



CASE STUDY FAMILY DECISIONS

KNOWLEDGE EXPECTED OF: CFP® Professionals Only

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Retirement

Patricia, the superintendent of a local school board, will retire at the end of this school year when she turns 55. Her husband Tom plans to continue working for the next five years until he turns 65. The couple doesn't expect to draw income on their assets while Tom is still working.

Once Tom retires, the couple estimates they will need \$10,000 per month (before taxes, in today's dollars) in addition to their full Canada Pension Plan (CPP) retirement and Old Age Security (OAS) pensions for the remainder of Tom's projected lifetime of 100 years. Thereafter, expenses would be expected to drop to \$5,000 per month (before taxes, in today's dollars) for the remainder of Patricia's life. Patricia and Tom own their home, estimated to be worth \$800,000. By the time Tom is 80, they may want to sell it and move into a retirement residence. They would expect \$1 million in net proceeds from the sale of their home at that time.

Tom has a federally regulated Locked-In Retirement Account (LIRA) valued at \$98,000 and a Registered Retirement Savings Plan (RRSP) worth \$600,000. He plans to continue contributing \$20,000 to his RRSP annually until he retires. The couple has a conservative investor profile, which translates into 70 percent of their investments in fixed income and 30 percent in equities. Their advisor charges one percent of assets under management annually.

Starting next year, Patricia's defined benefit pension plan will provide a monthly benefit of \$4,000, indexed to inflation. The couple is debt-free and has \$15,000 set aside for emergencies. Based on a previous cash flow analysis, they expect to have \$500 in surplus cash flow going forward until Tom retires. Tom expects to remain in the same tax bracket once he retires, while Patricia expects to be in a lower tax bracket once she begins receiving her pension. The couple would like some assurance that they are on track to meeting their retirement income goals.

Son's Home Purchase

Patricia and Tom have a 26-year-old son, Malcolm, who would like to buy a condominium and move out of his parents' house. Since he has graduated and has no plans to attend school further, the couple wonder if the \$7,000 remaining in the Registered Education Savings Plan (RESP) they set up for him 20 years ago can be used toward the condominium's down payment. Tom would also like to know if he can withdraw \$20,000 from his RRSP under the Home Buyers' Plan (HBP) and use it toward the down payment, or if they would be better off borrowing from their line of credit at an interest rate of five percent for five years.

After expenses, Malcolm's Disability Tax Credit (DTC), provincial disability supplement and earnings from employment are expected to provide \$500 in excess cash flow each month. His parents have encouraged him to start saving for retirement, planned to start at age 65. He is self-sufficient and expects that his lifestyle in retirement will be similar to his lifestyle today. Malcolm expects to need \$35,000 per year (before taxes, in today's dollars) in addition to his CPP retirement and OAS pensions. He has a balanced investor profile, which means that his fixed income and equity investments are of equal weight. Investing with his parents' advisor will result in a one percent fee on his investments. Malcolm's disability does not alter his life expectancy.

Mother’s Retirement Income Needs

Patricia’s mother Gladys is 80 years old and recently widowed. She is in the process of settling the estate of her deceased husband. When he died, he left a qualified Registered Retirement Income Fund (RRIF) and a deposit Tax-Free Savings Account (TFSA) valued at \$80,000 and \$60,000, respectively. Since then, each has accumulated unrealized capital gains of \$4,000 and \$6,000, respectively. Gladys was named successor annuitant of the RRIF and beneficiary of the TFSA. Gladys, who also owns a qualifying spousal RRIF worth \$75,000, has been involved in managing her investments since her husband’s death.

She is healthy and active. However, since the death of her husband, Gladys has thought about moving to a retirement residence at a cost of \$4,300 per month (after taxes, adjusted for inflation). These costs are over and above her government benefits. Her greatest concern is outliving her money. Gladys is also adamant about leaving as large an estate as possible for Malcolm upon her death.

The sale of her home would produce net proceeds of \$630,000, which Gladys could use to purchase a prescribed single life annuity that provides \$4,317.27 per month, or \$4,035.96 per month guaranteed for 10 years. Alternatively, she may invest the proceeds in a portfolio with the same asset allocation as her RRIF, which comprises 25 percent cash, 65 percent fixed income and 10 percent equities. There is no cost to hold cash in her portfolio. Her mutual funds, however, carry a fee of 1.5 percent annually for fixed income funds and 2.25 percent annually for equity funds. She may also convert her RRIF to an annuity that provides \$1,304.25 per month or \$1,128.84 per month with a 10-year guarantee. Gladys expects to be in a 20 percent tax bracket, which would result in five percent of any non-registered annuity or investment payment being payable in tax. Gladys and Patricia want to know how annuities can help Gladys meet her goals.

