

THE STAN CLARK FINANCIAL TEAM'S

PERSPECTIVES

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From our ancient forebears, humans got into the habit of viewing growth as linear, that is, increasing in a straight line, like footsteps to a destination. However, as I discuss in this issue's behavioral finance article, the modern world also involves exponential growth, where the amount gets bigger as the number itself gets bigger. Michael Chu explains the benchmarks our Team uses to measure client portfolio performance. And, if you're thinking of buying that first home, be sure to read Sylvia Ellis's guide to the First Home Savings Account (FHSA).

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Behavioral Finance

CAREFUL! YOU LIKELY SUFFER FROM EXPONENTIAL GROWTH BIAS

By Stan Clark, Senior Wealth Advisor

Let's begin with a fable:

The man who invented the game of chess showed it to the ruler of his country. The ruler was so impressed he allowed the inventor to name his reward.

The inventor, being wise, asked only for this: one grain of wheat on the first square of the chessboard, two grains on the second square, four grains on the third square and so on. Basically he was doubling the number of grains per square until the last square of the chessboard.

Scoffing at its seeming meagreness, the ruler granted the request. He ordered his treasurer to hand over the wheat. The treasurer took a whole week to calculate the amount of wheat needed. He finally determined it was impossible to make the payment!

Just how much wheat were they talking about? A lot: 18,446,744,073,709,551,615 grains. Assuming each grain weighed 65 mg, at current world production levels the total amount would take more than 1,600 years to grow.

The above shows the power of compound interest – and of *exponential growth bias*, “the pervasive tendency to linearize exponential functions when assessing them intuitively.”¹

With *linear growth*, things change by a constant amount. With *exponential growth*, growth becomes bigger and bigger as the number itself gets bigger.

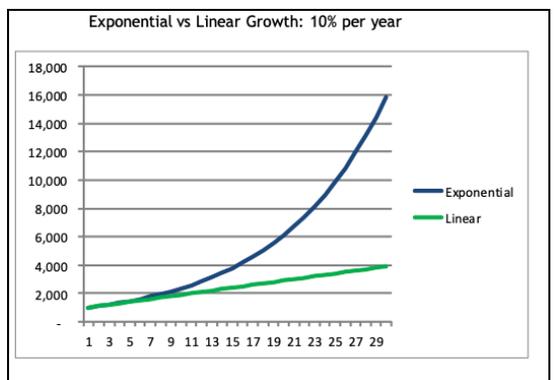
For our ancestors, most things were linear: the amount of food they gathered, the number of children they had, the distances they travelled. The

linear perspective worked well for them (though not for the ruler in our fable). Naturally, our minds evolved to think in that same linear fashion.

But this doesn't work so well in our modern world. Linear thinking can cause us to make mistakes when making judgements on things that grow exponentially.

To give you a sense of the difference, if one of our ancestors took 30 linear steps (one step equalling a meter) from the entrance to her cave, she would end up 30 meters away. However, if she could take 30 exponential steps – i.e., one, two, four, eight, 16, 32 and so on – she would end up a billion meters away. She'd be lapping the globe 26 times.

Even if we are aware that growth is exponential, our intuition still leads us to think of things linearly. For that reason, it's vital to sit down and crunch numbers.





TEAM TALK

Tatiana Joy Payomo
Administrative Assistant



Welcome to the Team, Tatiana!

I recently joined the Stan Clark Financial Team after working on the banking side of CIBC for 2 years. Everyone has been so welcoming and I'm glad I made the move!

Have you ever lived in another country?

A BIG YES for me. Moving to Canada was a dream come true. In the winter of 2022, I arrived with my two children, six pieces of luggage, three backpacks, and nearly our entire lives packed in boxes. My husband had already been in Canada for over three years, patiently waiting for us. When we landed in Vancouver, a massive tech outage had canceled over 200 flights, including ours to Edmonton. We spent more than 12 hours in the airport surrounded by chaos coming from all directions, but I remained calm – what was 12 hours compared to three years apart? At last, at 6 a.m. the next day, we boarded our flight. When we landed, snow blanketed everything. Though anxious about this new experience, our hearts were full of hope to finally be together again. It was indeed a white Christmas for us.

