Extreme Currency Crises

and the Systems that Replaced Them

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Abstract

Countries experiencing extreme currency crises often find themselves resorting to the private sector to issue money. There are three case studies presented that have been selected because of their strong relevance to the topic: Great Britain in the Industrial Revolution relied on private coinage, America in the Great Depression used a vast array of different paper scrips, and Zimbabwe during its hyperinflation did most transactions with the US dollar. The general conclusion reached is that through these crises, individuals have an opportunity to determine what they collectively believe to be the most desirable monetary system. As a result the monetary system factors in more insight into the functions of money than any government would be able to consider.

Introduction

For much of recorded history, the issue of currency has been the responsibility of a central authority. This has been justified by the argument that the government is in the best position to promote the stability and reputation of currency. However, maintaining perfect stability is an almost impossible task, and there have been several events in history where the official currency has, for whatever reason, become unusable. There are many examples of this that are important, three of which will be examined in detail, including the periods surrounding the Industrial Revolution in Britain, the Great Depression in America and the recent case of hyperinflation in Zimbabwe. In all of these situations, private individuals had to rely on alternative methods of currency, and experimented with monetary systems that they found desirable.

Great Britain in the Industrial Revolution experienced a chronic coinage shortage that was largely solved by private coin pressing, which modernised the coining habits of most modern governments. American in the Great Depression witnessed a vast array of different types of paper currencies as a response to the chronic money shortage in the Great Depression. Zimbabwe was victim of a substantial oversupply of money which rendered its currency unusable, and after a period of private use of foreign currencies, eventually officially joined the dollar.

The general trend observed from these cases is that when official currency does fail to circulate, there normally occurs a period of private money experimentation. Through this, individuals use money from alternate sources, ranging from local communes to foreign governments, and eventually adopt what they find to be the optimal system. The British and Zimbabwe cases show how private money selection solved their countries’ currency problems in ways that had not previously been thought possible or desirable. The American case shows how the public as a whole decided that the American monetary model was the most efficient method of transaction.

In all of these cases, the most successful currencies were not those that sought to solve the general crisis, but those that facilitated economic survival. Most people sought not to solve a societal problem, but a combination of individual problems, and only the solutions that best solved those problems were widely used. In this way, a monetary phenomenon known as Gresham’s Law ended up being completely reversed. Gresham’s Law states that when a metal-based currency is overvalued, then only bad (lighter, poor quality or counterfeited) coins are traded while good and inherently valuable money is hoarded or melted, so bad money drives out good. However, in all of the cases examined, the reverse was true. During the period of private monetary experimentation, only the most valuable and reputable currencies survived while unstable and poor quality moneys were promptly driven out.

1. British Industrial Revolution

Before the industrial revolution, most of the poorest class was comprised of peasantry, and were to a certain degree self-sufficient. During the second half of the 18th century, the British economy was starting to transition towards manufacturing. The workers in this new sector of the economy were mostly incapable of providing entirely for themselves without the use of the wages by which they were paid. As more individuals moved from the countryside to cities, a much higher proportion of people were wholly dependent on money, especially coins of smaller denomination (Rule, 1992, pp. 87-90). These coins most often took the form of copper and sometimes silver, but gold was too expensive for most wage payments.

At the same time as the increase of dependence on small currency, Britain was experiencing a widespread currency shortage. There was a substantial scarcity in small coins, especially those of acceptable quality. Silver coinage was overvalued, so was almost non-existent, and copper was suffering from a neglect of attention from a government that saw more value in minting gold coins. Both silver and copper were suffering from Gresham’s Law, and were victims of counterfeiting as well as debasement (Rule, 1992, p. 304). As well as the shortage in small coins, paper money was not allowed to be issued a value below 1 pound (Selgin, 2008, pp. 34-35). A combination of these factors meant that there was a severe small money shortage for manufacturers at a crucial early stage of the Industrial Revolution.

