DEBT-BASED CURRENCY AND BORROWING FROM THE FUTURE: IS IT SUSTAINABLE?

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ABSTRACT

The article reviews mechanisms of credit creation based upon popular financial products connected to promises of the economic future. Of interest are such items as collateralized debt obligations (CDO), special purpose entities (SPE), structured investment vehicles (SIVs), and credit default swaps (CDS). The concepts of securitization, off-balance-sheet transactions, and credit derivatives involve credit risk transfer and the leveraging of debt for the purpose of more credit creation; their core purposes. Consequently the process is an attempt to borrow from the future. The authors illustrate that monetary units are created ex nihilo and have no real anchor to the physical economy. Inherent in this system is the fantasy of borrowing from the future to provide the savings necessary for present capital formation. Without a physical-anchor, the credits to deposit ratios have been characterized by a divergent equation moving toward infinity not a convergent function limited by reserves. Therefore, the mathematical reality is that the money created expands or contracts because the global financial system has no physical anchored identity and effective reserve requirements. Subsequently, the findings are that the current financial system is destabilizing and destructive for the global physical economy. In the meantime, consumer price inflation reduces the value of earnings and reduces the original purchasing power of individual savings. The authors argue that unless the system is discontinued, and all monetary units are again tied to a physical anchor, the financial system will eventually collapse resulting in severe negative consequences for the global economic system.

INTRODUCTION

"It is well enough that people of the nation do not understand our banking and monetary system, for if they did, I believe there would be a revolution before tomorrow morning." – attributed to Henry Ford, founder of Ford Motor Company

In 1969, a graduate student, Darryl Mitry, under guidance of Dr. Spencer Pollard, Professor of Economics, presented a theoretical essay to the faculty of the University of Southern

California. The title of the presentation was "Mega-economics." The term Mega-economics was newly minted by the graduate student and referred to what would later be called globalization or global political economy. The theme of the presentation concerned theoretical exploration of implications for traditional macroeconomics from a global perspective. At the time, international trade imbalances were short-term occurrences because all monetary units were only exchangeable on the basis of an anchor to gold wherein the US dollar was a set ratio of 1:35 (ounce of gold equal to 35.00 USD). Therefore, global financial imbalances could not persist in the long-term because otherwise a trade deficit would deplete the backing of the debtor nation's monetary unit. The design of this financial system assured responses through resource markets to allocate cost-effectively for trade between nation states. Essentially, the physically anchored financial system provided automatic adjustment for international settlement of capital flows.

Two-years later the world's monetary system underwent a remarkable transformation, as the world's monetary units would thereafter be created exclusively ex nihilo**.** The initiation of this most fundamental change was by United States of America declaring it would no longer exchange gold reserves for the dollar (Yergin & Stanislaw, 1997). Over time the result of this historical change was to enable extraordinary financial manipulation, and thereafter the financial image of the real physical economy would never again be anything close to a *mirror image of physical reality*. This un-anchoring of monetary units severed the link between real physical economies and markets from the financial image of physical economy. Moreover, the financial policies of sovereign governments and the monetary policies of central banking systems would cause increasing distortions that allocated surplus monetary capital toward less prudent and unprofitable ventures in many of the western developed nations.

The process of distortion was slow but emphatic and assured decades of general price inflation because it allowed the banking system to unilaterally expand the supply of monetary units ex nihilo. It also allowed the heads of government to fund expanded government expenditures by issuing debt instruments to the banking system in exchange for funding new credit, instead of covering the costs by increasing taxes. The arguments in favor of constant expansion of expenditures was based upon the idea that future expansion of the economies would provide the necessary wherewithal to pay the ever increasing debts (or at least allow the servicing of payments when due). No attention was given to the possibility that at some time in the future such growth in economies might be insufficient as real increases in growth depend upon constantly increasing the physical return on expended resources per capita. Concepts such as "peak oil" and other ultimate constraints were not accepted as inevitable. Instead, growth was considered inevitable as long as government and monetary policies promoted it, and the invisible hand of Adam Smith's markets exploited the opportunities for profits.

