

# The Total Career Benchmark Process—A First Step in Redefining Canadian Pension Plans

By Thomas J. Walker FSA, FCIA, CFP

The Total Career Benchmark Process—A First Step in Redefining Canadian Pension Plans .....	2
Introduction .....	2
What is TCBP? .....	3
Rationale for Proposing TCBP .....	4
Risk Separation .....	5
Why Link to CPP .....	7
Quick Overview of the Total Career Benchmark Process (TCBP) .....	8
Some Definitions, Examples and Comments .....	9
Discussion Points .....	13
Initial Design of TCBP .....	13
Necessary Rules for Effective Introduction .....	13
New Plan Designs .....	14
Age Specific Rules .....	14
Funding .....	14
Division of Pensions on Marriage Breakdown and/or Separations .....	15
The Evolution of TCBP .....	15
Early Years .....	15
Transition from Current Plans .....	15
Comments re the Transition of Certain Types of Plans .....	15
Standardized Regulation .....	16
Some Examples .....	16
Example One: An Employee Whose Annual Income Remains Equal to the YMPE .....	17
Example Two: An Employee with an Increasing Salary and a Hybrid DB/DC Employer Plan .....	17
Conclusion .....	18

## **The Total Career Benchmark Process—A First Step in Redefining Canadian Pension Plans**

By Thomas J. Walker FSA, FCIA, CFP

### ***Introduction***

The focus of this paper is to define, describe and discuss what I see as the fundamental first step in redefining Canadian pension plans. It is necessary to go back to first principles and develop a system that recognizes the underlying purpose of retirement savings from the perspectives of an employee, an employer and the government. The focus of the first step that I am proposing will be to establish a foundation for a system which will ultimately maintain a consistent and reasonable sharing of risks and benefits amongst plan sponsors, plan members and the government. All three of these groups: employers, employees, the governments—hereafter referred to as the **threesome** are very much in need of a predictable and sustainable retirement system.

Much has been written about the problems facing not only the Canadian retirement system but that of almost all countries. The current Canadian regulatory framework is disjointed, inconsistent and bureaucratic. The current underlying system has been the primary cause of the problems we now face. By establishing a clear benchmark by which all plan members and plan sponsors can easily compare what they have to what they need—and even more importantly to determine how to accrue what is needed—it will be possible to transfer the skills of those involved in administering, designing, monitoring and regulating the retirement industry from time wasted on bureaucratic requirements to time invested in creative solutions and a sustainable system. By changing the manner in which tax-sheltered retirement benefits and funds can be accrued, many of the underlying issues such as financial risk, lack of understanding, asymmetry, bureaucracy and complexity can be dramatically reduced.

A necessary first step is a redefinition of the entire Canadian retirement system by using the Canada Pension Plan as the benchmark, both to administer retirement plans and to automatically determine an individual's tax-sheltered limits. In this paper this first step will be called the **Total Career Benchmark Process (TCBP)**. TCBP would be established in a manner that guarantees the possibility of adequate income replacement, including inflation protection, up to a pre-determined level, over an entire career. This paper will explain how and why this will work.

The new system must be such that weaknesses inherent in the current system are not grandfathered but can be eliminated in a smooth transition to the new system.

**The Quick Overview of the Total Career Benchmark Process (TCBP)** section of this paper provides a short description, including some terminology and examples, of how TCBP might be constructed as a fundamental first step. The manner in which TCBP can change, or integrate with, the entire retirement scenario in Canada, including employer sponsored DB and/or DC plans; individual tax-sheltered retirement savings and public mechanisms like the Canada Pension Plan will be discussed. The design of TCBP is intended to take maximum advantage of current technology. Current technology enables us to have very sophisticated processes and complexities behind the scenes while at the same time producing a “product” which is readily understood, and easy to implement, by its users.

The intention of this paper is not to develop the ultimate solution, which will evolve as the experts and corporations within the industry work from TCBP as a new base. Instead this paper will try to illustrate how the consistent application of the rules underlying TCBP will remove the need for much of the bureaucracy and clearly define who owns the risks and benefits of any retirement product. An individual member, a financial planner, a lawyer, an accountant, a regulator, an actuary -anyone at all- should be able to use TCBP to compare the pension benefits provided by Company ABC to those provided by Company XYZ to those accrued by an individual, without an employer sponsored pension plan. They will also be able to

compare the benefits accrued to date, and the needed future benefit accruals, for any two members. At any given time individual members will have some realistic perspective on whether they are in good shape or bad shape with respect to their retirement needs—just as any individual now has some sense of how serious an earthquake is through a Richter scale reading. Some examples will be included.

In this paper you will observe that the key to TCBP is that the tax sheltered retirement benefits available to any individual employee will be specified to include a “DB” component, which provides the necessary lifetime guarantee, as well as a “DC” component which enables employees to tailor retirement benefits to their own personal needs. Under TCBP then, the DB component will cover the “lifetime risk” and the DC component will cover the “personal risk.” The discussion of TCBP will include points which demonstrate how by using the DC component for personal risk, DB plans will have a significant reduction in “demographic risk.” The third critical component, “investment risk,” entails the managing of the contribution streams for the funding and payouts to cover the lifetime risk and the personal risk.

The lifetime risk component will drive the total value of “tax-sheltered retirement savings.” As an employee’s career and age advances the proportion of total value allocated to lifetime vs. personal risk will change. Fundamentally then under TCBP the lifetime risk will be the portion of the entire retirement savings that will ultimately be annuitized and/or locked-in regardless of whether an employer has provided a DB or a DC type plan. A critical component implicit in the proposed TCBP design is that an individual will have the opportunity to accumulate the same lifetime, tax sheltered, income replacement ratio at “normal retirement age” regardless of the plan provided by any employer. In contrast to the current system there will not be an out and out loss of retirement savings room as a result of a job change or a career interruption. There will also not be a significant subsidy of one member by another. From an employer perspective, the pension obligation for a member under TCBP will be met on a year-by-year basis and there should be no necessity to set up complex governance, administrative and accounting procedures. The vast majority of employers (i.e. those with less than about 10,000 members) should be able to pick a provider (from amongst the very large plan sponsors and/or other approved annuitization funds) and simply transfer funds and documentation electronically on a monthly basis.

