

The State Currency: A Case of Governmental Failure?

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“The curious task of economics is to demonstrate to men how little they really know about what they imagine they can design.”

F. A. von Hayek

This paper intends to be an eclectic one. The main purpose is not to judge the validity of a concept such as “market failure” but to use the theoretical framework designed to analyze such supposed failures to study one particular case that we call “governmental failure.” In this paper, we will specifically address the monopolistic issuing of money by the State.

If any areas of improvement shall be found, they shall not be derived of the very idea of “failure” as it is generally understood in the microeconomics of welfare economics.

What Are We Calling a Failure?

In welfare economics, there is a failure when the market “fails” to provide a good or service efficiently, whether it is in a sub-optimal amount or quality, or when it does – probably because of an imposed regulation by the State – it is not in cost-efficient way.

Even though in the introduction it was stated that the objective of this paper was not to criticize that idea, to arrive at the conclusion that there is a failure, a real circumstance of the world (such as the output of a monopolistic market) must be compared to an ideal circumstance, often impossible to achieve.

Charles Wolf Jr. was one of the first in trying to use the already mentioned neo-classical welfare economics apparatus to judge points where the output of non-market activities differed from an ideal standard in terms of allocative and productive efficiency.

He asserts that such failures had their origin in the distinctive supply and demand characteristics for such output.

“First, the ‘products’ of non-market activities are usually hard to define in principle, ill-defined in practice, and extremely difficult to measure independently of the inputs which produce them.”

“Another characteristic of non-market ‘supply’ is that evidence of output quality is elusive, in part because the information that in the market would be transmitted by consumer behavior is missing.”

“The absence of sustained competition is a third factor contributing to the difficulty of evaluating the performance of non-market production.”¹

Consider the implications of a government agency that has the goal of maximizing “social welfare.” This can never be accurately measured because of subjective definitions and the lack of a realistic, accepted standard. Also, consider the inherent nature of non-market activities, in which an individual must be made worse-off through coercive taxation in order to attempt to maximize the welfare of another individual through some type of redistribution. The point being is this: the nature of a functioning market is a culmination of win-win, positive sum scenarios, while non-markets activities are often zero-sum or negative-sum scenarios.

A Government Monopoly on Money

The quality of money is certainly a difficult item to measure, and evidence about it can be foggy. The preference for one national currency over another could be taken as an indicator of what we are trying to measure. In countries with weak and unstable currencies, a demand for foreign money tends to appear and an informal dual currency system might take place; such is the current state of affairs in places like Argentina and Venezuela.

At this point, it would be appropriate to quote Mr. Hayek² when he says that, since early in human history, minting rights were systematically monopolized by the State,

¹ Dr. Charles Wolf Jr., 1979, A Theory of non-market failure

² F.A. von Hayek, 1979, “A Free Monetary System.”

hence making it impossible to compare such system with a free-coinage system. Free competition of currencies, as Hayek purposes it on his “Denationalization of Money”³, is something of which we are unaware.

The idea of an historic State monopoly on money is especially curious when we consider a quote from Carl Menger.

“Money is not an invention of the State. It is not the product of a legislative act. Even the sanction of a political authority is not necessary for its existence.”⁴

Further, a quote from Charles Wolf can bring forth another point:

“(...) non-market activities generally have no “bottom line” for evaluating performance comparable to the profit-and-loss statements of market activities. Nor, in the case of non-market output, is there a reliable mechanism for terminating non-market activities if they are unsuccessful.”⁵

Even though the abandonment of a currency and its replacement for a new one could be understood as the termination of a currency that failed (historical examples abound), its successive replacement for a new State-controlled currency, backed by the State monopoly over minting rights, shows that the underlying concept of money as a good that should be provided by the State remains untouched and a bottom line under which the State can be outplaced of its position as a currency provider remains inexistent. The only comparison that we are able to make is within different States or governments, from which we might get some hints.

