

## **EconoFact Chats: The Past, Present and Future of Money**

**Kenneth Rogoff, Harvard University**

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Michael Klein:

I'm Michael Klein, Executive Editor of EconoFact, a non-partisan web-based publication of the Fletcher School at Tufts University. At EconoFact, we bring key facts and incisive analysis to the national debate on economic and social policies, publishing work from leading economists across the country. You can learn more about us and see our work at [www.econofact.org](http://www.econofact.org).

Michael Klein:

Large stones, cigarettes, pieces of precious metals, pieces of non-precious metals, pieces of paper, pieces of plastic, electrons -- money has taken many forms over the ages, but have certain forms of money, especially Benjamins, that is \$100 bills, outlived their usefulness, or at least their legal usefulness? and will the future see Bitcoins replacing Benjamins as well as conventional coins? Many economists focus on monetary issues, but few consider money per se. One who does is my guest on EconoFact Chats today, Professor Kenneth Rogoff of Harvard University. Ken's book, *The Curse of Cash*, spells out the benefits, but mostly the costs of paper money -- especially large denomination bills. This might strike some as an eccentric topic, but this book was written by one of the most respected economists in the world. One whose experience includes working at the Federal Reserve, serving as the Chief Economist at the International Monetary Fund, and co-authoring one of the most influential economic books since the beginning of this century, *This Time Is Different: Eight Centuries of Financial Folly*. Ken, welcome to EconoFact Chats.

Kenneth Rogoff:

Thank you, Michael.

Michael Klein:

Ken, you begin your book with what you call, a long and glowing eulogy for paper money. When did paper money begin, and what has it done for economic advancement?

Kenneth Rogoff:

Well, first I just want to say my books about the past, present and future of money, and of course, we'll always have something. Paper currency came after coins. Coins were first. The first standardized coins were probably in Lydia, in the sixth century BC, and were a major innovation at the time, maybe been done by private traders. But, when you hear the expression rich as Croesus, it really comes from that period.

Kenneth Rogoff:

Paper money was really invented by the Chinese first, as far as we know. And, if you know the book, *The Travels of Marco Polo*, it's one of the most famous chapters in his book where he talks about how Kublai Khan, the grandson of Genghis Khan issues paper money, it was made from tree bark at the time. And, people treated it just like silver. And, he describes it as alchemy. Went out of use in China, they ended up having a lot of hyperinflation from printing it too fast, but then it was rediscovered in Europe and really the biggest use of it, before the modern period, was by the colonies. Because in the United States back

then in the colonies, you couldn't get your hands on enough British silver just to make things work in this rapidly growing region.

Kenneth Rogoff:

So, we started printing paper money, Benjamin Franklin, actually, it's how he made his living. It was very technical printing paper money. It became into wide use, really only in the last 150 years where almost every country has it.

Michael Klein:

So there's that saying, "Not worth a continental," because they're printing a lot of dollars. And, dollars today are not backed by anything. You can't go to a bank or to the government and trade in your money for gold or silver, instead, partly why people hold money is because people hold money. It's what the Nobel Laureate Paul Samuelson called, the social contrivance of money.

Kenneth Rogoff:

Well, yes and no. I mean, you can pay your taxes with money and believe me, that's a big factor and the government can pay its employees with money. So, there's a view by some economists that sort of anything could be money. No, the government's always went out, because they're a big part of the economy. They have a lot of power over the economy and can insist on their currency being used.

Michael Klein:

Well, money can be paid for taxes. You can use cash to pay taxes. But in fact, you point out in your book, this statistic I found very striking. You said that, at the time that you were writing the book, the amount of money in circulation amounted to \$4,200 for every person, and 80% of that is in Benjamin's -- that is \$100 bills. I don't know about you, Ken, but I don't have that cash on me or stash in my house. Do you?

Kenneth Rogoff:

Unfortunately not. I want to say, I don't have a moralistic view of this and I use cash, but I'm certainly not throwing around hundreds, not least because no one really wants them. If you go to a store and try to buy something with a lot of hundreds, the person at the cash register is typically not very happy about it. It's more than \$5,000 per person now. Probably half of that is abroad, but still a lot of it is circulating here. And, this isn't something special about Benjamin's, the \$100 bill Benjamin Franklin, who I mention. This is something really true of every advanced economy. There's a ton of currency in circulation, not necessarily always as much as the U.S., there's tons in circulation, and nobody seems to be holding it. And by the way, there are countries like Switzerland and Japan, that have even more currency per person.

