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January 11, 2019

2018 Annual Letter

Barrage Fund

Management Report

For the period of January 1 to December 31, 2018, the S&P/TSX posted a return of -8.85% (including dividends) while the S&P 500 returned 4.15% (in Canadian dollars and including dividends). The Barrage Fund's performance for the same period was -4.97% before fees and -6.06% after fees.

The fund is now comprised of 10 stocks and has a modest cash position. We maintained this low cash position throughout the year.

Despite disappointing performance in 2018, we remain confident in our stocks, most of which are currently trading at very attractive prices.

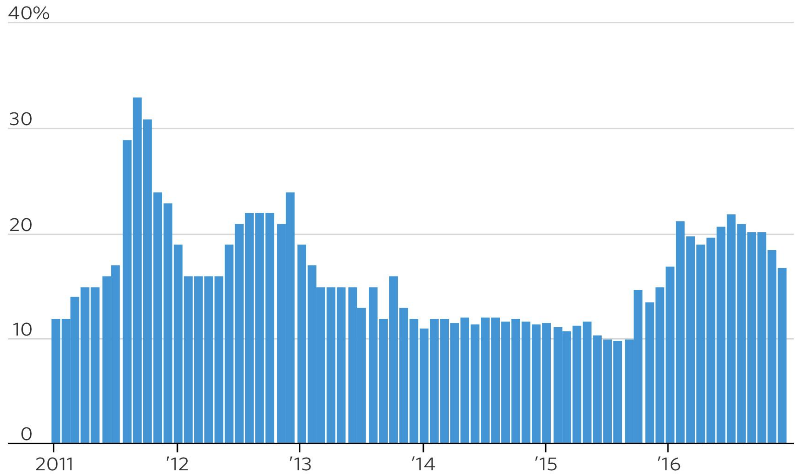
Market Commentary

The word we hear everywhere these days: recession. The word we hardly heard a year ago: recession. As far as we are concerned, this word remains in our mind every time we think about the risks of investing in the stock market, regardless of public opinion.

The following graph shows the likelihood of a recession in the United States based on the forecasts of economists from 2011 to 2017:

Recession Odds

Average probability of the U.S. economy entering recession in the coming 12 months



Source: WSJ Survey of Economists

In 2011, the risk of a double dip recession caused reactions from many observers. A Forbes article from July 2011 even mentioned the five reasons that the country was already back in a recession. In October of the same year, the economist Nouriel Roubini, who was known to have predicted the financial crisis, said: "The question is not whether there will be a double-dip recession or not, but rather to know the severity of this and the possibility that it may be accompanied by another financial crisis." Such findings seem to have had their effect on investors, with the S&P 500 falling 16% over a short period of time (despite the absence of a recession).

Why was there so much pessimism at the time? All you had to do was read the national and international headlines. The debt problems of several European countries were causing panic, particularly Greece. Then in 2013, the S&P 500 had its best performance in 15 years: 32.4%. That was enough to allay fears! Recession forecasts subsequently dampened over the next few years.

Then in 2016, the specter of a recession was revived by Brexit and a possible slowdown in China. Today, just two years later, this hot topic is resurfacing, given the rise in interest rates, the introduction of tariffs and perhaps for some, the mere mention of Donald Trump.

Far be it from us to predict the absence of a recession in 2019 or 2020. On the contrary, this eventuality is still likely, and it has even increased with the rise in interest rates. However, rather than trying to guess when this event will occur, we prefer to select companies that are well equipped to survive these difficult times.

