**Weimar’s Hyperinflation: A Legacy of War, Struggle for Survival, and the Affirmation of the State**

**By**

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… the most important difference between us and post-war Hungary or Weimar is that our roads haven’t been razed to the ground and half the country isn’t striking. It’s very difficult to have hyperinflation when you still have a functioning economy. Almost all examples of hyperinflation result from huge economic shocks that devastate an economy so much that leaders think printing money is the only solution to growth.

Mathew O’Brien

The first panacea for a mismanaged nation is inflation of the currency; the second is war. Both bring a temporary prosperity; both bring a permanent ruin. But both are the refuge of political and economic opportunists.

Ernest Hemmingway

**I. Introduction**

In a letter to his fellow émigré Eric Voegelin, Heinrich Bruning, a former Chancellor of Germany, focused on the negative social and political impact of the great inflation that swept central Europe. He commented:

I consider your sociological analysis of the absence of a new ruling establishment [*Herrscherschict*] after the last war very important. I wish that you would mention that the conservative *Burgertum* with whom one could have formed a strong conservative block in normal times was completely ruined financially and socially by the inflation. It became proletarian in its entire ideology. This is one of the astonishing factors which enabled the Nazis to gather together impoverished princes, unemployed workers and bankrupt peasants in the S.A. and S.S. Whatever the social strata they belonged to before, they were all poor and could reach an understanding with one another about nothing other than going to war… (Feldman, 1997, p. 4).

The former Chancellor seems to have missed the fact that the destroyed *Burgertum* was on the bandwagon for a hopefully brief and victorious First World War, and that war was the impetus to the great inflation that would devastate the financial status of the *Burgertum*. The irony of his questionable logic stands at the center of issues of human identity and how clinging to our identity can lead us to not perceive key elements of economic, political, and social reality.

The state is vested with a monopoly on legitimate violence (Weber, 1958, p. 71). That monopoly is essential to protecting property rights and allocating rewards throughout the society as decided by those who control the state. The creation of a common currency can be understood as a public good that serves the broader interest of society and would be under provided within a market economy. The state has the ability to tax its citizens through its issuance of additional currency into the system. This tax is enforced by the violence wielding potentiality of the state. When the state is strong, its decisions go unquestioned, and its monopolies are affirmed. When the state is weakened, its actions may be challenged by other sources of violence contending for legitimacy, and its currency can depreciate to being valueless if it is in jeopardy of ceasing to exist. The story of Germany’s hyperinflation brings these truths to clarity. The near destruction of the Weimar currency regime in 1923 shows how extreme the violence of currency depreciation can be. The quick acceptance of a new currency regime after the state demonstrated credible force to maintain its existence is a testimony to how useful a common currency can be to a community asserting its right to continued existence. The value of the state and the value of a common currency to ordinary human life explain how the hyperinflation came to such a rapid end when the state was able to exercise credible force in its own defense and demonstrate a commitment to limit its seigniorage privileges against its population.

This essay will survey some of the literature that explains hyperinflation including explanations of the inflation as a deliberate act of the government to print more money, the quantity theory of money explanation of inflation, and the explanation of inflation as a phenomenon driven by outside pressures on prices and the resulting depreciation of the currency. A review of the historical events and data associated with those events will follow and will give us some information to attempt to gain greater insight into the nature of Weimar’s hyperinflation. The essay will end with some speculative analysis that will attempt to come to grips with Weimar’s hyperinflation as a political phenomenon involving money as a weapon of the state.

**II. Literature Review**

The most prominent model that offers an explanation of inflation is Irving Fisher’s quantity theory of money. Fisher posited that MV = PT where M = Money Supply; V= Velocity of Circulation; P = Average Price Level; and T = the real value of aggregate transactions. If money supply increases or velocity increases either price level or the real value of aggregate transactions need to increase (Fisher, 2007/1911). If we assume that velocity is constant as is often done in introductory macroeconomic principles textbooks, then we easily come to the conclusion summed up in Milton Friedman’s observation, “Inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced by a more rapid increase in the quantity of money than in output.” (Friedman, 1968, p. 98). If this observation holds true in the instance of Weimar, then increases in the money supply will have been shown to lead to higher prices.

David W. Laidler and George Stadler do a nice job of summarizing the features of inflationary patterns in Weimar Germany. The stylized facts they cited included:

1. A phenomenal increase in the prices, well in excess of the increases in the money supply from mid-1921 onward;
2. A more rapid rise (depreciation) in the exchange rate than in domestic prices;
3. A widely perceived “shortage of money”;
4. An extremely large increase in real balances in the wake of stabilization, which brought inflation to an end (Laidler and Stadler, 1998, p. 817).