Michael Klein:

So, if you're not holding that much and I'm not holding that much, who is holding all that cash?

Kenneth Rogoff:

Well, of course, one of the things about cash, it's anonymous. And so, it only surfaces occasionally when people have tax busts or drug busts. But, I think we have a pretty good idea that it's circulating in the underground economy, which don't think of necessarily the mafia using it. But mostly evading taxes, evading regulations. There are people who say, "Oh, I use hundreds..." New Yorkers say this, "I use hundreds, I pay my nanny, my trainer in hundreds." Yeah and I go, "Well, I wonder if you both reporting this to the IRS." I mean, that's an example of evading taxes and regulations, maybe a benign one, but that's a lot of how it's used around the world.

Michael Klein:

Well, theft is theft, right?

Kenneth Rogoff:

Yeah. Some people aren't paying taxes, everyone else has to pay more taxes.

Michael Klein:

Yeah. And so to a certain extent, what you were saying about Marco Polo saying, this is magical, they're just creating money out of tree bark, I mean, to some extent the governments do as well now. The government can print money and buy things. We call that seigniorage in economics. But then on the other side, there's this tax avoidance. Is there any sense of which way this nets out? Is the loss from tax avoidance, you think more than the seigniorage revenues?

Kenneth Rogoff:

Well, so part of seigniorage revenue is what the government gives electronically to banks and that's different... But, my calculations, and this goes back to a paper more than 25 years ago, is that the cost-benefit analysis is never a winner for governments. It hasn't been even when interest rates are high. If you look at the cost of how much, say the U.S. loses due to tax evasion, the IRS put out an estimate a while back saying, about 15% of taxes are never paid, even after we bust people and enforce things. We're talking in federal taxes alone, \$500 billion and other few hundred billion for state and local. And, the U.S. is actually a low tax evasion country compared to a lot of the rest of the world.

Kenneth Rogoff:

And so, the amount of money that's made by printing currency actually doesn't add up to that much, even if you got rid of currency, you wouldn't get rid of crime, you wouldn't get rid of tax evasion, but even if you got rid of 4- 5% of them, it would make a big difference. The IRS has getting rid of \$100 bills is near the top of their list of things to improve compliance.

Michael Klein:

Another cost, maybe a more indirect one, is what you point out in your book, the corruption that occurs and is more easily facilitated by the presence of dollars, especially big denomination. You have stories about the Louisiana Congressman Jefferson, and El Chapo. Do you want to talk about that a little bit?

Kenneth Rogoff:

Corruption is a problem in the United States. It's a huge problem in emerging markets and other countries. And, when I've heard from policymakers and leaders in those countries, it's almost like the number one issue with cash, is there's just so much corruption and cash is being used to do it. That's certainly the case in political parties. We've seen that they found huge amounts of cash stowed away in one of the major political party headquarters in Canada. Cash is used a lot in the construction industry to avoid reporting what workers they're hiring. But yes, there are some famous drug busts, there's movie about one of them by David O. Russell and there're many others.

Michael Klein:

Yeah, there's the television series, Ozark is about money laundering.

Kenneth Rogoff:

Absolutely. Money laundering is a big part of any illegal business. In the drug industry, the international drug trade, getting the money back to Colombia or Mexico is almost as expensive as getting the drugs into the United States.

Michael Klein:

And, you wrote that El Chapo, When he was arrested in 2014, he had more than \$200 million in cash in his house. I mean, he must have his own rooms just devoted to cash then, right?

Kenneth Rogoff:

So when I wrote the book, I certainly got a lot of hate mail from people who like guns and stuff, and associate that with cash. But, I also got letters from law enforcement officials saying, you have no idea how much cash we find, we'll go into houses in Florida and find the walls filled with cash of people hiding money...so yes, of course. But again, I mean the major holding is not drug lords. The major holding are people running what we might think of as legitimate businesses doing something that's legal, but not reporting honestly what their revenues are. I know I went around New York City with my son while I was writing this book, and I said, "Gabriel, do you notice how whenever we go in a store and they only take cash, it always seems to be the owner or the child of the owner who's running the cash register?"

