## OVERVIEW

This report provides a projection of the value of the Pooled Pension Fund based on the premise that Government had matched employee pension contributions between 1967 and 1980 and the balance of those contributions minus pensions paid was invested. In 1967, Government began collecting pension premiums as a proportion of employees' salaries. Government did not match employee contributions at that time. Employees' contributions were paid into the Consolidated Revenue Fund and pensions were paid from it. There was no separate pension fund nor was the balance of contributions minus pensions invested in revenue generating assets.

The following analysis provides a review of legislation governing pensions in Newfoundland and Labrador from 1947 to 1981. Projections of government contributions to pensions between 1967 and 1980 are extrapolated from the Public Accounts. The asset mix used for investing was derived from the Pooled Pension Fund performance and historical rates of return were applied. Two methods are used to find the balance of the Pension Fund in 1980. The balance of the Fund in 1980 is then invested from 1981 to 2010 at the annual rates of return achieved by the Pooled Pension Fund during that time period.

## KEY FINDINGS

- Government legislated the collection of pension premiums as 6% of employees' salaries in 1967.
- Government established a Pooled Pension Fund in 1981, retroactive to July 1, 1980, began matching employee pension contributions to the Fund and investing the balance of the Fund in revenue-generating assets.
- Two methods were used to extrapolate the value of the Fund. One uses a calendar year end the other a fiscal year end.
- If government had created, contributed to and began investing the pension fund in 1967 the balance would be almost $270 Million in 1981.
    - Calendar Year Method = $269,510,446 on December 31, 1980.
    - Fiscal Year Method = $269,357,870 on March 31, 1981.
- The Pooled Pension Fund would have about $4 Billion more in assets on December 31, 2010 had the Fund been created in 1967.
    - Calendar Year Method = $4,019,585,280
    - Fiscal Year Method = $3,964,951,407

## PENSION LEGISLATION

The Allocations of Pensions was first legislated in 1947 in the Civil Service Act. Section I facilitated the granting of pensions. Section II identifies the conditions under which pensions were to be allocated. Officers were expected to be in good health and pensions were allocated in accordance to the actuarial tables included in the legislation. There are no provisions for the collection of pension premiums in the Civil Service Act of 1947.

The Budget Speech of 1967 introduced a contributory pension scheme. Government employees would be expected to pay a premium of their pension based on their salary. The Pensions (Premiums) Act of 1967 provided for the collection of premiums from employees of the Government and others, in respect of pensions. It specifies the amount of deductions as 6% of salary. Deductions were to be paid into the Consolidated Revenue Fund and credited under the new pension plan detailed in the Act. Payments from the pensions plan were to be made from the Consolidated Revenue Fund. No reference to matched government contributions have been found to date.

In 1968 the Civil Service (Amendment) Act made changes to the Civil Service Act to reflect changes in pensions calculations, pensionable service calculations, and changes to the appeals process.

The Budget of 1980-81 announced Government would begin matching employee contributions to the various Public Service Pension Plans. A Pooled Pension Plan would be created, the balance of which would be invested in revenue producing financial instruments. The Pooled Pensions Fund was established by The Pensions Funding Act in 1981. It was retroactive to July 1, 1980 and created a separate pension fund and provided for the investment of that fund. A deficiency guarantee was included which stipulates when there are insufficient assets to meet the obligations of the Fund monies sufficient to cover the deficit will be paid from the Consolidated Revenue Fund on a timely basis. It also identifies disbursements from the Fund as including pensions, refunds, payments, operating costs of the Fund, and all unpaid liabilities incurred under each plan prior to July 1, 1980. The implications of the deficiency guarantee and disbursements of unpaid liabilities are suggested areas for further research. The Act also outlines the establishment of bank accounts, reporting and auditing for the Fund and the related regulations.

In 1981, The Increase of Pensions Act was passed to establish a minimum pension of $2,200 and a system of pension increases.

## GOVERNMENT CONTRIBUTIONS

### Expenses of, and Contributions to the Pension Plan

In accordance with The Pensions Premiums Act pension premiums were deducted from Government employee salaries beginning in 1967. These deductions were paid into the Consolidated Revenue Fund and are recorded in the Public Accounts.

The Public Accounts records the expenditures and contributions related to pensions as part of the Consolidated Fund Services and the Department of Finance between 1967 and 1981. Expenses include: payments to Public Service, Constabulary, Railway, Fire Department, Teachers, Gander Pensions, Government of Canada Pensions; Ex-gratia Pensions; Refunds to Pensions – to members leaving the respective plans; Death & Marriage Gratuities; Special Acts; and Other Pensions & Gratuities.

