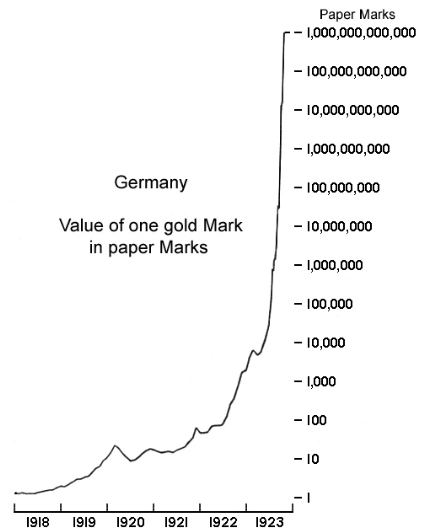
Hyperinflation in the Weimar Republic

The **hyperinflation in the Weimar Republic** was a three-year period of hyperinflation in Germany (the Weimar Republic) between June 1921 and July 1924.



Weimar Republic hyperinflation from one to one trillion paper Marks per gold Mark

A 50,000,000 (50 million) mark banknote from 1923

A 1000 Mark banknote, over-stamped in red with "Eine Milliarde Mark" long scale (1,000,000,000 mark), issued in Germany during the hyperinflation of 1923

Analysis

The hyperinflation episode in the Weimar Republic in the 1920s was not the first hyperinflation, nor was it the only one in early 1920s Europe or even the most extreme inflation in history (the Hungarian pengő and Zimbabwean dollar have both been more inflated). However, as the most prominent case following the emergence of economics as a scholarly discipline, it drew interest in a way that previous instances had not. Many of the dramatic and unusual economic behaviors now associated with hyperinflation were first documented systematically in Germany: order-of-magnitude increases in prices and interest rates, redenomination of the currency, consumer flight from cash to hard assets, and the rapid expansion of industries that produced those assets. German monetary economics was then highly influenced by Chartalism and the German Historical School, and this conditioned the way the hyperinflation was then usually analyzed.[1]

John Maynard Keynes described the situation in *The Economic Consequences of the Peace*: "The inflationism of the currency systems of Europe has proceeded to extraordinary lengths. The various belligerent Governments, unable, or too timid or too short-sighted to secure from loans or taxes the resources they required, have printed notes for the balance."

It was during this period of hyperinflation that French and British economic experts began to claim that Germany destroyed its economy with the purpose of avoiding reparations, but both governments had conflicting views on how to handle the situation. The French declared that Germany should keep paying reparations, while Britain sought to grant a moratorium that would allow for its financial reconstruction.[2]

Although reparations accounted for about one third of the German deficit from 1920 to 1923,[3] the government found reparations a convenient scapegoat. Other scapegoats included bankers and speculators (particularly foreign). The inflation reached its peak by November 1923 but ended when a new currency (the Rentenmark) was introduced. In order to make way for the new currency, banks "turned the marks over to junk dealers by the ton"[4] to be recycled as paper.

Outcome

Postage stamps of Weimar Germany during the hyperinflation period of early 1920s

Although the inflation ended with the introduction of the Rentenmark and the Weimar Republic continued for a decade afterwards, hyperinflation is widely believed to have contributed to the Nazi takeover of Germany and Adolf Hitler's rise to power. Adolf Hitler himself in his book, *Mein Kampf*, makes many references to the German debt and the negative consequences that brought about the inevitability of "National Socialism". The inflation also raised doubts about the competence of liberal institutions, especially amongst a middle class who had held cash savings and bonds. It also produced resentment of bankers and speculators, whom the government and the press blamed for the inflation crisis.[5] Many of them were Jews, and some Germans called the hyperinflated Weimar banknotes *Jew Confetti*.[6]

A medal commemorating Germany's 1923 hyperinflation. The engraving reads: "On 1st November 1923 1 pound of bread cost 3 billion, 1 pound of meat: 36 billion, 1 glass of beer: 4 billion."

