Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com

August 31, 2019

The Monthly Letter covers three topics this month. First, we update our analysis on the emerging fight for global growth. With populaces in the U.S. and Europe unhappy about the economic results of the past two decades, political turmoil continues to rise as citizens demand a better outcome. To achieve such an outcome will require changing the rules of the game, starting with global trade as they currently stand. Such actions to recapture economic growth by the Developed Economies will accelerate as political change forces changes in economic policies. Second, we review the economic policies adopted in the late 1930s and 1940s. They provide the most recent illustration of what the economy might resemble should the U.S. adopt some form of Modern Monetary Policy, in which the Central Bank underwrites the spending of the government and monetizes government debt. And Third, as always, we close with brief comments of interest to our readers.

The Fight for Global Growth: Technology Leadership, Currency Wars, And The Death of the WTO

> "*Over against the prospective yield of the investment we have the supply price of the capital-asset, meaning by this, not the market-price at which an asset of the type in question can actually be purchased in the market, but the price which would just induce a manufacturer newly to produce an additional unit of such assets, i.e. what is sometimes called its replacement cost. The relation between the prospective yield of a capital-asset and its supply price or replacement cost, i.e. the relation between the prospective yield of one more unit of that type of capital and the cost of producing that unit, furnishes us with the marginal efficiency of capital of that type.*"

Chapter 11: The Marginal Efficiency of Capital
The General Theory of Employment, Interest, and Money
By John Maynard Keynes, 1936

Over the past 40 years, the US followed a policy of helping the Emerging Market (EM) Economies to grow and become part of the global economy. This policy succeeded as the EM went from 20% of the Global Economy in 1980 to ~40% in 2000 rising to ~60% of Global GDP today. It raised the living

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com

standards of hundreds of millions of people. And the policies adopted worked well for all parties as EM countries and Developed Market (DM) countries grew and benefitted for the first half of this time period.

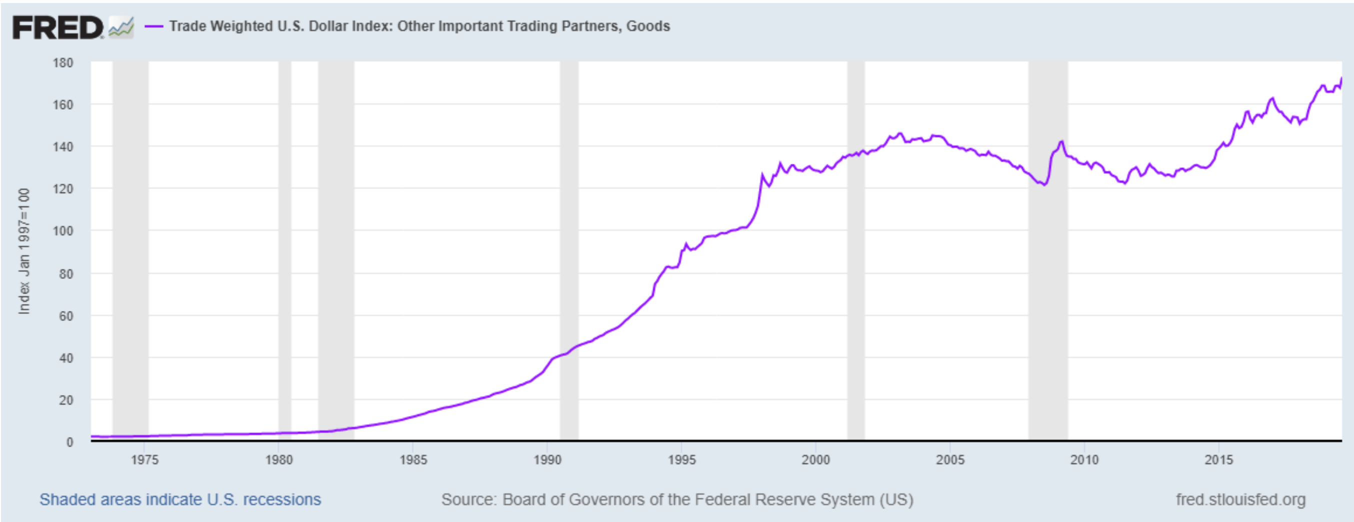
However, in 2000, this relationship changed. The WTO came into effect for global trade, replacing the GATT. For the uninitiated, the WTO stands for World Trade Organization, the current global trading agreement, while the GATT stood for the General Agreement on Tariffs and Trade, its predecessor. This move to the WTO did two important things. First, it gave market access to EM Economies to countries that had hitherto limited their access. These newly opened markets were the largest consumer markets in the world. At the same time, it gave EM Economies preferential treatment, such that they could exclude much of their economies and state owned companies from needing to abide by the same rules as the DM Economies in terms of trade and market access. Second, it changed the mechanism for addressing trade and market access disputes. Under the GATT, when one country developed a trade issue with another, it directly dealt with that country. Thus, disputes were settled government to government, with the aggrieved party utilizing traditional actions, such as tariffs and embargoes, to protect its economy from any predatory actions of another government. The WTO changed this relationship. Under the WTO, a new international body came into effect with the power to adjudicate any disputes. Thus, if the US possessed an issue with Indonesia, a panel of judges from other countries would decide the matter. And with the inclusion of numerous EM countries into the WTO, the probability a panel would consist of only EM judges rose significantly.