Pension contributions are made by members of the following plans: House of Assembly; Teachers; Public Service; Constabulary; Newfoundland Power, and Newfoundland Federation of Fishermen.

During the years 1967 through 1980 there are no record of government contributions to a pension plan.

The simplifying assumption of ceteris paribus, or keeping other things the same has been applied to the analysis. All contributions to the pension fund and payments from it will remain as recorded in the Public Accounts.

The study originally proposed estimating the effect of contributing an amount equal to 12% of government salaries to a Government Pension Fund. That amount would be 6% of employees' salaries with a matched contribution by Government.

The Public Accounts provides the exact amount of employee contributions for each Fiscal Year. Instead of estimating Government contributions as a portion of salaries paid each year this analysis will assume Government exactly matched employees' contributions to the pension fund between 1967 and 1980. Total Contributions to the Pension Fund equal Government's contributions plus employee contributions. The Fiscal Year End equals total contributions to the Fund minus total pensions paid from the Fund.

**Table 1: Projection of Government Contributions to and Fiscal Balances of Pension Fund, 1967 - 1980**

| FISCAL YEAR | Government Matched Contributions | Total Contributions = (Government + Members) | Fiscal Year End = Contributions - Pensions |
|---|---|---|---|
| FY 1967-68 | $2,103,965 | $4,207,930 | $2,223,438 |
| FY 1968-69 | $2,768,307 | $5,536,614 | $3,150,718 |
| FY 1969-70 | $3,177,752 | $6,355,504 | $3,195,133 |
| FY 1970-71 | $4,259,982 | $8,519,964 | $5,132,639 |
| FY 1971-72 | $4,837,575 | $9,675,150 | $5,949,406 |
| FY 1972-73 | $5,896,299 | $11,792,598 | $7,293,676 |
| FY 1973-74 | $7,678,922 | $15,357,844 | $9,758,954 |
| FY 1974-75 | $8,925,093 | $17,850,186 | $10,160,883 |
| FY 1975-76 | $10,872,186 | $21,744,372 | $12,895,705 |
| FY 1976-77 | $13,614,425 | $27,228,850 | $17,730,592 |
| FY 1977-78 | $15,668,164 | $31,336,328 | $19,736,892 |
| FY 1978-79 | $17,574,907 | $35,149,814 | $20,870,442 |

| | | | |
|---|---|---|---|
| FY 1979-80 | $20,550,472 | $41,100,944 | $24,583,429 |

Source: Public Accounts, Government of Newfoundland & Labrador, 1967-68 – 1980-81

The Public Accounts lists Government Contributions to the House of Assembly members pension plan for the Fiscal Years 1967-68 through to 1975-76. Under the assumption of ceteris paribus, no adjustment has been made for these contributions. Contributions by Government also ought to be listed as budgetary expenditure. Preliminary analysis has not found corresponding expenditures by Government in the Estimates or Public Accounts. Likewise, supporting documentation and legislation have not yet been found. This is a suggested area for further research.



## INVESTING THE PENSION FUND

### Asset Mix

Pensions Funds are invested with an asset mix that balances rates of return, risk and short and long term instruments. Investments generally include a mix of equities or stock market investments, long and short-term debt instruments or bonds, and real estate. The asset Mix of Pension Fund Investment for 1967-1980 is based on the asset mix used for the Pooled Pension Fund between 1985 & 1991 as shown in Table 2.

For the purpose of this analysis, it is assumed that investments that could have been made before 1981 had the same asset mix as investments made when the Fund was first established.

Thus, the following asset mix was used for assumed investments made between 1967 and 1980:

- 45% Canadian Equities;
- 24% Fixed Income Securities (Bonds);
- 9% Property Investments;
- 11% Short Term Notes; and
- 11% Foreign Equities.

**Table 2: Asset Mix of Pooled Pension Fund, 1967-1991**

| ASSET MIX % | Pre-1981* | 1985 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|
| **Canadian Equities** | 45 | 45 | 38 | 33 | 45 |
| **Fixed income Securities** | 24 | 24 | 37 | 23 | 23 |

| | | | | | |
|---|---|---|---|---|---|
| **Property Investments** | 9 | 9 | 4.3 | 4 | 3 |
| **Short Term Notes & Deposits** | 11 | 11 | 9 | 31 | 15 |
| **Foreign Equities** | 11 | 11 | 11 | 11 | 11 |

* Assumed based on asset mix used between 1985 & 1991.

