

Thomas H Greco Jr

I've titled this slide show the Exchange Revolution: Taking Cashless Trading to a New Level. That doesn't negate the possibility of issuing local currency notes. But basically, we are talking about an exchange revolution.

Thomas H Greco Jr

You know, there's been reference a couple times this weekend to the Wright brothers. This is a picture on the left of the Wright brothers' airplane, and on the lower right a 747. Now, we've had a lot of experimentation over the last couple of decades with local currencies, and local exchange systems. I make the analogy in my book that we're sort of at the Kittyhawk stage with all with all of that. What we have to do is take what we've learned and scale it up to something that can really carry some heavy freight in terms of economic exchange. A few years ago, General Motors had this slogan, "This is not your father's Oldsmobile." Well, we're looking forward to something that isn't like what we've experienced before, in terms of local currencies, and exchange systems. We have a big job to do. And we have to learn the principles required to do that job.

Thomas H Greco Jr

The question arises, why were the Wright brothers successful in achieving man powered flight, when so many others had failed? And you've probably all seen those old movies of people strapping wings onto their arms and jumping off buildings and people with the umbrellas up and down, trying to get off the ground. Well, a lot of our efforts, not to diminish them. I mean, we've learned a lot in the process of doing local currency exchange systems over the last 25 years. And in fact, we've had two systems in Tucson that I was involved in. And we didn't have any more success than most of the others. And I think I figured out the reasons why. And I've written those out in my book, and I'll put those in the slideshow as well. But if you think back on the birth of flight, there were three basic problems that needed to be solved. One was lift; how do you get enough lift to get off the ground? The other thing was control; how do you manage to control this thing once you do get it off the ground? And the third was, how do you move it forward; what's the propulsion? Well, that illustration on the right is the airfoil. One of the programs yesterday told the story about how the Wright brothers set up this wind tunnel and experimented with different wing shapes to finally discover that this airfoil shape is what they needed in order to get the lift.

Thomas H Greco Jr

So, we want to apply the same basic scientific and deliberate approach to the development of alternative exchange systems. So the question is what is required for efficient, effective and fair exchange? I maintain that we need three things: we need free markets. We need an honest means of payment based on sound principles that assure reciprocity, because money after all is just a means of achieving reciprocal exchange. reciprocal exchange means you put as much in as you take out from the economy. So money is supposed to achieve that reciprocal exchange. And the third thing is an objective and stable unit of measure of value. Now I'm going to focus on this second point and leave the others for another time. We have some promising directions in the free and independent approaches based on voluntary participation. And we've seen many of these involving grassroots organizations, for profit enterprises, municipal and provincial governments, NGOs, and associations. I spoke

earlier about some of these, and I'll say a little bit more about that. We have two basic currents in the alternative exchange movement. We have the voluntary grassroots social action current, out of which has emerged LETS systems and various community currencies.

Thomas H Greco Jr

We also have the for profit business to business exchanges, often called "barter exchanges", more appropriately called "trade exchanges". And these two currents are beginning to merge together. I think I mentioned the other day that I spoke at the IRTA a convention in 2006. And again, just about six weeks ago, IRTA stands for international reciprocal trade association. That's the trade association for the commercial barter exchange business. They, about a year and a half ago set up a community currency council within IRTA as a way of trying to reach out to the grassroots efforts and to try to learn from one another. So we had a good representation of community currency participants at the last convention that was in Dallas back in October. I've read a lot about self-organizing systems and complex systems and networks, as part of my research over the last couple of years. One of the books that was particularly interesting to me, was a book by Clayton Christensen. He's an MIT professor. And the book was called the innovators dilemma. And he makes a distinction between two kinds of technologies, sustaining technologies or technologies that build on and improve existing technologies and keep dominant companies in their dominant position. disruptive technologies, which I prefer to refer to as innovative technologies, present a different kind of value proposition. At first, they are not recognized as being at all revolutionary. are innovative or of great value. So they tend to get ignored by the dominant players, but eventually, they become dominant.

Thomas H Greco Jr

In the exchange process, the innovative technologies are these mutual credit, the credit clearing process, co-responsibility, internet based markets, social networks, accounting and information management. We've seen all kinds of markets migrate to the worldwide web. We've got eBay, we've got amazon.com. We've got a whole bunch of others, and I utilize them quite heavily myself. When I shop for electronics, typically I shop online. That digital camera that I've been taking pictures with this weekend I got through eBay and the computer that I've been using this weekend, I got direct from Toshiba online. And we also have numerous social networks. I'm participating in Friendster, LinkedIn, Facebook, the living directory, maybe one or two others that I can't remember. And we have information management that's online as well. In fact, the web is becoming the computer. You can put all of your files up on the web, on some remote server, and have access to your files wherever you go from whatever computer you have access to. Along with this has come what we call strong identity. You have to be able to identify yourself and people have to identify who they're doing business with, if it's a remote kind of system, like the web. And there has to be some basis for determining reputations. And we're seeing that with eBay today, you have vendor ratings and you also have buyer ratings as well, so that people can decide who they want to do business with based on the reputation and there are many factors that go into the reputation. Were the goods as advertised, was the delivery timely, were you satisfied with the service that you got? So it's the unique combination of these elements. That's revolutionary In exchange, it's not any one of them alone. And these technologies are combining into

new products that make the exchange process simpler, less costly, more efficient, more equitable, more democratic, easier to understand, and sustainable.

Thomas H Greco Jr

Another book that I've been reading with great interest is one by George Gilder. It's called Telecosm. Gilder is a writer in the technosphere, and he's written a number of very interesting books about technological developments relating to networks and the internet and computers. He says that nations companies and individuals that exploit the free abundance, and the freedom the free abundance is what he refers to as a resource that is dropping in price. And quite often we see a new resource dropping in price as the quality and performance improves. He says that the next free abundance will gain market share against all rivals, and political leaders who accommodate them become the prime movers in global affairs, their country's pioneer and prosper. What we're talking about here is the Credit Commons that I referred to the other day. The appropriation of credit by government and banking sectors diverts a huge proportion of the economic output from need-satisfaction to war, accumulation and waste. If we were to take all of that out of the equation, we could probably all work for about one or two days a week, and spend the rest of the time doing creative things. And even our work would become creative if we didn't have to just work to put food on the table and keep a roof over our heads. So when we liberate the Credit Commons, the only practical limits on credit in this private sector are the productive capacity of the buyer and the trust of the seller. If you have these two parties to trade, if the buyer pays with credit the seller who's providing real value in terms of goods and services has to trust the buyer to reciprocate at some later time.

