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THE NATURAL RATE OF INTEREST RULE

ERWIN ROSEN AND ADRIAN RAVIER

ABSTRACT: Considerable research has been conducted on central bank monetary policies. Particular attention has been focused on policies that have the potential to ensure “sound money,” the symptoms of which are full employment and economic stability. Debate has centered on employing rule-based strategies to improve the monetary policies of the Federal Reserve Bank (“the Fed”). This article reviews the Fed’s performance with particular emphasis on its contribution to the 2008 crisis and then suggests an alternative policy which, had it been in place would have dampened the most recent boom and bust. This alternative is the application of a monetary rule that follows Wicksell’s monetary equilibrium doctrine. Although the proposed rule would not eliminate short-term price fluctuations, it should create consistent, inflation-free economic stability, a condition for sustained growth which the U.S. has not seen since the Fed’s inception.

KEYWORDS: business cycle, central banking, crisis, economic fluctuations, Fed, interest, interest rates, monetary policy, natural rate of interest, Knut Wicksell

JEL CLASSIFICATION: E31, E32, E42, E52, E58

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INTRODUCTION

In 1945 Keynes wrote: "The monetary authorities can have any rate of interest they like.... They can make both the short and long-term [rate] whatever they like, or rather whatever they feel to be right...." (Rochon, 1999, p. 163). The U.S. Federal Reserve (the "Fed") has taken full advantage of this freedom to set rates, but the results have been both disappointing and revealing.

Since the creation of the Fed, there have been eighteen recessions, of which at least four have been severe: the 1929–1933 Great Depression, the 1973–1975 recession, the 1981–1982 recession, and the 2008 recession (Amadeo, 2011). To some extent, these recessions have all been the result of inflationary policies caused by discretionary money manipulation. This assessment is neither revolutionary, nor unique. It has been the main topic of discussion throughout the history of the Fed, and the 2008 crisis again focused attention on the issue. Most recently, Selgin et al. (2012, p. 48) published an extensive study on the effectiveness of the Fed to coincide with its centennial. It concluded that significant changes in the Fed's strategy for managing the money supply were needed.

The purpose of this paper is to respond to these authors' call for change by postulating a monetary rule that follows Wicksell's monetary doctrine. The goal of the rule is to match the market interest rate for loanable funds to the natural rate of interest, hereafter referred to as the "NRI" (Wicksell, 1898, p. 102). Such a strategy would induce behavior resembling that which occurs under a free and unregulated banking system. Applying this rule would keep the money supply in close proximity to the equilibrium at which supply and demand coincide. This would create an environment of inflation-free economic stability, which the Fed's monetary policies have so far failed to produce.

Attaining this goal will be shown to be no easy task. Notwithstanding this challenge, we believe that the proposed rule should be a guide for monetary policy, since the success or failure to achieve economic stability will also be shown to depend mainly on how close the market interest rate is to its natural level, and not to the current strategy of targeting an arbitrary and desirable level of inflation.

We begin this work with a review of the Fed's performance, paying special attention to its role in the 2008 crisis. This review demonstrates the weakness of the Fed's monetary policies. We

then demonstrate the effectiveness of the NRI rule in generating inflation-free economic stability, first using historical data on free banking and then by simulating the application of the rule in the years prior to the 2008 crisis. Finally, we suggest a mechanism whereby the Fed might implement the rule.

THE CASE AGAINST THE FED'S MONETARY POLICIES

Since its inception, the Fed has faced two significant weaknesses: susceptibility to political pressure and inadequate economic knowledge. Economists, particularly those affiliated with the Austrian School of Economics, have been pointing out these problems for close to a century, emphasizing the need to stop government interference with the market in general and its manipulation of the money supply in particular (Rosen, 2010). The latter, however, we consider only an unrealistic aspiration, at least in the foreseeable future, as there is every reason to believe that central banking will continue. The objective therefore becomes how best to minimize its unfortunate negative impact on the economy.

In articles published in 1936 and in 1945, Hayek discussed the problems generated by government interference in the market as part of his critique of socialist political systems. He explained that the knowledge necessary to run the economy is not all scientific or technical, and therefore it cannot be collected by a central entity. In fact, the necessary knowledge is dispersed among all those participating in market transactions. This 'tacit' knowledge is acquired by market participants in a myriad of ways, much of it spontaneously and even subconsciously. In Hayek's opinion, the market is a process of entrepreneurial discovery, in which the entrepreneurs' knowledge and intentions converge over time until they are perfectly coordinated, thus making it impossible for this information to be captured by a central authority. Although in his work Hayek was referring to the general market, the handling of money is merely a special case. The Hayekian knowledge problem makes it impossible for the Fed to realize its objectives on the basis of its proprietary knowledge alone. The term 'discretionary' is used to underline this inherent weakness of Fed policies based on in-house knowledge.

In a 1968 paper, Friedman arrived at same conclusions. Although he did not propose the abolition of the Fed, he criticized it by

pointing out that the discretionary monetary policies of the Fed were erroneous in 1919–1920, in 1929–1933, in 1937–1938, in 1953–1954, and in 1959–1960.¹ To this list we can now add the errors that precipitated the recessions of early 2000 and 2008. These policy failures were interrupted from the mid-1980s to the 2000s by a period frequently referred to as ‘the Great Moderation’, during which a dramatic drop in GDP volatility took place. Many economists have cited this drop in volatility as evidence that the Fed had finally learned how to manage the money supply ‘properly’. However, this claim has been refuted by statistical studies that show influences unrelated to action taken by the Fed were the reason for the unanticipated moderation (Selgin et al., 2012, p.16)

According to Friedman, the Fed did not only frequently make incorrect decisions, but also tended not to implement what would otherwise be considered desirable policies in an effective manner. In such cases it tended to act too late, and then when it finally did act, to go too far (in the ‘correct’ direction) and then finding itself in a position where a policy reversal was inevitable. According to Friedman, these overreactions have typically been the result of the Fed’s inability to time the natural delays between Fed actions and their economic consequences. Friedman’s main point, as he explained in a 1972 article, is that the expectations of the central bank are just too high. Our knowledge, he pointed out, is insufficient, and even when it is adequate, political considerations interfere with the process.

¹ Austrian and Chicago School economists are in agreement that the Fed has erred consistently; however, they do not necessarily concur on the causes of the crisis. For example, referring to the Great Depression, Friedman et al. (2008) understood that the cause of the crisis was the “great contraction” executed between 1929–1933, however, Robbins (1934), Anderson (1949), Rothbard (1963) and Cachanosky (1989) hold that the problem originated earlier, more specifically in the credit expansion developed during the period between 1924 and 1928. In 1912, over twenty years before this crisis, Mises (1912, pp. 365–366) explained the concern as follows:

Certainly, the banks would be able to postpone the collapse; but nevertheless, as has been shown, the moment must eventually come when no further extension of the circulation of fiduciary media is possible. Then the catastrophe occurs, and its consequences are the worse and the reaction against the bull tendency of the market the stronger, the longer the period during which the rate of interest on loans has been below the natural rate of interest and the greater the extent to which roundabout processes of production that are not justified by the state of the capital market have been adopted.

Although these issues cannot be fully eliminated, the use of rule-based monetary policies has the potential to avoid most of the undesirable consequences of discretionary central bank policies.

First, a rule has the potential to thwart political interference. Realizing this potential requires a commitment—not only from monetary policy makers, but also from politicians—to consistently apply the rule no matter what. This is certainly not a minor issue: monetary policies have traditionally been susceptible to political influence. Buchanan (1987), who made a career of researching the impact of government and politics on macroeconomics, considered political pressure on the Fed such a significant problem that he suggested its employees have their compensation fixed in nominal dollars in order to discourage them from bowing to political pressure favoring inflationary policies.

Second, reliance on a rule mitigates the knowledge problem as mechanical implementation could be accomplished without input from ‘experts’. In fact, in the 1968 article referred to above, Friedman, felt that even a computer, without any human help, could perform the task of implementing the constant money growth rule he was proposing.

Third, even if by chance the policy makers make correct assessments from the information available and are able to execute the appropriate policy, time lags will inevitably frustrate their ability to take action in a timely manner (Friedman, 1961). By the time the necessary data is collected, analyzed, and acted upon, the economy may well have moved on to another state, making the discretionary remedy inefficient or even counterproductive. This was a major factor behind Friedman’s suggestion of a constant money supply growth rule.

As an additional and significant bonus, a well-defined rule eliminates monetary uncertainties, allowing the business community to anticipate future central bank moves with accuracy and confidence, both of which are key to assuring business effectiveness (Simons, 1936).

Taylor (2011) studied the U.S. economy over the period 1950 to 2010, during which the Fed tried various monetary policy strategies. He showed that a strong correlation exists between rule-based policies and good economic performance (low inflation

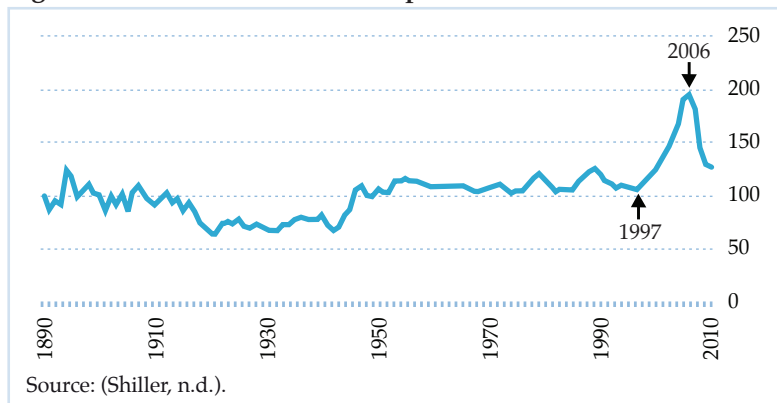
and unemployment levels), and just the opposite during times that the Fed used a discretionary approach to setting monetary policy.

Even ex-Chairman of the Fed, Alan Greenspan, concurs with economists who have been critical of the Fed's discretionary policy approach. In October 2007, during a televised interview on the Daily Show, Greenspan lamented that in his 50 years as an economist he could not claim any improvement in his forecasting skills and, for that matter, he did not know anyone who could. Implicit in Greenspan's statement is the fact that the economy is too complex to totally understand or forecast.

The 2008 crisis provides a classic example of the consequences of discretionary intervention by the Fed. The crisis originated in the United States when a major real estate bubble burst. White (2008a) demonstrated that the real estate market heated up over the period from mid-2003 to mid-2007, the four years before the crisis broke. While sales of goods and services were growing between 5 to 7 percent per annum during this period, real estate loans at commercial banks grew at levels of 10 to 17 percent or twice as fast.

The bubble began to show signs of deflating in early 2006 as prices rose to the point where purchasing a home became out of reach for most Americans, even under the very attractive terms available at the time: almost no down payment coupled with unusually low interest rates. However, as can be seen in Figure 1, the dramatic drop started in the period between late 2007 and early 2008.

Figure 1. Real Home Price Index pre-2008 Crisis



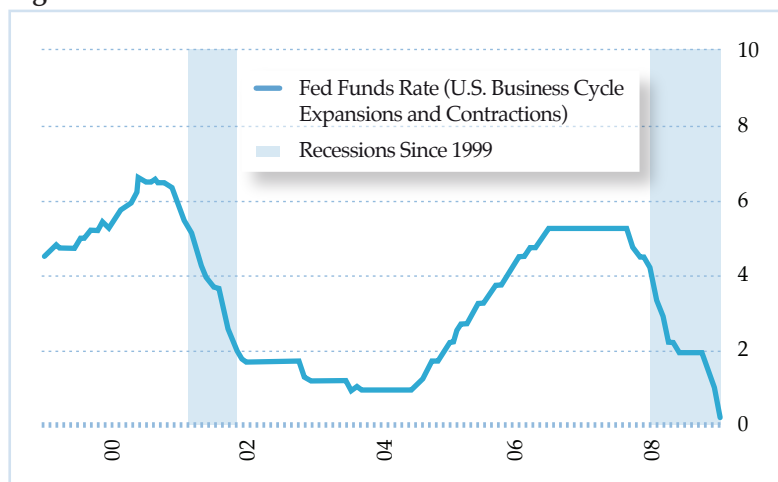
The abrupt collapse of the U.S. real estate market had a direct impact on financial markets. While in the middle of 2003 housing prices began increasing sharply, early in 2006 they took a sudden turn and declined as sharply, producing severe delinquencies and foreclosures (Taylor, 2008). This led to major financial turmoil, not only in the United States, but also around the world.

Research conducted on the 2008 crisis points to different perpetrators, from flawed financial innovations such as collateralized debt obligations (CDOs) to weak regulations, from the lack of CDO regulation to the operation of a shadow banking system, and the weakening of the existing banking system structure all compounded by government actions that allowed Fannie Mae and Freddie Mac to expand mortgages to borrowers who could not afford them by loosening down-payment standards on mortgages. But above all, the bulk of the studies reserve the blame for the Fed and its monetary policy.

In March 2001, the United States went into recession. This was the result of the technology related “dot-com bubble” that burst in the spring of 2000. This event caused the NASDAQ to fall 3,934 points, or 78 percent, between March 2000 and October 2002.² To stimulate the economy, Greenspan lowered interest rates. As illustrated in Figure 2, the Fed Funds rate³ had begun 2001 at 6.25 percent and ended that year at 1.75 percent, a very drastic action. The Fed did not stop there. It lowered the rate further in 2002 and 2003, and in mid-2004 it reduced the rate to a record low of 1 percent.

² The NASDAQ Composite Index reached its highest point on 10 March, 2000 at 5048.62. On 9 October, 2002 it fell to its lowest level, 1114.11 points. (Yahoo Finance, 2000–2002).

³ The Fed Funds rate is the overnight interest rate at which banks lend funds held at the Federal Reserve to other banks and is one of the primary tools that the Fed uses to intervene in the market.

Figure 2. Fed Funds Rate in the 2000s

Many leading economists (e.g. Taylor [2008], Schwartz [2009], Krugman [2009], Stiglitz [2010], Ravier et al. [2012] faulted Greenspan's discretionary monetary policy and consider it a key factor in the creation of the 2008 real estate bubble. Given this historical reality and the fact that the Fed has not been effective in applying discretionary strategies, implementation of a rigid, rule-based monetary policy deserves consideration as an alternative. The question then becomes, which rule?

The suggestion is made here that the most desirable arrangement is one in which the monetary system is as close to equilibrium as possible, i.e., the state where the behavior of the economy is not impacted by money considerations. Under these conditions, the resulting interest rate would be the natural rate of interest, as defined by Wicksell.

THE USE OF THE NRI RULE AS A MONETARY POLICY

The concept of the Natural Rate of Interest (NRI) originated with the Swedish economist Knut Wicksell. In 1898, he defined the NRI as the interest rate that is commodity-price-neutral. It is set by real supply/demand factors, and not by financial markets. This can only be the case when the supply of money has no influence on the rate of interest (Wicksell, 1898, p. 102).⁴

From this definition, one can conclude: a) that in an environment where the existing market interest rate matches the NRI, long term prices will be stable, and, b) this money-neutrality can only be expected when savings equal investments or money supply equals money demand.

If the existing market interest rate is below the NRI, it causes demand for money to be higher than the supply generated by savings. This excess demand is financed by an expansion in bank loans, which creates new money. This then pushes up the level of prices, creating inflation. The opposite occurs if the existing market interest rate is above the NRI, in which case, the money supply contracts and prices fall, creating deflation. These two scenarios are artificial and unsustainable. Thus, they cannot bring about the real, long-term economic growth that would be achievable under the NRI rule.⁵

⁴ It is worth noting that there is no complete agreement between Wicksell and Mises on the definition of the natural rate of interest. Mises (1912, p. 355) explains the differences as follows:

Wicksell distinguishes between the Natural Rate of Interest (*natürliche Kapitalzins*), or the rate of interest that would be determined by supply and demand if actual capital goods were lent without the mediation of money, and the Money Rate of Interest (*Geldzins*), or the rate of interest that is demanded and paid for loans in money or money-substitutes. The money rate of interest and the natural rate of interest need not necessarily coincide, since it is possible for the banks to extend the amount of their issues of fiduciary media as they wish and thus to exert a pressure on the money rate of interest that might bring it down to the minimum set by their costs. Nevertheless, it is certain that the money rate of interest must sooner or later come to the level of the natural rate of interest, and the problem is to say in what way this ultimate coincidence is brought about. Up to this point Wicksell commands assent; but his further argument provokes contradiction.

⁵ This logic has been a predominant reason for attracting the Austrian School of Economics to monetary strategies that resemble free banking. See Cachanosky (2013) for recent work closely related to this research.

Validation of this point is to be found in historical data pre-dating central banking, in other words when there was no government interference and 'free banking' existed. Under such conditions, monetary equilibrium is necessarily in effect (Selgin, 1997).

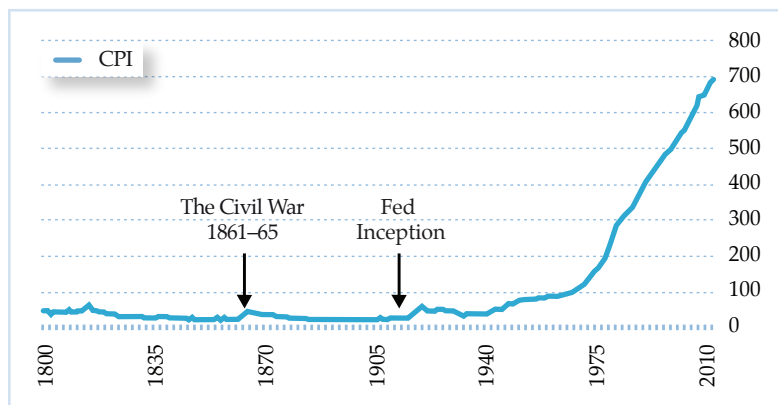
Schuler (1992) and Briones et al. (2005) have identified over 70 instances of unregulated banking, mostly in the nineteenth century.⁶ Of special interest is Scotland, which between 1716 and 1845 was a proven model of banking success, and is frequently employed to showcase the benefits of free banking (see for example, White [1984]).

In the United States, no true free banking existed prior to the Fed's birth in 1913 except for the sporadic, but ineffective, attempts to move in this direction between 1836 and 1913, which took various forms in different states (Briones et al. [2005]). However, the country not only did not suffer from inflation, but for the most part, a slight deflation prevailed, symptomatic of economic growth accompanied by an absence of excess money in the system. In fact, between 1880 and 1900, real (per capita) GDP skyrocketed, going from \$3,379 to \$4,943 (in 2000 dollars), see White (2008b, p. 4).

This has obviously not been the situation since the inception of the Fed in 1913. As shown in Figure 3, inflation has been prevalent throughout the era of central banking and, not surprisingly, the incidences of monetary and economic instability have also increased (Selgin et al., 2012, p. 1).

⁶ On this topic, see also Dowd (1992).

Figure 3. Inflation in the U.S. (As Indicated by the Consumer Price Index)



Thus, there is little doubt that the Fed's monetary policies have been a major cause of monetary instability. Closer examination of the 2008 crisis reveals a vivid example of misguided Fed monetary policies. During the period of time leading up to the start of the 2008 crisis, between early 2001 and mid-2004, the Fed drastically dropped interest rates, coinciding with a raise in real estate activity that reached unsustainable levels, creating a crisis that followed a typical boom and bust business cycle. Had the Fed been following the NRI rule (the free market interest rate), instead of artificially bringing the interest rate down to such extremely low levels, real estate would not have boomed so dramatically and a crisis as severe as the one that occurred in 2008 would have been avoided. To prove this statement, we estimate the NRI and then simulated the behavior of the real estate market with this rate in effect.

The literature offers a number of alternative ways of determining the NRI. From the options available we selected the methodology of Laubach and Williams (2001) because their estimate of the NRI most closely mimics Wicksell's definition. In essence, their model attempts to find the interest rate that closes the gap between actual and potential GDP. The potential GDP, also referred to as "natural gross domestic product," is the highest level of real GDP output that can be sustained over the long term,

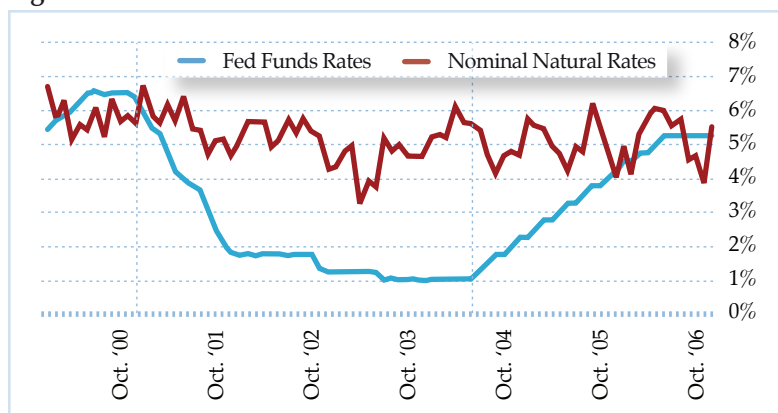
and which should be achieved when the prevailing interest rate and the NRI are equal.^{7, 8}

Using the Laubach and Williams approach, Figure 4 displays estimated nominal NRI and actual Federal Funds rates, during the period in question, between early 2001 and mid-2004. By simple inspection, the disparity between these two figures prior to the crisis is obvious: while the Fed funds rates dropped from 6.5 percent down to 1 percent and then increased to over 5 percent, the estimated nominal NRI fluctuated in a much more stable 4 percent to 7 percent.

Although the NRI is shown in the figure between 2000 and 2006—the entire boom and bust cycle—the only significant period of time is from the end of 2000—the beginning of the boom period—until mid-2004, when it ended, since the actions of the Fed reduced rates drastically during this portion of the cycle, and it is then that the damage was done.

⁷ Using a statistical technique (Kalman filter), the model adjusts the estimate of the natural rate based on how far the model predicts the gap between the potential GDP and the actual GDP. If the gap is negative—meaning that the actual GDP is higher than its potential and that monetary policy is over-stimulating the economy—the natural rate is adjusted upward to bring the economy to a stable condition. Conversely, if the GDP gap is positive and the monetary policy is more restrictive than expected, the natural rate is adjusted downward.

⁸ It should also be noted that the Laubach and Williams model is widely accepted by key central banks and economists associated with the Fed, the European Central Bank, and some South American banks. See Benati and Vitale (2007) from the European Central Bank; Fuentes and Gredig (2007) from the Central Bank of Chile; Humala and Rodriguez (2011) from the Central Bank of Peru; Garnier and Wilhelmsen (2005) from the European Central Bank; Manrique and Marques (2004) from the Bank of Spain; Mésonnier and Renne (2004) from the Bank of France.

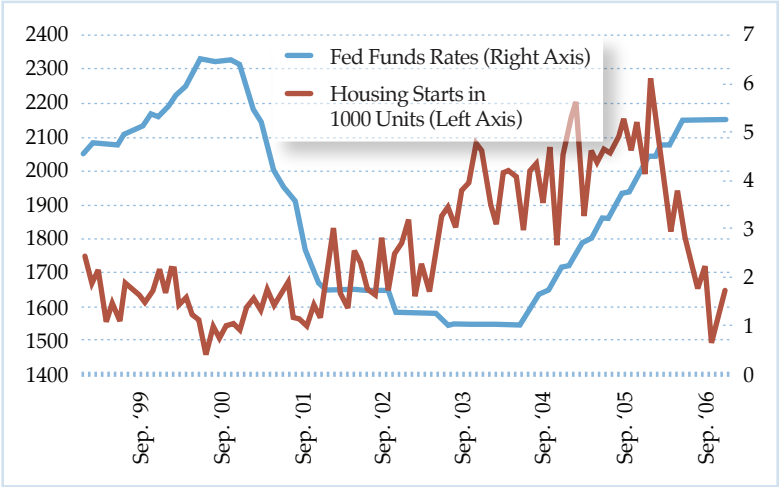
Figure 4. Nominal Natural Rates versus Fed Funds Rates in the 2000s

Turning to the historical data, the major rise in real estate prices materialized soon after the fed took aggressive action to lower rates. In Figure 5, the rapid drop in the Fed Funds rate is shown to coincide with the start of the major increase in housing starts.⁹ It is worth noting that the figure also shows that the Fed started to drop rates at the end of 2000, but it was not until late 2002 that the effect was fully reflected in the real estate market; on the downswing of the cycle, the real estate boom continued into the third quarter of 2005, more than a year after the Fed started to raise rates in mid-2004. Such lags typically occur between the onset of an economic problem and the full impact of a monetary policy.¹⁰

⁹ To evaluate the real estate market, housing starts was selected, as it is perceived to be a better economic leading indicator than real estate prices. According to the Bureau of the Census of the U.S. Department of Commerce, this indicator accounts for approximately a quarter of the country's investment spending and 5 percent of the overall economy. Sustained declines in housing starts slow the economy and can push it into a recession. The opposite, meaning an increase in housing activity, triggers economic growth and, when extreme, can turn into an unsustainable boom. Using regression analysis, a non-linear square fit correlation was used to correlate Fed Funds rates and housing starts between Jan 2000 and June 2004, the end of the boom period. The resulting quadratic equation was then used to estimate the housing starts with natural rates of interest instead of the existing Fed Funds rates.