One of the best examples of exponential growth is compound interest. Our fable was an extreme example of its exponential effects, with the amount doubling on each square. However, even seemingly small differences in returns can make big differences. And the effect is truly amazing. According to Albert Einstein, "Compound interest is the eighth wonder of the world."

At lower rates of growth, the effects of compounding don't make much difference over short time periods. For example, the difference of investing \$1,000,000 at 5% versus 7% over three years is less than \$70,000. But what if we look at the same example over 10 years? The extra growth is more than \$330,000. For 30 years, it's more than \$3.2 million. The extra growth is three times greater than the original investment of \$1,000,000. And that's from a difference in growth of only 2% per year!

As you can see in the table below, the longer the time period, the greater the effect. Plus, a bigger differential in returns will produce an even more significant difference in the final results. At 30 years, the difference between 3% and 9% means extra growth of over \$10 million!

Compound growth from \$1,000,000				
Time	3% Return	5% Return	7% Return	9% Return
10 Years	\$343,916	\$628,895	\$967,151	\$1,367,364
20 Years	\$806,111	\$1,653,298	\$2,869,684	\$4,604,411
30 Years	\$1,427,262	\$3,321,942	\$6,612,255	\$12,267,678

Source: The Stan Clark Financial Team

Asset Allocation

BENCHMARKS: WHEN AVERAGE IS MUCH ABOVE AVERAGE

By Michael Chu, Senior Wealth Advisor

How are you doing? More specifically, how are you doing with your [fill in the blank]? If you think about it, you'll likely find that progress in any area of life depends on, "Compared to what?"

The life area could be anything from health and fitness to investment portfolios. For example, let's say a moderately healthy person should be able to do somewhere between 10-20 pushups. But maybe you're not satisfied with moderately healthy. Maybe, to be extra healthy, you want a high/stretch goal of 25 pushups!

The number we all compare ourselves against can be called a *benchmark* – and for any benchmark, it is helpful to know exactly what it is and what it means.

In the performance reports our Team creates for clients, we show benchmarks that use a mixture of standard market indexes, like the S&P 500 or the TSX Composite index. Each mixture corresponds to each client's specific portfolio targets. But comparing our portfolios to market indexes is sort

of like comparing them to a high/stretch goals. "But" you might ask, "aren't these market indexes just averages? And don't we want to be better than the average, as with pushups?"

Indeed we do. But it turns out that achieving investment returns equal to index returns actually puts you far above average. This is because most investors fall well short of index returns. And not by trivial amounts, either. For stock indexes the average shortfall is likely in the range of 2-3% per year. We'll now talk about the reasons why, and how this might affect how we think about benchmarks.

Your intuition will often be surprised at the results.

¹ "Exponential Growth Bias and Household Finance," The Journal of Finance, December 2009

The Rule of 72

Dividing 72 by the compound interest rate will give you the number of years something will take to double. Conversely, 72 divided by the number of years something took to double will give you the interest rate.

Example: if something is growing at 6%, it will take 12 years to double. If something took 10 years to double, the compound interest rate was 7.2%.

Mind the Gap: the cost of fund and market timing

In its recent study *Mind the Gap*, Morningstar, the well-known collector of mutual fund and ETF data, estimated that investors' returns over the past 10 years averaged 1.2% per year lower than the returns of the very funds they'd invested in. In other words, if an investment published returns of 8%, actual investor returns were only 6.8%. That's a significant

gap – about 15% of total returns.