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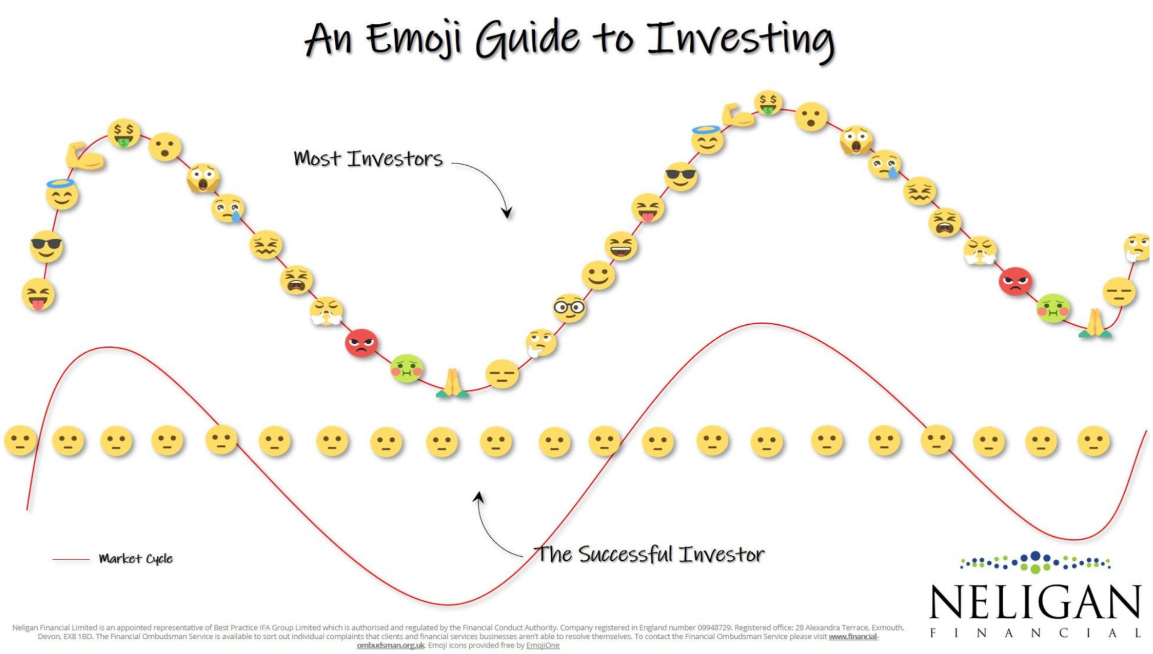
As far as our portfolio companies are concerned, we are not experiencing any panic, even though their share prices have recently dipped. On the contrary, the discount between our intrinsic value estimates and the stock market value has become even more attractive. We believe that the fear felt by investors is reinforced by the behavior of securities. When the media announces difficult times the reaction is, “This must be true, since the markets are collapsing!” We subsequently find ourselves in a vicious circle: bad news drives prices down, and falling prices lead to more bad news.

The following diagram, taken from the site of the British firm Neligan Financial, says a lot about the reaction of investors to market cycles.



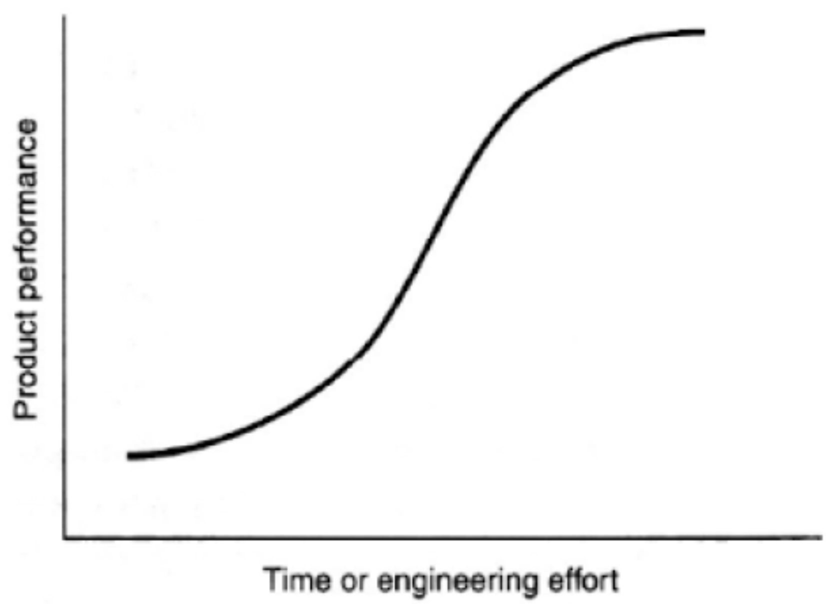
While the majority of investors react to the curve, those who succeed in the long run adopt a permanently neutral emotional attitude. As for recessions, this risk remains very real at all times. Ironically, a fall in the markets creates better opportunities in the stock market, precisely at times when fears of recession reach their peak. Then, after the stock market rebounds, fear tends to fade. Even though recession risks still exist after the rebound, the securities have now become more expensive and investors no longer show worry.