Source: Government of Newfoundland and Labrador Pooled Pension Fund Annual Reports & Financial Statements, 1985 – 1991.

### Yield on Investments

Historical rates of return were applied to the asset mix identified above. Historical yields for Canadian Equities are given by the Common Stock Index. Fixed Income Securities are assumed to have the rate of return of Canada Long Bonds.  Property, or Real Estate Investment, yields are represented by the Conventional Mortgage Index. The rates of return on 91 Day T-bills approximate yields on Short term notes and Deposits. Foreign Equities returns are shown as US Common Stocks in Canadian dollars. These yields as given in the Report on Canadian Economics Statistics 1924-2004, Canadian Institute of Actuaries, March 2005 are given in the Appendix.

## PENSION FUND BALANCE 1967-1980

The balance of the Pension Fund depends on contributions to it, payments made from it and the rates of return on investments made with it. The return on investment (ROI) accrued depends on when an asset is acquired and how long it is held. The rates of return (ROR) used in this analysis are given in calendar years and Public Accounts are reported in fiscal years. Return calculations had to adjust for the different time frames. Two methods have been developed. The Calendar Year Method calculates the balance of the Pension Fund at the end of every calendar year, December 31. The Fiscal Year Method finds the balance at the end of each fiscal year, March 31.

Both methods produce similar results. Using the Calendar Year Method the balance of the Pension Fund would be $269,510,446 on December 31, 1980. This is slightly higher than $269,357,870 on March 31, 1981 as given by the to the Fiscal Year Method.

The difference can be attributed to the timing of investments. The primary investment in the Calendar Year Method is made on January 1st. The primary investment in the Fiscal Year Method is made 3 months later, on April 1st. The additional interest earned between January and April comprises the difference.

### Calendar Year Method

The Calendar Method assumes Balance of Pension Fund is calculated annually on December 31. There are 3 key calculations in the analysis.

The Balance of the Pension Fund is invested on January 1 every year at the asset mix identified above and accrues a return at the rates given for that year for the period of one year.

A fiscal balance accrues as contributions are made into the plan and pensions paid from it each fiscal year. Contributions and payments are recorded fiscally in the Public Accounts. A Fiscal Year is April 1 to March 31. This analysis makes the simplifying assumption that contributions to and payments from the pension fund are evenly distributed throughout the year. The time period April to December can be considered as ¾ of a fiscal year. Therefore, for a given fiscal year, the balance of contributions minus pensions on December 31 is ¾ of the balance of contributions minus payments for the entire fiscal year.

It is also reasonable to assume that positive balances of contributions minus pensions accrued in a fiscal year between January 1 and March 31 are invested on April 1 for the remainder of the year. Using the same logic as above, this amount is ¼ the balance of contributions minus pensions in the given fiscal year.

Thus, the Balance of the Pension Fund on December 31 for a given calendar year has 3 parts: the principle and ROI accrued on the January 1 investment. The balance of contributions minus payments on December 31 of the current fiscal year. And, the principle and ROI accrued on the April 1 investment.

Using the Calendar Year Method the Balance of Pension Fund on December 31 is given by the formula:

$$BPF_t = BPF_{t-1} * AM_i\,(1+R_{i,t}) + 1/4FYE_{t-1} * AM_i * (1+R_{i,t} * .75) + 3/4FYE_t$$

where:

$BPF_t$ = Balance of the Pension Fund on December 31 in year *t*

$AM_i$ = Percent of Fund Invested in Asset *i* (Asset Mix)

$R_{i,t}$ = Yield of Asset *i* in year *t*

$FYE_t$ = Fiscal Year End in year *t*

The Calendar Year Method found the balance of the Pension Fund on December 31, 1980 to be $269,510,446.

**Fiscal Year Method**

The Fiscal Year Method calculates the Balance of the Pension Fund annually on March 31. There are 3 key calculations in the analysis. The Balance of the Pension Fund is invested on April 1 every year at the asset mix identified above and accrues a return at the rates given for that year from April 1 to December 31. The period from April to December is assumed to equal ¾ of a year.

On January 1, the Balance of the Pension Fund plus the return on investment accrued up to December 31 is reinvested at the same asset mix and annual interest rates given for that year until March 31, the remainder of the fiscal year. The time period from January to March is assumed to be ¼ of a year.

During each fiscal year a balance of contributions minus pensions accrues.

