Investments

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SHOULD YOU INVEST IN AN R.R.S.P.?

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TABLE OF CONTENTS

SHOULD YOU INVEST IN AN R.R.S.P.?

LIST OF TABLES

SHOULD YOU INVEST IN AN R.R.S.P.?

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INTRODUCTION

During the period from mid December to the last day of February every year the consuming public is bombarded by the advertising media concerning such things as Santa Claus, Christmas, New Year's resolutions, and Registered Retirement Savings Plans. Most consumers are familiar with the first three items. But, the same cannot be said of the last one.

Various institutions advertise the benefits Registered Retirement Savings Plans (R.R.S.P.'s) hold for all tax paying citizens of the country. Such advertising represents R.R.S.P.'s as the greatest "tax dodge" to become available to the common taxpayer since the invention of the personal deduction. Phrases such as: "You can legally line your own pockets with the tax collectors' money," [4] are typical of such advertisements. But, advertising of this nature does not normally go much beyond the tax savings aspects of R.R.S.P.'s.

The purpose of this publication is to explain exactly what an R.R.S.P. is and to set out some of the rules and regulations involved when you invest in an R.R.S.P. We will then explore some of the possible advantages and disadvantages you may realize if you invest in an R.R.S.P. Following this, we will present information which should facilitate comparison of an R.R.S.P. investment to any alternative non R.R.S.P. investment you may have. We then look at how you should compare various R.R.S.P. investments and thereby chose the one that is "best" for your situation.

WHAT IS AN R.R.S.P.?

The Registered Retirement Savings Plan is a federal government policy designed to encourage savings for retirement by private individuals. Specifically, an individual taxpayer may reduce his taxable income each year by the amount invested in an R.R.S.P. - subject to certain conditions.

To Qualify As An R.R.S.P. Investment

To qualify as an R.R.S.P., a plan (investment) must be one that has been accepted for registration by the Minister of National Revenue. There are a number of conditions that a plan must meet to be accepted for registration. Three of the more important conditions are: 1/

1. The funds invested in the plan will be used to buy an annuity which is payable in equal periodic instalments for life.

1/ For further information on these conditions see [1] and [3].

2. The purchase of such an annuity may be deferred, but it must be purchased and the annuity payments must commence before the 71st birthday of the taxpayer (annuitant).

3. The annuity may provide for a guaranteed term of payment, but this guaranteed period must not exceed 15 years.

These conditions may seem somewhat involved, but normally they are easily satisfied. Most, if not all, of the organizations licensed to carry on an annuities business or issue investment contracts in Canada have developed plans that qualify under the Income Tax Act. Thus, it is usually a simple matter to have each individual contract or arrangement accepted for registration by the Minister of National Revenue.

Limits on R.R.S.P. Investment

Since an individual taxpayer can deduct investments made to an R.R.S.P. from taxable income, this will reduce income taxes he must pay. Therefore, some taxpayers might find it very beneficial to invest quite large sums in an R.R.S.P. each year. Realizing that this situation might arise, the tax authorities placed limits on the amount that can be put into an R.R.S.P. in any single year.

Self-Employed Individuals

A self-employed taxpayer may deduct 20% of his earned income up to a maximum deduction of $4,000 per year. This $4,000 maximum is applicable for any taxpayer who is not covered by a registered pension fund or plan.

Individuals Earning Salaries or Wages

The maximum allowable deduction for a taxpayer who is covered by a registered pension fund or plan to which the employer has made a deductible contribution is the lesser of $2,500 or 20% of earned income. This $2,500 maximum must be reduced by the amount of any contribution made by the employee to a registered pension fund or plan.

Earned Income

Earned income is not the same thing as taxable income. The only definition of earned income given in the Income Tax Act is in connection with R.R.S.P.'s. Using this definition, a taxpayer's earned income includes:1/

1. Salary or wages.

2. Income from carrying on business as proprietor or partner.

1/ For further information, see [1].

3. Rental Income.

4. Superannuation or pension benefits, retirement allowances, and death benefits.

5. Royalties.

6. Alimony or maintenance payments.

7. Amounts received under a supplementary unemployment benefit plan, a deferred profit-sharing plan and amounts included in income under a registered retirement savings plan.

R.R.S.P. Investment Timing

An R.R.S.P. investment must be made during the taxation year or within 60 days after the end of the taxation year for which a tax deduction is to be claimed. If the investment is made during the first 60 days of the year, it must be claimed as a deduction for the previous year unless it exceeds the maximum deduction for that year. An investment made during this first 60 days is deductible in the current year only to the extent that it was not deductible in the previous year.

COMMON TYPES OF R.R.S.P. INVESTMENTS AND SELLING INSTITUTIONS

As you look into the possibility of investing in an R.R.S.P., you will find many different types of investments being offered by many institutions. The purpose of this section is to describe some of the more common types of R.R.S.P. investments which are available and the institutions which offer each type for sale.

Term Deposits or Guaranteed Certificates

An investment in a term deposit is similar to a savings account. The money invested earns a specified rate of interest for a specified number (1, 3, 5) of years. The capital invested and accumulated interest is guaranteed for the number of years specified. However, the rate of interest paid after the term of the guarantee is not specified. Also, no guarantee is made concerning the rate of interest which will be paid on any future investments in the plan. Term deposit or guaranteed certificate plans are offered by chartered banks and trust companies.

These plans are relatively safe investments and do not experience fluctuations in capital value. But, they may not offer a rate of return that is as attractive as some of the other types of R.R.S.P.'s being offered.

Income Funds

An R.R.S.P. investment plan which is largely invested in bonds and/or mortgages is known as an income fund. Investment in bonds or mortgages provides a fairly fixed income since the income is generated in the form of interest. The rate of return on income funds may be greater than that available from a term deposit. However, the risk associated with income funds may be greater than that associated with term deposits.

The interest earned by an income fund may not vary a great deal since the rate of interest is specified by the bond or mortgage at issue. Changes in the general level of interest rates existing in the national money markets do not change the dollar amount of interest paid on an outstanding bond or mortgage. But, it does change the value of the security. An income fund may provide a relatively high return per year. But, you may suffer a loss in capital value if you liquidate your R.R.S.P. investment at the "wrong" time. Therefore, income funds do not make any guarantee concerning capital value or income. Income funds are offered by chartered banks, trust companies, mutual funds, investment firms and a limited number of insurance companies.

Equity Funds

Equity funds are primarily invested in common stocks. The value of these funds fluctuate with any rise or fall in the stock market. An R.R.S.P. investment in an equity fund may offer a relatively high rate of return, but the results are quite uncertain. If you are in a position such that you can "wait out" the low periods and liquidate your investment during a good period, you may be able to realize a good return. However, if you are forced to liquidate during a low period, you may suffer a loss on your investment.

Equity funds are offered by chartered banks, trust companies, mutual funds, investment firms and insurance companies. Equity funds seldom carry any guarantee concerning the capital invested or the earnings of the investment due to the uncertainty associated with the price of common stocks. Some insurance companies do guarantee to return 75% of the capital you have invested in their plan. But, the guarantee is good only if you leave your investment until you retire or die prior to the retirement.

Retirement Annuities

Life insurance companies offer R.R.S.P. plans that involve the purchase of an annuity. These annuities normally specify that annuity payments will begin at some date in the future. As such, they are deferred annuities.

There are two basic ways by which you can invest in a deferred annuity. One method involves the purchase of a deferred annuity with a single investment. The other method involves the purchase of a deferred annuity with continual periodic investments under the terms of a binding contract.

Single investment purchases of deferred annuities normally provide a guaranteed rate of interest which the investment will earn. A continual investment plan normally provides a guaranteed cash value at some point in the future. Both methods of investing in deferred annuities offer the possibility that dividends may be paid in addition to the guarantees each carry.

But, the payment of dividends is at the discretion of the company and is not guaranteed.