Thomas H Greco Jr

So credit is the free abundance that we're talking about here. And the way I put it is that the future of money is no money. It's no money in terms of, it's not going to be political money. And it's not going to be any third party instrument issued by the Federal Reserve, or the banking system. It's going to be reciprocal exchange based on mutual credit clearing that I described the other day. So the future of exchange lies in decentralized, autonomous mutual credit clearing networks. I'm very confident of that I don't see how it could possibly be any other way. And these networks are going to be linked together without the center destroying their autonomy. So as we develop these credit clearing networks in our local communities, they're all going to be relatively small scale, but they're going to be combined together in such a way that we can trade over wide areas using our local credits. Here's a pictorial illustration that I used in my IRTA a presentation few weeks ago. IRTA already has something they call the Universal Currency, or UC. UC is a way of trade exchanges, being able to do business with one another. These these clusters here, the blue and the green, and the yellow and the red, and the yellow over here, these represent trade exchanges that have individual business members. So within each of these realms, within each local trade exchange, there are a number of members that are doing business with one another on a cashless basis. It's a credit clearing process.

Thomas H Greco Jr

Now using UC, which is a network hub, they can actually trade goods and services between exchanges. Eventually, it will be possible for members to trade directly

with one another, even though they don't belong to the same exchange. But in order to realize that full potential of the network, the exchange system architecture needs to be optimized. These exchanges need to adopt uniform standard operating procedures so that the trade credit value is equalized and they have to adopt convenient point of sale payment mechanisms. They need to greatly expand the membership and they need to organize local trade exchanges into the wide area trading networks. Now these networks can include in my conception both for profit and nonprofit trade exchange operations. This is a quote from one of the sources that I regard very highly Ulrich von Beckerath. He was a part of the German school of free money back in the 20s, 30s, and 40s; I think he died somewhere in the early 50s. He said, "Extension of exchange transactions without state money is in reality, the beginning of a new system of settling accounts, indeed, the beginning of a new economic order." And that's what we're after: a new economic order.

Thomas H Greco Jr

Back in August, I gave a workshop in Tucson. I spent the summer in Tucson after having spent nine months abroad and reconnecting with old friends and reconnecting with Sustainable Tucson, which I helped to start about three years ago. As I said before, we've had two exchange options in Tucson over the last 20 years. The first was a LETS system that was started in 1989 by a professional accountant. And when I arrived on the scene a few months later, I got involved with LETS onora, as we called it, and worked with that for about three years until it petered out. And then we organized another system called Tucson Traders, and our unit of currency was called Tucson Tokens. And that grew to a substantial size with a lot of enthusiasm. Initially, we had about 220 members at the peak and quite active trading for about four years. And then that gradually dissipated as well. And I'll get into the reasons why in a moment. But I gave this presentation because there was a new group that sprung up in my absence that wanted to start a local currency. And in my discussions with them, I told them about our past experience and cautioned them that they needed to do a whole lot more research before they tried to launch anything, and to make sure that they got all their ducks lined up in a row. So that was the beginning of this part of the presentation.

Thomas H Greco Jr

I pointed out that there are design issues or system architecture issues that need to be addressed. There are management issues, financing issues, implementation strategies, marketing, and timing, all of these things need to be considered if you're going to have a chance of success and sustainability with your alternative exchange system. And this quote from John Naisbitt I think I had in one of my previous books. He says, "Change occurs when there is a confluence of both changing values and economic necessity, not before." So a lot of the efforts that we did during the 1980s and 1990s, I think a large part of the reason why they didn't succeed or didn't thrive was because the timing was wrong. They were based on ideological concerns, and most people couldn't really see the need for it at the time. That picture has changed drastically within the last year and a half.

Thomas H Greco Jr

This is some material that I put into my latest book, *The End of Money and the Future of Civilization*. Why do community currencies often stagnate and fail to thrive? Well the fundamental reason is failure of reciprocity, that means people

spending the currency and not redeeming it. And this arises from system design deficiencies, either an inadequate basis of issue, over issuance in relation to the value available to be redeemed, and lack of a clear agreement between issuers and users. Again, this is in one of the chapters in my latest book. With regard to management issues, this can also result in failure of reciprocity, where we have a lack of accountability and transparency by the management. We have inadequate management procedures and controls. Quite often, as I said the other day over reliance upon volunteer administrators, who then burnout and failure to respond to internal or external threats.

Thomas H Greco Jr

Just an example of that: in Argentina, they had a massive social money movement that sprung up during the 1990s. During that time, the official government policy in Argentina was to try to maintain dollar to peso parity. They were to be the poster child for the Washington Consensus. Argentina was trying to do everything that was being prescribed by the IMF and the World Bank. And they were privatizing all their publicly owned assets, including 4000 miles of oil and gas pipeline that was sold to a subsidiary of the Enron company. This was supposed to get Argentina out of debt. But the result was at the end, Argentina was deeper in debt than they were before and they had no assets to help get them out of debt. Well, during the 1990s and early 2000s, there was a higher high level of unemployment even amongst professionals. And so they organized these trade exchanges called "Trueque clubs". And at first it was just a barter scheme, people would come to a central location with the stuff that they had to trade, and they would do barter transactions. Well, they quickly realized that barter was not an efficient means of exchange. So they started printing up credito notes. These notes, were then used as a currency, so that if you had something I want, but I have nothing you want, I could still get the goods from you and give you the credito notes and return, and later on, I would give somebody else what I had to offer and accept the credito notes back in exchange. So one of the things that happened during this during, this movement, and there were many of these clubs that sprung up and three or four dozen different brands of credito notes. When I was there in 2001, there were at least three dozen credito notes that were circulating in these different trading clubs. And there were trading fairs going on every day of the week in various parts of Buenos Aires. One of the things that became apparent; one of the bigger clubs was noticing that there was some counterfeit notes that were going into circulation. And for some reason, they failed to do anything about it. When I went back in 2003, the whole network had collapsed. There were still local exchanges that were trying to rebuild their trading based on local exchange, but they weren't accepting each other's currencies anymore, because they they failed to create these procedures and protocols that assured an equal value of the various credito notes. The other factor is scale and scope. You have to get to a sufficient size with your participant base, and you have to have a wide enough range of goods and service. services available within the exchange in order to make it significant in people's economic lives. Another thing is failure to attract participants from all levels of the supply chain, and failure to gain acceptance within the mainstream business community. So these are all things that need to be paid attention to.