According to Laidler and Stadler, most economists in the German-speaking world rejected the overly abstract quantity theory of money introduced by Fisher and preferred an historical approach to economic reality. Karl Helfferich’s *Das Geld* (1923) explained the Weimar inflation was caused by an adverse balance of payments that was in large part due to the need to make reparation payments to the Allies. The depreciation of the currency that occurred as Germany imported raw materials and went abroad to international credit markets to finance those purchases pushed price levels up in Germany. The Central Bank was forced to increase the money supply to address the problems of these exogenously created higher price levels (Laidler and Stadler, 1998, pp. 819-820). Princeton economist Frank Graham’s *Exchange, Prices, and Production in Hyper-Inflation Germany, 1920-1923* tended to follow a similar line of reasoning that faulted the reparations for the eventual collapse of the German currency (Graham, 1930).

The incorporation of expectations into the equation dealing with the Weimar inflation opens up the doors for the quantity theory of money to serve as a more robust tool for explaining the phenomenon of Weimar inflation. The seeds for addressing expectations are laid in the thought of Neoclassical economists such Alfred Marshall (1899), Arthur Pigou (1917), and Irving Fisher (1911), and are more fully developed in the work of John Maynard Keynes, Constantino Bresciani-Turroni (1931), Ludwig von Mises (1923), Albert Hahn (1924), and Ladislaus Bortkiewicz (1924). Inflationary expectations are architected into a formal mathematical model by Philip Cagan (1956) (Laidler and Stadler, 1998, pp. 821-822). Cagan’s model proposes to identify when expectations of inflation gain their own momentum, unleashing hyperinflation. It would be fair to assert approaches informed by this strand of thinking have tended to dominate how the topics of inflation and hyperinflation are taught in the modern macroeconomics classroom.

The heart of the academic discussion about Weimar inflation revolves around the relative costs and benefits of the inflationary policy as well as identifying the drivers of the inflation and how it eventually killed the paper mark.[[1]](#footnote-1) The American economist Frank Graham viewed the inflation as a response to reparations and believed the inflation contributed to growth, employment and social peace. The Italian economist Constantino Bresciani-Turroni viewed the inflation as being driven by domestic policy and a catalyst for greater inequality within Germany (Heyn, 1988, p. 183).

Some important works from the mid to late eighties begin to examine this debate by paying closer attention to the political and social dynamics of the inflation. Karl Holtfrerich views the inflationary policies of the German government playing a beneficial role in setting the German economy on a war footing, and after the war, the inflationary policies set the economy on a path to recovery that avoided the global economic slump of 1920/21. The holders of monetary assets such as foreign speculators suffered from inflation, but the inflation undid the concentration of wealth that occurred during Germany’s earlier industrialization (Heyn, 1988, p.184-185). Through this lens, the inflationary policy cannot be viewed as the gateway to National Socialism, but instead served as a dam against potential waves of extremism that would have been unleashed by a non-inflationary policy.

Steven Weber’s analysis of a wide range of econometric data builds upon Holtfrerich insights about the political processes undergirding the inflation, but he concludes that the inflation advantaged capital at the expense of labor and deterred investment (Balderston, 1992, p. 627). Gerald Feldman’s *The Great Disorder: Politics, Economics, and Society in the German Inflation, 1914-1924* conducts an exhaustive survey of the causes and costs of the inflation and offers a counter balance to Holtfrerich’s optimistic appraisal of the inflation. Decimation of the rentier class is analyzed as a civilizational catastrophe captured not as a prelude to the Third Reich, but in its own terms (Barbezat, 1996, p. 721 and Feldman, 1997, p. 4).

Two popular histories have provided accessible chronological and anecdotal treatments of the history of Weimar Germany’s hyperinflation. Adam Fergusson’s *When Money Dies: The Nightmare of Deficit Spending, Devaluation, and Hyperinflation in Weimar Germany* offers a moral tale of how poor monetary and fiscal policy can lead to a day of reckoning, and Frederick Taylor’s *The Downfall of Money: Germany’s Hyperinflation and the Destruction of Middle Class* that interestingly captured the mentality of the German leadership that focused on financing its war through imposing harsh reparations regimes on those whom they conquered, as well as the destruction of a middle class that bet on that government through purchasing war bonds (Fergusson, 2010 and Taylor, 2013).

