



## SOUND NAVIGATION UNCHARTED WATERS

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# Sound Navigation Requires Sound Measurement

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Highest standards for science must include observation, or experimentation, and *measurement*. Measurement in economics is carried out in terms of currency units; only economic activities measurable in that unit of account are recorded. But as experience shows, the value of any currency now fluctuates greatly. What does that say of 'economics' as science? What does it say about our choice of unit of value?

### ***What is Money?***

Money is any object that is generally accepted as payment for goods and services and repayment of debts in a given country or socio-economic context. The main functions of money are distinguished as: a medium of exchange, a unit of account, a store of value, and occasionally, a standard of deferred payment.

The gold standard, a monetary system where the mediums of exchange are paper notes that are convertible into pre-set, fixed quantities of gold, replaced the use of gold coins as currency in the 17<sup>th</sup>-19<sup>th</sup> centuries in Europe. The gold standard notes were made legal tender, and redemption into gold coins was discouraged. By the beginning of the 20<sup>th</sup> century, almost all countries had adopted the gold standard, backing their legal tender notes with fixed amounts of gold.

After World War II, in accordance with the Bretton Woods Agreement, most countries adopted fiat currencies that were fixed to the US dollar. The US dollar was in turn fixed in terms of gold. In 1971, the US government defaulted on its international gold obligations. After this many countries de-pegged their currencies from the US dollar, and most of the world's currencies became unbacked by anything except the government's fiat of legal tender.

So, while money originated as commodity money, all contemporary money systems are based on fiat money. Fiat money is without intrinsic use value, unlike a physical commodity, and derives its value by being declared by a government to be legal tender; that is, it must be accepted as a form of payment within the boundaries of the country, for "all debts, public and private". People do accept fiat money under duress, even if unconsciously so.

### ***What is meant by a 'unit of account'?***

A *unit of account* is a standard numerical unit of measurement of the market value of goods, services, and other transactions. Also known as a "measure" or "standard" of relative worth and deferred payment, a *unit of account* is a necessary prerequisite for the formulation of commercial agreements that involve debt. To function as a *'unit of account'*, whatever is being used as money must be:

1. Divisible into smaller units without loss of value;
2. Fungible: that is, one representative unit must be perceived as equivalent to any other; and
3. Measurable as a specific weight.

So, a *unit of account* is a monetary standard capable of measuring the value of goods, services, or assets. It serves as one of the three well-known functions of money. It lends meaning to profits, losses, assets and liabilities.

Unfortunately, the accounting monetary *unit of account* suffers from the congenital disease of **not being a stable unit of account over time**. Inflation destroys the assumption that money is stable, which happens to be the very basis of the science of accounting.

In today's modern economies, money in the form of **currency** usually serves the role of the standard unit of account. The use of money, under conditions of price stability, vastly improves the efficiency of market economies; but not when the monetary unit itself is unstable.

The use of a *unit of account* in financial accounting allows investors to invest capital into those companies that provide the highest rate of return. The use of a *unit of account* in managerial accounting enables firms to choose between activities that yield the highest profit. All this, of course, is falsified if the *unit of account* is no longer stable.

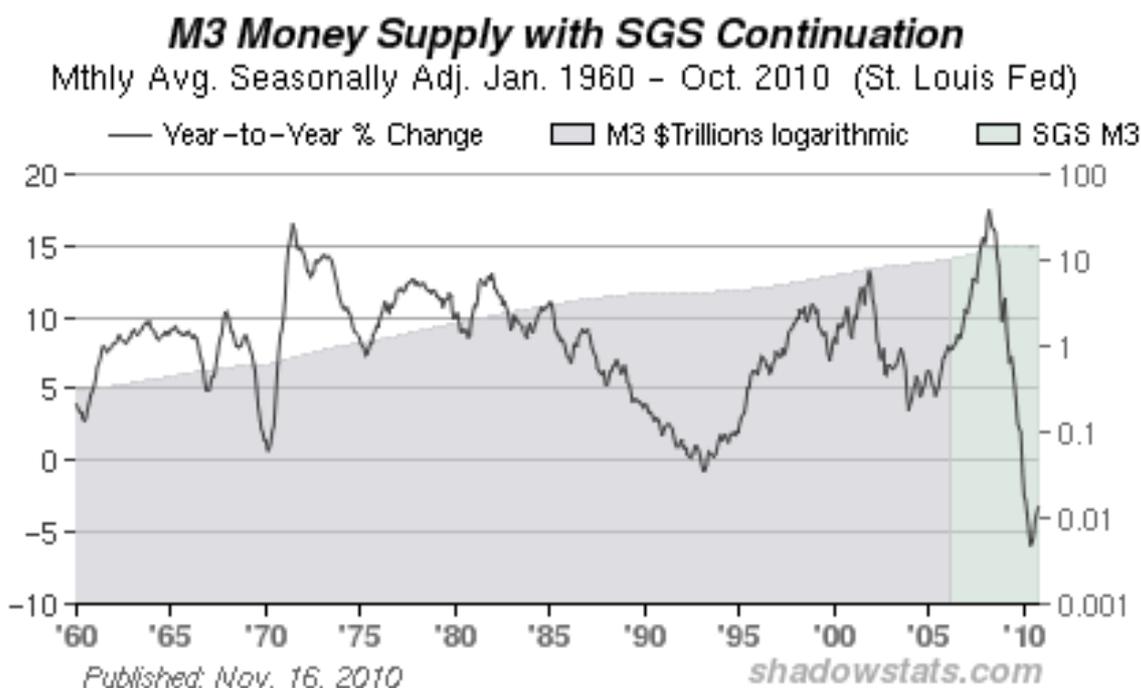
In economics, a standard *unit of account* is used for statistical purposes to describe economic activity. Indexes such as GDP and the CPI are so broad in their scope that compiling them would be impossible without a standard *unit of account*. After being compiled, these figures are often used to guide governmental policy; especially monetary and fiscal policy.