This shortage affected almost every manufacturer, and there were various approaches taken to try to keep workers working. Some spent exorbitant amounts of money attempting to seek small money, often of very poor quality. This on top of being expensive and inefficient also involved a large amount of risk in transporting the coins, which collectively would be worth a substantial amount to opportunistic highwaymen (Ashton, The Industrial Revolution, 1760-1830, 1962, p. 99). Others partially paid their workers in waste products from the production process, but this was unsustainable because it provided a substantial incentive for workers to make sure that “the crumbs from their master’s tables were ample.” (Ashton, 1955, p. 209) Some manufacturers even issued their own notes, and either supplied basic products at company stores where these notes could be spent, or came to agreements with local shops about their acceptance. This led to large cases of abuse from the employers, who often charged inflated prices for cheaply available essentials as a means of having to pay their workers less (Rule, 1992, p. 25).

Because of the fundamental lack of small currency, the overwhelming amount of poor quality counterfeit, and the aggravating effect these were having on workers, one businessman, Thomas Williams, decided in 1787 to start minting his own non-regal currency, the Parys Mine Druid. Being a large-scale supplier in the copper industry, and able to make copper sheets more cheaply than anyone, Williams was able to earn a very small profit on each of the coins. This fact meant that when the price of copper did end up rising, it did not rise above the intrinsic value of the Druid, so his currency did not fall victim to Gresham’s Law (Selgin, 2008, pp. 42-5). The legality of his coinage was questionable, but the fact that there was a portrait of a druid instead of the King meant that this first private coinage made no claim to challenge the official royal coinage. The Druid became widely desirable because it had very complicated designs that were very hard to replicate and this to counterfeit.

Another very successful competitor in the currency market was Matthew Boulton, who was the first, and only private minter, to introduce steam press to the coin printing process, massively increasing the speed by which high quality coins could be pressed. After his success in private currencies he eventually managed to secure a contract to produce the official government coinage for a short amount of time as they tried to reclaim their monetary standing. However, after updating the regal minting technology, the government felt prepared to issue coin effectively again and got rid of Boulton. However, quantity was not the entire problem with the old regal copper. The government at this point still had not learned to avoid currency shortages, as was evident by the fact that the country entered another critical shortage by 1810.

This led to another surge in private monies, this time including silver and eventually gold. One influential token provider in this second period was John Berkeley Monck, who decided to challenge the government’s issue of gold currency by minting his own coins. The government, seeing this as a direct assault on the regal prerogative to provide coinage, finally decided to retaliate by completely banning all private moneys. By 1817, all coins not issued by the government were required to be retired, and as they phased out, the government finally started to adopt the sophisticated minting techniques used by the successful private moneys.

In 1795, during the first regal shortage, Joseph Moser remarked that provincial currencies were often worth more than official copper coinage, which was frequently and illegally refused unless it was traded for less than its real value (Moser, 1798, p. 306). Why is it that private money was so much more successful and valuable then its government counterparts? One answer, put forward by Peck (1947) and Doty (1987) is that the government took too much time to adopt the steam press. This fails to explain why Boulton, who had the only steam press, did not have the only successful currency, as well as why even after the government had its own steam press, there was still a currency shortage.

The argument put forward by Selgin (2008) is that the private moneys had sufficiently complex dies that they were very hard to emulate, and often not worth doing for the low nominal values with which they were being issued. In 1810, the government had the steam press with which it could print large quantities of money in a short amount of time, but it lacked the minting expertise required to avoid counterfeiting and shortages resultant from Gresham’s Law. It wasn’t until 1817, when the government started adopting the advanced minting practices that they were able to effectively control the money supply.

Selgin concludes his research by observing that while government money had a constant struggle with Gresham’s Law for most of history, when private tokens were in place, the reverse was true: good money actually drove out bad money. This can be seen by the fact that the most widespread currencies were also the most valuable, and the best quality.

It is also worth nothing that none of the largest successful currencies were born with grand visions of improving the general welfare of society. Most were born out of ambition, where entrepreneurial and opportunistic individuals responded to the demand for small money to improve their purses and their reputations. Therefore, rather than interpreting this issuance of private money as a solution to the crisis, it should be considered as a natural and human reaction to maintain general economic survival. However, this reaction did consequentially provide an effective solution to the problem. It is very unlikely that officials before the crisis would have considered that the shortage was a result of poorly designed coins, let alone updated their methods without the innovation done by these private entrepreneurs. Thus as a result of the crisis, the monetary system used by Great Britain became far more effective than before, and also became used in various foreign countries. Most, if not all, modern countries today use the coinage methods discovered in the British Industrial Revolution. It is apparent in this case that the crisis led to a period of experimentation in which Britain’s monetary problems were largely solved by incorporating individual preferences.

