

April 27, 2020

## Revisiting Scheidel's Horsemen: Part II

In Part I, we introduced Walter Scheidel's four horsemen and examined the impact of COVID-19 using his framework.<sup>1</sup> This week, we introduce the equality/ efficiency cycle and discuss the first issue that would be affected by the reversal of this cycle.

### COVID-19 and the Equality/Efficiency Cycle

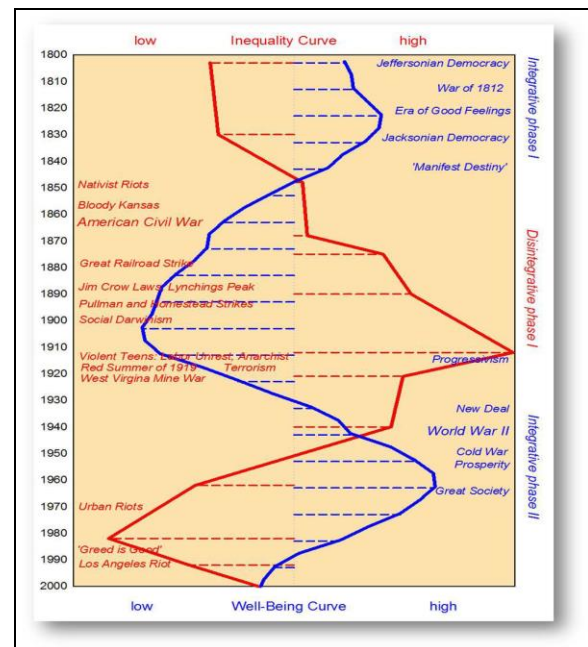
We postulate that economies pass through cycles of equality and efficiency. We developed this concept based on the seminal work of three scholars. The first strand is the idea of the equality/efficiency tradeoff, which comes from Arthur Okun.<sup>2</sup> He argued that societies face a tradeoff between equality and efficiency. Efficiency is necessary for growth, while equality is required for political and social stability. However, there is no evidence that Okun saw this tradeoff as a cycle; instead, he saw it as two competing forces to be constantly balanced.

The second source of our postulate is from Peter Turchin, who suggested that countries cycle between periods of greater or lesser equality. In the following chart, Turchin shows this cycle in the U.S. from the early

<sup>1</sup> Scheidel, Walter. (2017). *The Great Leveler: Violence and the History of Inequality from the Stone Age to the Twenty-First Century*. Princeton, NJ: Princeton University Press.

<sup>2</sup> Okun, Arthur. (1975). *Equality and Efficiency: The Big Tradeoff*. Washington, D.C.: Brookings Institution Press.

1800s to 2000. Measuring inequality (red line) is [a simple calculation that originated with Kevin Phillips](#). It is the ratio of the largest fortune in the U.S. relative to average household wealth. The well-being line (blue line) is the detrended and log-transformed level of social optimism, which is the average age of marriage, along with the wages of production workers divided by per-capita GDP, life expectancy and average height. The chart shows that well-being is inversely correlated to inequality.



(Source: [Peter Turchin](#))

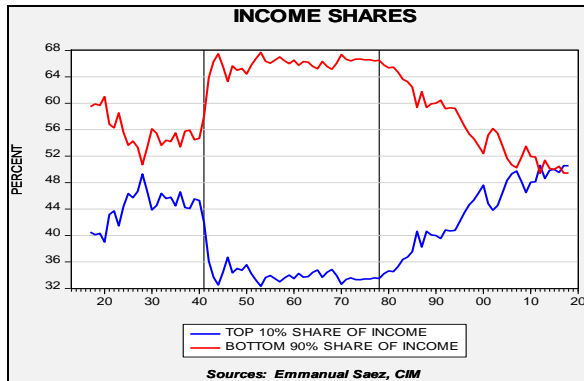
The third source of our thesis comes from Walter Scheidel, who suggests that efficiency cycles are the norm due to the power of capital. Efficiency continues until it is stopped by one of four major disruptions: mass mobilization war, revolution, societal collapse or pandemic.

Therefore, our thesis is the following:

1. Societies face a tradeoff between equality and efficiency.
2. This tradeoff leads to cycles in which the goals of one or the other dominate.
3. The natural course is for efficiency to dominate because capital tends to accumulate economic and political power over time.
4. What reverses the dominant trend is a cataclysmic event, i.e., mass mobilization war, revolution, collapse of social order, pandemic.
5. What reverses an equality cycle is persistent inflation, which is usually supported by equality policies of trade impediments, immigration control and regulation.

