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By: Vlad Tarko, Senior Editor, Sci-Tech News

Where Do Money, Banks and Economic Recessions Come From?

From barter to gold to paper money

Money has always had a bad press. It is often portrayed as, more or less, the source of all evil and the presence of money and of financial gains is thought to befoul even the noblest causes. But is money really nothing more but a necessary evil? Imagine a world without money. Suppose that all the money in the world would suddenly disappear while all other things remain the same. What would happen?Suppose you want a beer. You go to a store but you can't just take the beer and leave because the beer still is the property of the store owner (and the owner will most certainly object). However, the store owner says he likes your hat and he is willing to give you the beer for the hat. You think to yourself that you have a bunch of other hats at home and that the hat you're wearing isn't even your favorite so you decide that, right now, the beer is worth more than the hat so you agree. The exchange happens because the hat is more valuable than the beer from the store's owner perspective but less valuable than the beer from your perspective. This type of "magic" is the consequence of the fact that value is *subjective*. If the value of things and services wouldn't have been subjective, in other words, if things would have had a value in themselves, an objective value that could for instance be determined by a scientific enquiry, no exchanges whatsoever could take place because everybody would value everything in the same way. The point is that in the absence of money, when you need something, you always have to find somebody who has that something and who also wants something from you - something that you value less than the thing or the service you want. In this situation, it is a good idea to gather, just for the purpose of future exchanges, certain things that happen to be desired more often. For example cigarettes or bread or TV guides. Many people smoke, eat bread or watch TV so having a stack of such products can be useful. As time goes on, there appears a sort of natural selection among these highly desired products. Some products, fewer and fewer, are used and acquired increasingly for the purpose of later exchanges. But then an interesting thing happens: when something is increasingly used for exchanges its value increases *even more*. For example, the value of cigarettes for a non-smoker is zero (or maybe even negative). But even if you don't smoke it may be a good idea to get a hold on a bunch of cigarettes so you could offer them to somebody in return for what you want from him or her. So, the fact that cigarettes are used as an exchange medium makes them valuable even for non-smokers. Such products that are used for exchange purposes besides their standard use have literally become *money*.But not any product can become money. And it should be quite obvious that it would be very difficult for a service to become money (however, this *is* possible as time-based currencies show). For becoming money a product needs to have some qualities - otherwise it cannot win that natural selection process. For example it needs to be easy to carry around. A building could hardly become money. Most importantly such products need to be very valuable to start with and to be easy to divide into pieces. Cigarettes for instance are not a very good type of money because they are worth so little compared to other products. Imagine buying a car with cigarettes! What usually happened when money first appeared historically was that precious metals, such as gold and silver, eventually won that natural selection process and became the most wide spread form of money. **Consequences of money: prices and the law of supply and demand**The most obvious consequence of money is *prices*. The value of all other things starts to be expressed in terms of money - "how much does something worth?" starts to be answered by saying how much money you have to pay to buy that thing from somebody (or from some store). Actually, before money existed such a question couldn't even be formulated because it made no sense - one could only say is that, from his