2. American Great Depression

The American Great Depression is probably one of the most studied economic events in human history. The occurrence of various unofficial scrip currencies in that period has, however, been surprisingly under-analysed, considering it was an incredibly spontaneous and informative monetary experiment. Just like the events in Industrial Revolution Britain, this period is a powerful testament to how individuals will subsist when important structural institutions collapse.

Milton Friedman and Anna Schwartz (1963) provide a very good account of the events leading to the Great Depression, and provides the cause that is generally accepted. They argue that the monetary contraction was encouraged by the Federal Reserve’s incompetency. The Federal Reserve was an organisation that depended heavily on individual prowess, and was suffering from the untimely death of their very competent chairman, Benjamin Strong. This is why they argue that the central bank was very uncertain and hesitant in its response to the initial contraction. As a result, the total stock of money fell by over one third from 1929-1933, and commercial bank deposits fell by 42% (Friedman & Schwartz, 1963, p. 352).

By 1933, there was a large-scale money shortage caused by a series of bank runs and a pandemic of hoarding. Part of the explanation for this was that people appeared to believe the fall in quality of financial deposits was temporary, and hence took their money in a form that they saw safe for the time being, namely in cash (Rockoff, 1993). The collapse of the banking system, combined with significantly low employment and output rates meant that the Great Depression was possibly the worst contraction in modern American history.

In this period of chronic currency shortage, various different types of local and unofficial scrip currencies emerged, issued by people from all backgrounds ranging form the unemployed to business owners and local governments. This period had a much more diverse array of different types of currencies than Industrial Revolution Britain, all of which were sorted categorised into 5 general categories by Loren Gatch (2008): reputational, bank and financial, stamp, barter and self help, and tax anticipation notes.

Reputational scrip was most similar to the money seen in Industrial Revolution Britain. Companies issued their own currencies with which they paid their workers, some of which were redeemable only at company stores, while others much more widespread. These scrip currencies were very rarely accepted by national chains, but were often widely accepted within their communities (Shafer & Mitchell, 1984) While these were not strictly legal, they avoided being legally by making no claim to be legal tender, and did not explicitly promise redemption in money. These functioned well, but because of the brevity of their issuance, it is hard to accurately tell their success.

Bank and financial scrip consisted of certificates that were issued to substitute frozen deposits of banks with liquidity problems, often issued by clearing houses. These had always been intended as short-term emergency substitutes. However, the circulation of clearing house certificates in 1933 was short lived, and quickly ended by the Emergency Banking Act of March 9 1933, which made it easier for the Federal Reserve to issue currency against approved assets (Fletcher, 1941).

Stamp scrip was probably one of the most unique monetary experiments in the Great Depression. It took various forms, but all were based on the idea that a note would be fully repaid its value after collecting a certain number of stamps, usually costing anywhere from 1¢ to 3¢. Some required these stamps to be issued weekly (or else the note would lose all value), and some were based on the number of transactions. The most effective, both in acceptance, and at avoiding abuse were those that combined time and transaction based stamps. As well as some technical possibility of abuse, stamp scrip was generally hard to implement because it required acceptance of the fact that the currency would, by structure, depreciate with time. Hence this is a direct welfare loss, and in order to be kept sustainable, it required general acceptance of the fact that this was worth the indirect increase in general welfare. The idea that it helped the unemployed and other social benefits is what allowed it to be sustained in the places where it was successful, but because of this very fact, it is unlikely to be able to be sustainable in the long run, or in any circumstance other than one with widespread human misery (Warner, 2010, pp. 29-45).