Thomas H Greco Jr

Now with with regard to design, we've had, as I said, 25 years of experimentation

with local currencies. I first met Michael Linton in 1984 at the first North American Bioregional Congress, and that was held in a place outside of Kansas City. The second bioregional Congress was held right here just south of Traverse City in 1986. So we go back a long ways with these experiments you know, starting with LETS and then a lot of local paper currencies sprung up after that, and we've had different models that have been used. I list three basic types here. You have currencies that are sold for cash. And examples of these are Toronto Dollars, Salt Spring Dollars, and Berkshares. They come into existence when somebody puts up some conventional money in return for them. So basically, you buy them into circulation, and then hope to circulate them through the community and keep the money in the community instead of having it go out right away. Well, that works after a fashion. It's sort of like a gift certificate. When I buy a gift certificate to Target and send it off as a Christmas gift to my grandkids that limits their buying opportunities, you know, it really makes more sense to just give them cash but somehow we consider that to be kind of gauche, so we buy them a gift certificate that they can only spend at Target or Borders or Barnes and Noble or some other retail merchant. So, you know, I don't belittle any of these efforts. I think we've learned a lot from all of them. And we also have achieved quite a bit in terms of localizing a certain amount of buying power, and getting some perceptions in the public mind that there are other ways that we can mediate exchange than using dollars or checks or debit cards. Then we have currencies that are distributed, with no formal obligation to reciprocate and Ithaca Hours is the one that typically is pointed to, and many other communities have replicated the Ithaca Hour model. Ithaca did a good job of getting media attention early on. Berkshares has also done a superb job in getting media attention, as well as getting the entire local community involved. They're in western Massachusetts around Great Barrington, where the Schumacher society is. And there's been widespread support throughout the community, all sectors of the community for that currency project. And finally, we get to a currency that's spent into circulation as a credit obligation. And that's what we have in a mutual credit clearing circle, like LETS, and that's what we had in Tucson Traders. Tucson Traders was set up as a mutual credit clearing system. And then when the volunteer staff began to burn out, we decided to issue paper currency notes as an adjunct, so that you could draw a paper currency notes against your line of credit. So if you had a 200 token line of credit, for example, then you could draw up to 200 tokens in paper currency notes. If you had already drawn, let's say \$50, against your \$200 line of credit, then you could only draw out 150 token notes. So this is the most empowering form of community currency because it monetizes the local value-added. We don't need any national currency to bring it into existence. What backs it up is the goods and services that were delivered when it was created, and the obligation by the buyer to reciprocate by accepting credits back in exchange later on. Now, a currency can be issued by a single trusted issuer or by an associated group in a credit clearing exchange. And it comes into existence when real value changes hands. And this is very important that there's some exchange of value that takes place in order for this currency to come into existence. Because what backs it up is the obligation of the buyer who created it to reciprocate later on. So it's important that we assess the creditworthiness of each member of the exchange and to set balance limits on each account. This I think is one of the defects in the original LETS design, LETS originally did not put limits on account balances. So you had a in many cases some people spending, spending, spending and not earning. And this becomes a drag on the system, because now you have a lot of

credits accumulating and people have a hard time finding a place to spend them.

Thomas H Greco Jr

With regard to management issues, again we have to consider that we're operating a business here, whether it's for-profit or nonprofit, it's still a business. A service is being provided and the service needs to be high quality, and the management needs to be responsive to the client's needs. And of course, the people who do the work need to be adequately compensated, and we shouldn't rely too much on volunteer labor. And within the management, we need to maximize openness, transparency, and accountability. And of course, it's up to the members to demand accountability. With regard to finance, a lot of these currency and exchange systems start with no capital, or very little capital, relying entirely upon volunteer labor and donated services and goods. But in the long run, in order to be sustainable, the system needs to generate sufficient revenues to cover its costs of operation. And that includes a reserve account for bad debts. You have to recognize that even though you take great measures to assure reciprocity, you will inevitably have some bad debts. And you have to have some procedure for recognizing when a debt becomes uncollectable. And then you have to have a reserve against which to write that off. So how do you finance all of these operations? Well, we can have fees for transactions, advertising and brokerage. These will be the primary sources of revenue for an exchange. Typically commercial trade exchanges charge a fee on each transaction. So the amount of the transaction would be charged quite often 6% to the buyer 6% to the seller. And that will be sometimes partly in trade credit, and partly in cash. Commercial trade exchanges at first tried to generate all their revenues as trade credit. But of course, they couldn't get everything they needed within the circle. So they needed to generate some dollar income as well. So part of the revenue stream will have to be dollar revenue, at least initially.

Thomas H Greco Jr

So what about implementation? I've listed these as success factors. You need to be part of the mainstream community economy. You need to include the core small and medium sized enterprises That's what SME stands for. That's your base. And it's the SMEs that provide the bulk of the jobs and the bulk of the economic value in any community. And they're the ones that need to be nurtured. And they're the ones that are your basic market. You need to achieve critical mass, both in scale and scope. The scale has to be big enough to provide the members with significant amounts of buying opportunities. And there has to be a wide enough range of goods and services to make it worthwhile. And we need to include all levels of the supply chain. This has been a difficult process for the commercial trade exchanges as well as the grassroots trade exchanges. This chart illustrates the supply chain. You've got wholesalers, retailers, manufacturers, basic commodity producers. Basic commodity producers are the farmers, the loggers, the miners, all of those that provide basic inputs to further processing. Well a retailer, if a retailer is going to be a member of a credit clearing exchange, they're going to be able to, they're going to want to be able to pay their suppliers with the trade credit, and who are their suppliers? They're the wholesalers. And the wholesalers will want to pay their suppliers with trade credit. So that means you got to get the manufacturers involved. And the manufacturers want to pay the basic commodity producers that supply them. And of course, they all have employees. So you got to get the employees into the act at some point. And employees are consumers and they patronize the retailers. So you

want to complete this circuit if you're able to. Right now within the commercial, barter exchange business, most of their members are at the retail level, because once you go to the wholesale or manufacturing level, you're outside of the local community. So that's the importance of creating the network, so that you can include all levels of supply chain through the network.