The United States dollar is often considered a “good” currency, while Latin American currencies have been historically viewed as unstable and unreliable. Fundamentally, the differences in these currencies can be found by analyzing how well each performs the three standard characteristics of money: unit of account, store of value, and medium of exchange. In the United States, and all around the world, transactions are widely denominated in dollars, which are widely accepted, and, except for a few points in history, they have held their value relatively well from year to year.

³ F.A. von Hayek, 1978, “The Denationalization of Money.”

⁴ Carl Menger, 1871, “Principles of Economics”

⁵ *Ibíd.*

Conversely, since the values of Latin American currencies have continually and rapidly changed over the years, transactions have become more complicated, making these currencies less effective and more cumbersome as a medium of exchange and unit of account. Essentially, the dollar encourages smooth purchases with low transaction costs, while Latin American currencies often complicate transactions and increase transaction costs.

Central Banks and Incentive Problems

Ph. D Wolf also speaks to us about incentive problems that arise from State activity:

“(...) political actors are usually much more interested in near-term consequences than in long-term consequences. Furthermore, there is often an appreciable gap between the time-horizons of political actors and the time required to study and understand a particular problem - such as a market inadequacy - in order to see whether a practical remedy exists at all.”⁶

Monetary policy, carried out by a Central Bank, is a perfect example of what Dr. Wolf states. The structure of a Central Bank can cause many potential problems. First, central authorities with a great deal of concentrated power do not have a strong track record. Second, Central Banks will often encounter principle-agent problems. Let's assume the bureaucrats running a Central Bank do, in fact, have the public's best interest as their sole focus. Will they ever have the knowledge to act in the best interest of millions of people? Any economy is highly complex, and a Central Bank, that is not a market actor, will struggle to know how much money is demanded by the public at any specific time. Here it is important to note a point made by Hayek in “Denationalization of Money”⁷: we cannot assume there exists a constant demand for money so that the total stock will always be constant; there are ebbs and flow in demand, making the job of a Central Bank increasingly challenging. Clearly, Central Banks must suffer from having asymmetric information about the changes and preferences in money demand of the public. Third, the mandates that guide Central Banks can cause incentive problems.

⁶ Ibid.

⁷ Ibid.

Goals, other than price stability, that are listed for Central Banks often include high employment, economic growth, stability of financial markets, interest-rate stability, and stability in foreign-exchange markets. In the long run, price stability promotes the above goals; however, short-term incentives differ. There is always a temptation to pursue expansionary policies that will boost short-run economic growth, but this comes with the consequence of compromising monetary stability in the long-run.

Further, independent Central Banks cannot be viewed as completely independent. As Mishkin argues in “The Economics of Money, Banking, and Financial Markets”⁸, politicians can and do apply pressure on Central Banks to pursue short-sighted policies. Central Banks can also be susceptible to pressure from the public. As stated above, especially when an economy is sluggish, there is always a temptation to pursue short-run, expansionary policies to boost economic growth, and many historical examples exist to show that this temptation has turned into reality. Milton Friedman provides another angle on the incentives and reasons for a Central Bank to be near-sighted:

*“They (the Central Bank) tend to determine their actions by today’s conditions – but their actions will affect the economy nine or twelve or fifteen months later. Hence they feel impelled to step on the brake, or they accelerator, as the case may be, too hard.”*⁹

In recent years, media attention and analysis has been heavy on Central Banks, following their every move and criticizing their actions. These outside pressures can certainly create an additional consideration to the decision making of Central Banks.

Furthermore, simply because a Central Bank is considered “independent” does not ensure it will not act like other government agencies in many ways. Mishkin points out that the Theory of Bureaucratic behavior is likely applicable to Central Banks. This theory suggests that the objective of a bureaucracy is to maximize its *own* welfare through increasing power and prestige. Mishkin provides a concrete example using the Federal Reserve Bank of the United States:

“The desire of the Fed to hold as much power as possible also explains why it vigorously pursued a campaign to gain control over more banks. The campaign

⁸ Frederic Mishkin, 2010, “The Economics of Money, Banking, and Financial Markets.”