The investor returns were lower than investment returns? How can that be? According to the report: “Our research has found investors consistently struggle to earn their funds’ total returns, with the shortfall owing to the timing and magnitude of their purchases and sales.” Rather than sticking to their original plan, investors often switch funds from recent losers to recent winners – locking in losses from the losers while missing out on gains on the winners. The Morningstar authors note that factors such as fund category, management style and volatility influenced the size of the gaps. And the gaps

group that runs the S&P 500 and S&P/TSX Composite indexes. The authors measured the performance of actively managed funds vs the funds’ respective benchmark indexes. Active funds are those where managers invest actively in attempts to beat the market. The downside of most actively managed funds is they often end up doing the opposite. That is, they fail to beat the market.

Over the 10 years ending in 2024, few of Canada’s active funds beat their benchmarks. For Canadian Equity funds, 95.5% of active funds underperformed the index. The average percentage that underperformed for all seven categories of funds was 93%.

The average mutual fund underperformed its benchmark by over 2.5% per year over the past 10 years, and even more so recently. Part of this underperformance was due to high fees, but even after fees were eliminated, significant underperformance existed. We believe this is due to the repeated errors most managers make from using a subjective approach to investing, vs the systematic approach used by our Team. (See [Our Stock Strategies](#) for more information.)

The SPIVA study adjusts for survivorship bias. Survivorship bias is extremely important in evaluating historical returns of a manager’s funds, because about 40% of mutual funds that existed 10 years ago have either been shut down or merged with other funds. Usually it is the poor performing funds that have been closed. The performance numbers shown by fund managers therefore only show the performance of the surviving funds, which creates a biased representation of actual past performance. As this is very important, we’ll talk more about survivorship bias in a future article.

Investing in index funds

Some investors may be happy to come close to the benchmark. They’re willing to trade off not doing better (outperforming) for not doing worse (underperforming). It’s true you can buy index funds that mimic the benchmarks. But remember, there are costs embedded within these funds in addition to fees to buy or hold them. So, index funds will be nearly guaranteed to underperform the benchmark index.

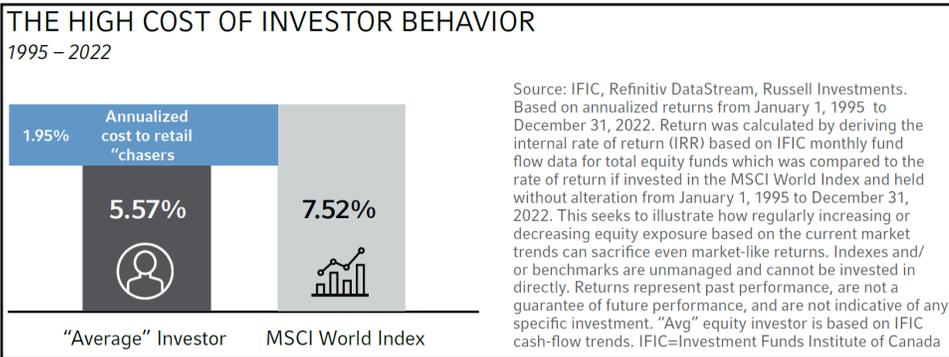
Plus, there are literally hundreds of different index funds. And since index funds are so easy to get in and out of, there might be greater risk of market timing errors. This may be why index providers Vanguard and Russell advocate the use of advisors who temper such errors with behavioural approaches to planning and investing.

What does all this tell us? Three things: 1) Investors usually lose by getting in and out of different funds and the market at the wrong times. 2) Traditional active managers usually underperform. 3) Investing in index funds is guaranteed underperformance.

Many investors are doubly penalized by the above. They invest in underperforming active managers and then lose more by switching back and forth between them. Or maybe they invest in index funds, but then lose out by extra attempts at market timing. Either way, the results will be investment returns much below the theoretical “benchmarks.”

What about us?

In the performance reports our Team provides every client, we show their portfolio returns



were worse for equity funds and more volatile funds – exactly the ones investors would be more emotional about.

