FOUNTAINHEAD INSIGHTS

MONEY! Wealth's Greatest Creation

October 2020 – Q3 Explorations

"This paper money is circulated in every part of the Great Khan's dominion; nor dares any person, at the peril of his life, refuse to accept it in payment. All of his subjects receive it without hesitation, because, wherever their business may call them, they can dispose of it again in the purchase of merchandise they may require; such as pearls, jewels, gold, or silver. With it, in short, every article may be procured… Upon these grounds, it may certainly be affirmed that the Great Khan has a more extensive command of treasure than any other sovereign in the universe." - Marco Polo, Circa 1300 AD in re Mongols

Money is a human convention. Populations need to be convinced one way or another that currency has value. Back in the day evidently risk of death was the lead. Today we go with belief in government.

The use of money has generally fallen under three monetary systems (or types):

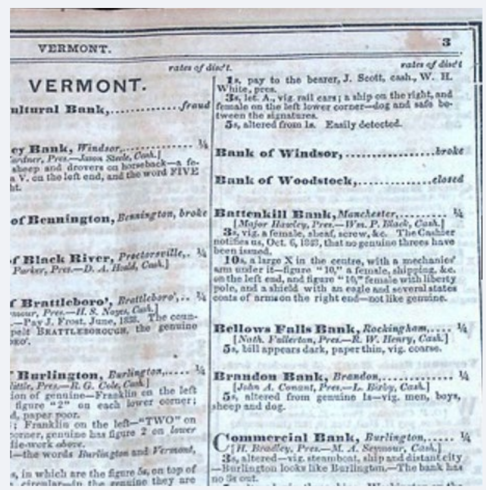
1) Gold/silver/copper and similar
2) Paper money backed by gold/silver and similar
3) Paper money backed by nothing (fiat currency)

In 1971, President Nixon removed us from the gold standard. Gold-backed currency is not coming back (sorry gold bugs) and if it does it means something really bad happened to the current status of the financial world. There are two primary flaws with gold as a currency or backing for a currency (Type 1 and 2):

- There is a finite level of gold
- Gold has no connection to productivity/growth/value - anything really - it is as artificial a construct as the dollar

Let's explain via an example:

A very, very long time ago, energy was extremely expensive. Life basically stopped when it became dark - every single evening. Over time, through innovation, the cost of energy plummeted. We created this massive amount of value through the harnessing of what had been primarily below earth (fossil fuel) and are now adding more energy by harnessing what is increasingly above earth (solar, wind, etc). This massive value creation had a multiplier effect in terms of human productivity.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VERMONT.

rates of dis'c't.

...ultural Bank,............fraud

...y Bank, Windsor,............ ¼

...of Bennington, Bennington, broke

...f Black River, Proctorsville,.. ¼

...f Brattleboro', Brattleboro',.. ¼

...Burlington, Burlington,..... ¼

rates of dis'c't

1s, pay to the bearer, J. Scott, cash., W. H. White, pres.

3s, let. A., vig. rail cars; a ship on the right, and female on the left lower corner—dog and safe between the signatures.

5s, altered from 1s. Easily detected.

Bank of Windsor,................broke

Bank of Woodstock,.............closed

Battenkill Bank, Manchester,......... ¼

[Major Hawley, Pres.—Wm. P. Black, Cash.]

3s, vig. a female, sheaf, screw, &c. The Cashier notifies us, Oct. 6, 1853, that no genuine threes have been issued.

10s, a large X in the centre, with a mechanics' arm under it—figure "10," a female, shipping, &c. on the left end, and figure "10," female with liberty pole, and a shield with an eagle and several states coats of arms on the right end—not like genuine.

Bellows Falls Bank, Rockingham,.... ¼

[Nath. Fullerton, Pres.—R. W. Henry, Cash.]

5s, bill appears dark, paper thin, vig. coarse.

Brandon Bank, Brandon,............. ¼

[John A. Conant, Pres.—L. Birby, Cash.]

