



Unraveling the Mysteries of Money

By Gideon Magnus

University of Chicago professors John Cochrane and Harald Uhlig debate money and economic policy during times of crisis.

To many people, the way money works and its link to inflation is rather mysterious, despite its obvious importance in the economy. We take it for granted that the dollar bills in our wallets can be exchanged for goods and services, but what determines their value? Why does a Big Mac cost \$3.45, and not \$345?

Most people think of inflation as the price of goods and services rising, but really inflation is about the value of money going down. So, if we want to think about inflation or deflation, we have to think about what gives money its

value. Are dollar bills intrinsically worthless pieces of paper that are nevertheless valued simply because everyone believes them to be valuable? Or is money perhaps a government liability, backed by an implicit guarantee that the government will be there, if necessary, to accept it in exchange for something of real value?

To get the answers to these questions, we invited two distinguished experts to Morningstar's Chicago offices on June 8: John H. Cochrane and Harald Uhlig. Cochrane is the

AQR Capital Management Distinguished Service Professor of Finance at the University of Chicago Booth School of Business. Uhlig is a professor in economics and the chairman of the Department of Economics at the University of Chicago.

Before we get into our discussion about money, we need to define what money is. Money is basically an asset, just like a stock or bond. It is an asset, however, with some particular characteristics. It is both a *unit of account* and a *medium of exchange*. There are different

types of money. The *monetary base* is money issued by the Federal Reserve, a bank owned and run by the federal government. Part of the monetary base exists in physical form (dollar bills and coins), or *currency*. The rest is electronic, or *reserves*, which are accounts that banks have at the Federal Reserve.

People tend to hold a fraction of their wealth in the form of money, because we need money to purchase goods and services and we obtain money when we sell them. How much money we hold depends on money's returns. If the returns to holding money are very low (compared with other investments), we try to hold less money. This low return occurs during inflation, when money is losing value quickly. Conversely, people are willing to hold a lot of money during a deflation.

How much money we hold also depends on the overall level of economic activity—how much we're buying and selling—and the costs of exchanging money for other assets. To hold very little money, you have to make a lot of trips to the ATM. Finally, people choose to hold a lot of money when the risks of holding other assets seem very high. We saw a massive increase in money demand during the financial crisis.

We can also talk about money and inflation in the context of current economic events. Many countries, including the United States, have accumulated high levels of public debt, often with the purported reason of "stimulating" their economies. Does higher government spending actually stimulate economic growth? Will large public debts lead to inflation? How is money linked to government debt? In Europe, is it desirable for sovereign nations to share a common currency? Was the euro even a good idea to begin with?

Cochrane and Uhlig help us tackle these questions and more. Our discussion has been edited for clarity and length.

The Value of Money

Gideon Magnus: I want to discuss the value of money and the idea that money is valued similarly to any other asset. Are there really assets backing money? If so, what are they? John, please explain.

John Cochrane: Money is just very short-term government debt. Really. Reserves at the Fed now pay interest, so they are overnight, floating-rate government debt that happens to be very liquid and used by banks to settle transactions. Cash is just government debt that people are willing to hold despite the fact it doesn't pay interest, because it's convenient for other purposes.

So let's ask the bigger question. Why do you buy government debt? Well, because you think you're going to get paid back. The government is borrowing in order to spend now, and promising to raise the taxes to pay you back later. So government debt is an asset that's valuable because it's a claim on future taxes.

If the government doesn't or can't raise future taxes relative to spending in order to pay off the debt—like, for example, the government of Greece—then the government debt becomes worth less, just as stocks must become worth less if the company makes lower profits. If the government doesn't default on its debt, then inflation must break out until all the debt—including money—declines in value.

Now, let's try to understand the mechanics of how this inflation comes about. Imagine a moment comes that the bond markets look at the U.S. and say, "You know what? These jokers aren't going to solve their structural deficit problems. They won't be able to pay back those debts, so we're not lending them any more money."

You might think this isn't so bad. All the U.S. has to do is cut out deficit spending for a while. But that won't do. Every year, the U.S. government has to borrow money to pay off the

old bondholders, even if it runs no deficit at all. We roll over short-term debt. Right now, our government spends about \$3.5 trillion a year, borrows about \$1.5 trillion to cover deficits, but must also borrow about \$3 trillion to roll over maturing debt. If we can't raise \$3 trillion in new debt to pay off the \$3 trillion that matures, we have a debt crisis. This is what happened to Greece. Of course, everything has its price: Rather than simply refuse to roll over, bond markets might just charge so high an interest rate that the debt is clearly unsustainable. That has the same effect.

