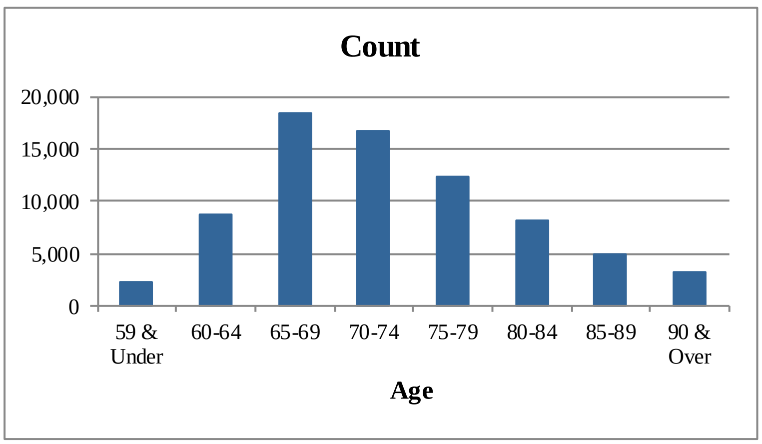
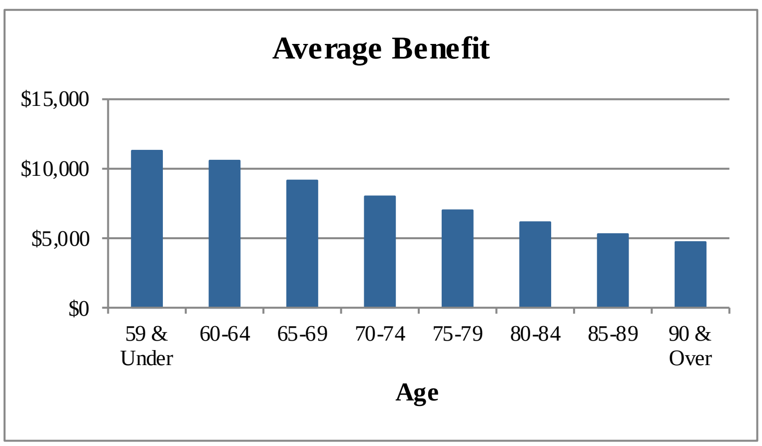
RETIRED MEMBERS
As of June 30, 2017 for the June 30, 2018 Valuation

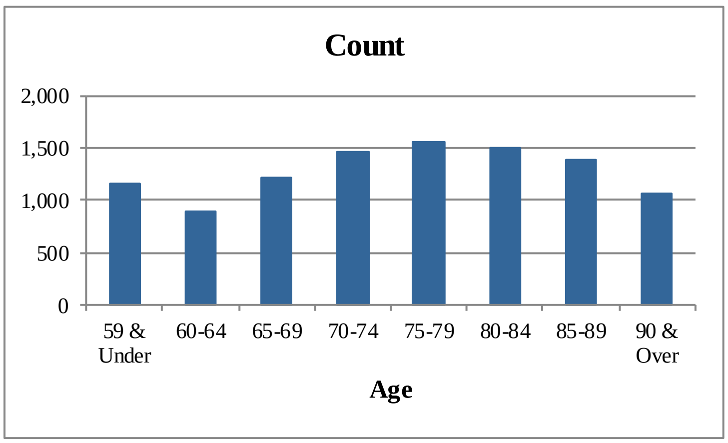
	Count of Members			Annual Benefits		
Age	Male	Female	Total	Male	Female	Total
59 & Under	1,043	1,208	2,251	$ 15,950,870	$ 13,339,952	$ 29,290,822
60-64	3,432	5,324	8,756	51,702,354	58,631,884	110,334,238
65-69	6,673	11,654	18,327	91,824,179	114,183,807	206,007,986
70-74	5,682	11,095	16,777	67,281,170	96,836,996	164,118,166
75-79	3,914	8,496	12,410	39,460,316	64,558,222	104,018,538
80-84	2,434	5,663	8,097	21,330,316	36,827,945	58,158,261
85-89	1,378	3,637	5,015	10,250,817	20,359,635	30,610,451
90 & Over	707	2,530	3,237	5,403,915	12,663,865	18,067,780
Total	25,263	49,607	74,870	$ 303,203,937	$ 417,402,306	$ 720,606,242