Self Administered Plans

You may establish and manage an R.R.S.P. yourself. There are two basic requirements which you must meet if you are going to invest in a self administered R.R.S.P.

1. You must arrange with a trust company to have your plan registered and carry out any administrative details involved.

2. The investments you make must be "qualified investments" as specified in the Income Tax Act.

Qualified investments include (but are not limited to) the following:1/

1. Money on deposit in a bank in Canada.

2. Bonds, debentures, notes, mortgages, or similar obligations of or guaranteed by Canada or a province or municipality in Canada.

3. Shares and debt obligations of corporations whose shares are listed on a prescribed stock exchange in Canada.

4. Shares of an investment corporation.

5. Guaranteed income certificates of a Canadian trust company.

6. An annuity for purposes of the plan.

A self administered R.R.S.P. is not extremely complicated to set up or operate. The greatest difficulty which you may encounter might involve finding a trust company to register your plan. Even if you find such a trust company the cost of registering a self administered R.R.S.P. may be very high. Obviously, the extent to which your plan will be guaranteed will depend on the type of investments you make.

Be Certain Before You Invest

Before you invest in any R.R.S.P. there are two things which you should be certain about. First, exactly what does the guarantee being offered by the selling institution mean? What does the guarantee cover? Does it include invested capital and accumulated earnings or just invested capital? Is it a

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1/ For further specification and explanation of what a qualified investment is, see [3].

100% guarantee or some lesser percentage? For what period of time does the guarantee apply? Does the guarantee apply to the current investment and all subsequent investments that may be made or just the current investment? What conditions must be met to keep the guarantee valid? Once you have answers to these and other similar questions you should have a good estimate of the value of the guarantee in your situation.

A second issue involves the idea of flexibility. Some institutions offer plans that require you to sign a contract to invest a specified amount each period for a specified number of years. These plans often stipulate a penalty which can be quite costly if the terms of the contract are violated. Failure to make a required investment may result in large losses on previous investments. If your annual income should be unexpectedly low for some reason, you may not be able or want to invest in an R.R.S.P. Therefore, you should carefully consider the inflexibilities associated with such a plan. What does the plan offer you in return for your committment to invest over a number of years? Are the potential returns great enough to offset the possible losses you may suffer if you cannot meet the terms of the contract?

REALIZING PROCEEDS FROM AN R.R.S.P. INVESTMENT

Thus far we have discussed how you go about getting money into an R.R.S.P. investment. But, how can you get money out of an R.R.S.P. investment? There are only two ways by which you can recover your investment and any earnings it has generated. You can either terminate the R.R.S.P. and buy an annuity with the proceeds or you can deregister the plan. We will now look at each of these methods of realizing the proceeds from your R.R.S.P. investment.

Termination to Purchase Annuity

Buying an Annuity

As pointed out earlier, one of the primary conditions that a plan must meet to be registered involved the eventual purchase of a life annuity. Specifically, the plan must provide that you begin receiving annuity payments before you reach your 71st birthday. The annuity must be for life and can be purchased with or without a guaranteed payment period. However, if the annuity does provide for a guaranteed period, it must not exceed 15 years. The annuity must be payable in equal annual or other periodic amounts throughout your lifetime. The annuity may not be surrendered, commuted or assigned in whole or in part. There are other conditions concerning the purchase of an annuity, but these are the more important ones.1/

Given these conditions, what you can do with the proceeds of your R.R.S.P. investment is fairly certain. You can take the accumulated value of your R.R.S.P.

1/ For further information, see [5].

and buy a life annuity.1/ Basically, this involves trading the proceeds from your R.R.S.P. investment to a life insurance company for their promise to pay you a specified amount of money per month for your lifetime or for the guaranteed period whichever is longer.

An important consideration when buying an annuity is to get the best annuity rate possible. The rate paid by a life insurance company depends on many things such as: 1) your age at time of purchase, 2) your sex, 3) length of guarantee period, 4) the general level of interest rates and 5) the insurance companies cash needs and investment opportunities at the time. The consideration given items one through four will not differ much from one insurance company to another. However, the investment opportunities and cash needs of an insurance company change daily. And the magnitude of change can be quite large. Therefore, the rate offered by different companies can vary a great deal from day-to-day.

A small survey of insurance companies in September 1974 found that the rate offered on an immediate life annuity guaranteed for 10 years for a 65-year old male ranged from $9.10 to $10.17 per month per $1,000 invested. Over the 10-year guaranteed period this difference would amount to $128 for every $1,000 invested. Therefore, shopping the annuities market thoroughly could prove to be very beneficial.

One thing which you should do when shopping for annuity rates is to be sure the insurance agent(s) you contact have brokerage rights. This allows the agent to shop the market on your behalf and obtain the best annuity rate possible whether it be from his company or a competitor. All insurance agents do not have brokerage rights since some companies discourage the practice.

In addition, it should be pointed out that an insurance company may offer a marginally better annuity rate (2-3%) on R.R.S.P. funds accumulated with it, than what it pays on annuities purchased with R.R.S.P. funds from other institutions or non R.R.S.P. funds. The exact reason for the difference is not known, but may be attributed to either a difference in the cost of processing and administering the annuities or its use as a method of competing with other institutions selling R.R.S.P.'s.

Taxation of the Annuity Payments

Previously we pointed out that investment in an R.R.S.P. may defer or reduce income taxes which you pay. An R.R.S.P. investment within the limits specified earlier is completely deductible from taxable income at the time the investment is made. The proceeds from an R.R.S.P. investment are completely taxable when they are received.

Only the interest portion of an annuity purchased with non R.R.S.P.

1/ If your R.R.S.P. investment involved the purchase of a deferred annuity from a life insurance company, it must meet these conditions.

funds is considered to be taxable income when you receive it. The remaining portion of the non R.R.S.P. annuity payment is considered to be a return of capital. It is assumed that you have paid any income taxes due on the amount originally invested when it was earned as taxable income. Thus, taxing the total annuity payment would result in double taxation.

The proceeds from an R.R.S.P. investment which are used to buy an annuity have not been taxed. The original amount invested in an R.R.S.P. is deductible from taxable income. The earnings of an R.R.S.P are not taxable as they occur. Therefore, all proceeds from an R.R.S.P. are considered to be ordinary income when they are received and are taxed as such.

As a result of this method of taxation, it is possible to defer income taxes from the time an R.R.S.P. investment is made until the time the proceeds of the investment are taken as an annuity. It is also possible that you may actually reduce the total income taxes paid if your annual income at retirement is less than what it was when you made your R.R.S.P. investment(s). However, the fact that you invest in an R.R.S.P. will tend to negate the ability to actually reduce income tax payments. The investment in an R.R.S.P. will lower the tax rate at investment and increase the tax rate at retirement. Your ability to reduce income taxes will depend on your specific situation at the time of investment and when the proceeds are taken in the form of life annuity payments.

Deregistration of an R.R.S.P.

Should you elect not to buy an annuity with the accumulated value of an R.R.S.P. investment, you can deregister the plan at any time.1/ Deregistering your R.R.S.P. investment simply results in the total accumulated value of the deregistered plan being brought into taxable income at the time of deregistration. You simply receive the proceeds from the investment as a lump sum. However, deregistering an R.R.S.P. may result in serious income tax consequences.

The lump sum payment received upon deregistration of your plan is considered to be ordinary income and is taxed accordingly. This lump sum payment could result in an abnormally high taxable income for the year in which the plan was deregistered. Therefore, the marginal tax rate and total income taxes paid could be quite high as a result of deregistering your R.R.S.P. investment. In this situation it is quite possible that you may end up paying considerably more income taxes with an R.R.S.P. investment than you would have if you had never invested in such a plan.

There are two methods of easing these income tax consequences associated with deregistering an R.R.S.P. One method involves the establishment of a number of separate R.R.S.P. investment plans. Each of the plans can then be deregistered as funds are required or as circumstances dictate.