### ***What is TCBP?***

TCBP is a process by which all Canadian retirement benefits, whether provided by individual savings, employer-sponsored pension plans or the government can be established and measured on a consistent scale. By establishing TCBP—not only can the measurement be consistent but also the administration of all tax-sheltered retirement benefits can be tracked by a centralized federal government agency. Whether you are measuring DB benefits or DC benefits TCBP will provide a comparison scale. Over time the terminology which will evolve will become everyday lingo for all. Behind the scenes, like with the Richter Scale, the process to develop the ongoing measures will be extremely complex as well as reflective of the current markets and demography. Over time the current terminology (e.g. DB, DC, RRSP, etc.) will be replaced with new terms like lifetime account, personal account, career retirement factors, worth factors etc. An individual’s access to an adequate tax-sheltered retirement fund will be independent of the type of plan. By standardizing the lifetime component it will be possible to establish a series of approved annuitization funds. These funds could be provided by insurers, banks or even other large DB pension plans which could accept new annuitants both to spread risk and to provide income.

At the present time if you Google ‘retirement calculator’ you get over 100,000 hits in Canada alone. Even recognizing that there are many overlaps in the Google search it is not unreasonable to surmise that there is a retirement calculator out there that meets the specific needs and capabilities of just about everyone. However finding the right calculator is a major problem—but not nearly as big a problem as the fact that many of the calculators give materially different answers with the same assumptions. Establishing TCBP

will give everyone a consistent tool and process which an individual, and/or a financial planner, can use to determine where they are at and to develop a plan to meet their goals.

The consistency which TCBP can provide requires that retirement tools such as DB plans, DC plans and RRSPs must follow the same set of rules. By nature the rules will be restrictive in some ways but the overall impact of changing to a system which is anchored by TCBP will be to significantly increase the overall flexibility of the Canadian retirement system while at the same time reducing the risk faced by each member of the threesome—employers, employees and governments. All individuals under TCBP will have online access to their retirement account which will include all components of their tax sheltered retirement funds, including historical data, regardless of the type or source.

### ***Rationale for Proposing TCBP***

The current retirement system contains a significant amount of unfairness in sharing and owning risk. Some employees effectively subsidize others under certain DB plan designs. Some employees lose access to tax shelter due to factors beyond their control and which vary depending on the type of plan they have. For example an employee who leaves a typical private sector DB plan 25 years before retirement totally loses pension coverage for the pre-retirement growth in salary. Some employers are subject to the “risk asymmetry” of having to make up plan deficits and give up plan surpluses. How can these unfairness aspects be removed?

The risks and the rewards should be allocated fairly. A fundamental principle in effectively reallocating risk is the establishment of a clear distinction between employer and employee risk. Ideally each risk should be assigned to the party that can accept, monitor and, to the extent possible, control it. There are also risks which in some cases can be totally or partially eliminated by simply assigning them to the right party.

By establishing the lifetime account and the personal account under TCBP the risk has been split. In developing TCBP the focus is not only on what is **wrong** with the current system but also on what is **right** with the current system. Adequate pensions are obviously the primary goal of the **threesome**. Currently the very best pensions are enjoyed by employees of large private sector companies and by public sector employees. The two most positive characteristics of the best pension plans are: 1. The income replacement ratio at retirement, for employees with long service, is generally adequate, inflation protected and guaranteed for life and 2. Employees are required to make significant contributions, often equal to the employer contributions. As a result members appropriately share in both the risks and rewards of the plan’s performance. These two characteristics go a long way towards minimizing the risk asymmetry between plan members and plan sponsors.

The best plans do, however, have a very major negative characteristic. This is a characteristic which can be referred to as the “hidden tontine.” The hidden tontine is the fact, previously alluded to, that one group of members effectively subsidizes another group of members. For the same year of service and at the same salary level the subsidized member receives a significantly more valuable pension benefit than does the subsidizing member. The hidden tontine is primarily a result of ancillary benefits such as subsidized unreduced early retirement pensions and spousal survivor benefits. The hidden tontine is consistent with the traditional view that a pension is a “reward for long service” rather than the more current view that a pension is “deferred income.”

Under TCBP the mechanism is present so that all employees can accumulate sufficient funds to provide the ideal pension. Effectively over the entire pension system the risk will be age specific rather than reflecting the demographics within a DB plan’s membership. Further, the impact of demographic factors such as a job change can be offset and the employee, at any time, can use the benchmark factors to determine both where he or she is at present and how to achieve retirement goals. The employer is not

prevented from rewarding employees for long service—but the funds must come directly from the employer to the employee rather than, effectively, from the employer to one employee and then to another employee.

### **Risk Separation**

Traditionally, contributions have been labelled as either employee or employer. From a risk point of view better labels are “lifetime contributions” and “demographic contributions.” Two of the three major risk labels (lifetime, demographic and investment) define the two contribution streams. That is why under TCBP a “lifetime account” and a “personal account” will be established. The lifetime account can include both a DB and a DC component and will be used to provide lifetime income. The personal account will cover demographic or personal circumstances risks such as early retirement, spousal survivor benefits, etc. Until retirement, the lifetime account is “locked in.” The third risk, investment, becomes the label for managing the contribution streams. Together the lifetime account and the personal account will be an individual’s retirement account.

The major risk in retirement is the lifetime risk. Everyone is more and more aware of the risk of outliving retirement savings. At the same time as life expectancy is increasing there is a trend away from DB plans. In a DB plan the employer has the lifetime risk. In DC plans, RRSPs and any other capital accumulation plan the lifetime risk is with the employee. The lifetime risk is one for which a ready solution is available—annuities. Annuities, or a modernized variation, should, once again, be required on any plan which receives a tax shelter. About two-thirds of the total accumulated retirement savings over a career must be allocated to the lifetime risk. The DB design and regulation under TCBP should be such that the accumulated benefit for a particular year of service, and a prescribed normal retirement age, is consistent for all employees regardless of gender, marital status, job changes or target retirement age.

For employees whose employer sponsors a plan, whether DB or DC, TCBP would include a requirement that all employer contributions be annuitized prior to, or upon, retirement. This requirement is consistent with the employer’s purpose for providing retirement benefits. Further, such a requirement reduces risk for both employees and employers. The annuity could be immediate or could be designed to begin at a fixed point in time after retirement if the employee is still living. For employees who do not have the benefit of an employer sponsored pension, annuitization of a defined amount should be required. The amount would be calculated to provide a mandated income replacement ratio (including government benefits such as CPP and OAS). With the centralized administration proposed for TCBP an annuitization process in which the annuity payments flow to a central distributor and then to the annuitant would be possible. The income replacement ratio, and the income it is applied to, would reflect the year by year tax sheltered limits up to the date of retirement. It would also be possible to set income breakpoints so that the required locking-in/annuitization portion could trend downward as income rises (e.g. for an employee with 35 years of employment: 70% income replacement ratio for salary up to the YMPE, 50% income replacement ratio for salary between one and two times the YMPE and 30% income replacement ratio for salary greater than two times the YMPE).