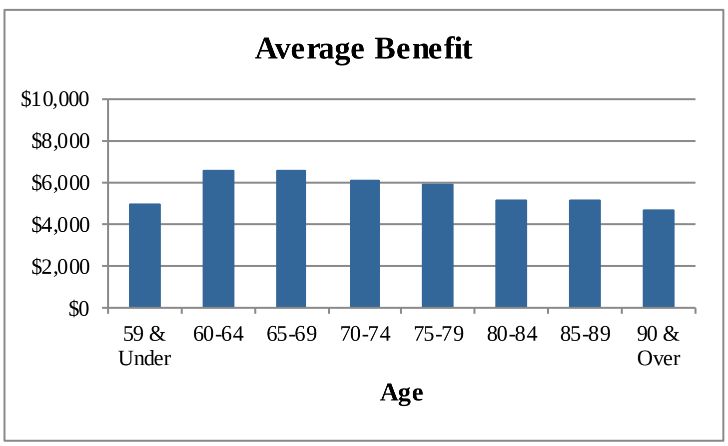




BENEFICIARIES RECEIVING BENEFITS
As of June 30, 2017 for the June 30, 2018 Valuation

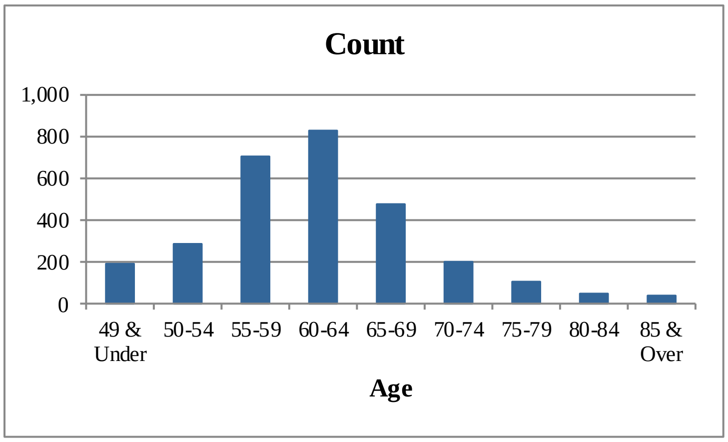
	Count of Members			Annual Benefits		
Age	Male	Female	Total	Male	Female	Total
59 & Under	347	820	1,167	$ 1,676,279	$ 4,850,568	$ 6,526,847
60-64	201	688	889	1,263,188	5,415,925	6,679,113
65-69	313	897	1,210	2,213,738	7,054,468	9,268,206
70-74	357	1,110	1,467	2,051,247	8,282,338	10,333,584
75-79	323	1,232	1,555	1,686,476	8,823,010	10,509,485
80-84	300	1,198	1,498	1,467,481	7,335,291	8,802,772
85-89	216	1,172	1,388	1,019,709	7,175,284	8,194,994
90 & Over	124	932	1,056	504,313	5,106,029	5,610,342
Total	2,181	8,049	10,230	$ 11,882,432	$ 54,042,912	$ 65,925,344