1/ The ability to and cost of deregistering will depend on the specific plan in which you have invested.

A second method involves the use of only one R.R.S.P. plan. You can transfer your R.R.S.P. from one investment to another without deregistering it. Therefore, all you need do is transfer out of the existing investment and into a new investment those funds you wish to keep invested in an R.R.S.P. You can then deregister the balance of the original fund and bring it into taxable income for the year.

Neither method of handling deregistration will avoid income taxes in total. However, both allow you to deregister only the amount of money you currently need. This allows you to spread the proceeds from deregistering your R.R.S.P. investment over a number of years and thereby reduce the total income taxes paid as a result of deregistration.

The "best method " of spreading the proceeds will normally involve the process of transferral between investments. This avoids the costs of establishing and servicing a number of separate plans. However, if this method is used, be careful to transfer out the balance of the investment you want to maintain before you deregister. If you deregister before you transfer anything out, the total value of the investment is deregistered and you must pay income taxes on it. This could be a very costly mistake.

Deregistration may allow one to use an R.R.S.P. investment as a business reserve or method of averaging taxable income over a number of years. This might prove to be beneficial to someone who experiences fluctuations in taxable income from one year to the next such as a self employed individual. They could invest in an R.R.S.P. in good years when their marginal tax rate is abnormally high and deregister the investment during bad years when their marginal tax rate is abnormally low. This could result in both a deferral of and a reduction in income taxes paid over time.

Death Prior to Receipt of R.R.S.P. Proceeds

Should you die before you begin receiving the proceeds from your R.R.S.P. either as annuity payments or through deregistration, there are a number of things that may happen. First, if you have made no preparation concerning what should happen to your R.R.S.P. either by use of a will or by naming a beneficiary in your R.R.S.P. plan, then the accumulated value of your R.R.S.P. is brought into income for the year, and it is taxed as ordinary income.

If your spouse is named as R.R.S.P. beneficiary, then she (he) has a number of options. She (he) can:

1. Include all proceeds from the R.R.S.P. investment in taxable income for the year when received and pay income taxes as appropriate.

2. Use the proceeds to purchase an income averaging annuity to start within 10 months.

3. Purchase a life annuity to commence immediately.

4. Transfer the existing R.R.S.P. in the name of the deceased spouse into her (his) name and allow it to remain invested until she (he) is ready to retire or deregister the plan.

If the R.R.S.P. beneficiary is other than your spouse, their options are limited to options 1 and 2.

ADVANTAGES AND DISADVANTAGES OF AN R.R.S.P.

Advantages

Many advantages may be attributed to the investment in a Registered Retirement Savings Plan. However, most if not all, of the advantages offered by an R.R.S.P. involves the deferral or possible reduction of income taxes as pointed out previously. An R.R.S.P. does represent a possible alternative method of preparing for retirement. But, the fact that an investment is "registered" does not make it any safer or more secure than any other investment. Any investment which qualifies as an R.R.S.P. could also be invested in without registration. The same returns generated by an R.R.S.P. could be obtained without registering the investment. Also, the non R.R.S.P. investment could earn the returns while incurring lower costs since you avoid any costs associated with registration.

Disadvantages

As a result of various conditions that an investment must meet to qualify as an R.R.S.P., there are a number of disadvantages associated with such a plan. Once you have invested in an R.R.S.P., your access to the funds is very limited. You can use the funds only if you deregister the plan which can be quite costly. In addition, an R.R.S.P. cannot be used as collateral for a loan. Therefore, you should consider any possible future need for funds before you commit yourself to an R.R.S.P. investment.

Investment in an R.R.S.P. can result in possible income tax disadvantages. The total proceeds from an R.R.S.P are taxable when they are received regardless of how they were earned. Therefore, if your investment was in common stock equities, you have forgone the favorable tax treatment associated with capital gains and/or dividend income which might accrue to a non R.R.S.P. equity investment. In addition, the recent change in tax laws to exempt the first $1,000 of interest or dividend income per year reduces the possible benefits associated with the fact that R.R.S.P. earnings are not taxed as they accumulate.

The actual advantages or disadvantages which you will realize from your investment will depend on your situation. You must assess these based on the specific conditions at any point in time.

SHOULD YOU INVEST IN AN R.R.S.P.?

We have now discussed what an R.R.S.P. is, some of the conditions that must be met for an investment to qualify and how you may get your proceeds from an R.R.S.P. Some of the advantages and disadvantages associated with an R.R.S.P. have also been set out. However, this has been a very general discussion. We now turn to a discussion of how you can compare an R.R.S.P. investment to a non R.R.S.P. investment and provide information that should prove helpful to you in making such a comparison. Following this we provide information on how to compare two R.R.S.P. investments.

General Investment Considerations

The actual decision to invest in an R.R.S.P. will depend on a number of factors. These include your personal circumstances and financial goals. If you are in a position where you can hardly make ends meet, you may be much more concerned about feeding the family the rest of the week than you are about preparing for retirement thirty years in the future. If this is the case, an R.R.S.P. is not likely to be useful to you. However, if you are in a financial position such that you can afford to set aside some funds in preparation for retirement, you may be able to use an R.R.S.P. to good advantage.

The potential usefulness of an R.R.S.P. will also depend on what preparations you have already made for retirement and your tradeoff of current consumption for consumption after retirement. If you have already made sufficient preparation for retirement, you may prefer to spend your income as you earn it. Your outlook may be that of living today and worry about tomorrow when you get there.

We do not claim to be in a position of telling you what you should do with your funds. However, you should be aware of the effect which inflation can have on the ability of a family receiving a relatively fixed income to meet an increasing cost of living. If you are now 45 years old and it currently costs you $6,000 to meet minimum living requirements. What will it cost you to provide this level of living in 20 years when you want to retire at age 65? If we assume the cost of living will rise by 6% each year for each of the next 20 years, it will cost you over $19,000 to provide the same level of living as that which you are currently consuming. If the rate of inflation over the 20 year period was 12% per year, it would cost you over $57,000 per year to live at age 65. This effect of inflation should be considered as you assess the preparations which you have made for retirement.

If you are interested in making additional preparations for retirement, the following information should prove helpful in comparing an R.R.S.P. investment to any non R.R.S.P. investment alternative you may have. Such a comparison, should enable you to determine if an R.R.S.P would be a desirable investment for you.

Our Method of Comparing R.R.S.P. and Non R.R.S.P. Investments

In order to compare an R.R.S.P. and a non R.R.S.P. we must start with before tax income which can be put into either the R.R.S.P. or a non R.R.S.P. investment. In our example we take $1,000 per year for 20 years and invest it in an R.R.S.P. and a non R.R.S.P. We apply all taxes as they would occur for all the possible marginal federal tax rates at the beginning, during, and at the end of the investment. The marginal federal tax rate is the federal tax "bracket". Estimate this marginal rate by finding the appropriate rate for your taxable income. If you expect your income to vary, calculate an average marginal rate for the investment period.

1975 Rates of Federal Income Tax

Taxable Income		Marginal 1/ Federal Tax Rate
587 or less		9%
587	$ 53 +	18% on next $ 587
1,174	158 +	19% on next 1,174
2,348	382 +	20% on next 1,174
3,522	616 +	21% on next 2,348
5,870	1,109 +	23% on next 2,348
8,218	1,649 +	25% on next 2,348
10,566	2,236 +	27% on next 2,348
12,914	2,870 +	31% on next 3,522
16,436	3,962 +	35% on next 11,740
28,176	8,071 +	39% on next 17,610
45,786	14,939 +	43% on next 24,654
70,440	25,540 +	47% on remainder

It should be emphasized here that a wider range of investment opportunities exists for non R.R.S.P.'s. For example, a business man may want to reinvest in his business or a farmer in land. These investments are likely to be more risky than term deposit type investments and are likely to have a higher rate of return. For this reason a wider range of interest rates is provided in the tables. For comparison purposes we assume both the R.R.S.P. and the non R.R.S.P. are term deposit type investments which accumulate over time at various interest rates. We then generated tables for 7 different rates of return for a non R.R.S.P.,under all possible combinations of marginal federal tax rates, at investment (and during the period of earnings accumulation), and when the proceeds are taken out. The proceeds at the end of the period can be used to buy a level stream of income for life (a life annuity) in our example with a guaranteed period of 15 years or it can be taken out as income in the last year. We compare the total guaranteed after tax payout of the R.R.S.P. and the non R.R.S.P. and their after tax lump sum payments. The following example comparison shows you how our tables were generated.