TCBP **worth factors** will provide a benchmark to compare accumulated funds to the required lifetime annuity and to compare employer sponsored DB plans to employer sponsored DC plans. Worth factors or present value factors for annuitization have, of course always been available—but not easily comparable. Many of the “retirement calculators” out there are asking people to input their life expectancy, their anticipated investment returns and their estimate of future inflation. This is like my doctor asking me how I would replace my hip! Even though standardized worth factors still have the same potential for experience variation as a current present value factor does; the ability to make consistent comparisons, and to monitor the evolution of the worth factors significantly increases the usefulness of the factors. It might take an actuary, an investment expert and a sophisticated computer program to develop the worth factors but any

person capable of employment is also capable of understanding that a factor of 200 is worth twice as much as a factor of 100.

Under TCBP the main worth factors will be those used to set the annual tax sheltered limits. However other factors can and would be developed and published which compare the rates charged for annuitization by insurance companies and approved annuitization funds.

The second major risk is the demographic risk. Demographic risk has had a large impact on many plans with generous "ancillary benefits" such as unreduced early retirement. As previously noted, traditional DB designs are such that there are frequently situations in which one category of members effectively subsidizes another: younger subsidizes older, short service subsidizes long service, normal retirement subsidizes early retirement and single subsidizes married. Most of these "hidden subsidies" are a function of the plan design.

We can largely separate the demographic risk from the investment risk and the lifetime risk by recognizing that much more of the demographic risk is within the control of the employee rather than the employer. Much of the demographic risk can, and should be, characterized as "personal circumstances risk." The decision to marry, the decision to change jobs, the decision to retire early are all aspects which are, to varying degrees, much more within the control of the employee than the employer. The employee has more ability to plan for personal factors than does the employer.

Demographic risk evolves and reduces over an employee's career. For example the risk of early retirement is gone by normal retirement age. The demographic risk component of the retirement system should be the component that provides the most flexibility, particularly in the years when an employee's retirement is far off in the future. The personal account should be used first to supplement any employer provided pensions up to the required lifetime risk requirement. The remaining funds can then be used to recognize personal differences such as retirement age, single vs. married etc. Under TCBP the personal account can be used to maintain fairness from one individual to another in contrast to the current situation under many DB plans (e.g. a person deciding not to retire early does not lose the "value" of a subsidized early retirement benefit but instead maintains the funds in the personal account to use for other personal needs or desires at a future date).

Now let's consider the third major risk, the investment risk. The perception is that the main difference between DB and DC is that investment risk is with the employer for DB and with the employee for DC.

For a DC plan the investment risk is predominantly with the employee. However the employer may in future be exposed to potential class actions. This happens when employees nearing retirement realize that the pension they will receive is much smaller than they had anticipated. This realization is not so much a function of poor investing or savings habits as it is a reflection of the tendency of many people to place a much higher value on an immediate lump sum than on an annuity. Once the employees realize that their lump sum won't provide the lifetime income that they thought it would, they then try and pass the buck back to the employer. They argue that the employer was deficient in providing good enough investment options and adequate investment training. A part of the TCBP process would be to regularly update employees as to the level of lifetime benefit that the DC component of their retirement account can be expected to provide. As the TCBP system matures individuals will become more accustomed to the fluctuations which can occur and more familiar with the published worth factors.

At present each employer sponsor of either a DB or a DC plan has responsibility for the investments of the plan. Under TCBP the proposal is that the largest pension plans, especially the large public sector plans which have very large pools of funds, and employ many investment experts, be permitted to annuitize benefits for smaller plan sponsors and possibly even for individuals by being designated as approved

annuitization funds. From an administrative point of view an individual account with an approved annuitization fund could operate much like trading does on the stock markets. On a monthly or annual or even an ad hoc basis, a plan sponsor, or an individual, could purchase “approved” deferred retirement “units” which become payable as part of a total monthly pension at retirement. Until the employee retires, the annuities would be standardized based on the target lifetime pension. This would enable a very broad spreading of risk. Detailed rules could be established for approved annuitization funds. By participating in an approved annuitization fund a DB sponsor can effectively change a DB plan (from an employee perspective) to a DC plan (from an employer perspective) or a DC sponsor can effectively change a DC plan (from an employer perspective) to a DB plan (from an employee perspective).

The simple approach to allocating investment risk is to have the employer control all investment decisions for employer contributions and to have the employee control all investment decisions for employee contributions. The employer would also provide the employee with the opportunity to “mirror” the employer’s investment decisions as well as an opportunity to select from a variety of approved annuitization funds which have been deemed acceptable for tax sheltered investments. The employer, by law, should not have any risk with respect to the investment of employee contributions.

1. The relative size of the lifetime account compared to the personal account will vary as an employee’s career advances and the employee ages. Until about age 35 the lifetime account will be totally provided by the employer. Beginning at about age 35 a portion of any personal account may be reassigned to the lifetime account to guarantee that required income replacement ratios are met. Any transfers between the lifetime and personal accounts will not affect the person’s total contribution room.
2. The employer and the employee would both have minimal risk with respect to the others’ contributions.
3. Employees, who are not members of a pension plan, as well as members of less generous plans, and employees who have changed jobs, would follow the same protocol and have the same overall limits (i.e. lifetime contributions plus personal contributions based on current age, earnings and service) available to them.

### **Why Link to CPP**

The proposed link to the Canada Pension Plan (CPP) should not be conceived as moving the employer and employee responsibilities for retirement savings to the government. Instead the link to the CPP is intended to achieve three major goals:

1. Government benefits such as CPP and OAS can be directly included in the benchmarking process.
2. The CPP administration process can be used to establish a central source for all.
3. The methodology used by the CPP to track member records can be easily expanded to cover private sector plans in a manner which will permit the private sector to move in tandem with the CPP as the market changes.

There are some unique aspects to the CPP methodology used to track member records. The key feature which will be used in the design of TCBP is a simple method used to track year-by-year contributions and pensionable earnings. The maximum possible CPP contribution period to normal retirement age is 47 years (from age 18 to age 65). In simple terms any member whose income is greater than or equal to the yearly maximum pensionable earnings (YMPE) for a given year is given a service factor of ‘1’ which is the

maximum credited service for the year. If the member's income was just one-half of the YMPE the members credited service is '0.5'.

When a member retires or becomes eligible for benefits, the year by year factors are added up. The proportion of the maximum possible benefit that the member is entitled to is simply the sum of the member's year-by-year factors divided by the number of years in the contributory period (the actual CPP benefit calculations reflect the number of months rather than years in the contributory period). The CPP does provide for "dropouts" of a certain percentage of low income years and also allows for dropouts for other reasons which will not be described here. The standard dropout is the lowest 15% of the years from age 18 to age 65. Suppose a member reaches age 65 and has had 30 years in which income was greater than the YMPE, 15 years where income was equal to one-half of the YMPE and two years with zero income. In this case the dropout period is 15% of 47 or 7 years. Therefore the number of years in the contributory period is 40 (47 minus 7). The sum of the member's highest 40 credited service factors is 35 (30 years at YMPE or greater plus 10 years at one-half of the YMPE). Note that five of the years at 50% plus the two years at zero have been dropped out. The proportion of the maximum benefit to which this member is entitled is therefore 87.5 % (35 divided by 40). If there had not been a dropout period, the proportion of the maximum benefit to which this member is entitled would have been only 79.8% (37.5 divided by 47).