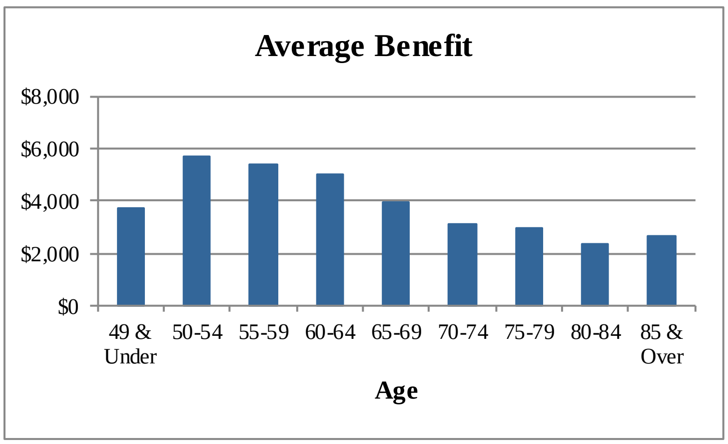




DISABLED MEMBERS
As of June 30, 2017 for the June 30, 2018 Valuation

	Count of Members			Annual Benefits		
Age	Male	Female	Total	Male	Female	Total
49 & Under	72	124	196	$ 331,492	$ 458,103	$ 789,596
50-54	126	164	290	938,623	889,305	1,827,928
55-59	302	396	698	2,208,726	2,004,614	4,213,340
60-64	350	480	830	2,295,988	2,478,721	4,774,708
65-69	220	253	473	1,136,727	982,582	2,119,309
70-74	89	108	197	341,063	334,815	675,879
75-79	41	70	111	157,546	201,678	359,224
80-84	17	35	52	42,344	92,940	135,285
85 & Over	9	34	43	25,500	98,171	123,670
Total	1,226	1,664	2,890	$ 7,478,010	$ 7,540,929	$ 15,018,940





ADDITIONAL IN PAY INFORMATION
As of June 30, 2017 for the June 30, 2018 Valuation

Schedule of Average Benefit Payments [1]

	Years of Credited Service						
For the Year Ended June 30, 2018	< 10 [2]	10 - 14	15 - 19	20 - 24	25 - 29	30 +	Total
Average Monthly Defined Benefit	$150	$288	$400	$558	$784	$1,265	$633
Average Monthly DC Annuity [3]	$46	$106	$144	$201	$273	$477	$232
Average Final Average Salary [4]	$25,035	$25,253	$27,427	$29,637	$33,189	$40,726	$30,974
Number of Benefit Recipients	3,113	14,854	21,774	17,528	13,272	17,449	87,990

[1]Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
[2]Members with less than 10 years of service are: (1) a member receiving a disability benefit from INPRS; (2) a member who has at least eight years of creditable service as a county clerk, county auditor, county recorder, county treasurer, county sheriff or county coroner eligible for a normal retirement after reaching age 65 (applies to only members retiring after June 30, 2002); (3) a member who has at least eight years of creditable service as a state auditor, state treasurer, or secretary of state (whose term commences after the November 5, 2002 election).
[3]This represents those retirees who elected to receive their ASA as a supplemental monthly payment in addition to the monthly Defined Benefit payment.
[4]Excludes the 2,911 in-pay members who are missing a final average salary in the data.

ADDITIONAL IN PAY INFORMATION
As of June 30, 2017 for the June 30, 2018 Valuation

Schedule of Benefit Recipients by Type of Benefit Option [1]

	Number of Recipients by Benefit Option								
Amount of Monthly Benefit (in dollars)	5-Year Certain & Life[2]	Straight Life	Joint with 100% Survivor Benefits	Joint with Two-Thirds Survivor Benefits	Joint with One-Half Survivor Benefits	Social Security Integration	Survivors	Disability	Total Benefit Recipients
1-500	11,677	8,759	7,254	781	1,806	255	6,267	2,080	38,879
501-1,000	7,291	8,521	4,889	1,017	2,144	143	2,756	574	27,335
1,001-1,500	2,588	3,918	2,742	639	1,156	73	811	169	12,096
1,501-2,000	991	1,808	1,192	381	508	71	260	53	5,264
2,001-2,500	413	881	568	166	293	58	86	6	2,471
2,501-3,000	183	358	224	89	135	28	29	3	1,049
Over 3,000	110	347	189	103	112	9	21	5	896
Total	23,253	24,592	17,058	3,176	6,154	637	10,230	2,890	87,990

[1]Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
[2]Includes members who elected a modified cash refund plus 5-year certain & life.