Any agreement depends on the players in the game fairly adhering to the rules and not trying to subvert them. Unfortunately, this change in rules led many EM countries to act to accelerate their growth by leveraging the new foreign markets open to them while protecting their home economies. These actions typically came at the expense of DM economies over the past 20 years. While China stands as the poster child for IP theft and protecting domestic markets, other countries, such as Malaysia, effectively followed similar actions, but with less publicity. Malaysia often requires foreign companies that wish to do business in the country to produce goods domestically. McDermott International found this out after it won a contract in Malaysia. It needed to create a Malaysian company and invest capital to create production capacity there. Other EM countries put safeguard tariffs in place to prevent goods from foreign countries to enter the country, when they believe such actions necessary to protect their home grown industries. Both Indonesia and India put tariffs in place to block Chinese steel and chemicals over the past few years. And, oftentimes, these EM countries put domestic content legislation in place requiring goods to be manufactured there. For example, Brazil possesses high domestic content requirements for mobile phones and autos sold in the country. Other countries, such as India, are notorious for this. Lastly, as documented in *Currency Wars Part VII: The Coming Un-Civil War,* February 28, 2019, EM countries weaponized their currencies, devaluing them 90% in the run-up to the WTO coming into effect in 2000. More recently, the EM countries devalued their currencies another

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com

25% compared to the US Dollar since June, 2014. The following chart demonstrates the massive rise in the US Dollar and, of course, the massive drop in the EM currencies:



The US Dollar currently finds itself valued at more than 4x its value in 1990. Such a move produced the expected result, transferring economic growth from the United States to the Emerging Markets.

To understand the cumulative impact of these policies, which were sold to the public as enhancing growth and living standards in the DM economies, one need only look at the actual data. For the United States, the data stands as follows:

Years	***Real GDP Growth Rate***	***GDP Growth Per Capita***
1980 – 1990	*3.27%*	*2.20%*
1990 – 2000	*3.44%*	*2.36%*
2000 – 2008	*1.83%*	*0.88%*
2008 – 2016	*1.90%*	*1.16%*
2009 Q2 – 2016	*2.21%*	*1.46%*
2016 – 2019 Q2	*2.64%*	*2.02%*

Data care of Federal Reserve of St. Louis. All data Q4 to Q4 unless otherwise noted.

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com

As the data demonstrate, the U.S. economy suffered from 2000 – 2016 under these policies. In simple terms, politicians and large public companies sold the populace a large can of worms. Instead of growing at 3% or better, including recessions, the U.S. economy grew at less than 2%. If it had just grown at 3% over the period, let along the 3.27% of the 1980s or the 3.44% of the 1990s, then the U.S. economy in 2016 would have stood at ~120% of its size then or 20% larger than it did. If it grew at 3.25%, as in the 1980s, the economy would have stood 124% of its size in 2016 or 24% larger than it did.

2016 Actual Real GDP ($ billions)	***If 3% Growth 2000-2016***	***If 3.25% Growth 2000-2016***
$17,824	***$21,284***	***$22,123***

Data from Federal Reserve coupled with Green Drake Advisors analysis.