5s, altered from genuine 1s—vig. men, boys, sheep and dog.

Commercial Bank, Burlington,..... ¼

[H. Bradley, Pres.—M. A. Seymour, Cash.]

3s, altered—vig. steamboat, ship and distant city—Burlington looks like Burlington.—The bank has no 3s out.

In the mid 1800s there were over 8,000 issued currencies in the US. Basically every bank issued their own currency. As a result, store owners needed to hold onto the *Thompson Bank Note Reporter* in order to research bills they were not familiar with to understand exchange rates as well as counterfeit bills and other important related data.

Note that Bank of Windsor is broke, Bank of Woodstock is closed and Battenkill Bank necessitates a .25 discount to the dollar. Note also the description of each bill so that store owners can look out for a counterfeit. The *Reporter* also published a counterfeit detector and a coin supplement describing foreign coins circulating in the US (Money: The True Story of a Made-Up Thing by Jacob Goldstein, pages 125 - 126; picture courtesy of an auction site.)

What does gold have to do with energy? Absolutely nothing. Gold cannot be increased to take account of increased value in the world due to productivity and so on. In fact, if we found a dramatic amount of gold, let's say in space, then the value of gold relative to other items of value would plummet. Because it is a physical item, there is no flexibility to match it to the realities of the world.

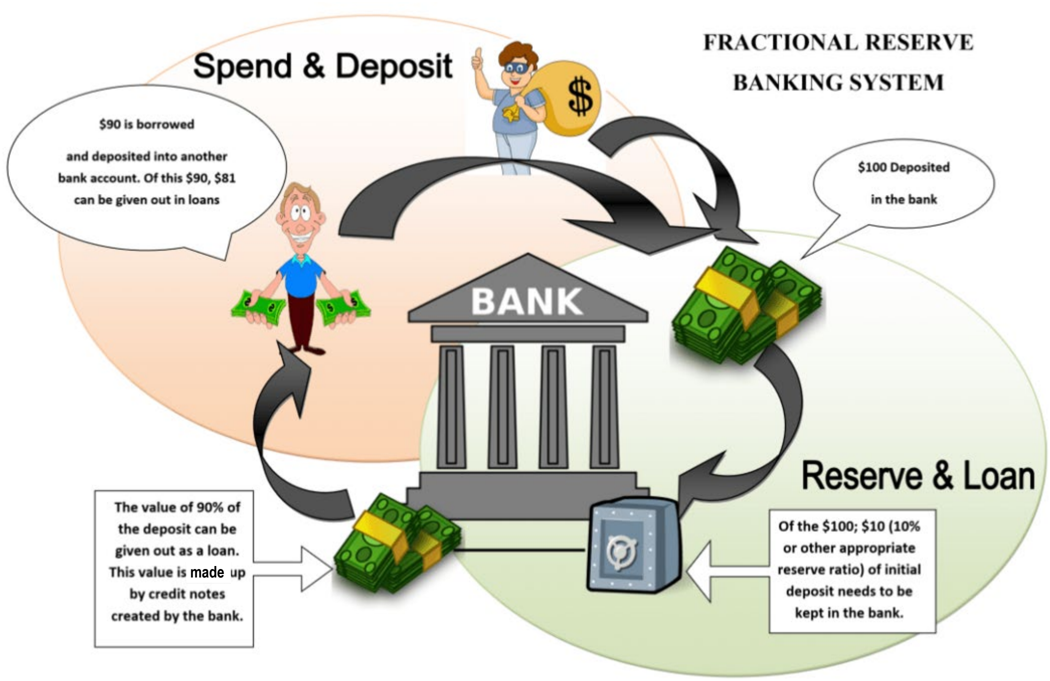
Gold can be thought of as a storer of value rather than as a currency. There are simply not many places you can go and use gold to pay for something. One would need to first exchange gold into the general currency in use and then purchase the necessary product.

