



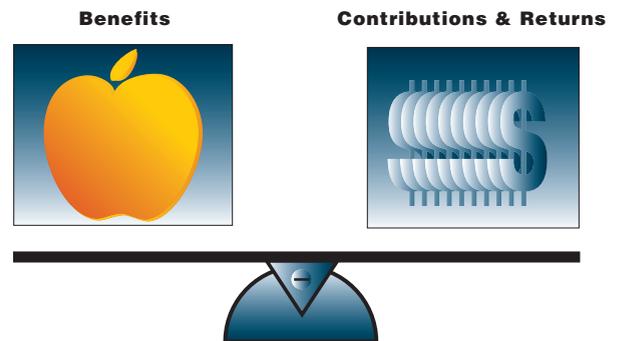
# FOCUS on FUNDING

December 2003

## *Understanding the plan's bottom line*

Each year, we send you a financial summary of our investment performance and the plan's balance sheet at year end. While this is important information for you to judge our performance in investing to secure your future pension, there is another measure that more accurately defines the pension plan's bottom line: the funding status. It's the measure the plan co-sponsors and pension regulators use to determine the long-term financial health of the plan.

It is important to keep the plan in the fully funded zone to secure the benefits and ensure that an imbalance is not passed on to future generations. Pension law also requires all plans to be fully funded within specified time periods.



Over time, the cost of benefits must balance with contributions and investment returns to provide members with retirement security tomorrow.

## *Who defines the plan's benefits and contributions?*

**The Teachers' plan is a defined benefit plan. The responsibility to ensure the plan is fully funded to meet these defined benefits lies with the two plan sponsors: the Ontario Teachers' Federation (OTF), representing plan members, and the Ontario Government representing taxpayers.**

The OTF and the government negotiate the use of surplus and, when there is a deficiency, make additional contributions to ensure the plan is fully funded within a specified period of time.

Our staff ensure the co-sponsors' decisions on benefits and contributions are reflected in investment policy and strategy to help the sponsors meet their responsibilities. However, contrary to most members' expectations, the Teachers' pension plan cannot change benefits or the contribution rate.

## ***How much money does the plan need for the future?***

The answer is, it needs enough to cover the cost of future benefit payments for all members.

Today, the plan has about \$70 billion in assets and pays retired teachers over \$3 billion annually. So, on a short-term basis, the plan looks like it has enough, and it certainly does for the next few years.

But we need to look beyond the short-term because the plan must be healthy not just in 2004 and 2005 but 50, 60 and 70 years from now when it's paying benefits to new teachers who won't retire until well into the future.

The plan uses a funding valuation to project the plan's benefit costs and compare them to the assets plus future contributions. It looks ahead to the next 70 years, which is how long the plan must exist to fully pay out the costs of future benefits promised to all current plan members.

The funding valuation provides us with a snapshot of the future. It tells us whether, at a particular point in time, the plan is fully funded and has enough money to cover the cost of future benefits promised to all current plan members.

To assess the funding status, the Board of Directors hires an independent actuary who determines the assumptions to be used in the valuation and calculates the plan's bottom line.

## ***What does the plan do with its funding valuation?***

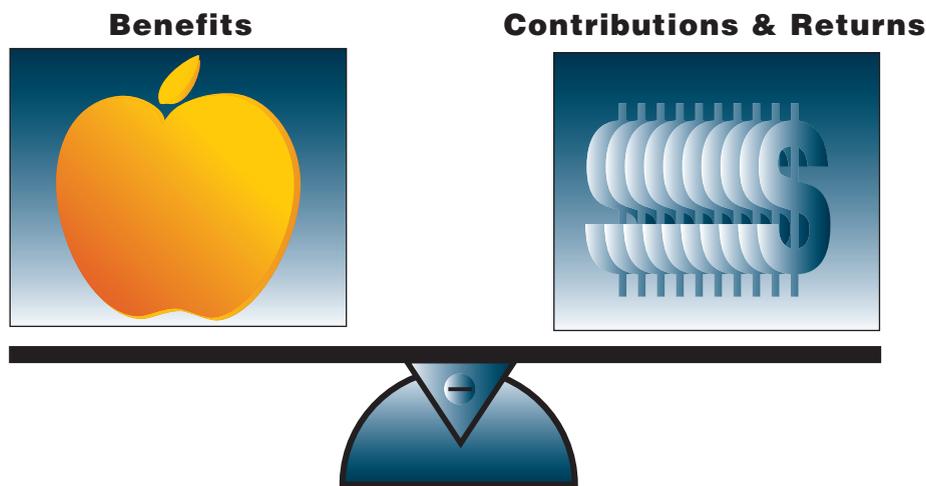
By law, the plan is required to file a funding valuation with pension regulators every three years. If the plan is in balance at the time the funding valuation is filed, then no changes are necessary in contribution rates or benefit levels.

