



Sri Lanka economic crisis: Steve Hanke on currency board and flawed pegs

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ECONOMYNEXT – Sri Lanka is now suffering the worst currency crisis in history of the island’s soft-pegged central bank which was set up in 1950 abolishing a currency board, dooming the country into exchange and trade controls as well as trade and exchange controls.

Emerging market central banks are notorious for the economic instability they frequently cause. For instance, Sri Lanka has had 16 IMF programmes and is discussing the next one. Only Pakistan has gone to the Fund more times in this region. In the past decade, the incidence of balance of payments crises in Sri Lanka has accelerated. Activist monetary policy or governments that spend beyond their means are often the reason for monetary instability in emerging markets.

Steve H. Hanke, Professor of Applied Economics at Johns Hopkins University, Baltimore, is a proponent of currency boards as a way to reign in irresponsible sovereigns. He is responsible for designing and implementing them in Estonia (1992), Lithuania (1994), Bulgaria (1997), and Bosnia and Herzegovina (1997).

He is also proponent of a close cousin to currency boards, “dollarization.” He is responsible for designing and implementing dollarization in Montenegro (1999) and Ecuador (2000). Hanke is also a senior fellow and Director of the [Troubled Currencies Project at the Cato Institute](#) in Washington, DC. Professor Hanke is known for his work as a currency reformer in emerging-market countries. In addition, he’s known as a currency and commodity trader. In 1995, when he was President of Toronto Trust Argentina in Buenos Aires, that fund was the world’s best performer.

He was a senior economist with President Ronald Reagan’s Council of Economic Advisers from 1981 to 1982 and has advised heads of state and governments in Asia, South America, Europe, and the Middle East.

In an interview with Echelon, Prof Hanke discussed why emerging economies often get into currency crises, how a currency board addresses the fundamental issues and if such reform is suitable in the midst of a balance of payments crisis.

There’s a lot of confusion whenever the word currency board is mentioned. Most people living in this century believe that currency depreciation is inevitable because, in their lifetimes, they have not seen fixed exchange rates. Can you explain to us what a currency

board is and what a floating exchange rate is and why they are both consistent regimes that do not collapse suddenly?

There are two types of exchange rates that are consistent with free-market principles. One is the floating exchange rate. In that case, the central bank has a monetary policy, but it does not have an exchange rate policy, the exchange rate moves around freely, and that's why it's called "floating".

In that case, you don't experience a balance of payments problem, because there's no conflict between monetary policy and exchange rate policy as the currency is floating. You have a monetary policy, but don't have an exchange rate policy so there can't be a conflict.

The big problem with a floating exchange rate is that you have no imposition of a hard budget constraint on the fiscal authorities. In other words, the central bank has its monetary policy and one thing it can do is loan money to the fiscal authorities by printing money and creating credit.

What would happen if you had a floating exchange rate in Sri Lanka? The rupee wouldn't float on a sea of tranquility, it would sink like a stone. That's the big problem.

Now, let us move to the fixed exchange rate. The typical monetary institution that imposes a fixed exchange rate is what is called the currency board system. Ceylon, as your country was once known, actually had a currency board for about 70 years from 1884 until 1950. The Ceylon rupee was fixed to the Indian silver rupee at a fixed exchange rate.

Fast forward. What would happen to the rupee if it was issued by a currency board? It would become a clone of whatever the anchor currency happens to be. For example, the U.S. dollar.

If you had a currency board, and you had a fixed exchange rate for the Sri Lankan rupee with the US dollar, and it was backed 100% with US dollar reserves, the rupee would be the same thing as the U.S dollar. If you didn't like the rupee, you'd take it into the currency board and exchange it at the fixed exchange rate and receive your U.S dollars at that fixed exchange rate. That would be the end of it. In effect you would be indifferent to the Sri Lankan rupee or the U.S dollar; they would be the same thing. In fact, it would technically be the equivalent of dollarizing and getting rid of the rupee. But if you want the rupee, you have a fixed exchange rate with a currency board. That's what happens.

Now, a currency board is another free-market mechanism for the balance of payments. With a currency board, you have no monetary policy, but you do have an exchange rate policy. So, you can't have a conflict between the two, you never get your feet tangled up, you never have a balance of payments eruption or anything like that. You don't have the kind of problem that you have right now in Sri Lanka.

