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The Retirement Dilemma

Addressing the *"nastiest, hardest problem in finance"*

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> Canadians are living longer, with a massive and growing wave of the population expected to start entering their retirement years.[1] A confluence of factors has created a considerable misalignment between human and portfolio longevity that will require new thinking and innovative retirement solutions.

Let's start by introducing you to Sam. At 65, Sam retired with a defined benefit (DB) pension plan and, based on his salary and years of service, was guaranteed $80,000 per year for the remainder of his life. He also built himself a $1,000,000 nest egg based on personal savings and investments, along with some inheritance money. Ever frugal and conservative, Sam decided he would not over-indulge and would seek relative safety with his investments throughout his retirement. Knowing that his defined benefit pension plan would cover all of the necessities of life, he felt there was no need to assume equity market risk in search of growing his nest egg further. He opted to invest his $1,000,000 in 10-year Government of Canada bonds at 10% interest.[2] As a result, he had created for himself a very comfortable $180,000 annual income stream without withdrawing from his invested capital and slept comfortably knowing that he didn't need to worry about the financial wellbeing of his lifelong employer or the state of the markets.

Younger readers may be forgiven for believing that Sam's story is simply one of an idyllic financial fairy tale. This was, in actual fact, Sam's reality in 1990.[2] In just one generation, we've seen the possible retirement future of Canadians shift so considerably that Sam's story seemingly enters the realm of make-believe by today's standards.

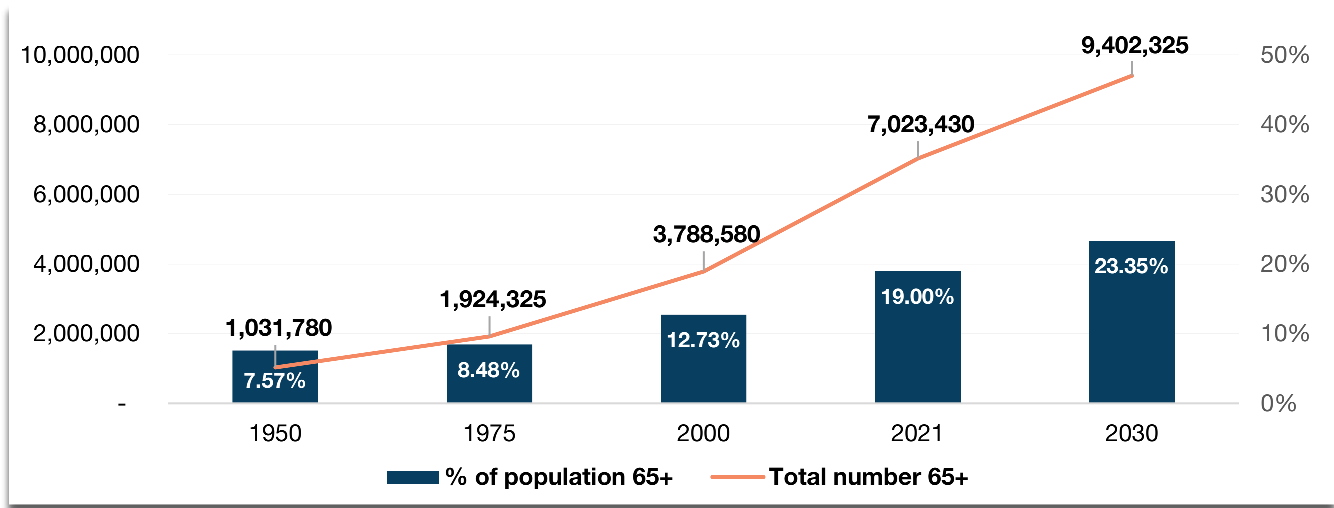
30+ years after Sam's experience, current and soon-to-be retirees need to contend with a host of headwinds, both biologically and financially. Said another way, this cohort of individuals are now faced with the challenge of bringing alignment to two areas which have become increasingly decoupled: **human longevity** (how long you live) and **portfolio longevity** (how long your nest egg will last). It will take new thinking and innovative solutions to address these challenges and help ensure retirees attain the financial security they've worked so hard to achieve.

So what are these new challenges and realities that make Sam's story seem so far-fetched? The remainder of this whitepaper seeks to lay them out, looking both at human and portfolio longevity to help foster new dialogues and, hopefully, new retirement innovations for Canadians that desperately need them.