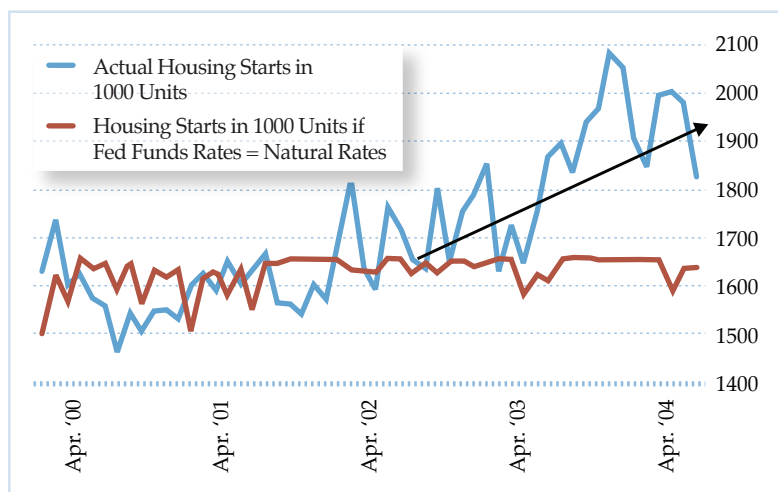
¹⁰ Economic time lags are an important issue in the development of monetary policy, and were examined in detail by Friedman in the 1961 and 1968 articles already mentioned.

Figure 5. Housing Starts versus Fed Funds Rates in the 2000s



As previously explained, the end-2000 to mid-2004 period is significant since had the real estate boom not occurred, the bust that followed would not have materialized, thereby mitigating or even eliminating all together the financial crisis that followed. Furthermore, as the simulation results presented in Figure 6 illustrate, it is highly likely that the free market generated NRI would have prevented the unsustainable real estate boom.

Figure 6. Housing Starts: Actual versus If Fed Fund Rates Equal to Natural Rates in the 2000s



Application of the Laubach and Williams proxy for the NRI in the period leading up to the 2008 sub-prime crisis and historical experience with free banking show that a monetary system constrained by free markets or an NRI rule is capable of producing price stability and sustainable economic growth. However, a return to free banking is considered unlikely, and the true NRI can only be determined in free markets. But any monetary system involving a central bank is handicapped by the knowledge problem discussed earlier, thus, it will inevitably yield an outcome that is only “second best.”

IMPLEMENTATION OF THE PROPOSED RULE BY THE CENTRAL BANK

As explained earlier, the NRI is evident when monetary equilibrium is achieved ‘naturally’ in a free banking economy. Unfortunately, this figure is not observable. Consequently, for the central bank to implement the rule, it must first be estimated. This poses a problem since no reliable tools are presently available to accurately estimate NRI in real time, which is precisely when it is needed (Laubach and Williams, 2001). A different approach is thus required.

The obvious alternative to the NRI rule is a strategy that holds the nominal income/gross domestic product (NGDP) constant: this is equivalent to holding monetary equilibrium.¹¹ Thus, it indirectly produces the same rule and, equally important, is relatively easy to apply.

First, the NGDP is calculated by determining the money-value of all final goods and services produced in the country, a calculation routinely conducted by governments. The central bank can then select the value it wishes to hold constant—the actual number is not important. Lastly, the rule can then be enforced by adjusting the money supply to maintain the NGDP within an agreed narrow band.¹²

CHALLENGES TO THE RULE

The NGDP constant concept was proposed by Hayek (1931, p. 131) over 80 years ago in the second edition of *Prices and Production* as a way to prevent business cycles. However, it has never really been seriously considered because it can result in mild deflation, which mainstream economists fear may bring about economic disruptions. Their logic, as Krugman (2010) explained, is that deflation feeds on itself. Once deflation starts, prices continue to fall, because people become less willing to spend since they expect prices to fall further, making cash a very attractive, positive real-yield investment. Further, investors are also less willing to borrow even for attractive projects because they must take into account the fact that their loans will have to be repaid in dollars that have a higher purchasing power than the dollars borrowed. It is alleged that this vicious cycle of weak spending and sliding prices can be unstoppable, or at least very hard to correct.

However, the fault in this reasoning lies in not distinguishing monetarily created (bad) deflation—typically created by government

¹¹ As explained earlier, monetary equilibrium occurs when M (the quantity of money) is equal to D (the demand of money), or when M times V (the velocity of money circulation) is constant. Resorting to the equation of exchange, M times V is equal to P (price level), times Y (the real output) or NGDP.

¹² The Fed does not control M or V , it can only directly impact M by buying or selling securities, which increases or decreases M , respectively. The Fed can also change the discount rate, but is only a secondary tool.

interference—which in the past has generated negative consequences and so should be prevented in the future, from natural (good) deflation, which should be encouraged.

In fact, any attempt to prevent good deflation will only result in market imbalances, since eventually the adjustments must conform to the reality of supply and demand: economic disruptions are inevitable when the prices of products falling due to an increase in economic productivity are not allowed to reflect their true value.

Another problem raised by mainstream economists involves the impact of wage and price stickiness has on the economy in deflationary times. Specifically, they claim that as deflation occurs, prices—particularly retail prices—start to drop, while production costs—which are likely to be constrained by wage and price contracts—do not. Then, unmanageable business disruptions will inevitably result. However, the fact is that there is no empirical evidence that this phenomenon occurs across the entire economy. In fact, these issues occur only in particular sectors, reflecting competition within the structure of production, and do not affect the aggregate economy to the extent feared by those economists (Selgin, 1995).

Notwithstanding the laundry list of issues concerning deflation presented by mainstream economists, study after study has shown no reason to fear it. Atkeson et al. (2004) studied 17 countries, including the United States, over the period between 1880 and 2000 and found no connection between deflation and depression. In fact, they determined that the correlation between deflation and growth is stronger than with depression. The only direct link between deflation and recession occurred during the 1929–1934 Great Depression.

In another study, Friedman et al. (1971) determined that between 1880 and 1896, while the United States was under the gold standard, the country had an exceptional period of growth with a significant fall in prices. Their data showed that real income rose by about 5 percent per year while the wholesale price level fell about 1.75 percent per year.

Data from China shows that between 1998 and 2001, the country experienced growth and deflation simultaneously. On an annual basis, the real GDP went up on an average of 7.6 percent while retail prices dropped between 0.8 and 3 percent (Salerno, 2003, p. 84).

These studies are unmistakable proof that there is nothing inherently harmful in deflation, as long as it is the natural consequence of improvements, such as technological innovation, from which lower production costs are a beneficial byproduct.¹³

CONCLUSIONS

A wider discussion would address alternatives to eliminating the monopoly on currency and shifting to a free, fully unregulated banking system. However, our goal was narrower. Following Hayek's argument (Hayek, 1960, p. 451) that abolition of central banking is already politically impractical and perhaps even undesirable given how we have become so accustomed to this system, we have focused our effort on finding an optimal monetary solution within an environment in which the central bank is preserved, fully aware that the outcome can be only second best.

Our proposal cannot eliminate market fluctuations that result from changes in the time preference of economic agents, technological innovations or other minor economic variables; in fact these fluctuations are healthy since they generate the price signals necessary to improve efficiency. It can, however, reduce the disruptive market cycles generated by arbitrary and politically driven credit expansions that cause short term interest rates to fall below the natural rate. The hope is that by not allowing the Fed to generate booms, the potential for economic busts can be reduced. Obviously, the degree of reduction will be determined by the ability of the Fed to follow the rule and minimize the unavoidable mistakes inherent in discretionary management of the money supply by a central bank.

¹³ In a series of articles, most significantly in 1990 and 1997, Selgin introduced the "productivity norm" to support the concept of "good" deflation by pointing out that it is the natural outcome of hands-off monetary policy, or free banking. In free banking, two simultaneous monetary actions consistent with monetary equilibrium and the creation of an environment of economic growth, take place in a natural manner. NGDP stays constant as the free market equalizes money supply and demand, while the price level (P) deflates at the rate of productivity growth, meaning at the growth rate in real output (y). This is "good deflation," like that which occurred under the gold standard period in the nineteenth century, versus the undesirable "bad deflation," such as that which occurred during the Great Depression.

Implementation of such a proposal will result in an immediate rise in interest rates to levels matching the natural rate. There is no doubt that this will bring about short term negative consequences, but once the economic system adjusts to the change, the benefits arising from monetary stability will materialize.

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JUAN DE MARIANA AND THE MODERN AMERICAN POLITICS OF MONEY: SALAMANCA, CERVANTES, JEFFERSON, AND THE AUSTRIAN SCHOOL

ERIC C. GRAF

ABSTRACT: Juan de Mariana may have had more direct lines of influence on the contemporary political denunciation of central banking in the United States than previously thought. As the culmination of a series of monetary theorists of the School of Salamanca, Mariana's genius was his ability to synthesize and articulate a critique of the inflationary monetary policies of the Spanish Habsburgs. Furthermore, the Jesuit scholar linked his economic analysis to his equally scandalous endorsement of regicide. For their part, both the monetary policy concerns and the rebellious animus of the modern libertarian wing of American politics echo Thomas Jefferson's views during the early Republic. These views also likely owe something to Mariana's uniquely menacing confrontations with the Habsburgs. And thanks to the Virginian's lifelong appreciation of Miguel de Cervantes's great novel *Don Quixote*, which was itself heavily influenced by Mariana, the fascinating connections between Jefferson's and Mariana's politicized understandings of money are even further intertwined.

KEYWORDS: monetary policy, Mariana, Jefferson, Cervantes, Don Quixote, Austrian School, School of Salamanca, Philip II, Philip III, libertarianism,

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liberty, slavery, regicide, billion coins, Constitutionalism, Aragon, Euclid, Ron Paul, Paul Krugman

JEL CLASSIFICATION: B1, B2, B3, N1, N4

What will I say about our own *maravedí*, which was first of gold, then silver, and now is entirely of copper? And who would be so bold as to dare to censure a custom allowed in all times and all places?

Juan de Mariana, *La dignidad real y la educación del rey* (341)¹

‘What do you mean “forced people?”’ asked Don Quijote. ‘Is it possible that the King uses force against anyone?’

Miguel de Cervantes, *Don Quijote de la Mancha* (1.22.199)

INTRODUCTION

Striking parallels exist between the work of Juan de Mariana (1536–1624) and modern political opposition to the advisability of central banking in the United States. I claim that said parallels can, and indeed should, be viewed as a matter of ideas passed down both directly and indirectly from late Renaissance Spain, ideas that were expressed in response to historical circumstances remarkably similar to our own. To quote Mariana: “What has happened will happen. Previous events are very influential: They convince us that what sets out on the same path will reach the same conclusion” (Mariana, [1609] 2007, p. 279).

Modern monetary theory first arose at the University of Salamanca during the second half of the sixteenth century through the combined efforts of Neo-Scholastic thinkers like Martín de Azpilcueta, Diego de Covarrubias, Tomás de Mercado, González de Cellorigo, and Luis de Molina.² On the one hand, motivated by

¹ All translations are the author’s own, unless otherwise indicated.

² As Luis Beltrán points out, the School of Salamanca’s “boundaries are blurry,” and not all of the thinkers that we associate with it actually attended the university or taught there, including Mariana. Still, it was the source of the intellectual atmosphere of late Renaissance Spain. For detailed presentations of the School of Salamanca, see the monograph by Marjorie Grice-Hutchinson and the edited volume by Grabill.

their philosophical interest in medieval and classical knowledge on the subject and, on the other hand, by the social and economic turmoil brought about by the importation to Spain of massive amounts of gold and silver from the New World, these men penned treatises expounding variously on the origins, functions, and effects of money. At the turn of the sixteenth century, however, a more critical and political incentive for monetary analysis arose when the Habsburg kings Philip II, Philip III, and Philip IV embraced a policy of debasement to cope with the massive costs incurred by the Spanish Empire, not the least among which were expenditures associated with courtly extravagance, bureaucratic graft, and multiple wars both domestic and foreign, especially in the Low Countries of northern Europe. Thus, the infamous Spanish billon copper coin, in the end entirely denuded of its silver content and transformed into one of the most worthless currencies of the modern era.

Figure 1. A *vellón* coin of Philip IV with a nominal value of sixteen *maravedís*.



Source: R. J. Sommerville (2011).

The great Jesuit thinker Juan de Mariana is the major voice of this last phase of the School of Salamanca's monetary theory. Extending the ideas of his precursors, his principal legacy in the field of economics is *De monetae mutatione* (*A Treatise on the*

Alteration of Money), published in 1609, which is a brilliantly articulated condemnation of the inflationary policies of King Philip III and his advisor the Duke of Lerma, and for which Mariana was promptly arrested and charged with *lèse-majesté*. His confrontation with Habsburg authorities over their fiscal shenanigans suggests another important facet of his thought: his radical advocacy of regicide. In his equally provocative princely advice manual, *De rege et regis institutione* (*The King and the Education of the King*), published in 1599, Mariana lays out the case for killing kings who abuse their power. And thanks to the second edition of this manual, published in 1605, which contains an early version of *De monetarum mutatione* in the guise of its sole additional chapter, “De moneta” (“On Money”), Mariana’s aggressive economic analysis remains forever linked to his scandalous endorsement of assassination as a vital check to monarchical tyranny.

Both the monetary concerns and the anti-authoritarian animus of the modern libertarian wing of American conservatism are heavily bound to the ideas of the Austrian School of economics, which includes such luminaries as Carl Menger (its founder), Ludwig von Mises, Friedrich Hayek, Murray Rothbard, Walter Williams, Hans-Hermann Hoppe, and Jesús Huerta de Soto. They also echo the economic and political views expressed by Thomas Jefferson during the early years of the Republic. The Austrian School’s debts to Salamanca have already been pointed out. But given Jefferson’s own documented attention to Mariana’s *History of Spain* (*Historiae de rebus Hispaniae*, [1592] 1854),³ as well as his profound admiration for the works of John Locke and Miguel de Cervantes—arguably two of Mariana’s most significant readers—it is well-nigh time to recognize that substantial aspects of American libertarianism are doubly reinforced projections of the great Jesuit scholar’s menacingly cynical stances against the policies of the Spanish Habsburgs. In short, Mariana’s unique formulation of the politics

³ In the references, this is listed as *Historia general de España*. These are the same work. First Latin (1592), then a Spanish translation by Mariana himself (1601), and finally the first English translation appears to be 1699. It is likely, although impossible to tell, that Jefferson himself had English translations in his libraries and that he sent the same book to Madison, but he could also have sent Madison a Latin or a Spanish version. The problem is compounded by the fact that the 1699 English translation is entitled *The General History of Spain*, whereas Jefferson refers to it as *History of Spain* (as do many modern English-speaking experts on Mariana).

of money stands as one of the most profound connections between the baroque world and our own.⁴

MONETARY THEORY, DEFICIT SPENDING, AND ECONOMIC CRISIS

In the wake of the worldwide economic crisis of 2008, we have witnessed an ongoing debate over the decisions by political authorities, Americans and Europeans in particular, to debase their respective currencies.⁵ This boils down to a difference of opinion regarding the advisability of interfering with the economy by injecting money into it in order to rescue those who bet wrong prior to the crisis—i.e., institutions and individuals who might otherwise be left holding worthless property, especially real estate and the stocks of failed corporations, such as banks, car companies, etc. The interventionists reason that with more money chasing the same amount of assets, goods, and services, people will shrug off the urge to save because their net worth will appear to stabilize, or else they will feel obliged to spend as the rate of return on their savings plummets in concert with the lowering of interest rates due to the increased availability of money. Furthermore, deficit spending by governments is viewed as the necessary complement to monetary expansion. Mainstream economists and politicians argue that the crisis will worsen without the continuation or

⁴ In addition to Grice-Hutchinson, Murray Rothbard should be credited with having emphasized the depth of the legacy of the School of Salamanca for Austrian economics. He made a good circumstantial case for Mariana's influence as well (2006, pp. 117–122, *passim*). In political terms, he also pointed out that Mariana was “positively ‘pre-Lockean’ in his insistence on the right of the people to resume the rights of sovereignty they had previously delegated to the king. While Locke developed libertarian natural rights thought more fully than his predecessors, it was still squarely embedded in the scholastic natural law tradition” (p. 314).

⁵ Of course, American and European authorities are not alone. The Chinese have long been accused, by American politicians in particular, of maintaining an artificially devalued yuan; Japan recently declared all-out war on deflation by vowing to print as many yen as it takes; Latin American countries like Argentina and Venezuela are notorious for periodic monetary collapses; and then there are the classic apocalyptic currencies of Zimbabwe and Weimar Germany. The authorities of ancient Rome and Greece were no different. The earliest known text to refer to a debased currency is generally held to be Aristophanes's play *The Frogs* (718–782), which dates from 405 B.C.

increase of government outlays in the form of infrastructure projects or wealth transfer payments in the form of social services and welfare.

Central bankers as well as officials in favor of more government debt, then, would have us believe that their efforts will bring about a general “stimulation” of commercial activities, thereby staving off economic ruin. The libertarian response is that such policies are destructive and unethical because they distort the “market” value of things by changing relative prices. Likewise, the Neo-Scholastics of Salamanca argued that said policies are unadvisable and unjust because they distort the “natural” value of things. Libertarians and Salamancans tend to link morality to economics since, on the one hand, they oppose those who are employed by the government or else are the beneficiaries of its largesse and, on the other hand, they believe that the longer term consequences of economic interventionism hurt people more than whatever dubious short term benefits it may have.⁶ Market strategists like Jim Rogers, James Grant, and Meredith Whitney, along with a minority of academic economists, such as Nassim Taleb, Mark Thornton, and Niall Ferguson, all make similar points when they rail against deficit spending and monetary debasement.

A contemporary American version of this debate was recently broadcast on *Bloomberg TV* between Congressman Ron Paul and Nobel Prize winner and *New York Times* pundit Paul Krugman. Paul stands for fiscal conservatism, debt reduction, and smaller government; Krugman argues for economic management, monetary intervention, and deficit spending. First, Paul:

I believe in very small government. I emphasize personal liberties. I don't like a managed economy, whether it's through central economic

⁶ In an effort to spare readers a much more detailed economics lesson, I oversimplify the important Austrian corollary that inflation ultimately leads to the destruction of malinvested capital and, therefore, higher unemployment, lower wages, and generally less production of wealth and, therefore, less improvement of the human condition than would otherwise have occurred according to the natural conditions of an admittedly harsh free market economy. This longer term view is perhaps best understood as a combination of Joseph Schumpeter's relatively pessimistic notion of the “creative destruction” of capitalism and Friedrich Hayek's more optimistic notion of its “extended order,” both of which would seem to have been at least in part intuited by the Salamancans (cf. Schumpeter [1942] and Hayek [1988]).

planning or monetary policy or, or even Congress doing it. So it's a completely different, uh, philosophy that markets are supposed to work, you know, in a natural way. I want a natural rate of interest. I don't want the government or the Federal Reserve fixing the rate of interest. That's a price fixing. And wage and price controls never work, so pricing the cost of money, uh, doesn't work either. And this idea that somebody or some group might know what the proper amount of money should be or what the proper rate of interest should be is sort of presumptuous. You know, I don't, I don't know where they get this knowledge, and uh, Hayek called it a "pretense of knowledge." They pretend they know, but they really don't... Governments aren't supposed to run the economy; the people are supposed to run the economy.

Then, Krugman:

You can't leave the government out of monetary policy. If you try to think, you know, we're, we're gonna just let it set itself, it doesn't happen. The government is actually always, uh, the, the Federal Reserve, the Central Bank, is always going to be in the business of managing monetary policy. If you think that, that... you can avoid that..., um, you're living in some... you're living in a world as it was a hundred and fifty years ago. Right? We have an economy in which money is not just pieces of green paper with, uh, with, uh, faces of dead presidents on them. Money is, is, uh, is the result of the financial system. It includes a variety of assets. We're not even quite sure where the line between money and non-money is. It's kind of a, a continuum. And look, history tells us that, in fact, an un... a completely unmanaged economy is subject to extreme volatility, is subject to extreme downturns. I know there's this legend... that the Great Depression was somehow caused by the government, caused by the Federal Reserve, but it's not true. The reality is that was a market economy run amuck, which happens, happened repeatedly over, over the past couple of centuries... There are limits. You do need the government to step in to stabilize...

Finally, Paul responds to Krugman's idea that inflation is necessary to get things going again:

Inflation is theft. You're stealing value from people who save money. So, if you have a 2% or a 10%, the value of the currency is lost. And it really destroys an important feature of the economy, and that is saving. Savings tells us something, and it tells us that capital is available. This notion that capital can come out of the expansion of the money supply is remote. Now, uh, Professor Krugman indicates that we just want to go back a hundred years or so..., but he wants to go back a thousand years, or two thousand years, just as the Romans and the Greeks and all other countries debased their currency... (Paul, 2012)

We should note that this debate is, and always has been, very much a matter of perception and perspective. Austrians and libertarians claim to see what others cannot or will not see, namely, that currency manipulation and deficit spending only create an illusion of wealth. In reality government officials are “monetizing” the debt created by their expenditures and foisting the costs onto future generations. More generally, in an unjust sleight of hand, they are transferring debt to creditors: debasing the currency allows debtors to more easily pay off what they borrowed back when the currency had relatively more value. Unwitting citizens, then, are forced to share in government debt as well as the losses of companies bailed out by said government. Even John Maynard Keynes, the most famous apologist for this dual strategy, noted its secretive and sinister nature: “There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one man in a million is able to diagnose” (1920, p. 236). Mariana saw just as much: “the prince..., if he repeatedly debases the value of the currency,... does not avoid committing an offence, with obvious infraction of the laws of nature, and in truth he is deceiving many with means meticulously devised so that they will not grasp the damage that he causes them” (*La dignidad real* [1605] 1981, p. 344).

Objections to Keynesianism are not exclusive to the United States. In *Paradigm Lost: The Euro Crisis*, Uri Dadush and Vera Eidelman argue that restoring the natural value of things and reducing the size of government are the only ways to bring about economic recovery in the same country that over four hundred years ago gave us Mariana. Note the historical irony that the Habsburg policy of currency devaluation is now off the table because the Spanish have embraced the euro, which is regulated by the European Central Bank headquartered in Frankfurt and controlled by bodies like the European Commission in Brussels and Luxemburg:

Spain has to effect a profound structural transformation and cannot look to a cyclical recovery to reignite growth and reduce its mass unemployment. It must instead unwind distortions that were built up over more than a decade, restore its competitiveness, and reallocate resources to manufacturing and other growing tradable sectors. With currency

devaluation not an option, these reforms will only happen if unit labor costs, house prices, and the price of services decline relative to its European partners. A smaller government sector and other far-reaching reforms must kick-start this process. (Dadush and Eidelman, 2010, p. 65)

Of course, the fact that Spain has relinquished control of its currency does not mean that its citizens will not suffer the consequences of increases in the money supply enacted by European institutions. While there may be differences in degree, both the European Central Bank and the Federal Reserve Bank in the United States have opted for monetary expansion, the inflationary effects of which might take time to occur and might be difficult to perceive as they arise at different rates across different sectors of the economy, but will in the long run be no less destructive of each currency's purchasing power.

Mariana made all of these observations as early as his chapter on money in the 1605 edition of *De rege*, where he objected on moral as well as economic grounds to the Habsburgs' debasement of the billon coins ("monedas de vellón" in Spanish). He understood that their policy was an illegitimate form of taxation designed to pay for excessive government expenditures, that it robbed citizens of their personal wealth, and that it would cause shortages and price inflation and have dire consequences for the nation as a whole:

In the first place, it is necessary to affirm that the prince does not have any right over the private property and estates of his subjects that would allow him to take them for himself or transfer them to others.