Knowledge Expectations – Financial Analysis for Tom and Patricia

The CFP professional should be able to:

- Construct a current net worth statement for Patricia and Tom.

**Personal Net Worth
for Patricia and Tom**

	Patricia	Tom	Joint	Total
House	\$-	\$-	\$800,000	\$800,000
Total Lifestyle Assets	\$-	\$-	\$800,000	\$800,000
Emergency Fund	\$-	\$15,000	\$-	\$15,000
Locked-in Retirement Account (LIRA)	\$-	\$600,000	\$-	\$600,000
Locked-in Retirement Account (LIRA)		\$98,000		\$98,000
Total Investable Assets	\$-	\$713,000	\$-	\$713,000
				\$-
Total Assets	\$-	\$713,000	\$800,000	\$1,513,000
Total Liabilities	\$-	\$-	\$-	\$-
Net Worth	\$-	\$713,000	\$800,000	\$1,513,000

- The couple has a positive financial position with no debt and liquid assets in the event of emergencies.

CASE STUDY – FAMILY DECISIONS

- Calculate that the estimated monthly income after taxes that Gladys may receive from a registered life annuity with a 10-year guarantee (based on a transfer from her RRIF) is \$903.07.⁴⁰ This is equivalent to the present value of \$167,480.90.⁴¹
- Identify that Gladys's primary concern is having enough income to cover her retirement needs.
- Identify that if Gladys invests the proceeds from the sale of her home, her TFSA and her RRIF in a portfolio comprising 25 percent cash, 65 percent fixed income and 10 percent equities, she may not meet her retirement income needs.⁴²
- Explain that Gladys may consider purchasing an annuity because investing alone will not allow her to meet her retirement income needs.
- Evaluate the factors Gladys may consider when choosing to purchase an annuity versus investing her assets.
 - Income requirement: Gladys may benefit from purchasing an annuity because investments alone will not help her meet her retirement income needs.
 - Risk tolerance: Explain that, since Gladys has a low risk tolerance, a life annuity may be a suitable protection against outliving her money by providing a guaranteed income stream.
 - Control over investments: Explain that an annuity will remove Gladys's control over investment decision-making, in which she has been actively involved since her husband's death.
 - Control over timing of receiving income: An annuity may be a more suitable solution for Gladys because it would ensure a predictable monthly income stream to cover her expenses.
 - Life expectancy: Gladys may be expected to live to 100. Explain that an annuity will protect against outliving her savings.
 - Estate planning objectives: Purchasing an annuity may reduce the value of Gladys's estate. However, purchasing an annuity with a guarantee period may provide some estate benefits.
- Explain that based on the factors listed above, Gladys may benefit from purchasing a life annuity with a portion of her assets because it will provide her with a predictable income stream for the remainder of her life.
- Identify that choosing the features of a life annuity will enable Gladys to pursue her secondary goal of leaving as large an estate as possible for Malcolm.
- Explain that using non-registered funds to purchase an annuity will enable Gladys to have a lower taxable income now, but that doing so may result in Malcolm receiving a smaller estate upon her death. This may happen due to higher taxes payable as a result of the remaining RRIF assets being included in her income in the year of death. With this in mind, a registered annuity may be a more suitable option.
- Explain that a higher income is available for an annuity without a guarantee period, but that Gladys may consider purchasing an annuity with a guarantee period to maximize the estate she can bequest to Malcolm.
- Explain that, based on the factors listed above, the optimal solution for Gladys may be to use the proceeds from her RRIF to purchase a life annuity with a 10-year guarantee period, while investing the proceeds from the sale of her home and her TFSA in a portfolio weighted 25 percent cash, 65 percent fixed income and 10 percent equities. Doing so, however, may leave her short of income in her final years.⁴³

⁴⁰ $\$1,128.84 - \$1,128.84 (0.20) = \$903.07$

⁴¹ $N = 20 \times 12 = 240$; $I/Y = 2.815\%$; $PMT = \$903.07$; $FV = 0$. $CPT PV = \$167,480.90$