The policy makers congratulated themselves on throwing off the chains previously imposed by having a physical anchor for monetary units. The very idea of gold and silver as a basis for monetary units was considered a primitive concept. Any physical anchor was simply thought to be an anachronism, purely a relic from the past and therefore totally unnecessary for the modern age. Over the years that followed, the minds of men were sleepily accepting this conclusion as if it were self-evident and purely logical. However, it is not self-evident precisely because it is not logical. Monetary units that have no physical anchor separate the financial image of economies from the real physical economies and cannot provide the function of money without distorting reality. Such monetary units fool the mind into making wrongful decisions about allocation of resources and these ex nihilo units greatly empower the controllers of financial system to constantly expand their claims on the physical economies without justification.

NEED FOR AUTHENTIC UNIT OF ACCOUNT

Money in theory is the basic accounting unit for the expenditure of human energy because without human energy nothing exists for human satisfaction and sustenance. The basic necessities of food and shelter require expenditure of human energy. In a banking system that uses ex nihilo monetary units there is no need to account for human energy, and so the units are not directly related to reality. Severing the tie that previously bound monetary units to the physical economy is at the core of all the financial problems in modern economies. Unanchored monetary units permit further economic dishonesty such as the use of fictional value by leverage and therefore it fosters the impetus to create various fabrications that forever expand the leverage.

For example, markets are manipulated by the creation of so-called "financial products" and mechanisms of "financial engineering" such as Collateralized Debt Obligations (CDO), Special Purpose Entities (SPE), Repos, Asset-backed Commercial paper (ABCP), Structured Investment Vehicles (SIVs), and Credit Default Swaps (CDS). The concepts of securitization, off-balance-sheet transactions, and credit derivatives all involved credit risk transfer and leveraging debt for more credit creation; their core purposes. These creations and their creators have been referred to as the Shadow Banking System. Behind the shadows is the mathematical reality that the money created expands because unlike traditional banking this new system has no tangible and physical reserve requirement. Instead the system is an exponential function that is destabilizing and destructive for the real physical economy.

Under a physically anchored monetary unit, and the substantial reserves of traditional banking credit-creation, the system is limited to a finite multiple of deposits. However, the modern banking system along with the SBS practices creates money beyond ratios of 100% of required reserves; a mathematical exponential function that is a divergent function without limits instead of a convergent function (with a strict physical reserve requirement). As the economy moves from boom to bust, the claims to real physical wealth are transferred to a powerful and relatively few financially privileged people while the burdens of losses and taxation to pay for increasing debt fall upon everyone else. This is illustrated in a recent study by the Congressional Budget Office showing that in that incomes of the highest one percent of households in the U.S.A. increased by 275 percent while incomes increased by less than 65 percent for the next 19 percent of households, and for the bottom 20 percent of households it only expanded by a mere 18 percent, (Congressional Budget Office, 2011).

When we consider the standard retail banking system, there is also noticeably unrestricted credit expansion. For example, in the U.S.A., the Federal Reserve (FED) has a reserve requirement on checking accounts of 10%, but it does not have a fixed and unavoidable requirement on much of the gross time-deposits, and these deposits represent the largest amount of money deposited in most banks (FED, 2011). Therefore, the FED system can expand monetary units exponentially ex nihilo. If each member bank creates credit up to 95% of its time deposits the result for the entire system is money creation of 20 times deposits, at 99% the result of new money creation is 100 times, at 99.5% it is 200 times. However, impressive this may be without a real physical-anchor-reserve requirement it is not the limit. For example, beyond 100% the expansion moves toward infinity. During the recent financial crisis banks operating within the USA had percentages over 105% and in Great Britain the expanded credit money creation was beyond 178% of deposits (Pytel 2009). Without a physical-anchor credit to deposit ratios are characterized by divergent equations moving toward infinity not convergent functions limited by reserves (Dawkins 2011, Pytel 2009). The following equation that describes this system can be expressed as:

Equation 1 $\lim_{n\to\infty} \frac{a_{n+1}}{a_n} = \mathbf{r}$ where r > 1 = divergent

It can clearly be seen that the absence of a real limit is devastating because for r > 1 the trajectory is divergent from its base. The current financial system appears irrational. Unless the current system is discontinued by new legislation, the financial pyramid being created will eventually spiral to a point of collapse with the result being that most people's savings and money will be worth nothing. In the meantime, inflation progressively reduces the value of earnings, and reduces the original purchasing power of individual savings, a process that has been occurring since monetary units became unanchored in August of 1971. Since the ending of the official gold convertibility the resulting price inflation has complicated and harmed most people's lives. In 1971, the price of a new Ford Mustang convertible was $3,126 (NADA, 2011). Today, the Mustang convertible is between $31,310 and $38,310 depending on model and options (Ford, 2011). Likewise, prices of even the simplest commodities such as grains and bread have risen tremendously. In other words, all the dollars someone saved from hard work during the past 40 years have become pennies, just a few pennies. Compare this devaluation of the dollar with the experience under a system of physically anchored money, the former chairman of the Federal Reserve identified that under the gold-standard the purchasing power of the U.S. dollar was nearly unchanged for almost 200 years (Greenspan, 1966). Under the longstanding physically-anchored gold standard, business owners and the public in general were able to plan their lifetime of finances with a reasonable expectation of the future value of their individual decisions. This is no longer possible with unanchored monetary units. The consequence is that controllers of the SBS can easily afford all the luxurious automobiles they could ever desire irrespective of rising prices, but not the majority of citizens. Likewise, the financial barons amass billions of dollars and so they can purchase multimillion dollar oceanfront estates in many locations, but the general public must eventually retire with pennies. At some point, the extraordinary inequalities of income and wealth become obscenely evident and the public becomes increasingly disturbed. During the time of the authors' preparation of this article in October 2011, there are numerous public protests occurring worldwide.

The quotation attributed to Henry Ford, at the beginning of this article, could be considered prescient. If the public ever comes to truly understand what is wrong with the monetary system then the public may indeed protest and insist that monetary units be tied to a physical anchor, and not created ex nihilo for the benefit of only a few. As a result of the lack of a physical anchor for money, many developed nations are caught in a serious debt-induced economic decline. Currently there are a number of different political ideas of why this is happening and what should be done. Nevertheless, the single fundamental reason is largely ignored. The fundamental reason is the disingenuousness of the current financial system; one which has been borrowing from the future in order to pay for the present. To fully understand the process it is necessary to consider the pros and cons of the idea of borrowing from the future.

THE CONCEPT OF BORROWING FROM THE FUTURE

The concept of borrowing from the future is used to hide a prejudicial policy because the only borrowing that is sustainable and legitimate is to borrow from current savings (derived from accumulated prior activities of production). Borrowing from the future is pretense because the future savings does not exist in the present, and it may not exist later. Even if enough future

savings were to exist later, you cannot claim it in the present without reducing it in the future. That is not an assumption, it is arithmetically indisputable. Nevertheless, pretending to borrow from the future allows individuals (both private and government representatives) through the current banking system, to claim that more savings exist when in fact it does not. Therefore, borrowing from the future is equivalent to simply printing money, and it is unavoidably inflationary and disruptive as it devalues the purchasing power of the earned income over time, as it redistributes real wealth from most people to very few people. For example, in the U.S. inequality has skyrocketed and the national economy now has the highest inequality measure of all the G-8 countries (CIA, 2011).

