

# MONEY, FROM EVOLUTION TO INVOLUTION: HYPERINFLATION ANALYSIS. PART II

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*Abstract:* This paper (Parts I & II) seeks to address the involution process of money through the Austrian School of Economics, mainly through Menger and Mises. Throughout history, money has emerged and evolved with the purpose of improving exchange and perfecting it; it has served to increase the welfare of societies, increase trade, and improve economies. When we have approached the main subject of this article, we have done so because—understanding the evolutionary process of money—we understand that a stage of involution has been reached which, in a great number of cases, has led to the loss of all the advantages derived from the evolutionary process of money. The greatest and most extreme case, but not the least frequent, is reflected in chronic inflationary and hyperinflationary episodes.

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## Introduction

This article is a continuation of Part I, previously presented, which seeks to address the evolutionary process of money through the

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Austrian School of Economics, mainly through Menger and Mises. We have approached the subject matter of this article (I & II) because, thanks to Menger, our understanding of the evolutionary process of money has led us to realize that a stage of involution has been reached which, in a large number of cases, has led to the loss of all the advantages that derived from the evolutionary process of money. In this second part, we address the consequences of increasing the money supply above the levels of production in the economy and the corresponding repercussions, up to the most extreme. The largest and most extreme cases, but not the least frequent, are reflected in episodes of chronic inflation and hyperinflation. In these processes, purchasing power deteriorates to such an extent that it loses its essential function as a common medium of exchange and is therefore disregarded in market transactions and operations. When these episodes occur, currencies, far from improving and perfecting exchange, obstruct it because agents refuse to accept the currency in the market. Submerged in tsunamis of monetary issuance, individuals find themselves unable to find any other use for paper that is incapable of expressing any value in the market, because unlike commodity money, paper money has no intrinsic value and is not useful for any other domestic or industrial purpose. This money obstructs and hinders exchange and is despised as a common medium of exchange, failing in its attempt to fulfill any monetary function.

### **Consequences of an increase in the money supply when demand remains constant or unchanged**

Mises (2012) argues that, in general, variations arising from small individual imbalances between demand and the amount of money held by an individual are usually offset by countervailing behavior on the part of other market agents, so that these individualized events are unlikely to have a general impact. However, if no such compensation occurs and the force exerted by the quantity of money is not offset by countervailing behavior in demand—which remains constant or unchanged—the consequence will be an alteration in the objective exchange value of money. In this sense, if what leads to

such an imbalance—between an individual's demand and quantity of money—is due to personal, accidental, and/or circumstantial circumstances, it is unlikely that this will have a general impact on the purchasing power of money. Otherwise, when the relationship between demand and the amount of money held by individuals is affected by a change in the amount of money in the community while the demand for money has remained unchanged or constant, the latter alters individuals' subjective assessments, this time not in isolation, but generally and in large numbers—which does not imply that it is in the same proportion and at the same time, but it is in the same direction—in such a way that they become phenomena that impact the economy and society as a whole, ultimately leading to alterations in the objective exchange value of money.

Mises says that the history of money has paid special attention to those variations in the purchasing power of money —objective exchange value—that have occurred as a result of a prior increase in the quantity of money while demand remained unchanged or did not increase at the same rate, and that these events fostered economists' interest in the quantitative theory of money to explain this problem. It is therefore pertinent to pay sufficient attention to and clarify relevant theoretical aspects. However, he clarifies that an increase in the money supply, whether due to an increase in the production of raw materials used to make commodity money or a new issue of fiat money, will always have a significant effect on the increase in the money supply of some individual agents—although not all and not at the same time. This increase in the amount of money in the community leads to an increase in the real monetary income of a certain number of individuals, without this translating into an increase in the amount of goods and services available to all members of the community, or, in other words, an increase in national income. He considers that an increase in the money supply (sign money or credit money) of a community can only be presented as an increase in national income if it manages to satisfy the demand for money that would otherwise have been satisfied by commodity money, throughout the process involved in the extraction and production of commodity money, which necessarily involves the production of a greater quantity of goods and services to exchange for the raw material of money, or the renunciation of

other types of production in order to allocate resources to the production of this raw material (Mises, 2012: 112-113).

This indicates that the amount of money in a community should not respond to unfounded desires, but should reflect variations in individuals' demand for money, or increases in the need for money as a result of an increase in real income. Only when there is a greater quantity of goods and services available to individuals in a community, or when there has been a prior increase in the production of the commodity from which money is made—because productive resources that were previously directed toward other purposes are now being allocated to this end—the increase in the amount of money in the community is offset by the increase in national income, without any adverse effect on the objective exchange value of money, or at least without affecting it in the same way and proportion as when the amount of money increases while the demand for money remains stable or does not vary in the same proportion.

However, an increase in the amount of money in a community always tends to benefit a certain number of economic agents—not all of them—with the main beneficiaries being those responsible for issuing sign money, or those producers of the goods with which commodity money is made. For these agents, regardless of their role, the relationship between the amount of money available and the demand for money to cover their needs is completely altered.

In short, the distortion introduced by the increase in the amount of money in the community while the demand for money remained stable—or did not vary in the same proportion—affected the behavior of the demand for money of a certain number of economic agents who, for some reason, are connected to the source of money issuance (either because they are part of the body that issues it, or because they are part of the production of the goods with which it is made). These agents, seeing the marginal utility of money distorted, enter the market and take actions that drive a change in relative prices, leading to price growth in the market. However, the final price growth is only a consequence of this chain of previous events. It is the result of the loss of purchasing power of money, or a reduction in its marginal utility caused by an increase in the amount of money when the demand for money remains stable or does not vary (Mises, 2012: 113-114).