Bitcoin is another item at this point that is a storer of value rather than a currency. It feels a touch like a new-age gold with properties that allow for easy transport across country lines, the ability for anonymity and so on[1]. In fact, Bitcoin is a lot like gold in that it is "mined" through a random number algorithm and is finite by definition according to the created rule book[2].

So while gold and Bitcoin happen to be very popular currently as an alternative store of wealth (as compared to a bank) and sometimes may be used for transactions, most likely given the standardization features, they are not so different from diamonds, art, silk (back in the heyday of the silk road), tulips and the like.

Fractional Reserve Banking

There is disagreement over the invention of the fractional bank system, though what most likely happened was innovation over time in the flexibility of using currency. First, wealthier people did leave their money at trusted locations in exchange for an IOU. Then there was realization that one did not have to use the same exact coins originally deposited. Followed by ledger sophistication. And, finally, the realization that not everyone comes for their money at the same time so why not lend some out and make some interest (with some of this information known to the depositor and some other not).



Nevertheless, the fractional bank system was born. In the US, every bank can lend out a vast majority of deposits. The illustration above shows two cycles of the fractional bank system at work with the assumption of a 10% mandated reserve. That means that a deposit of $100 is recycled into $90 of loans. The borrower then deposits the $90 in his/her bank which then lends $81 of that deposit. And so on. Interest is collected on the loans which helps the depositor not only have

[1] Not to be confused with block chain, which is not a currency at all but a public ledger that may have some very interesting applications inclusive of voting

[2] Human creations generally need rules while scientific facts need explanation – e.g., bitcoin vs gravity

the luxury of having their money safeguarded but also the ability to get paid while their money is sitting in the bank "vault".

The US government prints currency through the Treasury Department. They also control the fractional bank system through mandated reserves as well as the federal funds rate. This allows the government to tighten or ease or, as necessary, add stress tests, shut down banks and the like.

This system unfortunately opens itself up to bank runs which have always happened and most likely always will. Over time, controls and regulation have helped strengthen protection for US retail depositors. However, bank runs still occur as evidenced in 2008 by the massive runs on Lehman Brothers and Bear Stearns, primarily via institutional concerns given neither was a retail bank. Financial innovation and the typical cycle of fear and greed simply make it hard to stay ahead of the next potential bust. Having had a large derivative position in both Bear Stearns and Lehman Brothers in my portfolio at ING and then subsequently working at Lehman Brothers Estate post-bankruptcy, I was very close to this most recent event but still do not have a real opinion of whether these entities could have or should have been saved - it is incredibly complicated.

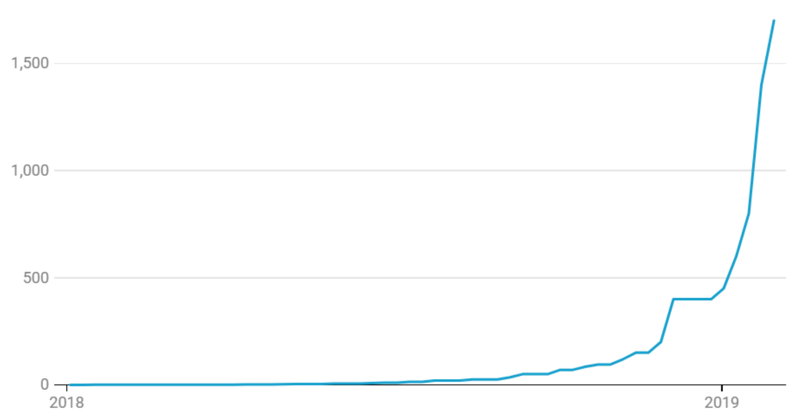
Ultimately, fractional banking allows for a further ability to support initiatives and future growth throughout the country via lending, with the US government controlling the levers to ease or tighten money flow. The Fed has communicated their goal of low inflation which conceptually is supposed to result in growth leading to employment, spending, and a virtuous positive economic cycle. This also leads to a constant eroding of the value of the dollar. Hopefully, the trade-off is worthwhile.

