The Stan Clark Financial Team's

PERSPECTIVES

In this issue...

Volume 10 - Issue 4   June 2019

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Human intuition is valuable in many ways. But it doesn't serve us so well in understanding probabilities. As I discuss in this month's behavioral finance article, using intuition alone can prevent us from making the best choices — and that includes investments. Then, Michael Chu and I, take a close look at life expectancy. Also, Michael takes a long-term view of the value of value investing. And Sylvia Ellis gives you need-to-know information about the federal budget changes to Registered Disability Savings Plans.

Stan

CIBC Wood Gundy

Behavioral finance

Investors, be wary: Our intuitions don't have a feel for probabilities

By Stan Clark - Senior Investment Advisor

Let's start with a puzzle. Imagine there are 100 passengers boarding a 100-seat jetliner. Somehow, between the gate and the door, the first passenger has lost his boarding pass. He takes his chances with a random seat.

After him, every subsequent passenger takes their assigned seat, if it's available. Otherwise, they take a random unoccupied seat. What is the probability that the last passenger to board will find their assigned seat unoccupied?

The most common answer for this, produced by our intuition, is one in 100. There are 100 seats. So, chances should be one in 100 that the last passenger's assigned seat will be the one left at the end. Some people might think the chances are one in 99, or some similar number. But the actual answer is: It's exactly 50%! The last unoccupied seat will either belong to the first or the last passenger. And, it's equally likely to be either.

That doesn't seem intuitive. Yet, if you think about it, that last remaining seat *couldn't* belong to any other passenger. For example, it couldn't have belonged to passenger 37 – had it been empty when passenger 37 came along, he would have sat in it.

This is an example of how our intuition, although powerful and useful in many ways, does not have a good feel for probabilities. Even people well educated in statistics make mistakes when using intuition to figure out probabilities.

Another example is the famous Monty Hall Problem, based on the game show *Let's Make A Deal* and named after its original host Money Hall. When the problem was first introduced, even many mathematics professors got it wrong. You are given the choice of three closed doors. Behind one is a car, behind the other two, goats. You make your choice, say door #1. Monty, who knows what's behind the doors, then opens one of the other two doors, say #3, to reveal a goat. He then asks, do you want to change your choice to pick door #2? Is it to your advantage to switch?

Most people would say there are now two doors, the odds are 50:50, and it doesn't matter. In fact, your odds would be twice as high if you switched your choice to the other door. That's because the odds were twice as high before Monty opened that door. That he showed you which of those two doors the prize was not behind didn't change that. But it's hard for most people's intuition to feel this.

Even people well educated in statistics make mistakes when using intuition to figure out probabilities.

In other areas of mathematics, like geometry and algebra, we usually have an intuitive grasp of the answers. We use formal "proofs" as a check. However, with probabilities, our intuition often leads us astray. Perhaps that's why the other areas of math were developed thousands of years ago, whereas probability theory wasn't formulated until the seventeenth century.

Investing often involves making choices under uncertainty. Our natural weakness in this area makes our "gut feel" very unreliable. Be wary of people who use a subjective approach to buying stocks and bonds. The subjective approach often involves assessing probabilities intuitively. Even the brightest people are simply not very good at this. Also be wary of jumping to conclusions on anything based on only a few years of data. People's natural tendency is to put far too much weight on small numbers of observations.

This is one more reason why it's important to use a disciplined, systematic approach to financial planning and investing. If you don't, the odds are you'll get the odds wrong – and this can cost you a lot of money over your lifetime. ■

Team Talk:

Martha Rodriguez

Administrative Assistant

Chip and Martha at home

What's the next planned event you're looking forward to?

I'm very excited about my trip to Europe at the end of June. I'm going to Munich, to visit my best friend from university. But not only that, five of my childhood friends will be joining me from Spain, Switzerland and Italy. We'll spend the first weekend all together. They'll go back to their respective countries and I'll continue with my Munich friend to Salzbourg, Vienna and Budapest. This girls trip visiting these amazing European cities is the highlight of the year for me.

Where do you want to retire?

My husband and I are seriously thinking of retiring in Andalusia, most probably Cadiz. We'll be checking out neighborhoods in Jerez de la Frontera next year.

Do you have any pets?

Yes, I have a rare chocolate color yorkie who turned 3 last week. His name is Chip and he's very tiny, barely 4 pounds. He's a funny guy because being so tiny he always growls at big dogs... I love him.