For purposes of illustrating how TCBP will work it has been assumed in this paper that pension accumulation will be based on year-by-year factors up to three times the YMPE to establish the benchmarks for plan design and income tax limits. The annual adjustment in the YMPE is based on the Average Industrial Wage (AIW). Under the tax laws the current limits for DC plans, RRSPs, DPSPs and DB plans are closely related to each other (the money purchase or DC limit defines the other limits by formula) and defined until the year 2010 when they will begin to grow in accordance with the AIW just like the YMPE. In 2009, the last year for which the limits have been specified, the maximum pensionable earnings which are consistent with the maximum possible contributions and/or benefits under each of DC, RRSP, DB and DPSPs is \$122,222 (because 18% of \$122,222 equals the 2009 money purchase limit of \$22,000). This amount, \$122,222, will be just over two and a half times the projected YMPE for 2009.

By using a maximum of three times the YMPE in developing an illustration of how TCBP will work the tax sheltered limits have been enhanced a little but this is partially offset by the treatment of CPP and OAS under TCBP. There are also very strong arguments that the tax sheltered limits available in Canada should be further increased since they have dramatically declined relative to the AIW and relative to many other countries from what they were in the 1970s. Since the purpose of this paper is to illustrate how TCBP can work I am leaving the arguments with respect to the ultimate limits and factors to others.

### ***Quick Overview of the Total Career Benchmark Process (TCBP)***

The TCBP system proposed in this paper is one in which clear benchmarks are established for both the basic required lifetime pension benefit and the annual accrual of tax sheltered retirement savings. Under TCBP each individual will have a master "retirement account" which is tracked by the federal government. The retirement account will include two separate components a lifetime account and a personal account. The lifetime account will track the amount and value of "locked-in" retirement benefits which includes (i) all employer-sponsored DB type benefits (ii) all employer sponsored DC type benefits up to the individual's lock-in requirement and (iii) any additional amount transferred from the individual's personal account to meet the lock-in requirements. The personal account will track all other retirement funds. Further, the personal account can be used for other special benefits such as the home buyers plan and the lifelong learning plan which are currently available to people with RRSPs. At any attained age there will be an annual tax-sheltered contribution limit expressed as a percentage of income up to an annual maximum for both the lifetime account and the personal account.

TCBP will be driven by one key factor—the annual retirement factor. The annual retirement factor is simply the ratio calculated by dividing the individual's "earned income," as defined for income tax purposes, by the YMPE (yearly maximum pensionable earnings) under the CPP. By using this factor as the basis for all calculations it will be possible to synchronize the administration and reporting of all types of pension accruals and projections. An individual will receive an annual retirement statement which will include all tax sheltered funds. By using the annual retirement factor, inflation is implicitly included as the individual's career progresses. Further, tax deductions for any "catch-up" payments for unused contribution room can be calculated in a manner which maintains consistent time-adjusted tax treatment.

Effectively, if the TCBP process were to be followed an individual would accrue an inflation protected, career average, lifetime benefit commencing at age 65. However TCBP is designed such that it includes "adjustment" tools which allow for:

1. Periods of non-participation in the work force
2. An adjustment from "career average earnings" to "best five average earnings"
3. Ancillary benefits such as spousal survivor benefits, early retirement benefits, bridge benefits, post-retirement health benefits etc.
4. An increase in income replacement ratio up to a maximum of 84% at age 65.

The adjustments are designed in a manner which attempts to minimize income tax "anti-selection."

The major benefit of TCBP however is the standardization of pension design and pension terminology in a manner which readily permits comparisons, retirement planning and most importantly an increase in the knowledge of employees. The actual level and value of the benchmarks (other than the YMPE) included in this paper are for illustrative purposes only. The actual values to be used will require further research and study beyond the scope of this paper.

### Some Definitions, Examples and Comments

The TCBP includes the following fundamental benchmark definitions (*some of which are illustrated using examples for an individual named Jordan and some of which include comments in italics*):

- I. The **Target Annual Lifetime Accrual (TALA)** for any individual is the sum of 2% of each calendar year's pensionable earnings up to a maximum of three times each year's YMPE.  
*Comment: The actual amount of pension accrual by an individual is a function of both employer sponsored pension plans and the individual's own contributions. The benchmarks are used to determine the amount of tax sheltered room available to the person at any time based on the career earnings history to date.*
- II. For each year during the pension accrual period an **Annual Retirement Factor (ARF)** equal to the individual's pensionable earnings divided by the YMPE will be calculated and recorded on the individual's permanent records. The maximum ARF in any given year is three.  
*Example: Jordan has pensionable earnings of \$92,000 during a year when the YMPE is \$50,000. Jordan's annual retirement factor is equal to 1.8400. Earnings equal to or greater than \$150,000 would result in an ARF of three.*
- III. The sum of the annual retirement factors between age 30 and age 65 (the **Designated Pension Accrual Period**) is called the **Career Retirement Factor (CRF)**. The sum of the annual retirement factors accrued to date is the **Accrued Career Retirement Factor (ACRF)**.

*Example: Jordan has an accrued career retirement factor of 15.5144 after 11 years in the pension accrual period. Jordan has an average ARF of 1.4104 (15.5144 divided by 11). Jordan's career average earnings to date (indexed relative to the annual increase in the YMPE) are \$70,520 (1.4104 times \$50,000) if the current YMPE is \$50,000.*

- IV. The Target Lifetime Pension (TLP)** commences at age 65 on a life only basis (i.e. without survivor benefits) and is equal to 70% of the individual's career average earnings between age 30 and age 65, indexed in accordance with the annual increase in the YMPE before retirement and the annual increase in the CPP after retirement. The **Accrued Target Lifetime Pension (ALTP)** is based on the ACRF to date. As a formula this can be displayed as  $ATLP = 2\% \text{ of YMPE times ACRF}$ .