If the valuation shows the plan is not fully funding the cost of its future benefits, a contribution rate increase would be imposed automatically to cover the shortfall. This has not happened to this pension plan since 1990 when the contribution rate was set at 7.3% up to the CPP maximum salary and 8.9% above that amount.

This does not mean the co-sponsors have to wait for three years before making funding decisions. They review the plan's funding status on an ongoing basis and can make negotiated changes at any time to safeguard the future of the plan.

They can also file the funding valuation any year within the mandated three year window if they believe it would help the plan. The last valuation was filed in 2003.

## ***The important balance between benefits & contributions***



The plan must maintain a balance, over time, between benefits and assets (contributions and investment returns). If the value of benefits is too high relative to the contributions made, the plan could run into a shortfall position.

That means the co-sponsors pay close attention to the long-term cost of benefits (not just the immediate cost) and the long-term value of contributions and investment returns.

When we look ahead, we are concerned that the plan appears to have a budding imbalance because of a substantial increase in the cost of benefits due largely to a substantial drop in real interest rates coupled with lower expected investment returns from stocks in the future. In addition, benefits have improved over the last decade while contributions have remained at the same level since 1990.

The 85 factor, in particular, contributed to the challenge in that it enables members to retire earlier and collect benefits longer than before. It is a permanent benefit change that will be available to all future teachers as well as those who were in the plan when it was introduced. The cost of all permanent benefit improvements will continue to escalate as new teachers join the plan.

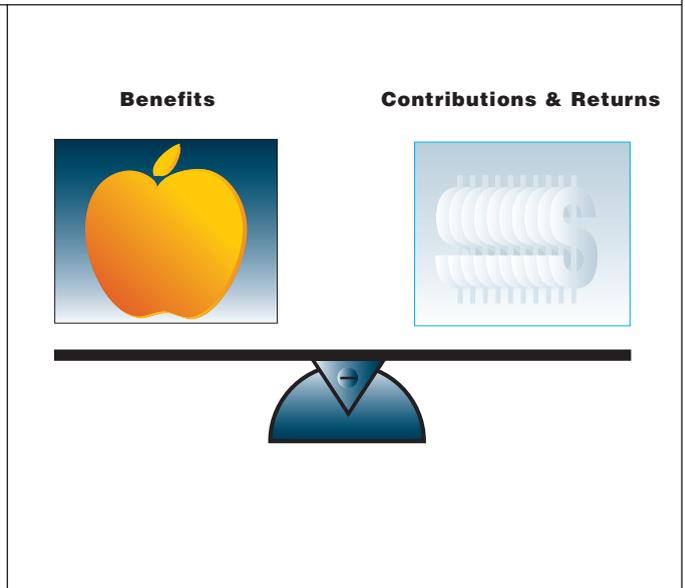
Also contributing to this imbalance was a sharp increase in the amount of money needed today to pay all pensions promised in the future. When real interest rates fall, as they did in the last two years, the cost of future benefits increases. In the short-term, this increased cost coincided with volatile investment markets, which caused the plan's assets to decline in value in 2001 and 2002.

While investment markets may produce better returns in the future, and real interest rate trends may reverse themselves, this won't change the fact that the contributions and benefits must balance over the long term to provide retirement security for plan members tomorrow.

## Valuing the benefits

The actuary determines the future cost of pension benefits (the plan's "liabilities") by making a number of assumptions, including:

- How long will teachers teach?
- What will inflation be in the future?
- What salary increases are teachers likely to receive?
- How long will the average teacher live?
- What will the plan's investments earn?

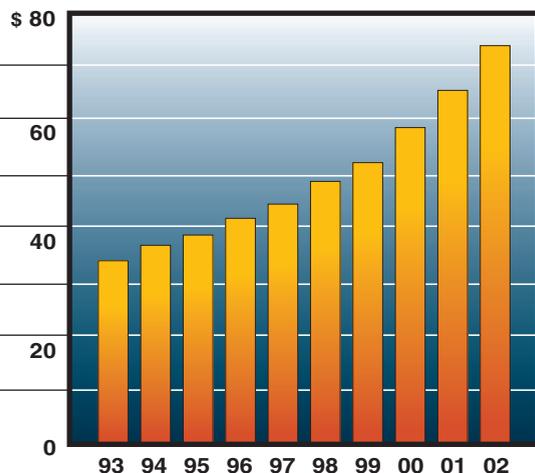


These and other assumptions are used to estimate the value and the cost of future defined benefits owed to *today's* members. The assumptions for the rate of return on investments and longevity of members are key to determining the cost.