This adulteration is a form of tribute by which is subtracted some amount of the wealth of the citizens.

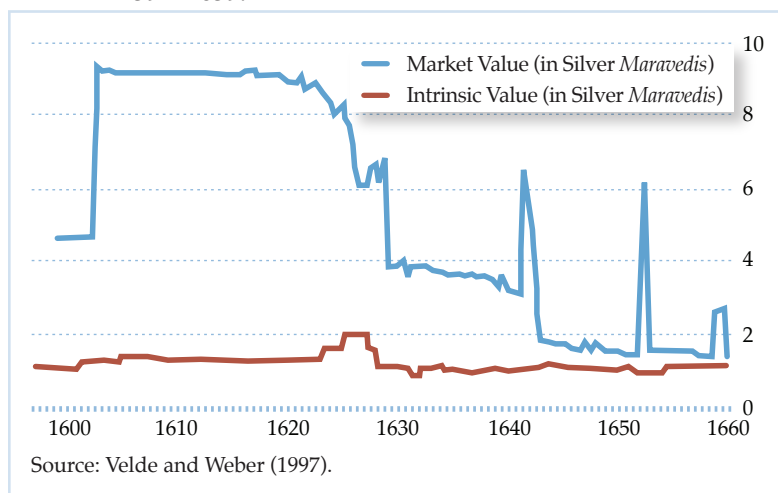
Would it be licit to force open the granary of a subject and steal from him part of his grain and then compensate him for the damage by granting him the power to sell that which remained in his granary at the same value that it had when it was full and we had not taken any part of it? Who would not say that this was robbery?

First, this abuse will necessarily be followed by a dearth of foodstuffs in direct proportion to the value that is removed from the currency, for men do not value money by anything other than its quality and solidity, even when severe penalties are decreed to forestall shortages. What is more, the people will feel tricked and will not stop protesting against this debased currency which has come to substitute the old but which lacks its value, calculating that now they will need much more money to meet their basic needs.

The merchant and the buyer withdraw at the first sign of adulteration and the shortages that it causes. And if the prince fixes the price of goods, as is oftentimes desired, instead of achieving the remedy that is intended, he will aggravate the problem, because nobody will want to sell at a price which is considered unjust and unfair when it is compared with the common estimation. Once commerce is ruined in this fashion, there will be no limit to the ills that will befall the people, and the inhabitants of that country will lose wealth right up until their last breath. (*La dignidad real* [1605] 1981, pp. 341–343, 346, 348–349)

The temporal inflection that Mariana gives to this last statement is crucial. Inflation only makes matters worse in the future. His prediction took a few years to come about, but the history of the value of the billon coins confirms his prescience. As one researcher at the Federal Reserve Bank of Chicago put it: “The Spanish experience unleashed unprecedented manmade inflation, which made the Price Revolution of the sixteenth century (price level increases due to the inflow of American gold and silver) look tame” (Velde, 1998, p. 11). Note how well the graph of the market value of the billon quarter coin resetting to its intrinsic value (Figure 2) corresponds to the fall of the Spanish Empire, the end of which is traditionally marked by the Treaty of Westphalia in 1649.

Figure 2. Market and intrinsic values of a *vellón cuarto* coin, 1597–1659.



Arguments about the government's right to grow itself through debt and then print money in order to pay for it amount to more than an economic policy dispute. As Paul has consistently pointed out, since these issues concern federal officials' ability to redistribute the wealth of citizens, they are ultimately constitutional in nature. In an editorial piece for *The Washington Times*, Warren L. Dean, Jr. objected in similar terms to the logic that a failure on the part of Congress to increase the federal debt limit would bring about a national default that was "unconstitutional":

It seems that the "me" generation thinks it has a constitutional right to continue to spend money it does not have. Without much doubt, its theory has to be among the most stupid—and most childish—constitutional arguments that ever have been put forward in Washington.

It is putting our constitutional system of government in hock and mortgaging the liberty of future generations of Americans. For a nation that, until now, has lived by the philosophy that it would hand the next generation a brighter future than the last, it is quite a reversal.

The liberal left prefers to spend the money of future generations. That is easier because the unborn don't have a say in the matter. They don't have the right to vote and cannot object.

In fact, the Constitution is quite clear in this area. It should be. It was built on the foundation of a rebellion that was, in turn, inspired by a tax revolt. That is one reason why Article I of the Constitution firmly vests the power of the purse in the elected representatives of the people in Congress. The power to tax, spend and, yes, even to borrow are all vested in Congress, which shall have the power "To borrow money on the credit of the United States." Pretty clear, you might think. Neither the executive nor the judiciary has that power. In fact, it is unconstitutional for the executive to spend money not appropriated by Congress. (Dean, 2012)

Similar clashes are arising in Europe. Not only has there been extensive debate in Mediterranean states like Greece and Spain regarding the legality of ceding control of their domestic economies to Brussels, we now see a corresponding debate in the Federal Republic of Germany over the legality of "restructuring" the debt of said states on the backs of Germans: "The German Constitutional Court must now decide whether the European Central Bank's policy of buying bonds contravenes the conditions under which Germany joined the European Union" (Raisbeck, 2013).

Here again, with respect to both the United States and the European Union, Mariana's thinking about fiscal matters can seem prophetic because the laws of economics that he perceived are applicable regardless of time and space. His complaints about the policies of the Habsburgs are the same ones we hear today against central banks and governments. And not only did Mariana articulate them in moral and economic terms, he did so on formalistic, or what today we would call "constitutional" grounds. He complains loudly in book one, chapter eight of *De rege* that tradition had been abandoned by granting excessive power to the head of state, what we would call the "executive branch." This is the essential reason behind his constant appeals to the Kingdom of Aragon, which unlike his native Kingdom of Castile, had clung tenaciously to its jurisdictional independence from Habsburg authority right up until the 1590s:

According to Aristotle, among the Greeks, the Lacedaemonians only conferred authority on their kings when it came to the direction of warfare and the care and administration of sacred things. In more recent days, in Spain, the Aragonese thought similarly, being so zealous in the defense of their liberty that they believe all liberties are diminished at the slightest concession. And thus, the Aragonese established an intermediate body between the king and the people, similar to that of the tribunes, popularly known as the Justice of Aragon, which, armed with the laws and the authority of the people, would keep royal power within certain limits... Among those people and others nobody doubts that the authority of the people is greater than the authority of the king. Otherwise, how would it be possible to resist the power and the will of kings?

Requiring that the decisions of the king be ratified by the community at large (a right which, in spite of everything, is still maintained among the Aragonese) has been suppressed...

Our own ancestors, being wise men, foresaw this danger and instituted numerous and most farsighted measures so that kings would be constrained within the limits of moderation and sobriety and would not be able to exercise an excessive power that might harm the public. Among other things, with great prudence they established that no important business should be resolved without consulting the lords and the commoners, to which end there were to be convened parliamentary Cortes in the realm to be attended by elected representatives from all branches, that is, the prelates with full jurisdiction, the lords, and the conservators of the townships. This custom is still maintained in Aragon and other provinces, and God grant that our princes would restore it!

Why have our traditional Cortes been so disfigured by the exclusion of the lords and the bishops, rendering impossible that common consent wherein resides public well-being, such that public and private business is now resolved at the arbitrary whim of the king and the will of the few? (Mariana, [1599] 1981, pp. 93–94, 98, 101)

THE ANIMUS OF AUSTRIAN ECONOMICS: MARIANA AND HABSBURG TYRANNY

A fascinating aspect of Mariana's career is that he gradually concludes that one way, *if not the very best way*, to judge history itself is in terms of monetary policy. In this he represents the logical extension of the School of Salamanca, which left a philological record of deepening interest in economic matters. In 1550, for example, Diego de Covarrubias produces the school's first full treatise on money, *Veterum collatio numismatum* (*An Examination of Ancient Coins*), in which chapters five and six deal with the historical currencies of Spain ([1550] 1775, pp. 168–252). Covarrubias notes passively that the practice of debasement dates as far back as the reign of King Alfonso X (1252–1584), also known as “el Sabio” ‘the Wise.’ In a preliminary note to his 1775 edition of Covarrubias's study, Josef Berní y Catalá indicates that the version published at León in 1558 contains these two chapters translated into Spanish, while the rest remain in Latin ([1550] 1775, pp. 309–311). Some of this divergence owes to simple nationalism, but it also reveals a desire to place highly technical and controversial information about the history of Spanish money before a reading public no longer versed in Latin.

For his part, Mariana's interest in things monetary dates at least from his investigations for his epic *Historia general de España* (Latin, 1592; Spanish, 1601), a text in which he also mentions, and in fact condemns, Alfonso X's recourse to debasement ([1592] 1854, 13.9.382–383). A few chapters on he declares that Alfonso's policy lent enormous support to his son Sancho's rebellion (14.5.407). Later, he pauses to qualify the triumph of Enrique II (1366–1367, 1369–1379), the first of the great Trastámara line that begat the Catholic Monarchs Ferdinand and Isabella, by indicating that this king too had to turn to debasement to finance his wars against Pedro I (1350–1366, 1367–1369). Mariana even says that Enrique

only got away with it because he was so handsome, and because he was generally regarded as the embodiment of gentlemanliness (“por excelencia le llamaban el Caballero”), whereas his rival was utterly cruel (17.14.520). From then on Mariana displayed ever-increasing urgency in regard to this theme, with each book granting more attention to monetary matters, allowing them to emerge as the primary focus of his life’s work. In 1599, he published a study of weights and measures, *De ponderibus et mensuris* (*On Weights and Measures*), topics that relate to debasement because authorities manipulate currencies by changing precisely these parameters. After seeing to the Spanish translation of *History of Spain*, with its clear critiques of Alfonso X and Enrique II, he then focused on adding “De moneta” to the 1605 edition of *De rege*. As Gabriel Calzada points out, Mariana inserted this new, highly contentious chapter on money into book three, precisely after the chapter on tribute, or what we would today call “taxation.” Moreover, “the second edition of *De rege et regis institutione*, in which he presented for the first time his anti-inflationary argument, was published together in a single volume with *De ponderibus et mensuris*, as if he had wished to add a long appendix expounding in detail on the technical foundations of the evil he was denouncing” (pp. 86, 88–89). The concluding words of “De moneta” underscore this link: “we wanted to admonish princes against altering those things which are the very foundations of commerce, that is, weights, measures, and currency, if they desire to have a tranquil and stable state, because under the appearance of momentary utility lies untold fraud and harm” ([1605] 1981, p. 351). In 1609, the topic reached critical mass in Mariana’s astonishing *De monetae mutatione*, which he quickly translated into Spanish for circulation in manuscript form, a clear sign of the gravity with which he now viewed the explication of monetary theory. The fact that Spanish authorities responded to this final sally by arresting him and charging him with *lèse-majesté* indicates that he was by no means alone in this regard.

What we are witnessing, then, from Covarrubias through Mariana, is the early modern birth of monetary theory, and by extension economics itself, as a discrete field of inquiry.⁷ What is more, we are

⁷ Grice-Hutchinson: “It is clear that the monetary theory of the School of Salamanca spread through many countries during the earlier decades of the seventeenth century” ([1952] 2009, p. 74). For a look at the way modern fields of scientific study

watching its coincidental *politicization*. Mariana lays the groundwork for all this by way of historical analysis. As we have seen, as early as 1592 he had already indicated the ineptitude with which Alfonso X “the Wise” chose to dilute his coins with copper. In the “De moneta” chapter of the 1605 edition of *De rege*, he reiterated his view that this was, in fact, the main reason for the chaos that threatened Alfonso’s reign. This time he does so in the first person:

I believe that the poor quality of the new money was the principal cause of the people’s exasperated spirits, so much so that during the life of King Alfonso they switched allegiance to Don Sancho and his sons. Don Alfonso was so stubborn and capricious that in the seventh year of his reign he tired of the money called the *burgalesa* and changed it for yet another, which was called the *negra* because the metal was so bad. ([1605] 1981, p. 347)

Mariana continues his monetary disenchantment with Spanish history, first dispensing with Alfonso XI (1312–1350), who evidently ignored the lessons to be learned from his great-grandfather, before turning once again to the civil wars between Pedro I and Enrique II. Striking here is the casual frankness with which he flips the traditional roles played by Enrique, the founder of the House of Trastámara, and Pedro “el Cruel” ‘the Cruel,’ the last king of the moribund House of Burgundy. All pretense vanishes, reputations are irrelevant, and the archeological record unveils the truth:

We have been able to inspect the *reales* of Don Enrique and Don Pedro. Those of the latter were truly of good silver, equal to that still used in our day in Castile; those of Don Enrique were rather blackened through much mixing with the copper they contained. And at the advent of a shortage of all goods of primary necessity, he found himself obliged to reduce the value of the currency by two thirds. Such often happens, for what is believed to be most useful and ingenious comes to be most harmful through lack of foresight and because the judgment of men is blind. ([1605] 1981, pp. 347–348)

For more than fifteen years before his open attack in 1609 on Philip III and the Duke of Lerma in *De monetæ mutatione*, Mariana

took shape through a kind of introspective precipitation of the modern intellect, all with a serious nod to early modern Spaniards like Velázquez and Cervantes, see Michel Foucault’s *The Order of Things*.

had been putting a lot of ink to paper against two of the most iconic kings of Spanish history, and precisely according to their willingness to debase their currencies.

It is his historically inflected politicization of monetary policy that makes Mariana such a giant. He may have accessed Nicholas Oresme's work, he surely read Salamancan Neo-Scholastics like Covarrubias and Molina, and in chapter three of *De monetae mutatione* he cites René Budel's *De monetis et re numaria* (*On Money and Monetary Things*, 1591), which means he knew the substance of many other publications on the subject (Laures, 1928, p. 163). He grasped Gresham's Law, whereby bad money drives out good in the context of an artificial exchange rate; he perceived the subjectivist theory of value, anticipating what today we would call "marginal utility"; he understood both the quantitative and the qualitative theories of inflation; and he warned of the disastrous effects inflation has on commerce and society. But the specifics of his thoughts on these matters are rarely original. His intellectual power is one of synthesis; his work, in essence, is a bitter preview of the cynicism of the Austrian economists, who regard much of recorded history as a series of misguided economic interventions arising from, and leading to, all sorts of travail and misery. To put it another way, Mariana's true genius, his most original discovery of all, is that statist monetary policy and authoritarianism are one and the same. And he brought a massive dose of moral courage to giving the issue its public due, turning up the volume of his insight and aiming it straight at the powers that be.⁸

This is also what makes the 1605 version of his essay on money so important; for it is here that he first establishes the lateral connections between currency debasement and two other wicked regal practices: tyranny and slavery. This is merely a matter of the transitive property of equality in the fields of logic and mathematics, whereby if $a = b$ and $b = c$, then $a = c$. Euclid's "first common notion" from book one of his *Elements*, which by the way was translated into Spanish in 1576 by Rodrigo Zamorano, states it thusly: "Things which are equal to the same thing are also equal to one another" (2). In book one, chapter five of the first edition of *De*

⁸ For a thorough discussion of the nefariousness of interventionist monetary policy, see Rothbard ([1963] 2008).

rege, Mariana had already defined a good king as one who treats his subjects as if they were his own progeny, as opposed to tyrants, who enslave them: "Thus it comes about that he rules his subjects not like slaves, as the tyrants do, but he is over them as if they were his children" ([1599] 1948, p. 136). A few pages later he had tied tyranny to slavery again:

It is unavoidable that the tyrant be afraid of those whom he puts in a state of dread; and must diligently take care, by removing all their means of protection and by taking their weapons away, not leaving them even their personal arms, that those whom he holds as slaves get no opportunity to engage in any of the liberal arts, worthy of a freeman, or strengthen their bodily robustness and their spiritual confidence by military activities. ([1599] 1948, p. 140)⁹

In 1605, when he adds "*De moneta*" to what is otherwise the exact same text, Mariana defines monetary manipulation as illegitimate taxation and, therefore, another form of tyranny:

The prince cannot impose new tributes without first obtaining the formal consent of the people. Let him request them, certainly, but he is not to despoil his subjects by taking something each day according to his fancy and little by little reducing to misery those who until recently were rich and happy. To proceed in this manner would be to act like a tyrant, who measures all according to his greed and arrogates all powers to himself, not like a king, who should moderate the authority which he received from those who accepted him as such according to reason and law, and not extend it further. ([1605] 1981, pp. 341–342)

What we have, then, in the 1605 edition of *De rege*, is a triple equivalency between tyranny, monetary debasement, and slavery. And here again, because he appeals to transcendental moral laws, Mariana's line of reasoning can seem prescient. Forcing citizens to assume the payment of debts unlawfully incurred by the government is to enslave them. Americans should recognize a slogan from the Revolutionary period lurking in this construct: "taxation without representation is tyranny." The only difference is that Mariana goes a step further by exposing monetary manipulation which finances government debt as an illegal form of taxation.

⁹ The Second Amendment to the US Constitution addresses this same issue.

In other words: “debasement is taxation without representation, which is tyranny.” In his editorial piece for *The Washington Times*, Dean (2012) makes essentially the same argument:

But while we are looking at the question of the constitutional implications of fiscal irresponsibility, it might be more instructive to consider the other, far simpler, post-Civil War amendment to the Constitution. The 13th Amendment elegantly states, “Neither slavery nor involuntary servitude, except as punishment of a crime whereof the party shall have been duly convicted, shall exist within the United States.” Involuntary servitude includes indentured service and peonage—in other words, compulsory service in payment of a debt.

Here we might ask, what is the proper response to tyrannical leaders who enslave their citizens? Mariana’s answer is one from which many contemporary readers will recoil, but it was accepted doctrine at the time: when monarchs become tyrants, they may be killed.¹⁰ In book one, chapter six of *De rege*, just after the chapter in which he lays out his definition of tyranny, the Jesuit thinker clearly endorses political assassination as a necessary check to kings who transgress the limits of their power:

If circumstances require, and the commonwealth is not able otherwise to protect itself, it is right, by the same law of defense and even by an authority more potent and explicit, to declare the prince a public enemy and put him to the sword. Let the same means be available to any individual, who, having given up the hope of escaping punishment and with disregard for his personal safety, wishes to make the attempt to aid the commonwealth.

It is a salutary reflection that the princes have been persuaded that if they oppress the state, if they are unbearable on account of their vices and foulness, their position is such that they can be killed not only justly but with praise and glory. Perhaps this fear will give some pause lest they

¹⁰ In the classical tradition Cicero and Plutarch had supported tyrannicide. John of Salisbury had argued for assassination of tyrants in his *Policraticus*. Thomas Aquinas endorsed the right to resist tyrants in *Summa Theologica* and elsewhere, although he thought fear of tyrannicide drove princes to even worse behavior and so he preferred the examples of those martyred by Nero and Diocletian. In early modern Spain, the emphasis on natural law by the Neo-Scholastics at Salamanca led down this road as well, especially among the Jesuits, and the thought of Juan de Mariana is perhaps the most notorious example. For a detailed survey and fuller discussion, see Brincat (2008).

deliver themselves up to be deeply corrupted by vice and flattery; it will put reins on madness. ([1599] 1948, pp. 148, 149)

In an important moral qualification, Mariana has argued here that a political assassin is only justified if she is willing to die in the attempt. Although he never deigned to personally take up arms against the king, with his pen Mariana was certainly willing to put his life on the line for what he believed. When he proclaimed the illegitimacy of Philip III's monetary policy in *De monetae mutatione*, he knew full well that he risked a charge of *lèse-majesté*, the penalty for which was death:

At a time when some are restrained by fear, others held, as it were, in bondage by ambition, and a few are losing their tongues and stopping their mouths because of gold and gifts, this pamphlet will achieve at least one goal: All will understand that there is someone among the people who defends the truth in his retirement, and points out the public threat of dangers and evils if they are not confronted with dispatch. Finally, like Diogenes, I will appear in public, I will rattle my barrel; I will openly assert what I think—whatever the final outcome. ([1609] 2007, p. 252)

To the degree that adherents to the Austrian School of economics look to Mariana for the roots of their political and economic thinking, they are taking inspiration from ideas that the valiant Jesuit theorist formulated in response to Habsburg tyranny. In her magnificent monograph on the School of Salamanca, Marjorie Grice-Hutchinson drew the direct lines of influence that the Spanish Neo-Scholastics had on the evolution of economics, from seventeenth-century thinkers like Grotius, Pufendorf, and Hutcheson to philosophes like Galiani, Condillac, and Turgot ([1952] 2009, pp. 59–78), which all allows for a multi-pronged impact on classical English economists like Locke, Smith, and Ricardo. Moreover, by any number of these routes, modern nineteenth-century economists like Jevons, Walras, and Menger are also their inevitable heirs. The problem with situating Mariana in this trajectory has always been that, owing to the fact that both *De rege* and *De monetae mutatione* were collected and burned with such zeal by Catholic as well as Protestant authorities, the recognition of his influence has remained speculative. Still, it is difficult to imagine that near contemporaries like Grotius, Scaccia, and Jesuits like Lessius, Salas, and Lugo, all intermediate figures

cited by Grice-Hutchinson, would not have laid their hands on Mariana's controversial work. The recent discovery by Calzada of a copy of *De ponderibus et mensuris* in Locke's library is, I believe, an excellent indication that Mariana's influence was likely far broader and more tangible than previously imagined.

In the last two sections of this essay, I want to point out that Mariana's modern legacy has also taken two additional, relatively unrecognized paths, namely via Cervantes and Jefferson. First, let us summarize that we are contemplating highly politicized arguments that are both economic and constitutional in nature: Mariana's objection to monetary tyranny is part and parcel of his objection to the Habsburgs' political usurpation of the medieval traditions of Spain's local legal codes (*fueros*), the last remaining vestiges of which were in Aragon at the time of his writing. With these facts in mind, I find it noteworthy that Cervantes read Mariana and that Jefferson read both Cervantes and Mariana. Ironically, Grice-Hutchinson cites Cervantes only as a warning against "the sin of reading our own ideas into the work of older writers" ([1952] 2009, p. ix). I want to embrace this sin and consider that certain reflections on the meaning of money and the struggle for liberty found in the writings of the inventor of the modern novel and the author of the American Declaration of Independence may owe some degree of their inspiration to Mariana.

MARIANA AND CERVANTES

If Mariana's genius lies in his discovery of the politics of money and his subsequent radical opposition to monetary adulteration as one of the most nefarious examples of monarchical tyranny, in a curious twist, the most immediate consequence of his work was its influence on the history of the novel.¹¹ Readers of Cervantes's *Don Quijote* (part one, 1605; part two, 1615)—first published the same year as Mariana's second edition of *De rege*, with its added "De moneta" chapter—will be familiar with the protagonist's difficulties regarding which heroes he should emulate. Substantial passages involve the knight's perplexing decisions to fashion

¹¹ For indications of the deep impact that Mariana's work had on Cervantes, see Fernández-Morera (2009), Liu (2007), and Graf (2011, 2013).

himself after a shifting series of fictional and quasi-historical champions: Palmerín de Inglaterra, Amadís de Gaula, Bernardo del Carpio, “El Cid” Rodrigo Díaz de Vivar, Reinaldos de Montalbán, Abindarráez, the Marqués de Mantua, the Caballero del Febo, etc. One scholar describes Don Quijote’s neurotic indecision as reflecting his society’s “crisis of exemplarity,” the end result of a process by which classical models of humanist virtue lost their persuasiveness over the course of the sixteenth century (Hampton). Readers of Mariana, however, can see how specifically this crisis coincides with the Jesuit’s own scientific demolitions of the myths of Spanish history. With Alfonso X “the Wise,” Enrique II of Trastámara, and now both Philip II and Philip III all unveiled as adulterating tyrants, is it any wonder that Don Quijote turns to fiction before wandering out on an impoverished Castilian landscape in an elusive quest for justice?