The great significance of this fact is that what previously impacted a specific group of agents now ends up causing a cascade effect in the market. By entering the market with a relative abundance of purchasing power, the affected agents demand economic goods more intensely and are willing to pay higher prices in exchange, which ends up increasing the disposable income of the sellers of those economic goods, causing a relative abundance of purchasing power that will make them bid more intensely when they present themselves as demanders of economic goods (just like the previous buyers), being able to accept higher prices. Successively, this behavior ends up affecting the next chain of relationships between buyers and sellers, which is transferred until it reaches the basic and raw material markets, ultimately (Hume as cited in Mises, 2012: 114). In this way, it goes from being an isolated event to a widespread phenomenon that ends up with a general increase in price levels, or rather a reduction in the objective exchange value of money (purchasing power).

It is correct to say that, due to their proximity or involvement with the source of issuance, those who initially see their purchasing power reserves increase may momentarily increase the amount of economic goods they consume because the price increase is not widespread, allowing them to take advantage of low prices. However, the rest of the individuals—whose purchasing power reserves have not initially been altered—will later be surprised by the generalized increase in prices and will completely absorb the deterioration in purchasing power, finding themselves limited in the amount of economic goods they can acquire. Thus, the initial economic subjects see their income increase, while the latter end up assuming the deterioration of their income. It should be noted that price variations and growth do not affect all individuals in the same way, at the same time, and in the same proportion.

One of the most interesting aspects of Mises' critique of the quantity theory is that he argues that supporters of the quantity theory attempt to assess dynamic elements in a static environment. In this sense, they focus on the argument that changes in the amount of money in a community must produce uniform and equal changes in all prices, or inversely proportional changes in the objective exchange value of money. Of course, this initial

argument is dismantled if we accept the subjective theory of value and understand that an increase in the money supply of a community—while its demand remains stable or unchanged—does not affect all individuals equally. First, because the demand of the community cannot be assumed to be the demand of individuals. Each individual enters the market with completely different and independent subjective valuations and intensities of demand. Second, the increase in the quantity of money affects a limited number of economic agents according to their proximity or involvement with the source of issuance. Thus, the increase in prices will be reflected mainly in the economic goods that these agents demand, even in a greater proportion than the rest of the goods. On the other hand, it considers that if the increase in the money supply is due to temporary, circumstantial, and momentary issues, it will not last long and will tend to be offset by an adjustment, although this adjustment will not affect all economic goods in the same proportion. The price harmony that existed prior to the increase in the money supply will not be restored, and the distortion in relative prices and the decline in the purchasing power of money is not uniform for all economic goods or for all individuals in the community, given that each of them may have completely different monetary incomes and subjective valuations (Mises, 2012: 114-115).

Finally, Mises points out that in order to explain variations in the value of money through quantitative theory, we would have to consider a set of characteristics as exclusive to money itself, so that its value is determined in a different way from other economic goods. The other issue is that, in attempting to explain inversely proportional effects on the objective exchange value of money based on variations in the quantity of money, we break with the static analysis method proposed by the quantity theory, introducing a dynamic element such as the variation of the quantity of money into a scheme that only accepts static elements (Mises, 2012: 118-119).

### **The market and the objective exchange value of money**

In the search for what determines the objective exchange value of money, it is, of course, convenient and appropriate to take into

account the essential work of the market and its mechanism. The market price system is essentially a mechanism for transmitting information and adjustment. Information is transmitted because the price resulting from the bidding process between supplier and consumer reflects the agreement that closes each transaction, and each agreement reflects one of the many equilibriums achieved in the market. In each agreement, the buyer subjectively values the money they are parting with less than the good they wish to obtain. Meanwhile, the seller subjectively values the money they expect to receive in exchange for the good they are parting with more. Only under these premises is it possible to complete the exchange process and arrive at a price. However, just as in many cases the bidding process between buyer and seller reaches an agreement that is expressed by the setting and acceptance of a price for the exchange, in other cases—also frequent—this coincidence of subjective valuations is not achieved, which ultimately prevents the exchange from being completed. This may happen because the buyer subjectively values the good they hope to acquire less highly and is therefore unwilling to pay a very high price, forcing them to seek other means available to satisfy their need or give it up. It may also be the case that the seller subjectively values the good they are bringing to market more highly and is only willing to exchange it at a relatively high price, thus setting a sufficiently demanding condition for exchange. Under such conditions, and unless a buyer comes along who values the good they hope to obtain more highly than the money they have to part with, if no buyer in the market is willing to pay the set price, the seller will not reach any exchange agreement and will be forced to give up or accept a lower price if they ultimately hope to reach an agreement.

Mises refers in particular to those cases in which the price is not set through the usual market bidding and haggling process, but rather there is a certain *h y* in the price setting by the seller, and the buyer has no choice but to accept the exchange agreement if they ultimately hope to satisfy their need. This may happen because the intensity of the buyer's need is significant enough that it cannot be left unsatisfied, or because the buyer has a reserve of purchasing power at their disposal. In this case, the buyer accepts the price set

by the seller without any qualms, but does so knowing that in this new situation they will need to have higher monetary income to satisfy their needs, and one way to obtain higher monetary income is to demand higher prices for the goods and services they offer on the market. If our initial buyer is a worker, they will demand higher wages from their employers or look for a new job where they will receive a higher salary. At this point, if the employer is willing to retain the worker, they will have to pay higher wages; otherwise, they will lose labor and may jeopardize the production process. In this sense, the employer will be willing to pay higher wages because they believe that they can ultimately pass on this increase in the form of higher prices for the final products they bring to market. This will increase the prices of other products that are part of a production and value chain of other goods and services in the market, and ultimately the rise in prices will become widespread, in an endless spiral with no clear beginning or end (Mises, 2012: 137).