This is not chump change, no matter how one slices and dices it. At just 3% growth, this represents a missing $54,000+ in GDP per Capita. And if labor received just one third, 33%, of this as compensation, this represented $18,000 in missing income for each member of a family. And with Real Median Family Income standing at $76,000, this represents over 20% in missing income. This policy stands as one of the key reasons Median Family Income went nowhere from 2000 to 2016.

Given this reality, political reaction to policies that led to these poor results became inevitable. Technology became the first area to receive scrutiny. The U.S. government, belatedly, put the screws to technology transfer. While the headlines read “China” in addressing this issue, the problem stands much broader, as numerous EM countries want technology built in their country. And they then want companies to give them the keys to the kingdom. Given this, China will become just a starting point in addressing this issue. The government, through CFIUS and other methods, will continue to expand the limits on moving technology out of the U.S. Already, the government moved to limit foreign investment into technology companies broadly. And, with a brewing Cold War with China, inevitably, the U.S. government will require certain goods be manufactured in the good, old US of A. For companies used to doing research here then taking the new technology and building a factory overseas using cheap labor, life will change dramatically over the next 5 years as the U.S. focuses on maintaining its Technology Leadership and positioning itself to win a long term Cold War.

And to win a long term Cold War, domestic manufacturing must become globally competitive. Below is a chart that demonstrates the current overvaluation of the U.S. Dollar (US$) compared to many other major currencies:

GREEN DRAKE ADVISORS

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com

Currency	*Exchange Rate*	*OECD PPP*	*Appreciation to PPP*
UK £	*$1.25*	*$1.42*	*13.6%*
EU €	*$1.11*	*$1.37*	*23.4%*
Japan ¥	*107.9*	*98.2*	*9.9%*
Brazil Real	*4.17/$*	*2.06/$*	*102.4%*
China Yuan	*7.10/$*	*3.55/$*	*100.0%*
India Rupee	*71.73/$*	*17.8/$*	*303.0%*

Data as of August 31, 2019.

As the table makes clear, the US$ stands slightly overvalued compared to the major DM currencies, but not massively so. In fact, the DM currencies stand within the long term range traversed over the past 40+ years, where they fluctuated between slightly undervalued to slightly overvalued. However, in contrast, EM currencies stand vastly undervalued, whether compared to the US$, the Japanese ¥, or the European €. Given the current exchange rates of EM currencies, coordinated Developed Market government action to correct this mis-valuation creeps closer and closer, as DM economies today stand under tremendous stress, producing significant political pressure to change policies, to say the least. Already, the U.S. moved to declare China a currency manipulator. This put in place the legal framework to address the expected devaluation by China, over the next year, to undermine the impact of the tariffs put in place by the United States and to help China's economy at the expense of the U.S., Japan, and Europe. Should China go down this route, the U.S. likely will forcefully intervene in the currency markets, issuing massive amounts of U.S. Dollars and buying significant amounts of Chinese Renminbi. This action likely will be joined by the EU and Japan, lest their currencies significantly appreciate against the U.S. Dollar. One might note the Emerging Markets find themselves excluded from the impact of a potential Chinese devaluation. The reason stems from their active competitive devaluations to prevent China from lowering its currency relative to their currencies. With the U.S. loading its currency guns and Europe and Japan forced to follow, lest they lose global competitive position, Currency Wars appear imminent that will begin to undermine the economic strategy of the EM and change the balance of global growth.

And while moving to restore currencies to fair value will begin to redress the economic balance of power, this action will not address the inequities generated by trade rules under the WTO. To address these inequities will require a wholesale rearrangement of the global trading system. Already, the U.S. moved away from utilizing the dispute mechanisms of the WTO over the past two years. The country now addresses trade disagreements directly, country to country. Recent actions by the U.S. with Canada, China, Japan, Vietnam, The United Kingdom, … look surprisingly like a bygone era from the

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com

1940s to 1990s, prior to the WTO, when the GATT ruled the global trading system. During this era, countries addressed issues directly with other countries. And, while large global companies might object, as these government actions often undermine individual company global strategies and the WTO judgments prove a more friendly forum most of the time, they benefit the U.S. and begin to address the skewed rules that currently exist, putting U.S. located companies at a disadvantage. As the U.S. becomes joined by other countries in negotiating their own deals with individual countries, the WTO will become less and less relevant to the actual functioning of the global trading system. And, as these actions accumulate, they will produce a tortuously slow Death of the WTO.