1/ Actual tax calculations in the tables includes Ontario provincial income taxes in addition to the federal taxes shown here.

Consider an individual with a marginal federal tax rate of 23% who has $1,000 to invest, per year, for 20 years. He can invest this money in an R.R.S.P. which earns 8% return and has no acquisition fees or service charges or in a bank account which earns a rate of return of 10%.

In Section IA of the example which follows we calculate the taxes on the income before it can be deposited in the bank (only $718.25 of the $1,000 per year makes it to the bank). In Section IB we calculate the ending balance or accrued value at the end of 20 years for the bank account ($32,196).

In Section IIA we calculate the before tax accrued value of the R.R.S.P. ($49,423). Notice that all of the $1,000 per year gets invested in the R.R.S.P. since it is not taxable.1/

In Section III we compare the amount of annuity payouts. Notice that the monthly annuity purchased is for a male of age 65 purchasing a life annuity guaranteed for 15 years. Also notice that all of the R.R.S.P. annuity is taxed whereas only the interest portion of the annuity from the bank account is taxed. This can result in a higher marginal federal tax rate (including the annuity payments) for the R.R.S.P. than for the non R.R.S.P.

1/ This number can be arrived at by using standard Amount of Annuity Tables. However, such standard tables consider investments from the beginning of the first year to the beginning of the 20th year, whereas we consider the investment from the beginning of the first year to the end of the 20th year. You can get the appropriate number from the standard Amount of Annuity Tables by finding the factor for the 21st year (50.4229 for 8%) and subtracting one (50.4229 - 1.0 = 49.4229).

I. Value of Non R.R.S.P. Earning 10% with Tax Rate At and During Investment of 23%

A. Calculation of yearly amount invested

Taxes 1/ are 1000 x 23% x (100% + 30.5% - 8%)

= 1000 x 23% x 122.5%

= 1000 x 28.175%

= $281.75

Yearly Amount Invested

= 1000 - 281.75

= $718.25

B.

Year	Last Years Ending Value	Investment	This Years Beginning Value	Before Tax Earnings	Taxes on Earnings	After Tax Earnings	This Years Ending Value
1	0	718	718	72	20	52	770
2	770	718	1488	149	42	107	1595
3	1595	718	2313	231	65	166	2479
19	26637	718	27355	2736	771	1965	29320
20	29320	718	30038	3004	846	2158	32196

II. Value of R.R.S.P. Earning 8% 2/

A

Year	Last Years Ending Value	Investment Before Acquisition Fee	Investment After Acquisition Fee	This Years Beginning Value	Earnings Before Service Charges	Earnings After Service Charges	This Years Ending Value
1	0	1000	1000	1000	80	80	1080
2	1080	1000	1000	2080	166	166	2248
3	2246	1000	1000	3246	260	260	3506
19	40446	1000	1000	41446	3316	3316	44762
20	44762	1000	1000	45762	3661	3661	49423

1/ Our analysis applied all taxes as they should be except no minimum or maximum was applied to the Federal Tax Reduction of 8%.

2/ Money invested in an R.R.S.P. is tax deductible in year of investment, that is there are no taxes on $1,000, therefore the yearly amount invested is $1,000.

III. Comparison of Amount of Annuity Payout

			R.R.S.P.		Non R.R.S.P.
A.	Accrued Value		49423.00		32196.00
B.	Monthly Annuity Purchased 1/		385.14		250.53
C.	Annual Annuity Purchased (12 x B)		4621.71		3006.40
D.	Taxable Amount of Annuity 2/		4621.71		942.54
E.	Taxes on Annuity (D x MFTR x (100%+30.5%-8%))	(31%)	1755.09	(18%)	207.83
F.	Annuity After Tax (D - E)		2866.62		2798.57
G.	Annuity Payout over 15 yrs. (15 x F)		$42999.30		$41978.18

1/ Monthly annuity purchased is estimated for you using your age, sex, and the length of the guarantee period for this example, 65, male and 15 years, to get a quoted monthly rate per thousand of 7.813809.

2/ Since Non R.R.S.P was taxed before investment only the interest portion of the annuity is taxable whereas the entire annuity is taxable if resulting from an R.R.S.P.

Using the R.R.S.P. versus Non R.R.S.P. Annuity Comparison Tables

Using the method of comparison explained in the previous example we have generated a large number of examples under various assumed rates of return and tax situations. The results are presented in Tables 1 through 8 which follow.

You can use Tables 1 through 8 to compare the total after tax payout of an annuity purchased with the proceeds of either an R.R.S.P. investment or a non R.R.S.P. investment. To illustrate how you can use the tables, consider the situation explained in the previous example.

The first thing you should do is determine the expected rate of return of your non R.R.S.P. investment. This indicates which table you should use to examine the results you can expect from your non R.R.S.P. investment. In our example, the expected rate of return on the non R.R.S.P. investment was 10%. Therefore Table 3, on page 24 is the appropriate table in which to look.

Next determine the marginal federal tax rate (tax bracket) for your taxable income in the current year, including the amount to be invested in the non R.R.S.P. In our example, this was 23%. Looking down the left side of table you find this "marginal tax rate when invested." Then you should determine the marginal federal tax rate when the annuity will be received, (18% in our example). Locate the appropriate column by looking at the heading across the top of the table. Once you have found the appropriate table based on the expected rate of return and the two marginal tax rates, you can then determine the total after tax payout of an annuity purchased with the proceeds from your non R.R.S.P. investment. In our example, the table indicates that the total payout would be $41,978.

To compare this result to an R.R.S.P. investment all you need do is turn to Table 8, page 29, which presents the results for all R.R.S.P. investments which we have considered. To use this table, first determine the expected rate of return on your R.R.S.P. investment. In our example this was 8%. This can be found by looking down the left side of the table. Then determine the marginal federal tax rate when your annuity will be received. You can then locate this by looking at the appropriate column in the heading at the top of the table. This was 31% in our example. Using this information, the total after tax payout of the annuity purchased with the proceeds of the R.R.S.P. investment in our example would be $42,999.

You are now in a position to compare the results of the R.R.S.P. and non R.R.S.P. investments. In this example, the value of the R.R.S.P. investment was $42,999 and the value of the non R.R.S.P. was $41,978. This would indicate, in our example, that investment in an R.R.S.P. would be more beneficial than investment in a non R.R.S.P.

At this point, two things should be explained concerning the use of these comparison tables. You will notice that Table 8 does not specify a marginal federal tax rate when the R.R.S.P. investment is made. This is simply due to the fact that R.R.S.P. investments are not taxed as they are made. However, as explained earlier, the total annuity payment purchased with R.R.S.P. funds is totally taxable. Therefore, as you use the comparison tables, you may want to adjust your estimates of the marginal federal tax rate on annuities purchased with R.R.S.P. funds.