*Example: Jordan's accrued target lifetime pension is \$15,514.40 (.02 times \$50,000 times 15.5144). For projection purposes we can assume that Jordan's current ARF of 1.8400 remains level which means that Jordan's CRF at normal retirement age will be 59.6744 (future total ARFs equal to 24 times 1.8400 plus current ACRF of 15.5144). Jordan's TLP at normal retirement age is currently projected to be \$59,674.40 (.02 times 59.6744 times \$50,000). This amount is equal to 70% of Jordan's projected career average earnings stated in current dollars as of the calculation date. At any time the accrued target lifetime pension is simply 2% of that year's YMPE times the ACRF. In these examples based on an assumed YMPE of \$50,000 the ATLP is therefore \$1,000 times the ACRF.*

- V. The Target Defined Benefit Pension** is based on the target lifetime pension and has an annual accrual equal to 2% of the calendar year's pensionable earnings up to a maximum of three times that year's YMPE. All DB plans are established as a percentage of the target defined benefit pension.

*Example: If throughout the pension accrual period Jordan has been a member of a 100% target defined benefit plan, then the actual accrued pension to date will be equal to the accrued target lifetime pension of \$15,514.40. Alternatively, if Jordan has been a member of a 50% target defined benefit plan then the actual accrued pension to date will be based on 1% per year rather than 2%. Therefore Jordan's actual accrued pension to date will only be \$7,757.20 which equals 50% of Jordan's accrued target lifetime pension of \$15,514.40.*

- VI. The target lifetime pension will form the basis for a Mandated Income Replacement Ratio** based on career average earnings which have been indexed in accordance with the annual change in the YMPE. The mandated income replacement ratios will vary by both age and career average earnings and will be used to define the **Lifetime Freeze Factors**.

*Comment: The mandated income replacement ratio and lifetime freeze factors are to make sure that income replacement ratios are adequate and that tax sheltered contributions are used for their primary purpose of guaranteeing adequate lifetime income. Another critical factor is to make sure that individuals do not use their retirement savings too quickly and then draw on government social benefits. The following example of a mandated income replacement ratio was given in a prior section of this paper: "e.g. for an employee with 35 years of employment: 70% income replacement ratio for salary up to the YMPE, 50% income replacement ratio for salary between one and two times the YMPE and 30% income replacement ratio for salary greater than two times the YMPE." The employer contribution portion of the lifetime account must be locked-in and annuitized under TCBP. A portion or all of the personal account could be freed up for any purpose if the income replacement ratio at retirement, including CPP and OAS, met the requirements of any mandated income replacement ratio such as the example given.*

- VII. The Designated Maximum Normal Retirement Pension** is the target lifetime pension augmented with ancillary benefits which are purchased at retirement using funds from the personal account to adjust for:

- Spousal and/or other survivor benefits

- an adjustment from career average to best five average earnings including indexing
- an adjustment for career gaps between age 30 and age 65

The adjustments are referred to as **Catch ups** in TCBP terminology. The designated maximum normal retirement pension will be 70% of the individual's best five *consecutive* year's average earnings between age 30 and age 65, indexed in accordance with the annual increase in the YMPE before retirement, and indexed in accordance with the annual increase in the CPP, after retirement. The designated maximum normal retirement pension will also include spousal survivorship benefits equal to at least 2/3, but as much as 100%, of the lifetime only pension. In order to achieve the designated maximum it will be necessary for an individual to have a total of 35 years of workforce participation, prior to age 65, during which some pensionable income was earned. Another potential use for a portion of the personal account would be to fund post retirement health care needs.

*Example (projecting an adjustment from career average to best five average earnings including indexing at retirement): Jordan anticipates future promotions and salary increases greater than the average annual increase in the YMPE. Based on Jordan's ARF remaining at its current value of 1.8400 for the 24 years remaining until normal retirement age we previously projected the target lifetime pension to be \$59,674.40 based on a projected CRF of 59.6744. Jordan expects that the career average ARF at normal retirement age will be 2.00 resulting in a CRF of 70.0000 and increasing the projected TLP from \$59,674.40 to \$70,000 (2% of \$50,000 times 70.000). This means that the average ARF over the remaining 24 years would have to be about 2.2702 rather than 1.8400. Moreover the difference in the year by year ARFs relative to Jordan's current ARF is almost certain to increase each year. Suppose that Jordan's best five consecutive ARFs are 2.72, 2.74, 2.76, 2.78 and 2.80. This mean's that Jordan's best five consecutive years average earnings would have an average ARF of 2.76. Jordan would, therefore, have the option to use the personal account at retirement to increase the projected TLP of \$70,000, based on the revised projected career average ARF of 2.00, to \$96,600 (2% of \$50,000 times 2.76 times 35) based on the best five average earnings. In current dollars Jordan's best five average earnings are projected to be \$138,000 (2.76 times \$50,000). Jordan's projected TLP of \$70,000 replaces only 50.72% of the best five average earnings. By using the personal account to upgrade from career average to best five average earnings the increased amount of \$96,600 replaces 70% of Jordan's projected best five average earnings (\$96,600 equals 70% of \$138,000).*

*Comment: Note that Jordan's personal account then would be needed to fund this 38% increase in the lifetime benefit to upgrade from career average to best five average earnings. The personal account funding represents about 28% of the total cost. This percentage will increase if spousal survivor benefits, early retirement benefits and/or an adjustment for any career gaps are required.*

**VIII.** The **Designated Maximum Early Retirement Pension** is the target annual lifetime accrual up to the actual early retirement age (earliest unreduced age is 58) augmented with ancillary benefits, funded with additional amounts from the personal account, to adjust for:

- Early retirement
- Spousal and/or other survivor benefits
- an adjustment from career average to best five average earnings including indexing
- an adjustment for career gaps between age 30 and age 58

The "adjustments" are referred to as catch ups in TCBP terminology. The designated maximum early retirement pension at age 58 will be 56% of the individual's best five years average earnings between age 30 and age 58, indexed in accordance with the annual increase in the YMPE before retirement and

the annual increase in the CPP after retirement with spousal survivorship benefits equal to at least 2/3, but as much as 100%, of the lifetime only pension. In order to achieve the designated maximum it will be necessary for an individual to have a total of 28 years of workforce participation, prior to age 58, during which some pensionable income was earned. After age 58 the maximum early retirement pension will increase by 2% for each additional year of accrual until the normal retirement age of 65 (e.g. at age 61 it will increase to 62% of the individual's best five years average earnings between age 30 and age 61).

*Comment: Funding for early retirement through Jordan's personal account would significantly increase the proportion of funding needed from the personal account relative to the total cost. The personal account would have to fund close to one-half of the total cost at age 58 depending on the benchmark worth factors at retirement. A later example in this paper includes a projected early retirement scenario.*

- IX. The designated pensions are based on a **Designated Pension Accrual Period** of 35 years commencing at age 30 and ending at age 65. The **Pre-accrual period** is any year prior to the year in which the individual attains age 30. Both employer and employee contributions can be made to the personal account during the pre-accrual period and can be used to enhance the lifetime benefits up to a **Maximum Income Replacement Ratio** of 70% at age 58 increasing by 2% per year to a **Maximum Income Replacement Ratio** of 84% at age 65. Each 2% increase over the target normal retirement pension would require a year prior to age 30 (i.e. before the **Designated Pension Accrual Period**) during which pensionable income was earned.