**III. Discussion of Quantitative and Qualitative Data**

**1. War as prelude to a financial crisis**

The role of political events and their impacts on expectations can examined by taking a look at the mark/dollar exchange rate during the course of the First World War. Because of price controls, blockades, and capital controls that were in place during the war, we might be able to assume that expectations associated with military and political news were the primary drivers of exchange rate variation during this time. The entry of the United States into the War against Germany on April 2, 1917 witnessed a substantial depreciation of the mark, moving from 5.82 marks per dollar in March to 6.48 Marks per dollar in April, an 11% depreciation. The mark would continue to depreciate for the next six months until it reached 7.29 marks per dollar in October, approximately a 25% depreciation.

German military successes and the eventual removal of Russia from the war through the signing of the treaty of Brest-Litovsk in March 3rd, 1918, culminated in an appreciated value of 5.11 marks per dollar, an appreciation of approximately 30 percent against its value in October of 1917. Perceptions of military success and the likely gains associated with that success strengthened the mark. Soon those perceptions would be altered as the German military offensive of 1918 was stopped and the likelihood of a German victory in the West became highly improbable, punctuated by the Kaiser’s abdication on November 9th, 1918 and the signing of the armistice on November 11, 1918. These events led to a substantial depreciation in the value of mark in face of likely losses of territory and possible reparations due to the victors. The mark fell from its April strong point of 5.11 marks per dollar to a depreciated value in December of 8.28 marks per dollar, a 62% depreciation. Table 1 can be referenced for a more detailed account of the fluctuations of the dollar exchange rate over this period of time. By the end of the war, the mark had lost half of its value (Feldman, 1997, p. 5).

**2. The peace and stabilization of the country 1919**

The devaluation would continue. During the war, Germany removed itself from the gold standard and began issuing paper marks. By the end of the war, the German government had accumulated a debt of 51 billion marks adjusted for 1913 price levels, the majority of which was owed internally. The real high-powered money index had risen to 2.63 with 1913 acting as a base year score of 1 (Webb, 1989, p. 11 and p. 49). The process of monetizing debt had already occurred. By December 1919 the wholesale price index would be 8 times higher than it was in 1913. This round of inflation was probably pushed not only by money, but also by price level pressures caused by wage gains for unionized workers as well as productivity losses due to the reduction of the workday from 9 to 8 hours and the loss of over 1,700,000 able bodied men.

A German republican government, to be known to history as the Weimar Republic, was established during this time frame and faced numerous political challenges from the left and the right as well as the imposition of a harsh peace settlement by the Allied powers that included substantial territorial losses and open-ended reparation payments. This time frame witnessed the further depreciation of the mark to a weakened position of 99.11 marks per dollar in February 1920. By this time inflation had destroyed 90% of the value of prewar bank accounts, pensions, and debts (Webb, 1989, p. 4). The fall of the mark was reversed as the Weimar government successfully addressed internal political disturbances. The defeat of various Communist insurgencies and the Kapp putsch, a right wing coup, was followed by several months of appreciation of the paper mark with the paper mark not depreciating below 69 marks per dollar through mid 1921.[[2]](#footnote-2)

**3. The path to the first hyperinflation**

By December 1921, the wholesale price index was 35 times its 1913 value. Net Domestic Product had climbed from 34.2 billion marks adjusted for 1913 prices to 40.1 billion marks. Total government revenues climbed from 218 million marks per month adjusted for 1913 price levels to 635 million marks per month similarly adjusted (Webb, 1989, p. 33). The German fiscal situation was improving due to tax reforms and inflation. Growth was occurring. Further, the population experienced relatively low unemployment even as its purchasing power was compromised.

The loss of Upper Silesia to Poland that contained 11% of German coal production capability and the imposition on Germany by the Treaty of Versailles to pay 132 gold marks in reparations to France and Belgium would begin the first wave of hyperinflation. It is interesting to note that an earlier number of 269 billion gold marks announced in January did not have a significant impact on the value of the mark (Taylor, 2013, location 2878). The government’s actions that grew the money supply by around 118 percent to purchase hard currency to meet reparations demand was the needed catalyst to begin the rapid rise of prices (Widdig, 2001, p. 42). By December 1922 wholesale price levels were 1,420 times higher than they were in 1913. The inflationary effect on government debt at this point was substantial. By 4th quarter of 1921, the internal debt of the government fell from a real value high of 57 billion 1913 marks to a real value of 8.7 billion 1913 marks (Webb, 1989, p. 49). From this period on price levels would increase faster than the supply of money, creating the strange phenomenon of the government rapidly increasing the money supply, while the populace perceived a shortage of money (Webb, 1989. p. 11). Within this hyperinflationary environment, the Weimar economy managed to grow slightly over 4% from 40.4 billion 1913 marks in 1921 to 42.1 billion 1913 marks in 1922.