Asset Allocation

Expecting more from life expectancy tables

By Stan Clark, Investment Advisor, and Michael Chu, Investment Advisor

We've written previously in *Perspectives* about life expectancy and inflation. We discussed how people are reluctant to plan too far ahead, despite rising life expectancies and the need to watch out for inflation over these longer periods. The key, as you may recall, is to have a financial plan with an appropriate asset mix, in order to plan properly for life expectancy and inflation.

Life expectancy can be complicated. But keep in mind, they are just averages. For example, we often hear that more Canadians are reaching 90 or even 100 years of age. But just as some of us turn out taller or shorter, most will live either longer than or less than the average.

How is life expectancy calculated? There are different methods. Let's describe a simple method using an example. We'll start with 60-year-old males. Over the year, we see how many survive, giving us the survival rate for one year. We repeat, doing the same for 61-year-olds, then 62 and so on. Now we have the one-year survival rate for each age.

We then proceed to combine the survival rates and calculate how many 60-year-olds will survive two years, then three years and so on. We keep going until the survival rate drops to 50%. This means that half the 60-year-olds have passed away. The age at which half the group has died is how the average life expectancy is determined. In this case the average is 89 years[1]. Some 60-year-olds will die earlier than 89 and some will die after, but *half will have passed at 89* – which is why it's the average.

But who wants to be average? We've always been taught to be better than average. Today, if a 60 year old is healthier, they would likely live beyond the 89 average expected age. How do we factor this into our financial plan?

In the method we described above, the expected age is determined when half (50%) the group dies. But that also means half the group has survived and will live further. What if you think you could be in the top 25% rather than the top half? That would mean a survival rate of 25% of the original group. For a 60-year-old male, surviving until only 25% remain (or be in the top 25% of his group), the average age is 94 (5 more years).

What about overachievers who are super-healthy, not to mention extra lucky? Maybe they will want to plan to be in the top 10%, instead of the top 25% or average 50%. At this level, the average age is 97 years (eight more years than the average person).

You can see how the table is expanding. We have a list of expected ages for an average person (top 50%); then someone healthier than average (top 25%); then someone way healthier than average (top 10%). More importantly, you see how the expected age can change significantly, adding up to eight years in our example – and that has a big impact on your financial plan.

Life Expectancy for 60-year-old

	Male	Female	Male/Female
Top 50% (average)	89	91	94
Top 25% (healthy)	94	96	98
Top 10% (over acheiver)	97	100	101

Of course, we don't know exactly which group you will belong to. But to be conservative (and optimistic!), and in line with how pension plans do it, we use the 25% survival rate in our financial plans. This gives us an extra margin of safety in our projections.

To keep things simple, so far we've just been talking about 60-year-old males. As you can see in the table, females live a bit longer – usually by two to three years. The male/female column refers to couples. You'll notice that their life expectancy is even longer. This doesn't mean that couples live longer; it's because you have to plan for both instead of just one. Since there are two people involved, it's likely that at least one could live longer than average. So females, and more so for couples, have to plan for longer lives.

Another interesting fact: When you factor in expected improvements in healthcare, current age doesn't have that much of an impact on life expectancy. Everyone between ages 20 and 85 has the same life expectancies as in the table, give or take one or two years. This is because the advancements in healthcare that younger people will have, compensate for the extra life risks that they still have to endure. Meanwhile, people currently beyond 85, might not benefit as much from healthcare advancements, but are expected to live even a bit longer – just because they have made it that far already.

Here's to a long and healthy life! ■

1 Life expectancies in this article are based on statistics used by Canadian pension plans which assume continued improvements in healthcare: 2014 Canadian Institute of Actuaries Canadian Pensioners' Mortality Report.

Stan Clark is First Vice-President, Portfolio Manager and Senior Investment Advisor for the Stan Clark Financial Team at CIBC Wood Gundy. Stan has direct responsibility for the team and oversees all areas of financial planning, investment selection and investment management.

Michael Chu is a Portfolio Manager and Investment Advisor for the Stan Clark Financial Team at CIBC Wood Gundy. Michael is a specialist in investment research and information technology.

Investing

Value investing over the long term

By Michael Chu, Investment Advisor

As discussed in our 2018 *Year-End Review*, value investing has underperformed lately. As a result, it's reasonable to ask if value investing is going to be less effective going forward. Despite the good long-term track record, is it possible there has been some big change – or is this underperformance just temporary?