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or her perspective, something is more or less valuable than something else; one could only have a hierarchical organization of the values of various products and services. Money makes it possible to ask the quantitative question "how much"?But the value is subjective, so how can this happen? Don't money and the displayed price tag create an artificial illusion that the value is objective - that it is the same for everybody? It is worth noting that the displayed price tag is there because of *governmental decree* (most European governments *force* the stores to place price tags for all products). In other places, most notably Istanbul, where such decrees are inexistent, the store owners bargain with every single customer. This happens because various customers may value the same product differently and thus they may be willing to pay differently for the same item. Of course, we are used to thinking that bargaining may be a cultural Turkish trait, but it actually reflects a general economic fact: value is subjective.However, even with that kind of governmental decree in place the subjectivity of value is still in place. Different stores can sell virtually the same kind of products at widely different prices. This happens because people are willing to pay more for a certain firm name. So for example if shoes are important to you or you are in the company of people who pay a lot of attention to shoes, you are probably willing to buy them from some well known firm. Somebody else who thinks of shoes purely from a utilitarian perspective will just buy the cheapest shoes for the desired quality. (A pair of shoes from a well known firm might have a higher quality but not *such* a higher quality to justify the price difference.)But besides such anecdotic issues, the subjectivity of value manifests itself in the *law of supply and demand*. This "law" answers the question: why does something (a product or service) have a higher price tag than something else?What happens is this: At a certain moment in time there is a limited supply - for instance there are a limited number of certain type of shoes on the market, or there are a limited number of firms with a limited staff offering some kind of service and so on. These sellers try to sell *all* their products or services for the highest price (so that, subtracting their costs and taxes, they will end up with the highest possible profit). But if they ask too much for their products or services they will find only a small number of people who value that kind of product or service so much that they will be willing to pay the price. Conversely, if they ask a price that's too small people will amass to their store (forming those dreadful queues) and the products will end up too quickly or they will find themselves unable to satisfy all the demand for their service (and that will hurt their reputation). So usually the suppliers try to reach a balance. However, they rarely succeed perfectly. For example when a store sells things at half price just to get rid of them (because it costs more to store them or because they want to order new things), they are doing it because they have been overconfident of the previous price (that's now halved). Or think about the super-market queues that appear because there aren't sufficient employees at the cash registers or the prices are too low (these two things are actually related to each other because due to the low prices it isn't profitable to hire enough employees).The next month (or year or whatever) the seller uses his or her gained experience to decide how much to produce (or to order from a producer), whether to fire or hire more people (the seller is also a buyer - the employer buys a service from the employees - their work), and what prices to ask. What the sellers try to guess is the public demand for their products or services. If the demand is high one can produce a lot. If there are many people who want the product (for example hamburgers) one can decide that the biggest profit is obtained by mass producing it (which reduces the production costs very much) and selling it at a very low price. In other cases, one can decide that the best profits are obtained by selling the product to very few people at very high prices - branding it as a luxury item. Thus, if the demand is high, the prices will usually be low. But if the demand is low, the price is not necessarily high (the item might be just crap).From the customers point of view, what happens is this: One has a limited amount of money and a virtually infinite amount of more or less important desires. One has to decide which are one's most important desires and to pursue them first. But if the price of something is too high the desirability of that item diminishes because buying it prevents the fulfillment of many other

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desires (because it creates a hole in the personal budget). This is an interesting feed-back effect: the price of something is high because of low demand, but the high price lowers the demand even more. This feed-back effect exists on the consumers' side of the story.But there exists an opposite effect on the suppliers' side of the story: A high price functions like a *signal* to various potential producers (or entrepreneurs) - it indicates that there are large profits to be made in that area. But because of the low demand, there are a limited number of buyers so the producers that enter the game have to "steal" the customers from the existing firms. They can rarely offer higher quality products because they are newcomers and lack the experience. They manage to offer higher quality products only when they come up with some great technological innovation for doing the same thing better. When this happens it puts the old firms in a very nasty situation because they have invested a lot of money in what now is an outdated technology in need of replacement. For instance this is what happens today in the photo industry, with old players like Kodak being taken by surprise by the digital photography. (Although a digital photo doesn't yet have the resolution of classical photographs, digital cameras are higher quality because they can take a lot more pictures with a reasonable resolution.) But usually the newcomers do things more or less in the same way as the old producers. (Think of Burger King and MacDonald's.) All they can offer is a lower price (think of AMD processors for example) or sometimes they offer the same item, or a very similar one, somewhere else (like the Chinese replicas of the Converse shoes). Sometimes an innovative firm can offer both a higher quality and a lower price because of some new technology that allows them to cut the costs dramatically. But when the prices began to drop, the aforementioned feed-back mechanism on the consumers' side starts to work in reverse: as the prices drop the demand increases and consequently the prices drop even more. This happens until the prices have dropped so much that additional entrepreneurs don't feel anymore the incentive to enter the market in this particular area. This complex process can be summarized with the observation that the price is lower if the number of suppliers is larger. The exact relation that gives off the price of something in some place is the ratio between the demand for that (i.e. the total amount of money people are spending on that something) and the supply (how many products are actually sold). This is the average price of that product (or service).**Let there be banks**But why is the price in dollars of some product different from its price in euros in similar regions (in regions where people have the same earnings and similar cultural backgrounds)? The reason is that the price, that *number*, does not depend solely on the number of suppliers and on how much people want the product. It also depends on the nature of money. When all the countries used gold as their standard for money, the same product in two similar regions (say, in Europe and in US) did have the same price (in gold). The different 19th century currencies, such as the crown, the dollar, the franc, the lira, the drachma etc., were all related to each other in the same way as the meter is related to the yard - they were different measurements units for the same thing: the value of gold. However, the money today is different - it is just paper or electronic bits that have an exchange value only because the government declared so and because it has also forbidden the use of other materials as money. For example, in Europe it is forbidden for a shop-keeper to accept US dollars in exchange for what he sells or in the US it is forbidden to use gold as money instead of dollars. It is even against the law for private individuals to exchange dollars into euros or vice-versa. The reason for this is that without the governmental backing, this type of arbitrary money (called fiat money) would not probably be capable of facing the competition of other forms of money (such as gold). (However, other forms of money that don't pose a serious threat are allowed, such as the time-based currency.)How did we end up having fiat money and what are the most important consequences?It can be dangerous to carry around precious metals or to keep them in your house - especially if you are living in the middle ages. Thieves might rob you. So, some people started to offer a new kind of service: they would keep your money safe, where it cannot be stolen. This is the most primitive form of a bank. The bank offers you a receipt that acknowledges that they are