The exchange rate system that you have in Sri Lanka is what's called a pegged exchange rate system. These systems actually contain a number of types, including "managed floating," "pegged but adjustable," "crawling pegs," and so on. In a pegged system the central bank has a

monetary policy, but it also has an exchange rate policy and those two invariably end up in conflict and a balance of payments crisis erupts as a result of that. Most developing countries have pegged exchange rate systems, and that is precisely why they invariably end up with a balance of payments crisis on their hands.

The beauty of the fixed exchange rate system, or a currency board, is that it provides discipline to the fiscal authorities because the currency board cannot extend credit to the fiscal authorities. So, there's a hard budget constraint. And the reason they can't, is that if the fiscal authorities wanted to receive more rupees, they would have to go to the currency board and give the currency board U.S dollars in exchange. So, there's no creation of credit under that system.

What you find in currency board countries is that you not only have the advantage of this smooth, free-market mechanism for adjusting the balance of payments, but you also have a hard budget constraint put into the system. It's like a straitjacket around the fiscal authority. So what you've witnessed – the wild spending and so forth in Sri Lanka – that couldn't happen with a currency board, because the fiscal authorities would be in a straitjacket and so would the monetary authorities, because remember I said that with a currency board you have no monetary policy. No discretionary monetary policy.

Is there a connection between dollarization and currency boards? Are we talking about the same thing here?

A currency board is exactly the same as dollarization in the sense that the adjustment process is the same and stability is the same because you have no conflict between monetary policy and exchange rate policy. With dollarization, you have no monetary policy and no exchange rate policy because you have no local currency. And you have no exchange rate policy because you don't even have a local currency. So, the dynamics of currency boards and dollarization are actually the same.

The only difference is with a currency board you have a local currency point number one, and point number two, you earn seigniorage or a profit off that because you're issuing the currency from the currency board, that's a liability, that pays no interest and the reserves that you're backing that currency with 100%, are invested and earning interest. So you always have a profit being generated by the currency board.

Most people here believe trade deficits drive the value of the currency. But we know that some countries, for instance, the US have chronic trade deficits, but have strong currencies?

First of all, there is a great deal of misunderstanding and ignorance about what causes a trade deficit. Trade deficits are not caused by exchange rates, they are not caused by nefarious activities by foreign countries, unfair trade, and that kind of thing. Trade deficits are homegrown. The trade deficit in Sri Lanka is caused by the fact that savings are deficient relative to investment. This is what's called an accounting identity, savings must equal

investment, and if savings are less than the investment, that difference is made up by the trade deficit.

In Japan, for example, you have a trade surplus, because it has huge excess savings in the economy, relative to investment in Japan, and you have a huge trade surplus and an export of capital. They're not borrowing from anyone, they're lending their surplus savings to foreigners. You have the same thing going on in China. Just like Japan, China saves much more than it invests, and it exports this excess savings. And also associated with that savings surplus, relative to investment, it has a trade surplus. Most people just don't understand the dynamics associated with the savings-investment identity and the fact that trade deficits and surpluses are all homegrown.

Let's talk about the experience of some countries with currency boards. Argentina is pointed out sometimes. A lot of people claim that Argentina had a currency board. What are your thoughts on that? What actually happened there?

Well, you're talking about a country that I know a lot about because I was President [Carlos] Menem's advisor. He was elected in 1989, and when I first met President Menem, Argentina had triple-digit inflation and had just come out of hyperinflation. He was trying to liberalize the economy and more or less follow the same kind of model that the Chicago Boys had introduced in Chile a few years before. He wasn't getting anywhere with the reform and he asked me what the problem was. He couldn't privatize anything and couldn't liberalize anything. Nothing was happening.

And I said, unless he killed inflation, he would not have any credibility, and he would not be able to do anything. And he asked, 'How do you do that? How do you kill inflation?'

I said, 'What you want to do is do what you did in the 19th century, in Argentina, when you put in a currency board and backed it with the anchor currency, like the US dollar. So the peso would become a clone of the dollar because the peso would trade at a fixed exchange rate with the dollar and be backed 100% with dollar reserves, and everything would be fixed.