Beyond Don Quijote’s identity crisis, we also find Mariana’s thoughts on money and politics insinuating themselves into the most intricate ironies of Cervantes’s novel. From the outset, as the aging hidalgo proceeds to sell off his estate to finance his consumption of militant fantasy literature, his household management might be said to resemble that of the Spanish Empire. The fact that a full three quarters of his income goes to food suggests that price inflation is now chipping away at any benefit he enjoys via his tax-exempt status (1.1). Leaving home, he remains in utter denial of economic reality. The first innkeeper actually has to inform him that adventures require money (1.3). In his first act as a “caballero,” he intervenes in a labor dispute that has all the markings of an allegory about the effect of the Habsburg’s new monetary policy upon future generations (1.4). Don Quijote finds Juan Haldudo brutally whipping Andrés, and when he orders him to fork over the youth’s back pay, the farmer sarcastically says that he will happily do so, with interest even. The mad knight responds that he will waive the interest so long as he pays the salary he owes him in *reales*—i.e., good silver coins instead of adulterated copper ones. A few chapters later, the second narrator’s determined haggling with Moriscos over the lost manuscript, which he finds in a heap of papers destined to feed silkworms, twice highlights the subjective theory of value, with the added irony that Spain’s silk industry is about to be destroyed by the government’s expulsion

of these same people (1.9). Later still, Don Quijote's dismissals, or dissembling postponements, of Sancho's repeated requests for a salary again make manifest an elitist disregard for the rules of the modern market economy (1.18, 1.20, 1.46, 2.7, etc.).¹²

Even more intriguing, *Don Quijote* contains numerous ironic allusions to Gresham's Law. The novel's first explicit pun involves just such an allusion. The description of Rocinante—"he had more quarters than a piece of eight"—refers to cracks in a horse's hoof owing to poor care, improper shoeing, injury, or any number of diseases; but it also plays off the decay of the Spanish money supply, which is taking place from the ground up, so to speak, via the Habsburgs' devaluations of the *vellón cuarto* coin (1.1). Despite the official exchange rate of sixty-eight *cuartos* per *real*, it now took more quarters to buy a piece of eight as people responded to the new policy by spending copper and saving silver. Toward the heart of the novel, Sancho's fortuitous discovery of one hundred gold pieces hidden inside a suitcase in the Sierra Morena hints at the same practice—i.e., good money is being secreted away in response to the Habsburgs' adulterations and mandated exchange rates (1.23). Indeed, throughout the Sierra Morena episodes, Cervantes appears to riff off the two senses of "adultery," the one having to do with sexual infidelity, the other with falsifying coinage. Again, when the squire fantasizes about getting rich by importing black slaves from the Kingdom of Micomicón to Spain, his racist metaphor, "as black as they be, I will turn them back into white or yellow," overtly references the darker, oxidized copper coins that are now pushing out silver and gold (1.29). The phrase also wryly acknowledges the counterfeit billon industry that sprang up on Spain's borders in response to the artificial rise in the price of copper caused by the Habsburg policy (Lea, 1906, pp. 560–566). And in part two, when Ricote offers to pay Sancho two hundred gold pieces to assist him in recovering his treasure, we can read Cervantes drawing an astonishingly complex and critical parallel between the exile of the Moriscos and the outflow

¹² For the tragic irony of the silk industry and the Toledo manuscript as well as more on the drama of Sancho's salary in *Don Quijote*, see the wonderful book by Carroll B. Johnson (2007). I believe that Johnson misfires by reading Cervantes as a critic of the free market *per se* rather than as an ironic observer of the dangers of governmental interference therein.

of good money from Spain: mutually reinforcing socially immoral and economically unwise policies (2.54).¹³

With Sancho's and Ricote's monetary evasions and Mariana's denunciations of the Habsburg policy in mind, it is difficult to avoid a deeper, truly bourgeois understanding of gold permeating Cervantes's masterpiece. As ambassador Warren Randolph Burgess once explained, gold puts natural limits on the powers of government, making it "historically one of the best protections of the value of money against the inroads of political spending." And as Austrian economist Joseph Schumpeter pointed out, this is precisely "why it was so popular in the bourgeois era. It imposes restrictions upon governments or bureaucracies that are much more powerful than is parliamentary criticism. It is both the badge and the guarantee of bourgeois freedom—of freedom not simply of the bourgeois *interest*, but of freedom in the bourgeois *sense*" (quoted by Woods, 2009, pp. 114–116). The ironies of Don Quijote's attitudes toward gold accentuate his romantic, tragicomic status: early on, he can be a meddling, oppressive bully; other times, especially in the second part, he rises to the role of defender of justice. In his famous "Golden Age" speech the knight clearly understands that the difficulty of mining gold makes it a store of value, but his nostalgia for some sort of prehistoric Platonic communism that would obviate private property leaves much to be desired (1.11).¹⁴ In the lion episode, however, which elicits the Morisco narrator Cide Hamete's most effusive praise, the hero symbolically defies not just a royal beast but also what fellow hidalgo Diego de Miranda at first thinks must be a wagon bearing "the King's money" (2.17). Sancho's tip of two gold pieces to the driver and the lion keeper, followed by the latter's promise to relate the knight's challenge to "the very King himself when he appears at Court," conclude

¹³ For more on the Ricote episode and the gold standard, see Liu (2007).

¹⁴ For different views of Don Quijote's "Golden Age" speech, see Geoffrey Staggs (1985) and Francisco Pérez de Antón (2003). Staggs details the philological history of the trope and Pérez de Antón assesses the same as a trans-historical delusion also found at the roots of both Marxism and liberation theology. Like Pérez de Antón, in her recent book, Susan Byrne holds that Cervantes himself is here being critical of private property, endorsing the knight's nostalgia for Platonic communism (2012, p. 42). I hold that a more Marianan-inspired irony is at play and that Don Quijote is rhetorically abusing the hospitality of his hosts.

the episode with flippant gestures in the direction of Philip III. Later, it is hard not to see a related slap at the same monarch when Governor Sancho, who reigns according to Don Quijote's princely advice, metaphorically contravenes the policy of inflation by finding ten gold pieces hidden in a cane, thereby exposing a debtor's illicit attempt to avoid paying his creditor (2.45). Viewed this way, the novel contains a whole slew of loaded phrases that bring Mariana's protests to mind, such as Don Quijote's quip at the beginning of part two that "historians who avail themselves of lies ought to be burned like those who counterfeit money" (2.3), or the subtly misallocated Latin phrase in the first prologue, "Non bene pro toto libertas venditur auro" "There is not sufficient gold to buy back the loss of liberty.'

If politicized allusions to money are not enough to indicate Mariana's importance for Cervantes, *Don Quijote* also contains, particularly in part two, a consistent critique of the decadence of the courtly governing classes, and even insinuations of the Jesuit's constitutional nostalgia for Aragon. Critics often marvel at the burst of Solomonic and Platonic wisdom that Sancho displays when he finally gets his island. His perceptive ruling in favor of the creditor strikes me as a case in point. But some of the final decrees in "The Constitutions of the Great Governor Sancho Panza" are ironically flawed from both Salamanican and Austrian perspectives. When he fixes the price of shoes, we know that this gesture obviates much of what was good about his reign, for he has effectively lowered the quality and the quantity of footwear available to the fictional citizens of Barataria (2.51). Similarly, his prohibition against hoarding is bound to have disastrous effects. And what are we to make of the fact that Governor Sancho accepts two hundred gold pieces from the malicious Duke while refusing to take the same sum from Ricote to assist him in the recovery of his fortune? After retiring from Barataria, Sancho repeatedly claims to have governed beyond reproach—"I have governed like an angel"—but the bias he subsequently displays against his Morisco neighbor suggests that a more sinister chain of command has taken hold in the real world (2.53-54).¹⁵

¹⁵ In the context of the connections between Cervantes and Jefferson that I will soon discuss, it is quite difficult not to see a parallel between Sancho's "angelic" defense of his art of governing and James Madison's famous lines from *Federalist*

The other dreadful irony at the heart of the novel's second part is the fact that Zaragoza, the constantly named objective that remains just out of Don Quijote's reach, was also the site of an Aragonese Cortes tradition in which, unlike the tripartite Castilian tradition, hidalgos actually had political representation as a fourth estate. All remnants of said tradition were put to the sword by Philip II when he invaded Aragon in 1591, and just like Mariana, Cervantes appears chagrined by that outcome. Scholar Quentin Skinner once noted that the collapse of late medieval republicanism in Western Europe, which coincided with the rise of the early modern authoritarian super states, was marked by an intellectual return of the tradition of educating princes by guiding them toward the light of reason via utopian curriculums ("Political Philosophy" 441–452). But libraries have been burned, allegorical caves remain dark dreamscapes, and no Platonic island paradise awaits us at the end of *Don Quijote*. Another of Cervantes's recourses to Latin, which is found in Don Quijote's last letter to Governor Sancho, "Plato amicus, sed magis amica veritas" 'Plato is a friend, but a greater friend is the truth,' harmonizes perfectly with the anti-monarchical neo-Aristotelian melancholy of late Scholastics like Mariana. Which is to say that there is something not just "curiously impertinent" about *Don Quijote*, but that, as per so many of its aspects, such as the lion episode, the aborted nostalgia for Aragon, and the consistent pro-Morisco theme, there is in fact something downright tyrannicidal about the novel. I submit that Cervantes announced his angry political sentiment as early as the first prologue of 1605 when he made recourse to an old Spanish proverb: "debajo de mi manto, al rey mato" 'beneath my cloak, I kill the king.'¹⁶

Don Quijote is massive and complex, on the order of the entirety of Shakespeare's tragedies, but if I had to pick one coetaneous

No. 51: "If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself." (1788)

¹⁶ For a more detailed look at the political tension between Plato and Aristotle in part two of *Don Quijote*, see Graf (2013). For a thorough look at the epic struggle between utopian thinking and limited constitutional government, see Levin (2012).

writer who sheds the most light on the novel, it would be Mariana, who not only articulated the intellectual thrust of Cervantes's bitter bourgeois irony but who directly confronted the same Habsburg tyrants against whom the novelist consistently tilts. In my view, like Mariana, Cervantes defends liberty in a materialist sense, i.e.—*Don Quijote* is not just about the abstract right to “dream the impossible dream” but, rather, the tangible right to live free of the monetary, legal, religious and even military oppressions directed by an imperious State hell bent on the daily mugging, enslaving, exiling, and killing of its citizens.

JEFFERSON, CERVANTES, AND MARIANA

The two aspects of Thomas Jefferson's thought that have most influenced modern American libertarianism are his emphasis on the vitality of revolution and his opposition to central banking. In the case of the latter, Jefferson was so wary of institutional promissory notes that his censure extended to banking in general—i.e., beyond his well-known alliance with James Madison in opposition to Alexander Hamilton's plan for a national bank. It would be difficult to exaggerate the radicality of his views on these issues, which are found in oft-cited letters containing hyperbolic expressions of love for political violence and hatred of government-backed fractional lending and deficit spending by both federal authorities and private institutions:

The spirit of resistance to government is so valuable on certain occasions, that I wish it to be always kept alive. It will often be exercised when wrong, but better so than not to be exercised at all. I like a little rebellion now and then. It is like a storm in the Atmosphere. (“Letter to Abigail Adams, February 22, 1787,” in Capon, 1987, p. 172)

And what country can preserve its liberties, if its rulers are not warned from time to time, that this people preserve the spirit of resistance? Let them take arms. The remedy is to set them right as to the facts, pardon and pacify them. What signify a few lives lost in a century or two? The tree of liberty must be refreshed from time to time, with the blood of patriots and tyrants. It is its natural manure. (“Letter to William Stephens Smith, November 13, 1787,” in Boyd, 1955, p. 356)

My own affections have been deeply wounded by some of the martyrs to the cause, but rather than it should have failed, I would have seen half the earth desolated. Were there but an Adam & Eve left in every country,

& left free, it would be better than as it now is. ("Letter to William Short, January 3, 1793," in Peterson, 1984, p. 1004)

Bank-paper must be suppressed, and the circulating medium must be restored to the nation to whom it belongs. ("Letter to John Wayles Eppes, 11 September 1813," in Looney, 2010, p. 494)

I sincerely believe, with you, that banking establishments are more dangerous than standing armies; and that the principle of spending money to be paid by posterity, under the name of funding, is but swindling futurity on a large scale. ("Letter to John Taylor, 28 May 1816," in Ford, 2010, p. 533)

Jefferson's lifelong interest in Cervantes is evidenced in a number of letters in which he recommends the Spaniard's great novel to friends and family alike. Quite simply, as Alison P. Weber puts it, "the *Quixote* was one of the books Jefferson could not live without" (2009, p. 407). Furthermore, his statements suggest "that Jefferson interpreted Cervantes' attitude toward his protagonist as critical yet not entirely unsympathetic" (p. 403). In other words, Jefferson understood the author Cervantes as essentially skeptical of authority and the character Don Quijote as the target of his satire, but not exclusively so—i.e., he saw the knight as an overreaching menace, but he also noticed that he was not always off the mark. Weber assures us that Jefferson did not read Cervantes as did the Romantics, by which she means that he did not take him to be a disillusioned fatalist in the spirit of Heine or Schelling (pp. 404–405). Nevertheless, as many of the extreme quotes that we have seen here from Jefferson as well as Mariana attest, the "gentle reasonableness" of Enlightenment thinkers can be as overstated as that of their Renaissance forebears. Jefferson may not have had time for literary analysis, but that does not mean that he did not intuit and perhaps even internalize the deeply radical aspects of *Don Quijote*. His respect for Cervantes's achievement strikes me as tantalizingly in tune with his hatred of authoritarian government and central banking, and perhaps even indicative of some deeper tragic sense of his own weaknesses.¹⁷

¹⁷ American philosopher Leo Strauss struggled to advance a Socratic vision of American liberalism as a broadly defined hybrid creature he called "aristocratic democracy," which would be constantly reassessing its own values as a way of avoiding the pitfalls of socialist populism. Interestingly, he cites Jefferson's idea of the best government as that which allows for "a pure selection of natural *aristoi* into offices" (1989, p. 55), but his view of Don Quijote is decidedly more tragic, comparing his role to that of Socrates in Aristophanes's *Clouds*: "Socrates owes his

Of greater interest might be Jefferson's connection to Mariana. There is no evidence that he was familiar with Mariana's confrontations with the Habsburgs in *De rege* or *De monetae mutatione*, which might lead us to resign ourselves to the Jesuit's indirect influence on the Virginian's political and monetary views by way of Cervantes, Locke, and so many others. But as it turns out, we are free to go much further, for Jefferson had a copy of Mariana's *Historia de España* in his personal library (Sowerby, 1952–1959, 1.79). In fact, according to a letter by Jefferson dated September 1, 1785, after an unsuccessful quest for a certain tantalizing "collection of tracts on the economies of different nations," he did manage to secure and ship an English translation of Mariana's history from Paris to his dear friend and fellow revolutionary Madison (Jefferson, [1785] 2013). This book could only have reinforced Jefferson's animus against bank paper and, for this academic at least, it is exciting to imagine the legendary hard-money attitude of the author of the Declaration of Independence gaining significant momentum from Mariana's running commentary against the monetary manipulations of the most beloved Spanish kings. And who knows? It is just possible that prior to his letter to Madison, Jefferson had spent the summer of 1785 searching for an unknown volume of economic treatises that would have contained a copy of Mariana's *De monetae mutatione*.

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downfall to a man who seeks light in the most literal sense, to a kind of Sancho Panza, to a rustic who has lost his bearings or has gone astray. It will do no great harm if this comparison suggests a similarity between Aristophanes' Socrates and Don Quixote" (p. 119).

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THE DEPRESSION OF 1873–1879: AN AUSTRIAN PERSPECTIVE

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ABSTRACT: This paper analyzes the period 1867–1879 in American economic history from an “Austrian” perspective. The post-Civil War boom, the Panic of 1873, and the subsequent downturn are investigated in light of Austrian Business Cycle Theory (ABCT) and its structure of production framework. This paper shows how recent legislation allowed for monetary inflation and a boom to develop that inevitably turned into a bust. However, since the federal government pursued a policy of relative *laissez faire*, the economy successfully recovered. Consequently, there was no prolonged depression in the 1870s.

KEYWORDS: Panic of 1873, Austrian Business Cycle Theory, Depression of 1873–1879, national banking system

JEL CLASSIFICATION: E2, E3, E4, N1, N2

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SECTION I: INTRODUCTION

With the recent financial meltdown in 2008, Austrian economics has experienced a revival by both professional and popular commentators. As documented by Cachanosky and Salter (2013) and Salerno (2012), much of this attention is directed towards Austrian Business Cycle Theory (ABCT), which places government manipulations of the interest rate and distortions in the production structure as the cause of economic booms. Significant focus is also placed on critically examining the policy of *laissez faire* that is often associated with the theory during the ensuing bust (e.g., Horwitz, 2011; Kuehn, 2011; Murphy, 2009; Thornton, 2010).

Since the advent of the economic crisis also reinvigorated a general interest in studying business cycles and the application and efficacy of monetary and fiscal policies, this paper provides an analysis of ABCT by examining an American business cycle from the 19th century. The 19th century was a period of relatively minimal government action compared to the 20th century, and as a result a detailed study of this period provides a different perspective on the effects of macroeconomic policies. Specifically, it allows for an analysis of the 1870s boom (1870–1873) and bust (1873–1879), which the NBER designates as the longest contraction in modern American history (Sutch, 2006a, series Cb5–8). The experience of the 1870s provides a unique window into economic history because the data from this period are more accurate compared to the early 19th century, and it allows for a rare investigation of output growth during a monetary contraction.

The present work is closer in line with those papers that analyze ABCT from a historical-economic perspective (e.g. Callahan and Garrison, 2003; Hughes, 1997; Powell, 2002; Rothbard [1963] 2008; Salerno [1988] 2010, 2012) instead of an econometric study (e.g. Bismans and Mougeot, 2009; Fisher, 2013; Keeler, 2001; Lester and Wolff, 2013; Luther and Cohen, 2014; Mulligan, 2006; Wainhouse, 1984; Young, 2012). The existence of an ABC in the 1870s is illustrated by showing the appearance of a significant credit expansion and confirming that prices and production behaved in a manner explainable by the theory.¹ The paper shows how political

¹ Space constraints preclude a more thorough study that distinguishes among other rival business cycle theories.

legislation allowed for monetary inflation to cause a boom and bust in the 1870s that is explainable by ABCT. Furthermore, since the federal government pursued a policy of relative *laissez faire*, the economy successfully recovered and the length of the perceived bust (1873–1879) is grossly exaggerated.

The paper is structured as follows: Section II provides a summary analysis of ABCT and related theories. Section III explains the relevant data, especially the figures regarding the money supply and industrial production, as well as describing how they will be used to show an ABC in the paper. Section IV provides the necessary historical analysis of monetary institutions and the economic narrative for the three time periods of study: 1867–1873, 1873–1875, and 1875–1879. Section V concludes the paper and Section VI is the Appendix, where the referenced tables and figures can be found.

SECTION II: THEORY

The following section provides a brief summary of what can be called “capital based macroeconomics” (Garrison, 2001, pp. 7–8). This review is essential as capital based macroeconomics is extensively used to interpret the economic landscape from 1867–1879, particularly the movements in relative prices and production, and as a result it is important to have the theories clearly stated.

Capital based macroeconomics emphasizes the importance and interrelatedness of time preference (the proportion of consumption to investment spending), the interest rate (the price spread or rate of return between stages of production), and the structure of production. The structure of production can be described as the temporal process where goods in the “higher order” stages (a shorthand term for those production processes that are more temporally remote from consumption) are worked on and sold to the “lower order” stages (a shorthand term for those production processes that are more temporally close to consumption) until they become finished goods and sold to the consumer. These relationships are graphically represented in the simplified diagram in Figure 1.

In capital based macroeconomics, changes in the production structure occur through changes in time preference. A decrease in time preference results in a lower interest rate and the creation of

additional stages of production. Savings are channeled through the credit market and the loanable funds interest rate drops. The decline in consumption spending reduces prices in the lower orders, while the increase in investment spending raises prices in the higher orders, i.e., prices in the former fall relative to before as well as to the latter. The additional investment funds are spent on creating higher order goods as the economy engages in relatively more long term production processes. The process continues as the public spends its constant money income at their lower time preferences. The opposite occurs with an increase in time preferences. The process is depicted in Figure 2.²

The situation is different when the increase in investment is financed through credit expansion. Here the money supply increases as additional bank credit enters the loanable funds market. This can be called inflation.³ As a result, the loanable funds interest rate drops and is distorted because it no longer reflects time preferences. Firms that receive the additional supply of bank credit respond by increasing investment in the higher orders, and because of the increase in spending, aggregate money incomes also increase. A boom begins.

Since time preferences have not changed, the public spends its enlarged income at its old time preference spending patterns, which pushes prices up in the lower orders.⁴ Whereas in the earlier growth scenario, lower order prices fall both relatively to higher order prices and to before, now lower order prices rise relative to before. The reassertion in time preferences relative to the period of credit expansion and the resultant price increases in the lower orders reveals the unprofitability of the newly embarked investment

² For a more in depth overview of Austrian structure of production theory and this basic growth scenario, see Garrison (2001, pp. 33–67), Hayek ([1931] 2008a, pp. 223–240), Huerta de Soto (2006, pp. 266–346), Rothbard ([1962] 2009, pp. 319–555), and Skousen (2007, pp. 133–264).

³ More specifically, inflation occurs when the increase in the money supply is not offset by an increase in the demand for money (Mises, [1953] 2009, p. 240; 2004, pp. 44–45). This definition is different from the one proposed by Rothbard ([1962] 2009, p. 990; [1963] 2008, p. 12).

⁴ The inflation can actually cause capital consumption through an accounting illusion (Mises, [1949] 2008, pp. 549–550; Rothbard, [1962] 2009, pp. 993–994). When this occurs, time preferences increase.

projects, known as malinvestments. In a modern complex economy, booms are prolonged because banks continue to expand credit and entrepreneurs temporarily mask the unprofitability of the increased investment through additional borrowing. However, the bank credit still filters down and enlarges money incomes, which causes another rise in consumer spending and reassertion of time preferences. Through a combination of tightened money from overexpanded banks and the eventual realization of entrepreneurs that many of their investment projects are unprofitable, the boom ends.⁵

The next phase of the cycle is the necessary liquidation of unprofitable lines of production and the reorganization of the economy according to current time preferences. Since time preferences are actually higher than planned by entrepreneurs, the capital structure must shorten and the rate of interest rise. In order for that to occur, relative prices are bid down in the overextended lines of production to reflect the higher price spread and infeasibility of the more temporally remote production stages. Unprofitable businesses contract and allow their resources to be reabsorbed and more efficiently used elsewhere, particularly in the comparatively more lucrative shorter production processes. In essence, it calls for a policy of *laissez faire*. The entire cycle of boom and bust (ABC) is shown in Figure 3. Phase 1 represents the initial expansion of investment spending into the higher orders. Phase 2 shows the reassertion of time preferences and the unprofitability of investment projects. Phase 3 depicts the necessary corrections.

Although during the bust the main adjustments that must take place are relative to reflect higher time preferences, contractions in the money supply can also occur. This credit contraction is called deflation.⁶ Under such a scenario, prices in the economy must adjust both relatively to reflect the higher price spread and nominally to reflect the changes in total spending.⁷ Credit contraction also has

⁵ For a more in depth analysis of ABCT, see Garrison (2001, pp. 67–83), Hayek ([1931] 2008a, pp. 241–247), Huerta de Soto (2006, pp. 347–384), Mises ([1949] 2008, pp. 542–563), Rothbard ([1962] 2009, pp. 994–1004), and Skousen (2007, pp. 282–331).

⁶ More specifically, it is a decrease in the supply of money not offset by a decrease in the demand for money (Mises, [1953] 2009, p. 240).

⁷ The following arguments regarding a decline in nominal spending are different than those Austrians who adhere to Monetary Disequilibrium Theory. For supporters of

other effects. Firstly, it can cause unanticipated capital accumulation that provokes lower time preferences which increases the relative profitability of the malinvested investment goods and allows for prices to fall less than they would have in the absence of the effect. Unlike inflation that causes capital consumption because individuals do not realize their profits are fictitious, deflation overstates losses and causes businessmen to spend the same amount of money on factor inputs in the economy even though their prices have fallen. Instead of not saving enough for factor inputs whose prices have risen, the fall in spending provokes the opposite effect (Mises, [1949] 2008, p. 547; Rothbard, [1962] 2009, p. 1006).

Just as the credit expansion described above distorts interest rates, so too can credit contraction. There are, however, important differences between the two. Credit contraction is directly beneficial to speeding up the adjustment process during a bust by correcting both the loan market and production structure's rates of interest to the higher one supportable by current time preferences. It results in a higher price spread by stopping the growth in loans to businesses that have facilitated the boom, which causes the demand for factor inputs and products in the temporally remote stages of the economy to fall and relatively lowers their prices. Credit contraction may raise loan and production structure rates of interest higher than deemed necessary by existing time preferences, and in this sense can be considered distortionary. However, due to the reduction in investment businesses pay smaller amounts to original factors, who in turn, with reduced money incomes, spend less on consumption. Price spreads fall in accordance with the lower time preferences and the market rates adjust (Mises, [1949] 2008, pp. 564–565; Rothbard, [1963] 2008, p. 18; Rothbard, [1962] 2009, pp. 1005–1006).