In a debt crisis, we have very few choices. One choice is we could default, simply tell the bondholders, "We're not paying. Tough luck." The other choice is we print up money to roll over the debt. That—you can all pretty clearly see—leads to inflation.

It is to some extent a choice. You could imagine the Fed refusing to print up the money. But, as is happening right now in Europe, I think it's a safe bet our Fed would not—or would not be allowed to—force a massive default on government bonds by refusing to step in and buy them.

I hope this clarifies the link between debt, deficits, and inflation. If the government cannot convince bondholders that it will be able to raise tax revenues, which really means economic growth, or cut spending in the future, and if it does not explicitly default, then inflation must result. And it is *future* deficits that lead to *current* inflation.

I told a pretty extreme story, so the mechanism would be vivid. But the same thing happens every day on a smaller scale. Every 1% of unexpected inflation is a 1% loss to government bondholders, and means the government pays back those bonds with 1% less tax revenues or spending reductions.

We have this faith that [Federal Reserve chairman] Ben Bernanke's got his hands on the lever and that the Federal Reserve can always



There were two hyperinflations in Germany during the past century. When you are in elementary school in Germany, you learn three things. You learn how to multiply up to 10 by 10, you learn the alphabet, and you learn that a central bank should never, ever inflate away fiscal debt.

Harald Uhlig

control inflation. But that view has always had a little asterisk that gets forgotten: Monetary policy needs fiscal foundations. Historically, it's hard to find a solvent government that suffered serious inflation, or an insolvent one that avoided it.

Harald Uhlig: This particular perspective is new but still somewhat unorthodox, and there is a bit of a scientific battle on this. The orthodox perspective is what Milton Friedman introduced: thinking of money as a means of exchange. Money is valuable: I'm willing to accept a dollar in a trade because I expect that the next person is willing to accept that dollar in a trade. There's never really a dividend. It's just that the greenback passes on from one person to the next, and that gives it value.

Friedman famously said that "inflation is always and everywhere a monetary phenomenon." What he meant is that the central bank controls the growth rate of the money stock and thereby controls the inflation rate.

By and large, that's true. If you look at the hyperinflations in Russia and Germany, these were countries that had an enormous growth in the money stock. If you look at other countries that brought inflation down, it's often the central bank that did it.

So John's view is a new perspective. It runs under the heading of the Fiscal Theory of the Price Level. He argues with an asset-pricing equation that the price level is tied to the future surpluses of the government. The

broader perspective is that there are really two players here. There are the tax authorities; they're the fiscal players. And there is the central bank. The more orthodox view is that the central bank could just stand back and refuse to do anything about what the government out there is doing. The ECB [European Central Bank] could refuse to step in and help Greece; it could refuse to step in and help Spain. The Federal Reserve Bank could refuse to help the United States with its fiscal troubles. If there is so much outstanding government debt that future fiscal surpluses are insufficient, the government will have to default.

We saw defaults in Greece, right? We have seen plenty of defaults on sovereign debts. Of course, the other possibility is that you don't allow the default to happen and you do something to keep these bonds trading to avoid default. Exactly which way to achieve that may be an interesting debate among scientists.

But you can take the other perspective and say, "If the central bank always allows the fiscal player to run its course and never allows a default, then, of course, it must be right that the fiscal deficits and the future fiscal surpluses ultimately determine inflation."

It is this tension between what a central bank does and what the fiscal player does that determines inflation. So, it is neither quite the fiscal player nor the central bank. It depends on the strength that each player has in this game to insist on its share of the pie.

Cochrane: I want to agree with Harald on this. Friedman is famous for "inflation is always and everywhere a monetary phenomenon," $MV = PY$. [Money times velocity equals price level times income.] That was actually on his license plates, $MV PY$.

But Friedman was very clear that the Fed's ability to control money, and therefore inflation, rested on a fiscal foundation. If the Treasury is not solvent, and $MV = PY$, the Fed's going to

have to print up the M. He had some famous papers about fiscal and monetary interactions. Historically, yes, we see that hyperinflation is associated with too much money. But wait a minute. Why were central banks printing up too much money? Every single hyperinflation came from a fiscal crisis. Printing money was the last source of funding government spending, not from the whim of central bankers.

