

Hewitt

Actuarial Report

Northwest Territories  
Legislative Assembly  
Retiring Allowances  
Act

As of  
April 1, 2000



Hewitt Associates

## Actuarial Report

### Northwest Territories Legislative Assembly Retiring Allowances Act

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Argentina	China	Ireland	Philippines	Switzerland
Australia	Czech Republic	Italy	Poland	Thailand
Austria	France	Japan	Puerto Rico	United Kingdom
Belgium	Germany	Malaysia	Singapore	United States
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Canada	India	Netherlands	Spain	
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## Preparation of this Actuarial Valuation

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### Northwest Territories Legislative Assembly Retiring Allowances Act.

This report on the actuarial valuation of the Northwest Territories Legislative Assembly Retiring Allowances Act ('the Plan') as of April 1, 2000 has been prepared for the Board of Management of the Northwest Territories Legislative Assembly, who is the Administrator, for the purpose of determining the Plan's:

1. going concern financial position;
2. wind-up position;
3. maximum contributions for the year following the valuation date in accordance with the *Income Tax Act*.

In conducting the valuation, we have used personnel information obtained from the Board of Management of the Northwest Territories Legislative Assembly as of April 1, 2000, the financial statements prepared by CIBC Mellon as of March 31, 2000, and the actuarial assumptions and methods described in the actuarial assumptions section of this report.

It is our opinion that:

1. the latest date on which the next valuation should be performed is April 1, 2004;
2. the data on which this report is based are sufficient and reliable for the purpose of the valuation;
3. the assumptions used are, in aggregate, appropriate for the purpose of the going concern valuation; emerging experience differing from assumptions will result in gains or losses which will be revealed in future valuations and may cause changes in future contribution levels;
4. the value of the Plan assets would be greater than the actuarial liabilities if the Plan were wound up on the valuation date; and
5. the methods employed in the valuation are appropriate for the purposes of the going concern valuation.

We hereby certify that:

1. the calculations in this report have been prepared in accordance with Subparagraphs 147.2(2)(a)(iii) and (iv) of the *Income Tax Act*; and
2. there is excess surplus in this Plan as of the valuation date.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice.

Hewitt Associates



Michael Y. Masuhara  
Fellow of the Canadian Institute of Actuaries



Robert J.W. Vandersanden  
Fellow of the Canadian Institute of Actuaries

September 2000

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## Definition of Terms

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Accrued Liability -	The actuarial present value of the benefits earned by participants in respect of their service prior to the valuation date. For active participants, the accrued benefits reflect anticipated future salary increases.
Actuarial Value of Assets	<p>The actuarial value of assets equals the smoothed market value of assets adjusted for amounts payable and receivable at the valuation date.</p> <p>The smoothed market value is calculated by adjusting the market value to recognize the difference between actual and expected investment earnings each year over a four year period. Expected investment earnings are calculated by assuming the fund assets and cash flows will earn the going-concern valuation interest rate each year.</p>
Surplus	Amount by which the Actuarial Value of Assets exceeds the Accrued Liability. Results from experience gains arising when actual results are more favourable than those expected under the actuarial assumptions.
Unfunded Accrued Liability	Amount by which the Accrued Liability exceeds the Actuarial Value of Assets. Results from liabilities established at the time the plan is amended and from experience deficiencies arising from the difference between actual and expected experience under the plan according to actuarial assumptions.
Participant Salary Base	The salary for those participants who are under the assumed retirement age.
Current Service Cost	<p>The actuarial present value of the benefits expected to be earned in respect of service during the year following the valuation date. For funding purposes, the Current Service Cost is expressed as a percentage of the Participant Salary Base.</p> <p>The Current Service Cost is also known as the Normal Cost.</p>

## Definition of Terms (continued)

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Maximum Eligible Contribution	<p>If Surplus exceeds the lesser of 1 and 2 below:</p> <ol style="list-style-type: none"><li>1. 20% of the Accrued Liability;</li><li>2. the greater of:<ol style="list-style-type: none"><li>a. twice the Total Current Service Cost;</li><li>b. 10% of the Accrued Liability;</li></ol></li></ol> <p>then the excess surplus must be used to offset the Current Service Cost.</p>
<b>Personnel</b>	
Active Participants	All members of the Legislative Assembly
Retired Participants	Members who have retired as of the valuation date and are in receipt of a pension from the trust fund.
Terminated Vested Participants	Members who are no longer members of the Legislative Assembly as of the valuation date and who are entitled to a monthly pension commencing at normal retirement age.
Terminated Non-Vested Participants	Members who are no longer members of the Legislative Assembly as of the valuation date and who are not yet entitled to a monthly pension commencing at normal retirement age. Under certain conditions, these members may see their prior service reinstated if re-elected.

## Summary

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Going Concern Valuation Results	As of April 1, 2000	As of April 1, 1996
<b>Past Service</b>		
Actuarial Value of Assets	\$ 16,271,700	\$ 11,205,000
Less: Accrued Liability	<u>9,207,500</u>	<u>8,759,400</u>
Surplus (Unfunded Accrued Liability)	\$ 7,064,200	\$ 2,445,600
As a % of Actuarial Value of Assets	43.4%	21.8%
<b>Current Service</b>		
Total Current Service Cost	\$ 376,400	\$ 517,000
Less: estimated member contributions	<u>96,300</u>	<u>173,100</u>
Assembly current service cost	280,100	343,900
As a % of Participant Salary Base	16.9%	17.9%
Participant Salary Base	\$ 1,660,000	\$ 1,923,600