SECTION III: DATA

This section presents the rationale behind the particular data sources and series used. Much of this analysis may seem overly

this theory, such a scenario of “secondary deflation” (declines in nominal spending during the bust) aggravates the downturn through various sticky-price induced arguments and necessitates the need for a stabilization in nominal spending either by government or private banks. See Garrison (2001, pp. 221–243) and Horwitz (2000, pp. 141–175; 2006; 2014) for a more in depth explanation.

technical and out of place, but since this paper applies ABCT and other Austrian economic insights, there must be a proper analysis behind the data that are used to describe these theories. For example, the selected Austrian definitions of the money supply and the breakdown of the structure of production into higher orders and lower orders are cited extensively in Section IV and therefore must be accurately defined in order to provide a clear exposition of the relevant economic concepts.

The numerical data are presented in Tables 2–4. They include data on money supply, interest rates, prices, and production. The per annum growth rates of all data except interest rates are presented, in addition to the level figures of interest rates in relevant years. Growth rates are used to show relative movements over time.

Gross National Product

Because the United States only started recording Gross National Product (GNP) figures in 1929, a variety of historical series were created in an attempt to present an accurate picture of the macro-economy in earlier years. The construction of such series has been described as a “work in progress,” and they are less precise than modern figures as the underlying data were not collected for the purpose of making GNP estimates (Rhodes and Sutch, 2006, pp. 3–12).

The three GNP series used in the analysis are taken from Balke and Gordon (1989), Johnston and Williamson (2008), and Romer (1989). These three are the latest GNP series devised for the period and are more accurate for measuring annual movements than earlier series that were designed for more long term measurements. In addition, the annual industrial production index by Davis (2004a) that is used to analyze specific compositional changes in the production structure (see below) serves as a suitable proxy for GNP and is also included. Numbers for the series can be found in Davis (2004b), Johnston and Williamson (2013) and Sutch (2006b, series Ca213 and Ca216).⁸

⁸ It should be noted that the Johnston and Williamson series incorporates the Davis industrial production index in its annual observations (Johnston and Williamson, 2008).

Since the series were composed using different methods and none have been conclusively accepted as the most accurate, it is best to incorporate them all. The discrepancy among them suggests that the best conclusion is to use the averages of small intervals for the individual series, and use the smallest as the average lower bound and the highest as the average upper bound. To use these series with individual years seems inappropriate, especially since there will be an urge to compare them to more accurate modern estimates that incorporate a much larger pool of data and can be precisely broken down in minute detail. A rationale for the particular bounds chosen is given at the beginning of Section IV.

Government Spending and Taxation

While analyzing changes in government spending and taxation is undoubtedly important for a paper that deals with historical macroeconomic policy, its small size relative to output makes it inconsequential for this period. After steeply rising during the Civil War, federal spending sharply declined in the post-war period and then gently fell throughout the 1870s (Wallis, 2006a, series Ea584–587). In addition, save for the Civil War, the federal government during this period ran surpluses, as tax revenue was greater than expenditures. Given the chosen method for estimating annual GNP figures and the dearth of annual figures for state and local governments (Wallis, 2006b, 5–3), it is hard to paint a reliable picture of annual changes in total government spending and taxation to gauge fiscal policy. It is for this reason that detailed figures on annual changes in taxation and spending have not been included. However, it can safely be said that significant activist fiscal policy was nonexistent in this period, including the depression years.

Interest Rates

Unfortunately, detailed collection of interest rates during this period is scanty. The most reliable figures are yields on government bonds and short term interest rates on commercial paper and call money. Given the limited data, the interest rates used are the rates on 60–90 day commercial paper. Their movements are assumed to roughly mirror interest rates on general loans. It is important to

remember that during a credit expansion there are other factors that influence the rates of interest on various financial assets. For example, during a credit expansion, other economic factors such as a rise in the risk premium or an expectation of a rise in prices may counteract the increase in the supply of loanable funds from credit expansion and raise the loan interest rate (Mises, [1949] 2008, pp. 549–550, 556; Rothbard [1963] 2008, p. 85). The interest rates are taken from James and Sylla (2006, series Cj1223).

Money Supply

In order to appropriately depict changes in the monetary environment during this period, proper money supply figures are needed. Following Rothbard ([1978] 2011, pp. 736–739), a general money supply figure, M_a (a = Austrian), and a more specific figure, M_b (b = business cycle) are defined. The first is useful for showing aggregate monetary influences on the economy, while the second serves as a suitable estimate for gauging business cycle generating bank credit.

The general money supply M_a consists of the base money (specie) and all money substitutes. The definition of a money substitute here comes from Mises ([1949] 2008, pp. 429–431) and includes all notes and deposits that the public perceives as always redeemable for a definite amount of the base money (such as the par value). This not only includes money that is usable in exchange, but also instruments that must first be converted into an exchangeable type of money. For the relevant period, M_a includes specie, government notes (such as greenbacks), bank notes, commercial bank demand and time deposits, and mutual savings bank time deposits.⁹

In order to accurately depict the effects of credit expansion on the structure of production one must concentrate solely on the

⁹ This particular definition of M_a , best defended in Rothbard ([1978] 2011, pp. 727–739) and Salerno ([1978] 2010, pp. 115–130), is different from other Austrian definitions such as Mises ([1949] 2008, pp. 429–431, 459–463) and White (1989, pp. 203–217) mainly because it considers time deposits that are in and of themselves not exchangeable for goods as money substitutes. While space constraints unfortunately preclude a thorough defense of this definition, it should be noted that for this time period it essentially corresponds to the M3 definition provided by Friedman and Schwartz (1970, pp. 79–81).

increases in M_a created through business loans and investments (M_b). Specie and notes can be removed because they are currency and do not cause a business cycle. Deposits at mutual savings banks can also be removed as most of their investments during this period were in government securities or small residential mortgages and were thus not cycle generating (Teck, 1968, p. 42; Welfling, 1968, p. 67). This leaves us with total commercial demand and time deposits. With this in mind, it can be stated that *ceteris paribus* (i.e., the demand for money), an increase in commercial bank deposits is synonymous with an increase in business cycle generating bank credit and investments to private firms.

The specific money supply figures are taken from Friedman and Schwartz ([1963] 1993, p. 704) as opposed to the figures used by Rothbard ([1983] 2005, pp. 153–154). Due to the imperfections of the statistical collection of the figures used by the latter, they are undoubtedly inferior to the Friedman and Schwartz estimates.¹⁰ Using those figures would significantly overstate credit expansion during the boom and would in fact continue to show credit expansion after the bust, which was not the case.

Prices and Production

As explained earlier, ABCT describes a structural adjustment in the macroeconomy that manifests itself through relative changes in prices and production. In order to show this, prices from Hanes (2006, series Cc114–121), and sector specific industrial figures from Davis (2004b) are used. The individual price and production series are divided into the higher orders and the lower orders and are presented in Table 1. This dichotomization is not meant to be literal. Indeed, such an inappropriate categorization is akin to organizing the production structure into strict “consumer goods” and “producer goods” industries (Hayek [1931] 2008b, p.444; Rothbard, [1962] 2009, p. 543). To reiterate, the “stages” or

¹⁰ Due to new Civil War legislation (explained below), the government stopped collecting statistics on state banks based on the belief that they would disappear, which turned out to be untrue (Friedman and Schwartz [1963] 1993, p. 3). As a result there is a large drop in state bank figures at the end of the Civil War, which continued until the early 1870s. Furthermore, the figures may include mutual savings banks as well as loan and trust companies (Bodenhorn, 2006, pp. 3–634).

“orders” of an economy are merely shorthand reference for the length of production processes and/or the temporal distance of a good from the consumer good it helps to produce. The distinctions are only meant to distinguish those sectors of the economy whose profitability would be most likely affected by credit expansion. Those industries designated as higher orders are the most capital intensive and temporally remote from consumption.

During the post-Civil war era there was a large expansion in the railroad and railroad related industries (Cain, 2006, series Df874; Fishlow, 2000, pp. 583–584). They were a major American industry and financially accounted for 15–20 percent of American capital investment (Moseley, 1997, p. 148). Economically, they were large projects that required a variety of land, labor, and capital, and completing a railroad was a significant long term investment dependent on heavy financing. Because the federal government was eager to create transcontinental railroads to stimulate growth into the Western States, in the Civil War and post-Civil War era an enormous amount of government railroad land grants and subsidies were given and a little over a third of the increase in railroad production during this period came from land grants (Burch, 1981, p. 16; Fishlow, 2000, p. 585).¹¹ However, undoubtedly a significant factor was also credit expansion as railroad production and its related industries constitute long term production processes which credit expansion increases the profitability of most. The changes in production in this industry will be shown through the Transport Equipment and Machinery figures, which contains locomotives as an included series.¹²

As stated earlier, an inflationary boom is signaled through a relative increase in the prices and production of the higher orders while at the same time a relative increase in the lower orders to

¹¹ In particular, in 1862 Congress passed the Pacific Railway Act, which created the Union Pacific and Central Pacific, and in 1864 Congress also created the Northern Pacific. The first two received money subsidies, and all three received land subsidies. (Folsom, 1991, pp. 18, 22–23).

¹² Railroad track mileage will not be included in the relative structure of production comparisons in the economic analysis. The Davis series is a self-contained industrial production index; to compare railroad miles with those figures would be inappropriate as it was neither designed like the other series nor meant to be compared in such a fashion.

before, with the opposite occurring during the bust. Likewise, a recovery driven by lower time preferences manifests itself as a relative increase in the higher orders with both a relative decline in the prices of the lower orders to the higher orders and to before. Of course, in the real world, one change never occurs isolated, so other factors are always influencing the economic landscape and counteract the visible effects of credit expansion. But what matters is that these credit induced restructuring processes still occur alongside the other forces.¹³

SECTION IV: HISTORICAL AND ECONOMIC ANALYSIS, 1867–1879

The intervals were chosen to best capture the macroeconomic trends during each period. The first two periods, 1867–1870 and 1870–1873, were chosen to best distinguish changes in the economy during periods of credit expansion. The third period, 1873–1875, was chosen because it was the post-panic years listed by Wicker (2000, pp. 30–31) while the fourth period, 1875–1879, was chosen to include the rest of the purported depression years listed by Sutch (2006a, series Cb5–8) and the monetary contraction that ended in early 1879 by Friedman and Schwartz ([1963] 1993, p. 704). It is noticeable in the output series that exceptionally strong growth occurred in 1879. Extending the growth analysis to 1875–1879 would overestimate GNP growth and give a less than accurate picture of the time period. Therefore, only the money supply and interest rate figures are extended to early 1879 (to include the rest of the monetary contraction in 1878) while the other series end in 1878. Each section contains a historical analysis of the relevant monetary institutions and an economic analysis of the production structure and other pertinent information.

¹³ Historically an increase in saving or technological innovation usually occurs alongside a credit expansion. In this case (which applied to this period) during the boom prices may decline, but still change relative to what they would have been had the credit expansion not taken place. Such economic forces do not eliminate the boom but only obscure it (Mises, [1949] 2008, p. 558; Rothbard, [1963] 2008, pp. 169–170). This fact reinforces the use of per annum growth rates to show movements in relative prices. If a price is falling in one period but then falls less (i.e. the growth rate becomes less negative) in the next period, it can be said that the price relatively increased.

Part 1: The Post-Civil War Boom, 1867–1873

Historical Analysis

After severe difficulties in financing the war, in late 1861 private banks suspended specie conversion on their notes and deposits as well as the federal government on its Treasury demand notes. Thus, for roughly the next 20 years the United States was off the gold standard. Subsequently, Congress passed several Legal Tender Acts that provided the Treasury with \$449 million “greenbacks” for the war effort (Friedman and Schwartz [1963] 1993, p. 24). At the end of the war in 1865 the total supply of greenbacks stood at \$400 million (Timberlake, 1993, p. 133), and afterwards Congress contracted them to \$356 million by the end of 1867. From 1867–1870 the federal government retired most of the Treasury demand notes that were remnants of the wartime economy (Friedman and Schwartz [1963] 1993, pp. 24, 54).

In addition, in 1863 and 1864 Congress passed the National Currency Acts (later known as the National Banking Acts) which caused a complete overhaul of the previous decentralized banking system by creating a group of so called national banks. For such institutions the legislation stipulated minimum capital requirements, restricted real estate loans, prevented branch banking and created an Office of the Comptroller of the Currency that had the ability to charter new banks and supervise them (White, 1982, p. 34). National banks could only issue notes up to 90 percent of the value of federal government securities they deposited with the Treasury (Klein, 1970, p. 141). This bond backing requirement and the total ceiling limit on national bank note issues (at \$300 million) made their issuance very restrictive, and in 1870 Congress increased the maximum number of national bank notes outstanding (to \$354 million). These notes soon became the only bank notes available after Congress passed a law in 1865 that stipulated a 10 percent annual tax on all state bank note issues after July 1866 in order to force all state banks to become national banks (Friedman and Schwartz [1963] 1993, pp. 18–21). However, the punitive tax on state bank notes only reduced their note issues and did not force them out of business. The growing use of deposits and the lower regulatory requirements still made state banks a profitable institution, and they became an important factor in much of the credit expansion of this period.

More importantly, the acts created a multi-tiered financial system that allowed banks to pyramid credit on the same set of reserves (Klein, 1970, p. 144).¹⁴ Before, in the pre-Civil War era system, each bank held its own reserves in terms of its own specie, and excessive credit expansion was prevented by other banks and depositors redeeming their notes and deposits. However, now banks could consider interest paying deposits at other banks as reserves, which weakened this mechanism and led to greater credit creation.

The system worked as follows. The National Banks were divided into three subcategories based on size and location: central reserve city banks, reserve city banks, and country banks. Central reserve city and reserve city banks faced reserve requirements of 25 percent, while country banks had 15 percent. While central reserve city banks had to keep 25 percent of their notes and deposits in “lawful money”, i.e., greenbacks and specie, reserve city banks could split their reserves into a minimum of 50 percent lawful money and up to 50 percent in interest-paying deposits at central reserve city banks. Country banks had a minimum of only 40 percent lawful money reserves and could keep up to 60 percent in interest-paying deposits at either central reserve city or reserve city banks (Friedman and Schwartz [1963] 1993, pp. 56–57; Rothbard [1983] 2005, pp. 136–137). Furthermore, most states allowed state banks to use national bank notes as reserves. State banks held deposits at national banks where they could “buy” notes to redeem deposits, as their own notes were unprofitable to circulate due to the federal tax (Friedman and Schwartz [1963] 1993, p. 21; Rothbard, 2005, p. 144). Thus a multi-layered credit pyramid was formed with state banks pyramiding off any national bank, country banks off central reserve city and reserve city banks, and reserve city banks off central reserve city banks, where lawful money reserves were generally concentrated.

Overall, the National Banking Act encouraged greater credit expansion by thwarting the competitive adverse clearing mechanism that would normally limit excessive deposit and note issuance. Much of the monetary expansion during this period was due to the banks adapting to this new system.

¹⁴ The term “pyramiding of credit” refers to when one bank holds part of their reserves in the form of another bank’s liability, and banks “pyramid” credit off the same base reserves (in this period, lawful money).

Economic Analysis

The economic climate in this period can be broken up into two parts: from 1867–1870, when there was mild growth in M_a and M_b , and from 1870–1873, when there was large increase in both. The results, presented in Table 2, show that in the latter period the familiar symptoms of an Austrian style boom appeared, which would make sense given the run-up in credit expansion.

From 1867–1870 both M_a and M_b increased by a relatively small amount. The growth in M_a was due mainly to the increase in both commercial and mutual savings bank deposits as currency during this period actually declined. In the second period, however, monetary conditions were much different. From 1870–1873 both M_a and M_b increased by enormous annual rates compared to the prior period.

While this was partly due to currency increasing, most of the rise came from an increase in mutual savings bank and nonnational bank deposits. The nonnational banks were able to expand credit from both the increase in national bank notes made possible in 1870 and the lawful money reserves that came from the national banking system. As explained earlier, the national banking system allowed banks to hold a large portion of their reserves in interbank deposits, which made it possible for them to decrease their lawful money reserves. As time progressed and the national banking system matured, many of these lawful money reserves found their way into the nonnational banking system (which had lower reserve requirements on average) and caused an increase in credit expansion that impacted both M_a and M_b (Friedman and Schwartz [1963] 1993, pp. 56–57).

It is clear that during both periods there was strong growth. Comparisons of GNP between 1867–1870 and 1870–1873 can only be made with the Davis and the Johnston and Williamson figures as the Balke and Gordon and Romer series start later. One can observe the difference between the Davis and the Johnston and Williamson figures and in the overall bounds to see that there was a marked increase in growth rates.

Crucial to showing an ABC is comparing the production structures in the two periods. As stated above, there was a large increase in credit expansion starting in 1870. Consequently, one

would expect the familiar symptoms. Production-wise, when comparing the two periods the higher order industries expanded the most.¹⁵ In particular, Machinery experienced a large jump in growth rates between the periods, which fits neatly with the railroad boom at the time.

However, movements in prices tell a more revealing story. Since the end of the Civil War, massive growth in the money supply subsided and combined with large increases in the output of goods, prices began a long secular downward trend that would last until the late 1890s. As explained earlier, what matters are the relative prices between the higher orders and the lower orders. In the period of low credit expansion, prices in both groups decreased at roughly similar rates. During the second period of high credit expansion, prices in the higher orders relatively rose to the lower orders and in almost all cases rose in even nominal amounts.¹⁶ By comparing the relative prices, it is clear that the economy was attempting to conform to a longer capital structure. But since the prices in industries closest to consumption were also rising relative to before, the change in the economy was symptom of an ABC. Interest rates also tell a similar story. From 1867–1870 interest rates slightly fell.¹⁷ At the beginning of the significant credit expansion from 1870–1871 interest rates continued to fall. However from 1871–1873 interest rates began to rise.¹⁸ This reflects the increased demand for loans by entrepreneurs in order to bid away factors of production and continue to embark upon their production processes. The changes in the production structure

¹⁵ In this analysis based on the earlier classification of higher and lower orders the Textile group played the role of an outlier as evident in Table 2. However, its unusual growth appears to be the result of its own industry specific fluctuations, as it experienced virtually no growth from 1865–1870, unlike every other group in the Davis series. One could be tempted to include it as a higher order industry, but it is far more conservative for the study to not change its categorization.

¹⁶ Though they still rose relative to before, chemicals prices did continue to fall during this period, although they increased absolutely from 1871 onward.

¹⁷ There was a sharp run up in interest rates in 1869, but this was almost certainly a consequence of the attempted cornering of the gold market by Jay Gould and James Fisk that culminated in “Black Friday” (Morris, 2006b, pp. 69–75).

¹⁸ Part of the rise in 1873 was due to the Panic of 1873, but what matters is that the trend had begun in 1872.

during this time are graphically shown by Figure 3, particularly Phases 1 and 2.

As shown above, credit expansion induced changes in the structure of production cannot last forever, and a correction in prices and production would have to occur in the near future.

Part II: The Panic of 1873 and Bust, 1873–1875

Historical Analysis

In late 1872 and early 1873, financial and economic conditions started to decline, and investors began to pull money out of businesses, particularly railroads. In the first eight months of 1872 bank loans increased slowly, and at the end of August depositors withdrew large amounts of cash from New York banks. The Treasury shored up the situation by purchasing \$5 million worth of bonds to increase bank reserves, but by the spring of 1873 another seasonal difficulty developed, and banks struggled to raise cash to meet withdrawals by selling securities due to the weakening bond market (Studenski and Krooss, 1952, p. 181).

Despite avoiding spillover effects from a Vienna stock market crash in May of 1873, Wall Street was hit with a great shock when Jay Cooke and Co. closed its doors on September 18th, full of worthless Northern Pacific railroad securities (Wicker, 2000, p. 20). Stocks plummeted and the New York Stock exchange responded by closing for 10 days on September 20th (Glasner, 1997, p. 133). The concentration of funds in New York's central city reserve banks lead to a withdrawal by other banks calling in their deposits. With the New York City banks unable to meet all of their demands, the New York Clearing House (NYCH) stepped in and issued clearinghouse loan certificates and pooled reserves. The equalization of reserves allowed seven major New York banks to meet banker demands for withdrawal and pay out cash. Despite the noble efforts, cash payment to depositors was suspended (Wicker, 2000, p. 31). In addition, during the crisis there were a number of bank suspensions, which occur when a bank either temporarily or permanently closes. The number of banks that suspended payment totaled 101, the majority coming from New York and Pennsylvania, which had a combined 59 bank suspensions (Wicker, 2000, p. 19).

By the end of October, cash redemption was resumed in most banks except a few in the South (Sprague, 1968, pp. 68–71).

Wicker (2000, p. 33) analyzed the surrounding financial events and concluded that the suspension of cash payments was actually unnecessary, given that the banks were in good shape. Most of the suspensions came from brokerage houses, which were banks with variably priced deposits based on the value of assets (in essence speculative investments and not money) and not commercial banks. Contrary to its purpose, it ended up aggravating hoarding and uncertainty, making it harder for businesses near banks to continue daily operations. The incentive to deposit cash in banks was lowered for many people and some chose to deposit currency in their own safes instead. In fact, the suspension may have even led to panic among reserve city and country banks, contributing to further withdrawals from New York.

Government action during this time period could be considered mildly expansionary. There was a temporary \$26 million increase in retired greenbacks from the Treasury following the panic that were legalized (i.e., made permanent) by a bill in 1874, bringing the total up to \$382 million (Friedman and Schwartz [1963] 1993, pp. 24, 47). Ultimately the bill was more expansionary through its changes with regards to the national banking system by removing reserve requirements against notes, and its consequences are explained below. However, changing economic realities and government policy starting in 1875 prevented the act from having an expansionary impact for the rest of the decade.

Economic Analysis

The turbulent crisis years following the Panic of 1873 are compared with the prior boom period of 1870–1873. It is apparent after looking at the figures presented in Table 3 that output growth definitely entered a slowdown and was mainly concentrated in higher order goods that were most affected by credit expansion, which is what one would expect under ABCT.

Overall, the panic did not cause a devastating monetary contraction and in fact both M_a and M_b grew. The rates of increase were definitely smaller compared to the prior period, although they

were higher than the amounts from 1867–1870. The increases in M_a predominantly and in M_b entirely came during 1874–1875. The source was mostly due to the recent monetary legislation in 1874 which freed the national banks from the requirement of a reserve against note issue. This in effect released base lawful money into the banking system that could be used for the additional creation of deposits (Friedman and Schwartz [1963] 1993, p. 57; Rothbard [1983] 2005, p. 141). It would have been far better for the economy if the government had not intervened in the monetary affairs by making it easier to increase credit. The government promoted expansion in credit distorts prices and production compared to what they would have been at a time when the market was adjusting them downwards. After rising during the panic, interest rates then sharply fell below their pre-panic level. This was undoubtedly due both to the increase in bank credit as well as a large drop in business demand for loans after businesses realized that many of their projects were unprofitable.

Looking at revised GNP estimates, growth only contracted in the Davis series and slowed down in the others. Despite the sharp downturn in his series, Davis concluded that the depression in fact only lasted from 1873–75 (Davis, 2006, p. 106). In the other series, while severe slowdowns occurred, they were certainly not the massive decline in output one would label as the beginning of a depression.¹⁹ As can be seen in Table 3, the drop in output was not uniform among sectors, and instead was concentrated in the higher order industries that were the most affected by credit expansion (specifically in Machinery and Metals) while the lower orders were much less relatively affected. With regards to prices, the situation was similar, with the higher orders (particularly Metals) taking the brunt of the fall in prices, while lower order goods fell at a much weaker rate.²⁰ It is clear that the sectors with the

¹⁹ Rockoff and Wicker also have somewhat similar views on the economic effects of the panic, with Rockoff (2000, p. 669) stating that “The crisis did not leave a strong impression on the aggregate economic statistics,” and Wicker (2000, p. 30) commenting that “Contemporary accounts describe the post-panic [1873–1875] years of contraction as years of almost unrelieved gloom. But the evidence for such gloom is certainly not apparent in the Romer-Balke-Gordon estimates of real GNP.”