Thomas H Greco Jr

Now, how do we go about implementing an exchange? I've listed three possibilities here. One is to go directly for organizing the credit clearing association as part of the regional economic development plan that I outlined the other day. Another strategy which seems attractive is to start with a rewards or loyalty scheme and then build your credit clearing exchange on top of that, or to start with a charity scheme, like community way. This again is a brainchild of Michael Linton, Community Way, and I'll say more about that in a minute. So we have three possible approaches that look promising as a way of launching alternative exchange in a community. Going back to my five stage development plan, I won't go over it again, just to highlight the second step which is organizing the credit clearing association to provide an alternative means of payment.

Thomas H Greco Jr

This is the rewards loyalty approach. This particular one, Locals Care, is a project that is ongoing it started three years ago in northern New Mexico, starting in Santa Fe, and then branching out to Los Alamos and other parts. northern New Mexico. This is a very interesting program, and I was in Portland, Oregon a couple weeks ago and I met the man who started this program. He now lives in Portland, and he's working with the Portland local currency group at this point. But what he did, he organized this locals care program in which a shopper can earn Community Points on every qualifying purchase. You get one point per penny of expenditure. And you can see, according to that pie chart, how the rewards are divvied up. 50% go to you the consumer as a reward for your loyalty, 40% of the points are given to nonprofit organizations in cash, and 10% go to Community fund to support the program. Interestingly enough, when they branched out to Los Alamos, they went to the Los Alamos National Bank and partnered up with them, and the Los Alamos National Bank is now branding the locals care program on their credit cards, their Visa cards. And you can register your Visa card with the National Bank, with the Locals Care program so that when you swipe your Visa card and make your payment at the merchant's checkout counter, your points are automatically added to your point account. So this is really cracking the nut of access to the point of sale infrastructure. It's, it's no longer pie in the sky, it's being done. And here's a list of the locals care merchants that are participating, and you can see it's quite an extensive list. The Interra project was a another loyalty project that was started by Greg Steltenpohl and John Raimer, and some people in the Pacific Northwest and Greg Steltenpohl actually was the, the guy that started Odwalla juice company. And he's a social entrepreneur and wanted to do something good for the community and for the common good. So they started this Interra project, which is a loyalty card, and you can see some of the co-branding that they've used, and they also branched out into Boston. So they had the Interra project going in the Puget Sound area and in the Boston Market as well. It was a loyalty card. It wasn't used for payment, but you would swipe both your payment card and your loyalty card to get credits on your purchases. And then the businesses was were were billed monthly for the community rebate



amount, which Interra then dispersed to the card holders and the chosen beneficiaries.

Thomas H Greco Jr

This Sonoma Go Local project is one that's about to launch in Sonoma County, California. It's being done by some friends of mine, and I'm working with them. Their local card, their reward card, will be distributed to patrons of the merchants that sign up to participate in this program. And the idea is that it'll be a rebate that can be spent on a subsequent purchase. It's not a discount, it's a rebate, so you don't get a discount off your current purchase, you get to spend your points on a later purchase. So it keeps people coming back to the local merchants. It's a first step in launching a mutual credit clearing system. Because once you have a number of merchants participating in generating reward points, they can also generate reward points by trading with one another through their mutual credit. Here's Community Way. Community Way was hatched number of years ago back in the mid 90s. But it never got much traction, but within the last several months, Michael and his associates have managed to launch a Community Way program in the Comox Valley which is on Vancouver Island in British Columbia. At this point, I want to interrupt the slideshow to show you a video that Michael made in conjunction with Alan Rosenblith, a filmmaker who lives in Portland.

Michael Linton

Community Way is a program for the introduction of community currencies to a community, there are businesses, involved nonprofits, and the general public. It begins when businesses make donations and Community Way Dollars, community currency, not in cash, not in product but in community way dollars to charities of their choice. They create the money, they receive it. That's the beginning. Now the community groups have money, community money, and they can spend that with each other, they can spend it with the businesses that issued it, they can do what they like with the money they now have. But the most powerful thing that community group can do with its community with dollars is make change with them, they can sell it to the general public. So the general public, gives hard cash, the nonprofit and the nonprofit gives the community money to the general public. So people who've made change with their community groups and have the community way dollars can now take them, with some cash, to the businesses that issued them because each business is obliged to accept the money it gave away in promise. For a restaurant that might be at 50% - 50% in the community way dollar and 50% in hard cash. Just up to the businesses to specify their acceptance. When businesses receive these community way dollars it's not the end of the trail, they can then spend these dollars on with other businesses. It's not like a discount coupon that stops when you get it, this money moves on to the other businesses in the network, say from the retailer to the wholesaler, the wholesaler to the manufacturer. And then of course, who are the engines of these business? Well, that's we, it's us the people, the employees, the owners, and we can be taking part of our bonus or salaries in the community money so the money can flow back into our part of the consumer cycle. So as we as individuals can be back into the loop again.

Michael Linton

So that's a look. They create, donate. We make change. And we spend on the businesses that are the originators of the whole process. They get loyalty and

corporate social responsibility. They get a new funding source. We get to do good with our community groups. I still go shopping. So it doesn't hurt as much as it usually does. We all win. That's Community Way.

Thomas H Greco Jr

So what about marketing? When you market this to businesses, individuals, professionals, anyone that you want to participate in the system, you need to clearly state what the value proposition is. And even the commercial trade exchange people I think have not done an adequate job of this. They typically promote trade exchange membership on its marketing advantages. Because, they'll say, Oh, you, you run a restaurant, join our exchange and you have access to this captive market of office supply stores, movie theaters, radio stations, newspapers, and various other businesses in the community. They do say that it's cashless trading, and you can conserve your cash. But they don't make a sufficient strong point of it, I think. The fact is that trade exchange membership does reduce one's need for cash, because now you're paying for the things you buy with the things you sell. It provides easier access to credit at lower cost. Typically, there's no interest charge attached to your line of credit. And your access is based on your credit worthiness and your volume of trading in the system. And that's determined, not by some bank staffer in New York, but by people in the exchange itself. It provides enhanced opportunities to sell your excess capacity. Virtually every business has excess capacity. They could sell more than they do. And the reason they don't is often that their potential customers don't have the money to buy. So we put more money, a different kind of money into the community. Participation in a trade exchange also brings in more foot traffic. Those who have trade dollars or trade credits to spend are likely to come to your place instead of going to a place where they have to spend their scarce cash. And they're likely to spend cash as well as trade credit. So you can get more cash business as well. And we provide overall improvement in the local prosperity and quality of life because now we supplement scarce official money with abundant local money. Further, we need to make participation easy, convenient, and virtually risk free. That's why we have to get access to the point of sale devices and utilize the swipe card technology and the cell phone technologies that are probably going to soon replace that.