This tendency seems to be baked into human behaviour – and over time can greatly harm our returns. Take, for example, the high-flying Fidelity Magellan Fund managed by legendary investor Peter Lynch from 1977 to 1990. Under Lynch’s management, the fund averaged an astounding return of 29% per year. It would seem you had only to ride along with Lynch to earn phenomenal returns.

Except that didn’t happen. According to Fidelity Investments, the average Magellan Fund investor lost money during Lynch’s tenure. Sure, it’s an extreme example, but this was a prominent mutual fund with an exceptional track record.

Index providers Vanguard and Russell also did some work on market timing. Their findings confirmed the results of the Mind the Gap study: Investors underperform significantly because they move in and out of different funds at inopportune times. The authors believe the root causes of this underperformance are behavioural, that investors’ biases and cognitive errors prompt wrong moves. Russell found that the cost of investor behaviour is almost 2%.

The danger of active investing

Another interesting study is SPIVA, or the S&P Indexes Versus Active. SPIVA was created by S&P Dow Jones Indexes, the same

So we know most mutual funds underperform – but by how much is also important. In Canada, the S&P/TSX Composite index had returns of 8.65% over the past 10 years. But the average Canadian equity mutual fund was only 6.91%, which is 1.74% lower than the benchmark. In the U.S., the S&P 500 had returns of 15.58% for the last 10 years. But the average U.S. equity fund only had returns of 11.38%, or 4.20% lower.

This table shows the underperformance for all seven categories over the past three, five and 10 years.

Actively Managed Portfolios: Average return vs benchmark

Actively Managed Portfolios Average Mutual Funds*	10 Yr.	5 Yr.	3 Yr.
Canadian Equity	-1.74%	-2.21%	-1.62%
Canadian Focuses Equity	-3.33%	-2.18%	-3.11%
Canadian Dividend & Income	-0.46%	-1.02%	-2.08%
Canadian Small-Mid-Cap	-1.49%	-0.97%	-5.58%
US Equity	-4.20%	-4.51%	-4.20%
International Equity	-1.75%	-2.00%	-3.31%
Global Equity	-4.97%	-5.97%	-6.27%
Average	-2.56%	-2.69%	-3.74%
Average without fees**	-0.81%	-1.09%	-2.24%

*Average mutual funds: shows the average return vs benchmark from SPIVA Canada Scorecard 2024. Report 4, Page 12. SPIVA adjusts for survivorship bias: 40% of funds have closed or merged in past 10 years.

**Average without fees: adjusts the returns by subtracting mutual fund fees which we assume averaged 1.75% over the past 10 years, 1.6% over the last 5 years and 1.5% over the past 3 years. This is based on a Conference Board of Canada 2024 survey, which found the average MER was 1.47% in 2023, down from 2.06% in 2013.

after fees. We compare these returns to benchmark index returns that don't include any fees or other adjustments for errors that most investors make. This doesn't make the comparisons look as good, but we want to keep things simple – and we also want to set a high bar for ourselves.

We are proud to say that, since we started tracking portfolio performance for our discretionary accounts in 2008, our flagship stock model's returns have beat the model's benchmark. And this is based on actual client returns.

Furthermore, we create customized financial plans for all our clients. We have developed an approach to asset allocation that helps us combat the negative consequences of behavioural and timing issues.

The key for us is that it's all about making sure we stick with our financial plan and investment philosophy, and rigorously follow our processes. We want all our clients to do much better than average!

Sources:

- [Morningstar's Mind the Gap 2025: The more investors traded, the less they made](#)
- [SPIVA® Canada Scorecard, year-end 2024](#)
- [SPIVA® U.S. Scorecard, year-end, 2024](#)



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Financial & Estate Planning

YOUR GUIDE TO OPENING A FIRST HOME SAVINGS ACCOUNT (FHSA)

By Sylvia Ellis, Senior Estate Planning Advisor

I remember, back in 1992, the federal government introducing the Home Buyers' Plan (HBP). With the HBP, Canadians could borrow funds from their Registered Retirement Savings Plan (RRSP) to put toward buying a home. Since then the HBP has improved. It now includes the ability to withdraw \$60,000 from your RRSP – and in the case of a spouse, up to \$120,000 – for a new home.