⁹ Milton Friedman, 1968, “The Role of Monetary Policy.”

*culminated in legislation that expanded jurisdiction of the Fed's reserve requirements to all banks (not just the member commercial banks) by 1987."*¹⁰

Additionally, instrument independence of independent Central Banks can provide incentives that actually work against the best interest of the public. With the power to continually print more money and the ability to manipulate currency, the humans behind Central Banks can help insulate their mistakes, at least in the short-run, thus creating a moral hazard. Individual elected officials do not have this type of authority to insulate their actions, and they are subject to the public through elections. Central Bankers are only accountable to those who appoint them.

Some Examples of Central Bank Performance

As history shows, the performance of Central Banks is certainly not pristine. While many failures exist, only a few of the major failures will be explored in this paper.

Let's briefly examine the case of the Great Contraction in the United States. Friedman¹¹, among many other economists, argues that failure by the Federal Reserve greatly contributed to downturn of the economy. From 1929-1933, the quantity of money fell by an astounding one-third. According to Friedman, the quantity of money fell because the Federal Reserve *forced* a sharp reduction in the monetary base. In doing so, the Federal Reserve failed to perform one of the functions for which it was specifically invented: to provide liquidity to the banking system.

However, the performance of Central Banks has often been worse in developing countries. During the Bretton Woods period (1946-1971), over 150 devaluations occurred under the leadership of Central Banks in developing countries that had signed the 1944 Bretton Woods agreement.¹²

¹⁰ Ibid.

¹¹ Ibid.

¹² Kurt Schuler, 1995, "The Failure of Central Banks in Developing Countries."

During the 1960s and 1970s, monetary-policy decisions were greatly influenced by a famous paper written by Dr. Phillips¹³, which produced disastrous results. In the United States, the Consumer Price index rose exponentially: 1.2% in 1962, 5.84% in 1970, and 13.5% in 1980. The Misery Index, the sum of the unemployment rate and the annual rate of inflation, also grew dramatically under the Phillips Curve era: 6.8% in 1962, 10.8% in 1970, and a record of 20.8% by 1980¹⁴. The central idea of the Phillips Curve, that there is an inverse relationship between unemployment and inflation, has proven to have no basis. As a 2002 Cato Institute study shows when using data for the U.S. economy:

*“Unemployment is sometimes high and inflation low (1961); unemployment is sometimes low and inflation high (1969); both have been low at times (2001); and both have been high at times (1974 and 1980).”*¹⁵

When examining the inception of the Phillips curve, it is curious why the idea carried so much influence. In the 1958 paper, economist A.W. Phillips presented the idea of a negative relationship between the unemployment rate and the rate of change in nominal wages. However, it was economists Samuelson and Solow who popularized the similar idea of a negative relationship between the inflation and unemployment rates in a 1960 paper; they dubbed it the Phillips Curve. This paper came during the 1960-61 United States recession, which is most likely why it was attractive to policymakers.¹⁶ It is important to note that Phillips never claimed his results should have serious policy implications. In fact, in his 1958 paper, he states, “These conclusions are of course tentative. There is need for much more detailed research into the relations between unemployment, wage rates, prices and productivity”.¹⁷ Samuelson and Solow advanced the idea of the Phillips Curve having policy implications; however, they warned the tradeoff between unemployment and inflation may not be sustainable, but this assertion was clearly not taken seriously. Further, the Phillips Curve, as advanced by Samuelson and

¹³ A. W. Phillips, 1958, “The Relation between Unemployment and the Rate of Change of Money Wages in the United Kingdom between 1861-1957.”

¹⁴ Hall, Thomas and Hart, 2010, “The Samuelson-Solow ‘Phillips Curve and the Great inflation”

¹⁵ Nisaken, Williams and Reynolds, Cato Institute, 2002, “New Evidence on the Old Phillips Curve”

¹⁶ Ibid.