First, let's look at what *value investing* is. Value investing is buying out-of-favour stocks that trade at a discount to their fair value. They could be out of favour for a variety of reasons: bad financial results, lower future prospects, or even just emotions. Value investing works because investors systematically underestimate the ability of "weaker" companies to revert to profitability and reasonable growth. Historically, buying value companies has resulted in better-than-market returns.

On the other side of the spectrum is *growth investing*, or buying companies that have high expectations and are usually more expensive. Here, investors tend to overestimate the high expectations, eventually to be disappointed.

But in recent years, expensive stocks have remained expensive because they have met their lofty expectations. As a result, cheap stocks have stayed out of favour. Is this something new?

To find out, we did a study of value investing, with data going back to 1927 (92 years). We looked at the performance of various individual value measures or "factors," such as *price-to-book value* (P/B). Book value is the value of the company's assets. We compared low P/B (cheap or value) stocks vs. high P/B (expensive or growth) stocks. On an annual basis, cheap stocks outperformed with returns of 12.9% vs. 9.3% for expensive stocks. At first glance, that's a very impressive track record over such a long time period. It makes value investing look great and easy to do.

But let's look closer. Like many things, returns on value investing go through cycles. Despite value investing's good long-term track record, it has had some bad periods. True, the bad years are eventually more than made up for, but that doesn't make it much easier when you are currently in one of those bad periods. Just how often do bad periods occur for value investing?

On an annual basis, value investing has bad years quite regularly. In fact, value investing only outperformed 59% of the individual years. That might seem unimpressive, but it's actually pretty good, as the better years made up for the down years. It just shows that value investing isn't going to do well year after year. It's good to know this, and shows we just have to be patient.

Let's look at *rolling three-year periods* – meaning we look at three-year periods together instead of each year individually. This gives us a longer-term perspective. Looking at three years, value outperformed 63% of the time, giving us more confidence. On a five-year basis, value outperformed 70% of the time. And on a 10-year basis, value outperformed 84% of the time. When we compare annual returns to rolling periods, we can see that patience pays off. Down periods were soon made up for by up periods.

Let's look at one more thing. Based on the above, we might feel more comfortable with a few bad years in a row. But what about underperforming for five- or 10-year periods? It has happened in the past: Value underperformed significantly over 10-year periods during the 1930s, late 1950s, the dot.com boom bust – and, unfortunately, today. While still a rare occurrence, we should be prepared.

The good news is that, historically, value has always come back. We can't tell when this will happen, and perhaps the future outperformance will be less than the past. Or, just maybe, value's current attractive relative price will enable it to outperform with a vengeance. Value is a big part of our investment philosophy and will have an impact on our results. Fortunately, with our diversified approach, we can mitigate some of the effects. ■

Michael Chu is a Portfolio Manager and Investment Advisor for the Stan Clark Financial Team at CIBC Wood Gundy. Michael is a specialist in investment research and information technology.

Financial Planning

Registered Disability Savings Plans: Changes you should know about

By Sylvia Ellis, Senior Estate Planning Advisor

Jamie Golombek, Managing Director, and Debbie Pearl-Weinberg, Executive Director, Tax and Estate Planning, CIBC Financial Planning and Advice, recently wrote a great summary about changes to Registered Disability Savings Plans (RDSPs). As these changes may be important to you, we wanted to share them.

RDSPs are tax-deferred savings plans open to Canadian residents eligible for the disability tax credit ("DTC"), their parents and other eligible contributors. Up to $200,000 can be contributed to the plan until the end of the year in which the beneficiary turns 59, with no annual contribution limits. While contributions are not tax-deductible, all earnings and growth accrue on a tax-deferred basis.

Federal government assistance in the form of matching Canada Disability Savings Grants (CDSGs) and Canada Disability Savings Bonds (CDSBs) may be deposited directly into the plan up until the end of the year in which the beneficiary turns 49. The government will contribute up to a maximum of $3,500 CDSG and $1,000 CDSB per year of eligibility, depending on the beneficiary's family income.

Under the current rules, when the beneficiary of an RDSP ceases to be eligible for the DTC, no contributions may be made to the RDSP and no CDSGs or CDSBs will be paid into the plan. In addition, the tax rules require that the RDSP be closed by the end of the year following the first full year throughout which the beneficiary is no longer eligible for the DTC. Currently, there is one limited exception: If a medical practitioner certifies that a beneficiary is likely to be eligible for the DTC in the foreseeable future, an election can be made to keep the RDSP open for five years.

