JOPPA MILL ADVISORS LTD.

The Illusion of Uncertainty
November, 2022

Part of the human condition is to seek knowledge of what is to come. Soothsayers and fortune tellers have been documented fulfilling this desire with a crystal ball since the 1st century AD and remain much in demand! Just google "fortune teller" and see how many paid advertisements pop-up! Practitioners of this "art" utilize numerous methodologies from Tarot cards to numerology, palmistry, astrology and Ouija boards! How many of us consulted the "Magic 8 Ball" as a child with its limited repertoire of 20 responses… "*It is decidedly so*…."

Nowhere is this quest for knowledge of the future more pronounced than in the financial markets (henceforth, the "Markets"). The Markets are always looking to what lies ahead. Often this is referred to as the Market's "discounting mechanism". You would be amazed at the methodologies followed by market participants to "inform" their views on the Markets. A former bond trading colleague relied on astrology – and you went long the market at your own peril when Mercury was in retrograde!!!!! I have a book entitled, "The Traders Guide" originally published in 1919, that predicates movements in the price of wheat based on lunar cycles.

Of course, as the "scientific method" [i] became more prevalent, some methods shifted from observation of cycles that occur in the natural world to more quantitative and quantifiable methodologies. Over time, these approaches evolved into quantitatively-oriented strategies based on observation and mathematical measurement. Reading through the bible of value investing, "The Intelligent Investor" by Benjamin Graham, published in 1949, the market participant who subscribes to the discipline of the "intelligent investor" is the one who estimates the value of a stock based on some key parameters such as price-to-book value; price-to-earnings ratio; return on equity, return on assets, and earnings growth rate, to name a few.[ii] More recently, quantitatively-oriented firms have embraced "factor" investing, basing investment decisions on a stock's behavior relative to "factors" such as Momentum, Value, or Defensive. Reliance on factor exposures is considered to support a consistent, rules-based implementation of an investment philosophy. But beware when the Market's sentiment shifts away from your favored factor!

As Markets became more sophisticated, a centralized marketplace for publicly traded options on stocks came into existence in 1968 (Chicago Board Options Exchange or CBOE). Options introduce even more complexity into the unknown as they offer the buyer the right to purchase 100 shares of a particular stock at a set price for a specified period of time. So how on earth do you value something like this? In 1973, several academic finance professors developed the Black Scholes Option Pricing Model that relies on inputs for 5 variables into the equation to establish the "fair value" of the option. Myron Black was awarded the Nobel prize in economics for this work in 1997. Imagine, input 5 variables and out spits the value of the option contract. Solid. Hard number. Mathematically derived. How could it possibly be wrong?

Another Nobel prize in economics was awarded in 2002 to Daniel Kahneman for his work understanding and integrating psychological insights (or biases) into economics. Our beliefs and values, conscious or unconscious, influence our choices. Consequently, one trader will have a different assumption or expectation than another about one or more of the variables, resulting in a different "fair value" than the other trader. Additionally, one must recognize the assumptions upon which Black Scholes is based – specifically the traditional assumptions of Modern Portfolio Theory (MPT): investors always act rationally, volatility (one of the inputs) remains constant, there are no transactions costs and information is freely available to all participants. MPT was developed by Harry Markowitz in 1952 for which Markowitz was awarded a Nobel in Economics in 1990.

So, let's recap…. We have always sought to know the future, particularly that of the Markets. The closer we can tie price action in the Markets to an observable event and then apply mathematical principles to determine correlation of price action to the event, the more confident we become that our expectations are accurate. Two of the above Nobel prizes support this line of objective, quantitative, unemotional thinking. This should be EASY, unless one confuses correlation with causality, which many investors do!

But let's remember, in order to make the mathematics doable, we had to make some simplifying assumptions about the Markets' mechanical operations, including the rather large leap that we all act rationally. Ooops!

We have applied scientific methods to help us refine our forecasts so we can take greater comfort in their accuracy, while applying similar scientific methods to demonstrate how our choices are NOT always rational, thereby violating one of the key assumptions of the scientific approach! Despite these apparent conflicts or hypocrisy, we nevertheless rely on mathematical formulations to inform our decisions and, rather than being objective, tend to believe the information that reinforces our beliefs ("Confirmation Bias" to use Kahneman's terminology.)[iii] Another observable behavioral trait worthy of a Nobel prize.

In the context of the larger picture, suffice it to say, the value of forecasts or prognostications often is said to be "worth less than the paper they are printed on." Not that they are intentionally so, for forecasting is the lifeblood of Wall Street and Management Consultants. It's just not realistic to place a great deal of credence in such prophesies given all the variables and underlying assumptions. Occasionally, a given practitioner's forecast may be accurate. And as my father used to say, "Even a blind squirrel occasionally finds a nut."

The Market hangs on every economic release or Federal Reserve commentary, reacting to what the participants perceive as the influence said observation will have on future monetary or fiscal policy and the economy as a whole. Did the Fed "pivot"? Are they pausing rate hikes? When will inflation start to slow? Large Tech is dead! Recently, consecutive releases have caused the Markets to gyrate wildly, as much as 1000 point intra-day swings; often reversing its trend within the day or the next day as a result of a fresh data point. As I have written before (with a nod to Howard Marks, Chairman of Oaktree Capital), we cannot predict, but we can prepare.

"There are two kinds of forecasters: those who don't know,
and those who don't know they don't know." – John Kenneth Galbraith[iv]

Ever the Boy Scout,

Jim

James W. Graves
Managing Director

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[i] Scientific Method - principles and procedures for the systematic pursuit of knowledge involving the recognition and formulation of a problem, the collection of data through observation and experiment, and the formulation and testing of hypotheses. Merriam Webster. https://www.merriam-webster.com/dictionary/scientific%20method

[ii] The Intelligent Investor; Graham, Benjamin, Harper & Brothers., 1949

[iii] Thinking Fast and Slow", Kahneman, Daniel, Farrar Straus & Giroux, 2011

[iv] The Illusion of Knowledge; Marks, Howard, https://www.oaktreecapital.com/insights/memo/the-illusion-of-knowledge