¹⁷ Ibid

Solow, included no empirical evidence. A 2010 study by Miami University that employed econometric models showed little resemblance to the original results of Samuelson and Solow.¹⁸ Considering all of these red flags, it brings into question the credibility of Central Banks that were heavily influenced by the Phillips Curve.

Currently, the performance of different Central Banks continues to be sub-par. As stated earlier in this paper, Argentina and Venezuela are currently experiencing rapid inflation, with Venezuela's inflation rate nearing 60% and Argentina's *official* rate at over 10%.¹⁹ However, Argentina's "unofficial" inflation rate, as determined by independent economists, is estimated to be around 25%.²⁰ Since the beginning of 2014, the Argentine *peso* has experienced a devaluation of 20% and prices are expected to rise around 30% this year.²¹ And as Friedman once famously stated, "Inflation is a monetary phenomenon."

Why Do We Want Money?

In order to understand the empirical data shown in the next section of our paper, we must ask ourselves this question. There were many heated and fruitful discussions of this topic, mainly during the last part of the 19th century and the first half of the 20th century.

What Did Keynes Say?

Lord Keynes is the first author we shall quote and briefly state his three motives for the demand for money: the transactional (income and business), precautionary, and speculative motives.

The first one is related to the need of individuals to arbitrate between the time period when spending occurs and when their monetary income is perceived.

¹⁸ Ibid

¹⁹ Source: INDEC (National institute of statistics and census).

²⁰ The Economist, "Argentina's new inflation index", February 22nd 2014

²¹ The Economist, "Wage negotiations in Argentina", March 8th 2014

The second one, as it derives from its name, comes from the need of the individuals to count on some liquid asset in order to face unexpected situations that require a monetary outlay.

He relates these two reasons to the income level, disregarding, for a matter of simplicity, its relation with the interest rate.

The third one, which is still today a subject of discussion, comes from the always present uncertainty of the future situation of the economy, in general, and the interest rate, in particular.

It is, in effect, uncertainty that makes people hold money just by itself and not turn it into a more lucrative asset. In the 17th chapter of his *General Theory*, Keynes defines money as an asset whose output derives precisely from the “liquidity services” it provides, but with no output in terms of itself and with negligible carrying costs.

In the 14th chapter of his opera magna, he defines, then, the demand for money as it follows:

$$Md = Md1 + Md2 = Md1 (Y) + Md2 (r)$$

With Md being the total demand, Md1 the addition of the motives related to the income level (Y), and Md2 the demand related to the interest rate (r).

*Baumol-Tobin*²²

James Tobin poses the question, “Why should any investment balance be held in cash, in preference to other monetary assets?” The answer is half-shared with Keynes, being the first motive, the transactional one as described above, and the second one being a speculative motive. Nevertheless, Tobin makes a distinction of his theory from the one on the *General Theory*²³ and elaborates upward-concave indifference curves for risk-averse investors with which then the economic agents would face the inherent trade-off

²² Even though this model has been disregarded as outdated and too simplistic, we consider that it treats adequately the basic idea of a trade-off between holding money and not doing so; it is not necessary to go into more complicated models to grasp the matter.

²³ Tobin (1958) – “Liquidity Preferences as Behaviour towards Risk.”

between holding their balances in monetary assets with an output but also with risk (v.g. bonds), or holding them in its most liquid form while receiving no coupons.

It is important to notice here that the decision is made between what he calls “monetary assets” but excludes other kind of assets (for example, goods).

His conclusion is a better justification for the downward-sloping curve of demand for liquidity as it is generally drawn, i.e. for the negative relation between interest rates and liquidity preference²⁴, and for diversification in monetary investments.

It is interesting to notice, as well, that Tobin recognizes that by using only a portfolio-theory (and excluding, for example, transaction costs) the critique made by Leontieff according to which, in the long term, demand for cash balances would tend towards zero remains valid.

