefit with the same (or greater) purchasing power as the original benefit received. Second, the result does not mean that by 1998 the individual is fully compensated for the prior losses of purchasing power. It simply means that no further harm will occur. It would take many years of benefit amounts in excess of that needed to maintain purchasing power to offset the prior shortfalls. But this ignores an essential point--the individual may no longer be alive or sufficiently healthy to enjoy these late windfalls. The year 2005, for example, would be 30 years after the individual's retirement date. A person who retired at age 60 would now be 90 if still alive, while the person who retired at age 65, the normal retirement age, would be 95, and in all likelihood would have preferred larger benefit amounts earlier in retirement rather than excess amounts later because of the time value of money, which is not taken into account by the analysis provided here.

Table 3
\$12,000 Initial Annual Benefit – 1980 Retirement Date

Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference	Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference
1980	\$12,000	\$12,000	--	1998	\$37,176	\$25,908	+\$11,268
1981	\$12,384	\$13,608	-\$1,224	1999	\$40,812	\$26,268	+\$14,544
1982	\$13,296	\$15,000	-\$1,704	2000	\$45,300	\$26,820	+\$18,480
1983	\$14,220	\$15,912	-\$1,692	2001	\$49,608	\$27,756	+\$21,852
1984	\$15,288	\$16,392	-\$1,104	2002	\$51,840	\$28,500	+\$23,340
1985	\$16,332	\$16,956	-\$624	2003	\$52,200	\$28,908	+\$23,292
1986	\$17,628	\$17,556	+\$72	2004	\$53,304	\$29,544	+\$23,760
1987	\$19,356	\$17,832	+\$1,524	2005	\$54,636	\$30,312	+\$24,324
1988	\$20,928	\$18,480	+\$2,448	2006	\$55,992	\$31,368	+\$24,624
1989	\$22,368	\$19,212	+\$3,156	2007	\$57,392	\$32,372	+\$25,020
1990	\$23,268	\$20,136	+\$3,132	2008	\$58,827	\$33,311	+\$25,516
1991	\$24,456	\$21,192	+\$3,264	2009	\$60,298	\$34,677	+\$25,621
1992	\$25,500	\$22,056	+\$3,444	2010	\$61,805	\$34,434	+\$27,371
1993	\$26,676	\$22,692	+\$3,984	2011*	\$63,041	\$35,157	+\$27,884
1994	\$28,272	\$23,328	+\$4,944	2012*	\$64,302	\$36,423	+\$27,879
1995	\$29,412	\$23,916	+\$5,496	2013	\$65,588	\$37,188	+\$28,400
1996	\$31,284	\$24,612	+\$6,672				
1997	\$33,792	\$25,320	+\$8,472				

* TRA law provided no benefit increases in 2011 and 2012.

Table 3 displays results for 1980 retirees. From 1980 until very recently (2011 and 2012), the MSRS and PERA general employee plans and TRA provided identical percentage adjustments, so for this table and many that follow, it makes no material difference which plan we assume the individual retired from. The 1980 retiree group started retired life with high inflation in 1981 and 1982 and benefit increases which did not keep up. But soon the Post Fund began paying increases in excess of inflation, and by 1986 this group had benefits which began to exceed the inflation matching benefit amount. This occurred much sooner for this group than for the 1975 retirees discussed earlier, because the 1980 retirees were working through the last half of the 1970s, when inflation was high, but the 1975 retirees were already retired and losing considerable purchasing power due to that inflation. The 1980 retirees had much less of a deficit to overcome, so for the 1980 retirees the flip point occurs much earlier, in 1986. That is the date where the retirees are no longer being harmed going forward, but given the prior shortfalls, it will take a few years of excess benefits after 1986 to compensate for past harm, and longer if we were to be realistic and take into account the time value of money.

When assessing how this 1980 retiree group did under the system of post-retirement adjustments in place, the answer depends on how long the individual lives in retirement. Given benefit payments during the first several years of retirement which were below that necessary to maintain constant purchasing power, individuals who died several years after retiring may have been better off if they had received inflation matching benefits. On the other hand, individuals who lived longer began to receive annual benefit amounts considerably in excess of that necessary to keep them whole. So those who lived long did well financially.

Table 4 (below) shows results for 1985 retirees. In retrospect, these individuals retired at a very opportune time. From 1985 to the current time, inflation has generally been modest while post-retirement adjustments were often generous. Since the very first post-retirement adjustment for this group in 1986, this group's benefits exceed the inflation indexed benefit. An individual with a \$12,000 annual benefit in 1985 would need a \$26,303 annual benefit in 2013 to have the same purchasing power, but that individual is now receiving \$48,514. That is 184% of the inflation matching amount.