Human Longevity

As previously stated, human longevity simply refers to how long, on average, we live. It is, of course, impossible to accurately predict how long any given individual will live, so we turn to the world of actuarial finance and census data to get estimates for the population at large. It should come as no surprise that we are all, collectively, living longer, with the average Canadian expected to live until their early-to-mid 80s.[3] Assuming the average person retires at age 65, a statistician or actuary might say there is a high degree of confidence that retirement will last 20 years, on average. However, with the pace of technological and medical advances increasing, it's fair to assume that we will see more and more people living beyond 85. When we look at historical data, the number of people aged 85 and older has doubled in Canada since 2001 and, according to population projections, this number could triple by 2046.[4] For context, the overall population of Canada grew from just shy of 31 million people in 2001 to over 38 million people in 2021.[5] This goes to show just how profound a doubling in the 85+ cohort is relative to growth in the general population.

The data in the chart below will, no doubt, have a profound impact on many aspects of our lives and our economy. Today, nearly 1 in 5 Canadians is a retiree, equating to over 7 million people. By 2030, that number is projected to jump by almost 2.5 million to 9.4 million, representing nearly 1 in 4 Canadians and according to Investor Economics, this large group of people aged 65+ will control roughly half of the wealth in Canada at that point. Through the lens of the investment industry, there will almost certainly be more solutions created to cater to this aging cohort. For investment advisors and financial planners, they will likely increasingly shift their focus to older clients out of necessity and will need to think differently about what they invest in and the types of investment strategies they use that focus on providing financial security to their clients in their retirement years.



Source: Statistics Canada, 2016 Census - Historical Age Pyramid. https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/pyramid/ pyramid.cfm?type=1&geo1=01.

Against this backdrop, it's interesting to hear what advisors have to say about their current investor clientele. In September of 2021, we commissioned Environics to conduct an anonymous survey of advisors to better understand what they and their clients thought about retirement and how well they were positioned for it.[6]

20%
of clients, on average, are not saving enough and risk outliving their savings, said Advisors.

27%
of clients, on average, were currently retired and decumulating their assets (actively drawing down their nest egg to fund their retirement expenses).

Perhaps most importantly, with regards to human longevity and the risk it presents:

28%
of clients are worried about outliving their investment portfolio.

Based on this survey, Advisors indicated that over a quarter of their clients are worried that they simply won't have enough money to sustain themselves over the course of their retirement and, sadly and alarmingly, there is a seemingly large void when it comes to retirement investment solutions available in Canada (and globally, for that matter). There are thousands and thousands of mutual funds and exchange traded funds (ETFs) available today, almost all of them focused on the accumulation phase of an investor's life. In other words, these (accumulation) investment solutions seek to grow your wealth during your working years to help ensure you have a sizable nest egg once you commence retirement. But then what happens? Often, you end up using the exact same products in retirement, perhaps dialing back risk by reducing exposure to equities and increasing exposure to bonds, but usually without making an effort to manage sequence of returns risk (a considerable obstacle for retirees to contend with, which we delve into further on page 5).

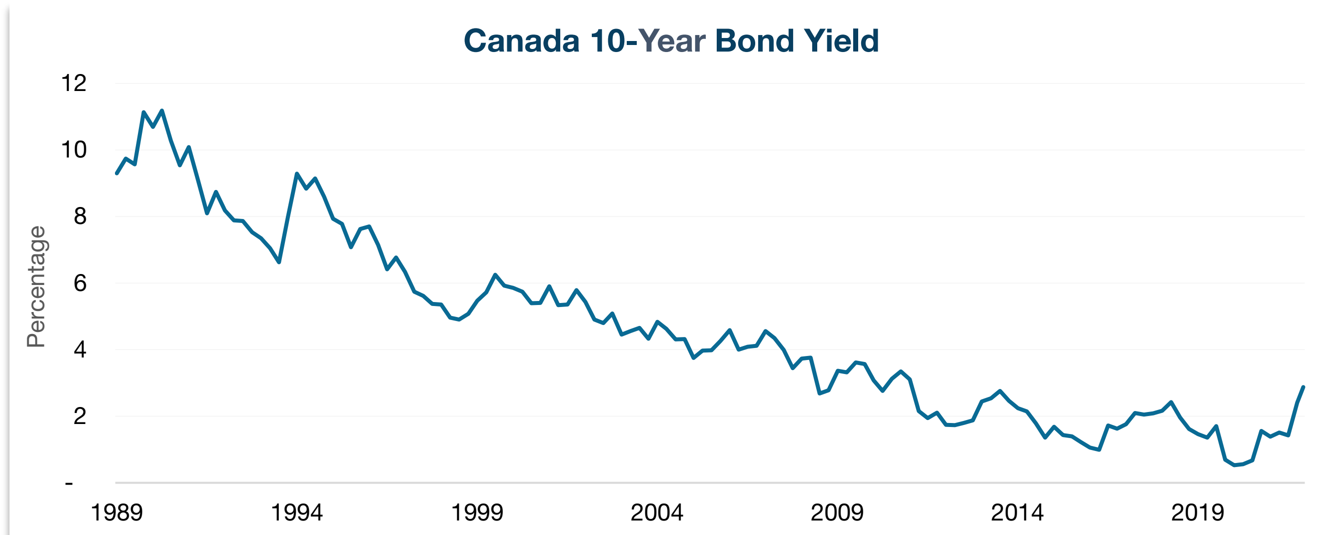
This strategy, however, seems increasingly likely to fail based on certain financial realities that we cover next.