He asked me whether I could write that up. So, Dr. Kurt Schuler and I wrote a monograph, titled *Banco Central o Caja de Conversión?*, that was published in Buenos Aires. It laid out the architecture for an Argentine currency board. Menem liked it. But when they got into structuring the law, in April of 1991, they introduced something they called "Convertibility". As it turns out, the Convertibility System looked somewhat like a currency board, because it required a fixed exchange rate and high levels of foreign exchange reserves. But, the Convertibility Law contained many loopholes which allowed for discretion on the part of the monetary authorities. In short, it allowed the monetary authorities to engage in a monetary policy and simultaneously an exchange rate policy. That's a "no-no" with a currency board.

Convertibility did kill inflation immediately and the economy started booming. And Menem got tremendous credibility and started engaging in a lot of other successful free-market reforms. So that was the initial impact.

But also, September or October 1991, I wrote an article published in the Wall Street Journal, titled Argentina Should Abolish Its Central Bank. I said Argentina should transform Convertibility into a currency board system. I said, if they don't, eventually this thing will blow up and they'll have problems. The reason I said that is that the Convertibility System actually allowed for the two things that I told you are associated with a pegged exchange rate system.

That is, the central bank could have a monetary policy, a discretionary monetary policy, and at the same time, have an exchange rate policy. Eventually, you can get yourself into trouble due to conflicts between a monetary and exchange rate policy.

It happened in 2001, 10 years after the introduction of Convertibility. Convertibility did blow up. The system operated very well for 10 years. Inflation was almost the same as in the United States, the economy boomed and contrary to what most people think, the economy remained competitive, and the export sector remained robust throughout that period.

But if you look at 1999-2001, during that period, when they were deviating from currency board rules, because they were a Convertibility System, there was a lot of debating about the system itself.

And Kurt Schuler did a survey at that time to see how the top 100 economists in the world were referring to the Convertibility System. 93 out of the 100 were incorrectly referring to Convertibility as a currency board.

And this is a very technical thing. If you look at the balance sheet of a real currency board, there's only one thing on the asset side of the balance sheet that moves around and that's the foreign exchange reserves. You have no domestic assets. And if you do, they're frozen and not moving around.

In Argentina, they had the foreign reserves on the asset side of the balance sheet, but they also had net domestic assets. Those net domestic assets were moving all over the place. They were buying, selling and sterilizing the inflows of foreign exchange coming in and neutralizing the outflows. The foreign exchange component was moving around, but also the net domestic assets were moving around. And you can't have this with a currency board.

It's a technical thing, most economists don't understand it. Convertibility was, in fact, a pegged exchange rate system with a very high level of reserves. So, it had a lot more credibility than most pegged systems because, for most of its life, it had big reserves over 100% of the pesos outstanding.

Let's talk about Sri Lanka's circumstances and perhaps draw some parallels with the work you've done in Eastern Europe. Sri Lanka is in a crisis. You have set up currency boards in countries in crises. What can we learn from that experience? Is a currency board something you can set up during a crisis?

I've set up four currency boards during crises of one sort or another. The first one was in Estonia in 1992. Estonia had just gained its independence from the Soviet Union. At that time,

they didn't even have a post-Soviet constitution. And in June of 1992, we set up a currency board and we got rid of the Ruble. The Russian Ruble was the currency. We got rid of that and introduced the Estonian Kroon, and it worked perfectly. And by the way, the important thing there was that we set that up in less than 30 days. From the time I introduced the idea, until the time it was implemented it was less than 30 days. It worked perfectly. It smashed inflation right away, Estonia got a local currency and stability was established.

And while stability might not be everything; everything is nothing without stability. So that was Estonia. The IMF, by the way, gave it rave reviews. All of the IMF's Article IV reports that came after June of 1992 were very positive. The currency board was very successful.

Then, in 1994, PM Slezevicius brought me into Lithuania and I became part of the government, where I operated as a state councilor. We put in a currency board in 1994, mainly because PM Slezevicius wanted a hard budget constraint in the system. He wanted to put the central bank into a straitjacket so that it couldn't extend credit to the fiscal authorities. He wanted to discipline the system.

The main purpose when it came to Estonia was to get rid of the Russian Ruble and establish its own currency. In Lithuania, the main purpose was to impose a hard budget constraint on the fiscal authorities.

Then in Bulgaria, I was President Petar Stoyanov's' chief advisor in 1997 and they had hyperinflation at that time. The inflation rate peaked at 242% per month.

We implemented the currency board in July of 1997. It then smashed the hyperinflation and put discipline into the system. The banking system had been insolvent before that. By the end of 1998, it was all solvent. And, by the end of 1998, money market rates had plunged to 2.4% per year.