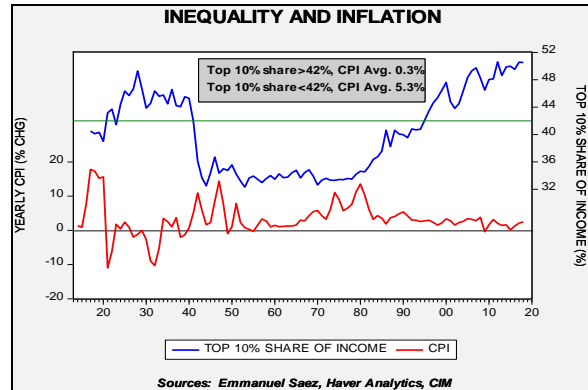
**Features of the Equality/Efficiency Cycle**

The following charts show some of the features of the equality/efficiency tradeoff.



This chart shows U.S. income shares of the top 10% of households along with the bottom 90%. The current level of inequality is near record highs (the data is from income tax rolls and thus is through 2018). The two vertical lines show inflection points in the data. The first is at 1941, the onset of WWII. There was a relative peak of inequality in 1928, but the relative income shares were remarkably stable despite the policies of the New Deal, which were designed, in part, to address inequality. Consistent with Scheidel’s thesis, it took a

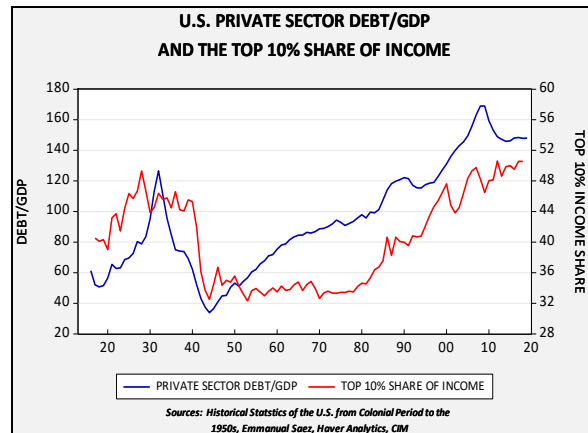
mass mobilization war to significantly shift the income distribution.



On the other hand, improving equality is not costless. In general, policies designed to improve equality, which include high marginal tax rates, restrictions on immigration, regulatory restrictions on the introduction of new technology and trade impediments, eventually lead to inflation. As the above chart shows, when the top 10% of households capture more than 42% of income, inflation tends to be non-existent. When this group receives less than 42%, inflation averages 5.3%

**Key Factors Tied to the Inflection of the Equality/Efficiency Cycle**

*The first major issue is debt.* As inequality rises, there is a tendency for private, non-financial debt to increase.



Why this occurs is complicated. [Some of it may be due to saving imbalances; as the](#)

[income and wealth distribution becomes skewed, the wealthy generate saving that needs to find a home. In other words, this saving needs to be lent.](#) As borrowing increases, eventually the debt load becomes unsustainable. Once this point is reached, a resolution of the debt load is required.

Another important facet to a debt overhang is that it usually coincides with excessive asset inflation. Rising asset prices give comfort and courage to lenders, encouraging them to expand lending further. This sort of behavior leads to a debt/asset price spiral, often referred to as a “bubble.” A good example was the residential real estate bubble seen in the last decade; it would probably not have occurred without the corresponding rise in home prices. However, once home prices stopped rising, the debt obligations became unsustainable.<sup>3</sup>

There are two methods of addressing excessive private sector debt. The first is through foreclosure and asset price adjustment.

It is important to remember that every liability has a corresponding asset. And so, if the debtor can't pay, it isn't just the value of the loan that falls; the asset attached to it declines in value as well. This process of foreclosing on homes, taking collateral from businesses and repossessing cars carries its own costs. Seizing collateral or calling in

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<sup>3</sup> Hyman Minsky discussed this process by suggesting there are three types of lending: 1) hedge, where the loan principal and interest are serviced by income from the investment; 2) speculative, where only interest is serviced and the loan needs to be refinanced in the future; and 3) Ponzi, where neither principal nor interest are being serviced and the loan will require both refinancing and rising asset values to be viable. At the end of asset bubbles, there is a lot of Ponzi financing.