The price in a competitive market is a process that is achieved through negotiation and bargaining. The seller will enter into the exchange hoping to obtain the highest price for their product, and the buyer will hope to satisfy their need by acquiring a certain good at the lowest possible price. The price that determines the agreement depends on constant adjustments and trial and error on the part of both buyers and sellers in the market, who will set barriers that they will calibrate until they reach equilibrium at a price that reflects mutual agreement. This market price may deviate from its target if, in certain circumstances, the buyer—even if they consider the price to be high—agrees to pay high prices without objection because they expect to obtain higher monetary returns in the future. The adjustment and calibration mechanism that tells the seller when the set price is too high and guides them toward a more appropriate adjustment to what the market is willing to pay is distorted if this correction does not occur and buyers are willing to accept any set price. The seller is unable to see that what appears to be an increase in the profitability of the business is simply the beginning of a price escalation that will end up diluting the purchasing power of the surplus income he has obtained by setting a high price and not being warned by the rejection of buyers (Mises, 2012: 137-138).

Once again, Mises makes the caveat that an increase in prices should not, and does not necessarily have to, lead to an increase in the demand for money. He argues that it is very likely that when prices rise, individuals will not think of increasing their demand for money to cope with the rise in prices, but rather will focus on increasing their monetary income to compensate for the rise in prices. However, he does not consider it logical to think that an increase in monetary income will necessarily lead to increases in money reserves. He acknowledges that it is possible that individual demand for money may rise with prices, but warns that there is no evidence to prove that this must happen tacitly, and that, if it does occur, it will be in such proportion and magnitude that it will nullify the effect on purchasing power. Similarly, he raises the idea that a rise in prices may lead individuals to austerity measures that eliminate certain superfluous expenses that they are unwilling or unable to assume in the new situation, causing a revision of the appropriate level of money reserves, which must now be lower because the individual has chosen to restrict their consumption. Thus, the result of a rise in prices would not be reflected in an increase in the demand for money, but rather in a decrease. Ultimately, these exercises end up being disjointed because they involve introducing dynamic factors into static states, essentially due to the foundations that constitute quantitative theory (Mises, 2012: 139-140).

### **Social consequences of variations in the objective exchange value of money**

Although inflation is often touted as a policy that works in favor of debtors and against creditors, because the latter are unaware of the inflationary impact, this is true when the effect of the loss of purchasing power is unexpected by creditors and they are taken by surprise. However, once the inflationary phenomenon becomes habitual, frequent, and chronic, it is impossible for creditors not to be aware of it in the course of their work and to incorporate the corresponding implications of inflation into their estimates. As a result, inflation ends up increasing costs and reducing the loan,

which represents a loss rather than a benefit for debtors, who could enjoy greater volume and better financing conditions in an environment free of inflation or with moderate price stability (Mises, 2012: 195).

Regularly, in the face of persistent inflationary scenarios, exchange relationships between present goods and future goods tend to incorporate clauses and insurance that seek to protect the profitability of the agreed business, with the intention of avoiding being harmed or surprised by a process of deterioration in purchasing power. When we take these exercises to the extreme or refer immediately to hyperinflationary processes, we find that under these scenarios, credit practically disappears because the inflation levels that could correspond to annual estimates are exceeded on a daily basis or even in a matter of hours. It makes no sense to part with capital with a certain purchasing power (regardless of the interest rate) to receive, even hours later, a small fraction of the previous purchasing power, even though the nominal value of the monetary unit remains the same.

Another important aspect relates to economic calculation, accounting, and intertemporal planning. Processes of loss of purchasing power undermine proper economic calculation, mainly because distortions in relative prices prevent individuals from making the subjective estimates and assessments appropriate to a regular economic process, often leading them to make wrong decisions. If the reference standard for economic calculation is money and, due to the circumstances we have already mentioned, we are faced with a deterioration in its value, we will find that the decisions and actions taken on the basis of this money may ultimately not be guided in the most correct and appropriate way. An individual who makes decisions based on erroneous estimates of purchasing power (while unaware of the real impact of the loss of purchasing power) may underestimate the real loss of purchasing power, the deterioration of capital, and assume inadequate levels of savings and/or investment, among other things. A misinterpretation of the value of money can lead to incorrect and inadequate estimates of inventory turnover, resulting in the technical impossibility of replenishment. In this scenario, the entrepreneur faces excessively rapid price growth, yet the prices at which he has sold

the merchandise do not contribute sufficiently to achieve effective inventory replenishment.

In scenarios of high inflation or chronic inflation, it is common for entrepreneurs and merchants to increase inventory turnover and shorten their terms. Delayed turnover can mean facing restrictive price growth. Similarly, poor estimation or ignorance of changes in the value of money can lead to unrealistic profit margin estimates that are not in line with market prices. Accounting management without a corresponding adjustment for inflation can often lead us to estimate profits that are higher than they actually are. On the other hand, when entrepreneurs are aware of inflationary realities, they increase inventory volumes, reduce replenishment times, decrease liquidity levels (because cash depreciates rapidly), and opt for a more open position in liabilities (which favors inflation) and a more restricted position in relation to assets. Rather than using assets, it is more advantageous to increase liabilities that are diluted by inflation.