Back then, the Deutsche Mark was the anchor currency for the Bulgarian Lev. And the Bulgarian Lev was trading at a fixed exchange rate with the Deutsche Mark with reserves of 100% of the Lev being emitted.

Bulgaria still has a currency board. It has the second-lowest debt to GDP ratio of any country in the European Union. And that's because of the hard budget constraint. The central bank that operates as a currency board cannot extend credit to the fiscal authority. So, no matter what government is in power, the budgets are more or less balanced in Bulgaria.

The last currency board I was involved in establishing was in Bosnia and Herzegovina in 1997. It was put in right after the civil wars in Yugoslavia and it was mandated by the Dayton Peace Accords. Those accords mandated that Bosnia and Herzegovina must install a currency board.

So, all four of these, with perhaps the exception of Lithuania, were installed during hot crises, and all worked extremely well. Indeed, they have all consistently received rave reviews by the IMF over the years. And in Bosnia, the situation was very tense, because you were right in the middle of a civil war situation.

How do you go around finding the capital for a currency board? I'm curious how these four European countries that you refer to did it also. And what will happen to the existing reserve money and the bank deposits in the banking system? Can they exist in parallel? What happens?

These countries didn't have problems with reserves, because the real inflation-adjusted value for their local currencies that were inflating at the time was very small. So, the reserve requirements, given the fixed exchange rate, determine the fair value of the currency, and you fix the exchange rate. Then you determine how many reserves you need. They needed very small reserves in these cases because the real value of the money supply was small. So, the reserves were not a problem whatsoever. They had plenty of reserves, in all cases.

Even Estonia, right after they left the Soviet Union, had gold reserves that had been shipped during World War Two. They had sent their gold reserves to London. So, they actually had gold reserves, waiting in London, that were used to back up the new currency that was started.

You can obtain the reserves in several ways. Number one, you can borrow the money.

Let's say you had zero reserves to set up a currency board. You could borrow those reserves from the government and if your currency is backed 100% the currency board could easily pay off the borrowings because they would be making a profit every year. That would be one way.

Or there have been currency boards that have started with less than 100% reserve cover for the total emission that is outstanding. But, the marginal or incremental issue of currency could not be made unless it was backed 100%. The infra-marginal could be conceivably less than 100%. But the marginal would always be 100%. These are technical things, but they haven't posed a problem.

You asked, how have these performed? There have been over 70 currency boards in existence and none have ever failed. There's never been a failure. And the ones that I gave you are the four new ones, Estonia, Lithuania, Bulgaria and Bosnia and Herzegovina. If you look at the IMF reports after we installed them, they are glowing. The IMF can't say enough good things about the stability and the discipline that was put into the economy with a currency board.

Are there any preconditions in your view, to setting up a currency board?

This is another stupidity economists talk about. Many economists claim that there are all sorts of preconditions that must exist before a currency board can be installed. In short, they stupidly assert that a state of bliss must occur before you install a currency board.

In fact, there are no preconditions for the installation of a currency board. That's not the point. You want to put in a currency board when everything is bad. Look at Estonia and Bulgaria, were there any preconditions? There were zero preconditions. Look at Bosnia, in the middle of a civil war, with no preconditions, none whatsoever. Everything was a complete disaster until a currency board was established, rapidly, in all cases.

And the solution to the major problem of inflation and the balance of payments problem was fixed immediately.

Look at it this way. Why do you have a balance of payments problem? What's one of the biggest causes of the problem in Sri Lanka? It's the fiscal deficit. That's where it comes from.

When the new government came in, the Central Bank of Sri Lanka was the first in the world to adopt what is called Modern Monetary Theory. The government said, well, where are you going to get the money? And the central bank said it's not a problem, we'll print it. It's an almost delusional statement of complete incompetence. But there you go, that was the road that was taken in Sri Lanka and it was the road to hell.

And the question is, how do you redeem yourself and remove yourself from hell. There is only one way and that's a currency board. This idea that some of the IMF people are suggesting about a floating exchange rate is wrong. The rupee will not float on a sea of tranquility; it will sink like a stone.

And what the IMF foolishly says is you'll have discipline because the IMF will manage things from Washington DC. No. You manage things in Sri Lanka with a currency board, you fix the problem yourself. This is a local problem and it can only be fixed by locals. And the only way to fix it is to put the government in a straitjacket with a currency board.