⁴² $(\$598,500.31 + \$66,000 + \$127,199.58) < \$849,998.35$ required to fund retirement

⁴³ $\$598,500.31 + \$66,000 + 167,480.90 < \$849,998.35$ required to fund retirement

- Explain that the next best alternative should enable Gladys to meet her retirement needs while maximizing the estate she wants to leave to Malcolm. This would require her to use the proceeds from her RRIF to purchase a life annuity without a guarantee period, and invest the proceeds from the sale of her home and her TFSA in a portfolio weighted 25 percent cash, 65 percent fixed income and 10 percent equities.⁴⁴

Knowledge Expectations – Financial Analysis for Gladys

The CFP professional should be able to:

- Construct a projected cash flow statement for Gladys.

**Projected Cash Flow
for Gladys**

	Monthly	Annual
Non-Registered Income	\$3,397.01	\$40,764.12
Tax-Free Savings Account (TFSA) Income	\$355.88	\$4,270.56
Registered Retirement Income Fund (RRIF) Annuity	\$1,304.25	\$15,651.00
Taxes	-\$430.70	-\$5,168.40
Net Income	\$4,626.44	\$55,517.28
Total Cash Inflows	\$4,626.44	\$55,517.28
Retirement Facility Expenses	\$4,300.00	\$51,600.00
Total Expenses	-\$4,300.00	-\$51,600.00
Total Cash Outflows	-\$4,300.00	-\$51,600.00
Net Cash Flow	\$326.44	\$3,917.28

Knowledge Expectations – Estate Planning for Gladys

The CFP professional should be able to:

- Explain that Gladys should update her will to include Malcolm as the beneficiary of her estate.
- Explain that Gladys should update the beneficiary designation to include Malcolm on her RRIF, TFSA and the life annuity⁴⁵ she purchases, to ensure that any remaining assets are transferred to him upon her death

⁴⁴ \$598,500.31 + \$66,000 + 193,540.27 > \$849,998.35 required to fund retirement

⁴⁵ A life annuity without a guarantee period may still have a beneficiary named to receive a payout if Gladys dies before receiving the first payment.

Knowledge Expectations – Disability, Savings, Planning and Retirement for Malcolm

The CFP professional should be able to:

- Identify that, based on the *Projection Assumption Guidelines*, Malcolm has a 25 percent chance of outliving his capital if he lives to his 90th birthday. He may wish to revisit this risk in the future to ensure he remains comfortable with 90 years of age for life expectancy.
- Calculate that he may expect to earn an annual rate of return of 5.1 percent⁴⁶ on any investments based on the return assumptions provided in the *Projection Assumption Guidelines*.
- Calculate that, after fees, Malcolm may expect to earn a net rate of return of 4.1 percent.⁴⁷
- Identify that Malcolm will need \$35,000 per year (in today's dollars) over a 25-year⁴⁸ time horizon.
- Identify that \$35,000 in today's dollars is equivalent to \$75,766.07⁴⁹ when Malcolm turns 65.
- Calculate that providing Malcolm with an annual income of \$35,000, indexed to inflation, from age 65 to 90 will cost \$1,479,215.51.⁵⁰
- Calculate that Malcolm will need \$1,171,211.60⁵¹ at age 65 to be able to draw \$35,000 of income before taxes, indexed to inflation, until he turns 90.
- Calculate that Malcolm needs to save \$1,017.03⁵² per month until he turns 65 to fund his retirement income needs.
- Identify that as a recipient of the DTC, Malcolm may qualify to open a Registered Disability Savings Plan (RDSP).
- Explain that the RDSP helps Canadians with disabilities save for the future by enabling taxes to be deferred on the growth of assets held within the plan.
- Identify that Malcolm has a Social Insurance Number (SIN), since he already has an RESP. As such, he can open an RDSP.
- Explain that Malcolm may be the beneficiary of only one RDSP and that he retains all decision-making authority over the account, including investment choices and timing of withdrawals.
- Explain that anyone may contribute to the plan on behalf of Malcolm and that up to \$200,000 in total contributions are permitted over his lifetime.