Barter and self-help scrip schemes were developed by workers and the unemployed pooling together to barter their labour in exchange for essentials. As operations grew, scrip started to be used as a measure of accounting and a tool for exchange (Weisharr & Parrish, 1933, pp. 47-60). This was the form of scrip that encountered the most resistance, and many disapproved of scrip-based relief as “retrograde, corrupting, and humiliating for the recipient” (Koplovitz, Colcord, & Kurtz, 1932, pp. 245-246). Also, when they were issued as scrip, they were often discounted due to difficulties barter groups had in being fully self-sufficient. The regulations on minimum wage issued by the Federal Emergency Relief Act of 1933 ended up collapsing most groups’ scrip circulation (Mosher & Wolfe, 1940, pp. 10-20).

Tax anticipation scrips, issued by local governments that were lacking in liquidity in order to pay their employees, were usable to pay taxes and public fees. Because of their officially recognised nature, and the fact that they were accepted for taxes, they worked quickly, and could not be spent far outside the communities within which they were issued, but generally they were popular and widely accepted wherever they were issued.

The most successful scrip experiments in this period were mostly those that were smaller scale and those that were accepted by local authorities for tax purposes. Even though they were relatively successful and widespread, little discussion about their desirability ensued. Probably because of the academic trends of the time, they were widely assumed to be undesirable. But again, it is worth observing that most scrip issuances were practical responses to difficult times, and rather than being a countermovement to monetary orthodoxy, they were a natural reflex to challenging times. It is perhaps for this reason that they were so easily forgotten. The scale and effects of the scrip incident did not seem to be understood, as they were never intended to be a policy prescription. It is curious that such a large proportion of a country took part in such a widespread and unorthodox project, and thought nothing of it after normality resumed.

As in the case in Britain a century before, the existence of scrip could be seen as an array of private monetary experiments allowing individuals to decide the most desirable monetary system. Unlike the British and Zimbabwean cases, individuals rejected these experiments in the long run in favour of the previous dollar system. This means that in the eyes of private individuals, the American Dollar was the most desirable of all experimented systems. However, it is worth noting that even though some economists like Irving Fisher and Silvio Gesell had been calling for monetary change, most of the public were very averse to the idea of having a monetary system out of the hands of the government, especially given the political and economic climate of the time. It is therefore important to understand the distinction between publically desirable and optimal, as some might argue that there were better monetary alternatives at the time. Individuals chose the most generally desirable monetary system subject to the preferences of the time. This might have been the optimal system, but whether it is, is a separate discussion.

3. Dollarisation in Zimbabwe

A modern equivalent of the monetary conditions that led to the monetary experimentation seen previously is that seen in Zimbabwe, during and after the hyperinflation crisis. Zimbabwe, however, being a relatively small economy had a currency option not available in the other two cases observed: it had access to various foreign currencies that were considered stable and desirable. For this reason, the period of private monetary experimentation was short lived as the private sector started relying on those foreign moneys, predominantly the dollar.

At its peak in September 2008, inflation on the Zimbabwe dollar was valued at 489 billion percent by the IMF (Hanke & Kwok, 2009). This was one of the worst episodes of hyperinflation in recorded history, caused entirely by the government over-issuance of currency. With a daily inflation rate of 98%, the currency became almost entirely unusable. GDP had been contracting since 2002, and in 2009, the economy shrank by 17% (Hanke S. H., 2012). A substantial oversupply of money left Zimbabwe in a similar situation to the significant shortage of coinage in the British Industrial Revolution: state money had become unusable and private organisations had to find alternatives in order to keep functioning.

In the British Industrial Revolution and the Great Depression, there was no stable source of money, so people needed to rely on competent private or local government issuance. However, Zimbabwe, being a comparatively small economy, was able to draw on the currencies of more stable countries. During this time of extreme hyperinflation and government efforts to force people to enact price ceilings, individuals started to rely on alternative ‘illegal’ methods. Black markets emerged for goods with price ceilings and for foreign currencies that weren’t being sold at the official exchange rates. Some commodities such as gasoline were exclusively traded in US dollars or South African rands, and landlords often accepted groceries and food items as barter for rent. By 2009, the most widely used currencies in almost all transactions were the US dollar, South African Rand and Botswana pula (Koech, 2011, p. 4).