To complete the model that probably every economist had to study at some point since the fifties to the present, we must examine William J. Baumol’s paper on demand for money responding to the transactional motive.

The two most noticeable points we can extract from it are that: a) demand for money - even because of the transactional motive - is indeed affected by interest rates, and b) the demand for money is positively correlated to the value of transactions (or, in an aggregate level, with the product), but its derivative with respect to income can be less than the unit.

Transaction Costs

It is evident that the usage of money greatly reduces the costs of making transactions. We shall not abound on the most obvious reason for it, which is, of course, that money reduces the amount of transactions needed to match the preferences of people willing to exchange assets. It is self-evident as well that, as societies grow in complexity, bartering processes do as well, and so do its costs.

²⁴ Even though the author recognizes the possibility of an increase in the demand for cash when interest rates made it to high enough levels.

Another aspect, noted by Dr. Thomas R. Saving, which is not as evident, is that money reduces storage costs; this comes from the assumption that holding money as such tends to be much cheaper than storing goods, not for using them in the future, but for using them as exchangeable good. This point will be very important when we consider the case of people escaping from bad currencies by using them when in their highest point of purchasing power to acquire assets with better outputs.

One last thing we shall state is the existence of growing returns to scale in the usage of a currency; that is, that the more widely-used a currency is, the more it reduces transaction and intermediation costs, costs related to simultaneous usage of two (or more) different currencies and exchange risks.

Empirical Findings of Money Demand

We assert that “bad” currencies reduce money demand. While we were unable to find a study that specifically addresses our hypothesis, empirically, evidence does exist to support our idea. A currency is “bad” when it reduces money demand, and demand seems to be reduced when a currency is unstable and volatile. Below, we present three analyses of the change in money demand in relation to variation in inflation rates. Intra-country comparisons over time are ideal as we won’t have to adjust for changes in tastes and preferences when comparing multiple countries to each other.

The first set of money demand estimates comes from the 1992 study by Mulligan and Martin.²⁵ In this study, the authors calculate income elasticities for money demand over time in the United States. We have added a column for inflation rates for our analysis purposes.

Money Demand Income-Elasticity and Inflation Rates for the United States

Year	Income-Elasticity	Inflation Rate
1930	1.26	-2.3%
1935	1.44	2.2%

²⁵ Mulligan and Martin, 1992, “U.S. Money Demand: Surprising cross-Sectional Estimates.”

1940	1.42	0.7%
1945	1.31	2.3%
1950	1.32	1.3%
1955	1.11	-0.4%
1960	1.14	1.7%
1965	0.90	1.6%
1970	0.81	5.7%
1975	0.91	9.1%
1980	0.92	13.5%
1985	1.15	3.6%
1990	1.31	5.4%

The period of interest is 1965-1980, when U.S. money demand is at its lowest. This is the period when the Phillips Curve influenced macroeconomic policy and created an inflationary atmosphere. This fifteen year period is when the dollar was most unstable, unpredictable, and volatile, with inflation ranging from 1.6% to 13.5%. Clearly, the lowest levels of money demand correlate to the highest period of monetary uncertainty, as measured by inflation-rate fluctuations. After 1980, although there is some volatility, the dollar became comparatively more stable and, therefore, demand increased. It is interesting to note that, even though volatility was low in 1965, money demand still dropped significantly. One possible explanation is that, since expansionary monetary policies were beginning to be implemented, the public accurately forecasted the dollar would become unstable and thus reduced their demand.

The second paper studied, written by Arrau and Gregorio²⁶, provides the basis for the analysis of two more countries. As part of this paper, the authors present money demand elasticities for Chile and Mexico. (Although this is a different type of elasticity than what was used in the paper for the United States, these data still present money-

²⁶ Arrau and De Gregorio, 1993, "Financial Innovation and Money Demand: Application to Chile and Mexico."

demand fluctuations. In an ideal world, the two studies would be parallel, but nonetheless, both allow us to analyze changes in money demand). Data for Chile are presented for a 15-year period (1975-1989), and data for Mexico are presented for a 10-year period (1980-1989). In both charts, we have added a column for inflation rates for our analysis purposes.