An editorial by Georg Bernhard, a liberal democratic politician, captured the sentiments of this time well:

In the past year we have put a substantial part of our journey through the darkness behind us. That the inflation in Germany must be reduced has now, gradually become commonplace. But until now no one has had the confidence. Everyone has some knowledge of economic matters and connections also know why. Inflation is a gigantic fraud, which causes pleasing images to dance before our senses. The lively state of business, the rise in all prices and wages, does, it is true, mean everything sells at below the real price, but also means that as consumers the masses are the victims of profiteering and as producers the working population is underpaid. But because there is a constant rise in the numbers, to which our old concept of price still adhere, we notice only slowly, or not at all, and because everyone who wants to work finds employment and payment, the favourable labour market statistics only serve to thicken the mist and fog that surrounds us. Against this, deflation means a cruel awakening, as if after an opium trance… (Taylor, 1913, location 3229 from an Editorial in *Vossische Zeitung*, “*Der Kampf ums Leben*”, Sunday 1 January, 1922, p. 1f).

By February 1923, the value of the paper mark deteriorated to 27,818 per dollar; and the government’s debt was growing at over a 400% rate. Due to increases in price levels, its real debt had shrunk to 440 million 1913 marks (Webb, 1989, p. 49 and Feldman, 1993, p. 5). Modest concern about these trends can be detected at the Reichsbank, as Reichsbank discount interest rates were raised from the 5% they stood at throughout the post war period toward 12% by January 1923 (Webb, 1989, p. 5-6).[[3]](#footnote-3)

**4. The final round of hyperinflation and its remedy**

The failure of the Germans to make appropriate payments in coal and timber to the French and the Belgians in early January led the French and Belgians to occupy the Ruhr, the heart of industrial Germany. This event and the German response to it would lay the foundation for the final phase of the hyperinflation, but before this final episode that would kill the paper mark occurred, the Reichsbank made one last attempt to stabilize the currency. In February of 1923, the Reichsbank used its foreign currency reserves to attempt to stabilize the situation leading to an appreciation of the paper mark from 27,918 marks per dollar in February to 21,920 marks per dollar in March of 1923 (Webb, 1989, p. 124 and Feldman, 1997, p. 5).[[4]](#footnote-4)

The breakdown of this policy came as the German government began to expand its budget to support its passive resistance to the French and Belgian occupation of the Ruhr. By adding 4.5 billion marks to the budget to support workers on strike in the Ruhr and to deal with the higher costs of using imported coal to replace lost coal from the region, the government began a path that would witness the rapid depreciation of the paper mark. An inflationary guerilla war would prove to be costly to both sides of this conflict.

The continued struggle against the French and Belgians would intensify with the two allies eventually expelling 70,000 Germans from the Ruhr in the month of July. August would see the mark’s value fall to 353,412 paper marks per dollar. By September, wholesale prices would be climbing more rapidly than the currency was depreciating, reaching a level 23,900,000 times higher than they were in 1913 (Widdig, 2001, p. 42).

The failure to resolve problems with the French, a tripling of the unemployment rate to 19.6% over a three-month period, right wing secessionist threats in Bavaria, a Socialist/Communist government in Saxony deploying left wing worker militias, a secessionist threat in the Rhineland, and a communist rebellion in Hamburg were significant challenges to the survival of the Republican government. These strains led to the passage of the Enabling Law in October, giving the central government dictatorial powers in the case of a national emergency. This law would lay the foundation for the reform that would eventually put an end to the hyperinflation, but at the time the paper mark had depreciated to over 25 billion marks per dollar and would fall substantially more before reforms would be implemented (Taylor, 2013, location 6542). The death of the Weimar Republic was a meaningful possibility.