Thomas H Greco Jr

So that's the end of the slideshow. I've got a couple other things that I want to show you I'll put this slide back up so that you can reference my website and my blog, and my recommended reading. As part of this latest tour, I was in the northwest for about two weeks, in Portland and Seattle, and up to British Columbia. I was invited to give a presentation on Salt Spring Island, by the people who do the Salt Spring Dollar currency. So we had a public presentation as well as extensive discussions and consultations about how they might get their currency to circulate more. After eight years of issuing Salt Spring Dollars, they're no longer satisfied with selling souvenirs to the tourists. They've made about \$30,000 doing that. And so that's been a benefit to the community. But typically, the Salt Spring Dollars that they sell go off Island and they don't circulate within the community or help the local economy, other than to provide that additional income from souvenirs. So they're looking at ways to shift their method of issuance, so that they can have a currency that does circulate throughout the island economy.

Thomas H Greco Jr

The film, Money as Debt has been mentioned a couple times this weekend. That's an excellent animated film, about how the money system works and about the history of the money system. And that was started by or that was created by Paul Grignon, who happens to live on Vancouver Island. He came over to meet me and to see my presentation on salt spring Island, which is just a short ferry ride across the Strait, and he gave me another DVD, which does a good job. It's only eight minutes long, it does a good job of explaining how in medieval times, people created their own currency. So I'm going to play that for you.

Narrator, The Essence of Money

In medieval times, just like today, people had problems with money. In those days, gold and silver coins were the universally accepted form of money. Precious metals were used as money because their scarcity made them valuable even in small quantities. Unfortunately, it also made them scarce. To other qualities made precious metals useful as money, they didn't spoil and they did not get consumed. So they were ideal for saving. Unfortunately, the same properties made them ideal for hoarding. Hoarding worsen the problem of scarcity. Those who had wealth beyond their needs, could acquire the metal coins and hold on to them, thus depriving everyone else of the money they needed to enable the convenient trading of real goods and services. As a result, though the weekly market always offered a wealth of goods and services to be traded, there was often very little coin available to make trade work efficiently. So what did medieval folks do solve their coin shortage problem? They invented market money, and this is how they did it. Each seller had a pretty good idea of what his or her sales would be. If sufficient coins were available. The sellers had a basis upon which to issue credit to themselves. This self-issued credit could then be used as money to buy other sellers wares. People could do this because the participants at the weekly market were both producers and consumers. They went to the market to trade their products, literally. But what happened when the butcher wanted to buy something from the seamstress, but the seamstress wanted something from the shoemaker, not the butcher, and so on. Trading goods and services for other goods and services, required coordination of many trades. It often required several steps before a seller could acquire what he or she really wanted to buy. Bartering like this has always been a cumbersome process. That's why money was invented.

Narrator, The Essence of Money

And sometimes money has to be reinvented. So one day during an economic slowdown caused by a serious shortage of precious metal coins, that happened. Anton the baker, whose bread was always in demand, could easily count up the people he knew would buy his bread if they had the money. Anton could reliably expect to sell at least 20 silver pennies worth of bread at each market. Therefore, he reasoned he could safely issue 20 silver pennies worth of Anton's bread vouchers, and persuade his fellow sellers to accept this virtual bread in trade for their actual wares. Anton was a good man trusted by all, so he had little trouble spending his 20 pennies worth of bread vouchers on the wares of other merchants. Most were able to understand the elegance of his idea right away. So those who had traded their wares for Anton's vouchers were in turn successful in trading said vouchers for other sellers goods and services. Because the bread vouchers' value was expressed in silver pennies, everyone knew what the voucher was worth relative to everything

else. And they knew that every voucher was backed by the abundant supply of Anton's delicious smelling bread. So Anton's bread vouchers were soon recognized by all as reliable money, based solely on the proven demand for Anton's bread. Throughout the day, Anton's vouchers would be returned to him in exchange for bread. Each voucher had completed a unique journey through the market, some short and some long. And all along the way, the vouchers facilitated trades that had nothing to do with Anton. It wasn't long before other producers began writing vouchers against their products and services. Soon the market was flooded with money in the form of virtual goods and services. All of it backed by the abundance of actual goods and services available at the market. With no shortage of money, everyone had unrestricted opportunity to sell their products or special skills to whatever extent there was real demand for them. This led to general prosperity and happiness.

Narrator, The Essence of Money

The only purpose silver served in this system was to provide a widely understood measure of value, in the same way that inches and feet pounds and ounces were necessary for measuring lengths and weights. Anton liked to explain to the amazed people from other markets, "No one has ever stopped from building a house due to a shortage of inches, and similarly, no one in this market is ever stopped from making a trade by a shortage just silver pennies." At the end of each market, outstanding vouchers were reconciled amongst the market merchants with payments made in three ways: in product, in vouchers for the next market, or as a final resort, in coin. This system was very successful. That's because it fulfilled the essential purpose of money. It guaranteed the existence of enough purchasing power to purchase all goods and services in demand.

Thomas H Greco Jr

Well, I think that's pretty clear explanation of credit money and what's possible. When you associate within a credit clearing exchange, it's not your individual credit that goes into circulation; it's the collective credit of the members in the exchange. And if there are any imbalances that develop, you settle that out amongst yourselves. And those who were using your currency outside of the association don't need to worry about it.

Thomas H Greco Jr

So that's the conclusion of the presentation. If you have any questions, I'll be glad to answer them.

Aaron Wissner

So what in layman's terms would you say is the the number one reason that we haven't seen a local currency or community currency really stay around for more than, certainly, they all seem to kind of fizzle out after a couple years. What's the number one reason, or what's the one thing that must be avoided in that?

