

# RRIFmetric, the Goal-based paradigm and divorce financial planning

**Introduction** It is always a challenge to explain RRIFmetric to someone who is seeing it for the first time. After all, when you get down to it, most financial planning projections are just rows and columns of numbers, and naturally you would expect the results to add together correctly.

Unfortunately, this is as far as many planners get. Once they see the results and verify that the numbers add up, they proceed to look at the ‘cosmetics’ such as graphs and report presentation.

**Income Tax** Some planners may look further, and determine if\* and how, income tax is handled within the program. \* *It must be noted that many financial planning programs avoid income tax altogether and simply substitute an average tax rate.*

There are two issues you must consider when describing income tax as it relates to divorce financial planning software- *tax accuracy*, and the *nature* of how tax is applied. Accuracy is fairly easy to determine. Since the authors of these programs know that their users will be able to easily verify tax accuracy, they will generally make it known whether or not their program uses an average tax rate, or has a fully accurate income tax module.

Now this is important to understand: Income tax is a fairly simple calculation; as attested to by the fact that many still do their tax return by hand. Complexity isn’t the issue however; it is *how* tax is computed which is crucial. i.e. is it calculated from the bottom up, or from the top down?

**Lifestyle** The most critical divorce financial planning metric is how much each individual gets to spend on the necessities of life, expressed in after-tax/after-inflation dollars. In order for the projection to be credible therefore, you would expect that, *at the very least*, the tax calculation would be accurate. Now this is where it gets confusing, so pay attention.....

There are two types of ‘tax-accurate’ financial planning approaches, which I refer to as:

- 1) the ‘*shortfall*’ or top-down method and
- 2) the ‘*goal-based*’ or bottom-up method

Here is an explanation of how these two tax-based calculation methodologies differ.....

Let’s say you were budgeting for your upcoming year’s personal spending and determined that you needed exactly \$30,000 to live on. You were getting \$20,000 in spousal support; you had a modest RRSP and wanted to know exactly how much you should be withdrawing in order to deliver yourself exactly that \$30,000 –net of tax.

Say you have access to a tax program.... You would first of all make a guess as to how much to withdraw from your RRSP.... Let’s say you tried \$16,000. You enter the 16K RRSP withdrawal along with the \$20,000 support payment into your tax program, and it tells you that you will owe \$7,957 in tax. Now,  $20000+16000-7957$  will deliver you \$28,043 which is ‘short’ of the \$30,000 target by \$1,957. Next... let’s try a larger withdrawal from the RRSP.... Say \$18,000. This gives tax of \$8,783 and delivers an after tax income of  $20000+18000-8783$  or \$29,217... still ‘short’ by \$783. (now do you understand where the word ‘shortfall’ comes from?)

You continue this trial and error process... a \$20,000 RRSP withdrawal results in a surplus of \$472... and so on. Now, you could continue doing this top-down tax calculation until you found the exact RRSP withdrawal which delivers the exact \$30,000 spending target, but it would be very tedious. If you wanted to change the net income target or change the cpi, interest rate assumption, or some other element... you would have to revisit this trial and error exercise for each new 'what-if' parameter, and when you take into account the other cash flows such as loan payments, CPP, non-reg capital, etc... then the process becomes exceedingly time-consuming.

Now here's the punch line....you would think that today's modern high speed computer would quickly and easily perform this trial and error process; finding an exact solution by repetitively crunching the tax- automatically. News flash.... this seldom happens! Most tax-accurate financial planning programs don't perform this 'reverse tax' goal-seeking. RRIFmetic does.

Fortunately, differentiating 'shortfall' programs from 'goal-based' programs is relatively simple: Examine the results. If you see the words 'shortfall', 'surplus' or 'deficit' or the tax simply doesn't check out, then you know it is approximating the results... it is a 'shortfall' program.

Another way to determine whether the program is truly goal-based, is to observe the amount of time it takes to compute. If, when you make a change to a data element and the results display instantly, then it is almost certainly a 'shortfall' program. On the other hand, when you make a change to the data and you see the program pause for several seconds (or more), it is in all likelihood 'goal-based', and it is iterating or goal-seeking for a solution. In other words: computing tax in reverse. *Note: if the program you are testing is spreadsheet-based, then it will be slow by nature, and this slowness test won't apply (spreadsheets are poor number crunchers )*

**Die-Broke** The final test which sets the true 'goal-based' program apart is the 'die-broke' determination. Imagine that, instead of that \$30,000 after-tax income we were trying to achieve, we wanted to know what the *optimum* constant after-tax income was which would cause our RRSP to exactly run out on our 95<sup>th</sup> birthday. So, not only are we iterating ('goal-seeking') in order to get that constant correct after-tax income; we are trying to determine what level that constant net income would have to be in order to *just* run our RRSP out on our final birthday. This 'double iteration' takes an enormous amount of number crunching. It may take 10 to 20 thousand passes through the full T1 (tax formula) in order to come up with an exact solution!

This 'die-broke' cash flow calculation is an extremely powerful financial planning paradigm; for both divorce planning or generic financial planning. RRIFmetic does it in 2 to 3 seconds. Also remember that, in addition to your RRSP, you may have investments outside your RRSP such as equities, real estate or non-registered capital, (*each of which interact with income tax in completely different ways*). As well, there will be other discontinuous cash flow streams such as loan payments, lump sums and of course, child and spousal support payments. Most importantly, each and every one of these cash flows must be included in the overall plan, and not as individual free-standing modules. (Suites of individual spreadsheet modules, say)

**Summary** When computing the 'fairness' of a divorce settlement then, you must be able to compute tax accurately and unambiguously. Concepts such as 'shortfall', 'surplus' and 'deficit' are both approximating and confusing; and may involve legal liability. Remember, you can't see, taste or feel a 'shortfall' or 'deficit'. They simply do not belong in a divorce financial plan. The true 'goal-based' model is much better suited to such a critical planning process.