As the analysis above makes clear, disruptive change hurtles towards the global economic system. Whether corporate investment, currency valuations, or international trade, all stand at the precipice before the great plunge. And once the global system steps over the edge, chaos will reign until a new equilibrium comes into being. With The Fight For Global Growth breaking out into the open and with the United States acting to maintain its Technology Leadership and recapture economic growth lost to the Emerging Economies, Currency Wars and The Death of the WTO stand athwart the global economic ship, closing fast and prepared to engage. (Data from The Federal Reserve coupled with Green Drake Advisors analysis.)

Leaving the 1930s, Entering the 1940s: MMT, MP3, and Old Fashioned Money Printing

> "*When Roosevelt took office, our public debt stood at $22 billion. This represented the unpaid costs of the First World War and the deficits accumulated despite the Hoover Administration's budget-balancing efforts. Between Inauguration Day 1933 and the eve of Pearl Harbor our national debt rose to about $48 billion. Thus, the total increase during this period of eight years and eight months averaged around $3 billion per year.*
> *As against this, in one year of actual war we increased the public debt by $50 billion, a sum exceeding the deficit compiled by the nation in the preceding twenty-five years. By V-J day our war expenditures of approximately $380 billion left us with a public debt of $280 billion, or nearly six times what it was on the eve of Pearl Harbor.*
> *Yet at no time was there any doubt that money would be forthcoming to wage war. The promise Henry Morgenthau made to General Marshall was honored in full. Our military leaders shaped their plans free from worry that they would lack money to pay for them. Moreover, while the war debt was built up, there was no change in the interest rates paid by the government on its various types of securities. Contrary to the prophecies voiced in February 1933 that an increase in the national debt would force our government securities into a fatal drop in value, the fluctuations that occurred were minor even though the national debt increased six times.*"

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com

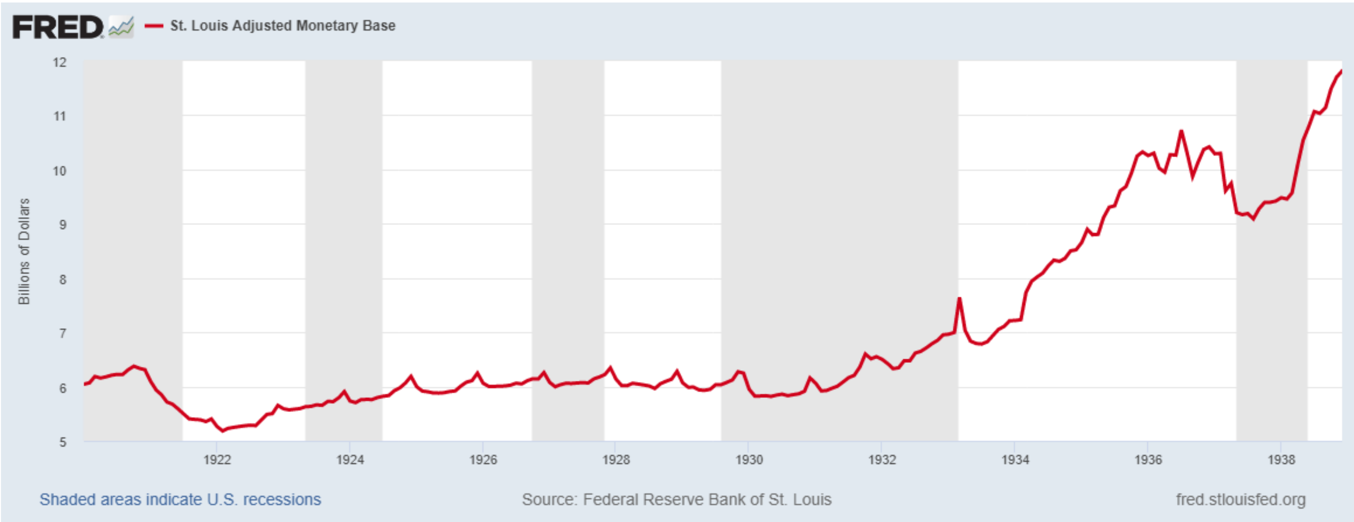
Chapter 2. Objects of Action
Part VI: The Economics of Armageddon
Beckoning Frontiers, 1950
By Marriner S. Eccles
Chairman, Federal Reserve, 1934 – 1948

On Wall Street a debate rages over the contours of the coming economic policy and its long term impact on the country, interest rates, and growth. This debate focuses on what is now called Modern Monetary Theory (MMT) with both its proponents and detractors vociferously voicing their opinions. The outcome of this debate will shape the contours of economic policy enacted by the U.S. Government over the next decade. Thus, it possesses significant implications for the actions that Congress and the Federal Reserve take and their impact on the U.S. economy.

