

Cash is Debt, Debt is Equity

Why cash is debt

The invention of paper money is attributed to China around 806 AD, as a private substitute for a lack of copper. Its usage on a significant scale through public issuance was started in 1023 AD by the Song dynasty. Kublai Khan, by decreeing its acceptance on pain of death, and by confiscating gold and silver, made it a credible monetary system during the time period of Marco Polo in the 13th century.

However, if we look at money, private or public, as a *contractual* store and exchange of value, then the cuneiform tablets of Babylonian traders used to facilitate trade 2000 years before Christ, are the first recorded instances of contractual obligations of value, i.e.; debt.

What is the difference then, between cash and debt?

The former is a contractual obligation, usually enforced by a government with a monopoly of issuance, whereby all types of obligations are redeemable at fixed units of value, between all subjects, using freely exchangeable pieces of paper.

How is this different from freely exchanging in a market other pieces of paper, with contractual obligations and defined units of value, that are called debt instruments of one type or another (bonds, receivables, letters of credit, etc.)?

The answer is, not very.

There are two principal differences. Debt is usually not as easy to trade or exchange, so it has less *liquidity* than cash. And debt usually carries an explicit cost to the transmitter of paper and receiver of value (the debtor), and thus a return, or interest, for the receiver of paper and transmitter of value (the creditor)

These two differences are linked, in that the value received by the creditor, the interest, is a function of the lower liquidity of debt vis a vis cash. The higher the liquidity of the debt instrument, for example U.S. treasury bills, the lower the cost or interest paid.

Why debt is another form of equity

But what about equity? Is it not just another type of contractual obligation, with a variable as opposed to a fixed cost?

Exactly.

And, crucially, the cost, being variable, is not limited to a range of zero and any positive amount, but can also be negative. The creditor (called the investor when speaking of equity), shares in the added value that may occur, but also shares in the loss, and can suffer a negative return.

So it seems that this is the crucial difference between debt and equity; the creditor is guaranteed a fixed price for the lower liquidity implied in the specific instrument of debt, whereas the investor is not guaranteed anything, may even lose value, but will share in the return, no matter how high.

Right?

Wrong.

This assumption, embedded in the mindset and contractual systems and financial systems that have evolved since the time of the Mesopotamians is a fundamental cause of booms and busts, and crucially, of the severe damage caused by busts in the economic cycle.

The key to correcting this misperception is to realize that creditors *also can receive negative returns*, despite the supposedly guaranteed nature of their contracts.

Liquidity and its relation to returns on cash, debt and equity, again provides the underlying cause. When the financial condition of a household, or a company, or a sovereign debtor, is impacted negatively to such a point that the ability to sell the obligation diminishes or even disappears, and the debtor cannot fulfill its obligations, the creditor becomes an investor, and owner. Debt has been transformed into equity.

Is this a problem?

It depends. If the transformation from debt to equity were a relatively smooth process, such as can happen with instruments that explicitly cover this type of eventuality, then it need not be a damaging event; ownership changes, and the debt investor is revealed as a "senior" equity holder. Life goes on.

Unfortunately, most contractual obligations do not explicitly prepare for this eventuality, so countries have evolved a legal code that handles this transition, namely the bankruptcy code.

As someone who has managed significant business restructurings on both sides of the table I can say from first hand experience that the bankruptcy process is an inherently inefficient as well as inequitable manner of transforming debt into equity.

It takes time. Companies and households are in limbo during the process. The underlying value of the assets, whether the company goodwill and reputation and adherence of customer, supplier and employee stakeholders, or the neighborhoods where houses are in the process of being foreclosed, suffer tremendously.

To add insult to injury, the remaining value is often captured by the trustees and administrators of the process. This leaves the creditor/new owners with much less than they should and could have received.

But more importantly, when the above process occurs in the context of a systemic fall in liquidity and thus asset values, the resulting destruction feeds upon itself in a vicious cycle of deep recessions or even depressions.

Why do booms & busts occur? Are they inevitable?

If we agree that cash is a form of debt, and that debt is also a form of equity, we can analyze what happens when liquidity falls for these various forms of contractual obligations of value.

The amount of cash on hand is usually only a small subset of the total amount of *nominal* cash in an economy. In other words, we place most of our cash in some type of financial institution, with different returns and associated liquidity (e.g.: checking accounts, mutual funds, short term bonds, long term bonds, etc.)