Portfolio Longevity

Portfolio longevity simply refers to how long your nest egg (or investment portfolio) will last and is becoming increasingly worrisome for retirees based on certain financial realities that can be quite challenging to overcome. Perhaps paramount among these challenges are historically low interest rates and the erosion of (or lack of access to) defined benefit pension plans, both of which can lead retirees to take on increased equity market risk. We discuss each of these challenges before highlighting just how important it is to understand and minimize portfolio volatility and protect against market drawdowns in retirement.

Historically low interest rates

When we think back to Sam's story, the fact that he was able to get 10% interest from Canadian government bonds perhaps stands out the most. While it's certainly not news, the fact that interest rates had been so high for that generation of retirees did two important things: First, and most obvious, it allowed them to generate very attractive and essentially risk-free income. Second, because bond yields and bond prices are inversely related, as bond yields fell, bond prices rose. It becomes quite clear to see then why the "move to bonds" mentality in retirement became the norm. Why bother with assuming equity market risk and volatility if you could earn 10% risk free?



Source: Source: Guardian Capital LP with data provided by Bloomberg, as of March 31, 2022.

Those days are now long past and, while it's hard to exactly predict, if central banks around the developed world are now in hiking mode, 2020 may have marked the low point in yields for quite some time.

The casual observer may look at this and argue that it's a good thing for retirees. Of course, as bond yields begin to rise again, future retirees able to lock in rates above where they are today would no doubt be better off. The problem, however, is that if we enter a prolonged period of rising rates, investing a lump sum today to start generating retirement income will be sub-optimal, particularly as the value of bonds issued today will decline as yields rise over time. Instead, investors and their advisors may look at laddering a bond portfolio such that as their short-dated bond holdings mature, they are constantly re-allocating money to more recently issued bonds offering higher yields. That being said, however, it seems highly unlikely that we'll get back to 10% yields anytime soon, so base-case expectations should be tempered and, for most people other than the ultra-wealthy, collecting interest payments from bonds is almost surely to be insufficient to fund retirement expenses, especially if inflation remains elevated.

Erosion of defined benefit plans

Another element of Sam's story that may seem foreign to younger readers is that he was entitled to $80,000 per year from his past employer for the remainder of his life. While still available to a lucky few, the prominence and availability of DB pension plans have been greatly diminished for most private-sector workers over the last couple of decades. Based on a 2021 report, data indicates that just 15% of US private-sector workers have access to DB plans.[7]

What happened? Quite simply, corporations wanted to ease the burden on themselves, both from a financial standpoint and from an administrative standpoint and instead, started to offer defined contribution (DC) plans. Unlike with DB plans, where an employee knows exactly how much income they are set to receive each year in retirement, the DC plan operates differently. With a DC plan, the employer essentially provides a contribution amount each year to the employee while they are still working in order for the employee to invest on their own. This new approach shifts the risk and responsibility of investing to the employee who needs to decide (likely with an advisor) how best to invest the money in order to be set up for financial security in retirement, hence, introducing an element of uncertainty. Success under the DC construct then becomes largely dependent on market performance and the employee's own ability to supplement these employer-sponsored DC contributions with contributions of their own.

Sequence of returns risk

Because the vast majority of the population has been clustered in the accumulation phase of life and the investment industry has mainly focused on catering to this cohort, sequence of returns risk hasn't been top of mind for many people. Perhaps part of the reason relates to the fact that, when you're trying to grow your nest egg during your accumulation years, sequence of returns can actually benefit your investment, with market drawdowns providing potentially attractive points at which to invest more capital at lower prices.