In early November, Friedrich Ebert, the German President, appointed Hjalmar Horace Greeley Schacht as Reich currency commissioner. Schacht would bring the Rentenmark, a new currency that would return the mark to 1913 values, into production. One Rentenmark was valued at one trillion paper marks, which at the time had reached a value of 4.2 trillion paper marks per dollar. The Rentenmark was presumably backed by land and industrial production and exchangeable for bonds denominated in gold marks, the German pre-war currency. The issuance of the currency from the Rentenbank, a new financial entity, contributed to the contraction of credit to the government, since the bank was not obligated to finance governmental spending (Fergusson, 1975, pp. 200-203). These actions, along with aggressive actions against domestic challengers of state authority, created the perception that the Weimar government had staying power and thus legitimacy.

The success of the Rentenmark at ending the hyperinflation rested not on assets backing the currency, the money supply would actually be larger under the new currency regime, but on the fiscal discipline the new financial architecture imposed on the government (Fergusson, 1979, pp. 203-204).[[5]](#footnote-5) The government’s willingness to cut spending to achieve some semblance of financial normalcy and a return to currency values that echoed pre-war stability was welcomed by a population that was undecided, divided, and unenthusiastic about embracing revolutions from both left and right that promised protracted war and poverty.

The year 1923 would see the net domestic product of Weimar Republic shrink by 10%, but by 1924 the economy grew by over 17% (Webb, 1989, p. 76). Through the Dawes Plan, Weimar would receive a stabilization loan from the United States government, Belgium and France would evacuate the Ruhr, and reparation payments would be lessoned and paid in a graduated manner. The Allies would supervise the introduction of Reichsmark to replace the old currencies and continue the financial probity associated with the Rentenmark innovation (Fergusson, 1979, pp. 220-221).

The inflation had caused a great deal of disruption in German society. The educated middle class lost its savings, material possessions, and dignity as it tried to survive in a world of rapidly changing values. Those who were debtors and had gotten hold of real assets benefited. Many in the agricultural sector benefited handsomely and were able to eliminate their debts. Price controls and regulations managed to preserve some of the value of the paper mark, but these regulations distorted values in the food and real estate markets significantly. The German government was able to successfully reduce its internal debt to a fraction of what it had been at the end of the war. The hyperinflation had created so much uncertainty that unemployment climbed and investment fell. The stabilization and the continuing unemployment and bankruptcies brought pain to those who needed to learn how to live in an economy of fixed values. John Maynard Keynes noted these costs as he reflected on the potential gains speculators might make from the German situation:

Yet it must not be supposed that Germany, too has not paid a penalty. In the modern world, organization is worth more in the long run than material resources. By the sale of paper marks, Germany has somewhat replenished the stocks of materials of which the war and blockade had denuded her; but she has done it at the cost of a ruinous disorganization, present and still to come. She has confiscated most of the means of livelihood of her educated middle class, the source of her intellectual strength; and the industrial chaos and unemployment, which the end of the present inflationary boom seems likely to bring, may disorder the minds of her working class, the source of her political stability. The money of the bankers and servant girls, which would have been nearly enough to restore Europe if applied with prudence and wisdom, has been wasted and thrown away (Taylor, 2013, location 3202).[[6]](#footnote-6)

**IV. Implications of findings**

The political variables and uncertainties that faced those concerned with the financial fate of Germany are a substantial part of analyzing the currency markets during this period. The goods and services market is impacted by governmental spending and taxing, disposable income, investment, and net exports as a function of the real exchange rate including relative price levels in countries and the existing exchange rate. The asset market is impacted by real money supply, money demand, interest rates in the home market, interest rates in foreign markets, and the expected appreciation or depreciation of the currency. The relative stability of interest rates and the rapid depreciation of the paper mark indicate substantial adjustments in home interest rates were called for, but the presence of capital controls, preferred lending, prohibition against using foreign currencies for domestic exchange purposes, price controls, etc. moderated the capital flight that would have occurred in the face of relatively stagnant interest rates given the significant depreciation of the German currency that occurred between 1919 and 1923. With stagnant interest rates, numerous politically induced output shocks, climbing price levels, government printing of money or issuance of debt, and expectations of things getting worse, we can use the tools of modern international monetary policy to model hyperinflation, but explaining why this detrimental path was taken requires a strong understanding of psychology, domestic politics, and international relations.