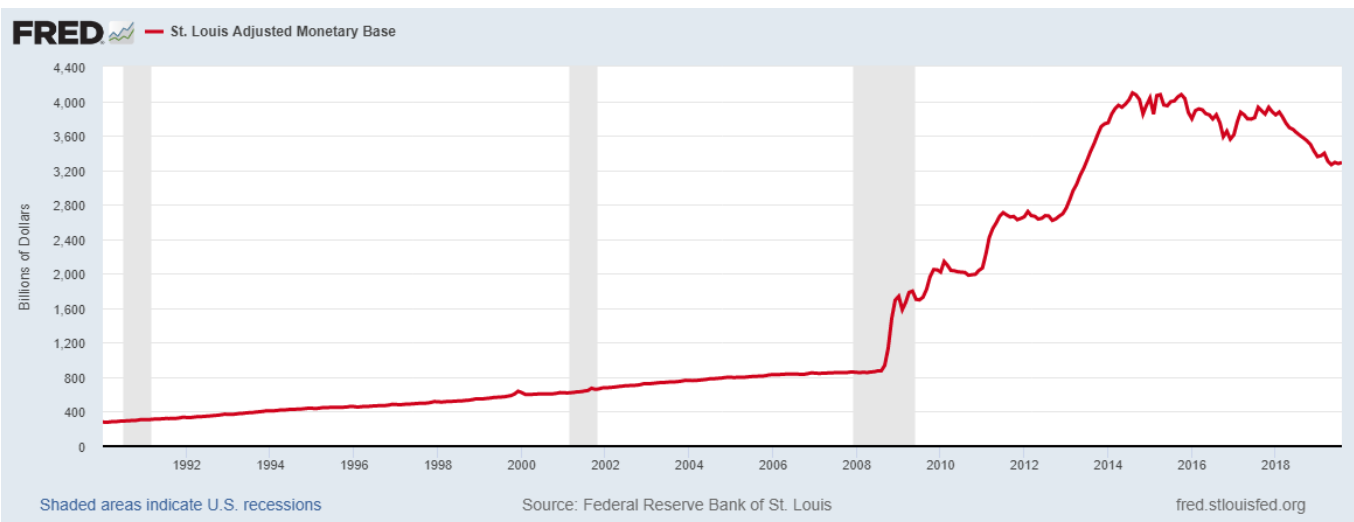
Modern Monetary Theory stands for the next iteration of Monetary Policy for a Central Bank, what some now call Monetary Policy 3 (MP3), as it represents a natural evolution of policy. In doing so, it broadens the mandate for monetary policy, linking it intricately with the actions of the national government. Typically, a Central Bank uses traditional tools such as bank reserve management, monetary growth, and interest rate management to effect its policies. These tools typically work when economic growth moves along at steady rates with inflation of 3% or more, on average, over an economic cycle. These tools collectively are known as Monetary Policy 1 (MP1). However, when demand collapses in an economy, such as during the 2008 – 2009 recession or during the early stages of the Great Depression, this policy proves inadequate. Central Banks then must move to Monetary Policy 2 (MP2), what economists currently call Quantitative Easing (QE). QE focuses on offsetting a slowdown in the rate at which money circulates in the economy, what economists call Velocity. If this collapse occurs, it causes massive deflation in the economy, such as occurred from 1929 – 1932. In order to prevent a repeat, Central Banks in the U.S., Japan, and Europe adopted QE over the past decade, as occurred during the Great Depression from 1933 – 1936. The following charts show the utilization of QE during the Great Depression and its mirror image over the past decade:

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com



And during the past decade:

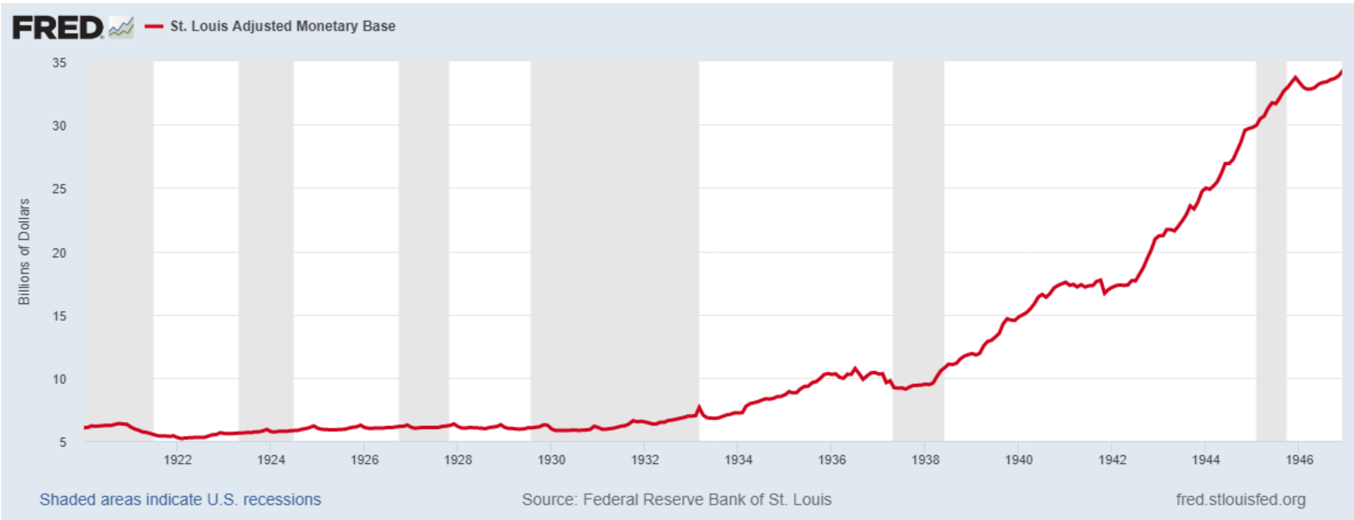


In both cases, QE successfully offset the collapse in money circulation. In fact, it proved so successful during the Great Depression that the U.S. economy stood at the same level in 1936 as it did in 1929, before the economic collapse. Unfortunately, for the economy, in 1936 the Federal Reserve started to worry about inflation, just as the current Federal Reserve began to worry about inflation in 2015. As a result, the 1930s Fed moved to pull money out of the economy at the same time as it raised reserve requirements. As the top chart indicates, this led to recession in 1937 – 1938. To offset this new

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com

recession within the Great Depression, the Federal Reserve reversed its monetary policy adding money rapidly to the economy for the next decade, as the following chart demonstrates:

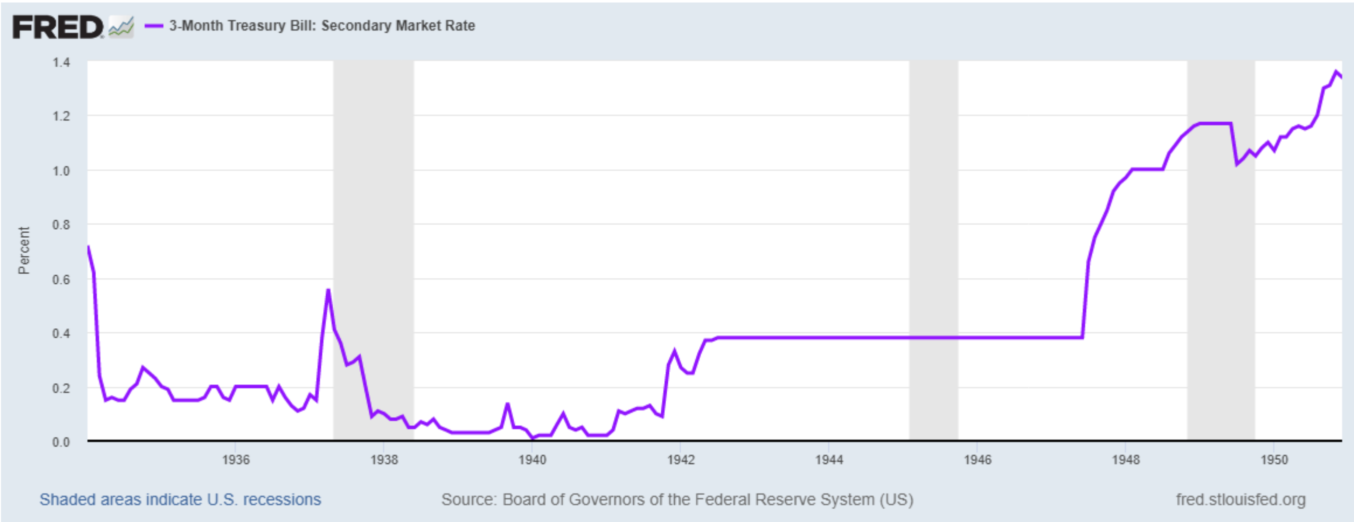


From this perspective, the 15%+ contraction in money from August, 1936 to August, 1937 became just a blip on the way to massive money growth. And this massive monetary growth underwrote the massive spending by the U.S. Government in order to employ people in the late 1930s and to fund the war effort during World War II. This combined partnership between the Central Bank and the Government represented the Central Bank underwriting the economy, now known as Modern Monetary Theory (MMT) or Monetary Policy 3 (MP3). One might say there is nothing "Modern" about this.

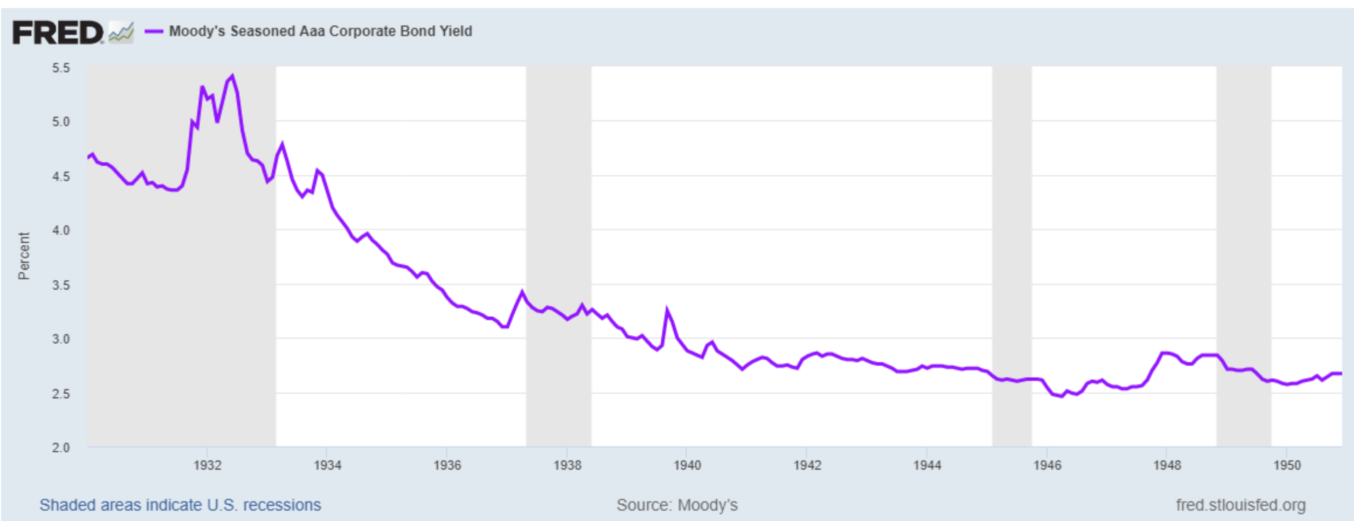
Despite this massive growth in money from 1938 – 1947, interest rates remained relatively tame, as the Federal Reserve controlled them. For example, the 3 Month Treasury Bill Interest Rate did not rise above 0.38% until July, 1947:

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com



And, even then, in December, 1950, the 3 Month Treasury Bill interest rates stood at only 1.34%. In addition, long term rates stayed low, as the following chart of Moody's AAA Corporate Interest Rates makes clear:



After the 1937 – 1938 Recession, corporate bond rates did not rise above 3.42% and averaged 2.75% from 1941 on. Thus, rates for the economy on long term borrowing, whether public or private, stayed low as well, effectively providing subsidized financing.