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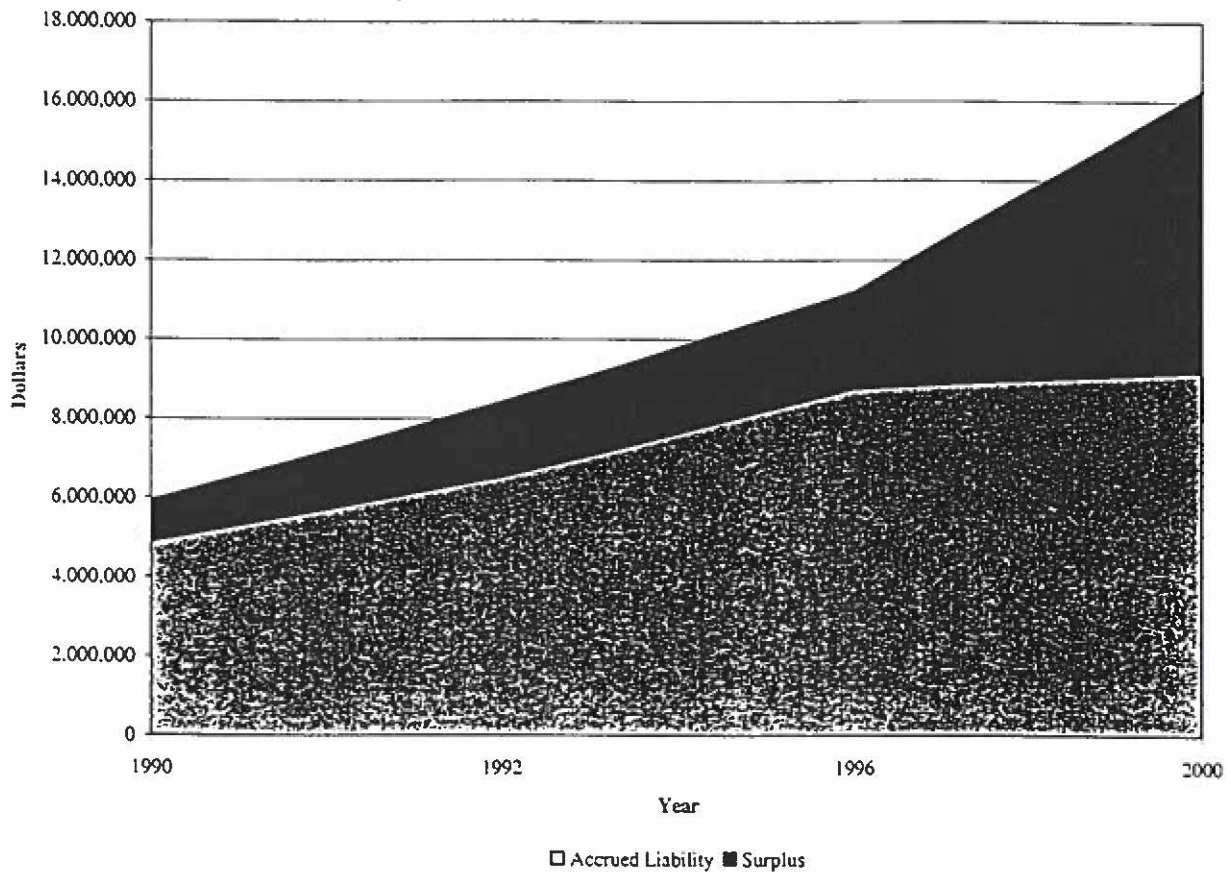
## Summary (continued)

Personnel Data	As of April 1, 2000	As of April 1, 1996
Active Participants	19	24
Retired Participants	31*	27
Terminated Vested Participants	1	0
Terminated Non-Vested Participants	<u>4</u>	<u>7</u>
Total	55	58

\* Includes one child receiving a dependent benefit payable to age of majority or age 25, if attending school, and a member whose pension was suspended on being re-elected.

## Summary (continued)

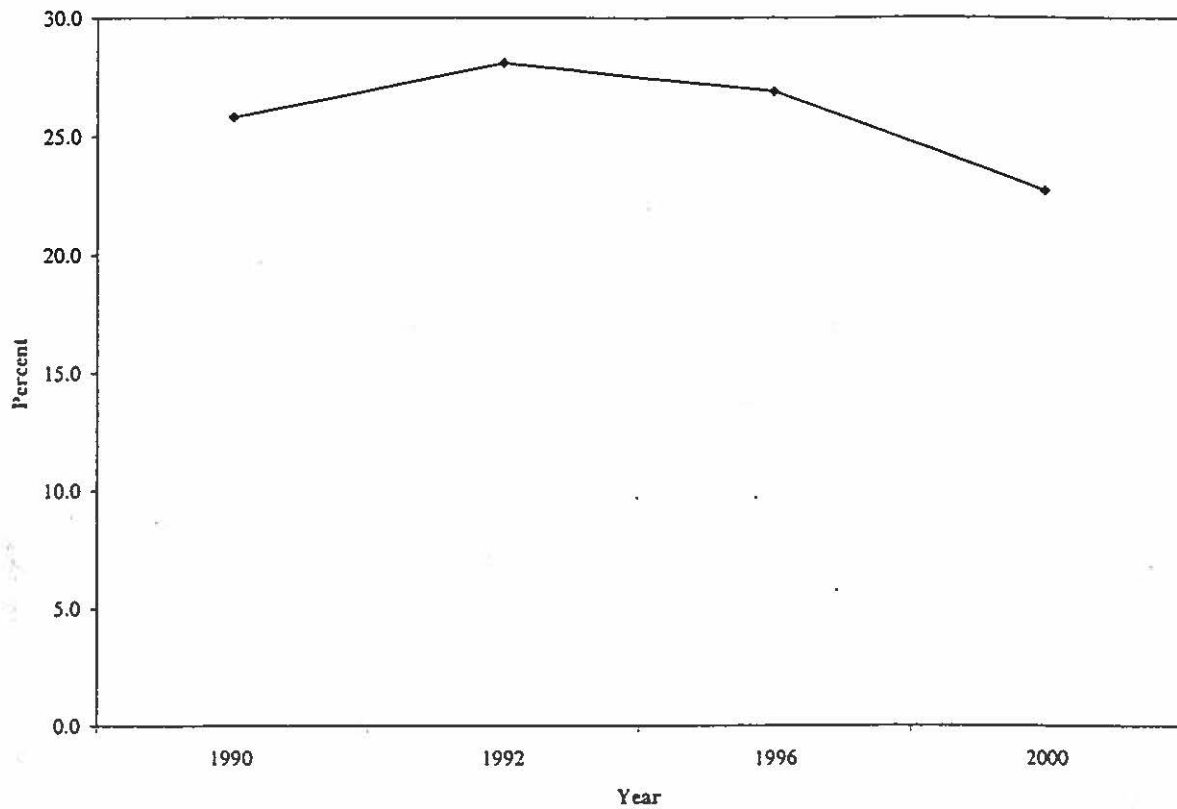
### History of Accrued Liability and Surplus



Year	Actuarial Value of Assets (AVA)	Accrued Liability	Surplus	Surplus as a Percentage of AVA
1990	\$ 5,932,000	\$ 4,899,000	\$ 1,033,000	17.4%
1992	\$ 8,423,000	\$ 6,525,000	\$ 1,898,000	22.5%
1996	\$ 11,205,000	\$ 8,759,400	\$ 2,445,600	21.8%
2000	\$ 16,271,700	\$ 9,207,500	\$ 7,064,200	43.4%