These entities then use the proceeds to lend or invest in other entities, which then place their surplus cash in other financial institutions.

Governments regulate some of these financial institutions as to the amount of cash on hand (or debt that is very liquid and thus very similar to cash) that they must hold as a proportion of total assets.

In a panic like those that were common in the 19th century, if everyone tries to redeem their holdings, the financial entities are unable to meet their obligations, liquidity dries up, returns on all types of assets become negative, and we enter a typical bust.

Classical economists thought that booms and busts were self-correcting if the market were allowed to function. They thought that in a boom the expansion pushed up wages and prices and asset values, and then, during the inevitable correction or bust all of these would fall until a new equilibrium were reached.

During the great depression, Treasury Secretary Andrew William Mellon famously advised President Herbert Hoover: "liquidate labor, liquidate stocks, liquidate farmers, liquidate real estate... it will purge the rottenness out of the system. High costs of living and high living will come down. People will work harder, live a more moral life. Values will be adjusted, and enterprising people will pick up from less competent people."

Well, values were adjusted, down, and I have no comment on whether morality improved. But the system did not find its way to a new equilibrium, and kept on falling and destroying value, economic activity, companies, employment and the very fabric of society.

The New Deal, and most especially the advent of World War II, ended the Great Depression. Keynes theorized that this was because government had stepped in to replace the final demand that the private sector was no longer creating, turning a vicious cycle into a virtuous one, and inaugurating a new era of economics.

He was right on the effects, but not in his conclusion. The demand created by the government in its new deal initiatives and World War II, as well as new financial regulations that restored faith in financial institutions, all played a part in ending the great depression. However, this method of restoring equilibrium is inherently costly and ultimately unsustainable, as can be seen with the current crisis in the U.S. and particularly some countries in Europe. There is a better way.

What happens in a bust

When an economy contracts, in classical theory, wages, prices and assets fall to market clearing prices, at which a new equilibrium is found, and full employment at lower wages, prices and asset values restored.

Keynes said that one flaw in this view is that wages are “sticky” and for a variety of reasons, do not fall to market clearing rates, thus leaving a permanently unemployed segment of the population, which thus decreases aggregate demand, worsening the problem.

No doubt this does play an effect, especially since the more specialized labor becomes, the less it can be viewed as a commodity. The value of an employee with accumulated knowledge of the internal & external processes of a company, and his internal & external networks is not the same as an equivalent unemployed worker, and thus is not easily substituted at anything close to equivalent prices.

The effects of deflation & debt.

A more pernicious problem than wages however is the “stickiness” of debt. In theory, according to most debt contracts, its value cannot go below its nominal value. In reality, as shown by the prices of debt where a liquid market exists, debt can easily and often does fall below its theoretical contractual value.

Even though a buyer may acquire on the open market a debt instrument at 80, 50 or 10 cents on the dollar, it can still ask for the full 100 cents from the original debtor. The problem is that the likelihood of being able to do so may be quite low and only enforceable through the expensive and value wasting process of bankruptcy.

In a contracting economy asset and commodity prices will fall, and wages may also fall, but debt, in theory, stays at the same contractual value, such that the total nominal debt (sovereign, corporate and individual household debt) rises as a proportion of GDP as the economy declines, and more importantly, as asset values decline; in other words, the amount debtors theoretically have to pay rises as a proportion of both their income and their net asset value.

The difference between the *market* value of the debt and its *nominal* value forces companies and individuals into bankruptcy, leaving the creditors, because of the inefficiencies of the bankruptcy process, with far less value, *below the “pre-bankruptcy” market value of the debt*, and thus less able to settle with their own creditors, thus creating a self reinforcing vicious and potentially never ending cycle.

A system whereby debt were treated as the most senior type of equity, where debtor conversions to owners or partial owners were handled in a structured, seamless and automatic manner, would enable a smooth adjustment of nominal debt values to real market values, without the value destruction of the bankruptcy process, thus maintaining a stable percentage of debt as a proportion of GDP and asset values, and thus removing this negative feedback mechanism.

Implications of busts with static nominal debt for financial systems

A second, and perhaps even worse effect of the “static” treatment of nominal debt during a downturn is its effect on the financial system, the transmission mechanism of cash, debt and equity, which are all different names for contractual agreements to store and exchange claims of value.