Later German monetary policy showed far greater concern for maintaining a sound currency, a concern that even affected Germany's attitude in resolving the European sovereign debt crisis from 2009 onwards.[7]

The hyperinflated, worthless Marks became widely collected abroad. The *Los Angeles Times* estimated in 1924 that more of the decommissioned notes were spread about the United States than existed in Germany.[4]

Nevertheless the immense acceleration process that occurs during the German hyperinflation of 1922/23 still remains unclear and unpredictable. The transformation of an inflationary development into the hyperinflation has to be identified as a very complex phenomenon, which could be a further advanced research avenue of the complexity economics in conjunction with research areas like mass hysteria, bandwagon effect, social brain and mirror neurons.[8]

History

Background

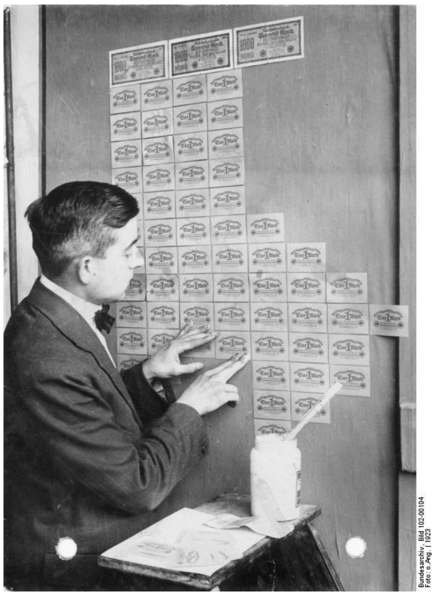
In order to pay the large costs of World War I, Germany suspended the convertibility of its currency into gold when that war broke out. Unlike France, which imposed its first income tax to pay for the war, the German Kaiser and Parliament decided without opposition to fund the war entirely by borrowing,[9] a decision criticised by financial experts like Hjalmar Schacht even before hyperinflation broke out.[10] The result was that the exchange rate of the Mark against the US dollar fell steadily throughout the war to 8.91 Marks per dollar. The Treaty of Versailles, however, accelerated the decline in the value of the Mark, so that by the end of 1919 more than 47 paper Marks were required to buy one US dollar.[11] It is sometimes argued that Germany had to inflate its currency to pay the war reparations required under the Treaty of Versailles, but this is misleading, because the Reparations Commission required payment to be in gold marks or in foreign currency, not in the rapidly depreciating paper mark.[12][13]

The German currency was relatively stable at about 60 Marks per US Dollar during the first half of 1921.[14] Because the Western theatre of World War I was mostly in France and Belgium, Germany had come out of the war with most of its industrial power intact, a healthy economy, and arguably in a better position to once again become a dominant force in the European continent than its neighbours.[2] But the "London ultimatum" in May 1921 demanded reparations in gold or foreign currency to be paid in annual installments of 2,000,000,000 (2 billion) goldmarks plus 26 percent of the value of Germany's exports.

The first payment was paid when due in June 1921.[15] That was the beginning of an increasingly rapid devaluation of the Mark which fell to less than one third of a cent by November 1921 (approx. 330 Marks per US Dollar). The total reparations demanded was 132,000,000,000 (132 billion) goldmarks which was far more than the total German gold and foreign exchange.

Hyperinflation

Beginning in August 1921, Germany began to buy foreign currency with Marks at any price, but that only increased the speed of breakdown in the value of the Mark.[16] The lower the mark sank in international markets, the greater the amount of marks were required to buy the foreign currency demanded by the Reparations Commission.[13]



Germany, 1923: banknotes had lost so much value that they were used as wallpaper

During the first half of 1922, the Mark stabilized at about 320 Marks per Dollar. This was accompanied by international reparations conferences, including one in June 1922 organized by U.S. investment banker J. P. Morgan, Jr.[17] When these meetings produced no workable solution, the inflation changed to hyperinflation and the Mark fell to 8000 Marks per Dollar by December 1922. The cost of living index was 41 in June 1922 and 685 in December, an increase of more than 16 times.

In January 1923 French and Belgian troops occupied the Ruhr, the industrial region of Germany in the Ruhr valley to ensure that the reparations were paid in goods, such as coal from the Ruhr and other industrial zones of Germany, because the Mark was practically worthless. Inflation was exacerbated when workers in the Ruhr went on a general strike, and the German government printed more money in order to continue paying them for "passively resisting."[18] As a result of hyperinflation, there were news accounts of individuals in Germany suffering from a compulsion called zero stroke, a condition where the person has a "desire to write endless rows of [zeros] and engage in computations more involved than the most difficult problems in logarithms."[19]

Stabilization

Two Rentenmark (Issued according Decree of 15th of October 1923, RGBL I S.963)

When the new currency, the Rentenmark, replaced the worthless Reichsbank marks on November 16, 1923 and 12 zeros were cut from prices, prices in the new currency remained stable. The German people regarded this stable currency as a miracle[20] because they had heard such claims of stability before with the Notgeld (emergency money) that rapidly devalued as an additional source of inflation.[21] The usual explanation was that the Rentenmarks were issued in a fixed amount and were backed by hard assets such as agricultural land and industrial assets, but what happened was more complex than that, as summarized in the following description.