Hyperinflation in Venezuela

It is helpful to look at extreme situations in providing context to normal ones. Venezuela's economy is overly reliant on oil. More than 90% of export earnings in recent years have come from oil. When oil prices drop, like they did in 2008, 2014 and earlier this year, the international community has less demand for bolivars, Venezuela's currency. The drop in oil prices also resulted in less revenue in the coffers of Venezuela's treasury. Being a have-not country (note last Exploration on debt), but needing money to fund the government, it had few options but to print money[3].

How many bolivares for a cup of coffee

Bloomberg created the Venezuelan Café Con Leche Index, using the price of a single cup of coffee, because Venezuela's government refuses to publish inflation statistics.



Based on the price of a coffee from a bakery in Caracas. In the year to the end of January 2019 the price rose from 0.45 to 1,700.00 bolivars. The currency devaluation in August 2018 means 1,700.00 new bolivars equal 170,000,000 old bolivars.

Source: Bloomberg

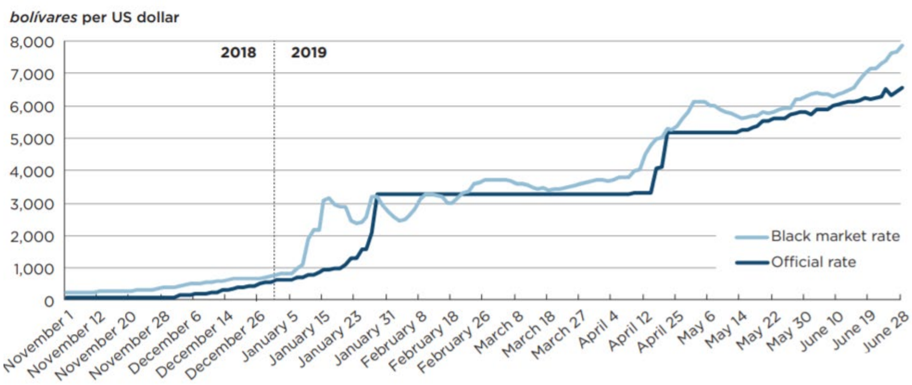
Lackluster demand for bolivars, a lack of trust in Venezuela's government, and the realities of additional money being printed began a cycle of lower value assessed to the bolivar. This resulted in the need to use more bolivars for any product purchase internationally. Which perhaps necessitated more money being printed and… note the circular logic here. This is how inflation cycles out of control. Unfortunately, Venezuela imports some basic goods. The cost in bolivars for these basic goods shot up.

[3] It does not have access to the global debt markets, no tax base, nothing to sell…

Citizens lost faith in the bolivar as the currency continued to depreciate, resulting in skyrocketing inflation. The graph below shows how quickly bolivars dropped in value and how frequently the government had to reset their artificially fixed rate to attempt to match reality. Those living near international borders sold whatever they could across borders resulting in more participants simply offloading the bolivar. Everyone tries to get rid of the bolivar as it has less value by the moment, which results of course in… less value for the bolivar - it is a terrible cycle.

In summary, less demand for bolivars, low trust of government, reliance on importing, and increased printing of currency resulted in a cycle where everyone looked to exit the currency, essentially making it worthless.

Official and black market exchange rates in Venezuela, November 2018–June 2019



Sources: Data from Banco Central de Venezuela (2019c) and DolarToday (2019).

US Dollar International & National Standing

Unlike the bolivar, the world needs US dollars. And the world wants to sell items to the US consumer base, the largest spenders in the world. The world needs US dollars as it is the default currency used in the global financial system. A material level of international corporate debt is denominated in the US dollar. A material level of trade is conducted in the US dollar – even trade between external countries (not inclusive of the US).

The world also competes to sell goods to the US. The best way to do this is to make sure those goods are relatively cheap, which can be done by making sure the local currency is relatively cheap as compared to the US dollar – note China yuan levels historically.