A simple thought experiment is necessary in determining the relative merits of the quantity theory of money explanation of the hyperinflation versus the theories that blamed reparations for the hyperinflation and will enable us to gain insight into the challenges facing decision makers within Germany. If we take the low figure of 132 billion gold marks owed in reputations and add it to the 57.8 billion gold marks of debt incurred during the war, owed mostly to German citizens, we come up with a debt ratio for the country that is 189.8/32.4 = 5.56 debt ratio, debt ratio greater than the debt ratio of any contemporary modern state. Assuming a 5% interest rate, the debt burden on Germany over a thirty-year period would be approximately 1 billion gold marks a month, resulting in total payments of over 366 billion gold marks. Roughly, 1/3 of Germany’s net domestic product would go to debt financing under this structure.[[7]](#footnote-7) In the face of an unwillingness to negotiate debt to manageable levels, Germany’s policy of inflation appeared rational despite its severe social costs. Even after negotiations that reduced the reparations burdens to around 50 billion gold marks and with reduction of domestic debt to negligible amounts, Germany still faced a debt ratio in excess of 1 without the luxury of having a reserve currency capable of exporting inflation to other countries.[[8]](#footnote-8)

The choice to pursue an inflationary policy, given the unpopularity of war reparations among the general public and the fragility of the coalition governments holding the Weimar Republic together, appears to be motivated by both realistic budgetary concerns as well as legitimate political concerns. Cutting government expenditures, raising taxes, and expanding the export sector through currency depreciation would be the logical steps to meet such a burden, but given that all the European countries were in a similar situation, it is not clear that pursuing these policies would not have ended with wide spread economic stagnation as evidenced by the depression of 1920-1921. Mildly inflationary policies appear to have been essential to manage the complex economic circumstances of the war, particularly since internal war debt alone would have been sufficient to put a politically difficult burden on the backs of people who had already lost substantial wealth from the inflationary financing pursued by the government during the war.

When France occupied the Ruhr, the possibility of an unbearable and never ending debt slavery became a pressing reality for the German nation. The French claims were legitimate, if we accept the premise of German war guilt. Vast amounts of infrastructure were destroyed in Northeastern France and over 1,300,000 Frenchmen died in the war. If we do some simple calculations, we can easily see how the reparation payments were justified by the damages caused by the war. Let us assume a human life is worth one million dollars in 2014. This number is low, but it is a good starting point to illustrate a basic point. If we adjust 2014 values using a consumer price index calculator, we discover the dollar value of one million dollars in 1918 is about $72,862.27. Multiplying this number by a round million, less by 300,000 than the French actually lost, we come up with a sum of 72,862,600,000 dollars. If we multiply this by the going exchange rate of 4.2 marks per dollar, we come to a sum of 306,023,172,000 gold marks. This value far exceeds the 132 billion gold marks the French sought and does not include numerous other costs that could easily be added to the numerous harms caused by the war. Whatever the Germans were able to pay would disappoint the French and any amount approaching a substantial amount of the harms done to the French would cripple the German economy.

When the French occupied the Ruhr, the decision of Weimar to support a strike in its most important economic region further reduced output in Germany, and the decision to pay workers to do nothing but resist could only result in inflation. Lower productivity, higher unemployment, and higher prices were bound to create internal pressures that would explode in a variety of secession movements and mini-revolutions. The French enemy could create a focus for the anger and suffering of a people that could hold the nation together and prepare the country to accept what appeared to be unacceptable at the end of the First World War, fiscal austerity. The success of the regime to keep the army on its side during this time of troubles gave the regime the necessary force to defeat internal rivals for political legitimacy.

John Maynard Keynes accurately assessed the situation associated with the punitive peace imposed by the Treaty of Versailles when he observed:

If we aim deliberately at the impoverishment of Central Europe, vengeance, I dare predict, will not limp. Nothing can then delay for very long that final civil war between the forces of reaction and the despairing convulsions of revolution, before which the horrors of the late German war will fade into nothing, and which will destroy, whoever is victor, the civilization and the progress of our generation. Even though the result disappoint us, must we not base our actions on better expectations, and believe that the prosperity and happiness of one country promotes that of others, that the solidarity of man is not a fiction and that nations can still afford to treat other nations as fellow-creatures (Keynes, 1919, pp. 128-29)?

The German middle class had bought into the idea that wars could be profitable for the nation. They lost their bet along with 1,700,000 dead. Such a gamble was exceedingly costly. The war financing and the need to keep workers relatively satisfied in the conditions of a devastated and desperate post war Europe resulted in further erosion of savings of the middle class. The choice of the government to finance itself through deficit spending created these conditions. The French imposition of high levels of reparations was an effort to deal with the similarly poor financial performance of the war for the French budget.