⁴⁶ Expected gross rate of return = 3.9% (0.50) + 6.3% (0.5) = 5.1%

⁴⁷ Expected net rate of return = 5.1% - 1.00% = 4.1%

⁴⁸ Malcolm: Age 90 – 65 = 25 years

⁴⁹ N = 39; I/Y = 4.1%; PV = \$35,000; PMT = \$0. CPT FV = \$75,766.07

⁵⁰ N = 25; I/Y = 2%; PMT = \$75,766.07; FV = \$0. CPT PV = \$1,479,215.51

⁵¹ N = 25; I/Y = 4.1%; PMT = \$75,766.07; FV = \$0. CPT PV = \$1,171,211.60

⁵² N = 39 x 12 = 468; I/Y = 24.1%; PV = \$0; FV = \$0. CPT PMT = \$1,017.03

- Identify that, based on his income, Malcolm may apply for and qualify to receive a matching Canada Disability Savings Grant (CDSG) of up to 300 percent of the contributions made to his plan each year until he turns 49. He will receive \$3 for the first \$500 of contributions and \$2 for the next \$1,000 for a total of \$3,500 per year, up to \$70,000 over his lifetime. Should Malcolm be short of contributions in any given year to maximize the grant, his grant room may be carried forward.
- Identify that, if Malcolm receives \$3,500 of the CDSG per year, he will reach the annual maximum limit after 20 years.
- Calculate that, if Malcolm receives the CDSG for the next 20 years, it may grow to \$105,311.35⁵³ by his 46th birthday and \$225,963.89⁵⁴ by his 65th birthday.
- Calculate that the CDSG will reduce Malcolm's savings requirement to \$820.82⁵⁵ per month.
- Calculate that Malcolm's \$500 monthly savings would reduce his need by \$575,979.26⁵⁶ at age 65. This will leave him \$369,268.45⁵⁷ short of providing the income he requires in retirement.
- Identify that Malcolm may choose to reduce the shortfall at age 65 by drawing income at a later age, or saving more as his income may increase in the future.
- Explain that, in addition, Malcolm may apply and qualify for a partial Canada Disability Savings Bond (CDSB), based on his income. The CDSB is an additional annual contribution made to an RDSP by the Government of Canada, through which he may receive up to \$20,000 between now and his 49th birthday.
- Identify the providers of the RDSPs.
- Explain that, with the exception of Prince Edward Island and Quebec, withdrawals from an RDSP are fully exempt from the calculation of income for federal or provincial social assistance payments, such as the disability supplement that Malcolm currently receives.

Knowledge Expectations – Down Payment for Malcolm, Tom and Patricia

The CFP professional should be able to:

- Identify that Malcolm is over the age of 21, his RESP has been in existence for more than 10 years and that he will not be returning to school. As such, he may transfer his investment income in the plan to an RDSP. Doing so will count as a contribution, but will not attract the CDSG. Any Canadian Education Savings Grants (CESGs) or Canada Learning Bonds (CLBs) remaining in the RESP would need to be repaid to Employment and Social Development Canada. Also, any contributions would need to be returned to Patricia and Tom tax-free. However, they would be free to provide those funds to Malcolm to help with his down payment on the condominium. Likewise, they could deposit them to his RDSP to help him earn matching grant money.

⁵³ $N = 20$; $I/Y = 4.1\%$; $PV = \$0$; $PMT = \$3,500$. $CPT FV = \$105,311.35$

⁵⁴ $N = 19$; $I/Y = 4.1\%$; $PV = \$105,311.35$; $PMT = \$0$. $CPT FV = \$225,963.89$

⁵⁵ $\$1,171,211.60 - \$225,963.89 = \$945,247.71$

$N = 39 \times 12 = I/Y = 4.1\%$; $PV = \$0$; $FV = \$945,247.71$. $CPT PMT = \$820.82$

⁵⁶ $N = 39 \times 12 = 468$; $I/Y = 4.1\%$; $PV = 0$; $PMT = \$500$. $CPT FV = \$575,979.26$