Unlike Venezuela, the world trusts the US government, and the US economy has a varied, diversified business sector selling lots of items to the world – military is just one example. So, the world needs US dollars to purchase items from us. The US has

There is $5,000 held outside of the banking system for each and every person in the US. $4,000 is in $100 bills[1]. I can tell you as a household of five we may have $500 on hand (as compared to an average of $25K based on the above statistic). Between credit cards, Venmo, Apple Pay and the like, one would think the amount of cash on hand would diminish materially. However, cash, like bitcoin, is anonymous.

In the late 1990s, the US Department of Defense developed an anonymized and encrypted network to protect sensitive communications of US spies[1]. The dark web was founded allowing for extreme privacy and protection, sometimes used for good but also for bad. Bitcoin, like gold and cash but unlike credit cards and other digital transactions, is anonymous. It is very hard to track down criminals using Bitcoin. In that world, it is fair to call Bitcoin a currency. In a country like the US, there is not much perceived need (in my opinion) for an alternative currency, especially one as volatile as Bitcoin. However, citizens of Venezuela need an alternative currency which is easily transferable to any location in the world. Bitcoin is a nice solution – better than cash in or out of a bank.

been relying on debt as of late but also has a tremendous tax base – the US has options.

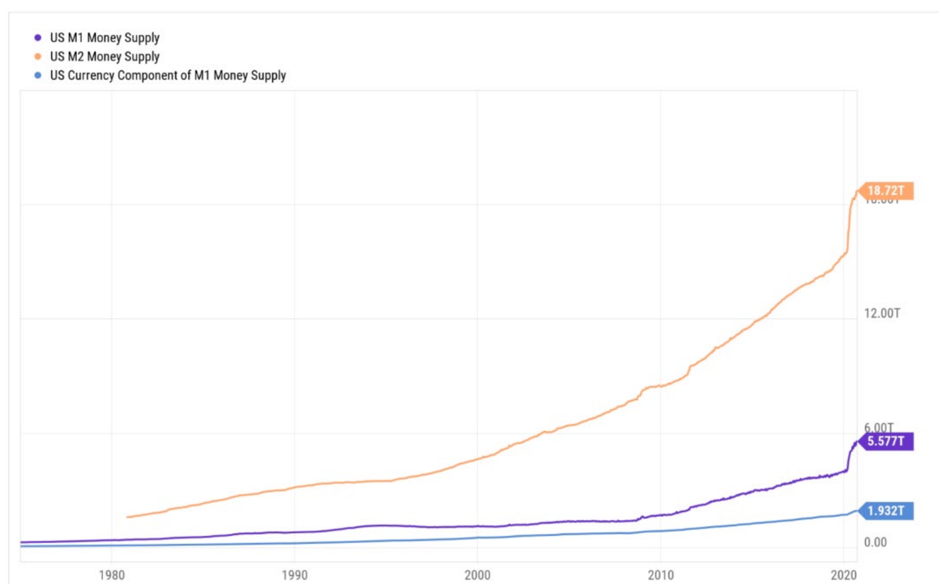
America is also primarily self-sufficient, being able to feed its own population with locally grown or raised product, being energy independent, and generally having all resources necessary – the global supply chain is a choice. And as we spoke about in an earlier exploration, we believe that global supply chain over time will become regional which is also favorable for the US and the US dollar relative to the world.

In short, we all believe in the made-up US dollar.

Conclusion

America has been fighting a number of deflationary characteristics since the financial crises that arose in 2008. COVID continues to be a major shock to the US economy. Yes, the government is looking to assist its citizens and businesses in providing a $2.2 trillion bail-out earlier this year. At the same time though, it is throwing all its resources at ensuring that we do not go into a deflationary spiral.

The chart above shows how deflation can spiral out of control. It is hard to exit this spiral. Our Fed has no interest in entering it. In fact, the Fed has a stated goal of inflation, albeit mild. That means it is purposely setting a goal of our money having less value year over year. This is supposed to push people to purchase items sooner rather than waiting for it to be more expensive, creating demand and jobs and so on – like the graph below.