It is interesting how human beings in the midst of their own sufferings can so desire to lash out at their enemies that they will lay the seeds for future suffering. The inability to perceive fundamental economic and political truths when emerging from conflict is a serious cognitive deficiency of groups. Few people will agree to slavery without hope of some redemption. The reparations seem to be the force that would lead to expectations of a continuing conflict, climbing price levels, and a hyper-devalued currency. Once the French accepted the fact that forcefully taking resources from the Germans was more costly than negotiating with the Germans, a path to normalcy was opened. The failure to abandon enemy images and to pursue the cooperative production of value through a liberal world regime took Europe down an even more destructive path. Fortunately, at the end of that conflict, the lessons of Versailles were learned and the Marshall Plan took the world down a path to prosperity through rebuilding the market capabilities of a war-ravaged Europe.

**Appendix A**

**Table 1**

**Dollar Exchange Rate of the Paper Mark in Berlin, 1914-1918**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1914 | 1915 | 1916 | 1917 | 1918 |
| January | 4.21 | 4.61 | 5.35 | 5.79 | 5.21 |
| February | 4.20 | 4.71 | 5.38 | 5.87 | 5.27 |
| March | 4.20 | 4.82 | 5.55 | 5.82 | 5.21 |
| April | 4.20 | 4.86 | 5.45 | 6.48 | 5.11 |
| May | 4.20 | 4.84 | 5.22 | 6.55 | 5.14 |
| June | 4.19 | 4.88 | 5.31 | 7.11 | 5.36 |
| July | 4.20 | 4.91 | 5.49 | 7.14 | 5.79 |
| August | 4.19 | 4.92 | 5.57 | 7.14 | 6.10 |
| September | 4.17 | 4.85 | 5.74 | 7.21 | 6.59 |
| October | 4.38 | 4.85 | 5.70 | 7.29 | 6.61 |
| November | 4.61 | 4.95 | 5.78 | 6.64 | 7.43 |
| December | 4.50 | 5.16 | 5.72 | 5.67 | 8.28 |
| Average | 4.28 | 4.86 | 5.52 | 6.58 | 6.01 |

*Source: Statistisches Reichsamt, Zahlen zur Geldentwertung in Deutschland 1914 bis 1923 [Sonderheft 1 zu Wirtschaft und Statistik, Bd. 5]* (Berlin, 1925), p. 10 cited from Gerald Feldman’s *Great Disorder: Politics, Economics, and Society in the German Inflation, 1914-1924*, p. 5, Oxford University Press, 1993.

**Table 2**

**Net Domestic Product (billions of marks, 1913 prices)**

|  |  |
| --- | --- |
| 1909-1913 | 44.7 |
| 1914-1917 | 42.1 |
| 1918 | 38.1 |
| 1919 | 34.2 |
| 1920 | 37.7 |
| 1921 | 40.4 |
| 1922 | 42.1 |
| 1923 | 37.9 |
| 1924 | 44.5 |
| 1925-29 | 49.5 |

Source: Steven Webb’s *Hyperinflation and Stabilization in Weimar Germany*, p. 76.

**Table 3**

**Dollar Exchange Rate of the Paper Mark in Berlin, 1919-1923**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1919 | 1920 | 1921 | 1922 | 1923 |
| January | 8.20 | 64.80 | 64.91 | 191.81 | 17,972 |
| February | 9.13 | 99.11 | 61.31 | 207.82 | 27,918 |
| March | 10.39 | 83.89 | 62.45 | 284.19 | 21,190 |
| April | 12.61 | 59.64 | 63.53 | 291.00 | 24,475 |
| May | 12.85 | 46.48 | 62.30 | 290.11 | 47,670 |
| June | 14.01 | 39.13 | 69.36 | 317.14 | 109,966 |
| July | 15.08 | 39.48 | 76.67 | 493.22 | 353,412 |
| August | 18.83 | 47.74 | 84.31 | 1,134.56 | 4,620,455 |
| September | 24.05 | 57.98 | 104.91 | 1,465.87 | 98.86 \*106 |
| October | 26.83 | 68.17 | 150.20 | 3,180.96 | 25.26\*109 |
| November | 38.31 | 77.24 | 262.96 | 7,183.10 | 2.193\*1012 |
| December | 46.77 | 73.00 | 191.93 | 7,589.27 | 4.2\*1012 |
| Average | 19.76 | 63.06 | 104.57 | 1,885.78 | 53.4914\*1010 |

Source: *Statistisches Reichsamt, Zahlen zur Geldentwertung in Deutschland 1914 bis 1923 [Sonderheft 1 zu Wirtschaft und Statistik, Bd. 5]* (Berlin, 1925), p. 10 cited from Gerald Feldman’s *Great Disorder: Politics, Economics, and Society in the German Inflation, 1914-1924*, p. 5, Oxford University Press, 1993. Powers of 10 introduced to save space.