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com

However, the same cannot be said of inflation. Inflation accelerated significantly during World War II and afterwards. Here is the year-over-year inflation rates from 1940 – 1952:

Year	***Inflation Rate***	***CAGR***
1940	*0.7%*	---
1941	*9.9%*	---
1942	*9.2%*	---
1943	*3.0%*	---
1944	*2.3%*	---
1945	*2.2%*	---
1946	*18.1%*	---
1947	*8.8%*	---
1948	*3.0%*	---
1949	*-2.1%*	---
1950	*5.9%*	---
1940 – 1945 Total	*30.2%*	*4.5%*
1946 – 1950 Total	*37.2%*	*6.5%*
1940 – 1950 Total	*78.6%*	*5.5%*

CPI Data, Unadjusted, December to December, St. Louis Federal Reserve.

As the above table makes clear, significant inflation occurred from 1941 – 1950. In fact, the price level rose almost 80%. For the U.S. Government and businesses that could borrow, this provided a windfall. The bond issued at par or $1,000 in 1940 was repaid 10 years later with $1,000, but the real value of the $1,000 paid was only $560. In other words, bondholders suffered a 44% real loss on their money. This inflation resembles actions taken by the government during and after World War I, The Civil War, The Spanish American War, The War of 1812, and The Revolutionary War to inflate away government debt, making the real cost to the government significantly less. Of course, for the bondholders, this tended to be a bad deal as they were repaid in sometimes worthless scrip.

With U.S. economic policy Leaving the 1930s and Entering the 1940s, a well-trod path appears ahead. And whether today's practitioners call it Modern Monetary Theory or something else, the end game is clear. The U.S. Government will boost spending to accelerate economic growth, while the Federal Reserve manages interest rates. And, acting in partnership, they will seek to address today's economic malaise. For the U.S., this will represent a sea change as growing the real economy takes precedence. And should a little inflation accompany it, so much the better, from the government's perspective. For

Green Drake™ Advisors, LLC
175 Strafford Avenue, Suite One
Wayne, PA 19087
(610) 687-7766 Voice
(610) 300-3211 Fax

www.greendrakeadvisors.com

the average American who owns their own home, this inflation will come as a windfall, as the cost of their mortgages stays static and their real value falls. For companies, faster economic growth should provide a better backdrop than the past decade. And for investors that understand this coming change, opportunities will abound. So, all on board, as the train heads for the 1940s, with MMT, MP3, and Old Fashioned Money Printing ahead. (Data from The Federal Reserve coupled with Green Drake Advisors analysis.)

Gaining Traction, All Hail, and A Photo Finish

Finally, we close with brief comments on Gaining Traction, All Hail, and A Photo Finish. First, tractor sales in North America turned upward recently after a long slump. According to the latest industry statistics, U.S. sales of 4 Wheel Drive tractors rose 17% year over year in August while 2 Wheel Drive 100+ HP increased 12%. With sales like this, we see the industry Gaining Traction. Second, hail storms increased significantly in July and August. According to National Weather Service data, hail storms are up ~21% year over year in Q3. For the manufacturers of roof shingles, this stands as a potential windfall as significantly more roofs were damaged this year compared to last. Based on this, we see those manufacturers saying "All Hail". And Third, MIT's Computer Science and Artificial Intelligence Laboratory developed a new ink they call PhotoChromeleon Ink. They used photochromic dyes to create a solution that can be sprayed onto objects. Using UV light, they can then activate and deactivate the different colors at will. In other words, the red shoes you wore today could be turned into beige shoes for tomorrow's outfit. Or your car could change colors overnight. In addition, this ink appears ideal for creating multicolor prints on objects today that could be changed tomorrow. And the ink shows no impact from normal light. With the ability for mass customization ahead, we can all look forward to A Photo Finish.

In Closing

Should you have any questions on how the above issues or the items discussed in our accompanying cover letter impact your family's financial position or your business's future as well as the potential actions you could take in response, please do not hesitate to contact us. We welcome the opportunity to discuss this with you.

Yours Truly,

Paul L. Sloate	Steve Rodia
Chief Executive Officer	President
& Senior Advisor	& Senior Advisor