To calculate the amount of money needed today to pay all pensions promised in the future, we use something called 'real' (meaning after inflation) interest rates. These rates rise and fall with the markets and can cause the cost of future benefits to change quite dramatically. A 1% change in the rates causes a 20% change in the projected cost of benefits. When real interest rates fall, as they did in the last two years, the cost of future benefits increases dramatically.

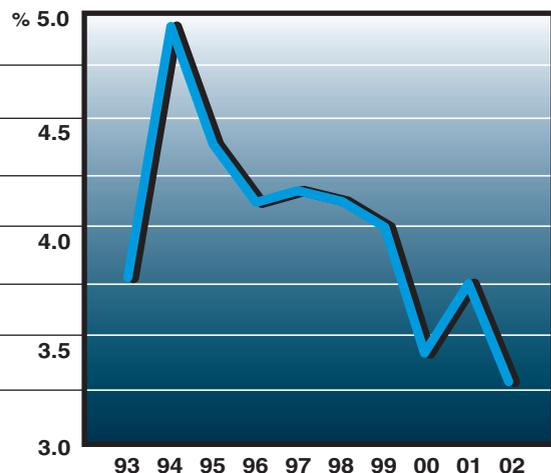
*Cost of future benefits*

(as at December 31) \$billions



*Declining real interest rates*

(as at December 31)

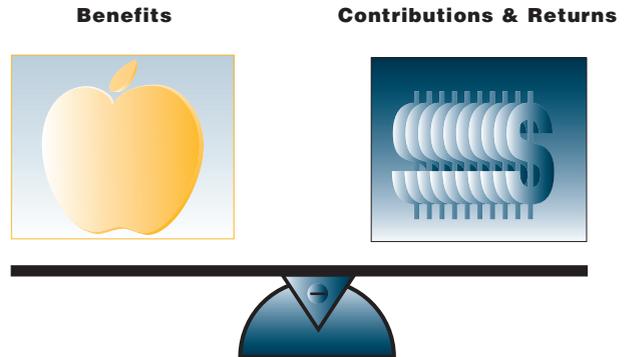


## Valuing the assets

The actuary takes into account everything the plan owns – stocks, bonds, cash etc. – and the investment return expected in the future plus the value of contributions today’s plan members will make in the future.

We know the size of the fund today. But we must estimate what rate of return we can expect to achieve over the long term. Based on the current rate, we also calculate the present value of future contributions current plan members and the government will make – \$15 billion.

In addition, an assumption is made about the plan's long-term rate of investment return. This is commonly referred to as the discount rate. Using the discount rate, the actuary determines if the plan’s assets today, plus future contributions made by existing plan members tomorrow, will be sufficient to pay promised pensions.



## Valuation assumptions

These valuation assumptions change over time, as this chart demonstrates, and are intended to be accurate over a long horizon. While actual experience mirrors some assumptions closely, annual stock market returns typically fluctuate much more significantly compared to the assumption and are smoothed over five years. (See chart page 6.)

	(percent as at January 1)	2003	2002	2000	1998
Rate of return		6.40	6.30	6.25	7.5
Salary escalation		3.05	2.90	3.20	4.5*
Inflation rate		2.05	1.90	2.20	3.5*