Thomas H Greco Jr

Well, the number one reason if I were to pick one reason is failure to involve the local business community. They're the ones that benefit primarily from it. And if it's started by people on the fringe, you're not going to get buy-in from the business community. You have to involves them from the very beginning. You know, the one exception to the rule was the WIR in Switzerland that was started by the

business community themselves, because it was at a time when there was a insufficient supply of official money in circulation. Another reason probably the second reason is the the timing, the conditions into which an exchange system is placed. You know, the, the dominant system has so much going for it, political privilege., people are habituated to using it, most people don't realize that there's even any alternative possibility. So, those are those are the main factors. I like to compare it to digital photography. Going back to what Clayton Christensen said about dominant companies being displaced from the market. I grew up in Rochester, New York. Anybody know what Rochester is famous for? Eastman Kodak company, and Kodak was for a long time the dominant company in photography. They, of course were committed to chemicals and film because that's what photography was all about. When digital photography first started to be invented and, and disseminated, it was much inferior to chemicals and film, the images that you can get digitally were very poor resolution. You know, you think back now to your one or two megapixel cameras. Now the camera I've got as 10 megapixels, and just in a short period of time, what's happened to chemicals and film? Who buys film anymore? Only professional photographers and people that have a special need for that high quality. The thing is that digital photography made inroads into the market, because it was good enough for certain purposes, especially if you were sending it up into space. You needed a camera that could send pictures back electronically. You can't do that with pictures and film. There's no Walmart up there to develop your pictures. So as the technology developed, digital photography displaced, the old technology. Digital photography was the, what did he call it, the disruptive technology. Now, it's very difficult for dominant companies to recognize that their technology is being displaced. All of their revenues are coming from the old technology and that's where they want to put their investment dollars. They want to keep improving the technology that's been feeding them. They don't recognize that they're going to be displaced. But now Kodak is trying to play catch up in digital photography. But it's usually the small nimble startups that take over the market, not the dominant companies. So I think that's the way it's going with the exchange process too. Right now we've got a niche market, in the retail sector being tapped by the commercial barter exchanges, and nonprofit exchanges can do the same thing. But you know, as the technologies develop, and we have better ways of recording transactions, I think we'll be able to make much greater inroads, very quickly.

Questioner 2

I'm wondering about the practicality of these community currencies in states like, I'm from Ohio, and I live in a county and there's 7% sales tax, and the state government and the county government depend upon those sales taxes. If this got going in a big way is it not a threat to the tax revenue, or can these community currencies have to keep details of transactions and payout pay sales taxes, ultimately?

Thomas H Greco Jr

Yeah, the tax implications are no different from a cash sale. You still have to pay sales tax, you still have to pay income tax on earnings. The commercial trade exchanges report their members trading to the IRS every year on a 1099 form B. And that's a report of the barter income, the net barter income that a member has had. So it's up to the individual to to file the proper tax papers and to pay the tax that's due. Same with sales tax.

Questioner 2

Just a quick follow up then; but of course you can't pay your taxes in that community currency, you have to switch to the US dollar. I take it.

Thomas H Greco Jr

Well, talk to the state and the Feds about that.

Questioner 3

If I'm correct, the insight that I get from this is that there must be a credit source in the system. Locally here in Traverse City, the main complaint that we have is that once the wholesaler gets the [?], the virtual money, it doesn't come back into the system.

Thomas H Greco Jr

Well, a currency that's locally issued has to come back into the system to be redeemed. Let's say you have a local Electric Power Company, as you do in Traverse City. Suppose the power company was paying part of its employee wages, and some of its suppliers, with its own electricity vouchers, good for electricity payments on your electric bill. Those have to come back to the electric company in order to be redeemed for value. So there's no question they may go out of the area for a while and circulate outside for a while. But ultimately, they have to come back in order to be redeemed for the value that's backing them. The thing is that you have to monetize the local value-added, as I said the other day. Many things cannot be acquired locally. So you have to have the national currency in order to acquire those from outside. But every community has a certain amount of value-added. And that part can be monetized into a local currency. Stephanie, you had a...

Stephanie Mills

I'm just trying to imagine, you know, how we'd go about starting a community credit clearing exchange, especially with the business part of it because at least at present the situation is that the, you know, the currency activists are not by and large members of the small and medium sized enterprise group, you know, so we're not, not many of us are could be sort of active, active players. So I'm just trying to, I'm just trying to imagine you know, how we would, we would catalyze this kind of thing in Traverse City and go beyond, beyond the currency into this, you know, next order of alternative exchange.

Thomas H Greco Jr

Well, those connections need to be made. If you're really intent on having a functional currency that's going to circulate and make a difference in the community, you have to get those people involved.

Stephanie Mills

I know one of the factors I think in the success of Berkshares in Great Barrington is that Susan Witt, one of the proponents, spent years getting active, and was at one point president of the local Rotary.

Thomas H Greco Jr

Yeah, absolutely. That's, she's very good at that. Yeah.

Questioner 5

Tom, it seems to me that all currencies are really a faith based system. That it's backed, they're backed by the, the trust, the belief that you can use them in the future and they will retain some kind of value and be useful, have some utility to you.

Thomas H Greco Jr  
Correct.

Questioner 5

And if you lose that, then they, they're worthless, if you lose the faith. That, that being the case, is it necessary that they actually be backed by anything of value other than faith?

Thomas H Greco Jr  
Why would you have faith in something that doesn't have any value behind it?

Questioner 5

Well you would have the promise of others of the same belief?

Thomas H Greco Jr  
Heh, heh, a mass illusion?

Questioner 5

Yeah, I suppose...

Thomas H Greco Jr  
That's what's holding up the dollar.

Questioner 5

But if everyone trusts in the system, as long as that trust is there, is it necessary that there be something tangible that actually backs the system?

Thomas H Greco Jr

Well, look at what's happening to the dollar. We trust it, but is it worthy of our trust? You know, we're seeing massive amounts of value taken out of the economy and wasted and distributed to favorite clients. You know, when the government runs deficit year after year after year by creating money, they're simply debasing the value of the dollar, we've seen the dollar lose basically 96% of its value since 1913 when the Fed was created, and we're going to see it much worse than that in the future, as foreign investors refuse to buy any more dollar denominated securities. So, yes, I think ultimately, the value, take a share of stock for example. Ultimately, the value of a share of stock depends on the fundamentals. You can have market mania, which we have quite frequently in the past, you can have a market mania that causes a share of stock to be artificially inflated, because people think they can sell it off to what they call "the greater fool." So if there is a greater fool to sell to, sure, it might be worth buying. But ultimately, it's the fundamentals that determine the value of a share of stock. And it's the fundamentals that determine the value of a currency. Because the currency is just a credit

instrument, just like a share of stock is a claim against the assets and the profits of the business. And a corporate bond is a claim against the long term assets of the business.