In August 1923, Karl Helfferich proposed a plan to issue a new currency (roggenmark) backed by mortgage bonds indexed to market prices (in paper Marks) of rye grain. His plan was rejected because of the greatly fluctuating price of rye in paper Marks. The Agriculture Minister Hans Luther proposed a different plan which substituted gold for rye and a new currency, the Rentenmark, backed by bonds indexed to market prices (in paper Marks) of gold.[22]

The gold bonds were defined at the rate of 2,790 gold Marks per kilogram of gold, which was the same definition as the pre-war goldmarks. The rentenmarks were not redeemable in gold, but were only indexed to the gold bonds. This rentenmark plan was adopted in monetary reform decrees on October 13–15, 1923 that set up a new bank, the Rentenbank controlled by Hans Luther who had become the new Finance Minister.

After November 12, 1923, when Hjalmar Schacht became currency commissioner, the Reichsbank, the old central bank, was not allowed to discount any further government Treasury bills, which meant the corresponding issue of paper marks also ceased.[23] Discounting of commercial trade bills was allowed and the amount of Rentenmarks expanded, but the issue was strictly controlled to conform to current commercial and government transactions. The new Rentenbank refused credit to the government and to speculators who were not able to borrow Rentenmarks, because Rentenmarks were not legal tender.[24] When Reichsbank president Rudolf Havenstein died on November 20, 1923, Schacht was appointed president of the Reichsbank. By November 30, 1923, there were 500 million Rentenmarks in circulation, which increased to 1000 million by January 1, 1924, and again to 1,800 million Rentenmarks by July 1924. Meanwhile, the old paper Marks continued in circulation. The total paper Marks increased to 1,211 quintillion in July 1924 and continued to fall in value to one third of their conversion value in Rentenmarks.[24]

The monetary law of August 30, 1924 permitted exchange of each old paper 1,000,000,000,000 Mark note for one new Reichsmark, equivalent in value to one Rentenmark.

Revaluation

Eventually, some debts were reinstated to partially compensate those who had been creditors. A decree of 1925 reinstated some mortgages at 25% of face value in the new Reichsmark (effectively 25,000,000,000 times their value in old marks) if they had been held 5 years or more. Similarly some government bonds were reinstated at 2-1/2% of face - to be paid after reparations were paid.[25] Mortgage debt was reinstated at much higher percentages than government bonds. Reinstatement of some debts, combined with a resumption of effective taxation in a still-devastated economy, triggered a wave of corporate bankruptcies.

Date	*"Reichs"Mark*	*"Gold"Mark*	*1 "Gold"Mark = "Reichs"Mark*
January-June 1918	10	8,00	1,25
December 1918	10	5,00	2,00
June 1919	10	3,11	3,21
December 1919	10	1,04	9,61
March 1920	100	4,87	20,53
December 1920	100	6,88	14,53
August 1921	100	5,82	17,18
December 1921	100	2,87	34,84
July 1922	1000	9,50	105,26
November 1922	10000	7,80	1.282,05
23. July 1923	1 Million	9,89	101.112,23
17. August 1923	10 Million	9,81	1.019.367,99
7. September 1923	100 Million	7,82	12.787.723,78
3. October 1923	1 Milliarde	9,21	108.577.633,00
16. October 1923	10 Milliarde	8,06	1.240.694.789,00
22. October 1923	100 Milliarde	8,18	12.224.938.875,00
5. November 1923	1 Billion	8,65	115.607.000.000,00

Revaluation Act 1925 - Conversion Table

Note: 1 Milliarde in German Terms (1,000 Million) = 1 Billion in US Terms;
1 Billion in German Terms (1,000,000 Million) = 1 Trillion in US Terms;
1 "Gold"Mark value in grammes of fine gold (1913) = 0.35842g;
"Reichs"Mark = Currency not tied to the goldstandard in 1918 to 1924.