## Summary (continued)

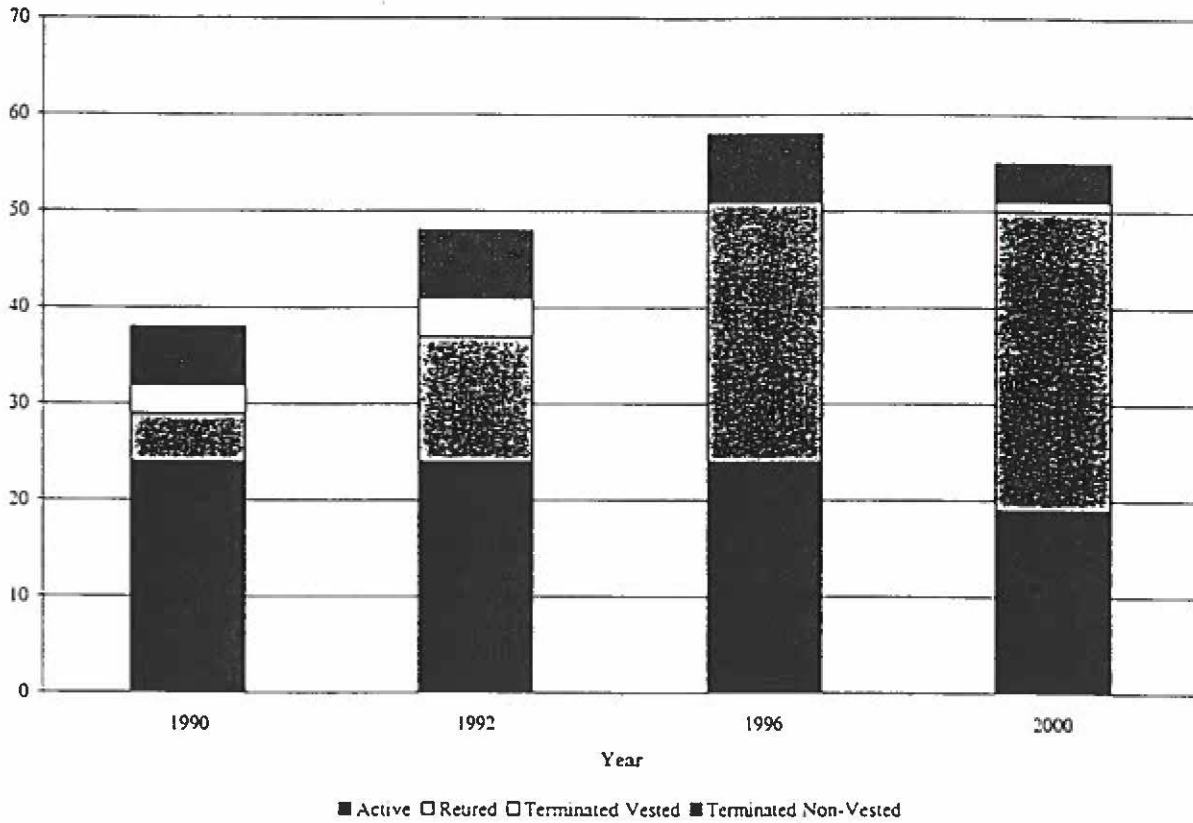
### History of Current Service Cost as a Percent of Participant Salary Base



Year	Total Current Service Cost	Participant Salary Base	Percent
1990	\$ 471,000	\$ 1,824,000	25.8%
1992	\$ 542,000	\$ 1,928,000	28.1%
1996	\$ 517,000	\$ 1,923,600	26.9%
2000	\$ 376,400	\$ 1,660,000	22.7%

## Summary (continued)

### History of Distribution of Participants



Year	Active	Retired	Terminated Vested	Terminated Non-Vested	Total
1990	24	5	3	6	38
1992	24	13	4	7	48
1996	24	0	27	7	58
2000	19	0	1	4	55

## Assets and Liabilities

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### Going Concern Valuation Results

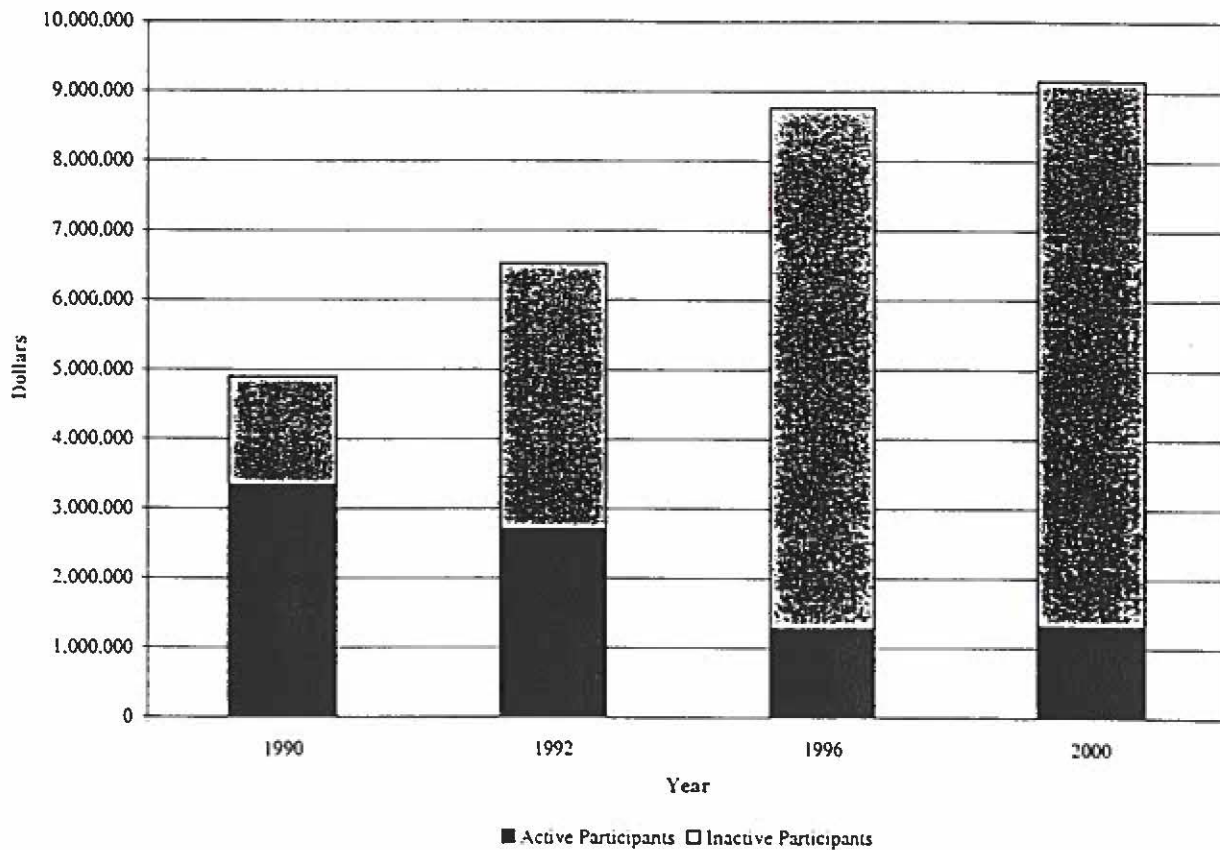
Following are the going-concern valuation results for the Plan as at April 1, 2000:

Actuarial Value of Assets		\$ 16,271,700
Less: Accrued Liability		
Active Participants	\$ 1,309,100	
Retired Participants	7,726,100	
Terminated Vested Participants	94,300	
Terminated Non-Vested Participants	<u>78,000</u>	
Total		<u>9,207,500</u>
Surplus (Unfunded Accrued Liability)		\$ 7,064,200
As a % of Actuarial Value of Assets		43.4%
<b>Current Service</b>		
Total Current Service Cost		\$ 376,400
Less: estimated member contributions		<u>96,300</u>
Assembly current service cost		\$ 280,100
As a % of Participant Salary Base		16.9%
Participant Salary Base		\$ 1,660,000

## Assets and Liabilities (continued)

### History of Distribution of Accrued Liability

The liabilities have been divided into liabilities for inactive participants (terminated vested and non-vested participants and pensioners) and active participants.



Year	Active Participants	Inactive Participants	Total
1990	\$ 3,335,000*	\$ 1,564,000	\$ 4,899,000
1992	\$ 2,694,000*	\$ 3,831,000	\$ 6,525,000
1996	\$ 1,276,700	\$ 7,482,700	\$ 8,759,400
2000	\$ 1,309,100	\$ 7,898,400	\$ 9,207,500

\* Includes voluntary contributions

## Assets and Liabilities (continued)

### Description of Plan Assets

The Plan assets are held by CIBC Mellon and invested by RT Capital Management. Information in this section of the report is based on financial reports prepared by CIBC Mellon, the Plan custodian, and asset mix information provided by RT Capital Management.

Asset Category	April 1, 2000		April 1, 1996	
Equities:				
• Canadian	\$ 6,751,410	38%	\$ 4,375,111	37%
• Foreign	3,454,209	19%	1,804,733	15%
Fixed Income	6,941,561	39%	4,883,030	42%
Real Estate	-	-	359,061	3%
Short Term	730,580	4%	360,634	3%
Accrued Income	<u>4,046</u>	<u>0%</u>	<u>4,541</u>	<u>0%</u>
	\$ 17,881,806	100%	\$ 11,787,110	100%

## Assets and Liabilities (continued)

### Changes to Plan Assets

	1999/2000	1998/1999	1997/1998	1996/1997
Market Value at April 1	\$ 16,113,828	\$ 15,868,448	\$ 13,351,524	\$ 11,787,110
Plus:				
Member Contributions	72,893	36,333	141,730	155,401
Assembly Contributions				
Miscellaneous	1,875	16,853	0	0
Investment Income	3,234,985	633,743	3,121,438	1,872,007
Less:				
Benefit Payments	(405,041)	(380,673)	(553,268)	(357,583)
Lump Sum Payments	(1,069,568)	0	(38,325)	(27,206)
Administrative and Other Expenses	(17,600)	(13,075)	(12,242)	(11,489)
Miscellaneous	0	0	(71,820)	(23,897)
Investment Management Fees	<u>(49,566)</u>	<u>(47,801)</u>	<u>(70,589)</u>	<u>(42,819)</u>
Market Value at March 31	\$ 17,881,806	\$ 16,113,828	\$ 15,868,448	\$ 13,351,524



## Assets and Liabilities (continued)

### Determination of Actuarial Value of Assets

In determining the Plan's funded position, we use an asset valuation method which smoothes the impact of short term fluctuations in the market value of the assets. The method does this by recognizing the difference between the fund's actual and expected investment earnings gradually over a four year period.

The fund's investment earnings net of investment and plan expenses (including realized and unrealized gains and losses) are compared below to expected investment earnings:

	1999/2000		1998/1999		1997/1998	
Net investment earnings:						
Actual	\$ 3,167,819	20.6%	\$ 572,867	3.7%	\$ 3,038,607	23.2%
Expected	<u>1,234,190</u>	8.0%	<u>1,256,628</u>	8.0%	<u>\$ 1,047,656</u>	8.0%
Excess of actual over expected	\$ 1,933,629		\$ (683,761)		\$ 1,990,951	

The actuarial asset value is then obtained by deducting from the current market value the portion of the investment gains (losses) which our method has not yet recognized:

Market value at April 1, 2000		\$ 17,881,806
Adjustment investment gains and losses not yet fully recognized		
1997/1998: ¼ x	\$1,990,951	(497,738)
1998/1999: ½ x	(\$683,761)	341,881
1999/2000: ¾ x	\$1,933,629	<u>(1,450,222)</u>
Smoothed value at April 1, 2000		\$ 16,275,727

Therefore \$1,606,079 of the last three years' investment gains have not yet been recognized in the smoothed actuarial asset value. The smoothed asset value equals 91.0% of the market value.

For this valuation, the actuarial value of assets equals the smoothed market value of assets adjusted for amounts payable and receivable at the valuation date.

The following table shows the calculation of the actuarial value of assets:

Smoothed Market Value at April 1, 2000	\$ 16,275,700
Benefits Payable at the Valuation Date	<u>(4,000)</u>
Actuarial value of assets	\$ 16,271,700

## Assets and Liabilities (continued)

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### History of Asset Returns

The following table shows the history of asset returns, based on market values, net after investment management fees and other expenses charged to the fund.

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Period Ending March 31	Return on Market Value
1997	15.6%
1998	23.2%
1999	3.7%
2000	20.6%

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The returns (after expenses) on market value have been calculated assuming contributions and benefit payments take place in the middle of each year.