Borrowing from the future is like trying to be an adult when you are a child. Real growth does not come from pretending that the future is now. Real savings are assets on-hand. If the currency is *stable* as a monetary measure, then cash can represent a flow of funds that closely tracks the physical assets as they are created, and it accounts for exchange from one person to another or one group to another over time. Aggregate real investment is equal to the aggregate savings. The customary mathematical proof is illustrated in the requirement of national accounting, where Y is national income, C is aggregate consumption, S is savings, the letter I is capital investment, and

Equation 2 $Y = C + I$ where $C + I = C + S$ and thus $S = I$

This algebraic expression is a simplified representation of an economy, but adding to the equation the government sector, inventories, depreciation, and foreign trade will still result in the same outcome where real savings equals real investment. Therefore, borrowing must come from current real savings, where the amount of the money supply (accounts and new credit) *does not* increase beyond the real account of physical assets and subsequent competitive market prices. Otherwise, the newly invented ex nihilo credit forces price-inflation, not real physical economic growth. A new amount of money that does not represent the actual production in the economy is not a stable monetary measure. Alternatively, money based upon a stock of a real physical asset can be a trustworthy currency and a reliable unit of accounting for value in general. The stock of the physical asset used as a base-measure must be easily determinable and unequivocal. That is why historically the stockpiles of gold, silver and other rare metals were popular assets used as currency or as a monetary basis for receipts (certificates used as money). Using a physical anchor is not magic, but it makes it extremely difficult for financial intermediaries to *cheat* and expand their wealth by leveraging debt on a purely imagined future. Otherwise, without a real anchor, cheating will exist through the creation of enormous amounts of newly created money as "loans" and this causes public and private debts that will benefit only a small number of privileged people. The resulting debt saturation causes suffering for most people because the majority must endure the burden of consequent economic cycles, dislocation of physical assets, and the majority pay the costs.

A PHYSICAL ANCHOR

As described, for over 25 centuries gold and silver were used as the ultimate physical anchors for monetary units. Historically, with a few brief exceptions, the increases in the stock of gold followed the average increase in physical economic productivity (e.g. 3% in national product coinciding with approximately a 3% increase in gold mined). A receipt for deposit of gold was merely the paper promise of the physical reality, the real monetary unit. In the past, the so-called precious metals and gold in particular, have been physical assets that easily satisfied the simultaneous requirements of currency and/or reliable means of security. No imaginary asset has proved to satisfy the requirements. Invariably, without this physical anchor, fiat money depreciates over time as the banking system usually increases the money supply via bank credit

expansion that is not in the amount of actual savings deposited. The world has been operating without a real physical monetary anchor ever since America stopped exchanging dollars for gold and therefore all the other bank syndicates stopped using a physical anchor for measurement. The experiment of universal fiat money for the past four decades has been destructive. With every passing decade the global experiment has been advancing debt at an increasing rate. The outcome is that the financial images of national economies are no longer mirror images of the real physical economies, and the unavoidable consequence has been serious price inflation, wasteful deployment of natural resources, periods of national and regional financial crisis, and mounting economic problems.

The private sector of the US economy is currently in *long-term deleveraging* because of the overvaluations of the past (leveraged loans on assets that simply cannot produce the income streams sufficient in order to pay the interest on these expanded loans unless the banking system creates enormously disruptive price inflation via additional credit. From an accounting standpoint, the balance sheets are simply too big and must decrease because they cannot be supported by realistic expectations for incomes, and the governments tax revenues are insufficient. This is the reason for the partially hidden economic depression that is likely to continue for many years. The recent destabilizing events overseas are also due to the same cause (ex nihilo money creation by bank credit that increases debt). Many of the European countries are reaching the point where they cannot service their debt loads. The politicians are motivated by the financial institutions to adopt economic measures for even more expansion of monetary units ex nihilo, in order to make the payments on previously invented credits. Around and around in a circle that expands at an increasing rate. The accommodation of debts by inventing more debt is not a real solution. It is not logically conclusive and certainly not prudent because the method is divergence from physical reality as illustrated in equation 1. The banking system is only trying to borrow from the future. Nevertheless, political authorities everywhere attempt to solve their national debt saturation problems by creating more credit ex nihilo. The political authorities in collaboration with financial specialists concoct ill-conceived solutions. They speak of "ring-fencing" and establishing special-purpose-entities, and creation of "bad banks" to corral the enormous unserviceable debts (based upon the idea of borrowing from the future). In the meantime, whole countries have become insolvent. The political and financial authorities are simply attempting to avoid reality. They might as well speak of creating a "bad country" and transfer all the toxic debt to this single unfortunate nation. The result will eventually be the same. The only legitimate solution is a return to using a stable physical anchor to account for all their monetary units. The only genuine solution requires that the monetary subterfuge cease.