Aaron Wissner

It seems to me that for people to maintain faith and a community currency or any currency that there are, it boils down to whether or not they have faith that they can exchange that currency for something of value in the future, and something of value in the future, a basic would be food. So a basis for issuance could be the product of farmers or gardeners or whatever. And the other basis of issuance seems to be energy in one form or another how gasoline or electricity or whatever. Have we seen any experiments in local currencies where food or energy or both of them are, are part of the local currency exchange system so people can look at that local currency and know that they'll be able to get either food or energy or something for that, has that has that been tried yet, and if so, has it worked or not worked?

Thomas H Greco Jr

Sure, farmers have been members of these trade exchanges and issuers of local currency. The Schumacher society issued Farm Preserve Notes years ago, as a way of financing farming operations. It wasn't a large scale thing, but you know, it was an example of what you're talking about. But any value can back up a currency: a power company, a farmer, a logger, anybody who's producing value that goes into the market and is ready for sale, has has something to back their currency with. But rather than have one individual back it up, it's a much more secure thing to have a whole group of people back it up with their goods and services through the mutual credit clearing system.

Aaron Wissner

Well, let's can we think about an example then? I was thinking of Detroit and how Detroit has, you know, right now, it's so decimated and everyone's unemployed and the people are starting the farm markets and the garden, the urban gardening and everything, but they don't have any money. And it seems to me that the way to get a community currency flowing there would be to, to issue it on the basis of food being grown, and really for for a poor community, this might be the only product of value that everybody has at least a chance of producing. Like, if I'm, if I'm a hairdresser, not everybody in the community currency system is gonna look at that note and say it's just like when I get my coupon book, I see. I see the hairdresser coupon in there. I don't care. It's no value to me.

Thomas H Greco Jr

But it is to some people.

Aaron Wissner

But how do I, how do I, I would lose faith that it was a value. So when I see the when I see that there is no place I can go to get food with it, there's no place I can go to pay for my heat bill with it, there's no place I can go to buy gasoline with this. If I can't do any of those things, which are necessities, then it was seemed like the local currency would kind of collapse into something more like, what is it? What are they doing in Japan where they help each other out? And it's the -



Thomas H Greco Jr

Well, the currency will not collapse as long as there's somebody who wants what they're selling. Well, you're right food is a necessity. It's one of those basic commodities that virtually everybody needs and wants. So yeah, sure, that's an excellent basis of issue. Typically, we say that currency should be issued on the basis of goods and services that are in everyday demand, and available to be bought in the market. It's like in the film, the baker issued his currency on the basis of his production of bread and everybody's desire to buy bread. So sure you're going to have you're going to have others in the system that may not have things that are in such great demand, in which case their overdraft mount their line of credit would be less, and as you as you gain experience with the system, you will you will have some data on which to base those lines of credit or the issuing privilege that goes with each account. That make sense?

Aaron Wissner

Well, I think you're saying is if it was only service people participating in the local currency, that since the services may or may not be in demand that the local currency could collapse from the desired value. Whereas if there's something that everyone demands, such as food, energy, paying the taxes, something like that, then that can support not only the currency, but also the ability of that kind of currency to serve the service providers who are participating in the system. I think that's what I heard.

Thomas H Greco Jr

No, it can be services. It depends on what the services are. You know, the auto mechanic is always in demand. The physician, the dentist, they're always in demand. Anybody who provides value that's in demand, can back a currency. I mean, it's good to have hard goods too. But that doesn't negate the fact that services could back up a currency.

Stephanie Mills

This is just a bit of information. I think that the little town of Willits got into Peak Oil awareness early on and did a food inventory. And I read on the internet recently that they started a kind of a warehouse receipts, currency, their object wasn't so much currency issue. Well, it wasn't purely currency issue. They bought dried quantities of dried storable staples or acquired them and then individuals purchased notes that entitled them to a combination of beans, rice, and wheat, so, so the purchaser, you know, had a certificate that was redeemable in in hard goods that were retained by the the, you know, warehouse, but the certificate started traveling from hand to hand.

Thomas H Greco Jr

Yeah.

Stephanie Mills

So it doesn't answer to the sort of general economic exchange that you're promoting, but it does sort of speak to the need for communities to have those kinds of things present as a fallback, I mean, real, you know, storable staples.

Thomas H Greco Jr

Sure, they can either buy them or they can grow them. Now, in that case, they had to buy them with cash. Now what we want to do is to have our own local growers grow them and create the currency on the basis of stuff we grow not stuff we buy, but you know, that that that can work. It's it's probably better than holding dollars in the bank account. Because at least you have something real that you have a claim to. When you have \$1 claim, as the dollar value declines in purchasing power, you're better off holding commodities if those commodities do not spoil, but that's the problem with most commodities is you have spoilage and deterioration over time. In my second book, *New Money For Healthy Communities*, and I think I put it in the third book too, there's a story that I got from Silvio Gesell about the story of Robinson Crusoe. And he makes an excellent case for lending out or allocating furs and skins and food and various other things to the newcomer on the island, because that will allow the newcomer to plant a crop and return fresh food, when it's needed by the lender. It's an excellent argument against the practice of usury, I thought.

Questioner 8

In trying to summarize this, in my own mind, it seems that the dollar equitably meets all these requirements except trust. And, and in thinking about that, I realized that trust is endemic in everything we do. And that if we could get to this on a local basis, we might see less inflation.

Thomas H Greco Jr

Well, with regard to inflation, the way I define inflation is it's an improper issuance of currency. Higher prices are a result of inflation, higher prices are not inflation. Higher prices as a result of inflation. So that's the problem with the dollar. That gets us down to how we measure value. You know, in the film, they talked about silver being a measure of value, not a payment medium, the payment medium was the credit notes that the baker and the others issued. So that's the distinction that we have to make as well. Initially, we're going to denominate our credit in dollars because that's the language of value that we understand. We know what the dollar is worth because we spend it every day. But ultimately, we have to define an objective measure that isn't subject to debasement as the dollar is. I think I mentioned the other day that the dollar was originally defined in terms of silver, just like in the film, so it had an independent life independent from the dollar as a means of payment or the dollar currency, but with legal tender laws, the government says you have to accept this currency just as if it were the silver dollar, which obliterates the the operation of the standard. So eventually in our communities, we're going to want to define our credit units in something other than dollars, maybe kilowatt hours or grains of silver or something else, that can't be manipulated by the monetary authorities.

Questioner 8

By the way, I was in Brazil when they devalued their currency twice in the 80s. So I got to see firsthand you know what the effect of that is?