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holding your money. You can go to the bank at any time and retrieve your money. However, eventually, people found it more convenient to have impersonal receipts. If the receipt has your name on it when you want to buy something you need to go to the bank and get some gold, get a new updated receipt, and then use the gold to buy what you want. But how about buying something with the receipt itself? Such impersonal receipts, called banknotes, can be stolen but the advantages are worth the risk. There also were some people, the money lenders, who chose not to spend all their money now but to lend some for a price - called interest rate. They usually had sufficient money so they could spare some. Moreover, according to the law of diminishing marginal utility, the value of something (such as a unit of money) is lower if that thing is more accessible. Thus, somebody having a lot of money tends to value the same sum less than somebody who is poorer. (This is why charity exists, by the way.) So, a rich person is more willing to take the risk of losing some sum of money (because the borrower doesn't return the money). But now, imagine that these two types of services are combined - the bank and the money lender. Because the bank has a lot of money, it is only "natural" to want to lend something. The difference is that the classic money lender lends one's own money, while the banks lend somebody else's money. So, why would anybody be willing to place his money in a bank that plays around with his money, lending it to other people? Well, while the previous banks asked you money to keep your money safe, the new banks are willing to pay you. They are paying you to let them play with your money - they are now paying you interest, because you are the one who is doing them a service.The bank then lends the money to other people and asks them for interest. The bank asks for a higher interest when you borrow from them than it gives you when you're lending them some money. The difference between these two interest rates is their profit. But they have this profit only as long as the people who borrow from them honor the agreement and return the borrowed money plus the interest. So, this offers some confidence that the bank won't waste your money leaving you with an empty wallet - if that would happen they would lose something as well. The banks, like any other firm that offers a service, compete with each other for grabbing as many customers as they can. They compete by offering assurance that you will get your money back and by offering you higher interest rates (so you would want to give them the money rather than giving them to some other bank).**The fractional reserve system**But then the banks started to fool around. They noticed that, as everybody was using their banknotes rather than the gold money itself, they could issue more banknotes than gold. They started to issue banknotes that had no backing in actual gold reserves in their safes: they were lending people not gold, but banknotes. But this is tricky because this practice spreads on the market a greater amount of banknotes than actual gold. So, what would happen if everybody would come with their banknotes asking for their gold? Obviously, the bank would be unable to honor its commitment (the banknote is a *contract*). Is this just a theoretical nightmare or should it be a real concern for the bank?If there would be only one bank in the entire world (or at least country), this nightmare would be rather unlikely, but there are many banks - and they are all competing with each other and they all *know* that the others are also practicing the fractional reserve scheme. So, when a bank is offered by someone the banknotes issued by some other bank it gladly accepts them - and then goes straight to that bank and asks for the gold. A bank that issued too many fake banknotes would soon find itself with a rapidly decreasing gold reserve. And when the news got out about this decreasing gold reserve people started to panic and the entire bank collapsed (as they could not honor the contracts) - and many people ended up with their life savings vanishing in thin air.Thus, as long as there were many banks, the banks couldn't go very far with their fractional reserve scheme - they all kept each other in check. But the dream of a working fractional reserve system, i.e. of a working fraud, didn't allow them to sleep.**Inflation and the economic recessions**One of the most important consequences of the issuing of fake banknotes was seen on the market: prices grew instead of diminishing. Although firms (all other firms except banks) competed to each other as usual and, consequently, the number of available products and services

