



Institut québécois de
planification financière

Projection Assumption Standards

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1. INTRODUCTION

a) Background

An important facet of the financial planner's task is to make a variety of projections (retirement needs and retirement income, insurance needs, children's education funding needs, etc.). In making projections, financial planners are bound by method, rather than results. The purpose of this document is to map out the assumptions to use in the preparation of these projections.

The standards presented here are absolutely realistic, so judicious use of these assumptions will protect not only the financial planner but also the person for whom the projections are being prepared.

These projection assumption standards go hand in hand with the IQPF's professional standards. For integrated personal financial planning, assumption standards should be seen and used as a complement to the IQPF professional standards. For example, IQPF professional standards recommend that several retirement projection scenarios be presented to the client to illustrate the sensitivity of the results:

“The financial planner shall clearly identify each fact and assumption, assign values and present at least two scenarios that illustrate the sensitivity of the projections to the economic and demographic assumptions.[...] The financial planner shall ensure that the client understands the risk of prematurely depleting retirement capital if the data or assumptions change.”

These standards dictate the assumptions to be used and the financial planner should, depending on the situation, present one or several other scenarios using varied assumptions in order to meet the objective of ensuring the client is fully informed about the possible variability of the future results.

b) Title and reference

The set of standards presented here is called the *Normes d'hypothèses de projection de l'Institut québécois de planification financière* (Institut québécois de planification financière projection assumption standards).

c) Updating and useful life

The standards will be updated annually and published every February on the IQPF website. Although some of the assumptions set out by these standards may change from time to time, this

does not mean that projections based on previously published assumptions are no longer valid. Projections are considered valid at the time of preparation.

d) Use and application

The use and application of these standards is completely voluntary. Use of the standards should nevertheless be disclosed using a (voluntary) statement such as the following:

- ◆ *Projections prepared using the Institut québécois de planification financière projection assumption standards.*
- ◆ *Analysis prepared using the Institut québécois de planification financière projection assumption standards.*
- ◆ *Study prepared using the Institut québécois de planification financière projection assumption standards.*
- ◆ *Calculations made using the Institut québécois de planification financière projection assumption standards.*

e) Effective date of the Standards

These Standards come into effect on February 17, 2009.

2. GUIDELINES FOR ESTABLISHING THE STANDARDS

The task force mandated by the Institut québécois de planification financière to prepare these Standards gathered information from reliable external sources. The purpose of the exercise was to establish a consensus for the preparation of the Standards. Using numerous sources also helps eliminate any potential bias that may be present in a single source.

The fact that some of the sources used change less frequently – such as the assumptions issued for the Quebec Pension Plan actuarial analyses – ensures the Standards will remain stable.

These Standards in no way represent predictions about short-term returns and should not be used for this purpose.

3. ASSUMPTIONS SUBJECT TO STANDARDS

a) *Inflation*

This assumption is central to the preparation of long-term projections. The basis for the calculation is weighted as follows:

- ◆ 20% of the assumption used in the most recent QPP actuarial analysis
- ◆ 20% of the assumption used in the most recent CPP actuarial report
- ◆ 20% of the result of the Watson Wyatt annual portfolio managers survey
- ◆ 20% of the general assumption of the Aon Consulting index
- ◆ 20% of the current Bank of Canada target inflation rate

The result of this calculation will be rounded to the nearest 0.25%.

b) *Nominal returns (before fees)*

For return, we will establish three assumptions: one for short-term investments (91-day T-bills), one for Canadian fixed-income investments, and a third for total returns (including dividends) on Canadian shares. These assumptions are for gross nominal returns (including inflation).

The basis for the calculation is weighted as follows for the three assumptions listed above:

- ◆ 20% of the assumption used in the most recent QPP actuarial analysis
- ◆ 20% of the assumption used in the most recent CPP actuarial report
- ◆ 20% of the result of the Watson Wyatt annual portfolio managers survey
- ◆ 20% of the general assumption of the Aon Consulting index
- ◆ 20% of the historic return on these classes of assets over the 50 years ending the previous December 31 (adjusted, for inflation, according to what follows)

We will use the long-term or most recent assumptions for the first four sources. The historical component will be based on the S&P / TSX (Canadian shares) index, the DEX Universe Bond^{MC} index (Canadian bonds), the DEX 91-day T-bill index and their predecessors. For the sake of consistency, the indices expressed in real returns (returns reduced by the CPI inflation rate as published by the Bank of Canada) will be increased by the future inflation assumption (before rounding) presented in paragraph a.

For QPP and CPP fixed income investment assumptions, a margin of 0.75% shall be deducted to convert the long-term bond hypothesis (theirs) to a bond portfolio hypothesis.

For investments in Canadian shares, we will then subtract a safety margin of 0.5% to compensate for the non-linearity of long-term returns. The same assumption may be used for non-Canadian shares, but an additional annual return of a maximum of 1.00% may also be used.

The results of these calculations will be rounded to the nearest 0.25%.

c) *Considerations concerning fees*

Depending on the type of management the client uses (direct, mutualized, private, etc.), fees from 0.5% to 2.5% should be subtracted. Finally, we do not adjust the assumptions to reflect the value-added potentially generated by the manager.

d) *Borrowing rate*

A great number of factors obviously influence the available borrowing rate: the type of loan, the borrower's credit rating, etc. But in light of the following relationships –

- ◆ There is a very strong correlation between the Target Overnight Rate and the 91-day T-bill rate
- ◆ The Bank Rate is set by adding 0.25% to the Target Overnight Rate
- ◆ The Prime Rate is set by adding 1.50% to the Bank Rate

– the assumption for the borrowing rate will be equal to the assumption for the 91-day T-bill rate presented in paragraph a, plus 2.00% for an average credit rating.

e) *Life expectancy*

All income projections representing disbursement of an asset must factor in the life expectancy of the individual at the current age. We will therefore use a mortality table.