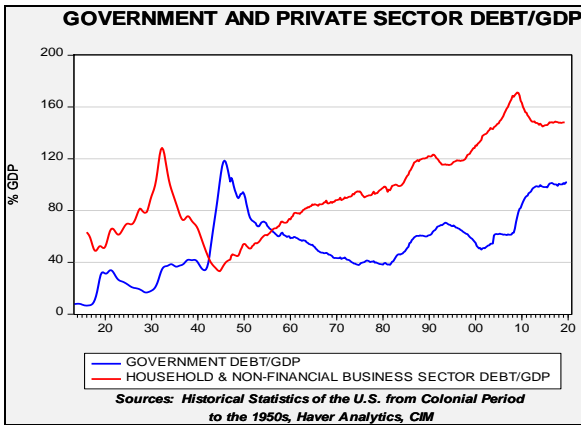
Minsky, Hyman. (1986). *Stabilizing an Unstable Economy*. New Haven, CT: Yale University Press.

the loan rarely leads to 100% recovery of the amount lent. This method of adjustment usually leads to a rapid decline in economic activity to the point where the asset values fall to a level where a new buyer can make the investment viable. This was the policy playbook of the Great Depression; the debt overhang was addressed by asset liquidation. Andrew Mellon, Herbert Hoover's Treasury Secretary, [was quoted as saying](#):

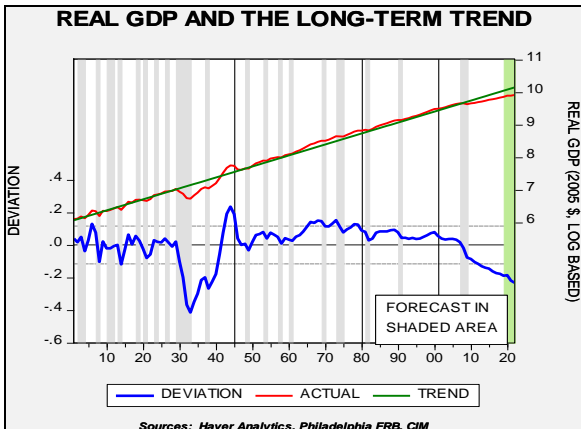
*Liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate. It will purge the rottenness out of the system. High costs of living and high living will come down. People will work harder, live a more moral life. Values will be adjusted, and enterprising people will pick up from less competent people.*

This method of addressing a debt overhang has a further complication. At the microlevel, enforcing moral hazard on borrowers and lenders who make ill-advised investments and loans is perfectly reasonable. The problem with the situation is the error of composition. At the microlevel, there is no systemic risk; bad actions are punished. But, if debt and asset liquidation become widespread, the macro effects become systemic. [This debt/deflation spiral was described in a classic paper by Irving Fisher](#). Essentially, the enforcement of moral hazard, if it becomes widespread, can lead to a downward spiral of liquidation and deflation. This was the cycle that triggered the Great Depression. In that event, banks failed, leaving innocent depositors penniless. When risks become systemic, this method can cause severe collateral damage to an economy.

The second method is to socialize the debt. In terms of finance, WWII was a massive public/private debt swap.



The debt liquidation began in the early 1930s. Private sector debt<sup>4</sup> fell sharply, from nearly 130% of GDP to below 80% of GDP by the second half of the 1930s. Government debt also rose from just under 20% of GDP to 40%. Despite that action, the economy continued to struggle.

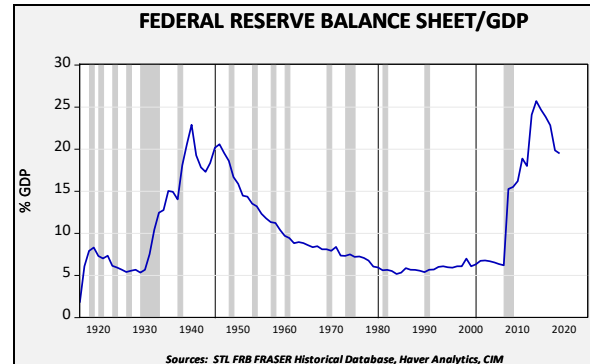


This chart shows the level of real GDP starting in 1901. We have log-transformed the data and added recessions. Note that GDP remained below its long-term trend until well after the war started. Although fiscal and monetary expansion was improving the private debt situation, it took massive government spending for the war effort to complete the restructuring. As the government borrowed for defense, firms and households supplied capital and labor. Both

<sup>4</sup> Defined as household and non-financial corporate debt. Financial debt is excluded because it would be double counting.

paid down their respective debt to low levels, laying the groundwork for the postwar recovery.