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grew, the prices also grew. But how the hell could this happen?! (Remember the formula I wrote above, $p = M/N$?) Is the law of supply and demand wrong? Well, if the average price of a product is the total amount of money customers spend to buy that product divided by the total number of sold items, and the customers now have more money to spend (because banks issued more banknotes on the market and everybody is using banknotes instead of gold), than the average price can grow. If the influx of fake banknotes is greater than the rate at which new products and services become available (M grows faster than N), the average prices will grow. This process is called *inflation*. The cause of inflation is the increase in amount of paper money on the market. One of the effects of inflation is an increase in average prices (although not all prices grow to equal amounts). But the effect on prices is not the only effect - and maybe not even the most important.Where *exactly* were the banks pouring these additional banknotes? What are the "input holes" through which this money has been (and still is) entering the market? Answer: the people who borrow money from banks. They are handed the fake banknotes and they are then using them to buy stuff and this way the fake banknotes spread and become indiscernible from any other banknotes. The banks that are doing this are able to look more human - they are the ones willing to lend "money" to people that other banks find untrustworthy. Among these people are various entrepreneurs with all sort of crazy ideas. Some of them will work some won't. The point is that by issuing fake banknotes, and thus lending more people than usual, the balance slowly leans on the side of crazy ideas that don't work. Moreover, because the amount of lent banknotes is increased it looks like people are saving more money and thus the banks have more money to lent. If you think of the interest rate as a price you can understand why this price drops when additional banknotes are printed - this price is set by demand and supply, like any other price, and it seems that the supply of money has increased - thus, the value of money has decreased.The effect is that as the interest rate diminishes even more people are willing to borrow money (because they have to pay later a smaller price). Thus even more unsound enterprises are pursued. This is what is called an economic bubble - or a "boom". To the unaided eye the situation looks very good because many investments are made (and also many people are hired by these businesses), but many of these enterprises are doomed to failure from the start and have received money only because new money was printed. This is how the so-called boom-bust cycle (or the business cycle) appears. An economic recession is when many investments fail. But why should this happen? This is what many economists wondered at the beginning of the 20th century. Of course, many business may fail, some work well, others go bust, it happens all the time, this is just how the market goes. But why is this *coincidence* of so many failures experienced during a recession? (Actually this unusual coincidence is what *defines* the recession.) This type of event doesn't sound like the regular working of the market. How can a large number of investments fail in concert? This just asks for a cause. And the reason is simple: the influx of fake banknotes - that are indiscernible from good ones.However, as I said above, as long as there are many competing banks, they usually undermine each other and this cannot go too far. This is why the economic recessions in the 19th century were never too big. The bust came, which caused a temporary surge in unemployment, some banks collapsed as people panicked to get their money, and some of these people, the ones that were last to reclaim their money, lost all their savings. But then things returned to normal.**The central banks and the big bust**The 19th century US bankers started to conspire in an attempt to reach a mutual agreement to expand the fractional reserve system. (To their apology: they had no idea why economic recessions happen and that they were the cause. Actually, nobody knew the cause of economic recessions - it was a big mystery back then.) However, their attempts to conspire failed miserably. The temptation to gain by secretly breaking the secret agreement was too much. And as the agreement was secret no one could really complain. The banks tried to secretly fix the interest rates, but then some or even all of them of them broke the agreement by secretly offering better deals to some investors. But the news unavoidably got out and the agreements collapsed.The

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only way to do this was to create a central bank that will dictate the interest rates and the legal amount of fake banknotes on top of the gold reserves. In the US, the central bank was established and then abolished for a number of times until the Federal Reserve System (the "Fed") was finally established for good (or at least so far) by President Wilson. It started working in 1915 and played an important role during the First World War by printing money out of thin air to pay for the war effort.After the war, America witnessed the so-called "the booming '20s", a period of unprecedented investments and discoveries. Everybody was thinking that this period of economic advances was going to last forever and that the economic depressions were a thing of the past. Many people though that the Fed is actually a good thing that could offer protection when some bank collapses. Instead of people losing all their savings the Fed would come to the rescue and print some money for them. This would also save the banks from collapsing by preventing the "panics". However, some economists though otherwise, most notably the Austrian government's principal economic adviser, Ludwig von Mises. Mises had already created a theory of the business cycle (the one that I sketched above) that hinted that the incredible and unprecedented growth the western world was experiencing was not to be trusted. The theory was later on refined by one of Mises' students, Fredrich Hayek, who received in 1974 a Nobel price for his contribution (a year after Mises' death).The save-the-day abilities of the Federal Reserve were put to the test in 1929 and during the entire next decade when the US and then the entire world faced the Great Depression, the biggest economic bust in human history. The Fed did little and some argue that as little as it did it was still too much making things even worse. As Ben Bernanke, the current Chairman of the Federal Reserve, said on the occasion of Milton Friedman's 90th birthday in 2002: "Regarding the Great Depression. You're right, we did it. We're very sorry." This came in concert with President Roosevelt's unprecedented measures of state intervention. At a point when the issue was that innumerable businesses and banks had gone bankrupt as a result of unsound investments propped up by the more than a decade long influx of fake money, Roosevelt started to make huge state investments without the slightest economic basis. Even more importantly, he and the Fed have kept the interest rates artificially low during the depression, not allowing them to rise as supply and demand would have had it, hoping to boost investements this way but in fact they have only boosted even more malinvestements. This only prolonged the depression to a stupefying duration. Things started to get better only when the Supreme Court ruled unconstitutional most of Roosvelt's measures. "It is not surprising that Mises was strongly opposed to the idea that central banks should impose 'low' interest rates during a recession in order to keep the economy going," wrote Frank Shostak, the chief chief economist of Man Financial, Australia. "Instead, he believed that the policy makers should not engage in the artificial lowering of interest rates but rather refrain from any attempts to manage the economy via monetary policy. By curtailing its interference with businesses, the central bank provides breathing space to wealth generators and thereby lays the foundation for a durable economic recovery."As a side note, it is important to mention, especially because this isn't common knowledge, the importance of Mises' ideas in post Second World War Europe. At that time Mises himself was no longer in Europe as he had emigrated in the 1930s first to Geneva and then to the US, fleeing the Nazis. What happened in the post-war Western Europe was that the Americans wanted to put in place in ruling positions (or to "favor" for such positions) people they could trust. The problem with that was that a great number of people either collaborated with the Nazi regime or were socialists - and for the US at that time a socialist was even more of a hot potato than a Nazi collaborator. The people that didn't collaborate with the Nazis and whom were certainly not socialists were especially the ones in the Mises' Circle. While in Austria Mises organized regular meetings where various economic issues were debated (he had recreated the Circle in US starting virtually from zero). These people were Mises' friends or students. Among them there were Italy's first elected president, Luigi Einaudi, General DeGaulle's economic and monetary adviser, Jacques Rueff (who proposed, to no avail, the