ADDITIONAL IN PAY INFORMATION
As of June 30, 2017 for the June 30, 2018 Valuation

Schedule of Retirees and Beneficiaries [1]

	Added to Rolls		Removed from Rolls		Rolls - End of Year				
	Number	Annual Benefits [2]	Number	Annual Benefits [2]	Number	Total Annual Benefits [2]	Percent Change In Total Annual Benefits	Average Annual Benefit	Percent Change In Average Annual Benefit
2018 [3]	5,249	$55,236	2,389	$15,609	87,990	801,551	5.8%	9,110	2.3%
2017 [3]	4,855	49,980	2,913	18,808	85,130	757,851	3.9	8,902	1.5
2016 [3]	6,478	78,487	2,488	15,597	83,188	729,366	9.9	8,768	4.6
2015 [3]	5,489	60,538	2,241	14,107	79,198	663,767	7.4	8,381	3.0
2014 [3]	0	0	0	0	75,950	617,977	0.0	8,137	0.0
2013	5,231	55,523	2,273	13,898	75,950	617,977	7.2	8,137	3.0
2012	4,751	49,766	2,139	12,540	72,992	576,678	6.8	7,901	3.0
2011	5,402	56,185	2,188	11,698	70,380	539,747	8.3	7,669	3.4
2010	4,827	39,214	2,760	19,022	67,166	498,199	4.3	7,417	1.1
2009	6,047	55,726	3,372	19,103	65,099	477,553	9.3	7,336	4.9

[1]Dollar amounts are in thousands except for the average annual benefit.
[2] Annual benefits includes members selecting an annuity for their ASA. End of year annual benefits are not equal to prior end of year annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and COLA increases.
[3]The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Definitions

Fiscal year	Twelve month period ending June 30.
Participation	All full time employees of the State of Indiana and all full time employees of Political Subdivisions which have adopted the plan become members of PERF upon date of hire.
Average monthly earnings	The monthly average of earnings during 20 quarters (in groups of 4 consecutive contribution quarters) preceding retirement that produce the highest such average. Earnings include basic salary, the member's 3% mandatory contribution paid by the employer, the member's salary reduction agreement under Section 125, 430(b), or 457 of the Internal Revenue Code, and up to $2,000 of additional compensation received from the employer in anticipation of the member's termination or retirement.
Member contributions	Each member is required to contribute to an Annuity Savings Account at the rate of 3% of pay (unless the employer has opted to make the contribution for the employee). These contributions are kept on deposit and credited with interest based on the investment elections of each member until such time as they are withdrawn or annuitized by the member. The Annuity Savings Account benefit is in addition to the annuity benefits provided by employer contributions. During FYE 2018, the Annuity Savings Accounts were completely separated from the defined benefit plan, and so are no longer relevant to the valuation process.
Minimum pension benefit	The minimum pension benefit paid to a member with 10 or more years of creditable service receiving any pension benefit is $180 per month.

Eligibility for Benefits

Deferred vested	10 or more years of vesting service and no longer active.
Disability retirement	5 or more years of vesting service and qualified for Social Security disability benefits or federal Civil Service disability benefits.
Early retirement	Age 50 with 15 or more years of vesting service.

Normal retirement	Earliest of: - Age 65 with 10 or more years of vesting service - Age 60 with 15 or more years of vesting service - Age 55 with sum of age and vesting service equal to 85 or more.
Pre-retirement death	15 or more years of vesting service if death occurs in service. If death occurs after separating from service, age 50 with 15 or more years of vesting service.