## Contributions

### Cost of Accruing Benefits

The following table shows the estimated going-concern annual cost of accruing benefits for the current and previous valuations:

	For the Year Following April 1, 2000	For the Year Following April 1, 1996
Total Current Service Cost	\$ 376,400	\$ 517,000
Less: Estimated Member Contribution	<u>\$ 96,300</u>	<u>\$ 173,100</u>
Assembly Current Service Cost	\$ 280,100	\$ 343,900
As a % of Participant Salary Base	16.9%	17.9%

As the Plan is in an excess-surplus position on a going-concern basis, employer current service contributions must be reduced by the portion of surplus which exceeds a prescribed amount, as described below.

### Maximum Deductible Contribution

Under Paragraph 147.2(2)(d) of the *Income Tax Act*, employer current service contributions must be reduced by the portion of surplus which exceeds \$920,800, which is the lesser of 1. and 2. below:

1. 20% of the Accrued Liability (\$1,841,500);
2. the greater of:
  - a. twice the Total Current Service Cost (2 x \$376,400 = \$752,800)
  - b. 10% of the Accrued Liability (\$920,800)

Since the surplus of \$7,064,200 in the Plan exceeds \$920,800 as determined above, there is an excess surplus of \$6,143,400 in the Plan.

Subject to the provisions of the Northwest Territories Legislative Assembly Retiring Allowances Act, the excess surplus must be applied to eliminate plan contributions during the period from April 1, 2000 to March 31, 2004. To avoid revocation of the Plan's registration by Canada Customs and Revenue Agency, the excess surplus must be applied to finance Plan benefits and expenses. Due to the magnitude of the excess surplus in the Plan, no Assembly contributions will be required in the period from April 1, 2000 to March 31, 2004. However, an application of surplus should not be implemented without a favorable legal opinion regarding the ability of the Assembly to apply the surplus under the terms of the Plan.

## Contributions (continued)

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### Operating Expenses

The Plan's operating expenses are paid partly from the pension fund. The going-concern actuarial assumptions include an implicit allowance for operating expenses.

### Subsequent Events

Subsequent events are events that transpire after the valuation date and before the date the valuation was completed. Subsequent events also include events which, as of the date the valuation was completed, are fully committed to occur in the future.

To the best of our knowledge, there are no subsequent events which materially affect the results of the valuation.

## Experience

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### Reconciliation of Funded Position

Surplus at April 1, 1996	\$ 2,445,600
Plus: Interest at 8.0% per annum	<u>881,600</u>
Equals: Expected Surplus at April 1, 2000	\$ 3,327,200
Plus: Increase/(Decrease) in funded position at April 1, 2000 due to gains/(losses):	
Return on Assets	\$ 3,627,800
Contributions	(1,208,600)
Retirements	(71,800)
Terminations	39,400
Mortality	89,400
Other Decrements	113,000
Salary Increases	(24,400)
Data Adjustments	(249,000)
Cost of Living Increases	997,500
Plan Changes	347,700
Assumption Changes	(46,800)
Other Factors	<u>122,800</u>
Equals: Surplus at April 1, 2000	\$ 7,064,200

## Experience (continued)

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### Comments Regarding Experience

#### Return on Assets

The assumed rate of return for actuarial valuation purposes was 8.0% per annum. The average annual total return based on the actual market value of assets after allowing for the full amount of capital appreciation during the four year period was 15.5%, assuming contributions and benefit payments take place in the middle of the year. This resulted in an actuarial gain of \$3,627,800.

#### Contributions

Due to the surplus in the Plan as of April 1, 1996, no assembly contributions were made during the period from April 1, 1996 to April 1, 2000. The cost of accruing benefits less member contributions, was paid out of the surplus of the Plan, and this resulted in an actuarial loss of \$1,208,600.

#### Cost of Living Increases in Pensions

The increase in the cost of living during the inter-valuation period was less than the 5.0% annual increase anticipated by the assumptions. This deviation from expected experience generated an actuarial gain of \$997,500.

#### Assumption Changes

The interest rate and inflation rate assumptions were each reduced by 1.0% to 7.0% and 4.0% respectively, to better reflect the long-terms expectations under the plan. This resulted in an actuarial loss of \$46,800.

#### Miscellaneous

Other factors such as personnel changes, retirements earlier than assumed, mortality among retirees, data adjustments and lump sum payouts for terminated vested participants, etc., deviated from expected experience. Combined with Plan and actuarial assumption changes, these factors resulted in a net actuarial gain of \$320,300.

# Appendices

# Appendix I—Personnel Information



## Personnel Information

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### Description of Membership Data

Active membership data as at April 1, 2000 was obtained from the Board of Management of the Northwest Territories Legislative Assembly. Information on the other membership groups was taken from the administrative records of Hewitt Associates. We reviewed the data to ensure its completeness, accuracy and consistency with the data used in the previous valuation.

The main tests of reliability and sufficiency we conducted on the data include:

- member-by-member reconciliation of records with records used for the prior valuation;
- checks to determine reasonableness of individual data elements both on an absolute basis and relative to the same data elements provided for the prior valuation; and
- checks to ensure consistency between the membership information provided and the information contained in the Plan's financial statements.

The results of these tests were satisfactory and in our opinion the data is sufficient and reliable for the purpose of the valuation.

## Personnel Information (continued)

### Summary of Membership Data

The following tables summarize the key characteristics of the data used for the valuation. Comparative information has been provided for the previous valuation. Detailed summaries of the valuation data are provided in the following sections of this Appendix I.

	April 1, 2000	April 1, 1996
<b>Active Members</b>		
• number	19	24
• average age	46.3	44.2
• average credited service		
– MLA	3.2	2.4
– Minister	0.3	0.7
– Other	0.3	0.1
• average earnings		
– MLA	\$70,000	\$50,747
– Minister	\$38,000**	\$58,478*
– Other	\$11,333*	\$3,307*
• number of Members with deferred entitlements	8	6
• average deferred monthly entitlement	\$258	\$140
<b>Terminated Vested Members</b>		
• number	1	0
• average age	41.3	0.0
• average deferred monthly pension	\$364	\$0
<b>Terminated Non-Vested Members</b>		
• number	4	7
• average age	50.5	48.4
• average deferred monthly pension	\$563	\$433
<b>Pensioners</b>		
• number	31***	27
• average age	56.3	54.4
• average monthly pension	\$1,132	\$1,146
* Based on nine Members		
** Based on six Members		
*** Includes one child receiving a dependent benefit payable to age of majority or age 25, if attending school, and a member whose pension was suspended on being re-elected.		

## Personnel Information (continued)

### Changes in Plan Membership

The following schedule shows the changes in Plan Membership since the previous valuation of the Plan at April 1, 1996.