This happened in Bulgaria. It's fixed. They have the second-lowest debt to GDP ratio of any country in the European Union. Before the currency board, they had defaulted on their foreign debt twice since they were independent, in the post-communist era. They even defaulted on their domestic debt as well.

Literally within days, the inflation was smashed, and within months, Bulgaria's bank solvency problem was fixed, and the sovereign debt problem was fixed within months also.

How does a country default on its domestic debt? You can always print the money?

What if they don't? It is unusual to have domestic debt default rather than a sovereign foreign debt default. But it does happen sometimes. The government just didn't pay the bondholders.

There are regimes which seem to have stable exchange rates for decades. For instance, GCC countries have fixed exchange rates. China has had a fixed exchange rate for decades. And it appreciated as soon as it broke it. How do you explain this?

The Gulf countries do not have currency boards. Their monetary systems aren't orthodox currency boards, in any case, but kind of quasi-currency boards. But their systems have been very reliable fixed exchange rate regimes because they operate them in a de-facto currency board manner. But, unlike currency boards, these systems are vulnerable and can blow up.

In 1986 when I was doing a lot of foreign exchange trading at that time, and trading oil at the Friedberg Mercantile Group in Toronto, where I was the chief economist at the time – now

I'm the Chairman Emeritus of the Friedberg Mercantile Group – we detected that OPEC was going to collapse in early 1986 and we predicted precisely that the price of oil would go below \$10 a barrel. And we also anticipated that this would cause big problems in the Gulf and with the pegs that they had; we predicted that their pegged exchange rates would blow up.

We shorted oil with huge positions. Indeed, we had 70% of all the short interest in London. We also were short the Kuwait Dinar and the Saudi Riyal and, sure enough, both of those were devalued in 1986. Since then, they've been fixed.

Unless you have a major collapse in oil prices, for example, those quasi-currency boards and pegs that they have are pegged systems. They do have a monetary policy and an exchange rate policy. The exchange rate is fixed, but they have some monetary policy.

In Sri Lanka the central bank's net foreign assets are negative, and the monetary base is about 1.3 trillion, which is about \$5 billion. But the central bank has dollar-denominated debts of about \$5 billion. So, in that case what do we do? Do we need a new currency board?

What we did with Estonia, Lithuania, Bulgaria, Bosnia and Herzegovina, is we retained the central bank. But we changed the central bank law to make what they call the issue department, a currency board. So, you have a currency board inside the central banks in those countries.

Now, what you could do is set up a new monetary authority, a new currency board from scratch, and that would be easy to do, because currency boards only require a handful of people to run them. You'd probably only need a staff of about six to ten at most to run a currency board.

So, one thing you're suggesting is that the central bank is in such a financial mess in Sri Lanka, that maybe it would be a cleaner operation, instead of changing the central bank law and transforming the central bank into a currency board, to actually set up a new entity.

Your question suggests that there might be a cleaner way, and that way to fix this mess up with a currency board organized as a new, separate entity.

Then what happens to the reserve money and what happens to the bank deposits and the banks that are linked to the old money? Do you have two currencies operating?

No, you would have only one currency, which is the new one that would trade at a fixed exchange rate with the anchor currency and be backed 100% with anchor currency reserves. That would be the way I would do it. In currency and monetary affairs, you keep things as simple as you possibly can.

There have been countries where there have been parallel currencies, but I would avoid those kinds of complications. I like to keep things simple. If you keep things simple, they usually don't break.

What happens to deposits. The banks are in trouble now?

Well, the banks were in trouble in Bulgaria. They were insolvent. The banks will get out of trouble if you get the economy going. Then if the economy grows the debtors can pay off the creditors. In one year in Bulgaria, we made an insolvent banking system solvent and the level of foreign exchange reserves tripled. The reserves tripled in 12 months.

The reason for that is that there is a huge arbitrage profit to be had once you put in a currency board. Because if you did, the Sri Lankan rupee interest rates would be higher when you first started than interest rates in the United States. So, it would pay me to borrow money or take my dollars and exchange them for Sri Lankan rupees because I could earn a profit, a risk-free profit. And that's exactly what happened in Bulgaria and that's what happened in every one of the new currency boards that I established. You have huge arbitrage going on initially so you get a big capital flow coming into the currency board. With a currency board in Sri Lanka, the foreign exchange reserves would go up very fast because of the increased demand for the new solid rupee, which would be a clone of the US dollar. Indeed, the demand for those rupees would be very high.