Also the non R.R.S.P. tables contain guide lines for comparison with the R.R.S.P. table. These lines are drawn under specific assumptions. 1/ Any figure above the line indicates that the non R.R.S.P. will have a higher payout; below the line the R.R.S.P. will have a higher payout based on the indicated interest rates. These lines do not prevent you from reading the tables as explained elsewhere but they can help you find the R.R.S.P. breakeven point in a particular non R.R.S.P. table. For example, a non R.R.S.P. investment earning 16% (Table 6, page 27), if your present tax rate is 21%, your tax rate when receiving the non R.R.S.P. annuity would have to be 27% or higher before the 16% non R.R.S.P. would be better than the 12% R.R.S.P. For all tax combinations above the 12% line, the 16% non R.R.S.P. is preferred to a 12% R.R.S.P.

In Section IV of our example we examine the case where the funds are taken as a lump sum. Registered Retirement Savings Plans and their tax advantages were setup to be advantageous for receiving a level stream of income for life. If the funds are deregistered to be used for some other purpose the R.R.S.P. lump sum is fully taxable. The non R.R.S.P. is not, since taxes were paid for it during the investment.

1/ Namely that the marginal federal tax rate when receiving the R.R.S.P. annuity will be one bracket higher than the marginal federal tax rate when receiving the non R.R.S.P. annuity (except at 31% or higher rates).

IV. Comparison of Deregistered Lump Sum to Closing Value of Non R.R.S.P.

		R.R.S.P.	Non R.R.S.P.
A.	Accrued Value	\$49,423	\$32,196
B.	Taxes on Lump Sum at tax rate of 43% 2/		
	A x 43% x (100% + 30.5% - 8%)	\$26,034	0.00 1/
C.	After tax value of Lump Sum	\$23,389	\$32,196

1/ Non R.R.S.P. has been taxed during the 20 year investment therefore need pay not taxes when closed.

2/ The actual rate will also depend on such things as automatic income averaging and personal exemptions.

Using the R.R.S.P. versus Non R.R.S.P. Lump Sum Comparison Tables

We have generated results which can be used to compare the R.R.S.P and non R.R.S.P. investments if the R.R.S.P. is deregistered in a manner similar to that used to generate the results presented in Tables 1 through 8. The exact method of comparison was explained in the previous example. The results are presented in Table 9, page 30.

Table 9 is divided into two parts to present results for the non R.R.S.P. investment and for the R.R.S.P. investment. The rate of return earned by each type of investment is specified across the top of each part of the table. The appropriate tax rates for each investment appear to the left of each part of the table. You will notice that only one rate of tax applies to each investment. In the case of the non R.R.S.P. investment, only the marginal federal tax rate at the time of investment is important since there are no taxes to be applied when the proceeds are taken as a lump sum. In the case of the R.R.S.P. investment, only the marginal federal tax rate at the time of deregistration is important since there are not taxes applied when the investment is made.

Using the conditions set out in Section IV of the previous example, we can Use Table 9 to compare the two investments. In that example, the non R.R.S.P. investment earned a rate of return of 10% and the marginal tax rate at the time of investment was 23%. The left part of Table 9 indicates that the total after tax value of this non R.R.S.P. investment would be \$32,196.

The R.R.S.P. investment earned a rate of return of 8% and the marginal federal tax rate at deregistration was 43%. The right part of Table 9 indicates that the total after tax value of the deregistered R.R.S.P. investment would be \$23,389. Comparing this \$23,389 to the \$32,196 obtained with the non R.R.S.P. investment indicates that with deregistration the non R.R.S.P. investment would be preferred to the R.R.S.P. investment.

WHICH R.R.S.P. SHOULD YOU BUY?

If you have now decided to seriously consider investing in an R.R.S.P. based on your current situation, your financial goals and some of the information presented thus far; you still face the difficulty of finding the "best plan" to fit your needs. As we pointed out earlier, there are many different types of R.R.S.P. plans which you can invest in. The most appropriate type of R.R.S.P. for you to invest in will depend on your specific circumstances the potential returns the plan has to offer, and the risk you must take to earn this potential rate of return. For some investors, an equity fund may be the plan of choice. Other investors may avoid an equity fund due to risk involved and chose a guaranteed certificate R.R.S.P. You must make the decision as to which type of plan is most appropriate for you.

However, almost all R.R.S.P.'s regardless of type have various costs associated with investing in them which will influence the overall performance of any plan. Therefore, any comparison of R.R.S.P.'s must consider not only the expected rate of return, but also the costs that must be paid to allow you to earn this rate of return. What you should be concerned about is the net amount each plan will accumulate to over time rather than the rate of return a plan will generate each period.

Common Costs Associated with R.R.S.P. Investments

The various costs associated with an R.R.S.P. may have any number of different names depending on what the selling institution chooses to call them. But, all of these costs can be grouped into three broad categories. These categories include:

1. The cost of getting into a plan.
2. The cost of staying in a plan.
3. The cost of getting out of a plan.

Our names for these costs are acquisition fee, annual service charge and termination or deregistration fee respectively.

Acquisition Fee

Acquisition fees include any costs associated with the initial establishment of your R.R.S.P. investment. These are often referred to as the "front end load". Insurance companies, mutual funds, and other institutions sell plans through salesmen who receive a commission on each sale. Other institutions charge a fee to cover cost of registration and setting up the fund.

These costs of acquisition may be stated as a dollar amount or as a percent of the amount invested. The acquisition cost for a single investment may be as high as 10% of your investment. If you are making continuing contributions under contract, the acquisition fee on your initial investment may be as high as

50% with the fee declining on each successive contribution.

The payment of an acquisition fee effectively reduces the amount of investment which you have earning a return. Over a long period of time, the effect of a large acquisition fee on a single investment can be costly. If you are making investments annually, a large acquisition can be much more costly.

Annual Service Charge

Many institutions selling R.R.S.P.'s make an explicit charge for the annual costs associated with keeping your investment registered and any administrative details that may be required. These charges are often referred to as management fees, service charges, trustee fee, or administrative charges. Annual service charges are normally stated as a percent of the account balance.

The charges may range from 1/4% to over 2.0% of your account balance annually. There may be minimum and maximum service charges specified by the selling institution. These often range between $5. and $50. per year.

An annual service charge reduces the size of your accumulating balance over time.

Termination Fee

Once you decide to take the proceeds out of your R.R.S.P., you may have to pay a cost of terminating your plan. If you are taking the proceeds to buy an annuity this cost is often referred to as a termination fee. If you are deregistering the plan, the cost may be referred to as a deregistration fee. Depending on the institution involved, these charges may differ with the deregistration fee being the greater of the two.

Termination fees are most often quoted as a fixed dollar amount. The most common charges range between $10 and $100. The result of a termination fee is to simply reduce the accumulated value of your investment by the amount of the fee.

Considering the different costs which can be involved with an R.R.S.P. investment, it is easy to see why it may be quite difficult to compare two plans. In the next section we present information you may find helpful in comparing two R.R.S.P.'s.

Our Method of Comparing Two R.R.S.P.'s

The method of comparing two R.R.S.P. investments is exactly the same as that which we previously used to compare an R.R.S.P. and non R.R.S.P. investment. The only additions involve the costs of investing in an R.R.S.P. The previous example allowed for the incorporation of both acquisition fees and annual service charges. As in the previous comparison we looked at a number of different possible costs and rates of return which may be associated with an R.R.S.P. investment. The results of this analysis are presented in Table 10 on page 31.

All of the conditions specified for our comparison of an R.R.S.P. and non R.R.S.P. investment continue to be true in this analysis.

As you look at Table 10, you will notice that the only cost analyzed therein is the annual service charge. The acquisition and termination fees can be handled outside the table. Let us explain how this can be done by going through an example.

You have two R.R.S.P.'s, which you would like to compare. R.R.S.P.-A offers an expected rate of return of 9% and has no costs associated with the investment. R.R.S.P.-B offers an expected rate of return of 10%. But R.R.S.P.-B has an acquisition fee of 5% of each investment, an annual service charge of 3/4% of the accumulating balance annually and a termination fee of $100.