	Active Members	Terminated Vested Members	Terminated Non-Vested Members	Pensioners
Number at April 1, 1996	24	0	7	27
New Additions	10			2
Deletions				
• Terminations (Lump Sum)	(10)			
• Terminations (Deferred Pension)	(1)	1		
• Retirements	(4)			4
• Deaths				(2)
• Disabilities				
• Terminated Non-Vested Members not re-elected in the last two elections	—	—	(3)	—
Number at April 1, 2000	19	1	4	31*

\* This number includes one child receiving a dependent benefit payable to age of majority or age 25, if attending school, as well as a member whose pension was suspended on being re-elected.

## Personnel Information (continued)

### Active Participant Summary

The following table summarizes relevant data items for the active Plan membership.

Sex	Date of Birth	MLA Start Date	MLA Pay Rate	Minister Start Date	Minister Pay Rate	Other Start Date	Other Pay Rate	Deferred Monthly Pension
M	23-Nov-1961	16-Oct-1995	\$ 70,000			23-Jan-2000	\$ 3,000	\$ 101.46
M	11-Nov-1957	16-Oct-1995	70,000			31-Jul-1999	5,000	18.68
F	08-Nov-1956	16-Oct-1995	70,000	18-Jan-2000	\$ 38,000			21.11
M	20-Jul-1951	15-Oct-1991	70,000			23-Jan-2000	3,000	403.15
M	17-Mar-1951	16-Oct-1995	70,000			17-Sep-1996	3,000	75.57
M	07-Nov-1950	05-Oct-1987	70,000			18-Jan-2000	54,000	1,297.48
M	29-Aug-1949	15-Oct-1991	70,000	01-Jan-1997	38,000			127.89
M	05-Aug-1942	16-Oct-1995	70,000	18-Jan-2000	38,000			
M	17-Jun-1941	16-Oct-1995	70,000	30-Mar-1999	38,000			18.11
M	11-Jun-1941	07-Dec-1999	70,000			17-Jan-2000	25,000	
M	17-Aug-1971	07-Dec-1999	70,000			23-Jan-2000	3,000	
M	19-Apr-1967	07-Dec-1999	70,000					
M	03-Mar-1964	07-Dec-1999	70,000					
M	06-Sep-1959	07-Dec-1999	70,000					
M	05-Oct-1956	07-Dec-1999	70,000			23-Feb-2000	3,000	
M	27-Jun-1954	07-Dec-1999	70,000					
M	05-May-1952	07-Dec-1999	70,000	18-Jan-2000	38,000			
M	03-May-1949	07-Dec-1999	70,000			23-Feb-2000	3,000	
M	09-Aug-1943	07-Dec-1999	70,000	18-Jan-2000	38,000			
Total			\$ 1,330,000		\$ 228,000		\$ 102,000	\$ 2,063.46
Average			\$ 70,000		\$ 38,000		\$ 11,333	\$ 257.93

## Personnel Information (continued)

### Terminated Vested Participant Summary

The following table summarizes relevant data items for the terminated vested Members:

Sex	Date of Birth	Date of Termination	Deferred Monthly Pension
M	10-Nov-58	16-Oct-1995	\$ 363.91

### Terminated Non-Vested Participant Summary

The following table summarizes relevant data items for the terminated non-vested Members:

Sex	Date of Birth	Date of Termination	Accumulated Member Contributions	Deferred Monthly Pension
M	20-Apr-1957	16-Oct-1995	\$ 44,120	\$ 633.10
M	08-Mar-1947	16-Oct-1995	37,089	525.86
F	05-Mar-1952	16-Oct-1995	44,566	627.84
M	18-Jul-1942	16-Oct-1995	<u>32,750</u>	<u>463.32</u>
Total			\$ 158,525	\$ 2,250.12
Average			39,631	562.53

## Personnel Information (continued)

### Pensioner Summary

The following table summarizes relevant data items for pensioners.

Sex	Date of Birth	Spouse's Date of Birth	Pension Start Date	Monthly Pension	Form of Pension
M	18-Feb-1937	06-Jul-1936	01-Apr-1999	S 646.28	Joint-75%
M	08-Jul-1944	20-Jul-1945	01-Aug-1999	1,219.61	Joint-67%
M	14-Jul-1944	10-Apr-1940	01-Jan-2000	357.09	Joint-67%
M	22-Nov-1946	20-Feb-1952	01-Apr-1999	829.68	Joint-67%
M	11-Jun-1941	10-Jun-1942	01-Nov-1995	868.79	Joint-67%*
F	28-Feb-1930		01-Nov-1991	984.03	Single Life
M	09-Nov-1987		01-Apr-2000	131.20	**
M	12-Oct-1953	12-Apr-1957	01-Nov-1995	855.97	Joint-67%
M	02-Apr-1946	15-Apr-1940	01-Jan-1995	459.80	Joint-75%
M	26-Jun-1939	11-Jan-1941	01-Nov-1991	1,232.20	Joint-75%
M	27-Feb-1945	18-Sep-1955	01-Nov-1995	1,734.20	Joint-67%
M	27-Jun-1925	16-Jun-1920	01-Nov-1991	2,720.87	Joint-75%
F	04-Mar-1940		01-Nov-1995	2,250.49	Joint-67%
M	06-Jul-1944	08-Feb-1950	01-Oct-1993	709.63	Joint-75%
M	01-Feb-1947	12-May-1946	01-Dec-1991	655.75	Joint-75%
M	25-Jun-1921	04-May-1935	01-Dec-1983	730.74	Joint-75%
F	12-May-1955	02-Jul-1944	01-Nov-1995	787.08	Joint-67%
M	26-Sep-1936	31-Aug-1939	01-Nov-1995	974.18	Joint-67%
M	10-Jan-1935		01-May-1990	795.66	Single Life
M	23-Apr-1931	25-Dec-1931	01-Nov-1987	2,320.06	Joint-75%
M	15-Jan-1946		01-Nov-1991	1,232.70	Single Life
M	04-Jun-1953	06-Jun-1961	01-Nov-1995	1,684.20	Joint-67%
M	30-Dec-1948	08-Sep-1949	01-Nov-1995	2,386.35	Joint-67%
M	19-Nov-1935		01-Nov-1991	1,343.42	Single Life
M	23-Aug-1943	07-Oct-1952	01-Nov-1995	868.45	Joint-67%
M	31-Jan-1943	19-Apr-1943	01-Nov-1995	2,245.52	Joint-67%
M	04-Aug-1936	31-Jan-1936	01-Nov-1992	237.79	Joint-75%
M	21-Nov-1943	01-Jun-1946	01-Nov-1991	1,446.07	Joint-75%
M	23-Dec-1945		01-Mar-1995	931.53	Single Life
M	21-Sep-1951	14-Mar-1954	01-Feb-1992	869.87	Joint-75%
M	01-Nov-1958	20-Aug-1960	01-Nov-1995	568.76	Joint-67%
<b>Total</b>				<b>\$ 35,077.97</b>	
<b>Average</b>				<b>\$ 1,131.55</b>	

\* Pension suspended due to re-election.