²⁰ The exception in this period being again Textiles.

largest contractions in prices and production were the industries that were most affected by the boom. Consequently, they needed their prices and production levels to fall the most in order to allow the economy to properly adjust to the steeper production structure price spread. This paved the way for a subsequent recovery during the latter half of the 1870s. Overall, the movements in prices and production can be shown by Phase 3 of Figure 3.

Part III: The Recovery and Resumption, 1875–1879

Historical Analysis

In January of 1875 Congress passed the Specie Resumption Act, which planned to bring the nation back on the gold standard at the prewar parity by January of 1879. It allowed the Treasury to accumulate a gold reserve using surplus revenue and proceeds from bond sales that would act as a “redemption fund” for specie convertibility. It also allowed for a retirement of greenbacks through an increase in national bank notes, though retirement was suspended in mid-1878, capping the greenbacks at \$347 million (Friedman and Schwartz [1963] 1993, pp. 24, 48). Due to the perceived downturn caused by the panic, there was continued agitation for monetary expansion, which partly took the form of the “free silver” movement that advocated the remonetization of silver. Despite the passage of the Bland Allison Act in 1878 that forced the Treasury to purchase \$2 to 4 million of silver a month for coinage, the Treasury was able to work towards resumption and from 1877–1879 refunded a large amount of debt to build up a redemption fund (Friedman and Schwartz [1963] 1993, pp. 82–84). In the end, on January 2nd 1879, the U.S successfully resumed specie payments and returned to the gold standard.

Economic Analysis

The rest of the supposed depression years of the 1870s are compared with the initial crisis years of 1873–1875. Despite a declining money supply, Table 4 shows that in virtually all of the economic indicators there was a visible recovery. In addition, qualitative evidence is presented that suggests the reason that there

was perceived to be an enormous depression from 1873–1879 was mainly due to faulty economic statistics and reliance on nominal rather than real values.

Both M_a and M_b in this period declined at significant rates that were only very rarely seen in U.S economic history (Friedman and Schwartz [1963] 1993, pp. 31, 299). Although this was partly due to the government-enforced monetary contraction following the Resumption Act, the decline was mainly due to the contraction of credit following a series of bank runs after 1876. The run on banks was fostered by weakened confidence in the banking system, and led to multiple nonnational bank suspensions; banks responded by building up their reserves (Friedman and Schwartz [1963] 1993, pp. 56–57, 82). As explained earlier, this type of monetary contraction can be part of a healthy process of recovery by speeding up the economy's return to its sustainable price spread.

It is partly due to this decline in the money supply, alongside the falling price level, that justified the belief that there was a long and protracted depression up until the beginning of 1879. However, it is certainly not apparent from the GNP estimates, as almost all of the series from 1875–1878 show a sharp rebound in growth as compared to 1873–1875. The only one that did not was the Balke and Gordon index, which one could reasonably argue understates growth in the mid to late 1870s because one of the main series they build on was the railroad output-dominated Frickey transportation and communications index (Balke and Gordon, 1989, p. 53). Despite having shown enormous growth during the boom, it is well known to both contemporaries and economic historians that railroads suffered an especially severe decline relative to the rest of the economy during this period (Morris, 2006b, pp. 105–106). From an Austrian perspective, one would certainly expect poor growth after a period of excessive expansion. Thus, basing a GNP series partly on railroads would reasonably underestimate expansion. Production figures show that the sectors with the sharpest recovery were those of the higher orders, particularly in Machinery and Metals. Recovery was also apparent in the price indexes as prices of the higher orders relatively rose compared to the lower orders, which mostly fell relative to before.²¹ Wages

²¹ Textiles again serving as an outlier.

were also flexible during this period and fell from 1873–1879. After rising 5.55 percent from 1870–1873, hourly nominal manufacturing wage rates fell 3.27 percent from 1873–1875, and from 1875–1879 fell 13.27 percent. In total, from 1873–1879 they fell 16.11 percent (Margo, 2006, series Ba4290).²² Similarly, interest rates throughout this period also fell. The growth for this period was healthy and sustainable, as it signified a lowering of time preferences and was not influenced by an expansion in bank credit. It is graphically portrayed by Figure 2.

So why did contemporary reports describe awful conditions in economic welfare? The main reason is that prices fell all around. If businesses based their outlooks on nominal series, they could be fooled by the appearance of a contracting economy. This belief, however, was purely an illusion, and in fact encouraged capital accumulation and a lowering of time preferences through the reasoning described earlier. Overall, businessmen did not consider the decline in the cost of their inputs, and hence overstated their losses. Wage earners did not realize that consumer prices also dropped, and their real income did not decline as much as they thought (Morris, 2006b, pp. 103–104).²³ A similar argument can be found in Davis (2006, p. 115). After he determined new recession-year benchmarks for the 19th century, Davis found that the years with the biggest differences were during recessions with large price and monetary contractions. Davis' reasoning was similar: that businesses concentrated on nominal series rather than real series. Falling prices, however, do not imply a depression.

Popular news reports also had little way of knowing entire nationwide estimates of economic performance and tended to poorly estimate production. The Commissioner of Labor at the time stated, "There was much apprehension to be added to reality" (Kleppner, 1979, pp. 124–125). Reznack (1950, p. 497), whose classic article famously gave a negative picture of the 1870s,

²² On the lack of downward nominal wage rigidity in the late 19th century in the 1860s and 1870s, see Hanes and James (2003).

²³ Real income for unskilled labor did decline during this period before drastically catching up throughout the 1880s. However, the decline in real income was much less than the decline in nominal income, which undoubtedly exacerbated the perceived effects of income stagnation (Morris, 2006b, p. 103).

even admitted that “contemporary appraisals of the intensity of depression tended to be the more alarming by their very vagueness and contributed to the prevailing pessimism.”

Americans were also confused by the growing modernization of the country. Large grain farmers began to replace smaller family owned farms, newly emerging department stores and mail order catalogs broke up previous local artisanal monopolies, increasing social and geographic mobility disturbed older traditional family security, and rising inequality from both market and political entrepreneurs bred resentment (Morris, 2006a). Overall, the lack of reliable information and the changing economic environment brought exaggerated conditions with regard to the depth of the depression, especially concerning unemployment.²⁴ Modern estimates of unemployment also tend to be inaccurate in light of more recent economic data. Lebergott (1971, p. 80) provides an estimate of over two million, which would roughly correspond to 13 percent in the depths of the depression. Vernon’s (1994, p. 710) annual unemployment series is more reasonable, but still shows unemployment rising until it peaks at 8.25 percent in 1878, which seems hard to believe given the GNP growth rates.²⁵

²⁴ For example, a New York relief agency estimated that during 1873 roughly 25 percent of the city’s working force was unemployed. They arrived at this estimate by counting all of the people whom they helped during the year. Their error came in including nonworking children and housewives, and by simply adding up the sum of the people they helped in each month without realizing they were double counting (Feder, 1936, pp. 39–40). Many other figures, such as those of the *Chronicle* newspaper, were also erroneous as some of their unemployment reports for certain industries were grossly exaggerated and based on incomplete information (Morris, 2006b, pp. 104–105).

²⁵ After selecting full employment benchmark years, he derives his estimates by regressing on the Balke and Gordon series and uses Okun’s law to get a figure of deviations from trend of output to produce annual unemployment rates (Vernon, 1994, pp. 702–707). With respect to the period under analysis, there are a number of problems with this approach. Firstly, although growth was undeniably lower in the mid-1870s compared to before 1873, this does not mean that economic stagnation occurred and unemployment rose, especially considering that the boom years were infeasible and not really “trend” growth. While it is reasonable to see unemployment rising during the recession of 1873–1875, after a sufficient fall in costs and reallocation of resources the idle labor would have been reabsorbed into the economy. Under such a dramatic change in production, one would not see growing unemployment throughout the recovery, which is what the series suggests. Secondly, it is important to note that Vernon derives his Okun’s law

Overall, both quantitative and qualitative suggest that the contraction in the 1870s was much shorter than previously assumed and there was no prolonged slump during this period.

SECTION V: CONCLUSION

ABCT explains the boom and bust that stretched across the time period analyzed. Following a run-up in credit expansion that occurred in the early 1870s, a visible widening in both relative prices and production compared to the late 1860s emerged that fostered multiple malinvestments in the higher orders. The expansion was largely caused by the Civil War monetary legislation that created the National Banking System. Both state and national banks were able to pyramid credit on the same set of lawful money reserves through the use of interest paying interbank deposits. The money supply continued to expand during the bust years, which showed symptoms of an Austrian contraction with the decline in output and prices concentrated in industries that overexpanded during the boom. Largely the result of bank runs, the money supply contracted for the remainder of the supposed depression years. This decline was shown to have actually hastened the recovery and during this period there was a noticeable rebound in growth.

The length of the depression was perceived to be from 1873–1879 when in reality it was closer to 1873–1875 because contemporary accounts relied on nominal series and had poor access to aggregate economic information. And aside from some monetary interventions from 1873–1879, there was no significant fiscal or monetary stimulus—yet the economy recovered. Indeed, the recovery is an example of how an economy can successfully correct itself when the government steps out of the way and allows the market to reallocate resources. It can be concluded that there was no prolonged depression in the 1870s. On this period Rothbard ([1983] 2005, pp. 154–155) appropriately writes, “It should be clear, then, that the ‘great depression’ of the 1870s is merely a myth—a

percentage from the years 1900–1940, a period of greater policy mandated wage rigidity, especially during the Great Depression, and of much greater rigidity than what actually occurred in the 1870s. Thirdly, he uses Balke and Gordon’s annual series, which one can reasonably expect to understate growth.

myth brought about by misinterpretation that prices in general fell sharply during the entire period."

SECTION VI: APPENDIX

For more intricate structure of production diagrams, the following sources can be consulted: for Figure 1, see Hayek ([1931] 2008a, p. 233), Garrison (2001, p. 47), Huerta de Soto (2006, p. 293), Rothbard ([1962] 2009, p. 369) and Skousen (2007, p. 203); Figure 2, see Hayek ([1931] 2008a, p. 239), Garrison (2001, p. 62), Huerta de Soto (2006, p. 334), Rothbard ([1962] 2009, p. 521), and Skousen (2007, p. 235); Figure 3, see Hayek ([1931] 2008a, pp. 242, 244), Garrison (2001, p. 69), Huerta de Soto (2006, pp. 356, 383) and Skousen (2007, pp. 288, 296).

Sources for the components of the Production industries can be found in Davis (2004a, p. 1188). The components are taken from the largest series in the 1880 weights.

All growth rates are compounded annually. For the monetary periods 1873–1875 and 1875–1879, the intervals also include half years, and as such the growth rates are adjusted accordingly.

Figure 1. The Structure of Production

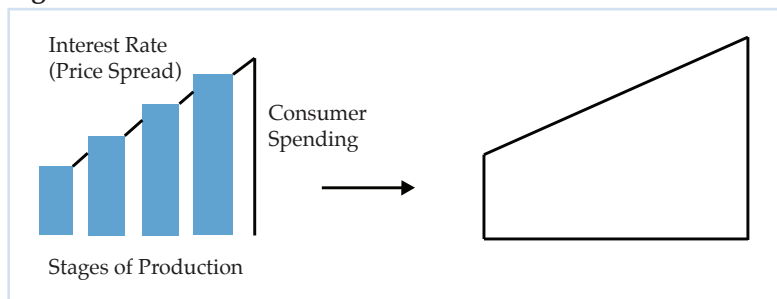


Figure 2. Time Preference Induced Growth

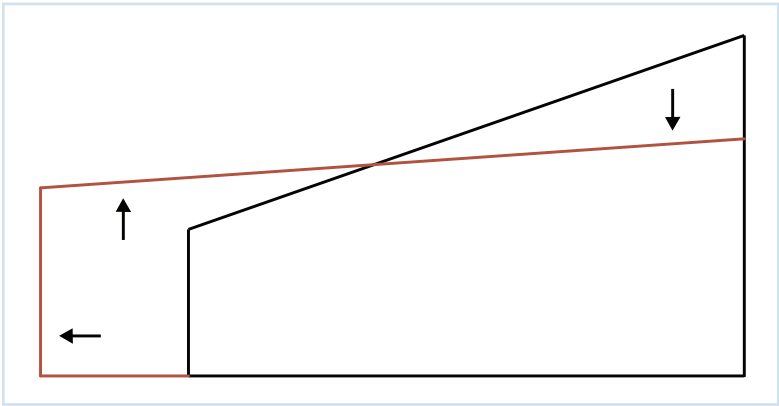


Figure 3. Credit Expansion Induced Growth

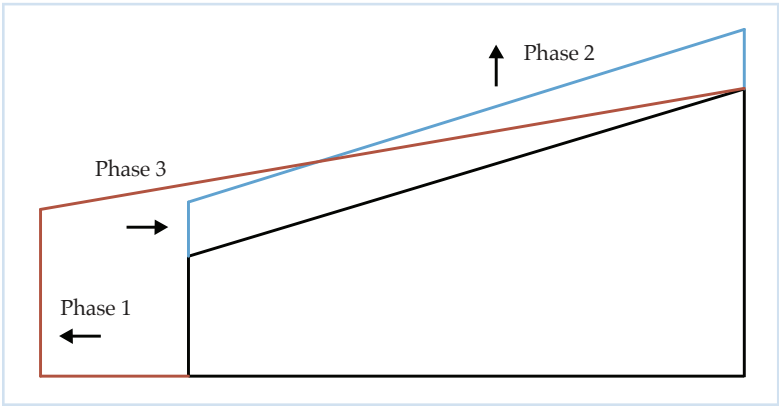


Table 1. Prices and Production Series

Production			Prices
	Industry	Composed primarily of:	Industry
Lower Orders	Wood and Paper products	Lumber shipments, Newspapers	Farm products
	Textile and Textile products	Cotton consumption	Textile products
	Food and Kindred products	Milled wheat flour, Refined sugar consumption, Hog packing, Beef packing	Foods
	Leather and Leather products	Sole leather, Leather hides	Hides and Leather products
Higher Orders	Chemicals and Fuel	Anthracite coal, Bituminous coal, Crude petroleum	Chemicals and Drugs
	Transport Equipment & Machinery	Merchant ships, Locomotives, Reaping machinery; steel plows	Building materials
	Metals and Metal products	Pig iron production, Tinsmithing, Bessemer and open-hearth steel	Metals and Metal products
	-----		Fuel and Lighting

Table 2. U.S Economy, 1867–1873 (per annum growth rates and levels)

Interest Rates (level)					GNP (growth rates)		
1867	1870	1871	1872	1873		1867 - 1870	1870 - 1873
7.32%	7.23%	6.98%	8.63%	10.27%	Davis	4.97%	7.53%
Money (growth rates)					J and W	3.20%	7.20%
	1867 - 1870		1870 - 1873		B and G	---	4.57%
M _a	2.75%		10.15%		Romer	---	7.45%
M _b	2.23%		11.16%		Bounds	3.2 - 4.97%	4.57 - 7.53%
Production (growth rates)				Prices (growth rates)			
Lower Orders	Industry	1867 - 1870	1870 - 1873	Industry	1867 - 1870	1870 - 1873	
	Wood and Paper	4.23%	4.22%	Farm	-5.56%	-2.75%	
	Textile	4.03%	11.16%	Textile	-6.64%	-0.75%	
	Food	5.56%	7.56%	Food	-5.93%	-4.25%	
Higher Orders	Leather	-1.20%	-5.93%	Leather	-1.02%	1.03%	
	Chemicals & Fuel	9.81%	10.66%	Chemicals & Drugs	-4.57%	-3.11%	
	Machinery	6.15%	11.35%	Building	-5.58%	1.62%	
	Metals	8.66%	10.56%	Metals	-6.91%	6.70%	
	---	---	---	Fuel and Lighting	-2.37%	3.36%	

Table 3. U.S Economy, 1870–1875 (per annum growth rates and levels)

Interest Rates (level)					GNP (growth rates)		
1873	1874	1875	---	---		1870 - 1873	1873 - 1875
10.27%	5.98%	5.44%	---	---	Davis	7.53%	-3.02%
Money (growth rates)					J and W	7.20%	0.81%
	1870 - 1873	1870 - 1873			B and G	4.57%	2.25%
M _a	10.15%	3.81%			Romer	7.45%	1.47%
M _b	11.16%	4.16%			Bounds	4.57 - 7.53%	-3.01 - 2.25%
Production (growth rates)					Prices (growth rates)		
Lower Orders	Industry	1870 - 1873	1873 - 1875		Industry	1870 - 1873	1873 - 1875
	Wood and Paper	4.22%	0.20%		Farm	-2.75%	-1.96%
	Textile	11.16%	-0.95%		Textile	-0.75%	-10.23%
	Food	7.56%	6.94%		Food	-4.25%	-0.82%
	Leather	-5.93%	8.71%		Leather	1.03%	-3.46%
Higher Orders	Chemicals & Fuel	10.66%	0.18%		Chemicals & Drugs	-3.11%	-9.26%
	Machinery	11.35%	-17.84%		Building	1.62%	-7.85%
	Metals	10.56%	-5.24%		Metals	6.70%	-15.13%
	---	---	---		Fuel and Lighting	3.36%	-7.00%

Table 4. U.S Economy, 1875–1879 (per annum growth rates and levels)

Interest Rates (level)					GNP (growth rates)		
1875	1877	1878	---	---		1873 - 1875	1875 - 1878
5.44%	5.01%	4.82%	---	---	Davis	-3.02%	3.37%
Money (growth rates)					J and W	0.81%	4.10%
	1873 - 1875		1875 - 1879		B and G	2.25%	2.86%
M _a	3.81%		-2.78%		Romer	1.47%	6.77%
M _b	4.16%		-4.11%		Bounds	-3.01 - 2.25%	2.86 - 6.77%
Production (growth rates)				Prices (growth rates)			
Lower Orders	Industry	1873 - 1875	1875 - 1878	Industry	1873 - 1875	1875 - 1878	
	Wood and Paper	0.20%	-2.91%	Farm	-1.96%	-10.07%	
	Textile	-0.95%	9.81%	Textile	-10.23%	-6.56%	
	Food	6.94%	3.11%	Food	-0.82%	-8.14%	
	Leather	8.71%	-0.83%	Leather	-3.46%	-8.24%	
Higher Orders	Chemicals & Fuel	0.18%	2.89%	Chemicals & Drugs	-9.26%	-5.18%	
	Machinery	-17.84%	1.14%	Building	-7.85%	-7.16%	
	Metals	-5.24%	8.91%	Metals	-15.13%	-10.37%	
	---	---	---	Fuel and Lighting	-7.00%	-10.10%	

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LEGAL POLYCENTRISM, THE CIRCULARITY PROBLEM, AND THE REGRESSION THEOREM OF INSTITUTIONAL DEVELOPMENT

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ABSTRACT: The circularity problem states that before legal polycentrists can employ price theoretic arguments about market competition, they must first show that legal polycentrism is able to instantiate the institutional framework within which property rights are protected and contracts are enforced. If these requirements are not satisfied, it is illegitimately circular to draw on market competition as an argument for legal polycentrism. This paper indicates that the above problem can be solved by relying on the regression theorem of institutional development, whereby the development of higher-level (hard) institutions is conditioned by the development of lower-level (soft) institutions.

KEYWORDS: legal polycentrism, institutions, institutional development, spontaneous order, collective action

JEL CLASSIFICATION: P16, P48

Legal polycentrism is the view that law and defense are, in relevant respects, no different from other goods and services

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normally supplied by the market, and that, in view of the generally acknowledged superior allocative properties of the market, freely competing protection and arbitration agencies would provide these goods at a much higher level of quality than territorial monopolies of force do (Tannehill and Tannehill, 1970; Rothbard, 1973; Molinari, [1849] 1977; Fielding, 1978; Friedman, 1989; Hoppe, 1999; Murphy, 2002; Stringham, 2007; Hasnas, 2008; Long, 2008). Legal monocentrism, on the other hand, is the term I use to designate the familiar position that law and defense are prototypical public goods, which have to be supplied by a territorial monopoly of force (otherwise known as the state) if they are to be supplied at all.

The former view developed in response to the latter, and since it is one of the newest theoretical developments in the field of political economy, its well-formulated criticisms are still comparatively rare. The one I find the most interesting, and the one I would like to address in the present paper, is centered around the so-called “circularity problem” (Morris, 1998; Lee, 2008; Buchanan, 2011), which focuses on the alleged inherent institutional shortcomings of legal polycentrism. The problem in question can be summarized as follows:

To show that competition between protection agencies would have beneficial consequences, [legal] polycentrists often cite results from price theory about market competition. But there is a circularity problem here: markets presuppose a legal framework; hence before polycentrists can employ price theoretic arguments about market competition, they must first show that the legal requirements of markets are satisfied, that is, that property rights and contracts are enforced. If these requirements are not satisfied, it is illegitimately circular to draw on market competition as an argument for legal polycentrism. (Wiebe, 2012, p. 1)

The implicit worry here is that price theoretic arguments about market competition and other efficiency-enhancing features of free-enterprise-based institutional arrangements depend on, but do not prove the existence of the requisite legal framework in a stateless environment.

In response, it has to be noted that the difficulties ostensibly raised by the circularity argument are by no means unique to legal polycentrism. An argument of a very similar structure can be deployed against, for instance, the supposed contractarian justification for

governmental legal monocentrism: it might be claimed that if the social contract can be made in the state of nature, then the state (understood as a contract enforcer) is redundant, but if the social contract cannot be made in the state of nature, then the state is impossible. In sum, either the contractarian position is viciously circular, or the social contract, needing no meta-state to enforce it, effectively becomes a self-enforcing anomaly.¹

The reason why I mention this parallel is because I believe that it illustrates the fact that the circularity alluded to in the context of both of the abovementioned legal systems does not point to any fundamental unworkability of either of them. In order to make this fact clearer, I will rely on the hierarchy of levels of social analysis proposed by Williamson (1998, 2000), which distinguishes between soft institutions—customs, traditions, norms, and religions—that emerge largely spontaneously and develop in an evolutionary manner, and hard institutions, whose purpose is to specify “the formal rules of the game” (*ibid.*, p. 597), i.e., the ones referring to property rights, contract law, etc.

Where a proponent of legal polycentrism claims that “a functioning market and a functioning legal order arise together” (Long, 2008, p. 141), a proponent of coercive legal monocentrism can equally justifiably claim that a functioning state and a functioning legal order arise together. The parallel under discussion seems to me to point to the fact that incipient legal orders, regardless of their more specific characteristics, such as mono- or polycentricity, are necessarily grounded in the underlying soft legal institutions (customs, traditions, general social norms, etc.).² In other words, if

¹ It might be argued at this point that the claim that the social contract is vulnerable to the circularity argument is not valid. The reasoning is as follows: The social contract argument claims that the authority of the state rests on agreement in the “state of nature.” It does not assume that this agreement can be enforced in the state of nature, and this is the way out of the circle: The social contract can be made, but not enforced, in the absence of the state. However, since the social contract is not able to establish the state unless it can be enforced, and, by definition, nothing can enforce it in the state of nature, the social contract argument’s alleged ability to escape the circularity objection still does not make it capable of accomplishing its intended goals.

² Unless a legal system is imposed on the inhabitants of a given territory by conquest, but even then its long-term survival depends on the ability of conquerors to integrate it with the local soft institutions to a sufficient degree.

by “state of nature” one means a state of affairs in which there are no hard legal institutions, then legal systems do, in fact, emerge directly out of the state of nature.

This is illustrated, for instance, by the fact that “roving bandits” (Olson, 2000) can rely on the soft, informal institutions of trust and ostracism to solve their own prisoner’s dilemma, successfully police or eliminate free riders, etc., and eventually become stationary bandits. The same applies to “anarchic” communities that manage to survive for at least some time without being subjugated by roving-bandits-turned-stationary-bandits but also generate wealth sufficient to become attractive prey for them.

In sum, what ultimately accounts for the stability and workability of any given set of hard legal institutions (be it monocentric or polycentric, coercive or voluntary, monopolistic or competitive, etc.) is the underlying set of corresponding soft legal institutions, i.e., the ones rooted in custom, tradition, religion, etc., or, more broadly speaking, the ones ultimately dependent on preferences rather than incentives. They are, in an important sense, and for all practical purposes, an ultimate given, since they originate over very long time periods in an endogenous, evolutionary manner. The familiar message of de la Boetie, Hume, Mises, and their modern successors is that any territorial monopoly of force that fails to tap into these institutions or at least make peace with them is ultimately bound to collapse (Hume, [1742] 1971; Higgs, 1987; Mises, [1949] 1996, pp. 188–191; de la Boetie, 1997). According to the theory of legal polycentrism, the same goes for any rogue protection or arbitration agency, i.e., an agency whose mode of operation fails to reflect accurately the shared values and expectations of the society it purports to provide with protective or legal services (Boettke, Coyne, and Leeson, 2008).