And the reason that they're high is that the interest rate, initially, will be higher in the rupee than in the US dollar. Now, that'll arbitrage down and the interest rates will equilibrate. They'll be identical on a risk-adjusted basis.

You've been an associate of Milton Friedman and have called him your mentor. What was his opinion about currency boards?

Milton Friedman is mainly known for being an advocate of flexible or floating exchange rates. That's what most people think.

Friedman was for free market mechanisms to adjust the balance of payments, and there are two ways to do that. You either have a floating exchange rate, or you have a fixed exchange rate with a currency board. In Hong Kong in 1983, when they put the currency board back in, John Greenwood was the architect of that and Milton Friedman was 100% behind it, he endorsed the thing.

In Estonia, Lars Jonung, Kurt Schuler and myself wrote a book titled *Monetary Reform for A Free Estonia: A Currency Board Solution*. It was published in Estonian and English. Who endorsed that book on its dust jacket? Milton Friedman. So, Friedman has always been for currency boards in developing countries and countries with weak institutions and unstable governments.

He knows that the hard budget constraint gets put into the system and the straitjacket gets put on the politicians, forcing them to more or less balance the budget if you have a currency board system.

So that's where Professor Friedman was on that. It looks like a contradiction, but it's perfectly consistent. Pure floating exchange rates and a fixed exchange rate with a currency board are

identical in the sense that they are free-market mechanisms for adjustments in the balance of payments.

The floating exchange rate has a monetary policy but no exchange rate policy. The fixed rate delivered via a currency board has an exchange rate policy but no monetary policy.

You brought up John Greenwood. Last year you wrote an op-ed with John Greenwood in the Wall Street Journal about US inflation, which was spot on. (Too Much Money Portends High Inflation)/(New Inflation Stats Vindicate a Bold Prediction – WSJ). Can you explain your association with John Greenwood?

John Greenwood and I go back quite a few years. Not quite as far back as 1983, when he designed the currency board for Hong Kong. There were three key people involved in that; we had Greenwood, the man on the ground, we had Milton Friedman, and also Sir Alan Walters. Now, Sir Alan Walters was Maggie Thatcher's economic guru at 10 Downing Street, but he was also a professor at Johns Hopkins University where I'm a professor.

We were very close colleagues. We edited two books together. We wrote the entry for the currency boards in the New Palgrave Dictionary of Economics. So, Hong Kong's 1983 experiment was via Alan Walters. Because remember, Thatcher was the one that put the green light on the thing. Hong Kong was a colony. So, the PM at 10 Downing Street was the one who had to say yes. And Thatcher did on the advice of Sir Alan Walters. And Sir Alan, who was a close friend of mine, was keeping me informed. That's where I was introduced to currency boards.

Subsequently, Greenwood has had a number of my students as interns of his in Hong Kong. For example, Dr. Kurt Schuler was an intern of John Greenwood's. And Dr. Kurt Schuler was a postdoctoral fellow of mine, a student of mine.

Dr. Chris Culp was also an intern there, he was a student of mine. Then Greenwood and I were personally introduced when we were part of Robert Mundell's, the Nobel Laureate, inner circle, where we would meet every year in Tuscany, at the Mundell Palazzo. One thing led to another, and Greenwood is now actually a fellow at the Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise. So, he lives in London, but he's a fellow at my Institute at Johns Hopkins.

How did you get on with Robert Mundell?

Mundell was a big backer of currency boards and fixed exchange rates. We served on the financial advisory board together in the United Arab Emirates for several years. So, we actually had an official position together. In addition to being quite good personal friends, and professional colleagues, we were literally working together in the United Arab Emirates.

I could remember the first meeting we had at the financial advisory council was the week after Lehman Brothers went bankrupt, in the great financial crisis of 2008. We were in Dubai at the time. We had a lot on our plate immediately. The first meeting was very intense.

And the one thing about the UAE is they can act very fast. So, we made big recommendations to the Minister of Finance. And that was the last day of our meeting when we made our recommendations. We flew out that night and when I landed in Washington D.C., they'd already implemented all the policy changes that we'd recommended. They don't waste time.