Note that some companies are more sensitive than others to recessions, such as car manufacturers and home builders. In these specific cases, we will pay close attention to the business cycle, taking care to adjust profits accordingly. Emphasis will also be placed on the balance sheet. When we look at our current holdings, we are reassured by the strength of their business models and excellent financial health.

The Great Technological Change

In recent years, we have witnessed great technological change in several industries. Retail is one of the most affected areas with the advent of e-commerce, but many other sectors are now affected as well.

The progression of these changes could be represented by this curve:



It shows that everything starts slowly, with little impact on traditional sectors. Towards the end of the 1990s, we witnessed the stock market bubble. The internet was a new concept that revolutionized the world. A multitude of companies tried to take advantage of the movement, adding the suffix ".com" to their name to propel their stock market valuations. However, we were at the dawn of the revolution, and the power of internet connections remained limited.

The streaming company Netflix has been able to navigate this curve based on its technological capabilities over time. Its founder, Reed Hastings, had the idea to offer video streaming some 10 years before actually testing this service in 2007. However, in the meantime, he opted for a hybrid solution. Members could select films for rent online, and DVDs were mailed to them for viewing. Due to the fact that technological progress was slow, a convergence of the online and physical world was required at this stage in the company's history.

Today, we find ourselves right in the most ascendant section of the curve. It took a decade before the birth of streaming in 2007. The number of registrations increased from 7.5 million in 2007 to 137 million at the end of the 3rd quarter of 2018. During this time, we witnessed Blockbuster's bankruptcy in 2010. Netflix has been able to take advantage of technological progress since the beginning of the curve. The number of its members continues to grow thanks to the growing internet connectivity around the world.

As an investor, ignoring this kind of disruption can be costly, as a multitude of companies and business models in traditional sectors are either slowly disappearing or on the verge of extinction. This trend has been reinforced by the development and increased use of artificial intelligence.

Kai-Fu Lee, an expert in this field, has worked as president of Google China, as well as previously at Microsoft and Apple. In a book he recently wrote, he explains how artificial intelligence is going to revolutionize our lives, especially the job market. He insists on one point: a new technological discovery is not necessary for one to witness profound transformations! The essential element leading to this revolution already exists. This is the abundance of data, coupled with the processing capacity of computers.

Basically, a computer can not reproduce the complexity of the human brain. It does not make decisions intuitively and does not demonstrate creativity. What gives it a huge advantage over humans is the large amount of data it can process. American companies such as Google (Alphabet), Facebook and Apple are investing considerable amounts in research and development which is contributing to the rise of artificial intelligence. Add to this Chinese companies such as Alibaba and Tencent, which have a population base of some 1.3 billion people to engage with, the majority of whom are constantly using their cell phones. Every action and transaction contributes to fuelling the data pool, making artificial intelligence algorithms more efficient.

For the value investor, these factors are important to consider. One need only look at the profound changes in the retail industry that have been evident for some time now. Other sectors are more subtly exposed to this kind of risk. The case of the autonomous car in relation to the use of roadside hotels is a good example. A car that drives itself will allow its passenger(s) to sleep inside the vehicle if they wish, making it less essential to have a rest area to spend the night.

Our Companies

Our securities were affected by the recent correction in the second half of the year. Since September 30, our top 3 positions, Google (Alphabet), Facebook and Apple, have dropped by 25%, 15% and 33% respectively. Note that in the case of Apple, we had a more modest position initially, having reduced our participation in August and early September. In November, we took advantage of the weakness of the stock to buy it back. As a result, Facebook has most affected our performance over the last three months.