One of the unique features of a competitive, contractual, polycentric legal order is that the role it assigns to hard legal institutions is merely to make the enforcement of rules based on the underlying soft legal institutions more effective. In other words, in such an order hard legal institutions do not establish the rules of social cooperation, but rather allow the process of their enforcement to benefit from specialization, division of labor, economic calculation, capital accumulation, greater incentive compatibility, and other

efficiency- and welfare-enhancing features of free-enterprise-based arrangements. As I see it, the chief, non-circular claim of the legal polycentrist is that market competition in the area of law and defense provision generates precisely these beneficial features, while state monopoly in this area necessarily prevents their emergence. This is so especially insofar as the idea behind coercive legal monocentrism is essentially to override the aforesaid soft legal institutions rather than consult them, which results in the impossibility of making a logically meaningful distinction between the coercive monopolist enforcing the law and merely claiming to enforce it. This, in turn, makes the whole concept of law empty or arbitrary (Wisniewski, 2013).³

There exist numerous historical examples of the abovementioned process of the development of hard legal institutions on the foundation of their soft counterparts, some of which point to monocentric, and some to polycentric results. The list of examples belonging to the former category is admittedly much longer, but this should not be surprising, since it is a well-known and well-understood fact that overcoming the collective action problem is much easier for roving bandits than for aspiring market entrepreneurs (Olson, [1965] 1971).

Institutional efficiency is a function of the underlying incentive structure, which, in turn, is largely a function of the underlying ideological conditions. As it happens, the praxeological features of collective action imply that minorities can undertake it with much greater facility than majorities, since within small groups benefits are more highly concentrated, interests are more uniform, and effective monitoring of free-riders is more feasible. This, coupled with the iron law of oligarchy (Mosca, 1939; Michels, [1915] 1959), implies that it is much easier for bands of roving bandits to generate incentive structures favorable to undertaking successful collective actions than it is for peaceful members of extended societies to accomplish the same task. In other words, it is much

³ It has to be stressed that this observation does not contradict my earlier claim that any territorial monopoly of force that fails to tap into the soft institutions existing in a given society or at least make peace with them is ultimately bound to collapse. This is because, first, overriding such institutions is not tantamount to ignoring them altogether, and second, as territorial monopolies of force consolidate their power over time, their dependence on such institutions may loosen.

easier to establish a territorial monopoly of force than to create a network of private, competing protection and arbitration agencies that could safeguard a given society from the depredations of such a would-be monopoly.

However, the difficulty of the latter task by no means implies its impossibility—instead, it points to the crucial link between incentives and preferences, and to the crucial fact that successfully modifying the latter can substantially alleviate the collective action problem (Hummel, 2001; Stringham and Hummel, 2010). Thus we get what might be called the regression theorem of institutional development, whereby the development of higher-level (hard) institutions is conditioned by the development of lower-level (soft) institutions.⁴ No alleged circularity seems to make this process inoperative.

In response, the defender of the circularity objection might suggest that the above solution is of limited value, since “informal institutions are limited in their ability to scale up”, i.e., in their ability “to function effectively as population size increases. For example, reputational mechanisms might break down in large anonymous groups, since communicating information about cheaters becomes prohibitively costly” (Wiebe, 2012, p. 8). I believe that this suggestion rests on a misunderstanding of the role of informal institutions in the process of establishing a robust system of polycentric governance. The scalability objection would work if the role of informal institutions was to replace their formal counterparts rather than to provide the necessary foundation for their emergence. This, however, is not the case—as soon as formal institutions emerge against the background of their informal counterparts, the scalability of the latter (or lack thereof) becomes irrelevant.

This is best illustrated by Menger’s ([1871] 1976) famous description of the bottom-up, evolutionary process whereby the

⁴ A somewhat similar solution is suggested by Friedman (1996), who claims that the formal arrangements of a polycentric legal and protective order can piggyback on the pre-existing equilibrium generated on the basis of a past sequence of mutual threat games. I believe that the narrative described in the present paper complements and improves upon Friedman’s proposal insofar as it explicitly grounds it in the distinction and mutual relationship between incentives and preferences, as well as between qualitatively different kinds of institutions.

most marketable commodity assumes the role of a universal means of exchange upon outcompeting all of its less marketable rivals, thus transforming a barter economy into a monetary economy. Now, while the initial existence of barter arrangements is necessary for the initiation of the abovementioned process that culminates in the emergence of money, together with the complex, formalized institutional framework that allows for its effective operation, the scalability of the former setting is in no way identical or even proportional to that of the latter. A barter economy is clearly limited in its ability to scale up, but a monetary economy is not. Likewise, “soft” reputational mechanisms might be limited in their ability to create a sufficiently scalable set of legal and protective institutions, but the same need not apply to “hard” frameworks that develop on their foundation. A different conclusion may be reached only if one mistakenly thinks of soft and hard institutions as substitutes rather than complements.

In sum, there does not seem to be any insurmountable problem of circularity confronting the position of legal polycentrism. Falling back on the hierarchy of levels of social analysis described in the new institutionalist literature (Williamson, 1998, 2000) allows us to generate a regression theorem of institutional development which disposes of any troublesome circularity in this context. Scalability also does not seem to be an overwhelming problem here. The reason why voluntary, competitive institutions in the area of law and defense have a harder time scaling up than coercive, centralized ones follows from the praxeological features of collective action, but this is a well-known observation, long appreciated by the theorists of legal polycentrism, who clearly recognize the indispensable role of ideology and preference change in rectifying the above asymmetry (Hummel, 2001; Stringham and Hummel, 2010). Thus, as I see it, the circularity problem fails to undermine legal polycentrism.⁵

⁵ It might be worth adding in closing that even if the circularity argument were correct, the argument that the advantages of market competition make a polycentric legal order preferable to a monocentric one has not been refuted. The circularity argument would show only that a state is necessary to establish a legal system. It would not show that, once a legal system exists, the monocentric order should be retained.

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THE MARGINAL EFFICIENCY OF CAPITAL: A COMMENT

LUCAS M. ENGELHARDT

ABSTRACT: The impact of interest rates on investment choices is a key element in both Keynesian and Austrian theories of the business cycle. Fuller (2013) compares the Keynesian Marginal Efficiency of Capital approach to the Austrian Net Present Value approach, claiming that the two give different rankings of investment projects. This comment provides examples to show that this is only true if factor prices are held constant. If factor prices reflect the discounted present value of the project, then the different rankings between the approaches vanishes. This result further highlights a fundamental difference between the Austrian and Keynesian views: factor price stickiness. This difference in assumptions drives the opposing views of monetary policy.

KEYWORDS: John Maynard Keynes, marginal efficiency of capital, net present value, interest rates, central banking

JEL CLASSIFICATION: E12, E22, E52, E58

In his recent article, Edward W. Fuller (2013) compared the Keynesian Marginal Efficiency of Capital approach with the Austrian Net Present Value approach. While his article has some important insights regarding the different treatments of investment

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projects in these two approaches, the result that the two approaches result in different rankings will only hold if factor prices are held constant. But, as the paper states, such an assumption is generally not true.

To briefly summarize Fuller's main point: the net present value criterion demonstrates that there is a "switching" from one type of investment project to another as interest rates change. In particular, as interest rates rise, shorter projects will be preferred, while longer projects are preferred when interest rates are lower. In the marginal efficiency of capital approach, there is no such switching. Rather, there is an invariant list of projects with each listed by its rate of return (defined as that interest rate which sets the net present value equal to zero), and the going interest rate acts as a "hurdle" rate, determining how far down the list investors will go when funding projects.

All of this is true, if we hold the cost of starting the projects (and therefore the rate of return) constant. However, if we include the insight that "[c]ompetition between investors creates a tendency for the net present value of an investment project to equal zero" (Fuller, 2013, p. 381), then these results fail to hold. To show this, I will slightly modify Fuller's examples.

Suppose that we have two projects that would utilize the same resources, so entrepreneurs with these two projects in mind are bidding against one another. The first project ("Project 1") pays \$1,000 of positive cash flow in each of the next three years (equivalent to Fuller's "wooden bridge") The second project ("Project 2") pays \$1,000 for each of 8 years, starting 3 years from now (equivalent to Fuller's "steel bridge"). Fuller assumes that the first project will cost \$2,000 to start, while the second costs \$5,000. That is where the problem lies: if competitive bidding occurs, then the starting cost is not fixed. It will depend on the interest rate, and the Net Present Value (NPV) of the project with greater present value will be zero, while the less valuable project's NPV will be negative. In short: while it is true that, "other things equal", as the interest rate changes, the NPV will change as described by Fuller, Fuller has argued that when the interest rate changes, the startup cost of the project will change as well—and will change to keep the NPV at zero for any projects that get funded. To reexamine Fuller's point, we calculate the Present Values (not the Net Present Values),

under the assumption that the two projects are competing ways of using the same set of resources.

Table 1. Present Values

Interest Rate	Project 1 PV	Project 2 PV
5%	\$2723.25	\$5862.32
10	\$2486.85	\$4409.03
15	\$2283.23	\$3393.06
20	\$2106.48	\$2664.69
25	\$1952.00	\$2130.50
28.18	\$1863.72	\$1863.72
30	\$1816.11	\$1730.59

As long as the interest rate is below 28.18 percent, the longer project has a higher present value, so entrepreneurs pursuing Project 2 will get control of the resources and pursue that project. If interest rates are above 28.18 percent, then the shorter project will have a greater present value, so entrepreneurs that pursue Project 1 will win control of the resources and pursue that project.

On the whole, the story here is very similar to Fuller’s, simply because Fuller’s NPV was really just present value, but subtracting an arbitrary constant that he treated as the startup cost. However, the story changes if we allow for the startup cost to change and then look at the marginal efficiency of capital (MEC) criterion. To calculate the MEC, first I assume an interest rate. Then, I calculate the present value of the two projects. Then, I assume that the project’s startup cost is equal to the greater of the two present values. Then, I calculate the interest rate that would be required to make the Net Present Value of each project zero.

Table 2. Marginal Efficiencies of Capital

Interest Rate	Project 1 MEC	Project 2 MEC
5%	-27.26%	5%
10	-17.03	10
15	-5.91	15
20	6.17	20
25	19.28	25
28.18	28.18	28.18
30	30	28.81

Once we correct for the changing cost of startup, the net present value and marginal efficiency criteria will give the same ordering—Project 2 is preferred if the interest rate is less than 28.18 percent, Project 1 is preferred if the interest rate is more than 28.18 percent. The reason is that the net present value of the “winning” project is zero, so the MEC of the winning project is equal to the going interest rate. The “losing” project has a negative NPV. To increase the NPV to zero, the MEC must be below the going interest rate used to calculate the original NPV.

But, what if we allow that the startup costs may be fixed? Does that suggest the rank ordering will be different for the two projects? Yes and no. Fuller has already laid out the reasons for a “yes” answer, so let me present the reasons for the “no.” If we apply the net present value criterion correctly, the decision we are making is not which of two (or more) projects to select—it is whether we should pursue a particular project at all. If the NPV is equal to or greater than zero, then investing in the project is wealth-enhancing. If the NPV is less than zero, then investing in the project is wealth-diminishing. In the following table, I assume that the startup cost is always \$2,000, and bold those projects that should be undertaken. Then, I calculate the MEC for each project, assuming a \$2,000 startup cost.

Table 3. Net Present Values (fixed startup cost of \$2,000)

Interest Rate	Project 1 NPV	Project 2 NPV
5%	\$723.25	\$3862.32
10	486.85	2409.03
15	283.23	1393.06
20	106.48	664.69
23.38	0	286.98
25	-48.00	130.50
26.48	-90.09	0
28.18	-136.28	-136.28
30	-183.89	-269.41

Under these assumptions, if the interest rate is less than 23.38 percent, then both Project 1 and Project 2 are undertaken according to the NPV criterion. If the interest rate is less than 26.48 percent, but greater than 23.38 percent, then Project 2 is undertaken, but Project 1 is not. If the interest rate is greater than 26.48 percent, then neither project is undertaken. By definition, the MEC of Project 1 is the interest rate that makes the NPV zero—so 23.38 percent. By definition, the MEC of Project 2 is 26.48 percent. So, using the marginal efficiencies of capital and comparing to a hurdle rate gives the same result as looking for a net present value greater than zero.

All of that said, Fuller raises an interesting point: Austrian theory is primarily about *which* investment projects get chosen, while Keynesian theory is driven by the question of *how many* projects get chosen. The goal of this comment is to add some clarification for two underlying reasons for those differences. The first reason is that Keynesian theory assumes idle resources. The second reason flows from that assumption: in Keynesian theory, prices of starting investment projects do not fully reflect expected, discounted present values of those projects—instead startup costs are “sticky.” Thus, Austrians, focusing on unsustainable malinvestments, see credit expansion as destructive while, for Keynesians, “[t]he conception of the interest rate as a hurdle rate naturally leads to a monetary policy of manipulating the interest rate.” (Fuller, 2013, p. 394)

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BOOK REVIEW

ECONOMISTS AND THE STATE: WHAT WENT WRONG

TIMOTHY P. ROTH

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MARK THORNTON

The Federal legislative process has completely broken down, from a deliberate rule-guided process to one that seems completely ad hoc and driven by lobbyists. This trend continues no matter what party is in power. Congress bypasses its own rules, ignores its own schedules, and call for votes without providing enough time for representatives and senators to even read the bills.

Legislation such as the Affordable Care Act, the Stimulus bill, the Medicare prescription drug bill, and the Omnibus Appropriations Act of 2009 are all examples of this ad hoc legislative process where the Congress ignores the traditional Congressional processes and timetables. The Troubled Asset Relief Program or

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TARP, for example, allocated \$700 billion for a specific purpose, but once the legislation was passed the money was doled out to a wide variety of programs, in what amounted to a wild fiscal orgy in Washington, DC.

What went wrong is therefore more than just a bewildering and costly regulatory code, an exploitive and ruinous tax code, and a fundamentally immoral and disastrous national debt. Author Timothy Roth shows that the federal government is being run in a sinister and criminal manner, not a legal one. As a result the vast majority of Americans no longer trust the federal government. They have no confidence in Congress and view Congress as representing the crony capitalists, not constituents. Furthermore, Americans see the majority of their tax dollars as simply being wasted. This serious book reports on “what went wrong,” dishes out some of the blame to the mainstream economics profession, and even provides some possible remedies.

Roth begins with the modern economist’s embrace of a theory of the state in which a social welfare theory drives policymaking based on utilitarian considerations. This process results in distributive rather than procedural justice. As a result, the “egalitarian spirit” destroys rights and imposes discriminatory policies and redistributionism. This in turn impacts the individual citizen’s psyche, their respect for law and rights, and reduces their trust in government. The author thereby blames modern economics, or at least the acceptance of its analytical and moral framework, for undermining “the legitimacy and stability of republican self government.” (p. xi)

This consequentialist-utilitarian process of government is fundamentally at odds with the procedurally based approach of classical liberalism. The former is the realm of *homo economicus*, the latter is based on real man. The former allows for government action to achieve various goals or to fix some technical problem in the economy, while the latter is largely constrained against doing so. The replacement of classical liberalism with the modern economist’s mindset has thereby opened Pandora’s box of government intervention and redistribution. Both the process and the results of that process are the reality of the modern political dilemma.

Roth suggests that only a return to the roots of classical liberalism can reverse our course. In particular he invokes Adam Smith,

Immanuel Kant, the American Founding Fathers, particularly James Madison, and one of the founders of the Public Choice School, James Buchanan, as examples of the proper approach. Most particularly, there needs to be a return to procedural justice and a rejection of distributive justice:

Economists should embrace the explicitly normative, procedurally based and consequence-detached political economy that comes to us through the work of Adam Smith and the America's Founders. If this means that their political economy must be conjoined to the moral and political philosophy articulated by Adam Smith, Immanuel Kant and John Rawls, it also means that economists must reject the politics and the economics of wants and needs and distributive or 'social justice'. (p. 146)

According to Roth, the "Smithian Inheritance" is the utter distrust of government and the belief that government is a dangerous and harmful institution. Parallel to this stance is the strong belief that humanity is or at least could be a self-governing society. In terms of government, Smith distrusted the judiciary and concluded that it should be separate and independent from the executive branch of government and that it should be constrained in every possible way. He sees the executive branch as invidious and wholly destructive. The legislative branch is also bad, but Smith held out hope that moral citizens would choose moral representatives or at least act to restrain them.

Roth believes that these Smithian views can be found in the Founding Fathers, the Federalist Papers and the Constitution and this is certainly true. However, I would note that Smith's views, as discussed by Roth, might be better seen in the slightly earlier generation of Founding Fathers and the Articles of Confederation. With the Articles of Confederation the judiciary is absent, the executive is disemboweled, and the legislature is constrained by both the States and the more stringent voting rules of the Articles. In comparison, the Constitution was a compromise with big, centralized government, and an extralegal one at that. Like most analysts, Roth dismisses the Articles out of hand without argument, analysis, or evidence.

The Founders of the Constitution hoped to constrain the central government with federalism, separation of powers, checks and balances, the Bill of Rights, and the "civic virtue" of the citizens. The

limit of the central government would be the enumerated powers listed in the Constitution. The author points out (pp. 90–92) that the majority of the Founders of the Constitution believed that the meaning of the General Welfare Clause was that Congress could pass any law needed to execute the enumerated powers, not that they could pass any law they wanted. In retrospect, that is the only interpretation that could make any sense of the Constitution.

Hence we find a problem with the Constitution. The Founders of the Constitution wanted a government powerful enough i.e. the General Welfare Clause, to be able to carry out the enumerated powers. They thought that they could constrain government through procedures, interests, and virtue. Whether this perspective is the result of naiveté or self interest is an interesting question, but at this point in time an unimportant one. The increase in the potential to “solve problems” eventually combined with the desire to solve a wider array of problems to create *the problem* of big, uncontrolled government. It turns out the ability of the Constitution to control the central government was an illusion.

Take Madison’s Federalist Paper No. 10 as an example of this naiveté. Here Madison argues that large expansive republics are better than small republics because they better balance the power of “factions” or interest groups and prevent any interest group from dominating the government. He argued that such factions can take control of small republics. According to Madison, local majorities in small republics are cancelled out once incorporated into larger republics. This is why, Madison argued, the Constitution with its expanded powers and geographic size, was a better check on the power of government, compared to the States under the Article of Confederation.

What went wrong? The construction of the Constitution failed to contain the powers of the Constitution and under the doctrines of modern economics and modern legal theory the central government has grown and developed into something the Founders of the Constitution did not intend. Indeed, it has turned out exactly as what they feared most.

Roth recommends a return to the understanding of liberty that Adam Smith gave us, an understanding of the republic from the Founding Fathers, the notion of constitutional government from

James Buchanan, and the guiding force of impartiality as found in John Rawls and others.

It is difficult to argue with much of the analysis, conclusions, and recommendations that Timothy Roth provides in *Economists and the State*. However, it does seem unsatisfying to argue that in order to correct our current dilemma that we essentially hit the restart button, go back to our original starting point, the US Constitution, and learn from our mistakes. As we search for causes and solutions, a much wider perspective is called for. For example, a different reading of Adam Smith might point us back further in time to the Articles of Confederation, as I have argued above. However, I would not stop there. Surely, the principles of the Founding Fathers pointed us in the right direction on the road to self government. The only question is how far can we travel.

BOOK REVIEW

MONEY: HOW THE DESTRUCTION OF THE DOLLAR THREATENS THE GLOBAL ECONOMY—AND WHAT WE CAN DO ABOUT IT

STEVE FORBES AND ELIZABETH AMES

NEW YORK: MCGRAW HILL, 2014, xvii + 249 pp.

DAVID GORDON

*M*oney is an odd book. Its odd character can be brought out through an analogy. Imagine that someone wrote an eloquent book about price and wage controls. The book showed how attempts to control prices led to economic disaster. Faced with an abundance of incontrovertible evidence that demonstrated the bad effects of these measures, an informed policymaker would find only one rational choice available to him. He should not impose comprehensive price controls but rather should use controls in moderation.

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Would it not be obvious what had gone wrong with our imagined book? If price controls do not work, they should be done away with altogether. "Moderation" in the use of a bad measure is no virtue. If cyanide is poison, "drink in small doses" is not the appropriate response.

Money falls exactly into the bad pattern just described. Forbes and Ames write with insight about the dangers of inflation and easy money. In response, they propose that the monetary system should be based on gold. What could be better? Unfortunately, they do not favor a genuine gold standard: instead, their plan calls for limiting monetary expansion by tying the dollar to gold at a fixed rate. In sum, monetary expansion is bad, so we ought to reduce the extent to which the Fed may engage in it.

Forbes and Ames aptly quote Ron Paul on the fundamental fallacy of inflationism: "If governments or central banks really can create wealth simply by creating money, why does poverty exist anywhere on earth?" (p. 81, quoting Ron Paul)¹ Money is valuable because we can use it to purchase goods and services: increasing the number of monetary units does not add new goods or services to those already produced.²

The point seems obvious once stated; why do so many ignore it? As Forbes and Ames point out, many nations favor inflation because it will increase exports and reduce imports. Foreign buyers, so long as the money of their own nation has not also expanded at as fast a rate, will find that they can purchase more goods for the same nominal amount of their money; and importers will find that, with their inflated money, they can purchase less.

In this view, exports are good and imports are bad; but why should we accept this? "Trade deficits and surpluses have historically reflected little about the health of an economy. Neo-mercantilists overlook the fact that the United States has had a merchandise trade deficit for roughly 350 out of the last 400 years.... The fact that the

¹ The same page mentions that "noted economic historian" Murray Rothbard said that inflation favors the first recipients of new money, but Rothbard's name does not appear in the book's index. (See p. 81 and the note on p. 219, citing "*What Has Government Done to Our Money?*" (1963).

² An exception must be made for non-monetary uses of a monetary commodity. An increased supply of gold, e.g., makes more gold available for jewelry.

United States buys products and services from other nations doesn't mean it is weak; it means that the U.S. economy is strong and has the wealth and resources to buy what others are selling." (p. 55)

The authors strike forcefully at the Keynesian claim that inflation is needed to combat unemployment. "According to [William] Phillips and his fellow Keynesians, vigorous growth corresponded to price increases, while lower inflation correlated with higher jobless levels. In other words, there was a trade-off between inflation and employment." (p. 79)

As the "stagflation" of the 1970s showed, the Keynesian claim is false. Inflation and unemployment "don't move the way Keynesians would have you believe. In the inflationary boom/bust era of the 1970s and early 1980s, unemployment reached higher levels than during the financial crisis." (p. 80)

Broadening their critical assault, Forbes and Ames show the deleterious moral effects of inflation. "Weak, unstable money inflames perceptions of unfairness. People with fixed incomes struggling with rising prices in an uncertain economy become enraged when they see others appear to get rich through speculation or crony capitalism, not honest effort." (p. 102)³

The natural conclusion from all this criticism of inflation is that the government ought to refrain entirely from monetary expansion; but a theoretical error blocks the authors from seeing this. The error is that money is a measure of value that must be kept constant. "Money is a standard of measurement, like a ruler or a clock, but instead of measuring inches or time, it measures what something is worth.... Just as we need to be sure of the number of inches in a foot or the minutes in an hour, people in the economy must be certain that their money is an accurate measure of worth." (p. 26)

What is wrong with this? When you pay \$25,000 for a car, you are not measuring the value of the car. Rather, you are showing that you prefer the car to the money: the person who sells you the car has the reverse valuation. Without this difference in preferences, no exchange would take place. If, as Forbes and Ames imagine, money measures value, both you and the car seller would arrive at

³ Wilhelm Röpke, *Welfare, Freedom, and Inflation* (1964), is an outstanding analysis of the moral effects of inflation.

the same “measure” of the car’s value. We would have no account at all of why an exchange takes place.