Table 4
\$12,000 Initial Annual Benefit – 1985 Retirement Date

Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference	Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference
1985	\$12,000	\$12,000	--	2000	\$33,276	\$18,972	+\$14,304
1986	\$12,948	\$12,420	+\$528	2001	\$36,432	\$19,632	+\$16,800
1987	\$14,220	\$12,624	+\$1,596	2002	\$38,076	\$20,172	+\$17,904
1988	\$15,372	\$13,068	+\$2,304	2003	\$38,340	\$20,448	+\$17,892
1989	\$16,428	\$13,596	+\$2,832	2004	\$39,144	\$20,904	+\$18,240
1990	\$17,088	\$14,244	+\$2,844	2005	\$40,128	\$21,444	+\$18,684
1991	\$17,952	\$14,988	+\$2,964	2006	\$41,124	\$22,188	+\$18,936
1992	\$18,732	\$15,600	+\$3,132	2007	\$42,152	\$22,898	+\$19,254
1993	\$19,596	\$16,056	+\$3,540	2008	\$43,513	\$23,562	+\$19,951
1994	\$20,772	\$16,512	+\$4,260	2009	\$44,601	\$24,528	+\$20,073
1995	\$21,600	\$16,908	+\$4,692	2010	\$45,716	\$24,356	+\$21,360
1996	\$22,980	\$17,412	+\$5,568	2011*	\$46,630	\$24,867	+\$21,763
1997	\$24,816	\$17,916	+\$6,900	2012*	\$47,563	\$25,762	+\$21,801
1998	\$27,300	\$18,324	+\$8,976	2013	\$48,514	\$26,303	+\$22,211
1999	\$29,976	\$18,564	+\$11,412				

* TRA law provided no benefit increases in 2011 and 2012.

Table 5 displays the results for the 1990 cohort. This is another group that did well financially. In 1991 the post-retirement adjustment was only .1% less than the inflation rate, resulting in a very minor loss of purchasing power. But this was immediately reversed in 1992, when the provided adjustment was slightly above inflation. From 1992 onward, this group has been receiving benefits in excess of amounts necessary to maintain purchasing power. An individual who started 1990 with a \$12,000 annual benefit would need \$22,164 in 2013 to stay whole given inflation, but would be receiving \$33,861, an amount which is 153% of the inflation-matching amount.

Table 5
\$12,000 Initial Annual Benefit - 1990 Retirement Date

Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference	Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference
1990	\$12,000	\$12,000	--	2002	\$26,760	\$16,980	+\$9,780
1991	\$12,612	\$12,624	-\$12	2003	\$26,952	\$17,220	+\$9,732
1992	\$13,152	\$13,140	+\$12	2004	\$27,516	\$17,604	+\$9,912
1993	\$13,764	\$13,524	+\$240	2005	\$28,200	\$18,060	+\$10,140
1994	\$14,580	\$13,896	+\$684	2006	\$28,908	\$18,696	+\$10,212
1995	\$15,168	\$14,244	+\$924	2007	\$29,631	\$19,294	+\$10,337
1996	\$16,140	\$14,664	+\$1,476	2008	\$30,372	\$19,854	+\$10,518
1997	\$17,436	\$15,084	+\$2,352	2009	\$31,131	\$20,668	+\$10,463
1998	\$19,188	\$15,432	+\$3,756	2010	\$31,909	\$20,523	+\$11,386
1999	\$21,072	\$15,636	+\$5,436	2011*	\$32,547	\$20,954	+\$11,593
2000	\$23,388	\$15,984	+\$7,404	2012*	\$33,198	\$21,708	+\$11,490
2001	\$25,608	\$16,536	+\$9,072	2013	\$33,861	\$22,164	+\$11,697

* TRA law provided no benefit increases in 2011 and 2012.

Table 6 shows the 1995 retiree results. Like the 1985 retirees, this is another group which from the first post-retirement adjustment to the current time has been receiving annual benefit amounts in excess of the amount needed to maintain original purchasing power. The 1995 retirees started retirement just prior to the very high post fund adjustments of the late 1990s and early 2000s. This group's current benefits are 144% of the inflation-matching amount.