How would this public/private debt swap work this time? During the Great Depression and WWII, the Fed expanded its balance sheet to maintain low interest rates in a period of rising fiscal spending.



The balance sheet to GDP ratio peaked at 25% in late 2014 before Chair Bernanke’s famous “taper.” The combination of rising GDP and balance sheet reduction prior to the recent expansion has lowered the ratio to 19%. Recent Fed actions could increase the balance sheet to GDP ratio to 50% by the middle of this year.

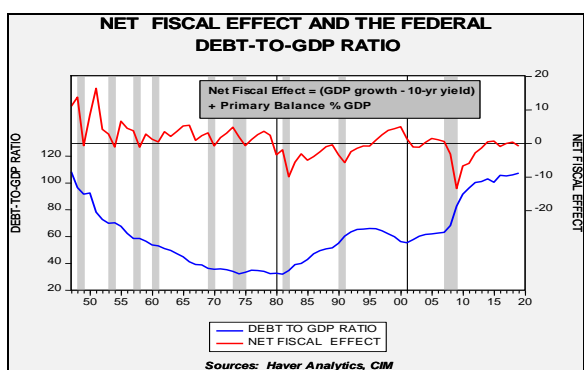
Since the Fed was buying Treasuries during the Great Depression and WWII, it was not actually taking credit risk. That may not be the case this time. The Fed has been aggressively providing guarantees for a plethora of private sector and state and local debt, all of which could default. If defaults rise enough, the Fed may need to be recapitalized. There are essentially three methods of recapitalization:

1. The Fed buys currency from the Bureau of Minting without paying seigniorage, which is about 4 cents on the dollar.
2. The Fed stops remitting interest to the Treasury on the bonds it holds.

3. The Treasury injects cash into the Fed either by diverting spending or issuing debt.

The first two methods are likely too slow and insufficient to deal with a crisis. The third option will almost certainly be debt issuance.

However, merely socializing the debt does not make it go away. It still must be resolved. But government debt, if issued in its own currency, is fundamentally different than private sector debt or debt from governments without currency sovereignty. First, because such government is effectively eternal (the government either exists and the debt lasts indefinitely, or the government fails and the debt is extinguished), it only needs to service its debt, not necessarily pay it back. That’s because maturing debt can always be rolled over. Second, since confidence in a government’s debt is usually measured compared to GDP, a government can reduce the relative size of the debt through the net fiscal effect.



The net fiscal effect is a formula that says if nominal GDP growth less interest rates (we use the 10-year T-note as proxy) plus the primary deficit balance<sup>5</sup> is positive, the government’s debt to GDP ratio will decline

<sup>5</sup> The primary balance is government receipts - (gross government spending - interest payments) scaled to GDP.

over time. The previous chart shows how it works. After WWII, the net fiscal effect was consistently positive and the federal government’s debt to GDP ratio fell.

This process is executed through financial repression. Essentially, financial regulation forces buyers to purchase government debt at a yield less than nominal GDP growth and the primary balance as a percentage of GDP. Modest levels of austerity can support this action as do actions designed to keep interest rates low. And, inflation clearly doesn’t hurt because it boosts nominal GDP; if nominal interest rates are controlled, the real interest rate on the debt is negative.

Although either method—the rapid devaluing of assets or the private/public debt swap—works, the political reality is that no government will repeat what the Hoover administration did in 1928-32. Thus, if the COVID-19 pandemic forces a public debt resolution to the excessive level of private sector debt, one should expect years of financial repression as a result. This may take the form of persistently low policy rates and could eventually require the Federal Reserve to lose its independence and have a mandate to control the yield curve through Treasury purchases as it did during WWII into the early 1950s. Savers are penalized in this environment and bear the cost of adjustment.

### Part III

Next week, we will conclude this report by discussing the other four factors affected by the reversal of the equality/efficiency cycle. We will examine the potential impact on inflation and conclude with market ramifications.

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April 27, 2020

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