We can trace further the source of the authors’ mistake. They rightly note that money “originated in the marketplace as a solution to a problem. It arose spontaneously, like the spoon or the personal computer, in response to a need.” (p. 37). With money, it is much easier to achieve the “double coincidence of wants” required for an exchange than without it. But they miss why this is so. The reason is that practically everyone is willing to accept money in an exchange; it is a commodity that everyone wants. Instead, Forbes and Ames identify the need as “for a stable unit of value to facilitate trade.” (p. 37)

This fundamental error leads them to recommend inadequate policies. Their plan leaves plenty of room for monetary expansion. Their “gold standard allows the money supply to expand naturally in a vibrant economy. Remember that gold, a measuring rod, is stable in value. It does not restrict the supply of dollars any more than a foot with twelve inches restricts the number of rulers being used in the economy.” (p. 128) Money needs to expand if the economy is growing, because without the expansion, prices would fall; and then, *horribile dictu*, money would cease to be a constant measuring rod. Further, if a “major financial panic” demanded “an emergency injection of liquidity,” the Fed would be able to act as a lender of last resort. (pp. 158–159)

How is the goal of stable money to be achieved? “The twenty-first century gold standard would fix the dollar to gold at a particular price.... The Federal Reserve would use its tools, primarily open market operations, to keep the value of the dollar tied at that rate of gold.” (p. 152) In this etiolated gold standard, only the United States would need to fix its money to gold in the fashion just mentioned. “If the United States went to gold, other countries would likely fix their money to the dollar, if only for convenience.... Of course, if a country wanted to attach its currency directly to gold instead of the gold-backed dollar, it could do so.” (p. 155)

An obvious objection to this proposal is that “setting a fixed dollar/gold ratio is price fixing and therefore anti-free market.” To this, the authors incredibly answer: “Having fixed weights and measures is essential for fair and free markets. We don’t let markets

each day determine how many ounces there are in a pound or how many inches there are in a foot.... Money, similarly, is a measure of value.” (p. 161) They fail to grasp that economic value is subjective: there are no fixed units of value that correspond to units of measurement of physical objects.

Their proposal, as they readily acknowledge, revives the interwar gold exchange standard and the post-World War II Bretton Woods arrangement. For them, this is no objection: those were excellent monetary systems. True enough, there are a few “gold standard purists” who argue that the policy of credit expansion pursued by the Fed in the 1920s under the gold exchange standard “produced the disaster of 1929.” These purists are wrong. “The cause of the Depression was the U.S. enactment of the Smoot-Hawley Tariff.” (pp. 148–149) So much for Mises, Hayek, and Rothbard! Readers in search of a deeper analysis of monetary policy should put aside this superficial book and turn instead to the works of these great Austrian theorists. A good beginning would be *America’s Great Depression* by “noted economic historian” Murray Rothbard.⁴

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⁴ I have benefited greatly from Joseph T. Salerno, “Will Gold-Plating the Fed Provide a Sound Dollar?” (Salerno, 2014).

BOOK REVIEW

THE DOLLAR TRAP: HOW THE U.S. DOLLAR TIGHTENED ITS GRIP ON GLOBAL FINANCE

ESWAR S. PRASAD

PRINCETON: PRINCETON UNIVERSITY PRESS, 2014, 432 PP.

GEORGE BRAGUES

The great mystery of international finance is how the U.S. dollar has managed to retain its dominance. This is a currency, after all, that has lost about 83 percent of its purchasing power since President Richard Nixon cut the dollar's remaining link to gold in August 1971. More recently, in the wake of the 2008 financial crisis, the Federal Reserve has sought to resuscitate the American economy by directly endeavoring to generate an abundance of dollars through the policy of quantitative easing. All the while, the level of the country's public debt has escalated above 100 percent of GDP, thus portending a continued outpouring of dollars from America's central bank to pay what is owed, with all that entails in cheapening the currency.

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Yet for all this, the greenback is still used in an overwhelming majority of transactions in the foreign exchange market. As of April 2013, its share of all trades stood at 87 percent, far greater than its closest counterpart, the Euro (Bank of International Settlements, 2014). When it comes to global trade in goods and services, the U.S. dollar was used to settle 81 percent of all transactions as of October 2013 (SWIFT, 2013). The latest figures for the first quarter of 2014 show the world's central banks retaining their confidence in the greenback as a store of value, holding 61 percent of their foreign exchange reserves in U.S. dollars, not much different from where that proportion was back in 1996, and still well ahead of its peers (International Monetary Fund, 2014). Topping it all off is the fact that investors the world over remain eager to purchase securities denominated in American dollars, with Treasury bonds a particular favorite despite these carrying historically low yields.

So what is going on? Are we witnessing the financial equivalent of a seemingly well-structured and prosperous city moments before a massive earthquake exposes the rickety foundations of its buildings? Or is the resiliency of the greenback reflective of forces assuring its paramountcy going forward? These are the questions taken up by Eswar S. Prasad, the Tolani Senior Professor of Trade Policy at Cornell University, in his book *The Dollar Trap*. Prasad argues the thesis that a confluence of politico-economic trends and seminal events over the past several decades, including the 2008 financial crisis originating out of the U.S. housing sector, have cemented the American dollar's reign over the global financial system. Though he acknowledges various threats to the greenback, Prasad does not think it will fall from its perch anytime soon. This will not be ideal, he concedes, but he does maintain that the continued supremacy of the U.S. dollar is the best we can expect under the present circumstances. It will be "suboptimal", as he puts it, but at least it will be "stable and reinforcing" (p. 307). Prasad tells a fairly convincing story about the recent strengthening of the greenback's position in global finance, but he is too accepting of the status quo.

First, some basic facts about the political economy of foreign exchange. Just as money exists to facilitate the trade of goods and services amongst individuals and firms, so foreign exchange exists to smooth that trade when it takes place between parties across

national borders. For as each nation often has its own currency, and sellers typically desire to be ultimately paid in their national unit, a market will emerge to exchange the different monies of the world. Inevitably, purchases and sales between various countries will not balance; on aggregate, individuals and firms in certain nations will buy a greater value of goods with money than they sell, while those in other nations will sell a greater value of goods for money than they buy. From the economic point of view, this is not a problem, inasmuch as the imbalances merely reflect an accounting by which people have been artificially sorted into national groups. One could just as easily carve up the population within national frontiers, by say tallying the transactions of those who reside in Long Island against those in southern California, and find an array of surpluses and deficits. What matters is how each of us fares irrespective of where we happen to live. Clearly, everyone benefits from cross-border trade, for they would not have otherwise engaged in it.

Politically, however, the imbalances have posed a dilemma because of the adjustment in the currency that is required. Prior to World War I, when the major currencies were backed by gold, the adjustment was supposed to be made through a change in the quantity of money. Countries that imported more than they exported were supposed to enable outflows of gold, whereas those that exported more than they imported were enjoined to tolerate inflows. After World War I, the world progressively moved away from this regime, eventually reaching the point with the breakdown of Bretton Woods in the early 1970s in which the advanced nations have opted to rely on price as the adjustment mechanism. This has spawned a gargantuan mart of floating fiat monies, where currency values can fall for countries with deficits and rise for those running surpluses, following the script laid out by Milton Friedman (1962, pp. 56–74) for a flexible exchange rate regime.

That the architecture of global finance has evolved in this direction is a sign that it better suits the needs of politicians. Rather than stand by as the money supply fluctuates with the international activities of their citizens, policymakers would much prefer to have a free hand in influencing its quantity in order to swing the economy in their political favor—which is precisely what the current system gives them. But as the exertion of this control over quantity also impacts the prices of currencies, the present framework has had

the baleful consequence of turning the movements of the US dollar, Euro, Japanese yen, Chinese renminbi and all the rest into a political battleground. Instead of furthering economic co-operation between the peoples of the world as it ought to do, the foreign exchange market has become a source of national discord.

Prasad nicely details this conflict. The chief protagonists are the U.S., the Euro zone, along with the developing world, principally the so-called BRICS nations, which include Brazil, Russia, India, China, and South Africa. Echoing all the discussion of late concerning the renminbi's ascent in currency markets, China looms large in Prasad's account, due to that country's size, rapid economic growth, and geopolitical ambitions. As the leading player, the U.S. dollar attained its status in the 20th century, assuming it from the British pound that dominated in the 19th century, and consolidating it after World War II with the establishment of Bretton Woods. When this exchange rate system fell apart with Nixon's 1971 decision to abandon gold, one might have expected the US dollar to lose its preeminence. That it instead gained influence Prasad explains by observing that everything is relative in international finance. Though the U.S. government effectively devalued its currency with respect to gold, what mattered for the dollar henceforth was how it stood compared to other fiat currencies in the eyes of investors, businesses, central banks, and governments.

On this score, the greenback has consistently trounced the rest of the field. According to Prasad, this is owing to the extent and depth of America's financial markets, which offer a multitude of highly liquid alternatives to deploy any funds set aside for future uses. Prasad also believes it reflects the superiority of America's political and legal institutions. For all the hue and cry about partisanship and gridlock in Washington, the U.S. democratic system, with its various checks and balances, gives assurance to holders of the country's debt that a default is unlikely, whether done explicitly through non-payment or implicitly through higher inflation. Likewise, property rights and the sanctity of contracts are protected by America's courts.

Reinforcing the dominance of the greenback are the policies of developing nations. As Prasad well observes, there are both insurance and neo-mercantilist motives at work here. Mindful of the balance of payment crises that befell Mexico, Thailand, Indonesia among

others during the 1990s, developing nations have taken to bulking up their foreign exchange reserves. The greater these are, the more wherewithal governments have to defend their currencies, as well pay for imports and any maturing external debt, should foreigners suddenly decide to take flight with their capital. To perform this insurance function, however, foreign exchange reserves have to be invested into something safe and no instrument in the financial markets is thought to have a better guarantee of repayment than U.S. Treasury bonds. Bolstering this demand for American dollars is the penchant among developing nations of pursuing growth through export promotion, a neo-mercantilist strategy best executed with a low currency. However, any country that succeeds in exporting more than it imports will invariably come head on against the economic reality that surpluses push the currency upwards, everything else remaining equal. How governments deal with this is to intervene in the foreign exchange market by purchasing another currency using their own and then adding it to reserves. Again, the dollar is preferred for this purpose on the belief that it can be parked safely in U.S. Treasury bonds. China is exhibit A of this practice, as Prasad duly notes. By 2013, its central bank had amassed an eye-popping \$3.8 trillion of foreign exchange reserves.

Prasad points out, too, that there exists a wider demand for safe assets. From pension funds, insurance companies, commercial banks to private investors with a low risk tolerance, the desire for securities bearing a guaranteed return of principal is always present in financial markets, making itself felt especially in periods of uncertainty and turbulence. As such, the demand for safe havens has risen since the recent financial crisis. At the same time, the economic carnage that ensued in the aftermath of that crisis has diminished the supply of safe assets. Over the past five years, bonds issued by numerous governments around the globe once thought to be secure have come to be seen as risky bets. U.S. Treasury bonds now compete with fewer debt securities for the title of sure thing, further strengthening the greenback's position. Prasad recognizes the irony of the country that started the financial crisis being the one whose currency has gained the most prestige from it.

Any system that produces this kind of outcome is bound to be subject to grumbling. A long standing sore point, going back to the French government led by Charles de Gaulle in the 1960s, is that the

dollar has an “exorbitant privilege” by which the Fed can simply issue currency to finance U.S. trade deficits instead of having to pay for imports with real goods. Both American consumers and governments can spend lavishly and rack up big debts because foreigners are willing to hold the country’s dollar denominated bonds. Developing nations, in turn, protest feeling the brunt of the Fed’s easy money ways. The added liquidity finds its way into their economies, boosting their currency to a level that renders their exports uncompetitive, while fomenting a transient boom that abruptly turns into a bust as soon as the Fed is compelled to tighten and the foreign money departs to safer locales. Understandably, developing countries have reacted by attempting to displace the dollar, with the BRICS nations going so far recently as to agree to pool their reserves. Even as the hegemon, the U.S. finds much to complain about, whether it involves shifting blame from the Fed’s monetary policy by admonishing developing nations to reform their economies or the regular allegations against countries (Japan twenty to thirty years ago and China nowadays) of harm to American companies from too low a currency.

This is a lot of tension for an international financial system to shoulder. What makes it all the more damaging is that capital ends up flowing in the wrong direction from the developing to the developed world. It is the Chinas and Indias of the world that have a greater need for capital in order to make their workers more productive; and it is there that holders of capital from places like the U.S. can obtain the highest return on their investments. Prasad’s only suggested fix is a global insurance scheme that would create a reserve fund which countries could tap into whenever they ran into balance of payments difficulties. Premiums would depend both on the size of the country’s economy and the quality of its economic policies. Prasad figures that such insurance would convince developing countries to stop bulking up their reserves. But lack of agreement among countries on what constitutes good policy is enough to make this proposal a non-starter. Will developing nations suddenly see the light and agree that the pursuit of neo-mercantilism deserves a higher premium?

Since even he concedes that the insurance scheme is unworkable, Prasad ends up defaulting to the current U.S. dollar standard. In part, he does so because he fears that its end would generate chaos in

the financial markets and wreak havoc on the economy. A decisive consideration for him, though, is how the quest for safe assets plays a stabilizing role in global finance. Whenever a crisis affects any part of the system, the demand that arises for a safe haven in the U.S. dollar serves to buttress that system at its most critical structural point precisely when that is needed the most. Still, the greenback can only serve this function so long as it is perceived as a gateway to the safety of U.S. treasury bonds. How long will that perception last as the U.S. public debt continues its relentless climb amid an aging population driving entitlement spending inexorably higher? Prasad acknowledges this threat without ever adequately explaining why it does not vitiate his model of a self-equilibrating financial order. Aside from arguing that China would only harm itself were it to dump its large US Treasury bond portfolio, he just clings to the idea that all is relative in finance and that, therefore, investors have no safer option than the U.S. dollar.

What about gold? The most disappointing part of this book is that Prasad never seriously considers a return to the yellow metal as the basis of the international financial system. He does consider the possibility, but dismisses it with a nod to Barry Eichengreen's (1995) contention that the gold standard worsened the Great Depression, as if a mere citation can resolve such a highly contested topic in economic history. Prasad's main objection, however, is that there is not enough gold in existence for it to function as a reserve asset. Yet scarcity is hardly an obstacle, since that can be dealt with by allowing the price of gold to appreciate. As this review is being written, half of the entire American money supply, as defined by M2, could be backed up by U.S. current official holdings of gold at a price of \$21,863 per ounce. The issue with reviving the gold standard is not so much about quantity as it is about political will. Prasad worries also about gold's price volatility, even though Britain somehow managed to keep it at 4.25 pounds per ounce for 93 years up to 1914. We are not trapped into the U.S. dollar.

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BOOK REVIEW

MASTERS OF THE UNIVERSE: HAYEK, FRIEDMAN, AND THE BIRTH OF NEOLIBERAL POLITICS

DANIEL STEDMAN JONES

PRINCETON: PRINCETON UNIVERSITY PRESS, 2012, 418 PP.

GREG KAZA

Critics of neoliberalism and its variants including Misesianism have responded to its emergence in two distinct ways: pejoratively,¹ or scholarly discourse that seeks to engage neoliberal proponents. The first approach is traceable to the Marxists Kapelush (1925) and Marcuse ([1934] 1968). This low road has been traveled more recently by Krohn (1981), Delong (2009) and Seymour (2010), who, *a la* Marcuse, smear Mises as pro-fascist when government and private archives show the Austrian worked

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¹ Murray Rothbard has used the term *smearbund* to describe this approach.

with U.S. intelligence against Italian fascism and German Nazism in the World War II era.²

The second is a high road, a sincere, scholarly approach to understand and/or engage *neoliberalism*, the term chosen by participants at the Colloque Walter Lippmann in 1938. Early examples include Brutzkus (1928) and Lange (1939). Recent works include Mirowski and Plehwe (2009),³ and this book by Jones, a London barrister relying on private archives in the U.S. and U.K. Jones claims three historiographic contributions: neoliberalism's transatlantic nature; intellectual history; and emergence as a political and intellectual movement. His work explains neoliberals' emergence on macroeconomics and public policy, but overlooks Mises's archives, and is selective in reporting on the 1960s-era U.S. civil rights movement.

The elections of Prime Minister Margaret Thatcher (1979) and President Ronald Reagan (1980) are key events in recent works. Mirowski and Plehwe find it significant that the British Conservative and U.S. Republican were aware of Hayek's ideas. Jones also focuses on the period, explaining, "The way in which neoliberal ideas-about individual liberty, free markets and deregulation-translated into electorally successful programs in Britain and the United States between the 1940s and the 1980s is the story of this book." He describes three distinct neoliberal phases. The term began to acquire meaning in the first phase, from "the 1920s to about 1950," as "Austrian school economists and the German ordoliberals sought to define the contours of a market-based society, which they believed was the best way to organize an economy and guarantee individual liberty." The second lasted until Thatcher and Reagan's ascendancy as neoliberalism "grew into a recognizable group of ideas, and also a movement," with the help of businessmen. The third phase, post-1980, "was driven

² The U.S. intelligence groups that Mises worked with were the Office of Strategic Services (OSS) and the War Department's Military Intelligence Division. Mises also worked with the Office of War Information (OWI).

³ Gregg (2013), sympathetic to neoliberalism, describes it as "commonly used to describe a group of mainly German economic thinkers uneasy with laissez-faire ideas, but far more market-oriented in their economic and policy prescriptions than Keynes." (72)

by the advance of an agenda of market liberalization and fiscal discipline into development and trade policy.”

Intellectuals, including Mises, whose ideas are viewed as influencing prominent politicians, are of particular interest. “Politicians on the right and, just as important, on the left,” Jones explains, “turned to the proposals of figures like Friedrich Hayek, Ludwig von Mises, Milton Friedman, George Stigler, and James Buchanan (all of whom, except Mises, were Nobel Prize winners) when the chimera of stability based on the Bretton Woods Agreement was dispelled. These thinkers were representative of what has become known as neoliberalism.” Mises and Hayek were among “the standard-bearers of a new set of ideas that would, later in the twentieth century, transform the intellectual landscape and fundamentally reshape” public policy in both Britain and the U.S.

Jones presents Mises in various roles: socialist critic; Mont Pelerin Society participant; *Bureaucracy* author; an overlooked yet triumphant visionary; and think tank adherent.

He writes of Mises’s first role:

In Vienna in 1920, meanwhile, leading Austrian school economist Ludwig von Mises elaborated the socialist calculation problem: whether economic resources can be allocated efficiently in a planned economy. This question was later refined by Hayek, Mises’ student and Keynes’s friend and adversary, who argued that the price mechanism operated as an information processor that sent unique, comprehensible signals to producers and consumers that were impossible for planners to replicate. (3)

Jones terms the Mont Pelerin Society “a kind of neoliberal international.” (30) Mises’s greatest role was not his membership, but writing a book that helped neoliberalism “expand beyond” the Society “and break through into the political mainstream” in Britain, the U.S., and around the world. That book was not *Human Action* (1949), termed “influential” (35) by Jones, but *Bureaucracy* (1944), examined in eight-pages. Mises, in “a direct contradiction of the way” neoliberals would conduct policy in the 1980s and 1990s in Britain, “*did not* believe it was possible to mix market mechanisms and public tasks.” He argued, “no reform could transform a public office into a sort of private enterprise.” Instead,

the state's role had to shrink, and it was reasonable to expect that markets "would accomplish those services that the consumers deem most urgent." (53) Jones elevates *Bureaucracy* alongside Hayek's *The Road to Serfdom* (1944) and Popper's *The Open Society* (1945) in its significance to neoliberalism's growth.

Mises "least noticed at the time," emerged victorious due to his "unalloyed vision of markets." Businessmen liked Mises "because he argued corporations were the drivers of social and economic progress." (83) Their support proved crucial to the success of postwar neoliberal institutions such as think tanks. "Although it is hard to map the direct influence of think tanks on particular government policies, they brought politicians and businessmen into contact with ideas and thinkers through conferences, journals, and newspapers." (159) Jones describes the process thus:

Cosmopolitan, transatlantic and international in their outlook, there was a process of cross-fertilization that carried on, imperceptible to the wider political classes or the public, that nevertheless shored up the intellectual infrastructure of neoliberalism. (170)

The think tank was the preferred vehicle of neoliberals, including Mises. The "economic policy successes of business," Jones notes, "have been striking when compared to the relatively unsuccessful Christian conservative attempts to roll back the sexual and cultural revolutions of the 1960s." (153) The Institute of Economic Affairs, which saw itself as a serious research establishment (331), was the most important group in the transatlantic neoliberal network. The Heritage Foundation,⁴ by contrast, tried to pass the "briefcase test." "Heritage briefings were meant to provide a primer on a particular issue that a congressman could digest on the train home in an accessible form that fit into his briefcase." (163) Neoliberalism's first success, which emerged from Mont Pelerin, was in West Germany where *ordoliberals* influenced Konrad Adenauer's and Ludwig Erhard's Christian Democratic governments. (88) Bigger breakthroughs occurred when conventional liberalism was discredited in 1970s-era economic crises. These included the 1971 collapse of Bretton Woods because of the expense of the Vietnam

⁴ Jones cites Murray Rothbard's role in starting the Cato Institute (165) but not his later disagreement with the group.

War, the decline in American gold reserves, and the continued expense of LBJ's antipoverty programs. (219) Neoliberal influence extended beyond Thatcher and Reagan. Transatlantic neoliberalism had become the preeminent reservoir for alternative Republican and Conservative social and economic policy ideas (and often for the Labour Party and Democratic Party, too)." (86) Jones includes, "arguably," former President Bill Clinton and prime ministers Tony Blair and Gordon Brown as neoliberal "political symbols." (17)

Milton Friedman's "deceptively simple" monetarism, built on Keynesian foundations (205), and his "ability to communicate complex economic ideas" (211) gave him an advantage over the Austrian School and the gold standard. A breakthrough occurred in Britain in 1975, when Chancellor Dennis Healey presented the first postwar budget in which full employment was not the highest priority. The move "arguably marked the Labor government's conversion to a form of monetarism." (241–242) The irony is that Healey thought "Keynesian and monetarist strategies were both flawed" (245). But Labor, faced with an unhappy British public, accepted "the monetarist critique of demand management." (247)

Healey explained:

Like long-term weather forecasts (economic forecasts) are better than nothing.... The most fashionable reaction to these uncertainties, which has made it so difficult to follow Keynesian prescriptions in managing demand, was to drop Keynes in favor of Milton Friedman, and rely simply on controlling the money supply. However, no one has yet found an adequate definition of money, no one knows how to control it, and no one except Friedman himself is certain exactly how the control of money supply will influence inflation, which is supposed to be its only purpose." (246)

The lesson for Austrians is that crises drive opportunity when entering the public square. Deregulation of the U.S. airline industry in the late 1970s occurred in a crisis and is "another example of the successful breakthrough into the political mainstream of a neoliberal policy insight." (249) A recent example is the Great Recession (2007–2009), a Federal Reserve-engendered crisis that opened the door for Congressman Ron Paul's two *New York Times* best-sellers (2008, 2009).

Austrians should appreciate Jones's presentation of Mises in various roles. His suggestion that Mises could be practical in approaching postwar Europe's reconstruction warrants further inquiry. But his interpretation of the 1960s-era U.S. civil rights era is incomplete. Jones describes the right's "powerful opposition" to the movement early (15), later noting the U.S. Department of Housing and Urban Development's failure to sell units to tenants (315) and the reformist essence (318) of the enterprise zone, a British think tank import. Jones cites neoliberal failures but ignores the work of Murray Rothbard, a neoliberal and Mises's student, in the area of civil rights. Rothbard edited *Left and Right*, a journal that opposed segregation laws, restrictions on the rights on blacks to vote, and police brutality (1965); defended Julian Bond, "a brilliant young leader" of the Student Non-Violent Coordinating Committee after he was denied his legislative seat (1966); and criticized government "urban renewal" (1967) in black neighborhoods. Rothbard advocated Black Power (1968) and property rights reparations (1969) as a solution to slavery's legacy in the U.S.

The slaves gained their freedom, it is true, but the land, the plantations that they had tilled and therefore deserved to own under the homestead principle, remained in the hands of their former masters. Furthermore, no reparations were granted the slaves for their oppression out of the hides of their masters. Hence the abolition of slavery remained unfinished, and the seeds of a new revolt have remained to intensify to the present day. Hence, the great importance of the shift in Negro demands from greater welfare handouts to "reparations", reparations for the years of slavery and exploitation and for the failure to grant the Negroes their land, the failure to heed the Radical abolitionist's call for "40 acres and a mule" to the former slaves. In many cases, moreover, the old plantations and the heirs and descendants of the former slaves can be identified, and the reparations can become highly specific indeed.

Transatlantic neoliberalism is more nuanced than the "highly-disciplined and effective" movement described by Jones (337) when Mises's anti-fascist intelligence work and Rothbard's application of homesteading to civil rights are included.

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