There are several different mortality tables, each based on a specific target group. The following factors are examples of target group characteristics:

- ◆ Gender, man or woman
- ◆ Smoker or non-smoker status
- ◆ Place of residence (e.g., province, country)
- ◆ Group that has shown evidence of good health (for life insurance pricing)
- ◆ Retirees

The Statistics Canada Generation 1951 mortality table for Quebec (91F0015MPF) will be used as the basis of calculation. But using life expectancy as the target date for asset depletion is risky, since about 50% of people surpass this age, which means 50% of people will outlive their capital.

ASSUMPTIONS

We recommend using a probability of survival¹ of less than 50%. We feel that the minimum projection should be no more than a 25% survival risk. We nevertheless present other probabilities of survival (from 10% to 50%) to allow planners to better illustrate their point for the client.

Using a lower probability of survival protects us from future improvements in mortality. Note that this concept of capital depletion and margin will be especially important in the preparation of retirement projections, usually after the age of 40

The table below sets out these assumptions:

Life expectancy based on various survival risks

Age	10%			15%			20%			25%			30%			35%			40%			45%			50%		
	M	W	M/W	M	W	M/W	M	W	M/W	M	W	M/W	M	W	M/W	M	W	M/W	M	W	M/W	M	W	M/W	M	W	M/W
10	95	99	99	93	97	98	91	95	97	90	94	96	89	93	95	87	92	94	86	91	93	84	89	92	83	88	91
15	95	99	99	93	97	98	91	95	97	90	94	96	89	93	95	87	92	94	86	91	93	84	89	92	83	88	91
20	95	99	99	93	97	98	91	95	97	90	94	96	89	93	95	87	92	94	86	91	93	84	89	92	83	88	91
25	95	99	99	93	97	98	91	96	97	90	94	96	89	93	95	87	92	94	86	91	93	84	89	92	83	88	91
30	95	99	99	93	97	98	91	96	97	90	94	96	89	93	95	87	92	94	86	91	93	85	90	92	83	88	91
35	95	99	99	93	97	98	92	96	97	90	94	96	89	93	95	87	92	94	86	91	93	85	90	92	83	88	91
40	95	99	99	93	97	98	92	96	97	90	94	96	89	93	95	88	92	94	86	91	93	85	90	92	83	88	91
45	95	99	99	93	97	98	92	96	97	90	94	96	89	93	95	88	92	94	86	91	93	85	90	92	84	88	91
50	95	99	99	93	97	98	92	96	97	90	94	96	89	93	95	88	92	94	86	91	93	85	90	92	84	89	91
55	95	99	99	93	97	98	92	96	97	90	94	96	89	93	95	88	92	94	87	91	93	85	90	92	84	89	91
60	95	99	99	94	97	98	92	96	97	91	95	96	89	93	95	88	92	94	87	91	93	86	90	92	84	89	91
65	95	99	99	94	97	98	92	96	97	91	95	96	90	94	95	89	93	94	88	91	93	86	90	92	85	89	91
70	96	99	99	94	97	98	93	96	97	92	95	96	90	94	95	89	93	94	88	92	93	87	91	92	86	90	91
75	96	99	100	95	98	98	93	97	97	92	95	96	91	94	95	90	93	94	89	92	93	88	91	92	87	90	92
80	97	100	100	95	98	98	94	97	97	93	96	96	92	95	95	91	94	95	91	93	94	90	92	93	89	91	92
85	98	100	100	97	99	99	96	98	98	95	97	97	94	96	96	93	95	95	92	94	95	92	94	94	91	93	93
90	100	101	101	98	100	100	98	99	99	97	98	98	96	98	98	96	97	97	95	97	96	95	96	96	94	95	95
95	102	103	103	101	102	102	100	101	101	100	101	101	99	100	100	99	100	100	99	99	99	98	99	99	98	99	98
100	105	106	105	104	105	105	104	104	104	103	104	104	103	103	103	103	103	103	102	103	103	102	103	103	102	102	102

The chart shows that a projection for a 65-year-old retiree will be valid if the capital is not depleted before the age of 91 for a man and 95 for a woman (25% chart). With a 65-year-old couple, the capital should last to the age of 96. The life expectancy presented for a couple illustrates the likelihood that one of the members¹ will survive to this age.

It is important to remember that this chart reflects the average mortality for the entire population of Quebec. People who do not use tobacco, people from younger generations, people who are

¹ The retirement section of the Collection de l'IQPF explains the difference between life expectancy and probability of survival.

more financially at ease, and people in good health are more likely to be in the 10% survival group.

The chart above is not the final word on survival risk, because there will always be those who are very long-lived. Since even planning to age 100 cannot eliminate all possibilities, we encourage the financial planner to incorporate a “life annuity” component if the client’s objective is to provide a life income for every possible situation.

4. STANDARDS FOR 2009

For 2009, the application of the principles outlined above generates the following assumptions:

- a) *Inflation* 2.25%
- b) *Return*
 - Short term: 3.75%
 - Fixed income: 4.75%
 - Canadian shares: 7.25%
- c) *Borrowing rate:* 5.75%
- d) *Life expectancy* See table in 3 e)

5. SAMPLE APPLICATION

By way of example, for a projection prepared in 2009 for a balanced portfolio made up of 60% Canadian shares, 35% bonds and 5% T-bills in a mutual fund environment with a management expense ratio of 1.5%, we would use the following return assumption: 4.70% rounded to the nearest 0.25%, or 4.75%. Note that the assumption depends on the investor profile remaining the same over time. If the profile is expected to change, it is preferable to use an “average target distribution.”