Table 6
\$12,000 Initial Annual Benefit – 1995 Retirement Date

Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference	Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference
1995	\$12,000	\$12,000	--	2005	\$22,308	\$15,204	+\$7,104
1996	\$12,768	\$12,348	+\$420	2006	\$22,872	\$15,744	+\$7,128
1997	\$13,788	\$12,708	+\$1,080	2007	\$23,444	\$16,248	+\$7,196
1998	\$15,180	\$12,996	+\$2,184	2008	\$24,030	\$16,719	+\$7,311
1999	\$16,668	\$13,164	+\$3,504	2009	\$24,631	\$17,404	+\$7,227
2000	\$18,504	\$13,452	+\$5,052	2010	\$25,247	\$17,282	+\$7,965
2001	\$20,256	\$13,932	+\$6,324	2011*	\$25,752	\$17,645	+\$8,107
2002	\$21,168	\$14,304	+\$6,864	2012*	\$26,267	\$18,280	+\$7,987
2003	\$21,324	\$14,508	+\$6,816	2013	\$26,792	\$18,664	+\$8,128
2004	\$21,768	\$14,820	+\$6,948				

* TRA law provided no benefit increases in 2011 and 2012.

Table 7
\$12,000 Initial Annual Benefit – 2000 Retirement Date

Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference	Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference
2000	\$12,000	\$12,000	--	2008	\$15,583	\$14,897	+\$686
2001	\$13,140	\$12,420	+\$720	2009	\$15,973	\$15,508	+\$465
2002	\$13,728	\$12,756	+\$972	2010	\$16,372	\$15,399	+\$973
2003	\$13,824	\$12,936	+\$888	2011	\$16,699	\$15,722	+\$977
2004	\$14,112	\$13,224	+\$888	2012*	\$17,033	\$16,288	+\$745
2005	\$14,472	\$13,560	+\$912	2013*	\$17,374	\$16,630	+\$744
2006	\$14,832	\$14,028	+\$804				
2007	\$15,203	\$14,477	+\$726				

* TRA law provided no benefit increases in 2011 and 2012.

Table 7 shows results for the year 2000 retirees. A glance back at the graph of post-retirement adjustments and inflation, early in this memo, indicates that this group had an initial adjustment that was in excess of inflation. Since then, adjustments and inflation have been fairly modest, with inflation exceeding adjustments in some years while post-retirement adjustments modestly exceeded inflation in others. As a result there has been very little change for this group over time, as indicated by the difference column. Given the assumed \$12,000 annual benefit at retirement, after the first post-retirement adjustment the annual benefit would be \$720 more than needed to maintain purchasing power. Over the years that changes very little. In each year the benefit being received is modestly above that necessary to maintain original purchasing power. The most recent benefit amount, \$17,374, is about 104% of the amount needed to maintain original purchasing power.

It should be mentioned that results will differ slightly depending upon whether the retiree is from the MSRS, PERA, or TRA plan. There was no need to mention this refinement in discussing most previous tables because the general results were not dependent on the specific plan. But the 2000 retiree cohort retired more recently than the previous groups covered in this memo, so the differences between the post-retirement adjustments paid in 2011 and 2012, due to post-retirement adjustment revisions in the 2010 Financial Sustainability provisions, begin to make noticeable differences because the total period in retirement is shorter for this group. In 2011 and 2012, MSRS provided 2% adjustments (which is the adjustment used in the table), while PERA-General provided 1% adjustments and TRA provided none. On January 1, 2013, TRA began paying a 2% adjustment, the same as that applicable to MSRS-General, while PERA-General will continue to pay a 1% adjustment. PERA-General will provide 1% adjustments until financial stability is restored, defined in law for that plan as when two consecutive actuarial valuations show a funding ratio of at least 90% based on market value. For a TRA member retiring in 2000 with a \$12,000 annual benefit, the benefit received in 2011 and 2012 would have been \$16,372, the same as the amount indicated for 2010 in the table. For 2013, TRA would have increased the benefit by 2%, providing a \$16,699 benefit. But by 2013 the amount needed to keep pace with inflation would be \$16,630, so the TRA benefit would have exceeded the inflation- matching amount by only \$69. So the margin would be getting very slim for the TRA retiree. Another year or two of adjustments even modestly less than inflation would cause the TRA retiree to start receiving annual benefits with less purchasing power than when the person retired in 2000. The PERA-General retiree, who is now receiving 1% adjustments, is marginally ahead of the TRA retiree but behind the MSRS retiree. Going forward, retirees from all these plans are at risk because post-retirement increases are likely to be less than inflation. Of the groups covered here, the PERA-General retirees are the most vulnerable because of the likelihood of only 1% adjustments in the coming years.