*Example: Jordan worked for five years prior to age 30. For those five years his ARFs totaled 3.75. This gives Jordan room to purchase additional lifetime benefits up to 10% (five years at 2% per year) of the projected best five average earnings of \$138,000. This purchase of an additional lifetime benefit of \$13,800 would have to be made with funds from Jordan's personal account. Assuming that no contributions were made to Jordan's retirement account during the pre-accrual period Jordan can make catch-up contributions for the five years. However any tax credit, or deduction, would be based on Jordan's ARF during the catch-up year. If the ARF during the catch-up year was 0.8000 the catch-up contribution amount and tax deduction would be based on the rates for Jordan's current income up to \$40,000 (0.8 times the assumed YMPE of \$50,000). As a result the tax implications for both Jordan and the government are the same as if Jordan had made the contribution when the income was earned.*

- X. The **Benchmark Worth Factors** will show the value of an annual pension equal to \$1,000 per year commencing at age 65 and indexed in accordance with the annual increase in the YMPE before retirement and the annual increase in the CPP after retirement. The assumptions used for these factors will vary by age using sophisticated analytical techniques. The factors will be released to the public on a regular periodic basis (initially by age in years but ultimately evolving to a factor specific to the individual's birth date by month and year). Worth factors for early retirement ages prior to normal retirement age will also be available.

*Comment: The "master" benchmark worth factor should be developed based on the assumptions used in the most recent CPP actuarial report. The master BWF should represent the "best" available since it covers the total working population. Over time expected variations standards from this master BWF will evolve for annuity purchases by (i) DB plan sponsors of varying sizes (ii) DC plan sponsors of varying sizes (iii) by individuals through their employer or financial institution (iv) by individuals directly.*

- XI. **Maximum Annual Tax Sheltered Contributions** will be based on the **Target Annual Lifetime Accrual** and will include a catch up component based on accruals to date and the time remaining until the designated early retirement age of 58. Once a member is over age 58, the **Maximum Annual Tax Sheltered Contributions** will be set at a level consistent with the maximum per year of service if the member was age 58. This provision guarantees that a member who elects to continue to work after

the target early retirement age does not lose tax sheltered room. The accumulated tax sheltered contribution limits over a career are designed to be sufficient to provide a designated retirement pension equal to 2% per year of best five average earnings, including indexing, in accordance with the annual increase in the YMPE, before retirement, and the annual increase in the CPP, after retirement to a maximum of 70% of best five average earnings at age 58. The maximum at later retirement ages would be increased by 2% for each year after age 58. Any amount in excess of 2% per year during the designated pension accrual period would be funded through the personal account and would require a period of earning pensionable income prior to age 30.

- XII. Cumulative Catch-up Factors** for any given year during the **Designated Pension Accrual Period** will be the difference between the **Cumulative Maximum Annual Pension Factor** (defined as the average of the best five consecutive annual retirement factors multiplied by the number of years to date in the pension accrual period) and the **Career Retirement Factor**. Multiplying the cumulative catch-up factor by 2% of the year's YMPE will give the annual catch-up pension amount. The catch-up factor reflects gaps in pension accrual due to both pension participation gaps (absence from the work force) and pensionable earnings gaps (years in which the annual retirement factor is less than the best five factor).

*Example: Jordan has not had any pension participation gaps. However Jordan's best five consecutive ARFs have averaged 1.7134 versus the career average ARF of 1.4104. Therefore Jordan has a cumulative catch-up factor, during his 11 years to date in the pension accrual period, of 3.333 (11 times the difference between 1.7134 and 1.4104). This means that Jordan's catch-up pension amount is \$3,333 (3.333 times 2% of \$50,000). This catch-up amount is available for Jordan to purchase with funds from his personal account before or at retirement.*

### **Discussion Points**

#### **Initial Design of TCBP**

The Overview above is a simplified example of an initial basic design of TCBP. It is critical that the design be such that employees and employers are on the same side and not opposing each other. Effectively, TCBP is a mandated "hybrid" plan which will dramatically reduce or even eliminate risk asymmetry and at the same time dramatically reduce the accounting "bounces" that have occurred over the past few years.

#### **Necessary Rules for Effective Introduction**

It is absolutely necessary that one of the rules for TCBP must be that all DB plans have the same basic design. The defined benefit is a life only pension, commencing at normal retirement age and indexed both before and after retirement. The only difference between plans will be the level of benefit provided from one employer to another, whether private sector or public sector. A generous 100% plan would provide an annual pension accrual equal to 2% of the employee's earned income up to a maximum of three times the YMPE. A 75% plan would provide an annual pension accrual equal to 1.5% of the employee's earned income up to a maximum of three times the YMPE, etc. An employer could also provide, for example, a 50% DB plan and require employee contributions to a DC component of the lifetime account.

An individual acquires year-by-year benefit room for the lifetime account based on the annual retirement factor. A portion of the accrued career retirement factor is offset each year by any employer sponsored DB or DC plans or by any employee contributions to the lifetime account. It is the standardizing of DB plans that permits the possibility of a system such as TCBP which standardizes administration and reporting. In contrast to the current Canadian retirement system, TCBP also makes possible the opportunity to carry forward both unused benefit and contribution room.

## **New Plan Designs**

Plan designs should be such that employee contributions are required. This will help to get employee buy-in and recognition of the fact that risks are shared. Employers should be encouraged to have a plan with both a DB and a DC component. This would be particularly important during the pre-accrual period when only the personal account is available for contributions. An individual is not eligible for a DB plan until the beginning of the designated pension accrual period at age 30.

It is important to emphasize, over and over, the administrative simplification that an employer would have under TCBP whether sponsoring a DB plan or a DC plan or a hybrid. All the employer has to track is the actual purchase of DB benefits from an approved annuitization fund or the the actual DC contributions to such a fund. All of the administrative record keeping for the employee's retirement account will be done by a centralized TCBP government agency. The actual investment policies and payout procedures will be the responsibility of the approved annuitization funds. Human Resource professionals will quickly become conversant with TCBP and if they move from one employer to another so does the knowledge.