So, one could argue that the **measurement** of our economic performance and/or financial performance, individually or in aggregate, is only as good or reliable as our **money/currency** is. If so, then how good or reliable is our currency as a **measure**?

**Measures of Money**

When we scan the modern economic literature, the only measure(s) of money we find today are aggregate measures. For example, the *money supply* is the amount of financial instruments within a specific economy available for purchasing goods and services. The money supply is usually measured as M0, M1, M2 and M3, four escalating categories, each containing the previous.

The categories grow in size with M0 being so-called "high powered money"; that is, money issued by the central bank of a country. M1 is the issued currency (coins and notes) and checking account deposits. M2 is the currency, checking accounts and savings accounts. M3 is all that plus time deposits and repos. M1 includes only the most liquid financial instruments, while M3 also includes relatively illiquid instruments.



The above chart is based on official data supplied by the US central bank, but produced by John William's Shadow Government Statistics service (because the US central bank stopped calculating and updating M3 in 2006, shortly before Greenspan passed the baton to Bernanke). It shows that the US money supply, as measured by M3, grew from US\$0.3 trillion at the beginning of the 1960s to more than US\$10 trillion today, at an annual rate of change that varied from -6% to +18%.

Please note the collapse of the rate of growth in the money supply starting in the milestone year of 1971 and, in spite of the reversals of 1995 and 2005, continuing to this day. This collapse scares the wit of central bankers and Treasury secretaries, who do not realise that it is their own doing.

By the way, the same goes for any other currency: the money supply statistics are abundantly available and appear to be very reliable measures as they seem very precise. That's all good and fine, but what of the basic **unit of measure** of that money supply itself? There is nothing to find in today's literature on the 'measure' itself; more precisely, nothing in absolute terms. On the other hand, there is an abundance of information and ongoing speculation in relative terms: currency exchange rates and the price level in terms of currencies.

So, we need to understand what makes a unit of measure accurate and reliable, and ask ourselves if we have that in what we use today as 'money'.

### **Scientific Measurement**

Units of measurement are essentially arbitrary. Nothing is inherent in nature to suggest that a mile is a better measure of distance than a kilometre. Over the course of human history, however, first for reasons of convenience and then for reasons of necessity, *standards of measurement* have evolved so that communities would have common benchmarks. The Old Testament calls false weights and measures an abomination and says that all those who want long life in this world must shun them.

Laws regulating measurement were originally developed to prevent fraud in commerce. Today, *units of measurement* are generally defined on a strictly scientific basis, overseen by governmental or supra-governmental agencies, and confirmed by international treaties. The metre, for example, was redefined repeatedly, the last time in 1983, as the distance travelled by light in vacuum in  $1/299,792,458^{\text{th}}$  of a second. Now, that's precise!

What can be said of our *monetary* unit of measure today? Well, one could argue that it is about as precise as the measure for length was before the French Revolution: the King's foot! If the King died, the measure changed. If the new king had a longer foot, the producers of cloth were out of luck; if shorter, then the consumers were.

As a matter of history, over time, length (as well as weight and time, for example) became measured more and more accurately. In fact, in all scientific endeavours, precision in the definition of the unit of measure has improved. The ONLY exception is economics, in particular monetary economics. 'Money' today, as far as its value is concerned, is based on government fiat, which is itself a highly **elastic** measure, with an irresistible bias on the side of falling short.

What we now use every day in our actions and interactions of a monetary nature, and never give a second thought to it, is, quite simply, based on fiat and so, quite unreliable. This is clearly an aberration in the history of Western Civilisation. There is only one rational explanation for this: the propensity of governments to use a fraudulent unit of value in order to cheat their subjects. And it makes no difference whether the government is absolutist or democratic, malignant or benign.

### **Final Thoughts**

The present financial crisis is far from over. In fact, it is getting worse. It can be described as a debt crisis, but its true nature is a monetary crisis. At its roots, it is a belated gold crisis. It is a punishment for discarding the honest unit measuring value: gold.

The landmark year was 1971, when the United States defaulted on its international gold obligations under the Bretton Woods Agreement. There have been many defaults in history, but the one forty years ago was unique in that it exiled gold internationally and without recourse to the Courts from the monetary system; *thereby gold has been prevented from discharging its natural function as the ultimate extinguisher of debt ever since*.

There is a direct cause and effect relationship between that decision in 1971 and the present global financial crisis. We are about to pay the price for our collective delusion as participants in this insane monetary experiment.

Our monetary system today did not grow naturally, nor was it the result of careful study and planning by competent scientists. As we have just seen, it has no accurate and reliable unit of measure. In fact, it was imposed through bribe and blackmail on the people.

So it is prudent, to say the least, to measure one's net worth in gold units rather than legal tender units. And it is incumbent on the actuarial profession (not to mention the profession of accountants) to resist government duress to use a badly debased and depreciating monetary unit of measure and advocate in the strongest possible terms for a return to sound money.

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