When a financial entity lends on a long term basis (lower liquidity) and borrows on a short term basis (higher liquidity), and when the liquidity of an economy systemically decreases due a downturn, the entity is faced with a conundrum; it cannot sell its assets (long term debt) at market prices because the lower liquidity would entail a price below nominal value. So it doesn't, and keeps the assets on its books, and is allowed to do so at *nominal value* even though this is a fantasy; its assets are no longer worth the nominal value on its books.

Were this entity to recognize its real “market based” situation, it might become insolvent, or require an extra capital injection, at a low valuation given the decreases in asset values. This would probably entail a change of management, something most self-interested executives will strive to avoid.

So the entity maintains a fiction that its assets are worth what it claims, while at the same time it is unable to monetize them at said value. Therefore it cannot make new loans, since its assets in cash terms are not worth what its balance sheet says. In effect, it no longer has cash, just wishful thinking.

This leads to the partial or complete non-functioning of the financial system as a transmission mechanism, converting financial entities from lenders and deposit taking institutions into speculators hoping that someday the value of their assets will recover.

Currently in Spain it is easier to sell a house with an existing mortgage than a house with no mortgage. Why? Because in the former case the buyer can simply replace the debtor, and the bank need not come up with “new” money. Money they simply do not have, as Spanish financial entities have become the largest holders of real estate in the country, at nominal, but not market clearing prices on their balance sheets, unable to transform their assets (debt) into cash without compromising their “nominal” solvency.

The ensuing credit crunch destroys the economy further, with the monetary authorities unable to rescue the economy; reductions in interest rates for financial entities to borrow at from the central bank have little or no effect and are not converted into monetary injections into the economy. The famous “pushing on a string” that Keynes noted.

Keynes saw that in a scenario where nominal prices are declining, even zero interest rates, the theoretical limit to which central banks could push interest rates down, might still imply high “real” interest rates (the difference between nominal rates and the deflation rate). For example a zero nominal central bank interest rate, and a deflation rate of -10%, would imply a very high and punitive 10% real interest rate.

Quantitative easing, the purchase of vast sums of debt instruments through the creation of money, thus achieving the equivalent in economic terms of negative nominal rates, can palliate this effect.

However, to the extent that banks do not have a balance sheet that reflects market clearing prices, their transmission function will be vastly compromised, and quantitative easing cannot achieve its full potential.

So why did the New Deal and World War II Work?

If the private sector financial system is compromised and unable to serve its function of transmitting cash, debt and equity throughout the economy, then the economy, most of which is based on credit (from the Latin “Credo” meaning “I trust you”), will suffer drastically, and private aggregate demand will dramatically shrink.

Keynes was correct in his view that the U.S. Government, by stepping in and substituting its own demand for the private sector, both through the new deal initiatives and the effects of World War II, could palliate and overcome the resulting decrease in aggregate demand.

It could do so because if the government is buying lots of goods and services, and in addition does not have to worry about having a financial system because it can either print money, through the federal reserve, or borrow money directly from citizens (e.g.: "War Bonds"), or both, then *there is less need, during that time period, for a functioning financial "transmission lever" system*. The government in effects **bypasses** both the private sector and financial sector to create a sufficient level of aggregate demand.

However, a far more efficient and sustainable manner of solving the problem would be to force financial entities to adjust their balance sheets to market values, recapitalizing them either privately or publicly or both, with a view to ultimate privatization when asset values recover.

This entails the most efficient and lowest cost to the taxpayers and to society. The debt of the government does not necessarily rise as a % of GDP over the medium and long term, since it will recapitalize at market clearing prices, if it undertakes thus function itself, and ultimately may make a profit, as has been shown with the limited initiatives in this regard carried out with the TARP program in the U.S.

This action restores a functioning financial system, that then carries out its purpose and allows private aggregate demand to recover equilibrium, without the government needing to carry out endless substitutions of aggregate demand, for sometimes inefficient purposes, and which at a certain ratio of government debt to GDP becomes in any event unsustainable, as seen currently in Greece and Italy.

Proposed solutions.

A functioning financial system, as a transmission lever for the economy, is an essential prerequisite for an advanced credit based economy. Financial institutions should be required to adjust their balance sheets to reflect market clearing prices. This would recognize the essential "equity" nature of debt.