The ends of the inflations did not come with central bank just saying, "Oh, wow, we've been dumb all these years. We'll stop printing money." They came when the underlying fiscal problems were solved and the central bank was able to stop printing money.

I also agree on default. The crisis comes, and the government's choice is to inflate or default. I'd like to see more default, actually. I'm really a hard-money guy. I'd like to see no inflation. The only way that's going to happen is if we agree government debt will default—and arrange it so that this does not create chaos—rather than that money will be printed to inflate it away.

So that is the fundamental choice. The fiscal theory business is conditioned on the idea that government debt will always be inflated away and not defaulted on. Maybe defaulted-on is a better institution.

Great Expectations

Magnus: The value of money is determined to a large extent on what people expect to happen in the future—what the government is going to do. What are some sensible ways a government can "manage" these expectations to ensure that money's value is relatively stable over time?

Uhlig: This is an excellent question, and it has so many facets. Let me start with one, which we thought was just a Japanese problem, but now it's becoming a U.S. problem and a European problem: deflation.

If there's a gradual decrease in prices over time, that's wonderful. You can put your money under your mattress, take it out a year later, and you actually earned real interest on the money. It doesn't matter whether you put it in a savings account or into cash.

The fear about deflation is that deflation is at the edge of a cliff. If the deflation becomes larger than the real interest rate that would emerge in a stable economy, then people start looking to money as a key store of value. They start holding money. They stop investing in houses. They stop investing in companies. They stop paying for goods and services. It could derail the whole economy.

So policymakers don't want to go there. They would rather have a little bit of inflation. That doesn't sound too bad. So how do you do that? In Japan, lots of recipes have been tried. None of them worked very well. So one idea, you look to Friedman, and he says that inflation is always and everywhere a monetary phenomenon. Let's just print money.

That doesn't really help because if money is an exact substitute for bonds, people will just get rid of bonds, hold the money, and then at some later point, they will just swap it back, so in a deflation, money will just be siphoned off by the population. They will just hold it, and you really don't solve the problem at all.

[Columbia University professor] Michael Woodford, one of the most famous new-Keynesian economists, proposed committing yourself to return to a certain price path in the future. As a central bank, that means that you may not be able to do much about the deflationary path for now, because people are really indifferent between bonds and money. But as a central bank, you can promise that once you're back in the driver's seat, once you're back to being able to influence what the inflation rate is, you can get back to a price path that you preannounce. So, the longer the deflation lasts, the more inflation we should then have to come back to this price path.

Now, if this works, if you can convince people of this, it is wonderful, because then people would say, "It's not a good idea to put my money under the mattress because it's true we have deflation now, but if I keep it there too long, inflation will pick up again, and I better start spending now." The deflationary genie goes back into the bottle.

Cochrane: Expectations matter. This is really the important lesson. We shouldn't call macroeconomics "macroeconomics." We should call it "intertemporal economics." It's about today versus the future. What people think is going to happen in the future is what matters crucially to their decisions about what to do today—how much to save, consume, invest, whether to start a business or go to school. That was the revolution in macro in the 1970s that got us away from simple-minded Keynesianism.

Now, let's talk about those horrible words "managing expectations." Let's think about the kinds of policies we're talking about. Europe is in a big government solvency crisis. European leaders have been taking this as a job of managing expectations: "We need a big announcement to calm the markets and to bring down their expectations." It's as if you're trying to manage your 5-year-old's expectations of desserts with promises. It's not that easy.

Michael Woodford says that the Fed needs make a big announcement about how it's going to have a lot of inflation in the future. But wait a minute. We just talked about how the Fed is completely powerless, how Treasury bills and money are exactly the same thing, so there's nothing the Fed can do today to affect anything. And there will be no action it can take in the future either, if things stay the same. So if it can't do anything, what does this announcement about higher future inflation mean, anyway?

Teddy Roosevelt said, "Speak softly and carry a big stick." This is, "Speak loudly, because you



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John H. Cochrane

have no stick." The markets are going to figure out that you have no stick.

We've all seen deficit projections. When was the last time the government published a five-year deficit projection useful for anything but starting your charcoal grill? We all know that it's completely meaningless. Why should people believe Ben Bernanke any more than they believe the Treasury?