Monthly Benefits Payable

Normal retirement	The normal retirement benefit is a pension payable for life with 60 months guaranteed and is equal to 1.1% of average monthly earnings multiplied by years of creditable service earned. The minimum monthly benefit is $180 if the member has at least 10 years of creditable service.
Early retirement	The early retirement benefit is the accrued retirement benefit determined as of the early retirement date and payable commencing at the normal retirement date. A member may elect to have the benefit commence prior to normal retirement provided the benefit is reduced by 1/10% for each of the first 60 months and by 5/12% for each of the next 120 months that the benefit commencement date precedes the normal retirement date. The minimum monthly benefit is $180 if the member has at least 10 years of creditable service.
Deferred retirement	The termination benefit is the accrued retirement benefit determined as of the termination date and payable commencing at age 65. If the member has 15 or more years of creditable service, then the member may elect to receive a reduced early retirement benefit prior to age 65. The minimum monthly benefit is $180 if the member has at least 10 years of creditable service.
Disability	The disability retirement benefit is the accrued retirement benefit determined as of the disability date and payable commencing the month following disability date without reduction for early commencement. The minimum monthly benefit is $180.
Pre-retirement death	The spouse or dependent beneficiary is entitled to receive the monthly life benefit under the assumption that the member retired on the later of age 50 or the date before the date of death and elected the joint and full survivor option. The minimum monthly benefit is $180 if the member has at least 10 years of creditable service.

Cost-of-Living-Adjustments	The employer-funded monthly pension benefits for members in pay status are increased periodically to preserve purchasing power that is diminished due to inflation. Such increases are not guaranteed by Statute and will only be provided by legislative action. A "13th check" was paid to each member in pay status during fiscal year 2018 and 2019. The amount of the 13th check varied based on the years of creditable service the member had earned prior to retirement. Legislation passed in the 2018 legislative session creates a funding mechanism to provide for future benefit increases or 13th checks. The INPRS Board has the authority to have employers contribute up to 1% of member pay into the fund. Increases or payments are made upon passed legislation subject to the availability of funds to provide the benefit.
Forms of payment	
a. 5-Year Guaranteed Beneficiary Benefit (Option 10)	Member will receive a monthly benefit for the rest of their life. If the member dies before receiving benefits for 5 years, the beneficiary will receive that monthly benefit for the remainder of those 5 years or a lump sum distribution equal to the present value of those payments. After 5 years, there are no payments available to the beneficiary.
b. Benefit with No Guarantee (Option 20)	Member will receive a monthly benefit for life, but there are no monthly payments to anyone after death. However, the balance of the Annuity Savings Account will be distributed to the beneficiary or estate if it is larger than the payments previously made to the member.
c. Joint with Full Survivor Benefits (Option 30)	Member will be paid a monthly benefit for life. After death, the same monthly benefit will be paid to the beneficiary for their lifetime.
d. Joint with Two-Thirds Survivor Benefits (Option 40)	Member will be paid a monthly benefit for life. After death, two-thirds (2/3) of the benefit will be paid to the beneficiary for their lifetime.
e. Joint with One-Half Survivor Benefits (Option 50)	Member will be paid a monthly benefit for life. After death, one-half (1/2) of the benefit will be paid to the beneficiary for their lifetime.

f. Integration with Social Security (Option 61)	A member who retires between ages 50 and 62 may integrate the PERF monthly pension benefit with the member's estimated Social Security benefits. This does not affect the amount of the benefit received from the Social Security Administration. Before age 62, the member's benefits will equal the sum of the member's Social Security estimate, multiplied by actuarial factors, and the member's early retirement benefit. This will result in the member receiving a larger monthly benefit payment before age 62. After age 62, the member's benefit will equal the difference between the member's Social Security estimate, multiplied by actuarial factors, and the member's pre-62 monthly pension benefit. Depending upon the member's estimated Social Security disbursement, benefit payments may be greatly reduced or terminated at age 62.
g. 5-Year Guaranteed Beneficiary Benefit with ASA Cash Refund (Option 71)	In order to select this option, the member must choose to combine at least a portion of their ASA with their lifetime monthly pension benefit. If selected, the member will receive a monthly benefit for the rest of their life. If the member dies before receiving payments for 5 years, the beneficiary will receive the pension portion of their monthly benefit for the remainder of those 5 years or a lump sum equal to the present value of those remaining payments. Also, upon death (whether death occurs before or after receiving 5 years of benefits), the beneficiary may receive any remaining balance of the Annuity Savings Account.