As a retiree today though, you are not only faced with the fact that you're likely to live longer, but you also need to sustain yourself on historically low interest income and a DC plan that has removed certainty of payments. The convergence of each of these factors has led many people, perhaps out of necessity, to take on greater investment risk. They do so not only leading up to retirement, but also in retirement. Taking on greater risk in the years leading up to retirement, while still concerning, may not turn out to be as potentially harmful as taking on greater risk while you're in retirement and drawing an income from your capital. More on that in a moment.

For those in their pre-retirement years, the urge (and necessity) to take on greater equity risk comes as a result of numerous factors. Most bonds today offer very little yield or return potential, so for those looking to grow their nest egg, the obvious choice is to increase equity exposure for greater upside potential. The risk, of course, is that markets don't cooperate and take a turn for the worse right before you need to start using that nest egg to generate retirement cash flow.

A far worse outcome, however, is having markets perform poorly in the early years of your retirement, when you are drawing down the investment capital from your nest egg.

Let's first define sequence of returns risk and then illustrate the potential impact with a real-world example.

Sequence of returns risk refers to the risk of market corrections happening in the early years of retirement while the retiree is simultaneously drawing cash flows from their portfolio. The combination of market losses and cash distributions/withdrawals leads to less and less capital being available to participate in a market rebound. These instances can lead to catastrophic outcomes, such as a considerably decreased standard of living or the very real possibility of running out of money, as demonstrated in the following case study.

Case Study – Drawdowns in the Early Years of Retirement

Let's assume that, based on low bond yields and concerns that you might very well outlive your money, you and your advisor have agreed to invest a majority of your assets in equities. You construct a balanced portfolio consisting of 70% equity and 30% fixed income.

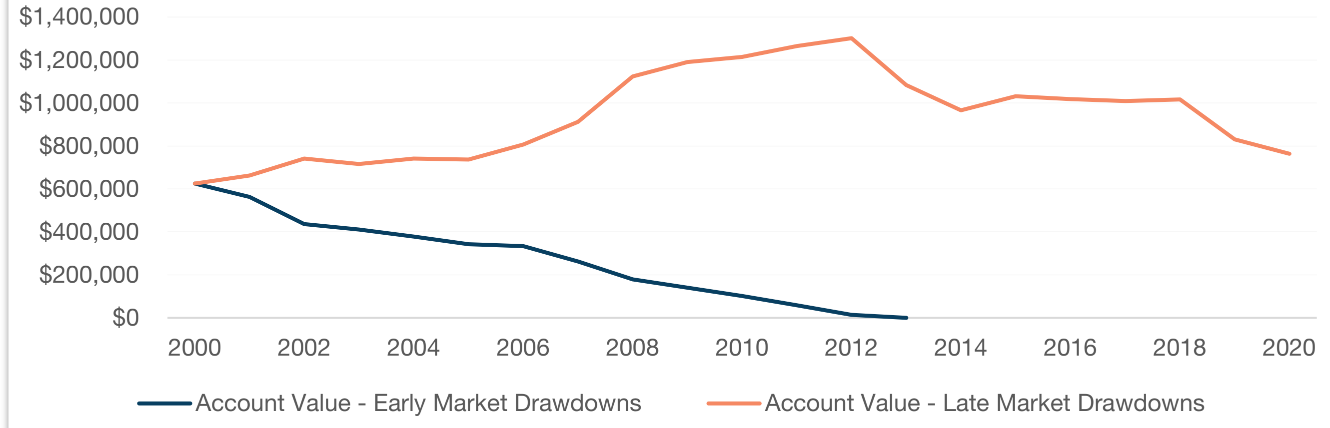
For the purposes of this simulated illustration, we created a blended portfolio of 70% S&P 500 TR Index (CAD) to represent equities and 30% FTSE Canada Universe Bond Index to represent fixed income, gross of fees and rebalanced annually. We used actual historical index performance for the 20-year period ended December 31, 2020. We also assume an initial investment of $625,000 and $50,000 of cash flow from the portfolio each year.

In this simulated illustration, we show two examples:

The first example, represented by the orange line, shows a healthy retirement portfolio that could last beyond 20 years. It is based on taking the actual annual returns of the blended indexes between 2001 and 2020 and reversing their order such that stronger returns are realized early in retirement and weaker returns (drawdowns) are not realized until the end of the period. In other words, it assumes that the actual market performance from 2020 occurred in 2001, 2019 occurred in 2002, and so on.