They shouldn't, and for a good and deep reasons. If Bernanke can change his mind today and announce to the press, "I want to have inflation higher three years from now," he can change his mind three years from now and say, "You know what? That was a dumb idea."

There's no way to precommit yourself to something that you have the authority to change all the time. We saw this already in Bernanke's attempt to say that interest rates would be zero for the next several years. All the commentators immediately said, "Well, if the economy picks up, he'll change his mind." Odysseus understood that he needed to be tied to the mast in order to precommit not to swim to the sirens. Bernanke is no different.

Economics has thought hard about this. How do you get stable policy when expectations about the future matter so much? The answer is that you have to have rules, laws, institutions, not discretion. You tie yourself to the mast. That's been something we've been searching for in

monetary policy since the gold standard disappeared. The gold standard had lots of problems. I don't think we should go back to a gold standard. But it had one great advantage. It was a clear rule. It gave a precommitment. It's going to be \$32 per ounce of gold. Done.

The answer to an economy where expectations matter so much is not that you shoot from the hip to try to manage expectations. The answer is you need to have policy that's based on rules, institutions, laws—not the whims of grand czars running things. That's the big lesson of modern macroeconomics.

Uhlig: There's complete agreement here, right? I said, "If people believe this," but that's a very big if.

Cochrane: There's no reason for them to believe it.

Magnus: John, you suggested in an article that the Fed target CPI futures. Could the Fed back its liabilities—i.e., money—with something real, like inflation-indexed debt?

Cochrane: Yes. I think the ideal monetary policy is a price level target. The CPI is about 230 today [meaning that a basket of goods that cost \$100 in 1982 costs \$230 now]. The Fed could say, "The CPI is going to be 230 now and forever."

This would work similarly to the old gold-standard target. We could have a similar commitment that the price level is always going to be the same; there won't be any inflation, there won't be any deflation.

The question, then, is where is the stick behind this promise? The clearest way is to trade something nominal, a dollar, for something real, like gold. We have real things in our financial system, CPI futures or inflation-indexed debt. By always targeting the relative prices of those two, you could have both a price-level target and a commitment device, a rule for policy that always means you're going to nail that

price-level target. But this is an idea way out of the mainstream right now.

Stimulus

Magnus: I'd like to discuss government policy responses to economic crises. Many people think it's intuitive that the government should spend more when there is an economic downturn. In other words, the government should get a larger degree of power in deciding which goods and services should be produced and consumed. But do collective problems necessitate collective solutions? Could you give us the best arguments for and against increased spending during recessions?

Uhlig: It's complicated. It's good to do certain things, not good to do other things. Let me first give you a pro argument. I walk around Chicago, and when I am under some of these bridges, I'm afraid they're going to fall down. There are roads full of potholes. A good time to fix these things is, presumably, when wages are low in the construction industry, when there are lots of workers idle, and when you don't have to compete against private business to do that construction. So you might as well fix them in a recession.

Another pro are automatic stabilizers. People want to be insured against business-cycle risk, but they have low-paying jobs and can't go out and buy fancy financial contracts. So developing government institutions that insure them against business-cycle risk by having some form of unemployment insurance is sensible. Government spending automatically goes up via these automatic stabilizers during downturns, but it's a good thing.

It's a bad thing, however, if you're in a fiscal crisis and you try to spend yourself out of it. Fiscal stimulus in a recession, as we saw in 2009, also doesn't work, because the lessons that we have learned over the past 40 years applied again. The spending comes too late, and it's often devoted to the wrong

projects. At the end of the day, it does extremely little.

So the typical Keynesian arguments that have been given for fiscal stimulus have been debunked many times. You may get a slight fire that looks good for a short period, but you're going to have to worry about the resulting debt problems and tax problems down the road.

Cochrane: All of Keynesian economics has a remarkably one-dimensional view of economic prosperity and decline. It's all about spending. It's too much spending or too little spending, or "aggregate demand." That's it.

Modern economies are like people with complex diseases. You find the cause of the problem and cure it. Keynesian economics is like the old humors, except there were four humors and there is only one Keynesian diagnosis and remedy. Diagnosis: inadequate "demand." Remedy: fiscal stimulus.