Then, although it may seem irrelevant, when inflation becomes recurrent, chronic, and reaches extraordinary levels such as hyperinflation, accounting becomes a set of unproductive procedures incapable of adding value and constantly involving the recording of unpronounceable monetary figures in accounting entries. Inflation makes accounting processes for business management tedious and fruitless. Expansions of the currency cone are constantly necessary because the nominal value of the currency is incapable of preserving minimum real purchasing power. This process is only a preliminary step until the possible number of zeros that can be contained on a paper bill is exhausted,<sup>1</sup> although there are always options to add more, as many zeros as the person in charge can imagine.

The processes of expanding the currency cone to incorporate higher-denomination bills are the most notable evidence of the inflationary process. Often, when such gross or scandalous denominations are reached, artificial processes called currency reversion are resorted to. Reversion is nothing more than removing

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<sup>1</sup> This was the case with the one million mark note in Germany in 1923, the one hundred million million dollar note in Zimbabwe in 2008 (Hanke & Krus, 2012), and the one million bolivar note in Venezuela in 2020.

as many zeros from the currency as possible to start the game again<sup>2</sup>. These processes provide temporary relief for those responsible for accounting and filling out accounting entries, while individuals will circumstantially go from carrying carts loaded with money to buy bread to carrying just a few bags. Of course, these processes of expanding the money supply, currency conversion, and any other strategy that does not completely stop monetary issuance do not represent a structural and real solution to the problem of loss of purchasing power. Often, when the deterioration process is so widespread and repeated that it even reaches hyperinflation, it is common for the market to end up discarding the deteriorated currency, which does not incorporate any type of benefit and/or service as a common medium of exchange, and to switch not only for its economic calculations, but also for daily use, to another type of money or currency that is capable of better fulfilling the function of a common medium of exchange, that is, one that better represents the concept of money (Mises, 2012: 179-182).

### **Defenders of inflation and the involution of money**

On many occasions, defenders of inflation argue that inflation makes the domestic productive sector more competitive with regard to foreign competitors because it lowers the cost of domestic production factors, allowing exporters to have lower costs and compete in the foreign market with a certain competitive advantage. The reality is that inflation does not favor production, much less contribute to competitiveness. To assume otherwise would be to fall into a mirage that necessarily involves economic isolation. To think that inflation contributes to competitiveness by making production factors cheaper implies assuming that all production

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<sup>2</sup> Venezuela has undergone three currency conversions that have eliminated a total of fourteen zeros from the currency. First conversion: January 1, 2008, eliminated three zeros from the bolivar (Decree No. 5,229, March 6, 2007). Second conversion: August 20, 2018, eliminated five zeros from the bolivar (Decree No. 3,548, July 25, 2018). Third conversion: October 1, 2021, eliminated six zeros from the bolivar (Decree No. 4,553, August 6, 2021). In total, 00,000,000,000,000 (fourteen zeros) have been eliminated from the bolivar, and the problem persists.

factors are obtained from within the country and that you only export what you produce abroad. but the reality is that we live in an environment where economies are increasingly interconnected, and it is quite difficult to have a production process that does not require at least one imported raw material component or need an imported component at some point in the production cycle.

When inflation becomes recurrent and chronic, it becomes the worst enemy of production processes; it destroys capital, hinders economic calculation and intertemporal planning, alters inventory replacement cycles, complicates accounting processes, and introduces imbalances that can ultimately destroy a company's business margins. It is a mistake to associate inflation with competitiveness; a country's competitiveness must be linked to structural and development factors, not only in the economic sphere, but also in the legal and institutional framework, foreign trade, logistics infrastructure and communication channels, technological development, among others. If we look at the World Economic Forum's global competitiveness index and review the ranking of the top five countries with the best performance in competitiveness, we will not find among them the countries with the highest inflation rates. If we were to associate competitiveness with inflation, countries such as Argentina, Venezuela, and Zimbabwe should have repeatedly occupied the top of the competitiveness ranking table. but, on the contrary, in the 2019 report they rank 83rd (Argentina), 127th (Zimbabwe), and 133rd (Venezuela) out of a total of 141 countries (World Economic Forum, 2019).

### **Non-monetary components of monetary problems**

One of the advantages of commodity money is that it conceptually restricts the discretionary increase in the money supply because it requires a prior increase in the commodity from which the money is made and on which banknotes are backed and issued. This advantage is precisely what made the pure gold standard a threat to governments' appetites for spending and political discretion. The existence of commodity money presented itself as a restriction on political criteria and populist appetites. It was more difficult to

influence or manipulate the money supply under the commodity money scheme than with credit money or sign money, both of which gave the government a certain amount of confidence and freedom to influence the money supply with complete discretion and always under "good judgment." Mises points out that with credit money and sign money, the government has been able to influence the objective exchange value of money by increasing or decreasing the amount of money in the economy. However, this has not been a directly pursued intention; the government does not seek to influence the purchasing power of money, but it does so indirectly when it increases the money supply to cover fiscal needs and fuel populist public spending policies.