PROPOSED GLOBAL SOLUTION TO FIAT CURRENCIES

Recently, there has been considerable talk about using the IMF receipts, called Special Drawing Rights (SDR), as a worldwide reserve currency, instead of dollars. Many people in leadership think that this would be a solution. Let us examine this idea of a global use of the SDR and determine if these leaders are correct or not. The SDR is largely defined by a "basket" of fiat currencies, which are not directly tied to physical production of value in a market of purely competitive open opportunity. Therefore, any increase in the SDR beyond real physical productivity is also borrowing from the imaginary savings of an uncertain future. It is equally duplicitous. The SDR like all fiat monies can eventually enforce indebtedness upon the future of most people while enriching a privileged group. The substitution of a worldwide digital currency does not eliminate the problems inherent in national fiat currencies because the SDR is simply a global extension of the same thing that currently exists. In fact, additional problems would be incurred with a single worldwide fiat currency because individuals would no longer have the

option of avoiding one currency for another. This supposed global solution is not a solution to the fundamental problem because it is still the same attempt to manipulate a money supply for purposes other than the outcome determined in a market of competitive open opportunity devoid of monopoly and oligopoly. With the SDR there is no fundamental physical basis to restrict financial authority from expanding monetary units ex nihilo. Unless the SDR were to be 100% physically anchored, the IMF's SDR does not ensure financial system is a mirror image of the real physical economies of the world.

The economic problem confronting the world is fundamentally the use of leveraged debt financing based upon an imagined future saving, instead of unleveraged loans from accumulated real current savings. Individuals and businesses that borrow money in order to invest in real physical resources must receive money that represents the savings that exist in physical resources and not something only imagined. Savings exist when a physical productive asset is produced, but not yet fully exhausted. A building, a lathe, and a vehicle of transportation are each examples of physical assets that can add to production for years to come. When someone borrows from real savings and invests in a business venture this is a legitimate activity. If the venture is profitable in the future, then the former savings is repaid (claims on existing assets are transferred). That is legitimate. If the venture is not productive, then the borrower loses, and the lender loses claims on some of the value of existing physical assets. The only legitimate economy is one where current *real savings* becomes real investment. Anything else is a false form of a type of financing that is leveraged on expectations by simply inventing new money, and it represents something that does not exist. Essentially, it is a bet, a gamble that a specific forecast of some future stream of income will indeed happen. Furthermore, only the few top-level people in the banking system decide what the constraints are on expanding the ability to gamble. Newly created currency not strictly representing *real savings* could be called dishonest money. Essentially, it is impossible to have honest government and honest commerce if it is based upon dishonest money. Therefore, the idea that if the International Monetary Fund's SDR is used as a worldwide reserve currency it would solve the financial economic problems is illogical.

The practice of "borrowing on the future" is embedded in the current banking system and only results in disguising the transfer of real wealth. For example, imagine that you believe you will be a multi-billionaire 20-years hence and were then permitted to borrow a billion dollars immediately, based upon this imagined future. It would be unfair and a fraud because such a system would not permit everyone the same fantasy, only those that might be deemed privileged by the banking system to borrow on that imagined future by obtaining ex nihilo credit now. This is exactly the system currently in place and that is how a few well positioned businessmen can buy billion-dollar companies using leveraged acquisitions on future expectations of an income-stream that does not exist and often may not materialize. Furthermore, these businessmen need only place little or none of their own money on the future gamble. Notice that this process is not the same as when current physical resources are being bid for in a marketplace where the money supply is actually tracking real physical growth in resources. Leveraged banking that borrows from the unknown future is imaginary money, whether it is dollars, euros or SDRs. It is also a sure means to place under debt most of the citizens and it forces them into a type of servitude in order to pay off that debt. This is why a global system with a global fiat currency such as the proposed use of the IMF receipts (SDR) does not solve the problem of credit ex nihilo.