Thus, the Pension Fund accrues value in a given fiscal year in 3 ways. ROI from April to December, ROI from January to March, and, fiscal contributions minus pensions paid.

Using the Fiscal Year Method the Balance of the Pension Fund on March 31 is given by the formula:

$$BPF_t = (BPF_{t-1} * AM_i\,(1+R_{i,t} * .75)) * (1+R_{i,t+1} * .25) + FYE_t$$

where:

$BPF_t$ = Balance of the Pension Fund on March 31 in year *t*

$AM_i$ = Percent of Fund Invested in Asset *i* (Asset Mix)

$R_{i,t}$ = Yield of Asset *i* in year *t*

$FYE_t$ = Fiscal Year End in year *t*

The Balance of the Pension Fund on March 31, 1981 is $269,357,870 according to the Fiscal Year Method.

**PENSION FUND BALANCE 1981-2010**

The historical annual rates of return on the Pooled Pension Fund investments are given in the Annual Report of the Pooled Pension Fund of the Government of Newfoundland and Labrador. This analysis applies these rates as shown in Table 3 to the balance of the Pension Fund as found in both the Calendar and Fiscal Year Methods to calculate the value of the Fund on December 31, 2010. The respective balances are invested in 1981. Returns accrue at the given rates and the principle and ROI are reinvested on January 1 of the following year and each subsequent year. The Fiscal Year Method is adjusted in 1981 to recognize the initial investment would be made on April 1.

The Calendar Year Method finds there would be an additional $4,019,585,280 in the Pension Fund had Government matched employee pension contributions between 1967 and 1980.

Similarly, there would be an additional $3,964,951,407 in the Pension Fund had Government matched employee pension contributions in the years 1967 to 1980 using the Fiscal Year Method.

**Table 3: Province of Newfoundland & Labrador Pooled Pension Plan Annual Rates of Return, 1981 - 2010**

| Year | Rate | Year | Rate | Year | Rate |
|---|---|---|---|---|---|
| **1981** | 5.5 | **1991** | 14.5 | **2001** | -0.9 |
| **1982** | 18.3 | **1992** | 5 | **2002** | -7.5 |
| **1983** | 17.1 | **1993** | 24.1 | **2003** | 16.2 |
| **1984** | 5.1 | **1994** | 1.5 | **2004** | 11.6 |
| **1985** | 21.6 | **1995** | 16.7 | **2005** | 15.5 |
| **1986** | 11.8 | **1996** | 20.4 | **2006** | 16.4 |
| **1987** | 7.8 | **1997** | 15.9 | **2007** | -2.48 |
| **1988** | 9.2 | **1998** | 9.1 | **2008** | -20.99 |
| **1989** | 16.4 | **1999** | 11.5 | **2009** | 18.9 |
| **1990** | -2.8 | **2000** | 9.4 | **2010** | 11.6 |

Source: Annual Report of the Pooled Pension Fund of the Government of Newfoundland and Labrador 2010.

**FURTHER RESEARCH**

Research and analysis to date has identified several concepts and reports warranting further research and review. These include:

- The implications of the deficiency guarantee and disbursements of unpaid liabilities as identified in the Pension Funding Act.
- Government contributions to the House of Assembly pension plan up to FY 1975-76.
- Royal Commission on Pension 1966
- Actuarial Study of the Uniformed Services Pension Plan
- Province of Newfoundland and Labrador Pooled Pension Fund Annual Reports and Financial Statements 1981 – 2010.
- Report of the Standing Committee of Public Accounts, Review of government's Pension Plans, House of Assembly, May 1999.
- Government Money Purchase Pension Plan
- Auditor General's Report on the Province of Newfoundland and Labrador's Pooled Pension Fund, Office of the Auditor General, June 30, 2006.
- Report of the Commission of Enquiry on Pensions, March 1990.

- Plan Member Guide to the Public Service Pension Plan
- Highlights of the Public Service Pension Plan
- Public Finance Planning Committee Report on the Financial Position of the Province of Newfoundland and Labrador, December 1973
- 2010 Report on the Audit of the Financial Statements of the Province
- Review of the Province of Newfoundland and Labrador Pooled Pension Fund (2003), *Reviews of Departments and Crown Agencies* Office of the Auditor General, 2003.
- Pooled Pension Fund – (Actuarial Valuations) (2001), *Reviews of Departments and Crown Agencies* Office of the Auditor General, 2003.
- *Report of the Auditory General for the Fiscal Year ending March 31, 2010* Office of the Auditor General, 2011.