The government does not seek, in the first instance, to influence price levels (in fact, it acts in the hope that the consequences of its actions will go unnoticed) but, through the discretionary increase in the money supply, to cover the fiscal imbalances caused by its excessive and extraordinary spending policies. In principle, before accepting a budget adjustment and reducing its size and scope of action to balance the accounts, or increasing tax collection to alleviate its revenues, both of which are tremendously unpopular measures, governments prefer to cover their fiscal deficit with monetary issuance that is not immediately perceived by the population and are able to do so without major problems because they do not face a commodity money system. This is how a fiscal problem ends up becoming a monetary consequence. Of course, as societies have advanced and developed, the role of the state in relation to money has changed, as have the demands placed on it in this regard.

The modern fiat money system makes inflation not a problem but a tool of monetary management; governments do not question whether or not to have inflation, but rather the optimal level of inflation. There are supporters of inflation who consider it a healthy and necessary policy, capable of contributing to the economy and benefiting society by transferring income from the richest groups to the poor, favoring exports over imports, and benefiting debtors over creditors. In short, inflation in the eyes of inflationists seems to be the best of the desired economic policies, but only those who do not suffer from the undesirable evils of

inflation can dare to propose it as an optimal and healthy measure. Those who advocate inflationary policies are usually members of the government in power, politicians waiting for their turn to use this tool, interventionist intellectuals who are incapable of conceiving or assimilating the evils embodied by interventionism, or naive citizens who cannot assess the real damage caused by an inflationary policy.

Likewise, while those responsible for inflation evade their responsibility and the process of deterioration in purchasing power becomes increasingly evident, government officials divert attention from the logical consequence of their inflationary policy, namely widespread growth in price levels. They react to price increases by pointing to deliberate manipulation by merchants and entrepreneurs, erecting barriers in the name of social welfare, and establishing price controls to prevent the perversity of speculators. Inflation, as Mises says, diverts public attention and hatred from those primarily responsible to merchants and entrepreneurs, who are accused of being speculators and taking advantage of the people. In its rhetoric, the government manages to inoculate the community with the evil of inflation and end up blaming others. Often, the argument invades the warlike imagination and comes to be classified, as in the case of Venezuela, as economic warfare (Mises, 2012: 197-198).

Inflation is the most expeditious and cheapest means of financing for governments. Indiscriminate abuse of monetary issuance provides an inexhaustible source of resources for the government with a very low margin of responsibility. By resorting to inflation, the government avoids financing through debt issuance or tax increases. Inflation provides it with the resources necessary to carry out populist policies, deficit spending, and keep unproductive public companies afloat.

Inflation financing facilitates the permanence in power of inefficient and irresponsible governments, which would not remain in power if it were not for the profitable business of monetary issuance. Without the recourse to monetary issuance, any government that wants to increase its spending levels must necessarily reduce other types of spending to afford new ones, or increase its revenues to expand its spending margins. The former implies submitting to

austerity measures or prioritizing spending, which is politically difficult and undesirable, while the latter involves increasing sources of income through financing or taxation, a somewhat unpopular strategy. In a way, inflation ensures that governments remain in power that otherwise would not have been able to do so, as their questionable economic management would have led to their removal from power. Inflation allows bad governments to achieve goals that would otherwise be impossible, guaranteeing them permanence in power despite their management (Mises, 2012: 198). If individuals could see the consequences of inflationary policy as directly and clearly as they see a substantial tax increase to cover budgetary needs, some governments would undoubtedly not remain in power for long and the deception would not be prolonged, but unfortunately this is not the case in reality<sup>3</sup>.

It is difficult to hide the effects of inflation permanently and expect to deceive individuals on an ongoing basis. Although increases in the money supply take a considerable amount of time to be reflected in a decline in purchasing power, once these processes become recurrent, individuals become aware of the inflationary reality that surrounds them and learn to behave in such a way that they can anticipate and best avoid the losses resulting from inflation. Thus, what was initially an issue that took economic actors by surprise becomes an estimate that they incorporate into their usual operations. In this way, the advantage of the debtor over the creditor who was surprised by inflation disappears, because there is no surprise in what can be predicted. In any

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<sup>3</sup> The exception to the rule came in Argentina's 2023 presidential elections, where, after years of terrible socialist government management with chronic inflation and a slide toward hyperinflation, the ruling party's candidate was the person primarily responsible for the government's monetary policy, Economy Minister Sergio Massa, the same man who led the country to the brink of hyperinflation. Fortunately for the Argentine people, these elections had the distinction of featuring what is perhaps the best-prepared head of state in the Western world, who has an excellent knowledge and command of economic theory and is also a faithful follower of the Austrian school, economist Javier Milei. Milei exposed those responsible for the economic collapse of the Argentine people and was elected with 55.66% of the vote, a milestone that undoubtedly represents one of the greatest practical challenges ever faced by the Austrian school of economics: to implement the principles it has always defended from within a government.

other business scenario, individuals act by incorporating current and expected changes in the purchasing power of money into their transactions and proceed accordingly. This fact is nothing more than the ratification of the inflationary process.

### **Hyperinflation completes the phase of monetary involution**

When inflation is chronic and the deterioration of purchasing power becomes recurrent, the monetary units in circulation (at their face value) are often insufficient to carry out normal transactions, and a greater amount of money (mainly due to price increases) or an expansion of the money supply is required to incorporate new higher-denomination banknotes. Such growth in the demand for money is not associated with an increase in productive activity or real income. On the contrary, individuals demand a greater amount of money to cover the voracious increase in prices, and inflation levels make the current currency and the amount of money available insufficient, even leading to episodes of cash shortages. At this point, prices are rising faster than the money supply, the purchasing power of each unit of currency in circulation is being eroded, and large amounts of money are needed to cover the purchase of everyday goods and services. Any successive increase in the money supply will not alleviate the problem; it will be like trying to put out a fire with gasoline. On the other hand, as long as monetary issuance continues, increases in the money supply will be insufficient, and at a certain point it will be necessary to restart the game through a currency conversion, which can lead to repetitive processes of expansion and conversion without reaching a solution to the problem.