ARGUMENTS PRO AND CON FOR BORROWING FROM THE FUTURE

The argument for allowing imaginary fiat money and borrowing from the future is often defended by stating that any physical anchor will not necessarily grow at the overall rate of the aggregate of physical assets (productivity), and therefore a money supply based upon one of these assets (like gold) might at times be arbitrarily deflationary or inflationary. Therefore, it is argued that the solution to flatten economic cycles is for a banking system that can provide management of imaginary money that is set to grow at exactly the same rate as overall economic productivity. This argument is logically appealing. The flaw is not within the premise, but in execution because we are left with the need for an oracle of divine prescience that can honestly manage the desirable and precisely attainable rate of change, and at the same time not favor themselves or their friends and business associates, and never cheat.

Theoretically, it was thought that a fiat currency system could work as well as a physical anchored currency under a certain constraint, and avoid any market variations related to a physical anchor. A proposed and supposedly pragmatic approximation was suggested over forty years ago by Professor Milton Friedman (Friedman, 1970). The idea was to examine a long history of increases in overall productivity and then set the expansion of fiat money supply to that measure. For example, if the long term productivity has been three-percent per year, then the banking system would only be permitted to expand the money supply by no more than three-percent per year. That would not allow borrowing from an unlikely imagined future, and it would not cause significant mal-distribution of resources, as is now the case. This fixed rate system would still require flexible exchange rates between national currencies because the separate national economies would likely encounter differences in rates of expansion (or even contraction). Nonetheless, the three-percent idea was proposed as a pragmatic solution and it could work as long as it was always adhered to and not changed to accommodate the politicians' desire to fund government by borrowing beyond tax collections and real savings, or a banking syndicate's desire to leverage credit ex nihilo and thereby govern an economy. The fixed-percent solution would only be good so long as it was steadfast. Otherwise, it would be like government representatives setting a limit on government debt but raising the limit every time they wanted to borrow more instead of raising taxes (unfortunately it is a common practice).

Furthermore, the argument for the reasonableness of supposedly borrowing from the future by creating new money to "manage the economy" relies on the premise that a small group of individuals in the banking system can reasonably predict the future. This appears to be a dubious premise because no one has ever accurately predicted the future with any reasonable level of consistency because no one is truly an oracle or possesses divine cognition. So the fundamental assumption of the argument for ex nihilo fiat money is without foundation. Instead, by anchoring the monetary unit to a physical element, the overall market through the process of competition bids for the production of the anchored element (e.g. as in silver or gold) until the profit possible from producing further units of the anchor to money is less than the profit possible from employing the resources in other productive pursuits. This market process is what was responsible for stability in the past before the advent of the contemporary monetary system.

To allow an economic system to operate with a type of banking system that borrows anything from the future is a duplicitous system and it harms the majority of the citizens while it greatly rewards only a few. It harms most individuals because it is stealing away whatever might be their real future reward, as it puts the *claims* to both existing and future assets into the hands of a privileged few individuals who have continual access to the largesse of the banking system, particularly the SBS. Over time, this results in an inordinately skewed distribution of wealth,

misdirection of resources, and a society of powerful overlords in all aspects of the economy. This imbalance in power eventually will result in the failure of markets to work properly and result in the collapse of the system. If government debt is from the issuing of bonds in exchange for current private savings then it is ***not*** borrowing from a future generation. However, if bonds are instead purchased by the banking system with newly created money, the banking system is continually paid interest on the loans of "illegitimate money," and the principle debt is passed forward. Long term debt that is intended to be paid by the yet unborn citizens reduces future potential for real growth while it only rewards a few very privileged people to the detriment of most citizens.