That's not how economies are. We had a recession because we had a financial crisis. The bailouts I didn't like so much, but a lot of things the Fed did to address the financial crisis affected the financial problems. Greece's economy is going down the toilet. Is that really because its government isn't spending enough? We know lots of other things that are wrong. Greece is full of structural problems. The whole economy has sand in the gears. Pouring on more gas doesn't address those problems at all.

But let's talk about stimulus itself. Like Harald, I want to clarify what the question is. Of course, governments should run deficits in recessions. For the same reason that if you lose your job, you shouldn't stop eating. You dip into your savings for a while and go look for another job. Governments are the same way. That means you're running deficits in recessions. As Harald mentioned, recessions could also be great times to do positive value projects, because the construction workers come cheap and so forth.

The issue for fiscal stimulus is whether, *above and beyond all that*, if the government borrows a dollar and spends it, does that make the economy one and a half dollars better off? In Keynesian economics, it's good for the government to borrow a dollar and spend it on something that ends up on the bottom of the ocean—totally useless spending is fine, because that raises GDP more than a dollar and a half. Literally, the key to prosperity is to pay people to dig ditches and then fill them up again.

Is *that* proposition true? We're saying it's not. The answer why is quite simply because there's a budget constraint. Those resources have to come from somewhere. It is not manna from heaven. If the government borrows a dollar from you and spends it, that's a dollar you do not spend. And that just doesn't work to raise GDP.

Now, let me be a little bit of a heretic. In some sense, fiscal stimulus can work. Yes, you heard it here. How? Keynesian stimulus is about borrowing money and paying it back in the future. That's what doesn't work. Printing money can cause inflation, and sometimes a bout of inflation can fool people into producing a bit more for a while. But printing money, and dropping it from helicopters, as Friedman famously suggested, is *fiscal* policy, not monetary policy. The Fed always takes back government debt when it sends out money. Only the Treasury can, essentially, print money and give it to voters. And, back to the fiscal theory, money printing can only create inflation if you really persuade people that the government will *not* raise taxes in the future to soak up the money. If you want inflation, you want people to get rid of this money like a hot potato.

I'm not saying creating inflation is good, but if you want to create inflation, you have to do it by fiscal stimulus. The tough part is convincing people that you're absolutely going to be irresponsible and never pay it back. That's just as tough as convincing people that you *are*

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going to pay it back, once they've decided otherwise. Managing expectations by announcements is awfully hard!

Europe

Magnus: Europe has come up a couple of times in our discussion. What is going on in Europe? Was the euro a good idea, or is it doomed to fail?

Cochrane: What's going on in Europe? I would say a massive collective self-delusion is going on in Europe. There's a belief that this is just a passing bout of illiquidity and market mania that soothing announcements from politicians will put to rest.

The euro is great. I am a big euro fan. I like a common currency, because I don't like inflation, and I like removing inflation and devaluation from the list of stimulus topics. It's especially good for a small country like Greece to pre-commit itself against devaluing ex-post. Back when Greece had the drachma, remember, it was not a wonder of growth and prosperity. It was a country of perpetual inflation, devaluation, poor finances.

Greece started growing when it joined the euro, largely because, in my view, it—and here is this word again—precommitted: "Look, we're issuing debt, but we're not going to be able to just inflate it away or devalue the drachma this time. It's going to be a really painful sovereign debt crisis with default and God knows what." It turned out that that's exactly what's happened.

The euro would be a great common currency with the understanding that sovereigns default. You can also have a currency union with a fiscal union, with the understanding that that currency is backed by all of our taxes. That's what we have in the U.S., because we pay federal income taxes, which is fundamentally what backs up our currency. Fiscal union run by Brussels is a terrible idea for Europe, but they can have a currency union without fiscal union.

But then, they have to allow for, plan for, and countenance sovereign defaults.

So, I was a big fan of Europe as a currency union without fiscal union, with the understanding that sovereigns can default, which is how the treaty was written. But when faced with it, the Europeans didn't want to do it.

They're heading in the direction of basically monetizing the sovereign debt. The ECB has bought a lot of it directly, but also lent to banks, which in turn have bought so much of it. Europeans don't want to ever see any bank fail, so that means the ECB owns the debt. Either Germany's going to pay for it, or they're going to inflate it away. Those are the current policy choices. I think the only sensible one is sovereign default; keep the currency union. They may try some of the other ones. Leaving the euro will be a disaster for Greece. It will be a country the size of Chicago with capital controls, cut off from the rest of the world.