\*\* Dependent benefit payable to age of majority or to age 25 if attending school.

## Personnel Information (continued)

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### Confirmation Certificate

I, Myles Moreside of the Northwest Territories Legislative Assembly, hereby certify that to the best of my knowledge, the data submitted to Hewitt Associates for the purpose of performing an actuarial valuation for the Northwest Territories Legislative Assembly Retiring Allowances Act as at April 1, 2000 is accurate and complete. I also certify that to the best of my knowledge, I have responded to any requests for additional information regarding the actuarial valuation.

*M. Moreside*

\_\_\_\_\_  
Myles Moreside  
Northwest Territories Legislative Assembly

*October 4, 2000*

\_\_\_\_\_  
Date

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## Appendix II—Plan Provisions



## Plan Provisions

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This summary contains the main provisions of the Northwest Territories Legislative Assembly Retiring Allowances Act (the "Plan") as at April 1, 2000. For a complete description of the Plan, reference should be made to the Legislative Assembly Retiring Allowances Act.

Effective Date	October 1, 1979.
Eligibility	All Members of the Legislative Assembly are Members of the Plan.
Credited Service	Service from March 10, 1975 and before January 1, 1992 not exceeding 15 years. All service after December 31, 1991.
Contributions	Members contribute 6 ½% of earnings to the fund effective October 16, 1995.
Normal Retirement Age	<ol style="list-style-type: none"><li>1. <i>Service Prior to 1992</i> Age 55.</li><li>2. <i>Service After 1991</i> The earliest of:<ol style="list-style-type: none"><li>a. Age 60;</li><li>b. Thirty years of service; and</li><li>c. Age plus service equals 80.</li></ol></li></ol>
Retirement Pension	Two percent of the average best earnings over four consecutive years as an MLA multiplied by Credited Service as an MLA.  PLUS  Two percent of the average best earnings over four consecutive years in each of the positions of Minister, Speaker or Chairperson multiplied by Credited Service for each position. A position must be held for at least one year for a pension to be paid, and the pension for each position is calculated separately.

## Plan Provisions (continued)

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### Early Retirement -

A member may retire at any time upon ceasing to be a Member of the Assembly. A Member retiring prior to Normal Retirement Age shall receive:

1. *Service Prior to 1992*

A pension which is actuarially equivalent to the pension calculated as if the member was 55.

2. *Service After 1991*

A pension which is reduced by .25% for each month a member retires before the Normal Retirement Age.

### Late Retirement

Up to age 69.

### Maximum Allowance

For benefits earned after 1991, the annual retirement pension payable shall not exceed the lesser of:

1. The defined benefit limit as prescribed under the Income Tax Act of Canada for the year in which the pension commences, times the years of credited service after 1991.
2. 2% of the average annual indexed pensionable remuneration, times the years of credited service after 1991.

## Plan Provisions (continued)

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### Form of Pension

#### 1. *Service Prior to 1992*

The normal form of payment is a joint and 75% survivor pension reducing on the death of a Member.

Each dependent will receive a pension of 10% of the retirement pension (to a maximum total of 25%) if the spouse survives. If there is no surviving spouse, a benefit of 25% of the retirement pension (to a maximum total of 100%) will be paid to each dependent.

#### 2. *Service After 1991*

The normal form of payment for service after 1991 is a joint and 66-2/3% survivor pension reducing on the death of the Member with a guarantee of 100% of the first 60 monthly payments in any event.

Each dependent will receive a pension of 10% of the retirement pension (to a maximum total of 25%) if the spouse survives. If there is no surviving spouse, a benefit of 100% shall be divided by the number of children for the first 60 monthly payments after the Member's pension commencement and then 25% of the benefit thereafter.

### Increases in Pension

Pensions in pay and deferred pensions are increased every January 1 based on increases in the Consumer Price Index up to the preceding September 30.

### Pre-Retirement Death Benefits

If a Member or Former Member dies before retirement and is not eligible to receive a pension, his accumulated contributions with interest will be returned to the beneficiary. If he was eligible to receive a pension, it will be assumed that the member retired on the day preceding his death and elected the normal form of pension.

### Withdrawal Benefits

A Member who terminates with four or more years of service or serves at least one full term as a Member of the Assembly is entitled to a retirement pension. All other Members who terminate will receive a lump sum payment of their accumulated contributions with interest.

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# Appendix III—Actuarial Assumptions

## Actuarial Assumptions

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### Going-Concern Valuation

Retirement assumptions for members	Later of age 55, or four years of service or end of current session.
Mortality Rates	
• before retirement	None
• after retirement	1983 Group Annuity Mortality Table
Withdrawal Rates	None assumed
Disability Rates	None assumed
Percentage with spouse	100%; female spouse assumed to be 2 years younger than male spouse
Dependent Children's Death Benefit	Payable to age 25.
Increase in Revenue Canada Maximum Benefit	Current level of \$1,722.22 per year of service until 2004, inclusive; 5% per annum thereafter
Salary Scale	5.0% per annum
Inflation	4.0% per annum
Interest Rate	7.0% per annum net of expenses.
Re-election of Deferred Members	Non-vested terminated Members are assumed to have a 25% chance of being re-elected in the next two general elections after being terminated

## Actuarial Assumptions (continued)

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### Valuation of Assets

The actuarial value of assets is equal to the smoothed market value of assets adjusted by amounts receivable and payable at the valuation date.

The smoothed market value is calculated by adjusting the market value to gradually recognize the difference between each year's actual and expected investment earnings over a four year period. Expected investment earnings are calculated by assuming the fund assets and cash flows will earn the prior valuation's going-concern valuation interest rate.

### Actuarial Cost Method

Projected unit credit actuarial cost method.

## Actuarial Assumptions (continued)

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### Wind-Up Valuation

Retirement Age	Retirement age that produces the highest value.
Mortality Rates	1983 Group Annuity Mortality Table.
Interest Rates	
• Non-Indexed Benefits	6.5% per annum for 15 years; 6.0% per annum thereafter.
• Indexed Benefit	4.25% per annum for 15 years 3.25% per annum thereafter
	Interest rates are based on the Canadian Institute of Actuaries Recommendations for the Computation of Transfer Values from Registered Pension Plans ("Transfer Value Basis").
Termination	All members are assumed to terminate on the valuation date.
Valuation of Assets	The actuarial value of assets used for wind-up purposes is the market value of assets adjusted by amounts receivable and payable at the valuation date, less an allowance for estimated wind-up expenses.
Actuarial Cost Method	Accrued benefit actuarial cost method.