## **Age Specific Rules**

Rather than the artificial "9" factor that is used now for the pension adjustment factor (PA) for DB plans the values used for PAs should be closely related to the individual's age and the worth factors—which would eliminate the need for pension adjustment reversals (PARs). This would mean that the annual tax sheltered limit (employer plus employee or lifetime account plus personal account) would start out low as a percentage of salary but would increase over a career (possibly in "blocks" of ages but maybe eventually age specific). This would not be age discrimination but would be designed to provide equality over a career. It would also recognize the realities of a typical individual's spending needs and income patterns over a career. The carry forwards of unused contributions would be based on a percentage of pensionable earnings rather than fixed dollar amounts. This would be consistent with the overall TCBP design.

The key annual tax sheltered limit is the total percentage of earnings that can be contributed to an individual's retirement account including both the lifetime and the personal accounts. In testing TCBP concepts for this paper I developed and used a "hypothetical" contribution schedule where the retirement account annual contribution limits were stated as a percentage of earnings in blocks by age for (i) Under age 30 (ii) Age 30 to age 39 (iii) Age 40 to age 49 and (iv) Age 50 and over. The present system has an 18% of salary contribution limit each year—if we ignore the preferred treatment of employee contributions under DB plans! Under the "test" TCBP scenario the total annual percentage contribution limit was lower than the current limit during the Under age 30 pre-accrual period; about the same from age 30 to age 39; somewhat higher from age 40 to age 49 and higher still for age 50 and over. However the total contributions over a career, expressed as a percentage of earnings, was not much different than the combined employer/employee contributions to the generous DB plans whose benefits we are trying to replicate under TCBP.

Because of the manner in which the TCBP system will be administered, the tax rules for an employee can be such that any carry forward of prior year's contributions can receive tax credit in the same tax category, when actually contributed, as if they had not been deferred. This feature of TCBP would somewhat offset any increase in total career tax sheltered contributions.

## **Funding**

The funding of a pension plan, particularly a DB plan for a small employer, can be dramatically simplified through the use of TCBP since the DB plans will have a standard design. Further, the employer can use an approved annuitization fund which precludes the need for a plan specific investment policy or for an actuarial valuation. The grouping of employees within an approved annuitization fund will be by age rather than by employer. A DB plan will effectively be something that can simply be bought by an employer. All

DB benefits will be fully funded as accrued. The simplified system permits that. If over time the age of an employer's staff increases significantly the employer can pursue many options to reduce cost and include the employees in the solution. An older work force would likely be amenable to allocating a greater portion of their compensation to pension benefits. If the employer does find it necessary to reduce DB benefits only future benefits are affected. Employees would then have additional contribution room available.

### **Division of Pensions on Marriage Breakdown and/or Separations**

In several provinces one of the most complex, time consuming and inconsistent processes in the current retirement system is the division of pensions as a result of a marriage breakdown. Under TCBP this could be handled easily just as it is under the CPP. This item by itself will save some plan sponsors and members millions of dollars.

### ***The Evolution of TCBP***

#### **Early Years**

The first step will be the development of the master TCBP administration system and the rules for approved annuitization funds. Once this has been done and approved annuitization funds are in place the actual plan transition to TCBP can begin.

In the early years employers, as is the situation now, will not be required to provide retirement benefits. Over time rules should be established, likely varying by size of employer and income level of employees, which will require that a portion of all employee compensation be deferred until retirement through employer contributions to the employee's retirement account. Employee contributions should be required at a level at least equal to the CPP contribution rate on income above the YMPE.

#### **Transition from Current Plans**

There will have to be a transition period, likely a minimum of five years and possibly up to a maximum of 15 years for existing employer sponsored pension plans to evolve to the TCBP system. The transition period selected will be partially dependent on how much historical earnings data can be obtained from CRA and CPP administrative systems. A critical element in the transition will be the current funding level of the plan. Procedures should be established, which will be quite complex, for establishing a final wind-up date for the current plan. The transition date should be at a time when the plan is fully funded to cover all current accrued benefits. A possible alternative would be for the plan sponsor to establish a new plan under the TCBP system which is projected to provide the same "total" value to employees as the current plan. If the plan is currently in a deficit position, such that a 100% transfer of current accrued member benefits to the new plan cannot be accomplished, the employer and employees, could agree that rather than continue funding the current plan any deficiencies could be determined on a member by member level and funded in the new TCBP plan.

Employees who are currently retired obviously stay on the current system, but even for them, a process could be established such that as the approved annuitization funds mature an existing plan could effectively transfer the risk just as would happen with a current plan wind-up. For an active employee once the employer has established the level of DB and DC plans which it will introduce a calculation of the employee's current pension value can be calculated with a portion being allocated first to the lifetime account of the TCBP and the remainder to the personal account.

#### **Comments re the Transition of Certain Types of Plans**

The transition to TCBP will vary significantly depending on the type of plan. The actual transition arrangements are far beyond the scope of this paper. Following are some brief comments on certain plan types or circumstances:

### ***Individual RRSPs***

Generally an RRSP would be transferred directly to the TCBP personal account. Depending on the individual's age and whether or not there is any employer sponsored plan a portion of the RRSP balance may have to go to the lifetime account to meet the mandated income replacement ratio rules.

### ***Group RRSPs***

These must be treated the same as individual RRSPs from the employee's perspective. Current sponsors of group RRSPs should be able to easily transition to TCBP by contributing directly to an employee's lifetime account.

### ***Self Employed or Small Employers***

This is the group that will receive the most immediate benefits from TCBP. If they do not currently have a registered DB or DC plan they can introduce, either or both, by contacting an approved annuitization fund.

### ***Union Sponsored Multi-Employer Plans***

This type of plan may be the most difficult transition group primarily because of the potential need to fund current plan obligations. Going forward TCBP is the ultimate multi-employer plan. The unions can negotiate the benefit level of the lifetime account on either a DB basis or a DC basis or possibly both.

### ***Current Public Sector Plans***

TCBP has been designed to replicate the benefits of the best public sector DB plans. The major change for most of these plans will be the removal of the hidden tontine previously discussed in the Rationale for Proposing TCBP section of this paper. As with the union sponsored multi-employer plans meeting current obligations will be a major transition issue. The contributions made by, or on behalf of, one member cannot be used to fund benefits for another member under TCBP.

### ***Special Circumstances***

There are some special plans, or plan features, currently for certain groups such as firefighters, judges, etc in which the annual accrued benefit or early retirement age is much more generous than proposed under TCBP or even, in some cases, more generous than permitted under current legislation. Any benefits which are over and above the standard benefits available to the general public will have to be handled as "special cases" with any extra benefits administered and funded outside of TCBP.

### ***Standardized Regulation***

All federal and provincial regulation with respect to the level of tax sheltered retirement savings, and the mechanisms to accumulate them, must be standardized. The goal of TCBP is to transfer the complexity and bureaucracy to the large approved annuitization funds which will have the resources and expertise to deal with them. From both an employer and an employee point of view the way benefits are accumulated, funded and reported will be standardized. Financial planners, accountants and actuaries can help employees at an individual level determine their retirement needs, based on their own demographics, and have the benchmarks readily available to them.