Looking in Table 10, you can see that the total before tax accrued value of R.R.S.P.-A would be $55,764. However, the result for R.R.S.P.-B is somewhat more difficult to obtain. First, you can see that the accumulated value of R.R.S.P.-B would be $56,963 if there were no acquisition or termination fee. The acquisition fee was $50 (5% x $1000) therefore, the total before tax accrued value of the investment when considering the acquisition fee would be 95% of $56,963 or $54,115. 1/ Reducing this amount by the $100 termination fee, we have a total before tax accrued value of R.R.S.P.-B of $54,015. Comparing this to the $55,764 which R.R.S.P.-A would accumulate, you can see that you would be over $1,000 better off with R.R.S.P.-A than you would be with R.R.S.P.-B even though B offered a higher rate of return.

It should be pointed out that Table 10 does not include any tax rates. There were two reasons for excluding taxes from the table. First, taxes do not apply to R.R.S.P.'s when they are invested. Second, any taxes that may apply when the proceeds of the R.R.S.P.'s are taken will apply to all in the same manner. Therefore, since there are no marginal tax rates greater than 100%, the larger the total before tax accrued value of an R.R.S.P., the greater the after tax value.

We must point out that while it may appear that you can use the results contained in Table 10 to compare to results from our previous tables, this is not the case. Table 10 does not include annuity taxation and all other tables do. Therefore, the results are not directly comparable. However, you can make very general comparisons between the two sets of tables.

If you have made a comparison of our standard R.R.S.P. and your non R.R.S.P. alternative investment using Tables 1-9 and found the R.R.S.P. to be preferred, you can then compare this standard R.R.S.P. to your specific R.R.S.P.

1/ This procedure is correct for percent of balance service charges only. If the investment involves a flat annual service charge this procedure will give only a rough estimate.

using Table 10. If your comparison of the two R.R.S.P's finds your specific R.R.S.P. to be preferred to the standard R.R.S.P., then your specific R.R.S.P. would be preferred to your non R.R.S.P. alternative. However, if your specific R.R.S.P. was found to be inferior to the standard R.R.S.P., you cannot determine whether your specific R.R.S.P. is preferred to your non R.R.S.P. alternative or not. The fact that Table 10 does not include taxes, prevents you from making a decision in this specific situation.

SUMMARY

This report has looked at what a Registered Retirement Savings Plan is and how one might be used. Various general rules, regulations, limits, and conditions that apply to an R.R.S.P. investment have been set out. The possible advantages and disadvantages one may realize by investing in an R.R.S.P. have also been examined. In addition, we have presented information about how you might go about comparing an R.R.S.P. investment to a non R.R.S.P. investment or two specific R.R.S.P. investments.

The information presented here is not the "last word" concerning your investment in an R.R.S.P. Some of the very specific rules and regulations specified in the Income Tax Act have been omitted. Also, the information and results presented concerning the comparison of investments is, of necessity, rather general. However, this information should allow you to make numerous general comparisons and provide some general investment guidelines. And this was our purpose.

If you find it difficult to fit your situation into the assumptions we used in generating the results presented in Tables 1 through 10, you can obtain much more specific information by contacting the Extension Branch of the Ontario Ministry of Agriculture and Food.

The Extension Branch offers an R.R.S.P. evaluator service. This service uses a computerized budgeting system to perform analysis and present results similar to those presented in this report. However, since the analysis is performed on an individual basis, it is capable of considering your situation in much greater detail than that which would be handled in a report of this nature. Using the evaluator service will allow you to make much more specific comparisons than those that can be made using the information in this report. For further information or more specific regulations contact your local tax office.

TABLE 1. TOTAL AFTER TAX PAYOUT OF ANNUITY PURCHASED WITH NON R.R.S.P.INVESTMENT EARNING A RATE OF RETURN OF 7 % */

Marginal Federal Tax Rate When Invested	MARGINAL FEDERAL TAX RATE WHEN ANNUITY IS RECEIVED													
	9%	18%	19%	20%	21%	23%	25%	27%	31%	35%	39%	43%	47%	
9%	48204	46476	46284	46093	45901	45517	45133	44749	43981	43213	42446	41678	40910	9%
18%	38561	37183	37029	36876	36723	36416	36110	35804	35191	34578	33965	33352	32739	
19%	37576	36232	36083	35934	35785	35486	35188	34889	34292	33695	33098	32501	31904	
20%	36606	35298	35152	35007	34862	34571	34280	33989	33408	32827	32245	31664	31082	
21%	35653	34379	34237	34096	33954	33671	33388	33105	32539	31973	31406	30840	30274	
23%	33792	32586	32451	32317	32183	31915	31647	31379	30843	30306	29770	29234	28698	
25%	31993	30851	30724	30597	30471	30217	29963	29710	29202	28695	28187	27680	27173	
27%	30252	29173	29054	28934	28814	28574	28334	28095	27615	27136	26657	26177	25698	6%
31%	26941	25982	25875	25769	25662	25449	25236	25023	24597	24170	23744	23318	22892	
35%	23844	22997	22903	22809	22715	22527	22339	22150	21774	21397	21021	20644	20268	
39%	20950	20208	20125	20043	19960	19795	19630	19465	19135	18805	18475	18145	17815	
43%	18245	17600	17529	17457	17386	17242	17099	16956	16669	16383	16096	15810	15523	
47%	15718	15165	15104	15042	14981	14858	14735	14612	14366	14120	13874	13628	13382	

*/ Investment in both R.R.S.P. and Non R.R.S.P. involved taxable income of $1,000 per year for 20 years. Annuity was assumed to have a guaranteed period of 15 years.

TABLE 2. TOTAL AFTER TAX PAYOUT OF ANNUITY PURCHASED WITH NON R.R.S.P. INVESTMENT EARNING A RATE OF RETURN OF 9 % */

Marginal Federal Tax Rate When Invested	MARGINAL FEDERAL TAX RATE WHEN ANNUITY IS RECEIVED													
	9%	18%	19%	20%	21%	23%	25%	27%	31%	35%	39%	43%	47%	
9%	59580	57442	57204	56967	56729	56254	55778	55303	54353	53402	52452	51501	50551	12%
18%	46333	44673	44489	44304	44120	43751	43382	43013	42276	41538	40800	40063	40898	
19%	45008	43396	43217	43038	42859	42501	42143	41784	41068	40352	39635	38919	38202	
20%	43711	42146	41972	41798	41624	41276	40929	40581	39885	39190	38494	37799	37103	
21%	42440	40921	40753	40584	40415	40077	39740	39402	38727	38052	37377	36702	36026	
23%	39978	38548	38389	38230	38071	37753	37436	37118	36482	35847	35211	34575	33940	9%
25%	37617	36272	36122	35973	35824	35525	35226	34927	34329	33732	33134	32536	31939	
27%	35353	34090	33950	33809	33669	33388	33108	32827	32266	31704	31143	30582	30026	
31%	31102	29993	29870	29746	29623	29377	29130	28884	28391	27898	27404	26711	26418	6%
35%	27198	26230	26122	26014	25907	25692	25476	25261	24831	24401	23970	23540	23110	
39%	23613	22774	22681	22588	22494	22308	22122	22813	21563	20817	20817	20444	20072	
43%	20333	19603	19523	19443	19363	19203	19043	18883	19563	18243	17923	17603	17284	
47%	17305	16694	16626	16559	16491	16355	16219	16083	15812	15541	15269	14998	14726	

*/ Investment in both R.R.S.P. and Non R.R.S.P. involved taxable income of $1,000 per year for 20 years.
Annuity was assumed to have a guaranteed period of 15 years.

