Goldfish

By Geoff MacDonald, portfolio manager

A Microsoft Corp. study in 2015 concluded that humans now have an attention span of just eight seconds. Goldfish have an attention span of nine! The report was 54 pages though, so I didn't read it. This small paragraph will take over eight seconds to read so I've likely lost half of the humans already. Too bad goldfish can't read, at least I'd still have an audience for another second. The humans' minds have already drifted to their goldfish (did they feed them today??), what HBO series were they watching in 2015, Microsoft, or whether the person next to them looks good naked. Informal research to the latter suggests the answer to that is usually no.

> In this study, attention span was defined as "the amount of concentrated time on a task without becoming distracted"…hello…hello… you can go to the next paragraph now…there's a squirrel in it.

…..Oh look, a squirrel

Luckily, our attention span is longer than a squirrel which is only one second. Unless the squirrel is focused on an acorn, then it grows to four minutes! We expend a lot of time and energy looking for our acorns and make even greater efforts to not lose focus in the midst of all the wild and constant distractions around us.

Acorns

We write about distraction because:

- An eight-second attention span is detrimental to your financial health
- An eight-second attention span means most of you won't make it to the end of this commentary

That matters to me as a writer. I wonder if there are some acorns I can drop into this commentary to keep you reading?

Down 33%

We don't hold out much hope that we humans can throw our brains into reverse and fix our distraction problem. In 2000, we had a 12-second attention span meaning we've dropped 33% in just 15 years. Based on our unscientific observations, the decline continues.

Purely from an observational perspective, we don't see shortened attention spans as a good thing for society as a whole. On the flipside, we have far more opinions on how shortening attention spans can be great for your pocketbooks.

Tweet tweet

As talking points are shortened and tweets replace genuine contemplation and sustained thought, there are more and more investors buying and selling securities without really knowing what they own.

Narratives like buy an index fund for the lower fee, or buy a low-volatility fund because it has less risk, or buy this stock for the nice yield are all dangerous for those with the attention span of a small googly-eyed bowl dweller but can be gifts to the few still capable of exercising sustained thought.

Obviously the collective shortening of our attention spans also contributes to increasing turnover on stock exchanges. Investors who hold stocks for weeks or just months are great counterparties for the long-term thinker. More on those parking their brains at the door later…

Under-estimators

Another glitchy thing about our brains is that they're ill-equipped to understand exponential growth. In other words, we severely underestimate how big numbers can get, which means things turn out very differently in the future than most of us imagined.

To illustrate, let's tell a story about an emperor, an inventor, the game of chess and a whole lotta rice. This section of the commentary was inspired by a book I read called The Second Machine Age: Work Progress And Prosperity In A Time Of Brilliant Technologies.

Two to the power of (64-1)

Chess originated in the sixth century in the Gupta Empire in what is present-day India. The Emperor was so impressed with the game he invited the inventor to his palace and asked him to name his reward.

The inventor had what seemed like a simple request, he wanted some rice to feed his family. He asked the Emperor to place one grain of rice on the first square of the chessboard, two on the second square, four on the third, eight on the fourth and so on, so that each square received twice as many grains as the previous one.

The Emperor probably said something like "ha ha (this was before LOL), that's all you want for inventing such a wonderful game? No problem."

The inventor would have ended up with two to the power of 64-1 or over eight quintillion grains of rice. The pile of rice would be bigger than Mount Everest, for those of us not good with quintillions.

We assume things progressed reasonably well for quite a few squares. We then assume someone's head got chopped off by the time they got to the second half of the chessboard.

The second half of the chessboard is where things get really weird.

Graph it

If we were to graph exponential growth during a prolonged period it looks like all the action happens towards the end. Try the rice and chessboard experiment with a calculator and piece of paper and you'll see what I mean.

Beam me up, Scotty

The exponential growth in computing power over the past 50 years, originally predicted by Gordon Moore in 1965, is a current example of being on the second half of the chessboard and is leading to technologies and products we saw in sci-fi flicks a few years ago and thought were improbable. For example, if computing power doubles again over the next two years the world will experience more computing power than in the first 45 years of computers combined.

That's tough for our minds to imagine. The implications are even tougher to envision. Digital progress has become sudden after being gradual for so long.

More on Moore:

Gordon Moore worked for Fairchild Semiconductor in 1965. He wrote an article in Electrons Magazine called *Cramming more components onto integrated circuits* that stated "Integrated computers will lead to such wonders as home computers – or at least terminals connected to a central computer – automatic controls for automobiles and personal portable communication equipment." His most famous forecast was that the amount of integrated circuit power you could buy for a dollar would double each year for the next decade. This doubling of computing power over a certain time period became known as Moore's Law.

Source: Erik Brynjolfsson and Andrew Mcafee, "The Second Machine Age: Work Progress And Prosperity In A Time Of Brilliant Technologies", WW Norton, January 21, 2014.

Why does it matter?

What we've been experiencing presents wonderful investment opportunities to a few while presenting big risks to many. That's because this type of unprecedented advancement will expose most established businesses to disruption in one form or another. We believe the level of disruption is picking up pace which leaves owners of established businesses at risk.

Enjoy capitalism

This disruption is capitalism at its best. When it occurs it's because the new product or service was chosen by customers.