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enactment of an international 100 percent gold standard ending the fractional reserve system), and, most famously, Germany's Ludwig Erhard. When the western part of Germany was still under American military administration Erhard totally exceeded his authority and went on the radio on a Sunday to give a speech. In that speech, to the horror of the American administration, he declared that from then on all the price-fixing and production controls were abolished. He gave his speech on a Sunday precisely to take the military administration by surprise. The military asked Erhard why the hell he did such a thing, because all their economic advisors told them the effects would be disastrous. Erhard comforted the general telling him not to worry because his own economic advisors had told him the exact same thing. However, the economic effects were so swift and impressive that there was no turning back. This is how the so-called "German economic Miracle" began. **Total paper money**In order to pay for the Vietnam War, the US government had to order the printing of enormous quantities of fake paper money. But this devalued the dollar so much that other countries started to refuse to take the paper and went for the gold instead. At that point, the US dollar was still linked to gold. But on 15 August 1971, seeing that the US gold reserve is on its way out, president Nixon declared that he will no longer honor the contract written on each dollar bill - the gold was to stay in because it was a matter of "national security". Since then, the dollar is pure paper. It is no longer defined in terms of gold. Because other currencies were linked to the dollar, they also became detached from gold and became purely paper. They have value only because they are used as exchange medium and they are used as such because governments had declared illegal most other forms of money (such as the gold itself or the money of other countries).The prices are measured by this paper money in the same way as I noted above - by the law of supply and demand. However, today there is no barrier against inflation. The only barrier is spiritual: the officials ruling the central banks (such as the Fed or the European Central Bank) know the link between inflation and economic depressions. For example the Fed's ex governor, Alan Greenspan, has written in the 1960s quite extensive articles on the perils of fiat money and the potential destructive power a central bank has. Only such knowledge makes them reluctant to allow the printing of too much money even when the governments are requesting it (the independence of the central bank from the government is of course important here). But in the same time, they are caught in a necessary double talk - they have to hide the fact that they are the cause of inflation rather that a remedy against it.**Why governments love inflation**The reason is simple: inflation is a type of taxation. Instead of taking our money directly, they can make the money devalue itself by printing more of it. Moreover, this additional money goes where they want, either to pay for governmental expenditures (more or less scheduled) or to pay the governmental contractors (that sometimes are firms with which the politicians have various connections). Moreover, the governments are in office for a short period of time anyway, so they don't really care about the long term effects.But the problem is that, unlike old fashion taxation, inflation has all sort of nasty effects such as the favoring of unsound investments and the consequent boom-bust economic cycle. It is interesting to note that a country such as the post 1990s Finland has managed to get along with honest high taxes after it almost collapsed. Thus, the greatest threats to private investments, which ultimately are the motor of economic progress, are not the state investments themselves but the investments, private or state owned, financed by the inflated money. The inflated money distorts the prices (including the interest rates) and as a result, the prices fail to act as reliable signals on the market. As a result, there are more unsound investments that eventually go bust.

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