This graph illustrates that the money supply has increased dramatically over the last few years. However, US debt has as well. The US government is providing IOUs for a lot of the money it is printing in the form of debt. It is flushing the system in cash to avert a deflationary spiral and attempting to get back on good footing with respect to growth. As we have been mentioning, it is one of the reasons the market was able to rebound quite well off the bottom as investments are an asset that is vacuuming up some of that extra cash.

Removed US Bias in Equity Investments; Continue to Analyze Effectiveness of the 60/40 Portfolio

Our general approach to investing on your behalf is to take a top-down approach in creating diversification of risks and returns in one's portfolio. Let's unpack that. A top-down approach means we start by viewing the high-level investing opportunities. Equities vs. Fixed Income exposure first. Then within equities, US, Developed Markets (e.g., Europe & Japan), and Emerging Markets (e.g., less-developed markets like China & India) and so forth. We continue on this path to actual strategy and manager selection. Diversification of risks and returns means we invest in multiple exposures on your behalf in order to increase the likelihood we'll have varied return streams as well as risk streams. Since we do not know with certainty (nor does anyone else to our knowledge) what investment will do best, we attempt to smooth out the experience. We do have biases though.

This past quarter we have removed the US bias we had held in our models over the last couple of years. While the US still has many material advantages compared to the rest of the world, as detailed in past Explorations, there are some US specific risks on the horizon. The US elections is one concern discussed in detail in our July Market Commentary. Another is our lackluster performance fighting COVID despite the US entering the pandemic recognized as the country most ready to combat an epidemic globally. Perhaps of most concern is the tremendous divide our society is currently experiencing, likely exacerbated by social media. These reasons led to our decision to remove our US bias until these perceived risks hopefully pass.

Like debt levels, interest rates mean nothing without context. Is an 8% yield high or low? Well, relative to what? Yields in the marketplace are based off the risk-free rate. As a result, the risky assets that are based off of those risk-free rates now have historically low lower bounds. An example of this is Amazon's ability to raise $1 Billion at a 0.4% interest rate[4].

For those corporations with access to debt markets over the last decade it made perfect sense to raise capital through the debt markets and then initiate stock buybacks as debt represented a more efficient form of capital.

While still elevated, yields of riskier fixed income investments are beginning to normalize, resulting in less short-term opportunity. If these yields continue to come in, at some point interest rates even on riskier investments may be historically low.

Fixed income has been a meaningful part of investor portfolios for the last few decades. Beyond potential returns, it was viewed as ballast for a portfolio, protecting at times like these. However, with risk-free rates at historical lows, holding longer term fixed income becomes riskier. Furthermore, yield levels are at historical lows. Less ballast and less potential for decent returns create a need to find other potential exposures. We have defined the issue but do not have the answer – it is something we are actively working on.

Concerns: *Social Media Exacerbating Partisan Gap*

In our last Explorations we had shared some concerns about increased political polarization which we copy for convenience below. At this point, it seems fair to state that social media is exacerbating the unfortunate social divide we are experiencing. There is a new documentary out on Netflix called "The Social Dilemma" that brings up a lot of interesting (and to be honest concerning) points about how all of these gigantic internet companies are operating. Several tech experts, many of whom have worked for years in the industry, share their opinions/concerns about the business practices of these powerful and unregulated companies.

We all scroll through the legal fine print ("scroll" but not "read") and just click agree on pretty much anything that these companies demand in order to use their apps/technology. But what are we really agreeing too? What are we actually allowing these companies to do?