By contrast in the second example, represented by the blue line, it shows the experience of the blended portfolio using the actual index returns in their correct chronological order. The early years in this scenario were quite poor for equities, as this is when the dot-com bubble burst and the market value of many technology companies fell considerably. As a result of this weak market performance, coupled with the annual $50,000 withdrawals, the blue line runs itself to $0 in 13 years. **In other words, if this was your retirement portfolio starting at age 65, you would have run out of money by age 78 and would have been completely dependant on CPP/OAS thereafter.**

The punchline here is that investors may need to consider different strategies that focus on extending the longevity of their portfolios through managing volatility and protecting against drawdowns. This is in stark contrast to the current approach of just focusing on potential upside return in order to meet portfolio longevity needs.



Simulated Example – For Illustrative Purposes Only

Source: Guardian Capital LP based on data from Morningstar Direct to December 31, 2020. Balanced fund performance is gross of fees assuming weights of 70% S&P 500 TR Index (CAD) and 30% FTSE Canada Universe Bond Index, rebalanced annually. Early market drawdowns data is reflective of the actual blended index results for the 20-year period ended December 31, 2020. Late market drawdowns data are reflective of the same string of blended index results over the same time frame but in reverse order.

The use of hypothetical, simulated returns comes with inherent risks and limitations. Simulated returns are not the returns of any particular account or portfolio, they are produced with the benefit of hindsight through the retroactive application of a model. No representation is being made that any investor will, or is likely, to achieve gains or losses similar to those illustrated.

Conclusion

The misalignment between human longevity and portfolio longevity is, perhaps, the most concerning aspect for retirees to grapple with. We are living longer and many Canadians don't start retirement with a large-enough nest egg. Bonds simply aren't what they used to be. Retirement income is no longer a certainty from employer-sponsored DB plans. Equity markets will continue to be volatile and sequence of returns risk could cripple even the most well-intentioned retirement plan.

It's time to start thinking differently and focusing on solutions that address the real-world challenges faced by current and upcoming retirees. First, sequence of returns needs to be better understood and the associated risks better appreciated by all. Second, we cannot become complacent and expect that equity markets, despite strong performance since the 2008 financial crisis, will perform well forever. At the same time, we have to accept that bonds are likely to provide far less utility to retirees than they once did.

As the proportion of retirees in Canada continues to grow at a rapid pace, the investment industry needs to move beyond focusing on solutions geared towards savers in the accumulation phase of life. The absence of options for people actually in their retirement years is alarming. True decumulation-focused solutions are becoming a necessity. Without them, we are bound to continue looking back at Sam's story with envy.

Guardian Capital LP is at the forefront of solutions-oriented investment innovations, both for the accumulation and decumulation phases of life and we're on a mission to **revolutionize retirement**.

Talk to your advisor to learn more, or visit guardiancapital.com/investmentsolutions

[1] Source: Statistics Canada, Historical Age Pyramid, Census Program, Data Products 2016 Census, Canada, 2019-04-03. Date accessed online May 30, 2022. https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/pyramid/pyramid.cfm?type=1&geo1=01.
[2] Source: Statistics Canada. Table 10-10-0139-01 Bank of Canada, money market and other interest rates. Accessed online March 31, 2022. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1010013901.
[3] Source: Statista, Life expectancy (from birth) in Canada, from 1800 to 2020, 2019-09-06. Date accessed online May 30, 2022. https://www.statista.com/statistics/1041135/life-expectancy-canada-all-time.
[4] Statistics Canada. "2021 Census: A portrait of Canada's growing population aged 85 and older", April 2022, https://www12.stat can.gc.ca/census-recensement/2021/as-sa/98-200-x/2021004/98-200-x2021004-eng.cfm. Accessed April 2022.
[5] Statistics Canada. Table 17-10-0009-01 Population estimates, quarterly. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid= 1710000901. Accessed April 2022.
[6] Environics Research is an independent Canadian polling and market research firm widely cited in Canadian news media. The anonymous survey focused on retirement and was conducted online in August 2021. There were 204 advisors surveyed, 90% of which were IIROC registered (50% bank and 50% independent) and 10% were MFDA registered, with each advisor managing greater than $20 million in client assets.
[7] Bureau of Labor Statistics. National Compensation Survey: Employee Benefits in the United States, March 2021, https://www.bls. gov/ncs/ebs/benefits/2021/employee-benefits-in-the-united-states-march-2021.pdf" Page 191. Accessed April 2022.

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