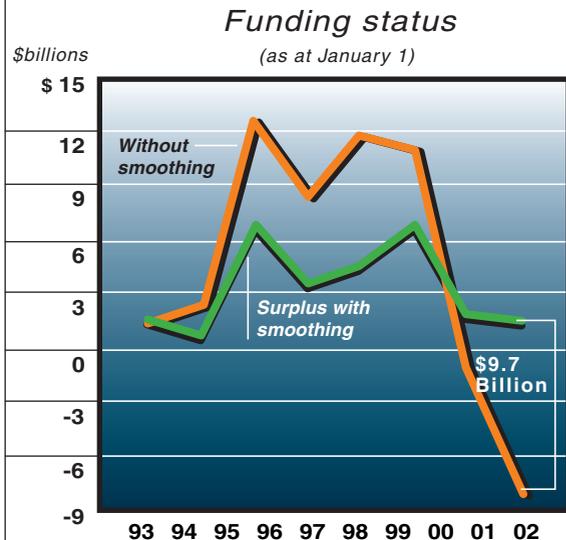
\* except 2% for two years

## What is smoothing?

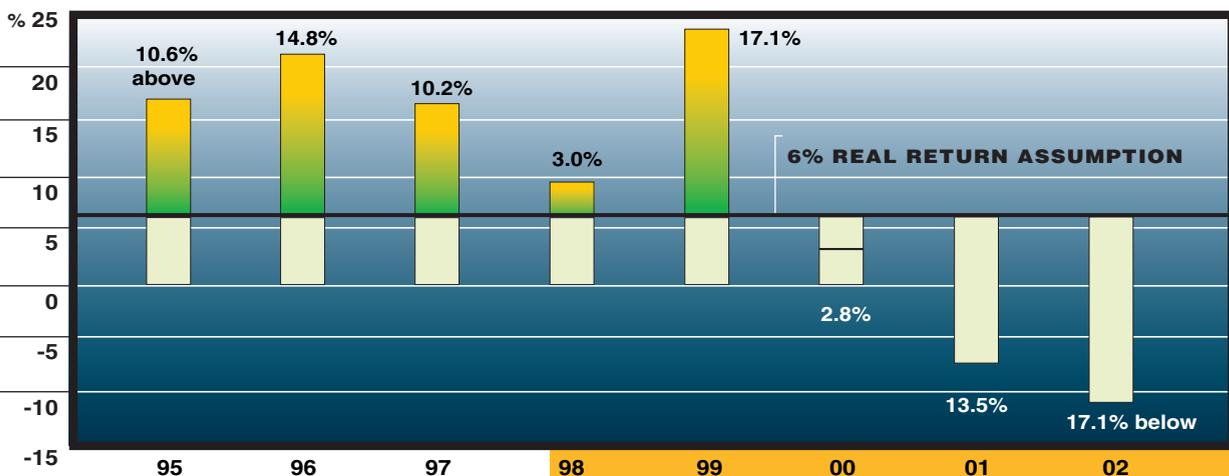
To arrive at the funding valuation, the actuary 'smoothes' gains and losses the plan makes or incurs on all investments except bonds when those gains or losses are different from the plan's long-term assumption. The practice of smoothing is employed consistently by many other plans to reduce short-term fluctuations in the valuation. Without smoothing, pension plans would be faced with the impractical task of adjusting contribution rates frequently because of the volatility of stock markets.

Smoothing is not used on the plan's investments in bonds because their value is correlated to the cost of benefits. Smoothing defers gains when actual returns exceed the (6% plus inflation) assumption. When returns are below the assumption, smoothing defers losses. Each year, 20% of gains or losses are recognized straight up, the balance is then smoothed and recognized in future years.

But this doesn't mean the plan gets a free ride as a result of smoothing. Everything that is smoothed out is eventually brought back in. As a result of stock market declines in 2001 and 2002, the plan holds \$9.7 billion in equity losses that will be recognized over the next four years. When these losses are absorbed, the full impact of past poor markets will be absorbed in the plan's funding status. The chart above shows the considerable difference to the plan's funding status with smoothing and without smoothing.



## Equity returns (after inflation) vs. assumption



5 YEAR S M O O T H I N G

## Funding valuation history

(\$ billions)

(at January 1) <sup>1</sup>	03	02	01	00	99	98	96	93
Net assets	\$ 66.2	69.5	73.1	68.3	59.1	54.5	40.1	29.4
Smoothing	9.7	3.0	(4.3)	(7.3)	(5.1)	(6.0)	(1.8)	–
Value of assets	75.9	72.5	68.8	61.0	54.0	48.5	38.3	29.4
Future contributions	14.7	13.7	14.4	13.4	12.0	12.6	14.5	14.3
Funding commitments <sup>2</sup>	–	–	–	–	3.7	8.5	8.4	8.4
Actuarial assets	90.6	86.2	83.2	74.4	69.7	69.6	61.2	52.1
Future accrued benefits	89.1	84.3	76.4	69.8	66.2	62.8	60.5	50.6
Surplus (deficit)	\$ 1.5	1.9	6.8	4.6	3.5	6.8	0.7	1.5

<sup>1</sup> Valuation dates determined by co-sponsors

<sup>2</sup> Payments committed by the government toward the pre-1990 unfunded liability