Let's take a look at the financial results for our largest holdings compared to their stock market performance for 2018:

	Apple	Google	Facebook
Per share earnings growth	29%	24%	28%
2018 Share price performance	- 7%	- 1%	- 25%
Change in Price/Earnings ratio	**- 28%**	**- 20%**	**- 42%**

The table above shows the growth rate of earnings per share for the twelve months ended September 30, 2018. There is no question that our companies have been experiencing solid growth. However, stock prices have taken the opposite path, which has contributed, we believe, to making the value proposition even more compelling. Apple, Google and Facebook were thus 28%, 20% and 42% cheaper at the end of 2018 than at the beginning of the year.

Alphabet

The company continues to benefit from the growth of the advertising market, where we are still witnessing a migration to digital. The global ad market as a whole is expected to grow by 5% a year to 2022, according to market research company eMarketer. As for the digital ad market, the firm anticipates it will be larger than traditional advertising by 2021.

Although Alphabet derives its revenue mainly from online advertising, its other divisions are expected to contribute more and more in the future. In the last quarter, its "other income" division, which includes the results of its cloud sales, grew by 29%. Amazon and Microsoft far surpass the company in this category, but it benefits from a market that will grow strongly for a long time.

We must highlight the important advances of Waymo, Alphabet's autonomous cars subsidiary. A commercial taxi project was introduced last December in Phoenix, placing the firm in direct competition with Uber and Lyft. Waymo has accumulated more than 16 million kilometers of driving with its autonomous cars, which has allowed a huge accumulation of data. This is a great example of the advancement of artificial intelligence, which depends primarily on data for development.

Facebook

The stock has undergone a severe correction since its peak in July 2018, down nearly 40%. A series of bad news contributed to this fall.

First, shortly after the announcement of Q2 results, we obtained a new estimate of future margins. Significant expenditures have been made to improve security and safety measures. During their conference call, management reported a transition to mid-30s margins (approximately 35%), compared to 46% at the time of the announcement.

Another source of concern comes from the change of strategy at Facebook. Management wants to focus on "stories" rather than the newsfeed, causing a risk of profit adjustment during the transition. Add to this the departure of several senior leaders, some saying that the prospects of the company have darkened. Finally, there was the introduction of the General Data Protection Regulation (GDPR) in Europe in May, increasing fears that Facebook might have difficulty in monetizing its platforms further.

Another factor strongly contributes to the cultivation of a negative image of the company: the media. Indeed, we have rarely seen a company be so targeted by journalists in such a short timeframe. In the New York Times, a lot of energy is devoted to all kinds of investigations, in what appears to be an attempt to weaken the popularity of this social networking giant. We understand most of their motivations.

A Canadian journalist told us some time ago that Facebook had a complete hold over his newspaper. Increasingly, readers were accessing their articles via social networks, rather than going to the newspaper's website. So Facebook benefits from quality content, while pocketing the resulting advertising revenue. This comment made us further realize the incredible positioning of the company. Therefore, we should not be surprised at the reaction of some traditional media outlets to events at Facebook.

Of the factors mentioned above, only one really caught our attention. The reduction in future margins is a significant change in the short term, but modest in the long term in our view. Once the new measures and procedures have been put in place and are perfected, margins are expected to improve and the company will return to growth. The founder, Mark Zuckerberg, has recently stated that more than 30,000 people have been assigned to this end.

As we mentioned earlier, artificial intelligence will play a growing role in our lives, and Zuckerberg expects to use it more and more. Mike Schroepfer, the head of technology at Facebook, said the only way to effectively review 2.3 billion users is by using this valuable tool. To entrust all this work solely to humans would be an exorbitant cost.

With respect to Facebook's revenue growth, our expectation is an increase in revenue generated per user, not necessarily an increase in the total number of users. Currently, average revenue per user is US $ 24 globally, a 20% increase over last year. For comparison purposes, this figure is at more than $ 100 for North America.

Apple

The results were excellent in the last quarter. The revenue from the services segment now stands at $ 10 billion, an increase of 27% over the same quarter last year. This segment now accounts for 16% of total revenue, and this percentage is expected to grow over time, decreasing the company's reliance on device sales.