Table 8
\$12,000 Initial Annual Benefit – 2005 Retirement Date
(\$1,000 Initial Monthly Benefit)

Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference	Year	Annual Benefit Amount	Amount Needed to Match Original Purchasing Power	Difference
2005	\$12,000	\$12,000	--	2010	\$13,577	\$13,634	-\$57
2006	\$12,300	\$12,420	-\$120	2011*	\$13,849	\$13,920	-\$71
2007	\$12,608	\$12,817	-\$209	2012*	\$14,126	\$14,421	-\$295
2008	\$12,923	\$13,189	-\$266	2013	\$14,409	\$14,724	-\$315
2009	\$13,246	\$13,730	-\$484				

* TRA law provided no benefit increases in 2011 and 2012.

Table 8 displays results for the year 2005 retirees. Glancing back to the inflation/post-retirement adjustment graph indicates that in the first few years of retirement the adjustments were less than inflation. This group has never recovered. In each year following retirement the benefit amount being received is less than that needed to maintain purchasing power, but the difference column shows that the shortfalls are not large, at least not yet.

Again, results must be modified somewhat to fully recognize the difference in 2011 and 2012 post-retirement adjustments between the MSRS plan and the PERA and TRA plans, and PERA's lower adjustment going forward. The TRA benefit in 2011 and 2012 would have remained at the 2010 level, a benefit of \$13,577, which would have been increased in 2013 by 2%, to \$13,849 - noticeably below the \$14,724 benefit indicated in 2013 as necessary to maintain purchasing power. For the TRA retiree, instead of a 2013 annual benefit that is \$295 too low to maintain purchasing power, the annual benefit would be \$875 too low. The PERA result would be between that indicated for MSRS and TRA.

Therefore, all retirees from the 2005 cohort from the plans covered here currently have a benefit with less purchasing power than when they retired; that will worsen going forward if inflation exceeds the post-retirement adjustments that will be provided, which is likely. The most vulnerable retirees will be from PERA-General if the adjustments provided by that plan continue to lag behind those provided by MSRS-General and TRA.

Observations

Based on this review, a few observations can be made:

- Because of changes in post-retirement adjustment procedures over the years and different inflation experience, it is not possible to draw any universal conclusion regarding the purchasing power of past retirees. Depending on when the individuals retired, some cohorts have benefits considerably in excess of that needed to maintain purchasing power, while others have considerably less. For some groups, a general assessment would depend on how long the individuals live in retirement, because generous benefits late in retirement are of no value to those who do not live to enjoy them.

Very generous benefit adjustments occurred during the approximate 1982-2002 period, adjustments which were often considerably in excess of inflation. Groups that retired during that period appear now have benefits considerably in excess of that necessary to maintain purchasing power, although that is less true at the margins. The 1975 cohort lost considerable purchasing power prior to the beginning of generous adjustments during the 1980s. Despite later generous benefit adjustments, it took a few decades before their purchasing power recovered. The 1980 cohort lost purchasing power during the first few years of retirement, not regaining the initial purchasing power until 1986. The 2000 retiree cohort retired at the very end of this golden period. They had an initial boost, creating benefits somewhat in excess of the inflation matching benefit, but this modest excess is eroding and is likely to soon disappear.

- Post-retirement adjustment experience during the early portion of retirement plays a critical role in how well a group will fair during the entire retirement period. If purchasing power is permitted to seriously erode during the early years of retirement, the retiree's purchasing power may never recover. On the other hand, if overly generous adjustments are received in the early years of retirement, it might take a prolonged period of deficient adjustments before purchasing power falls back that that of the original benefit.

If individuals were to receive inflation matching adjustments during the early portion of the retirement period, a continuation of that practice will maintain the purchasing power of the benefit received from the plan throughout the retiree's life. If, during the first several years of retirement the value of the benefit is permitted to seriously erode due to no adjustments or adjustments which seriously lag inflation, the retiree's purchasing power may never recover. Implementing inflation-matching adjustments at some later point only serves to lock in the prior losses. Even if later there were a prolonged period of adjustments which exceed inflation, it may take years before the annual benefit has the same purchasing power as the initial benefit, because those adjustments are being applied to a base that was first permitted to erode. This is demonstrated by the 1975 retiree cohort reviewed in this memo, which lost considerably purchasing power in the initial years of retirement and which did not again have an annual benefit with the same purchasing power until 23 years after they retired.