Changes in Plan Provisions since the Prior Year

Legislation passed in the 2018 legislative session creates a funding mechanism to provide for future benefit increases or 13th checks. The INPRS Board has the authority to have employers contribute up to 1% of member pay into the fund. Increases or payments are made upon passed legislation subject to the availability of funds to provide the benefit.

ACTUARIAL METHODS

1. Actuarial Cost Method

The actuarial cost method is Entry Age Normal - Level Percent of Payroll.

The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date.

For funding, gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 20-year period with level payments each year. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 20-year period (gain or loss bases established prior to June 30, 2016 were amortized over 30 years and will continue to be amortized over 30 -year period). However, when the plan is at or above 100% funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payments each year. Effective June 30, 2018, the bases are calculated without regards to the COLA provisions. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities.

For accounting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants. Gains and losses occurring from investment experience different than assumed are amortized into expense over a 5-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Member census data as of June 30, 2017 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2017 and June 30, 2018. The valuation results from June 30, 2017 were rolled-forward to June 30, 2018 to reflect benefit accruals during the year less benefits paid.

2. COLA Surcharge

The COLA Surcharge is developed by determining the assets needed at the start of the next biennium to fund the post-retirement benefit increases anticipated to be granted in that biennium. This amount is divided by the present value of expected payroll over which the accumulations will occur.

3. Asset Valuation Method

Actuarial Value of Assets is equal to a five-year smoothing of gains and losses on the Market Value of Assets subject to a 20% corridor.

6. Miscellaneous adjustments	For active and inactive vested members, a salary load of $400 was added to approximate the impact on average monthly earnings of unused sick leave accumulated at termination of employment.

Changes in Assumptions since the Prior Year

The COLA assumption was changed due to passage of Senate Enrolled Act No. 373. In lieu of a 1% COLA occurring beginning on January 1, 2020, we now assume that the COLA will be replaced by a 13th check for 2020 and 2021. The COLA assumption thereafter, would be 0.4% beginning on January 1, 2022, changing to 0.5% beginning on January 1, 2034, and ultimately 0.6% beginning on January 1, 2039.

Data Adjustments

Active and retired member data is reported as of June 30. Member census data as of June 30, 2017 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2017 and June 30, 2018. Standard actuarial roll-forward techniques were then used to project the total pension liability computed as of June 30, 2017 to the June 30, 2018 measurement date.

The member census data and the asset information for this valuation were furnished as of June 30, 2018. We did not audit the information provided, but we did review it thoroughly for reasonableness and compared it with the prior year's submission for consistency.

Actives and inactives with no date of birth are assumed to be the average age of the member population with their respective status. Additionally, payroll for new hires is annualized, and actives missing a salary are assumed to earn the average active salary amount.

Other Technical Valuation Procedures

Salary increases are assumed to apply to annual amounts.

Decrements are assumed to occur at the beginning of the year. Standard adjustments are made for multiple decrements.

No actuarial liability is included for participants who terminated without being vested prior to the valuation date, except those due a refund of contributions.

Accrued Service	Service credited under the plan that was rendered before the date of the actuarial valuation.
Actuarial Assumptions	Estimates of future experience with respect to demographic or economic events. Demographic assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement plan benefits between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method."
Actuarial Equivalent	A single amount or series of amounts of equal value to another single amount or series of amounts computed on the basis of a given set of actuarial assumptions.
Actuarial Accrued Liability	The difference between the actuarial present value of plan benefits and the actuarial value of future normal costs. Also referred to as "accrued liability" or "actuarial liability."
Actuarial Present Value	The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
Amortization	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.
Experience Gain (Loss)	The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.
Normal Cost	The actuarial present value of retirement plan benefits allocated to the current year by the actuarial cost method.
Unfunded Actuarial Accrued Liability	The difference between actuarial liability and the actuarial value of assets. Sometimes referred to as "unfunded accrued liability" or "unfunded liability". Most retirement plans have unfunded actuarial liability. They arise anytime new benefits are added and anytime an actuarial loss is realized.