The right answer, of course, is another choice—reprogram the simulation, as Capt. Kirk did—start growing. Structural reform. Tomorrow morning. Grow like crazy. Greece's tax revenues will grow. Bond markets will fund it. They could pay off this debt.

Back to expectations, rules, and precommitments for a moment. Right now, a serious bank run is starting, as people take money out of Greek, Spanish, and Italian banks. This is speeding everything up. The ECB is printing money like mad to replace the deposits fleeing the banks.

Why are people running? Precisely because there is all this talk about leaving the euro. If a country leaves the euro, bank depositors understand they're screwed. So, if your country starts talking about leaving the euro, run like the wind and take your money out of the bank. If Europe had been really clear that countries do not leave—which means Europe accepts sovereign default rather than a country leaving—and had kept sovereign debt out of

each countries' banks rather than seeing the banks as piggy banks for the government, they wouldn't be having a run now. If they let Greece default, then Spanish depositors would not be running for the exits.

Magnus: Monetizing the debt, would Germany go along with that?

Uhlig: There were two hyperinflations in Germany during the past century. When you are in elementary school in Germany, you learn three things. You learn how to multiply up to 10 by 10, you learn the alphabet, and you learn that a central bank should never, ever inflate away fiscal debt. It just gets ingrained.

So the idea that there's a central bank in Europe that uses its printing press to print money to inflate away the debt is just absolutely horrifying in Germany. Faced with that, Germany may exit the eurozone. The ECB realizes that they can only go so far before the music stops entirely. That's why many of the ideas that are out there just wouldn't be viable politically.

The debate has been very confused in Europe. When the Greek sovereign problems happened, the politicians in Europe were running around scared. They were saying this is going to be Lehman II and that it will lead to another worldwide financial crisis.

I was thinking: how? Greek debt amounts to 4% of EU sovereign debt levels. On a world scale, this is small potatoes. If the stock market goes down by 4% in value, it would be reported on Page 25 in *The Wall Street Journal*. But somehow if Greece defaults, it is a big issue. This is hard to understand.

I fear that we have gotten the debate in Europe to a point where we tie all these things together—sovereign default, banking crisis, the euro. We should untie them, and deal with one problem at a time.

We can have sovereign default. We have to think about how to stabilize the banking system. One hint here. You don't stabilize the Spanish banking system by encouraging Spanish banks to hold Spanish bonds. But that's exactly the policy that we started in December. You have to safeguard the euro as a stable currency. If it is a stable currency, it's going to continue to be used, and it might as well be used in Greece. They don't have to exit. They can still use the euro. That's not the issue at all.

Cochrane: I'm not sure Germany will have any choice. It's just arithmetic. What are the possible options? Germany could pay off all the Spanish, Italian, Portuguese, and Greek debt. Not happening. Germany doesn't have the resources to do it. Germany's got its own sneaking little debt and government spending problems.

Germany can let countries default. That would have been easier earlier when it was in private hands. Now, it's owned by the banks and, via the ECB and various bailout funds, by taxpayers. So now, when the sovereigns default, it's not just wealthy investors who lose money. You blow up the local banking systems. At this point, it's almost "Germany pays the bill" again.

Or, you let the ECB print money to bail out the countries and banks, and leave that money outstanding until it causes inflation. Does Germany have that much choice?

There is a hard question here, and we make it sound so easy. A central banker's job is to provide liquidity and to notice problems where the market is illiquid and step in. That's how they've viewed this all along: "There isn't a fundamental problem. The markets are a little irrational today. We'll just help by buying some of the debt. Then the markets will calm down, and we'll be able to sell the debt back again."

That's how the ECB is seeing Spain. "Oh, there's a run on the Spanish banks. Run means liquidity crisis. Just read your textbook. What

do you do in a run? You're supposed to provide lots of liquidity, then the run will ease, and then the central bank can get out."

Telling liquidity from solvency is actually a lot harder than we make it sound. I think Harald and I have the view that this was a solvency crisis two years ago and that Europe's going to have to wake up. I was listening to market reports this morning, and it's still: "We need to see something big from the Germans, some big sign, some firewall, some emergency funds, some temporary funding to get us through the crisis."

No, guys. Sorry. I think our view is we left that world two years ago, and the Europeans had better wake up and figure out that that is not the problem anymore. ■■

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