**Table 4**

**Prices and Dollar Exchange Rate, 1918-1923**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Monthly Average | Cost of Living Index  1913=1 | Wholesale Price Index  1913=1 | Exchange Rate Index  1913=1 | Mark per Dollar  1913=1 |
| Dec. 1918 | No data | 2.5 | 2 | 8.25 |
| Dec. 1919 | No data | 8 | 11 | 48 |
| Dec. 1920 | 12 | 14 | 17 | 73 |
| Dec. 1921 | 19 | 35 | 46 | 192 |
| Dec. 1922 | 685 | 1,480 | 1,810 | 7,590 |
| June 1923 | 7,650 | 19,400 | 26,200 | 110,000 |
| Sept. 1923 | 15,000,000 | 23,900,000 | 23,500,000 | 99,000,000 |
| Oct. 1923 | 3.7 billion | 7.1 billion | 6.0 billion | 25 billion |
| Nov. 1923 | 657 billion | 726 billion | 522 billion | 2,160 billion |
| Dec. 1923 | 1,247 billion | 1,262 billion | 1,000 billion | 4,200 billion |

Source: Sprenger, *Das Geld der Deutschen*, 213 cited in *Bernd Widdig’s Culture and Inflation in Weimar Germany*, 42.

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1. Upon entering World War I Germany removed itself from the gold standard and began to issue currency that was not fully backed by gold. A paper mark was nevertheless affirmed to have the same value as a gold mark. The reference year for much of the data in this paper will be 1913, the year when Germany’s currency was on a gold standard. [↑](#footnote-ref-1)
2. It is important to note that the depreciation of the currency was helpful in expanding exports throughout the period covered by this essay, but Germany never reached a positive balance of trade during this time. The fact that many indebted countries ran trade deficits and the relative self-sufficiency of the United States made it difficult to pay debts off through a positive trade balance, a strategy that would be logical within the context of economic theory, but difficult to realize in the atmosphere of post war Europe. [↑](#footnote-ref-2)
3. Discount rates would reach 90% in September and October of 1923, but they would never reach a level that would compensate for the depreciation of the mark. Capital controls were essential to keeping the economy from suffering from massive capital flight. [↑](#footnote-ref-3)
4. It would be interesting to look more closely at the decision making process that led the Reichsbank to pursue a tightening process just as a hyperinflationary approach response to the French occupation would be pursued. [↑](#footnote-ref-4)
5. The Rentenmark would actually expand the real money supply even as inflation would be brought under control by limiting governmental access to credit. [↑](#footnote-ref-5)
6. Does the loss of a middle class with substantial investment income eliminate an important anchor to stabilize a political regime? If this is so, the destruction of the middle class that occurred by 1919 may have made it difficult for any government in Germany to avoid being taken over by a mass movement. If the educated, professional middle class perceived their difficulties coming from the improving status of labor, as many did, we could expect right wing movements would be the primary beneficiaries of the leadership talent that would be radicalized by economic losses. The willingness to use violence may be an expression of people being willing to expend twice the resources to avoid a loss than what they would expend to get a gain of a similar value. [↑](#footnote-ref-6)
7. It is important to note that the surplus for reparations during this time never reached more than 1.3 billion gold marks (Webb, 1989, p. 111). [↑](#footnote-ref-7)
8. The shrinking of the internal debt through inflation left the government with the problem of paying roughly 3 billion gold marks per year in reparations. The debt was divided among A and B debts summing to 50 billion gold marks and C debt that would be initiated once the German economy was perceived to be healthy enough to cover an additional 82 billion gold marks in debt. It was very difficult to have a population that largely denied its war guilt and believed its fighting force was on the verge of victory to accept even this level of burden. Leaders who moved towards accommodating the realities of reparations, such as Matthias Erzberger and Walther Rathenau, were murdered by right wing assassins who refused to accept the terms of the Treaty of Versailles. Also, it should be noted that a debt structure that promised only heavier burdens for economic success would be a disincentive for making the sacrifices necessary for strong economic growth. [↑](#footnote-ref-8)