Money Demand Consumption-Elasticity and Inflation Rates for Chile

Year	Consumption-Elasticity	Inflation Rate
1975	0.85	340.70%
1976	0.60	174.32%
1977	0.70	63.49%
1978	0.67	30.32%
1979	0.93	38.90%
1980	1.05	31.24%
1981	1.3	9.54%
1982	1.2	20.73%
1983	0.93	23.09%
1984	1.05	23.04%
1985	0.89	26.42%
1986	0.90	17.36%
1987	1.05	21.45%
1988	0.85	12.68%
1989	1.2	21.45%

The above data can be separated into pre-1980 and post-1980 categories. In the pre-1980 section, money demand is *generally lower* while volatility is much higher; inflation rates in this period range from 340% to 38%. In the post-1980 period, money demand is *generally higher* while volatility is much lower; inflation rates range from 31% to 9%. Although there is more deviation in these data, this *general* trend can still be

extrapolated. Again, these data support the idea that a “bad” currency reduces overall money demand.

Money Demand Consumption-Elasticity and Inflation Rates for Mexico

Year	Consumption-Elasticity	Inflation Rate
1980	2.10	29.85%
1981	2.13	28.68%
1982	2.11	98.84%
1983	1.65	80.78%
1984	1.42	59.16%
1985	1.39	63.75%
1986	1.30	105.75%
1987	1.08	159.17%
1988	0.90	51.66%
1989	0.95	19.70%

From 1980-1982, money demand is almost constant, and from 1980-81 the inflation-rate volatility is almost nonexistent. However, 1983 marks the second consecutive year the inflation rate changed significantly, and this year is also when money demand begins to drop, and a downward trend continues as the inflation rate changes widely from year to year. These data are consistent with the previous two analyses: low volatility in inflation is associated with higher demand (1980-1982), and higher volatility is associated with lower money demand (1983-1989). Interestingly, in this case, there appears to be an “adjustment year” in money demand (1982). A definitive downward trend also exists: as the currency continues to fluctuate, demand for it continues to decrease.

The analyses above show that money demand seems to be reduced when a currency is unstable and volatile. On the other hand, a stable and predictable currency promotes higher money demand. Stated another way, periods of high volatility have

lower money demand, in general, and periods of lower volatility have higher demand, in general.

Some Conclusions

The Quantity Demanded and Provided

We departed from the idea that, if under a certain state of affairs, something is offered in a smaller quantity (and/or quality) than what it could be done under ideal conditions, there is space for increasing the consumer's surplus; there is, then, a failure.

Nevertheless, in the case of money, it is even more difficult than with any other good to determine what could be the *optimal* quantity demanded since we will see that the previously described motives to demand it may act in opposite directions, with different intensities in different points.

Results using Keynesian theory

Let's take the three points previously described. Even though Keynes neglected the relationship between the interest rate and the demand for the transactional and precautionary motives, we must take it into account after looking at Baumol's paper.

Under such definition, money would go sub-demanded as inflationary tendencies were taking place. The cost of holding monetary balances as such would increase if money offered a negative output in terms of most of the other goods. This is valid for the two mentioned motives. Utility would descend as covering oneself from unpredictable facts that require a disbursement of money gets more expensive, and resources²⁷ would not go into their most profitable destination as more of them have to be used to acquire the liquidity needed to proceed with transactions.

The analysis of the consequences of an incorrect provision of money over the speculative motive is not as clear. First of all, we must consider if it is a good²⁸ motive to demand money. Being Keynes an author of a theory designed fundamentally for a system

²⁷ One must think of "resources" in the broadest terms one can do so.