Mises (2012) points out that although the state and inflationary groups seek to influence the amount of money in order to control the purchasing power of money in a certain way, it is impossible to achieve this goal because, despite the quantitative importance given to variations in the amount of money, it is impossible to calculate how these variations in the relationship between the supply and demand for money influence individuals' subjective valuations, which are what ultimately determine the objective exchange

value of money. Even when, in a constant game of trial and error, attempts are made to manipulate the money supply in order to achieve or hit one inflation target or another, there is always the possibility of failure, and the consequences are dire, despite the artifices (expansions and reconversions) used to remedy the situation. Any intervention measure, however well- r well-intentioned it may be, runs the risk of causing greater harm to the welfare it hopes to achieve.

When the process of deterioration in the purchasing power of money is continuous, chronic, and recurrent, economic agents act by abhorring, despising, and emancipating themselves from the use of the destroyed currency, pursuing in the market any other means of exchange that is capable of genuinely fulfilling its functions and allowing them at least to preserve their purchasing power away from the clutches of inflation.

Mises (2012) points out that once the Germans abandoned the use of the mark and began to conduct their exchange operations in gold, they were able to escape the evils that the use of this currency entailed for them. Of course, the impact of inflation is reflected for those who are forced to trade in the currency that is subject to this process. To the extent that individuals divest themselves of the deteriorated currency and move away from its use in common transactions, to that extent they will move away from the evils it incorporates.

Mises, long before other economists, was aware of the phenomenon of hyperinflation, although he did not define it as such. He tells us that

*“Continued inflation will eventually lead us, steadily and uninterrupted, to collapse. The purchasing power of money will decline more and more until it disappears completely. It is true that one can imagine an endless process of depreciation. We can conceive of a continuous decline in the purchasing power of money without it disappearing and prices rising continuously without it becoming impossible to obtain goods in exchange for banknotes. Ultimately, this will lead us to a situation where even retail transactions would be expressed in millions, billions, and even higher figures, but the monetary system would continue to exist” (2012: 201).*

This paragraph perfectly summarizes the description of the hyperinflationary process; it addresses the scenario in which a continuous, recurring, and chronic process of inflation reaches its peak and spirals completely out of control, a scenario in which the purchasing power of money deteriorates almost infinitely. Obviously, this scenario implies a natural and eventual abandonment of the use of this monetary unit.

Mises continues with his analysis of the hyperinflationary process, addressing one of the consequences associated with these processes, namely the reduction in the holding of real cash balances:

“Everyone tries to minimize their cash reserves, since they are a source of continuous losses. Income is spent as quickly as possible, and purchases made to obtain goods of stable value, rather than money that depreciates, will be assigned higher prices than would otherwise correspond to market conditions. When goods are purchased that are not needed at all, or at least not at that moment, in order to avoid holding banknotes, the process of expelling them as a common medium of exchange begins. This is the beginning of the “demonetization” of banknotes. The process is fueled by panic. It may be possible to allay public fears once, twice, three times, or even four times, but in the end events will take their course, and there will be no turning back. Once depreciation proceeds so rapidly that sellers have to reckon with considerable losses, even if they buy back as quickly as possible, the situation of the currency is hopeless” (2012: 201-202).

In hyperinflationary processes, money undergoes a process of involution in which, after losing its recognition and acceptance as a common medium of exchange, it lacks any monetary characteristics; it is replaced by any other medium capable of representing the function of money in better and greater conditions. Individuals regularly turn to certain safe-haven assets, as in economic crises, but due to the magnitude of hyperinflationary processes, it may be equally difficult to obtain gold or silver. When, either because prices are too high or because it is very difficult to obtain these safe-haven commodities, individuals have to settle for owning goods that can be used for personal consumption or exchange, we

reach the complete degree of involution of money, moving from indirect exchange, for which money is essential and for which it has emerged, to direct exchange through barter<sup>4</sup>.

At this level, the distortion in relative prices is such that they are unable to reflect the relationship estimated by the quantity theory between the amount of money and the objective exchange value. In these episodes, the intensity of individuals' subjective valuations acts as the true determinant of the objective exchange value of money, clearly demonstrating Mises' approach to the quantity theory. Individuals and traders incorporate expected changes in purchasing power into their valuations in order to protect themselves, in a sense, from the evils that await them. This brings us to a point where prices do not reflect the coincidence of individuals' subjective assessments and their estimates based on marginal utility, but rather incorporate distortions associated with the profound deterioration of purchasing power in a hyperinflationary environment. These estimates, which are a clear example of individuals' subjective assessments, consciously determine the value of money and a price relationship in the economy that is far removed from what would correspond to a market economy without these disturbances.