What you are signing away is the ability for all your activity on these apps/websites to be monitored, stored, and analyzed in an effort to target you with ads (e.g., they can tell how long you are looking at your ex's pictures on Facebook/Instagram). All these tech companies want to do is make their products as addictive as possible so you spend more time on them. The more time you spend

[4] https://markets.businessinsider.com/news/stocks/amazon-raised-10-billion-through-record-low-borrowing-costs-2020-6-1029272938

using their apps, the more data they can collect, and the better they get to know you. In this situation, the user (you), is actually the product. As mentioned in our most recent market commentary, an author received 14 million pages of self-documentation upon a request to Google[5].

We receive "free" banking but there are risks in our fractional banking system. We receive "free" social media – I am afraid that the cost in reality may be very great to us collectively as well as individually.

Social media is a chief concern of ours as it will continue to increase uncertainty and volatility in pretty much everything it touches.

From our last [*Explorations*]:

Democracies are afflicted by at least seven plagues[6]:

- Parties eroding
- Citizens not trusting one another
- Minorities being excluded
- Voters losing interest
- Politicians who turn out to be corrupt
- Rich getting out of paying taxes
- Growing realization that our modern democracy is steeped in inequality

Does any of this ring true for you? According to many measurement's wealth inequality has reached highs not seen since the 1920s while the Average Partisan Gap is showing increased political polarization. As noted in footnote eleven, there is evidence that inequality contributes to recessions and slows recovery from them. We have highlighted concerns about a portion of our citizenry not accepting the outcome of the presidential election if it was close. It now feels like regardless of how close the elections may be, it may not be accepted by a significant portion of our citizenry.

Geopolitical climate: COVID will likely continue the negative geopolitical climate as countries continue to close borders and hoard medical supplies in a bid to keep citizens safe and get economies back on track – to the detriment of global cooperation.

Artificial market support by governments: $2.2 trillion and counting of added spend in 2020. Is it possible that the government is purchasing negative yielding bonds from the government? Yes, it is. We are not sure of the implications or how this potentially even ends (negatively or not), or if it does, but we are actively analyzing this risk.

Shorter-term volatility and risks: We expect volatility and headline risks to remain heightened relative to the last couple of years – especially through the upcoming election.

To be clear, there are and always will be concerns in the market and in the world. We explore them to give us the best chance to navigate them effectively. It is worth noting, though, that the reason we diversify both risks and returns is that the future is simply unknown.

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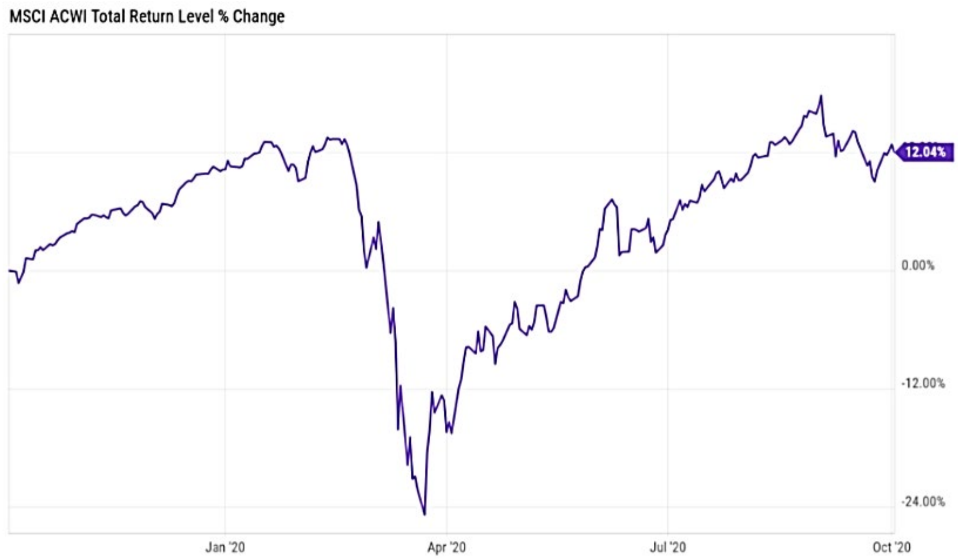
[5] https://theamericanscholar.org/our-post-privacy-world/#.X0_KjS2w0Wo

[6] *Humankind: A Hopeful History,* by Rutger Bregman, page 298. I highly recommend this book.