⁵⁷ $\$1,171,211.60 - \$225,963.89 - \$575,979.26 = \$369,268.45$

- Identify that Tom and Patricia have three options to provide Malcolm with \$20,000 for a down payment. They can:
 - Withdraw the money from Tom's RRSP under the HBP.
 - Withdraw the money from their TFSAs.
 - Borrow the money from their line of credit.
- Identify that Tom would qualify to withdraw up to \$25,000 from his RRSP under the HBP to help Malcolm with his down payment because Malcolm has a disability.
- Explain that if Tom withdraws money from his RRSP under the HBP, he must make annual repayments of at least \$1,333.33⁵⁸ beginning in the second year after the withdrawal. This will shorten his repayment period to a maximum of 10 years (from a maximum of 15 years) since Tom will need to make full repayment under the HBP by the end of the year in which he turns 71.
- Explain that contributing to his RRSP, and then withdrawing funds under the HBP, is a good alternative to gifting the funds to Malcolm directly for his down payment since it provides Tom with an RRSP tax deduction.
- Explain that if Tom withdraws money under the HBP, he may designate his \$20,000 annual contribution to his RRSP as an HBP repayment.
- Calculate that if Tom removes \$20,000 from his RRSP under the HBP, and repays it using his annual contribution the following year, it may reduce his assets at age 65 by \$23,057.08⁵⁹ to \$918,271.81⁶⁰. The couple will not meet their retirement goal using this strategy.
- Calculate that if Tom contributes \$20,000 annually to a TFSA for the next five years, and withdraws \$20,000 in the first year to help provide Malcolm with a down payment, his retirement assets may be worth \$918,271.81⁶¹ at Tom's retirement date. This amount would be the same as withdrawing from his RRSP under the HBP. While this option is better than using the HBP, because the resulting withdrawals in retirement will be tax-free, the couple still may not meet their retirement goal.
- Calculate that if Tom borrows \$20,000 from the couple's line of credit at an interest rate of five percent for five years, his repayments will be \$377.42⁶² per month.
- Calculate that Tom will need to reduce his RRSP contributions to \$15,470.96⁶³ annually to facilitate the repayments to the couple's line of credit.
- Calculate that, if Tom's RRSP contributions are \$15,470.96 annually for the next five years until he pays off the line of credit, his retirement assets may grow to \$916,983.75,⁶⁴ less than under the RSP and TFSA withdrawal option.
- Explain that, if the couple provides Malcolm with \$20,000, they will not meet their original retirement goal of providing a monthly income of \$6,000 before taxes from Tom's age of retirement at 65 onwards.

⁵⁸ $\$20,000 / 15 = \$1,333.33$

⁵⁹ $\$941,328.89 - \$918,271.81 = \$23,057.08$

⁶⁰ N = 1; I/Y = 3.62%; PV = \$698,000; PMT = 0. CPT FV = \$723,267.60

N = 4; I/Y = 3.62%; PV = \$723,267.60; PMT = -\$20,000. CPT FV = \$918,271.81

⁶¹ N = 1; I/Y = 3.62%; PV = \$698,000; PMT = 0. CPT FV = \$723,267.60

N = 4; I/Y = 3.62%; PV = \$723,267.60; PMT = -\$20,000. CPT FV = \$918,271.81

⁶² N = 5; I/Y = 3.62%; PV = \$698,000; PMT = 15,470.96. CPT FV = \$916,983.75

⁶³ N = 12 X 15 = 180; I/Y = 3.62%, PV = \$941,328.89 – \$918,271.81 = \$23,057.08; FV = 0. CPT PMT = \$166.19

⁶⁴ N = 5; I/Y = 3.62%; PV = \$698,000; PMT = 15,470.96. CPT FV = \$916,983.75

CASE STUDY – FAMILY DECISIONS

- Explain that the couple has three options if they provide Malcolm with \$20,000.
 - They may choose to receive \$101.75⁶⁵ less per month from Tom's age 65 to 80.
 - They may choose to retire eight months⁶⁶ after Tom turns 65.
 - They may find a way to save an additional \$351.13⁶⁷ per month for the next five years to make up the shortfall so that Tom may retire when he turns 65.

⁶⁵ $N = 12 \times 15 = 180$; $I/Y = 3.62\%$, $PV = \$941,328.89 - \$918,271.81 = \$23,057.08$; $FV = 0$. CPT PMT = \$166.19

⁶⁶ $I/Y = 3.62\%$, $PV = -\$918,271.81$; $PMT = \$0$; $FV = \$941,328.89$. CPT N = 8.23

⁶⁷ $N = 12 \times 5 = 60$; $I/Y = 3.62\%$, $PV = 0$; $FV = \$23,057.08$. CPT PYMT = \$351.13

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