## Actuarial Assumptions (continued)

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### Discussion of Actuarial Assumptions and Methods

#### Ultimate Cost

The ultimate cost of a pension plan can be measured only when the obligation to all participants has been fully discharged. The cost will then be:

The benefits paid from the plan  
plus  
administrative expenses  
less  
investment gains  
plus  
investment losses.

The actuarial process assigns pension costs to the current year by estimating, based on both current and future service, the benefits to be paid to current plan participants. These estimates are determined through an actuarial valuation which uses three basic elements to project payments from the plan:

- Benefit provisions of the plan.
- Data on the present workforce, terminated vested, and retired employees.
- Certain predictions (actuarial assumptions) about the future as it applies to this workforce.

#### Actuarial Assumptions

The first step in the actuarial process is to determine the magnitude of the pension liability by determining the benefits expected to be paid. To determine how many employees will become eligible for benefits, what benefits will be paid, and how long benefits will be paid, it is necessary to make some economic and demographic predictions (usually called actuarial assumptions) such as:

- Assumed retirement rates predicting when employees will begin to receive retirement benefits.
- Mortality rates predicting the number of employees who will die before retirement and the duration of benefit payments after retirement.
- Withdrawal rates predicting the number of employees who will leave the workforce before retirement. (Sometimes certain kinds of withdrawal such as disabilities are predicted separately.)
- An assumed rate of pay increases predicting employees' compensation in future years.



## Actuarial Assumptions (continued)

These assumptions are applied to the data for each employee to predict the amount of benefits expected to be paid each year in the future. The total future benefit payments in each year are then discounted at a selected interest rate to determine the current amount which with future investment return, will be sufficient to pay the expected benefits as they become payable. The discounted payments are usually called the present value of future benefits.

<b>Total Future Benefit Payments</b>	
<b>Future Investment Return</b>	<b>Present Value of Future Benefits</b>

### Actuarial Method

The actuarial method is the mathematical process which determines the contributions required to pay for the present value of future benefits, by allocating costs to the years of an employee's career. Some costs are allocated to future years in an employee's career (*future service liability*) and other costs are allocated to past years (*past service liability*).

<b>Total Future Benefit Payments</b>			
<b>Future Investment Return</b>	<b>Present Value of Future Benefits</b>		
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><b>Future Service Liability</b></td> <td style="text-align: center;"><b>Past Service Liability</b></td> </tr> </table>	<b>Future Service Liability</b>	<b>Past Service Liability</b>
<b>Future Service Liability</b>	<b>Past Service Liability</b>		

There is a fair amount of flexibility in this allocation of costs between future and past. Some methods assign relatively little cost to past years in an employee's career, others assign a more significant portion to the past. All methods produce allocations of contributions which will accumulate to an amount sufficient to provide the benefits at retirement. However, the various methods produce widely different allocation of contributions to past and future employment.

Usual terminology refers to the future allocation as the *present value of future normal costs* and the past allocation as the *accrued liability*.

## Actuarial Assumptions (continued)

The portion of the accrued liability which is not covered by the assets of the plan is called the *unfunded accrued liability*. The value of the assets used in the actuarial process must take into account fair market value, but this may be done in a way which eliminates much of the short-term fluctuation of market value from one valuation to the next.

<b>Total Future Benefit Payments</b>		
<b>Future Investment Return</b>	<b>Present Value of Future Benefits</b>	
	<b>Future Service Liability</b>	<b>Past Service Liability</b>
	<b>Present Value of Future Normal Costs</b>	<b>Unfunded Accrued Liability</b>
		<b>Assets</b>

For the current year, the method produces a *normal cost*. Payment of the normal cost each year would eventually discharge all future service liability.

The unfunded accrued liability must also be discharged, and this is done by an *amortization payment*. The amortization payment is flexible, and may be increased or decreased within certain allowable bounds. The sum of both the normal cost and the amortization payment is the current year's pension cost.

<b>Total Future Benefit Payments</b>		
<b>Future Investment Return</b>	<b>Present Value of Future Benefits</b>	
	<b>Future Service Liability</b>	<b>Past Service Liability</b>
	<b>Present Value of Future Normal Costs</b>	<b>Unfunded Accrued Liability</b>
		<b>Assets</b>

Normal Cost			Amortization Payment
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Current Year's  
Contribution

## Actuarial Assumptions (continued)

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Valuations to determine contributions to the ongoing plan use the *Projected Unit Credit Cost Method*.

Under this actuarial method, the cost attributed to past service (*past service liability* or *accrued liability*) is determined on the valuation date as the present value of the benefits actually earned (accrued) as of that date. Benefits earned by members are calculated using current earnings projected to retirement, termination or death. The *unfunded accrued liability* is the amount by which the accrued liability exceeds the valuation assets. This actuarial method does not necessarily ensure that assets will exceed liabilities in the event of a plan wind-up.

The current year's *normal cost*, determined on the valuation date, is the amount required to fund the benefit expected to be earned in the current year.

The benefits earned by members and used for the calculation of the accrued liability or normal cost, are calculated using current earnings projected to retirement, termination of employment or death, whichever is applicable.

Because the value of the future service liability is not used in the calculation of normal cost, it is often omitted from the actuarial report which may show only an accrued liability.

The calculations for any disability, termination or death benefits take into consideration that the entitlement to benefits may begin at various future times. Each age prior to retirement has associated with it appropriate probabilities of disability, termination and death.

The Projected Unit Credit Actuarial Cost Method produces a contribution rate for an individual member that increases with age. For the entire membership, however, the contribution rate will remain stable provided the average age of the active membership remains stable.

Each going-concern unfunded actuarial liability is amortized over a period of fifteen years from the date it is created by equal monthly payments of principal and interest using the going-concern valuation interest rate which is compounded annually.

The actuarial methods used for determining the wind-up status of the Plan are as follows:

1. The wind-up liability was determined using the Accrued Benefit Actuarial Cost Method. The wind-up liability is equal to the present value of benefits earned by members for service prior to the valuation date assuming the Plan is wound-up on the valuation date.
2. Wind-up assets are equal to the market value of invested assets, already adjusted for payments due to and payable from the pension fund, less an allowance for wind-up expenses.

