QV UPDATE
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From Pigs to Artificial Intelligence

Trading has been around for thousands of years and has seen its share of advancement along the way. Gone are the days when farmers cautiously trekked all day, hoping to evade wolves and bandits, to get to a nearby hamlet to fight over how much cotton they could trade their pig for. The first stock markets appeared in European port cities in the 1500's. One of the earliest North American exchanges was created in 1792 when a group of merchants accepted commissions for trading government securities on behalf of other people. The primary location of their meetings was under a tree at 68 Wall Street, New York.

For many years trading took place in physical locations called trading floors. Operations were optimized, specific roles were created, and traders from all major financial institutions were ever-present. Before long, serious business took place on trading floors at lightening speed. Transactions worth millions of dollars took place with simple hand gestures among traders.

Electronic trading became mainstream in the 1980's and 1990's. Traders turned in their brightly coloured jackets and physical orders for business casual garb, a telephone and a personal computer. There are still a few trading pits in existence today, but the vast majority of security trading is now done electronically.

Adoption of electronic trading has decreased bid-ask spreads (the price difference between where buyers and sellers are willing to transact), increased liquidity and decreased broker commissions and exchange fees. Not all outcomes from electronic trading have been positive, however. The door was opened for amateur investors to access the market directly, which can be risky and addictive, especially if investment knowledge is lacking. It also heightened the probability of fat finger mistakes (errors caused by accidentally asking the computer to do the wrong thing). Arguments for and against high frequency trading can be made.

During the early years of electronic trading, computers merely provided efficient access to traders on the floor. With the advent of the internet came direct stock market access for a massive untapped segment of the population. Billions of dollars were invested in technology, as opportunities for first movers were unparalleled. An arms race manifested among financial institutions and hedge funds to see who could develop the most profitable trading programs and algorithms.

Traditional block trading, whereby traders negotiate the execution of large blocks of stock, is alive and well in Canada and is one of our preferred ways to transact in the market. Unfortunately, there is not always an institution willing to buy the quantity of stock we wish to sell or vice versa. Fortunately, we have access to a robust array of products to aid us in trading the remainder of the shares.

We routinely utilize anonymous block trading programs to transact large amounts of stock in a single transaction. These programs have global reach and provide access to institutions that do not necessarily have relationships with the same brokers that we do. Trades executed this way provide liquidity that is sometimes not accessible by other means. The anonymity of these programs also protects us from information leakage that could work against us in the market.

Our brokers, who trade stock on our behalf, use some of the most modern algorithms on the planet. A trading algorithm (algo) is a mathematical process written in computer code to execute trades on a stock exchange or exchanges in a specific manner. One of our brokers, RBC, has recently developed an artificial intelligence (AI) algo that utilizes technology called deep reinforcement learning, which mimics the structure of the human brain. It remembers the outcomes from previous actions and adjusts accordingly for future decisions. So far, this new AI technology has proven to execute more consistently and at better prices than its predecessor.

We often only hear about the negative aspects of technological trading advancements in the news. Despite the occasional mishap, these developments save our clients money via reduced transaction costs, whether it be implicitly through additional liquidity or explicitly via better execution pricing and reduced broker commissions. It is truly an exciting time to have access to such cutting-edge technology!