TABLE 3. TOTAL AFTER TAX PAYOUT OF ANNUITY PURCHASED WITH NON R.R.S.P. INVESTMENT EARNING A RATE OF RETURN OF 10 % */

Marginal Federal Tax Rate When Invested	MARGINAL FEDERAL TAX RATE WHEN ANNUITY IS RECEIVED													
	9%	18%	19%	20%	21%	23%	25%	27%	31%	35%	39%	43%	47%	
9%	66352	63968	63704	63439	63174	62644	62115	61585	60526	59467	58407	57348	56289	12%
18%	50859	49036	48833	48630	48428	48023	47617	47212	46402	45591	44781	43971	43160	
19%	49326	47558	47362	47165	46969	46576	46183	45790	45005	44219	43433	42647	41862	
20%	47829	46115	45924	45734	45543	45163	44782	44401	43639	42877	42116	41354	40592	
21%	46365	44704	44519	44335	44150	43781	43412	43043	42305	41567	40828	40090	39352	
23%	43537	41978	41805	41632	41459	41112	40766	40419	39727	39034	38341	37648	36956	
25%	40837	39376	39213	39051	38889	38564	38239	37915	37266	36616	35966	35317	34668	
27%	38259	36891	36739	36587	36435	36131	35523	34915	34307	33691	33091	32483	33451	9%
31%	33451	32256	32124	31991	31858	31593	31328	31062	30531	30001	29470	28939	28408	
35%	29072	28036	27921	27806	27691	27460	27230	27000	26539	26079	25619	25158	24698	6%
39%	25087	24195	24095	23996	23897	23699	23501	23303	22906	22510	22113	21717	21320	
43%	21462	20701	20616	20531	20447	20278	20109	19940	19601	19263	18924	18487	18249	
47%	18166	17524	17453	17382	17311	17168	17025	16883	16397	16312	16027	15471	15456	

*/ Investment in both R.R.S.P. and Non R.R.S.P. involved taxable income of $1,000 per year for 20 years. Annuity was assumed to have a guaranteed period of 15 years.

TABLE 4. TOTAL AFTER TAX PAYOUT OF ANNUITY PURCHASED WITH NON R.R.S.P. INVESTMENT EARNING A RATE OF RETURN OF 11 % */

Marginal Federal Tax Rate When Invested	MARGINAL FEDERAL TAX RATE WHEN ANNUITY IS RECEIVED													
	9%	18%	19%	20%	21%	23%	25%	27%	31%	35%	39%	43%	47%	
9%	73963	71310	71014	70719	70423	69833	69242	68651	67470	66288	65106	63925	62743	12%
18%	55875	53870	53648	53425	53202	52757	52311	51866	50975	50084	49193	48302	47411	
19%	54104	52163	51948	51732	51516	51085	50654	50223	49360	48498	47635	46773	45910	
20%	52377	50499	50290	50081	49873	49455	49038	48620	47786	46951	46116	45281	44447	
21%	50693	48875	48673	48471	48270	47866	47462	47058	46250	45443	44635	43827	43019	
23%	47449	45749	45560	45371	45182	44804	44426	44049	43293	42537	41782	41026	40271	
25%	44365	42776	42600	42423	42247	41894	41541	41188	40481	39775	39069	38363	37657	9%
27%	41433	39950	39786	39621	39456	39127	38797	38468	37809	37150	36491	35832	25173	
31%	35998	34712	34569	34426	34283	33997	33712	33426	32854	32282	31711	31139	30567	
35%	31092	29983	29359	28736	29613	29366	29120	28874	28381	27888	27395	26902	26409	6%
39%	26665	25716	25610	25505	25400	25188	24977	24767	24345	23923	23501	23079	22658	
43%	22673	21686	21779	21689	21600	21421	21242	21063	20706	20348	19990	19633	19275	
47%	19077	18402	18327	18257	18177	18027	17877	17727	17427	17127	16827	16527	16228	

*/ Investment in both R.R.S.P. and Non R.R.S.P. involved taxable income of $1,000 per year for 20 years.

Annuity was assumed to have a guaranteed period of 15 years.

TABLE 5.

TOTAL AFTER TAX PAYOUT OF ANNUITY PURCHASED WITH NON R.R.S.P. INVESTMENT
EARNING A RATE OF RETURN OF 12 % */

Marginal Federal Tax Rate When Invested	MARGINAL FEDERAL TAX RATE WHEN ANNUITY IS RECEIVED													
	9%	18%	19%	20%	21%	23%	25%	27%	31%	35%	39%	43%	47%	
9%	82537	79568	79239	78909	78579	77919	77260	76600	75281	73962	72643	71323	70004	
18%	61435	59229	58984	58739	58494	58004	57514	57024	56044	55063	54083	53103	52123	
19%	59391	57259	57023	56786	56549	56075	55601	55128	54180	53233	52285	51338	50391	
20%	57402	55342	55113	54885	54656	54198	53740	53282	52367	51451	50536	49621	48705	12%
21%	55466	53477	53255	53034	52813	52371	51929	51487	50602	49718	48834	47949	47065	
23%	51750	59894	49688	49482	49276	48863	48451	48039	47214	46389	45565	44740	43915	
25%	48231	46502	46310	46118	45926	45542	45158	44774	44006	43238	42469	41701	41933	
27%	44899	43291	43113	42934	42755	42398	42041	41683	40969	40254	39539	38825	38110	9%
31%	38762	37376	37222	37068	36914	36606	36298	35990	35374	34758	34142	33526	32910	
35%	33269	32081	31949	31817	31685	31421	31157	30893	30365	29838	29310	28782	28254	
39%	28354	27344	27232	27120	27007	26783	26559	26334	25885	25436	24987	24538	24090	6%
43%	23962	23110	23016	22921	22827	22637	22448	22259	21881	21502	21124	20746	20367	
47%	20039	19329	19250	19171	19093	18935	18777	18620	18304	17989	17674	17358	17043	

*/ Investment in both R.R.S.P. and Non R.R.S.P. involved taxable income of $1,000 per year for 20 years. Annuity was assumed to have a guaranteed period of 15 years.

TABLE 6. TOTAL AFTER TAX PAYOUT OF ANNUITY PURCHASED WITH NON R.R.S.P. INVESTMENT EARNING A RATE OF RETURN OF 16% */

Marginal Federal Tax Rate When Invested	MARGINAL FEDERAL TAX RATE WHEN ANNUITY IS RECEIVED													
	9%	18%	19%	20%	21%	23%	25%	27%	31%	35%	39%	43%	47%	
9%	128964	124318	123802	123285	122769	121737	120704	119672	117607	115542	113477	111412	109347	
18%	90413	87160	86799	86438	86076	85353	84630	83908	82462	81016	79571	78125	76679	
19%	86829	83706	83349	83012	82665	81971	81276	80582	79194	77806	76418	75030	73642	
20%	83368	80370	80037	79704	79371	78704	78038	77372	76039	74707	73374	72042	70709	
21%	80027	77149	76830	76510	76190	75551	74991	74272	72993	71714	70435	69157	67878	
23%	73687	71039	70745	70451	70156	69568	68979	68391	67214	66037	64037	63683	62506	
25%	67781	65346	65075	64805	64534	63993	63452	62911	61829	60747	59665	58582	57500	
27%	62279	60043	59794	59546	59298	58801	58304	57807	56813	55819	54825	53832	52838	12%
31%	52386	50507	50299	50090	49881	49464	49046	48629	47794	46959	46124	45289	44454	
35%	43816	42248	42073	41899	41725	41376	41027	40679	39982	39284	38587	37890	37193	9%
39%	36403	35102	34957	34813	34668	34379	34090	33801	33223	32645	32066	31488	30910	
43%	29997	28927	28809	28690	28571	28333	28096	27858	27383	26907	26432	25956	25482	6%
47%	24469	23599	23502	23406	23309	23116	22923	22729	22343	21956	21570	21183	20797	

*/ Investment in both R.R.S.P. and Non R.R.S.P. involved taxable income of $1,000 per year for 20 years. Annuity was assumed to have a guaranteed period of 15 years.