Eventually, after 3 attempts to stabilise the Zimbabwe dollar, the government recognised that their currency had lost all credibility, and officially suspended it as legal tender. Following the idea of several South American economies, the US dollar was adopted as the currency with which the government would do its transactions. This makes Zimbabwe unique among all the cases examined, as the government observed the monetary behaviour of private institutions during the currency crisis and adopted the measures being used. This meant taxes were accepted in US dollars, which served as an official endorsement of the solution. As a result, growth increased significantly, and by 2012, the annual growth rate of GDP was 12% (Hanke S. H., 2012). This has slowed again in recent years, partly because of attacks on property rights by the government, but the initial high growth rates are a testament to the effect of an endorsement of private currency choices.

As far as economic recoveries go, Zimbabwe’s was one of the smoother and more successful transitions relative to the turmoil being faced. The costs of dollarisation were no more than those already existing under hyperinflation, and much of the economy had already made the transition to foreign currencies. This, contrary to the first two cases illustrated in this paper, is an example of the alternative currency found by private individuals being endorsed, rather than resisted, by the official government. A consequence of this was a large boost in confidence, and a fast paced recovery, despite all the political problems prevalent at the time. Zimbabwe is now not without its problems, but its economic position has improved dramatically over the past decade.

It is reasonable to infer from the observed occurrences in Zimbabwe, that future extreme currency crises could be somewhat negated by private institutions adopting a stable foreign country. However, it is important to note that the events in Zimbabwe, and, for that matter all, the other cases observed have a unique series of events that may not necessarily be repeated. Dollarisation, or systematic adoption of any foreign currency, does have inherent limitations. Firstly, it relies on consistent and predictable monetary policy by the country issuing the currency. Also it only applies to relatively small countries with a viable source of a foreign currency. If the events in Zimbabwe were to happen in the United States, for example, it is unlikely that one specific foreign currency will be able to replace all transactions in the country without having substantial effects on that currency’s money supply or value. This again emphasises the fact that private money systems do not lead to the optimal currency choice, they simply better account for individual preferences and needs than do government moneys.

Conclusion

When for whatever reason a currency is no longer sufficient to maintain economic activity, there has tended to be an initial process of experimentation and diversity in transactions, ranging from government provided currencies to barter exchange. With this diversity comes competition in which, through the standard market process, the most reliable currency form is chosen. In this way, the reverse of Gresham’s Law has proven to be the case; good money drove out bad money. However, problems arise when the government tries to interfere in the process as can be seen most clearly in the in the British Industrial Revolution where the government had several failed attempts to combat the issuance of private moneys.

The scenarios examined where the government accepted and endorsed the decision taken by private individuals had transitions that were relatively painless and incredibly productive. This is seen in the end of the British Industrial Revolution where the government adopted the techniques established by private institutions, and Zimbabwe where the government accepted the currency preferences of its populace. This can be explained by the fact that the private experiments acted as an indicator to what policy or technique would be most desirable.

This leads to another interesting consideration, namely that if we accept this trend that private moneys are an indicator to the most beneficial monetary system, we should also question the role of the government in money issuance. In Zimbabwe and in Britain, the countries’ currencies were far stronger after their crises than before. In both of these cases, the private selection of money bought to light ways of solving the monetary problems which the government either were unconvinced or unaware of. These were by no means perfect solutions, and both private systems had their own set of problems, but they proved to be effective at resolving many of the problems being faced. The scrip issued in the Great Depression, if allowed to continue, may well have modernised the American monetary order, but the likely reason it didn’t continue is that private individuals found the pre-existing monetary system to be optimal.

It needs to be emphasised that the orders selected in these periods of private experimentation are by no means, and should not be understood as, inherently superior to alternative orders. They are a result of general individual preferences collectively deciding what they think would be the best ways of managing currency. This process inherently has more insight into general individual preferences than the government does but that does not make it superior. It is of course possible that the currency chosen could be wrong, for example if the dollar significantly changes in value, the Zimbabwe will have unforeseen problems. However the impacts on the general economy are better determined by the individuals making up that economy than by the leaders of those political boundaries.

There have undoubtedly been many other circumstances in history that are relevant to this analysis in some way. These are important to examine and it is possible that they could fundamentally impact the discovered results. For this reason, it is important that more research be done in the very limited historical field of private currencies to better understand the impact of the monetary system.

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