## What is the funding management policy?

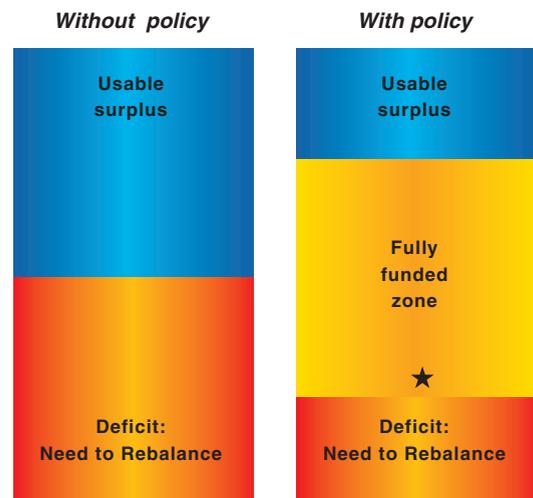
In March 2003, the co-sponsors adopted a funding management policy. This policy was designed to provide a structure for the sponsors to determine when it's appropriate to change benefits, change contribution rates or hold the line on both.

Previously they relied on the common practice of assuming the plan was fully funded when assets equaled 100% of liabilities (otherwise known as the cost of future benefits). Anything even marginally above that level was a 'usable' surplus that could be spent on improving benefits or reducing contributions. Anything even marginally below that level would have caused a contribution increase when the funding valuation was filed with regulators.

This black and white definition had very practical pitfalls. The most obvious is it provided false comfort that even a marginal surplus of assets over the cost of future benefits – say 101% – was enough cause to increase those benefits.

Knowing this, the plan's co-sponsors took the innovative step of adopting a funding management policy which defines a "funding zone".

### Pension funding policy



★ In 2003, the plan was fully funded with a small surplus of \$1.5 billion.

Now, when the co-sponsors look at the funding valuation, they don't just see a surplus or shortfall, they see whether the plan is operating in its fully funded zone and if it is, where it is in this zone.

The plan is fully funded if its assets equal more than 100% but less than 107.5% of future benefit costs. The policy also defines when the plan has a 'usable surplus' which occurs when assets equal more than 107.5% of future benefit costs.

Under the policy, new benefits or reduced contributions would be granted only when the plan is above its fully funded zone. This higher standard for what constitutes a usable surplus will help the plan avoid benefit improvements today that could risk higher contributions tomorrow.

### ***History of use of surplus***

<b>Valuation date</b>	<b>Surplus (Deficit)</b>	<b>OTF</b>	<b>Ontario government</b>	<b>Surplus remaining</b>
1990	(\$7.8 billion) unfunded liability	Increased contributions by 1% to 8.9%	Agreed to make a series of special payments to eliminate the unfunded liability and match increased contributions	\$0 Special payments considered an asset eliminating unfunded liability
1993	\$1.5	\$325 million to offset social contract days <sup>1</sup>	Eliminated special payments for \$1.2 billion saving	\$0
1996	\$0.7	\$0.6 for benefit improvements and RCA contributions <sup>2</sup>		\$0.1
1998 <sup>3</sup>	\$6.8	\$2.2 for benefit improvements <sup>4</sup>	\$4.6 to reduce the value of remaining special payments	\$0
1999	\$3.5		\$3.5 to reduce the value of remaining special payments <sup>5</sup>	\$0
2001	\$6.8	\$6.2 for benefit improvements <sup>6</sup>		\$0.6
2002	\$1.9	Co-sponsors agreed not to make any changes to benefits or contributions		\$1.9
2003	\$1.5	No changes; funding management policy adopted		\$1.5
<b>Total</b>		<b>\$9.3 billion</b>	<b>\$9.3 billion</b>	

<sup>1</sup> Savings offset cuts that would have been made in the education sector as part of the government's overall cost-cutting program.

<sup>2</sup> Benefit improvements: reduced early retirement penalty to 2.5% from 5% for each point short of 90 factor, making it easier to retire early; lower CPP reduction after age 65 (to 0.68% from 0.7%).

<sup>3</sup> In 1998, the co-sponsors agreed future surplus would first be used to eliminate the remaining special payments, and the next \$6.2 billion would be available exclusively to the OTF.

<sup>4</sup> Benefit improvements: 85-factor window from 1998 to 2002; lower CPP reduction after age 65 (to 0.6%)

<sup>5</sup> The government paid off its remaining special payments by the end of 1999.

<sup>6</sup> Benefit improvements: permanent 85-factor; 10-year pension guarantee; reduced pension as early as age 50; lower CPP reduction (to 0.45%); 5-year average YMPE to calculate CPP reduction; pension recalculation based on approximate best-5 salary for older pensioners; and top-up waived for LTIP contributions.