But home prices, inflation and interest rates still make it challenging for many to break into the real estate market. So, in addition to the HBP, the government introduced a new plan, the First Home Savings Account (FHSA). The FHSA not only provides more assistance to potential buyers, but can be used in combination with the HBP.

Like an RRSP, contributions to a FHSA are tax deductible. Like a TFSA, withdrawals, including any investment income or growth earned in the account, are non-taxable.

Exactly what does it mean to be a first-time buyer? For the purposes of a FHSA, you are considered a first-time buyer if, in the calendar year of opening the account, or in the previous four years, you did not live in a home as your principal residence that was owned by you, or jointly owned by you and your spouse or common-law partner.

Here are some other key details about the FHSA:

- You must be a Canadian resident for tax purposes with a social insurance number (SIN), and at least 18 years old (or the age of majority in your province or territory).

- You will occupy the home as your principal residence within one year of acquiring it.
- The annual contribution limit of \$8,000 includes any transfers you make from an RRSP. However, RRSP transfers will not be tax-deductible because you have already received applicable deductions. You can carry forward unused portions, but the maximum amount you can contribute in one year is \$16,000. The lifetime limit is \$40,000.
- The FHSA can hold the same types of qualified investments currently allowed in a TFSA and RRSP.
- You must use your FHSA contributions within 15 years of opening the account, or by the time you turn 71, whichever is sooner. After that, you can transfer savings into an RRSP or RRIF, or make a taxable withdrawal.
- If certain conditions are met, the entire balance in the FHSA can be withdrawn on a tax-free basis in a single withdrawal or a series of withdrawals, and used toward the purchase of a qualifying home.
- An FHSA can remain open for a maximum of 15 years from the date you opened it, subject to conditions.

With housing affordability in Canada remaining a challenge, first-time buyers welcome any help that can be provided. The combination of benefits described above allows first-timers to save in a tax-

efficient manner, with the goal of making homeownership more achievable.

Should you know anyone or have a family member interested in learning more, we are happy to help!



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

Trivia Time!

Thank you for reading this month's newsletter. Test your knowledge with our trivia questions! Each question relates to one of the articles featured in this edition. See how many you can get right, and check your answers at the bottom of the page. Good luck and happy quizzing!

Hint: You can find the answers inside this newsletter.

1. With linear growth, things change by a constant amount. By contrast, with exponential growth:
 - a) Not much growth occurs.
 - b) There's a lot of growth in the short term, not in the long term.
 - c) Growth becomes bigger as the number itself gets bigger.
 - d) Growth is purely based on luck.
2. With compound interest, keep in mind that:
 - a) From the very first day, you see sizeable increases.
 - b) Increases putter out after 10 years.
 - c) You should always rely on intuition in deciding how long to invest for.
 - d) The longer the time period, the greater the effect.
3. In the performance reports for clients, the Stan Clark Financial Team shows benchmarks that use a mixture of standard market indexes, like the S&P 500 or the TSX Composite index. Each mixture corresponds to each client's specific portfolio targets:
 - a) True
 - b) False
4. The First Home Savings Account (FHSA) assists Canadians in buying their first home by allowing them to:
 - a) Use the FHSA in combination with the Home Buyers' Plan (HBP).
 - b) Save in a tax-efficient manner, with the goal of making homeownership more achievable.
 - c) If certain conditions are met, withdraw the entire balance in the FHSA on a tax-free basis, in a single withdrawal or a series of withdrawals, toward the purchase of a qualifying home.
 - d) All of the above.

Answers: 1, C, 2, D, 3, A, 4, D

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