The RDSP issuer is required to set aside an amount (known as the *assistance holdback amount*) equal to the CDSGs and CDSBs paid into the RDSP in the preceding 10 years (less any grants and bonds repaid). This requirement ensures that RDSP funds are available to meet potential repayment obligations. When the RDSP is closed, the assistance holdback amount must be repaid to the government, with any remaining assets going to the RDSP beneficiary.

For years, individuals with disabilities, their families and other advocates have raised concerns about the need to close an RDSP and pay back the CDSGs and CDSBs upon loss of DTC eligibility. They cited as the reason for their concerns that this did "not appropriately recognize the period of severe and prolonged disability experienced by an RDSP beneficiary."

As a result, the federal government in its recent budget announced that RDSPs can continue to remain open (although contributions will not be permitted) even if the beneficiary becomes ineligible for the DTC. For the years the beneficiary is ineligible for the DTC, and that are prior to the year in which the beneficiary turns 51 years of age, the assistance holdback amount rules apply and withdrawals may prompt the repayment of grants and bonds.

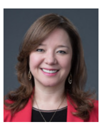
However, once the beneficiary turns 51, and over the following 10 years, the assistance holdback amount will be reduced based on the CDSGs and CDSBs paid into the RDSP during a reference period. For example, for the year in which the beneficiary turns 51, the reference period will be the nine years immediately prior to the beneficiary becoming ineligible for the DTC. The assistance holdback amount will therefore be equal to the amount of grants and bonds paid into the RDSP in those nine years, less any repayments of those amounts.

These new rules will generally apply beginning in 2021. But, as of federal budget day, RDSP issuers will no longer be required to close an RDSP solely because an RDSP beneficiary is no longer eligible for the DTC.

In another change for RDSPs, the federal budget proposes to exempt RDSPs from seizure in bankruptcy, with the exception of contributions made in the 12 months before the filing.

Here's the full article:

https://www.cibc.com/content/dam/personal_banking/advice_centre/tax-savings/2019-federal-budget-en.pdf



Sylvia Ellis is the Senior Estate Planning Advisor for the Stan Clark Financial Team at CIBC Wood Gundy. Sylvia provides support to the team in projecting and planning client financial affairs.

SCFT Trivia

Play our trivia – support the cure!

For every correct entry we receive in our trivia contest, the Stan Clark Financial Team will contribute $1 to CIBC's "Run for the Cure" to raise money for breast cancer research. Each correct entry will also be entered into the draw for this month's prize. Email or phone in your entry today.

Answer all four questions to be entered into the draw for this month's prize. Hint: You can find the answers inside this newsletter.

1. In terms of investing, our human tendency to rely too much on our intuition means that we may:
   a) use a purely objective approach to buying stocks and bonds
   b) naturally tend to put far too much weight on small numbers of observations from just a few years of data
   c) carefully do our research before making financial decisions
   d) avoid doing what our "gut feel" tells us to do.
2. Life expectancy tables indicate longer lives for couples. This can be attributed to:
   a) couples remind each other to go for regular medical check-ups
   b) couples tend to adopt healthier lifestyle practices
   c) with two people involved, it's likely that at least one could live longer than average, meaning that couples have to plan for longer lives
   d) statistics show that two people co-habiting both live longer.
3. Value investing is buying out-of-favour stocks that trade at a discount to their fair value. The stocks could be out of favour because of:
   a) bad financial results
   b) lower future prospects
   c) emotions
   d) all of the above.
4. The federal government in its recent budget announced that Registered Disability Savings Plans can continue to remain open even if the beneficiary becomes ineligible for the Disability Tax Credit:
   a) True b) False.

Email answers to: **stanclarkfinancialteam@cibc.ca**
or call (604) 641-4361

One prize winner will be chosen by a draw from all those who submit correct answers. The draw will take place on June 28, 2019.

Trivia challenge runs June 1 - 27, 2019. No purchase necessary. There is one prize to be won. Simply complete the trivia questions correctly to be entered in the draw. Limit 1 entry per person.

Chances of winning depend on number of eligible entries and whether you correctly answer the trivia questions. Open to adult Canadian residents (excluding Quebec). For full challenge rules, write to: The Stan Clark Financial Team, CIBC Wood Gundy 400-1285 West Pender St, Vancouver, BC V6E 4B1.

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