Michael Klein:

Oh, you weren't trying to teach Gabriel how to trade in this way, I imagine. So, one of your proposals linked to all of this is to get rid of large denomination notes. Can you talk little bit about that?

Kenneth Rogoff:

Yeah. So, I mean, there're various ways to regulate cash. I don't want to ban cash by the way, I think we're not ready for that. Eventually we'll have ways to allow electronic transfers that are private up to some small level, but not a larger level. I think at the moment, you don't want to stop somebody from buying a present for their significant other and keeping it secret, how much money it was, it's not in your credit card bills. On the other hand, do want somebody to be able to buy a Lamborghini, or an apartment in Trump Tower. This goes on all over the world. In fact, real estate transactions in many parts of the world, but including Los Angeles, New York City, Miami, are very often in cash in order to misstate what the value is.

Kenneth Rogoff:

So I want to regulate it in a simple, and I think, light touch idea, would be to slowly phase out a \$100 bills and \$50 bills, something I actually first recommended 25 years ago. It actually got some attention from the U.S. Treasury, though I think it was mostly that they noticed the Europeans were going to have 500 euro notes worth more than five times as much. And they were thinking, "Oh gee, maybe we should have \$500 bills." But, we still have the hundreds. I've been saying this for a long time, hasn't so far gotten traction. Although the Europeans are phasing out their 500 euro note.

Michael Klein:

Well, I hope this podcast will help it get the traction it deserves. If we don't have paper money, but just electronic money, what would happen? The Bank for International Settlements reports that more than 60 countries have experimented with a national digital currency over the past year. China just introduced a digital currency after testing it in four cities, and now it's expanding it to bigger cities like Beijing and Shanghai. What are the advantages of an electronic digital money and what challenges does it present to policy?

Kenneth Rogoff:

Well, so we saw one of the advantages in the pandemic where the U.S. government wanted to get out money really quickly to people, and if everyone had a digital account at the central bank, they could do that very quickly. And it's a very efficient way to sort of help the unbanked, make sure there's universal inclusion in financial transactions. Many other countries have achieved this without having a central bank digital currency. But, the central bank digital currencies are coming everywhere. It doesn't necessarily mean paper currencies going to go away right away. For example, in China, they're thinking of keeping it around for a long time. I think the main issue with having it be with the central bank, everyone would use it electronically, like most transactions are now already. The main issue is privacy. Where do you draw line? And, I think it's going to be important before they more completely phase out paper currency to develop ways you can have some level of privacy for smaller transactions.

Kenneth Rogoff:

So, China has a proposal for this. The European Central Bank has a proposal for this. But again, this isn't happening overnight. What's coming reasonably soon, I would say in the next five to 10 years, are the ability much more easily for individuals to hold currency with the government or something like currency. Banks can already do this. There exist central bank reserves, which are just exactly like digital currency, but we would describe them as wholesale, not retail. But the retail is coming.

Michael Klein:

We have a nice EconFact memo by my Fletcher colleague, Jenny Aker about the use of digital currency in Africa. And, with the proliferation of cell phone technology there, that's been really important for getting money out to people.

Shifting gears a little bit now, Ken, what about cryptocurrencies like Bitcoin? So, these are distinct from digital currencies. Digital currencies are created by the central banks, but cryptocurrencies have a ledger, and are not controlled by any single entity. Isn't there a difference between trading cryptocurrencies on an exchange and just trading them with somebody directly?