Source: Law about the Revaluation of Mortgages and other Claims (Revaluation Act 1925), issued the 16th of July, 1925 (Aufwertungsgesetz, Reichsgesetzblatt, Teil I, 1925, p.133-135) and Author's calculations in: Wolfgang Chr. Fischer, German Hyperinflation – A Law and Economics Approach, Eul-Verlag Köln 2010, p. 85

Conversion Table (Revaluation Act 1925)

One of the important issues of the stabilization of a hyperinflation is the *revaluation*. In its customary sense it refers to the raising of the exchange rate of one national currency against other currencies. It also means *revalorization* – the restoration of the value of a currency depreciated by inflation. The German government had the choice either by means of a revaluation law to finish the hyperinflation quickly or to allow sprawling and the political and violent disturbances on the streets. The German Government argued in detail that the interests of creditors and debtors had to be fair and balanced. Neither the living standard price index nor the share price index or the property price index (for this time, however, not existing) were judged as relevant. The calculation of the conversion relation was considerably judged to the dollar index as well as to the wholesale price index. In principle the German government followed the line of market orientated reasoning that the dollar index and the wholesale price index would roughly indicate the *true* price level in general over the period of high inflation and hyperinflation. In addition the revaluation was bound on the exchange rate Mark and North American Dollar, based on the Berlin Bourse to obtain the value of the *Goldmark*.[26]

The *Law about the Revaluation of Mortgages and other Claims* (Revaluation Act 1925 of 16 July 1925) finally included only the relation of paper mark to gold mark for the period from 1 January 1918 to 30 November 1923 and the following days.[27] This led to the fact which was given up the *A Mark is worth a Mark* principle recognized till then (nominal value principle) because of the galloping inflation.[28] This law was challenged in the Supreme Court of the German Reich (*Reichsgericht*). The 5th Senate of the German Supreme Court (*Reichsgericht*) ruled on 4 November 1925 that the Revaluation Act 1925 was constitutional, even when weighed against the "Bill of Rights and Duties of Germans" (articles 109, 134, 152, and 153 of the Constitution).[29][30][31] This case was precedence-setting for the issue of judicial review in German jurisprudence.[32]

Notes

[1] *Monetary Explanations of the Weimar Republic's Hyperinflation: Some Neglected Contributions in Contemporary German Literature*, David E.W. Laidler & George W. Stadler, Journal of Money, Credit and Banking, vol. 30, pages 816, 818 (http://www.jstor.org/stable/2601130)
[2] Marks, page 53
[3] *The Economics of Inflation*, Costantino Bresciani-Turroni, page 93 (http://mises.org/books/economicsofinflation.pdf)
[4] *Americans With Marks Out of Luck*, Cable and Associated Press, Los Angeles Times, 15 Nov 1924
[5] *Mein Kampf ("My Struggle")*, Adolf Hitler (originally 1925-1926), Reissue edition (September 15, 1998), Publisher: Mariner Books, Language: English, paperback, 720 pages, ISBN 0-395-92503-7
[6] "The Death of Paper Money"—London Telegraph 25 July 2010—City of London Bankers are buying up book on the Weimar Inflation: (http://www.telegraph.co.uk/finance/comment/ambroseevans_pritchard/7909432/The-Death-of-Paper-Money.html)
[7] *Greece bailout: What's the future of the euro?*, Ben Quinn, Christian Science Monitor, 28 March 2010 (http://www.csmonitor.com/World/Europe/2010/0328/Greece-bailout-What-s-the-future-of-the-euro/(page)/2)
[8] Fischer 2010, p. 124.
[9] Fergusson, *When Money Dies*; p. 10
[10] Fergusson; *When Money Dies*; p. 11
[11] Fergusson; *When Money Dies*; p. 16
[12] Fergusson, page 36
[13] Shapiro, page 187
[14] Laursen and Pedersen, page 134
[15] Fergusson, page 38.
[16] Fergusson; *When Money Dies*; p. 40
[17] Balderston, page 21
[18] *Civilization in the West, Seventh Edition*, Kishlansky, Geary, and O'Brien, New York, page 807.
[19] "Cipheritis" (http://www.time.com/time/magazine/article/0,9171,717208,00.html). *Time Magazine*. 1923-12-17. . Retrieved 2010-01-07.
[20] Fergusson; *When Money Dies*; p. 208
[21] Fergusson; *When Money Dies*; p. 119-120, 173
[22] *The Rentenmark Miracle*, Gustavo H.B. Franco, page 16 (http://www.econ.puc-rio.br/pdf/TD159.pdf)
[23] Guttmann, pages 208-211
[24] Fergusson, Chapter 13
[25] Fergusson, Chapter 14
[26] Fischer 2010, p. 83.
[27] Fischer 2010, p. 84.
[28] Fischer 2010, p. 87.
[29] Friedrich 1928, p. 197.
[30] *RGZ III, 325*
[31] Fischer 2010, p. 89.
[32] Friedrich 1928, pp. 196-197.

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