Borrowing from the future is the deception, which is perpetrated on the average citizen. On the other hand, a banking system with money anchored on a real physical asset cannot loan imaginary monies. It is limited and can only loan *current real savings*, but this provides opportunities for the most productive and creative people to develop enterprises that offer real growth and employment. The wealth obtained is justified if the markets are operating under conditions of open competitive opportunity and not monopoly or oligopoly. That is why efforts should be made to anchor the banking system. Not only will it restore justice to the system, but also avoid the eventual collapse of it. Research conducted by Bordo (et al, 2003) confirmed the advantages of a gold based system for price stability. There is a challenge of using gold to provide an anchor to the banking system is that the accumulated units of all currencies have greatly outgrown the world's gold supply in terms of the old ratios. To anchor the global monetary system to gold requires a huge increase in the price of gold in terms of current nominal units. This issue is not a real problem precisely because it is nominal. Today our monetary units are largely accounting entries in bank computers and not physical coin in circulation; even the paper certificates will soon be unnecessary as the paper is replaced by digital transactions using cellphones and similar communications devices (Good 2000).

ESTABLISHING A PHYSICAL ANCHOR IS NOT DIFFICULT

The challenge to return to a physical anchor for monetary units is not a difficult problem; it only requires dividing the money supply into a physical stock. For example, this could be done for the current gold treasury of the U.S.A. and thereby determine a current unit value. The world's reserve currency is the U.S. dollar, and re-anchoring the dollar to gold would imply many thousands of dollars per ounce of gold, but that is precisely because of the amount of global price-inflation experienced since the initiation of unanchored monetary units has been massive. The numerator is the current stock of gold, and it does not matter the amount of the divisor. It would not matter if the calculation resulted in $5,000 per ounce or $50,000 dollars per ounce. Moreover, the physical element need not circulate as a common daily currency because the usual digital and paper certificates we use today would continue to provide the same function, but they would no longer expand by credit being creating ex nihilo.

The theoretical alternatives, instead of returning to a physical anchor such as the gold standard, do not preserve the necessary "mirror image" between financial transactions and the real physical economy. One alternative to the gold standard was suggested many years ago, the concept was to create a price index of commodities to replace gold (Fisher, 1934). However, in practice this too cannot be a sustainable alternative because such multiple commodities indexing eventually force the circumvention of markets to change relative values and consequent prices. Therefore this "basket approach" does not solve the problem of an unanchored system. A third alternative would be to identify a new commodity or material that would have similar suitable properties to gold and therefore useful as a standard of exchange in measuring economic value

via the digital unit. However, why contemplate or search for something else when the element of gold would work as well (Paul 1982).

The gold standard is often offered as a supposedly plausible explanation of the cause of the Great Depression of the 1930s. However, this idea is not controverted by actual evidence. Essentially, blaming the gold standard for the Great Depression ignores the evidence of the monetary authority's actions that circumvented the normal operation of a true gold specie standard. Specifically, there were substantial monetary manipulations by the Federal Reserve System in the 1920s and 1930s. These FED operations would have been utterly impossible if the U.S. government had not already abandoned many elements of the gold standard by bestowing discretionary powers upon the monetary authorities (the FED). As Rothbard and many others have documented factually, the credit supply was substantially increased between 1924 and 1929 by the Federal Reserve, later followed by a planned contraction of the money supply of almost one-third between 1929 and 1933 (Rothbard, 1963). Obviously, this was not the normal operations of an unfettered market determination based upon gold standard. The FED prevented a free market from operating. A gold standard was in no way responsible for the credit cycle of the depression. On the contrary, the irrational exuberance of the 1920s and the subsequent depression were the result of monetary mischief by abandoning constraints of the gold standard.

The greatest danger is failing to use a physical anchor for the monetary system; unless a single and universal physical anchor is reemployed the fantasy of borrowing from the future will continue and eventually create a financial and economic collapse far deeper than the current recessions and global instability.