It has been pretty rough for the stock in the last two months, due to two events. First, the management announced in November that it intended to stop disclosing the number of units sold (iPhone, iPad, Mac), which has displeased many analysts and investors. We believe, however, that the company did not benefit from disclosing this data. Indeed, most of its competitors do not provide similar data, allowing them to follow the evolution of Apple unit sales without having to do the same in return.

The stock fell further at the beginning of the year, as management revised the revenue outlook downward for the upcoming quarter. The previous target of $ 89 billion to $ 93 billion was revised to $ 84 billion. The blame has been laid mainly on China, where tariffs and a certain slowdown in the economy are putting pressure on sales. Another factor may have been added with the arrest of Huawei's chief financial officer in Canada, temporarily creating an anti-American sentiment among the Chinese people.

We saw a similar phenomenon in 2012, when a territory dispute between Japan and China led to a sudden drop in sales of Toyota and Honda by 49% and 41% respectively for the month of September. The incident ended up being forgotten, and Chinese consumers started buying Japanese vehicles again.

From a high of $ 232 in October of last year, Apple's stock has plummeted to $ 147 at the time of writing! We know their current strategy for capital allocation, which aims to allocate all their liquid assets to repurchasing their shares. The management has been offered a great opportunity to acquire them at a very attractive price.

Taking into account cash on the balance sheet, we estimate that the security is trading at between 10 and 11 times its profits. We are still confident about the company's long-term prospects, and for the third time since we started the fund, the stock market has offered us an excellent price to become shareholders.

Amazon

In February 2018, we sold our position completely, between $ 1,400 and $ 1,500, as we were close to our estimate of intrinsic value. The stock continued to climb, surpassing $ 2,000, and finally falling back to less than $ 1,350 in December. Nearly a year since our final sale, we have rebuilt a position in the stock. Based on recent results, we believe its intrinsic value has increased by 40% in the last 18 months. As a result, we have once again become shareholders of Amazon at a discount similar to the one we had before, during our first purchases in 2017 (at $ 1,000 and under).

The recent weakness in the stock may be attributable to management's forecast for the fourth quarter, with sales growth expected to be between 10% and 20%. Despite a possible slowdown in online sales, we are very confident about the cloud division. Sales and profits from operations grew by 46% and 80% respectively in the last quarter! The founder, Jeff Bezos, continues to innovate, and without a doubt, his company will benefit from the development of artificial intelligence.

One of his great strengths lies in his very long-term vision. In 1996, the chief executive of Barnes & Noble's, an American chain of bookstores, approached Bezos. Mr. Riggio warned him: Barnes & Noble was getting ready to start its own online sales site, and was about to *annihilate* Amazon. Therefore, it was in Bezos' interest to collaborate with the book giant. That year, Amazon's sales were just $ 16 million, compared to $ 2 billion for B & N, a multiple of 125 times. Bezos declined the offer, and Amazon's total sales now outperform B&N by a factor of 62.

Nowadays, Bezos agrees somewhat with Mr. Riggio. His habit of looking back in time led him to consider the death of Amazon, which would be a certainty, according to him. "Even the best companies end up disappearing". However, he wants this event to happen only after his death! In other words, he wants to fight as though it is always "Day One" and push back the day when Amazon will be beaten as long as possible. This is an attitude that reassures us as investors. Its founding leader remains constantly on guard and seeks to excel on a constant basis.

Administration

The Barrage Fund's Canadian dollar units closed the year with a net asset value of $ 172.66. After the distribution of $ 4.34, the unit value is $ 168.32.

In US dollars, the Fund finished the year with a net asset value of $ 126.42 per unit. After a distribution of $ 3.18, the unit value is $ 123.24.

For 2019, the performance threshold of the Barrage Fund in Canadian dollars is $ 194.28 per unit, or 15.4% above the value at the beginning of the year.

Unitholders who have elected to reinvest their distributions will find their new number of units on their first statement of the year.

Sincerely,

Patrick Thénière

Rémy Morel and

Mathieu Beaudry

Maxime Lauzière