Thomas H Greco Jr

Yeah, well, unfortunately, in our case, we don't do any official devaluation. It's a de facto devaluation.

Aaron Wissner

Tom, I was wondering about this whole issue of money I find very interesting because I think it's the critical missing education piece in the entire environmental and social justice movements, and I think it's what ties everything together.

Thomas H Greco Jr  
I agree.

Aaron Wissner

And I thought Richard Douthwait's presentation was fantastic, as far as I thought everything really tied together in my mind, but I noticed you took issue with it. And you guys are two really bright people. I'm just trying to understand the the space between you and what it is that you think that way has wrong or understands differently from you, because I couldn't quite understand what was going on there. But I could see that there was a separation.

Thomas H Greco Jr

Well, I agree with 99% of what Richard Douthwait said. So I think there's a lot of agreement between us. I think where he goes wrong is with his monetary solution. You know about having the government just give money away, willy nilly, issue it into circulation against nothing. You know, they talk about debt free money. Well, there is no debt free money. If it's a credit obligation, somebody has a debt. Now, it may not be interest bearing debt free money, but it's still it's still money. Well, I call it credit money to differentiate it from interest bearing debt money. I think that's, that's not a viable solution. if I understand it correctly,

Aaron Wissner

Maybe I wasn't understanding what Richard said in response. I think what he said was he was talking about, like my Township, my township Council, hires people to collect trash. And the thing of value is that the streets have been cleaned. So there has been some value added to the community. And so they're paid partially in the currency issued by the township board itself based on that labor, and then that that currency goes into circulation within the stores and within the community. And when the tax bill comes the tax bill says, you can pay up to 20% in the local currency and people know that or maybe it's \$1 denominated amount. That's what I heard. Do you still take issue with that?

Thomas H Greco Jr

No, no, that's not what I heard. No that that would be an appropriate basis for issue. As long as the government that issued it is willing to take it back in payment for taxes and fees.

Questioner 10

Are there any models, or in theory is it feasible that on a small scale level, if money is a means of exchange or means of storage, is it feasible in theory that on a small enough scale, you can use ecological restoration better benchmarks as, as that unit of value exchange or storage?

Thomas H Greco Jr

Money is not a means of storage. Value should be stored otherwise. Money is a medium of exchange, pure and simple. And I'm not sure what you mean by using an ecological

value as a measure.

Questioner 10

I'm not sure either. I'm just exploring the idea of, of there's there's clearly a lot of ecological issues that that tie into all of this. And if there if there were any, if in theory, it were possible to set certain benchmarks of restoration to say, Okay, I owe tax. I owe X amount of dollars in taxes, so I can pay that in X amount of hours restoring this part of my community.

Thomas H Greco Jr

Well, that would be a sale for money. That's not a way to measure money. People confuse values with value. You know, it's unfortunate we use the same word, but we're talking about market value here. The way to measure credit claim is by using something that's traded in the market. And it's convenient for us to choose one thing like gold or silver, as a way of measuring market values of everything else. It's really a pricing unit. So if we price something in dollars, originally when we did that, we were pricing that item that we had for sale in terms of silver, because the dollar was defined as so much silver. But as I said, that standard has been obliterated. So now the standard is a currency standard. And \$1 is whatever it will buy in the market, despite the fact that is being debased by the monetary authorities.

Stephanie Mills

So, say we have mutual credit clearing systems you know that are are doing an admirable job of medium of exchange. And then what do you do about capital formation and savings. I mean store is store of value function -

Thomas H Greco Jr

That's chapter 20 in my book.

Stephanie Mills

But, but there - I mean part of the thing that's so mystifying about money initially is unpacking those functions of medium of exchange and store of value and unit of account, so -

Thomas H Greco Jr

Well, while the principle is that money should be created on the basis of goods and services going into the market or already on the market. Capital formation needs to be financed out of surplus. That is those who have excess credits in their money account allocate those credits to those who want to start a business or expand a business, that's the capital formation process. It's like, if you're a farmer, and you have a harvest, you consume most of it and you save some of it for seed. You can't save what isn't produced. So, money is a virtual representation of what has been produced. And in order to expand your production capacity, you have to allocate part of that production to capital improvement, future production, increasing capacity, so that that's not money. That's what I talked about the other day as being long term credit. And that's a reallocation of existing money to potential producers.

Aaron Wissner

One of the things I noticed about money a couple years ago, was the - in our current global monetary system, if I spend \$1 on gasoline, and then the filling clerk spends it at the grocery store and then the grocery store spends at the hardware store. And that money goes to buy some lumber, which comes from the Amazon and the dollar just keeps on moving. And it ends up if you follow the dollar path, in either direction and time at either ends up motivating behavior that I would never myself do like the cutting down to the rain forest, for the mahogany that gets sold at the Home Depot where the person might have shopped that I gave the dollar. And it seems to me that there must you almost have to build into a monetary system, a set of ethics or a culture of ethics so that everybody participating would not do these destructive things. Because each of us when we use money, I mean we have control only at the moment that we hold And then the only control is in slowing the circulation. As soon as we let it go again to the next person, it motivates the behavior either good or bad. We don't know what the results going to be two steps to exchange those away from us. So how can we reinvent money in such a way that we don't end up with the same thing we have right now, which is a global money system, which is motivating behaviors everywhere in the world, doing things at the lowest possible common denominator for the country that has the least enforcement or at least laws possible.

Thomas H Greco Jr

Well there are two issues you raised there, the first one is how do we maintain local control? And I address that question in my book as well. We want to have our exchange systems small and local. And we want to network them together so that we maintain local control while we have a globally useful credit system and that means taking responsibility to make sure that those that we assigned to manage a system are accountable, and that the systems are transparent, and that we exercise our responsibilities. You know, it's just like exercising your civic responsibility for your local government. And most of us have been remiss and doing that. We get the kind of government we deserve, it's been said. We've allowed government to get way beyond our grasp, if we ever had any control of it at all. But, you know, at least in some places, they have long tradition of town meetings and people taking responsibility for the local governments. It's much easier to do on a small local scale than it is on the higher levels. But you know, power ought to migrate upward, not come from the top down. Right now we're being dominated by the top rather than having our servants do what we want them to do. As far as the other thing is, it may be asking a lot to try to build into a monetary system or credit system directions on human behavior and ways to prevent self destructive behaviors. That's that's too much for me to get my mind around.

Thomas H Greco Jr

Are we done? [Applause.]

Transcribed by <https://otter.ai>