TABLE 7. TOTAL AFTER TAX PAYOUT OF ANNUITY PURCHASED WITH NON R.R.S.P. INVESTMENT

EARNING A RATE OF RETURN OF 20 % */

Marginal Federal Tax Rate When Invested	MARGINAL FEDERAL TAX RATE WHEN ANNUITY IS RECEIVED													
	9%	18%	19%	20%	21%	23%	25%	27%	31%	35%	39%	43%	47%	
9%	203357	196023	195208	194393	193578	191948	190318	188688	185429	182169	178909	175649	172390	
18%	134224	129388	128851	128314	127776	126702	125627	124552	122403	120254	118104	115955	113805	
19%	128042	123430	122917	122405	121892	120867	119842	118817	116767	114717	112667	110617	108567	
20%	122118	117719	117231	116742	116253	115276	114298	113321	111366	109411	107456	105501	103546	
21%	116441	112248	111782	111316	110850	109918	108986	108055	106191	104327	102463	100600	98736	
23%	105792	101983	101560	101137	100714	99867	99021	98175	96482	94789	93097	91404	89711	
25%	96020	92564	92180	91797	91413	90645	89877	89109	87573	86038	84502	82966	81430	
27%	87056	83925	83577	83229	82881	82185	81489	80793	79402	78010	76618	75226	73835	
31%	71305	68743	68458	68174	67889	67320	66750	66181	65042	63903	62765	61626	60487	
35%	58085	56000	55769	55537	55306	54842	54379	53916	52990	52063	51137	50210	49284	12%
39%	47008	45323	45136	44949	44762	44388	44014	43639	42891	42142	41394	40645	39897	9%
43%	37742	36393	36243	36093	35943	35643	35343	35044	34444	33844	33244	32645	32045	
47%	30006	28937	28818	28699	28580	28342	28105	27867	27391	26916	26441	25965	25490	6%

*/ Investment in both R.R.S.P. and Non R.R.S.P. involved taxable income of $1,000 per year for 20 years. Annuity was assumed to have a guaranteed period of 15 years.

TABLE 8. TOTAL AFTER TAX PAYOUT OF ANNUITY PURCHASED WITH R.R.S.P. INVESTMENT */

Rate of Return on R.R.S.P. Investment	MARGINAL FEDERAL TAX RATE WHEN ANNUITY IS RECEIVED												
	9%	18%	19%	20%	21%	23%	25%	27%	31%	35%	39%	43%	47%
6%	48630	42604	41934	41265	40595	39256	37917	36578	33900	31222	28544	25866	23188
7%	54727	47945	47192	46439	45686	44179	42672	41165	38151	35137	32123	29109	26095
8%	61682	54039	53190	52341	51492	49793	48095	46396	42999	39602	36205	32808	29411
9%	69618	60991	60033	59074	58116	56116	54282	52365	48531	44697	40863	37029	33195
10%	78676	68927	67844	66760	65677	63511	61345	59178	54845	50512	46180	41847	37514
11%	89016	77986	76760	75535	74309	71858	69407	66956	62053	57151	52249	47347	42444
12%	100821	88329	86940	85552	84164	81388	78612	75836	70283	64731	59178	53626	48074

*/ Investment in both R.R.S.P. and Non R.R.S.P. involved taxable income of $1,000 per year for 20 years. Annuity was assumed to have a guaranteed period of 15 years.

TABLE 9.

TOTAL AFTER TAX VALUE OF NON R.R.S.P. INVESTMENT AND DEREGISTERED R.R.S.P. INVESTMENT */

Marginal Fed.Tax Rate When Invested	VALUE OF NON R.R.S.P. FUND — Rate of Return							Marginal Fed.Tax Rate When Deregistered	VALUE OF R.R.S.P. FUND — Rate of Return						
	7%	9%	10%	11%	12%	16%	20%		6%	7%	8%	9%	10%	11%	12%
9%	35634	44014	49003	54614	60926	95128	149933	9%	34694	39029	43974	49616	56056	63408	71802
18%	28530	34255	37590	41285	45381	66729	99004	18%	30395	34193	30525	43468	49110	55551	62904
19%	27804	33280	36461	39980	43875	64088	94450	19%	29917	33655	37920	42785	48338	54678	61916
20%	27090	32324	35357	38708	42410	61539	90086	20%	29439	33118	37314	42102	47567	53805	60927
21%	26387	31388	34279	37467	56056	59078	85904	21%	28962	32581	36709	41419	46795	52932	59939
23%	25017	29574	32196	35078	38246	54407	78059	23%	28006	31506	35498	40052	45251	51186	57962
25%	23691	27834	30207	32806	35654	50056	70860	25%	27051	30431	34287	38686	43708	49440	55985
27%	22409	26167	28308	30646	33199	46003	64256	27%	26096	29357	33076	37320	42164	47694	54007
31%	19970	23035	24765	26642	28679	38715	52653	31%	24185	27207	30655	34588	39077	44202	50053
35%	17689	20159	21540	23027	24631	32402	42913	35%	22274	25058	28233	31855	35990	40710	46099
39%	15556	17517	18604	19766	21011	26940	34753	39%	20364	22908	25811	29123	32903	37218	42145
43%	13564	15094	15933	16826	17775	22221	27927	43%	18453	20759	23389	26390	29816	33726	38191
47%	11702	12871	13506	14176	14885	18149	22228	47%	16543	18610	20968	23658	26729	30234	34236

*/ Investment in both R.R.S.P. and Non R.R.S.P. involved taxable income of $1,000 per year for 20 years.

TABLE 10. TOTAL BEFORE TAX ACCRUED VALUE OF R.R.S.P. INVESTMENT */

Expected Annual Rate of Return	ANNUAL SERVICE CHARGE: As a % of Accumulating Balance					ANNUAL SERVICE CHARGE: As a Flat Annual Rate		
	0%	.25%	.50%	.75%	1.0%	$10	$25	$50
5%	34719	33687	32689	31725	30794	34388	33892	33066
6%	38992	37805	36658	35550	34480	38625	38073	37153
7%	43865	42498	41179	39905	38675	43455	42840	41815
8%	49423	47849	46331	44865	43451	48965	48279	47135
9%	55764	53952	52204	50518	48892	55252	54485	53206
10%	63002	60915	58903	56963	55092	62492	61570	60138
11%	71265	68861	66544	64311	62158	70623	69660	68055
12%	80699	77930	75262	72692	70215	79978	78897	77096
13%	91469	88280	85208	82249	79400	90659	89445	87421
14%	103767	100095	96558	93153	89874	102857	101492	99217
15%	117809	113580	109509	105590	101818	116785	115248	112687
16%	133840	128971	124285	119776	115436	132686	130956	128071
17%	152136	146532	141140	135952	130962	150836	148886	145635
18%	173019	166570	160367	154401	148663	171553	169353	165688
19%	196846	189427	182293	175433	168837	195192	192711	188575
20%	224024	215493	207291	199406	191827	222158	219357	214690

*/ The amount invested was $1,000 per year for 20 years.

BIBLIOGRAPHY

[1] Canadian Master Tax Guide: A Guide To Canadian Income Tax. Don Mills, Ontario, CCH Canadian Limited, 1974.

[2] "Registered Retirement Savings Plans", Information Circular No. 72-22R, Department of National Revenue, April 8, 1974.

[3] "Income Tax Act: Registered Retirement Savings Plans", Interpretation Bulletin IT-124R, Department of National Revenue, February 10, 1975.

[4] Byrd, Clarence E. and Stanley N. Larken, "Better Investment Return Through Registered Retirement Savings Plans", CA Magazine, March 1974, pp. 43-50.

[5] McCullough, J.W., "Registered Retirement Savings Plans", Unpublished, Ontario Ministry of Agriculture and Food, November 1975.