Where necessary, these institutions would be recapitalized either through private means, public means, or combinations, with the government disposing of its stakes in a transparent and systematic manner as asset values recover.

The bankruptcy code and the commercial code could be changed such that whenever a corporation could not make good on its commitments, a series of private consortiums, selected through a regular "auction" and regulated process, would manage the entity, and earn a fee of the returns provided to the new owners (the creditors), without passing through bankruptcy courts, leaving commercial courts to govern any resulting conflicts between creditors (including pension plans and other "non-standard" creditors), while the company was sold, restructured, or winded down.

Properly instrumented, this could be done on a fairly routine basis, partially or fully, such that the negative value destruction of the current bankruptcy process is avoided.

Similarly, in the case of home foreclosures, non payment would result in a change of status from owner to renter, with a market based rental payment that would be maintained until the house were sold, at which point the former owner would share in part of the proceeds and the upside from the sale.

This would eliminate the needless and wasteful destruction of neighborhoods and asset values due to empty foreclosed homes, and allow foreclosed owners to maintain at least temporarily their residency, and share in the upside of any eventual sale.

What about sovereign debt?

When governments default, they also transmit partial ownership as a consequence, albeit in an indirect and much more diffused fashion. The nature of the transmission is quite different from how it occurs with corporations or households.

In the case of governments there are two types of default, devaluation or restructuring. In the case of devaluation, the resulting products, services and assets of the entire country can now be acquired at a lower cost by other countries, so the benefits of the partial ownership transfer, rather than going solely to the creditors, are shared amongst all other countries that trade with the defaulting country.

In the case of a restructuring something similar occurs through a drastic "internal devaluation" as credit dries up, asset prices fall, and other countries therefore also collectively benefit from reduced prices on assets, goods and products from the affected country.

In practice however, both types usually occur together, or consecutively, first an unsustainable level of restructuring and pain followed by a devaluation (e.g.: Argentina, circa 2001)

In effect, currency markets are marketplaces where different types of cash are valued one against the other. Debt, a type of cash, when excessive, causes the cash value of one country to decrease vis a vis the cash value of other countries' cash, either gradually or suddenly.

What happens when devaluation is not an option?

The easy answer is that devaluation is always an option. In practice however, it may be postponed if the country in question is ready to go through an "internal devaluation" a fancy name for painful deflation and its attendant bankruptcies and suffering.

Countries in the Euro zone now face this painful choice. In the absence of a restructuring of the financial sector to allow market based monetization of its devalued balance sheet assets, if necessary through public based recapitalizations, the Euro zone is heading for a repeat of the U.S. Great Depression, followed by a breakup of the Euro zone, in effect a devaluation, when the pain becomes ultimately unupportable.

It may be argued that the governments of many Euro zone countries do not have the capability to recapitalize their financial systems. To the extent this is true, then the manager of cash and therefore debt in the Euro zone, the ECB, must step in, directly or indirectly, to carry out this essential function.

Some may argue that this is against the ECB's mandate, which is price stability and managing the liquidity in the financial system. But "price stability" should not be confused with "consumer price stability".

Inflation and deflation should not be measured solely on the basis of the consumer price index; if asset values are plunging in every type of asset class, recently even with German government bonds, can this be labeled "price stability"? The ECB's mandate *requires* it to stop the precipitous and systemic fall in asset values, which is "**price instability**".

Furthermore, the distinction often mentioned in regards to its mandate between liquidity and solvency is semantic; if liquidity fails, in an advanced credit based economy, we are all insolvent. That is the implication of the nature of cash being another type of debt, which in turn is another form of equity, and of liquidity being the determinant of the pricing of all three; if liquidity fails, prices disappear, and there is no solvency where there are no prices and thus no markets.

Conclusion

The purpose of this paper has been to examine the nature of cash, debt and equity, and the artificial distinctions, biases and legal constructs that societies have encumbered their common nature with, as well as propose some solutions that can improve the functioning of the financial system.

As we become more interconnected on a global basis, with markets for different types of cash, debt and equity instruments becoming significantly intertwined, it is imperative we recognize the common nature of all three types of instruments. We need to devise the systems, legal instruments and conditions under which all three types of "value exchange contracts" dynamically change in relative values as conditions change, seamlessly and without hindrance from artificial constructs that do not change their essentially common nature, and simply raise severe costs during their inevitable changes in relative value.

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