In another advance on the consequences of hyperinflation, or what Mises called rapid inflation (2012: 202), it is recognized that a level of deterioration in purchasing power and price volatility is reached that is not related to the increase in the money supply. At this point, the decline in the value of money is much faster than the increase in its quantity, a reality that contradicts the assumption of the relationship between the quantity of money and the price level proposed by the quantitative theory and that operates in favor of the subjective theory of value. At this stage, variations in the value of money are not purely due to individuals' subjective assessments of whether they estimate a greater or lesser need for money and based on its marginal utility. Individuals incorporate into their usual estimates and assessments an extraordinary

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<sup>4</sup> During Venezuela's hyperinflationary process (2021), agreements were reached at certain times for direct exchange via barter, either because there was a shortage of bolivars in cash or because people refused to accept them in exchange.

component that stems from the hyperinflationary nature itself. Thus, the variations that occur in the purchasing power of money incorporate factors that cannot be objectively considered.

Another consequence of the hyperinflationary process is the subsequent reduction in the demand for money. The fall in demand for money reflects the reality of a currency that no one wants to use, that individuals despise because it brings more discomfort than well-being. No one wants to use a currency that depreciates so rapidly ( ) that its purchasing power is diluted in an instant. Commerce despises it because it lacks value as a medium of exchange. The fall in individual demand is expressed through the demand of the community, which has ingeniously begun to use other means—which it has considered more suitable—to carry out its transactions and exchanges. With the progressive adoption and use of these other types of means of exchange as money and an increase in their demand, there is also a decline in the money in question, which is despised and abhorred by the public.

The hyperinflationary scenario encompasses a set of distortions and practices that are the result of harmless and well-intentioned inflationary interventions. Hyperinflation is the most extreme form of inflation, but it also involves major and profound distortions that can destroy the market price system. In this scenario, subjective valuations (estimates of the marginal utility of money and goods) do not respond to normal criteria, but to extreme scenarios; they incorporate variations well above those that would occur in a normal environment. Of course, no individual expects to assume the inflationary loss, so when estimating prices, they expect to pay the lowest possible price and charge the highest possible price, incorporating a margin of coverage for future prices that may seem crude or abysmal. Expectations of price growth incorporate, in a way, more inflation into the hyperinflationary spiral; individuals project prices well above their real value to protect themselves from imminent deterioration, but while this is happening, hyperinflation feeds on this factor of hysteria and panic, which further exacerbates the decline in purchasing power. Prices rise to such extraordinary levels that the monetary base becomes insufficient to cover cash

needs. At a certain point, a cash shortage becomes evident, further hindering trade and exchange<sup>5</sup>.

Hyperinflation ultimately leads to the abandonment of the currency in question, as the market wisely rids itself of a medium of exchange that is incapable of fulfilling its most essential function. This hyperinflationary dynamic destroys money until it regresses and disappears (all of this is possible in the modern monetary system in which we live), individuals despise its use in everyday transactions and get rid of it as soon as they can. Any type of capital or wealth escapes from being expressed in this currency and immediately seeks refuge in foreign currencies or financial assets denominated or payable in solid currencies. Exchanges of all kinds begin to be expressed or referenced in terms of foreign currencies. Thus, labor relations between workers and companies, which regularly involve a temporary exchange that entails giving up present working hours in exchange for a certain future monetary salary (in biweekly or monthly payments), begin to lose their meaning due to hyperinflation. Under this reality, at the end of the month, workers receive a salary with less purchasing power than they could have received if they had been paid for their work on a daily basis. Thus, workers and unions begin to demand shorter payment frequencies, sustained wage increases, or even that wages be paid in foreign currency protected from hyperinflation.

It makes no sense to continue using a severely deteriorated currency—which clearly causes more harm than good— The public constantly decides through the transactions and exchanges they carry out in the market. Despite the collapse and the clear confirmation of its monetary policy errors, the state is unlikely to dare to give up its monopoly and privilege of issuing currency on the pretext of not wanting to relinquish monetary sovereignty. However,

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<sup>5</sup> In Venezuela (2021), hyperinflation reached a point where a shortage of cash became evident, and suddenly people began to buy cash. It is a little curious, but given the shortage of cash, people made bank transfers in exchange for cash and agreed to transfer more money than the amount of cash they were going to receive. The need for cash was relevant not only for retail trade, but also because the liquidity of banknotes made it easier to carry out transactions and exchanges, given that bank transfers can take at least 24 hours, during which time the money may have lost a significant amount of its value.

monetary collapse gives way to the massive abandonment of a monetary system that has systematically impoverished the population and allows the market to transition to a currency or type of money that is capable of fully meeting the expectations and functions of a common medium of exchange. In some cases, monetary collapse resulting from hyperinflation leads to the spontaneous adoption of a foreign currency, which, while not perfect, incorporates fewer evils than remaining with the highly destroyed currency (Mises, 2012: 203-205).

Monetary collapse embodies the virtue of finally being able to abandon an oppressive and destructive monetary system that has become most clearly evident through hyperinflation, in order to adopt a better currency. It is usually more difficult for individuals to realize that moderate and sustained inflation can cause the same evils, albeit in a more protracted and prolonged manner, without raising any alarm. Mises points out that, without a doubt, all sustained inflation (“hyperinflation”) must inevitably lead to the collapse of that currency and the abandonment of any present or future transactions involving it. To this we could add that any monetary manipulation, even if carried out repeatedly or continuously over time, will ultimately lead—either quickly or gradually—to the deterioration of purchasing power and the decline of money to the point of compromising its existence as a preferred and commonly accepted medium of exchange (Mises, 2012).