> Disruption refers to a disruptive innovation that creates a new market which often disrupts an existing one.

Google is far better than the Yellow Pages.

Shopping from home in your pjs is often way better than fighting for a parking spot at the mall.

Having a drone drop off the next book you buy will be faster and cheaper than a truck and its driver.

Having an electric car eliminates time wasted every week at the gas station and delivers more torque to boot. Your concern won't be the disruption in the supply chain experienced by manufacturers of internal combustion engines and car transmissions, unless you own those businesses in your index fund or for their yield.

The customer wins with these changes. Assuming, of course, the customer's job hasn't been replaced with some form of automation.

Let's find the losers

As disruption continues and unimaginable technologies emerge, more will change and more will lose.

Finding the winners is where most investors will spend their time, but finding the potential losers should be much easier.

The most impactful thing we can do over the next decade is to avoid, as best as possible, those being disrupted. Sometimes the most effective way of making money is to avoid making big mistakes. Don't get us wrong, we'll take great investment opportunities when we see them, they're just harder to find than the losers.

....Oh look, my customers are gone

If you're concerned that further penetration of online shopping will cause a decline in foot traffic at shopping malls, don't own them. You don't have to own retailers for that matter either. You can talk to the management teams of these companies and hear their mitigation strategies. Or listen to how they claim they won't be affected, or of course, affected less than others. Or you can ignore the entire group and look for a better idea.

You could spend months figuring out what percentage of industrial distributors' sales is being targeted by Amazon. Then figure out what that means for each company. You can listen to management tell you they'll be fine. Or you can ignore all the ones you think are exposed, which will take about 10 minutes of work. You don't need to have all the answers. You don't have to try to figure out the impact potential future events will have on each company. Just look for an idea you feel more comfortable with that has a less uncertain future value.

The level of disruption will touch more than the obvious industries like distributors, hoteliers, cable companies, advertising agencies, network TV companies, taxi companies and retailers.

We'll miss a lot

We recently sold our position in Team, Inc. The investment will go down as a mistake. We'll spend more time talking about it in a future commentary or email to our partners. The reason we briefly mention it here is because one of the reasons the stock underperformed for us was that we believe it's being hit with some disruption.

A big part of its business is providing maintenance services to large facilities like refineries and chemical plants. Owners of these assets are always looking for ways to reduce the cost of maintenance. Historically, they'd outsource the maintenance to businesses like Team that are more efficient than internal staff. More recently, we believe owners have been using technology to replace Team where they can. Sensors monitoring an asset's performance can go just about anywhere now, including hard-to-reach areas.

Historically you'd have to take the asset down for routine maintenance for a week or two every year. Now, with the right sensors monitoring the right things, assets have maintenance only when the smart little sensor says it's absolutely necessary. There were some other problems with the investment, but an element of the mistake was that the company was at the early stages of being disrupted on the maintenance part of their business, and we missed it.

Any company in the maintenance business is similarly exposed. Some will disrupt themselves and keep a viable business. Many will just make less money in the future from maintenance contracts, as businesses are able to monitor their assets' performance themselves.

Good questions are better than uncertain answers

The beauty of how we invest is we don't need all the answers.

Maybe it's because we have $160 million (as at December 31, 2016) of our own money invested in our funds. Or because we define risk as losing money rather than looking different from the benchmark. Maybe it's how we're wired. Either way, we try to make the easy decisions.

Making hard decisions doesn't make sense if easier ones are available. We're very comfortable taking a pass on the hard ones. As digital technologies continue to grow at a fast pace there will be more disruption to many businesses. We'll continue to ask questions about each company's future and simply try to avoid the ones that are too tough.

More and more hard decisions not to make

Because there are more companies likely facing structural headwinds because of disruption in their business models, there are more to avoid than when we started nine years ago. Same can be said from a valuation standpoint.

This will make the next nine years more challenging. Have you altered your expectations?

Back to eight seconds

We're not sure eight-second blurbs will work well for investors going forward. For example, buying an index fund simply because it has a low fee is almost comical when you think of how little goes into that decision.

Who asks about the price of the securities you own in that index fund…wait for it …nobody. Does the overvaluation of the securities you own offset your annual savings? Are your securities overvalued by 5% or 20% – in other words, 500 basis points or 2,000?

Where do you find all the businesses facing disruption more broadly and faster than in the past? Wait for it, the index. Who's trying to figure out the ones at risk? Nobody.

Everything has a price. Most people just don't know what that is anymore.

Thought

It's more important than ever to take the time for true sustained thought about future business models. Yet it's happening at a time when our attention spans are shrinking and nobody is taking the time to stop and think. This is where we feel we can bring value. We believe we have the ability to remain focused on the long term as more and more do the opposite.

The summary not worth writing

There's no point in summarizing as it will take more than eight seconds and will simply repeat what's above. Thanks again for your trust. We work hard every day to try to be worthy of it.

Interested in reading more about how technology may disrupt our future? Here are some more books that inspired Geoff to write this commentary.

The Industries of the Future by Alec Ross

The Inevitable: Understanding the 12 Technological Forces That Will Shape Our Future by Kevin Kelly

The Fourth Industrial Revolution by Klaus Schwab

The Future of the Professions: How Technology Will Transform the Work of Human Experts by Richard Susskind and Daniel Susskind

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