### ***Some Examples***

The following examples use the TCBP terminology and illustrate how TCBP measures the accumulation and projection of retirement benefits. A key element of TCBP is the introduction of terminology which is simplified and which over time will become common language amongst everyone with an interest in the success of the Canadian Retirement System. On a first reading of these two examples, and also in the

prior examples, the so called “simplified” language will appear to be complex. However please note that all examples assume that TCBP has been in place for some time and the terminology has been used frequently by all. Further, the examples assume that the current year is 2007 so that the actual history of the CPP can be used and the dollar amounts are current.

**Example One: An Employee Whose Annual Income Remains Equal to the YMPE**

Each and every year from age 30 to age 65 this employee will be assigned an annual retirement factor of 1.0000. After 10 years the employee will have a cumulative retirement factor of 10.0000, a participation count of 10 Years and a target annual pension accrual equal to 20% of that year’s YMPE. The employee’s actual pension accrual will depend both on the pension provided by the employer and on employee contributions.

**Example Two: An Employee with an Increasing Salary and a Hybrid DB/DC Employer Plan**

John has just turned 41 on January 1, 2008. John started working full-time at age 24. Before that he was attending school and traveling and his annual income never exceeded the CPP exemption limit. The TCBP system was in place when John started his career. John’s career has gone well. His one and only employer provides a fairly generous set of retirement benefits consisting of a “50% DB plan” (i.e. one that provides an annual pension accrual of 1% of an employee’s earned income) plus a DC plan to which it contributes 4.95% of salary (corresponding to the annual CPP contribution rate) during the pre-accrual period (i.e. prior to age 30) plus 4.95% of salary above the YMPE after the pre-accrual period. The plan does not require employee contributions.

John links into the TCBP website to review his pension information. The site contains information with respect to both his employer pension plans and his personal accounts which are spread amongst several different financial institutions. John’s on-site file shows that for 2007 the YMPE was \$43,700 and his ARF was 1.9680. It then showed that his 2007 annual benefit under his employer’s DB plan was \$860.00 (1% times 43,700 times 1.9680). John then checked his average ARF which was 1.6189. His file showed that his total accrued DB benefit was \$7,782 (1% times 11 times 1.6189 times \$43,700). The benchmark worth factor (BWF) for John this year is \$6,256. Applying this factor to his total accrued benefit the site indicated that John’s DB benefit was worth \$48,684 (\$6,256 times 7.782) at present. *Quiz: What was John’s salary in 2007?*

John has regularly checked the TCBP website and is familiar with all that is there as well as the terminology. He finds it easy to use and discusses it regularly with his buddies. He decides to check out his DC components which include \$37,635 within his lifetime account from the employer’s DC plan and \$74,643 within his personal account from his own contributions. This means that John’s total retirement benefits are currently worth \$160,961 (\$48,684 plus \$37,635 plus \$74,643). John then calculates how much accrued benefit he would currently have if he converted his DC accounts to a lifetime benefit (this calculation is available on-line but John prefers to do it himself). Using the BWF he determines that his current retirement benefits are equal in value to a lifetime benefit of \$25,729 (\$160,961 divided by \$6,256 and then multiply the result by 1,000).

This benefit looks pretty good to John compared to his current salary which has just increased from \$86,000 in 2007 to \$90,000 for 2008. But John realizes that this is a benefit that does not commence until age 65 and contains no spousal survivor benefits. John then checks the site for the designated early retirement worth factor which is benchmarked to an early retirement age of 58 and includes spousal survivor benefits and an adjustment to his current best five years average earnings (John can see on-site that his best five years average ARF is 1.8543 compared to his overall average ARF of 1.6189). The designated early retirement worth factor is \$11,967. Using the worth factor John determines that if he retired early at age 58 his annual accrued pension to date is only about \$13,451 (\$160,961 divided by

\$11,967 and then multiply the result by 1,000). Based on an ARF of 1.8543, which equals average income of \$81,033 (1.8543 times \$43,700), this is only about a 16.6% income replacement ratio (\$13,451 divided by \$81,033).

John thinks about his future retirement planning and realizes that he is now at an age where the value, and the cost of lifetime benefits will be increasing rapidly. In fact the contribution limits for his age group increased significantly last year and will increase again at age 50 to the ultimate maximum. He reviews the site again to check how much catch-up room he has accumulated. He finds that he currently has accumulated catch-up room equal to about 78% of his current salary primarily due to his lack of contributions until his mid 30's. He decides to maximize his contributions going forward and to eliminate his catch-up room by age 50.

Before signing off John does look back to one year ago (a great feature of the site is that you can go backwards to see where you were at in any given year). He is pleased to see that the total value of his accrued retirement benefits has increased from \$135,891 to \$160,961—18% in just one year. He is certain that next year will be even better since his salary, his contributions and his age will all go up.

### **Conclusion**

The process to provide the Canadian retirement system with a much needed significant overhaul is significantly complicated by conflicting forces: employee vs. employer; jurisdiction vs. jurisdiction; plan type vs. plan type; public sector vs. private sector; employer sponsored vs. individual savings.... Any realistic and meaningful reform necessitates a return to first principles. Otherwise the existing embedded conflicts will continue and prevail. It is somewhat ironic that the Canada Pension Plan (one of Canada's Public Pensions to which all employees contribute and from which all employees receive benefits) is currently the most stable element in the Canadian retirement system.

As the Canadian pension environment continues to evolve employers are experiencing significant cost pressures at the same time as employees are undervaluing their benefits due to lack of understanding. TCBP is an attempt to lower employer and employee cost and risk while at the same time increasing employee understanding, increasing employee appreciation of benefits and increasing employee acceptance of responsibility for their portion of the risk. The only way these seemingly divergent goals can be attained simultaneously is by simplifying both the environment and the benefits. Lower employer costs should not always mean lower employee benefits. Lower employer risk does not have to mean higher employee risk.

The cost savings under TCBP will not be as a result of removing funds from the intended purpose of providing retirement income but will instead be from a combination of:

1. The removal of a significant portion of the bureaucracy which binds the current Canadian retirement system.
2. Taking advantage of current technology to implement consistent, standardized and sophisticated processes.

In the end TCBP should effectively provide each employee with the equivalent of an individual defined benefit pension plan. I strongly believe that TCBP meets the goal of the Call for Papers which inspired me to write this paper. The headlined goal was Improving the Predictability of Defined-Benefit Plan Costs for Canadian Pension Plan Sponsors. A process like TCBP not only improves the predictability of DB plans but also encourages their use and recognizes that they are an absolutely essential component in any successful Canadian retirement system.