One might think that after a process of abysmal destruction of the purchasing power of money, the objective would be to pursue exchange value stability, but, as Mises argues, we must not fall into the error of pursuing the invariability of the objective exchange value of money, or of wanting to influence whether it ends up being higher or lower, because this is not something we can achieve, since—in essence—it depends on the intensity of individuals’ subjective valuations, which are expressed in the ways they manifest their needs for money and their estimates of its marginal utility in relation to the set of goods. Precisely because intellectual currents and economic theories have proposed the need to influence and determine the objective exchange value of money through manipulations of the relationship between the quantity of money

and the needs for it, we end up with scenarios such as hyperinflation. Proponents of the quantity theory or supporters of inflation will think that it is always possible to influence the purchasing power of money through monetary manipulation—for fiscal purposes—and that this can generate more welfare than harm to society. The truth is that it is not the responsibility of the state to determine the purchasing power of money, or even to establish whether it should remain fixed or variable; this is a task that corresponds to the market and individuals through their subjective estimates. When attempts are made to influence or determine the purchasing power of money by altering the relationship between the supply and demand for money, the seeds are sown for a possible future collapse of the monetary system itself. Any untroubled intervention by the state to determine the objective exchange value of money carries the risk of leading to error and excess, with the corresponding repercussions that can undoubtedly lead to hyperinflation (Mises, 2012: 210-212).

## Conclusion

We have reviewed the main contributions of Menger and Mises, assessing how money has emerged and evolved naturally and spontaneously in the market to respond to individuals' needs to find a means of overcoming the problems posed by direct exchange or barter. Throughout history, money has emerged and evolved with the purpose of improving and perfecting exchange. Along the way, it has naturally served—through its evolutionary process—to increase the well-being of societies, boost trade, and improve countries' economies. But it is also noteworthy that as money emerged, evolved, and became a common element in the life of societies, it aroused the interest of the state. The state became involved in the evolutionary stage of money—as always—with good intentions, to “safeguard” the common good and serve the citizenry. In principle, it guaranteed the weight and purity of the money circulating in its jurisdictions, doing so through official mints and coinage houses. From this fact arose the issue of abrogating the right to categorize and designate what is money and

what is not. Thus, by law, they were able to create their own money and give it legal force, all while ignoring the spontaneous origin of money and the fact that its evolution is a matter for the market and those who participate in it. Therefore, it is impossible to create money by law, because money essentially requires the acceptance, use, and recognition of the market as a common medium of exchange.

In its evolutionary process and the search for improvement and refinement of exchange, money continued until it achieved the form of certificates of deposit, a form that represents a way out of the transactional difficulties involved in making exchanges in areas far from where the money was kept, or to reduce the risks of having to carry money and be a victim of theft, or the heavy work involved in procuring a money order for large transactions. Thus, with the intention of facilitating and improving exchange, banks issued certificates of deposit that could be used in exchange instead of coins, so that anyone who accepted the certificate of deposit could go to the bank and claim the corresponding money. The use of certificates of deposit became so convenient that their use in commerce and transactions quickly spread and became widespread, but only as long as they guaranteed the holder the possibility of claiming the value expressed in real money.

With the spread of the use of certificates of deposit, the prerogative of their mandatory conversion into the amount of real money they represented was also maintained, thus creating a monetary system with certificates of deposit that circulated freely and were accepted with confidence because the system guaranteed their convertibility. However, this step towards evolution would also represent the first step towards the involution of money, as soon as governments realized that paper money could circulate freely without any citizen worrying about whether the backing for that banknote actually existed, and, thinking of the inexhaustible needs of the state, they decided that it was time to break with the tiresome convertibility and take the step towards a monetary system that did not guarantee any convertibility to gold or silver as the original money, but was based on the trust placed in the monetary management of governments. Thus, the gold standard monetary system died and the current fiat system that governs the

current monetary system was established. This step marked the beginning of an inflationary era that has consumed the purchasing power of the currency, as governments could now issue money freely without any backing. In certain cases, monetary authorities acted with discipline and caution, but in others, they have been carried away by fiscal appetite and have plunged the people into the greatest of evils: inflation.

This process also gave rise to defenders of the new monetary standard, alchemists who believed it was right to manipulate certain variables to control price stability and the value of the currency. This fatal arrogance has solidified an inflationary international system which, as expected, fails not only to achieve its objectives but also to admit its mistakes. When we have approached the subject matter of this article, we have done so because, thanks to Menger, we understand the evolutionary process of money and how, in the midst of this process, a stage of involution was reached that in a large number of cases has led to the loss of all the advantages that derived from the evolutionary process of money.

The most extreme cases, but not the least frequent, are chronic inflationary episodes and hyperinflation. In these processes, purchasing power deteriorates to such an extent that it loses its essential function as a common medium of exchange, and is therefore disregarded in market transactions and operations. When these episodes occur, currencies, far from improving and perfecting exchange, obstruct it because agents refuse to accept the currency in the market. Submerged in tsunamis of monetary issuance, individuals find themselves unable to find any other use for paper that is incapable of expressing any value in the market, because unlike commodity money, paper money has no intrinsic value and is not useful for any other domestic or industrial purpose. In inflationary processes, paper money ends up thrown away as trash on the street because it has lost its value so rapidly that it lacks monetary use. Individuals prefer to resort to direct exchange through bartering and all the complexities that this entails rather than accept useless paper money in exchange.

Everything we have learned through the Austrian School of Economics, mainly through Menger and Mises, provides us with the necessary arguments to conclude that we have experienced a

process of monetary involution and that the current monetary system does not guarantee the continuity of the evolutionary improvement of money. On the contrary, it confirms the concern that some countries, faster than others, are moving towards the certain involution of money.

### **Conflicts of interest**

The author declares that he has no conflict of interest.

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