The purpose of money is to allow people to exchange the perceived community value of things without specifically exchanging the items by barter. Therefore:

1. Money must function as a <u>standard unit of account</u> in order to identify the unit exchange value of amounts of one item for another.
2. The standard unit of money can allow for the <u>storage</u> of value over time (savings) because it is a claim on previous energy that has not been fully used for exchange (the symbol is usually a promissory receipt: thought of as money).
3. It is important that the standard for a monetary unit is <u>stable</u> over long periods and not allowed to fluctuate.
4. Intermediaries who offer services <u>must not issue more credit</u> than there are deposits in the economy. Otherwise, the financial intermediary is essentially counterfeiting money.

The explanation of money is that it is a publically agreed-upon symbol for value of the energy that people expend working. The origin of money is the need for a unit of exchange to account for the activity involved in production of all products and services. Physically anchored money is directly represented by a physical unit of some naturally occurring resource, acquired by expending human energy. The simplest act of acquisition is accomplished by the energy required to forage or harvest. However, these items of labor are not uniform or easily divisible as a unit of account. Furthermore, such items do not allow for very long-term storage. Therefore, these items do not have all the requirements to function as money.

Most metals are valuable because metals are long lasting and are useful ingredients in manufacturing various products. In addition, metals are easily divisible and very suitable for long-term storage. Therefore, metals became an early form of money. However, gold has properties especially appropriate for money; gold is rare, does not corrode, can be extracted only at a reasonably small and rather steady rate over time, which provides a stable exchange value for

accounting, storage and circulation. No other physical element shares all these qualities equally well. Historically, gold performed the monetary function very well. For example, in the USA, the gold anchor prevented inflation for much of two centuries (Greenspan, 1966). Moreover, it does not have numerous alternative uses. Therefore, it is not consumed by acts of destruction or competitive uses, and thereby serves the function of accounting for savings and capital formation better than any known alternatives. One problem with the physical element of silver is that it has numerous alternative uses, can corrode and the stock is more difficult to control. The old physical anchor of gold is not magic. However, on balance, gold is the preferred physical anchor for a monetary unit. Money as a paper or digital receipt for the physical unit held in storage serves the same purpose as the circulation of the metal as long as it is not fraudulently expanded beyond the real stock of the physical anchor. The connection between work and money is an important reality.

CONCLUSION

The money that people spend and save must represent the work that they have done in order for the symbol to act as genuine a monetary unit and have stable value. The value of money anchored to a stable physical material is a secure unit of account. It enables people to be intelligent consumers and savers because they realize how much energy/time needs to be spent in order to purchase the things they want. It also enables people to calculate reasonably the time-value of money because such money has a stable relationship to the expected human lifetime of potential expended energy. This is very different from the experience we have today.

The shrinking of purchasing power of the dollar or any other fictional receipt used as money is due to the banking system's control over the amount of the receipt-money and profits from banking by ex nihilo creation of credit. The banking system has simply deemed money into existence and not actually loaned against a real deposit of a physical anchored unit. The process is ultimately uncontrollable. The ever expanding money supply of ex nihilo units causes bad investments and unserviceable loans to skyrocket. The logical conclusion, as illustrated in the mathematics, demonstrates that without a universal physical anchor being reemployed as a reserve monetary unit, we find that the current fiction of borrowing from the future will result in a financial economic collapse and the outcome could engulf the world in overwhelming hostilities.

Inequality of income and wealth would exist in any type of system, but the question of a reasonable division of income and wealth aligned with the effort, skills and talents of people can only be answered by a truly competitive market with equal opportunity, equal access to information, and a monetary unit that is stable, thereby presenting a financial mirror image of the real physical economy. Without a competitive market process involving physically anchored monetary units, the global economic system is unstable. The concept of constantly borrowing from the future is not only an unjustifiable fabrication but unsustainable and very dangerous to public wellbeing. The findings are unequivocal, monetary units that are not physically anchored are wholly untrustworthy because they encourage and promote financial subterfuge by appearing to borrow from the future. This is the real problem behind the global financial crisis, and the core discovery of the only means to solve the problem.

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