General Market Review: ***Economic Vs. Financial Market Disconnect***

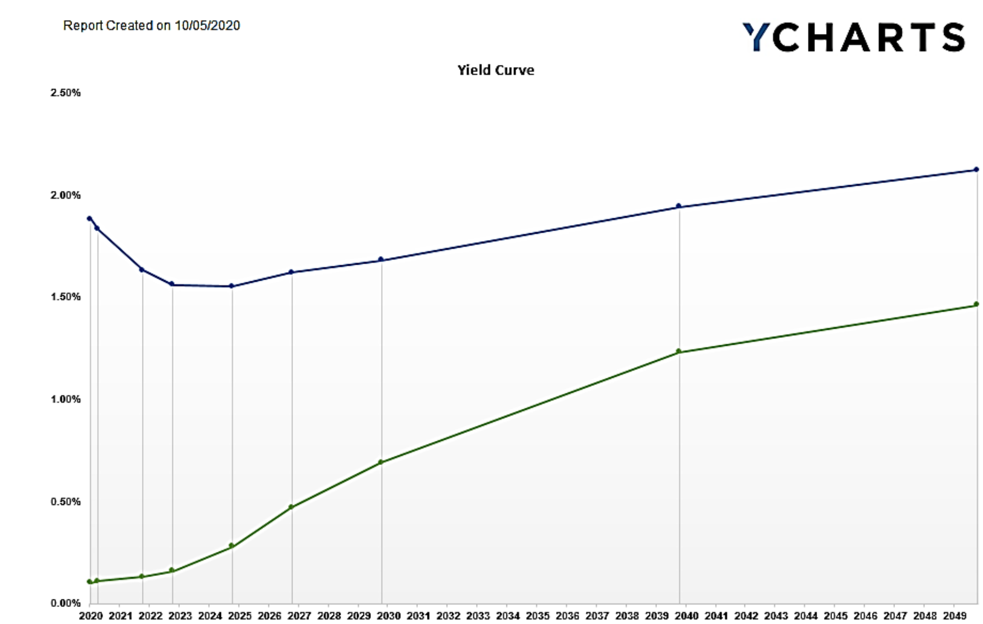
Equity markets continued to roar back this past quarter on the back of material government support resulting in a very accommodating investment environment. While we have had a V shaped financial market recovery to date, the US general economy is still struggling. As a result, the government is negotiating another large bail-out while the Fed maintains an accommodative stance inclusive of extremely low interest rates and the promise to purchase certain assets. With an increase in available money, investments came pouring back into the financial markets but in a narrower vein, focused primarily on technology and other firms that seem to fit the new realities and quicker realization of expected secular trends.



The massive debt load globally, as discussed in our last *Explorations*, and the fact that the world's population, especially in developed markets, is becoming older on average, results in large overhangs that seem likely to have negative effects at some point in time – when, who knows? Countering this narrative are the amazing innovations occurring continuously in society that result in further productivity and value creation.

Both the debt load and aging populations are significant contributors to the low yield environment we are currently experiencing. As mentioned above, with yields at historical lows and a stated lower bound of 0% interest rates by the Fed, the risk/reward may be shifting on fixed income after a 30+ year bull market.

Suffice it to say, financial markets are and will always be incredibly complex. We continue to monitor markets closely and look for opportunity on your behalf from both a risk mitigation and return perspective.



	12/30/2020	3/30/2021	9/30/2022	9/30/2023	9/30/2025	9/30/2027	9/30/2030	9/30/2040	9/30/2050
Today	0.10%	0.11%	0.13%	0.16%	0.28%	0.47%	0.69%	1.23%	1.46%
Last Year	1.88%	1.83%	1.63%	1.56%	1.55%	1.62%	1.68%	1.94%	2.12%

IMPORTANT DISCLOSURE

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