Kenneth Rogoff:

So cryptocurrency is to the extent, you can't trace them, are a big problem for the government, for the same reason hundred dollar bills are. People could do illegal activity, terrorism, certainly tax evasion, all kinds of things that governments want to maintain some control over. And, I think for that reason, the whole idea that Bitcoin, which is sort of the quintessential cryptocurrency is going to replace cash, replace the dollar is just nonsense. Central theme in my book about the past present and future of money is the private sector innovates, but the government always comes in and regulates, and eventually appropriates. And, I think we'll see the same dynamic here. Now, you asked a very technical question, which may be a lot of your listeners wouldn't be familiar with. One of the ways governments have tried to sort of control Bitcoin and other cryptocurrencies let say, okay, if you trade on an exchange, it's a little bit like going in and out of a bank account, we can ask the exchange, which is like your bank. Who are you? Who did you give the money to? So, you can't do things anonymously. The trouble is you and I can do a trade where I

could give you just good old fashioned Benjamin's cash and you could give me Bitcoin, and no one will ever know. That's very difficult to trace. And yes, the FBI, if they decide that you're a person of interest and in some huge incident and they really need to know, yes, they could eventually figure out. But, even that's very difficult. There are lots of tricks around that. So, I think there are limits on how much the government can regulate us trading with each other. But, if you can't launder it back into the mainstream economy, it keeps the cryptocurrencies marginal and expect the central banks to crack down and keep doing that. China has already done so, and it's just a matter of time until other advanced countries do that.

Michael Klein:

So Ken, one thing about money that we learned in our first economic courses is a link between the growth of the money supply to inflation. And, this is something that people have been studying a lot lately. They're talking about the possibility of higher inflation, because of the Federal Reserve has increased the money supply so much. Does this say anything about the role of cash in the economy or are these concerns somewhat misplaced?

Kenneth Rogoff:

I'd say the concerns are somewhat misplaced. It's been a long time since you could draw a straight line from how much paper currency and cash there was in the economy to inflation, and that's because it's just one piece of our payments mechanism. First there came along checks, then credit cards, then debit cards, then smart phones, Venmo, all these other things, and they can all leverage up payments a lot. So, it's not such a simple connection. I mean that said, obviously to the extent the government's making loans cheap and spending a lot of money does eventually create inflationary pressure. So I have to tell you, I have not met the economist who really understands what's going on with inflation these days, it's been puzzlingly low. But, that doesn't mean it'll stay that way forever. I don't know if it'll go up now, but if we certainly continue with this very high pressure economy, de-globalization, we could get inflation.

Michael Klein:

Yeah. I had a discussion about the puzzling aspect of inflation with your colleague, Greg Mankiw back in the fall. And, I've also been puzzled as you mentioned, as have most economists. Ken, to tee up my last question, I'm going to quote from the great 20th century economist, John Maynard Keynes, he wrote, "The ideas of economists and political philosophers, both when they're right, and when they're wrong are more powerful than is commonly understood... Practical men who believe themselves to be quite exempt from any intellectual influences are usually slaves of some defunct economist." Now, you're not defunct, you're very much alive and functioning, but the ideas that you put forward in your book, *The Curse of Cash*, are pretty radical. How did you find the hearing that you got for these ideas among policymakers and economists who work for governments and international organizations? And as I mentioned, you're one of the most respected economists in the world, but you're coming out with this idea that, for them probably, it seemed like you were coming out of left field with that. Were those practical men and women as well receptive and open-minded to your arguments?

Kenneth Rogoff:

Well, I have to say when I first came out with the book, which has a number of ideas and that one of them is phasing down cash, another one is what to do when interest rates are zero, how do you conduct central bank policy, ideas about negative interest rates for another discussion, ideas about how to regulate cryptocurrencies, central bank digital currencies, and no one wanted to hear it. They didn't want to rock the boat. Central bankers are doing well. Everybody's happy. So when I first came out with it, I was sort of surprised how muted the response was, because I thought they were very provocative ideas, but now, they become very mainstream. And, I certainly got invited to discuss these ideas all over the place and in these circles. Well, they're still very cautious. I mean, I think -- particularly right now in the middle of

pandemic, we're doing a lot of out of the box things, which I support by and large -- And so, they're a little reluctant to take on the payment system, but it's coming. I think we're going to see radical changes over the next 5 to 10 years.

Michael Klein:

So, you were ahead of your time, but times have caught up with you. Maybe. Well, we'll see. We'll see. So Ken, thank you very much for speaking with me today about this really interesting and provocative topic, one again, where the time seem to have caught up with it.

Kenneth Rogoff:

Well, thank you so much for having me and it's by the way, a terrific podcast, and service that you're doing with EconoFact. So, I'm glad to join today.

Michael Klein:

Thank you very much for your nice words, Ken.

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