²⁸ Does it enhance utility or efficiency like the other two?

in disequilibrium, and being this a motive fundamentally related to uncertainty, it seems that demanding money for speculating around interest rates is the result of a system working in a sub-optimal level. Therefore, as the system tended, or was lead, to equilibrium, speculative demand should tend to zero.

Therefore, we see what was stated previously. It seems that, while uncertainty might increase the demand for money on one side, it might reduce it on the other side. If this is so, it would only be a coincidence if the amount of money provided was optimal; a Central Bank simply could not know to which motive it is responding, or on which motive is acting.

In the opposite case, the one of a deflationary context, things would simply go the other way round, resulting in an excess demand for money.

The Effect on Transactions

It will be simpler to show the effects of a bad currency on the aspect of transaction costs. "Transaction costs" can be associated with the first two functions of money, medium of exchange and measure of value.

If one is forced to use an imperfect currency through one's transactions, one will have to devote more resources to a) taking into account the possible changes of the price of what is being traded related to the rest of the other assets (distortions in relative prices), and b) taking into account the changes of the value of money related to all of the prices (changes in the general price level). The effect of this happening will be an increase in transaction costs, hence reducing efficiency and probably crowding-out transactions that would have happened with lower costs.

The second aspect to which we made reference was related to agents escaping from bad currencies by using them when in their highest point of purchasing power. We always keep in mind the case of an inflationary scenario, but the inverse reasoning can be used in the opposite case.

The acquisition of an asset, not for its direct usage, but for a further conversion of it into a more liquid one, generates two sources of inefficiency: one, to which we already

made reference, is holding a sub-optimal amount of money, and a second one, related to transaction costs, is making extra transactions to protect one's purchasing power. The reader can think for himself all the resources that are devoted to this task which could be devoted to a much more productive one in the presence of a good currency.

In this section, we shall include "menu costs" and any cost related to adjusting its functioning to changing prices.

There are also transactions and costs that would not take place at all but because of a bad currency: they are the costs related to the acquisition and usage of a foreign currency considered as better; such was the case with U.S. dollars throughout Latin America for decades. An incomplete list of such costs would include the cost of pricing assets in two (or more) currencies, acquiring foreign currency in black markets, protecting that money - even from governments - , and facing exchange risk in front of erratic monetary policies.

Finally, we must consider the stated existence of scale-returns in the usage of a particular currency. A priori, it would be impossible to tell which could be the amount of different currencies that should exist in the world in order to maximize efficiency on the usage of money.

Nevertheless, since the existence of national currencies has never depended on economic efficiency but on political considerations, efficiency could hardly be attained. The European case before achieving the monetary union serves as an example of an over-divided monetary system, and the current Eurozone (only considering transaction costs) showed the great earnings in efficiency that were possible to attain though a reduction in the number of different currencies.

Once again, even though the Euro shows that efficiency on transaction costs can be increased within the State currency, it still depends on political decisions and not on a market process; therefore, it would only be a coincidence if the number of different currencies was the optimal.

Of course, the value of money and relative prices will always change and some of these costs will always be present, but an inadequate provision of money will enhance instability and produce unwanted effects.

In conclusion, the idea of a State monopoly on money includes many concerns when holding it up to an ideal standard. First, monetary policy, as controlled by a Central Bank, provides multiple examples of the failures of a centralized-government power. The incentives and structures of Central Banks can also cause conflicts of interest that are contrary to what is best for the public. Second, money can be demanded for multiple reasons. Motives to demand money may work in opposite directions, with different intensities in different points, meaning it would be a coincidence if the amount of money provided by the State was optimal. Third, empirical evidence supports the hypothesis that a volatile, unpredictable currency reduces money demand. For the three case studies presented, periods of higher money demand occur during periods of higher monetary stability, and periods of lower money demand occur during periods of lower monetary stability. Finally, we believe the evidence in this paper supports the idea that a State-controlled currency will include many non-desirable characteristics that, in turn, reduce the public's welfare. That is to say, there is a failure.

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