BNY Mellon
Perspectives

FOUNDING TO FUTURE: BNY MELLON'S 237 YEARS OF TRUST AND INNOVATION

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Featuring:

Todd Gibbons, CEO, BNY Mellon

Dr. Richard Sylla, Professor Emeritus at New York University Stern School of Business

Moderated by Tom Hoare, Deputy Chief Communications Officer, BNY Mellon

TOM HOARE: Hey everyone, it's Tom Hoare. Welcome back for another episode of our BNY Mellon Perspectives podcast series. We've got a great episode for you today, especially if you like history, because this episode is a history of our bank, BNY Mellon.

Now as some of you may know, BNY Mellon just celebrated our 237th Founder's Day in June. Our firm's journey began in June of 1784, when Alexander Hamilton saw the need to establish a national bank to provide liquidity as the newly-formed United States really struggled to rebuild after the Revolutionary War. And so, we thought with Independence Day approaching here in the United States, we wanted to bring you a very special conversation that takes a look at BNY Mellon's founding, and how our centuries-old institution really began at the founding of the United States, and then went on to influence subsequent centuries of financial history.

We could think of no one better to bring this discussion to life than our very own CEO, Todd Gibbons. Todd is not only CEO; he's probably one of the people most passionate about our firm's history. He's been with our firm for more than three decades, having served in a number of leadership roles within the bank.

And in this episode, Todd sits down with Dr. Richard Sylla. Dr. Sylla is a professor emeritus at New York University's Stern School of Business. He is a prolific author, and a leading expert in financial and economic history. He is former Chair of the Museum of American Finance. He has spent decades researching not only our firm's history, but also how our firm has had a unique vantage point into the global capital markets, and how our firm and others actually influenced economic history and the development of the financial services industry, well beyond Wall Street.

And in the conversation, you'll hear about BNY Mellon's 237 years of innovation. They discuss

milestones such as the Bank of New York's role in starting the New York Stock Exchange, the history of the Mellon National Bank and eventual merger that led to the institution we know today. And you'll also hear about BNY Mellon's legacy of helping support the U.S. and global economies through financial crises. Our firm has acted as somewhat of a "secret weapon" during the Great Depression, the recession of 2008 and of course, most recently, the economic fallout of COVID-19.

Another interesting point – Dr. Sylla wrote one of the defining books on interest rates here in the U.S., and he and Todd take us through the history of interest rates, and how our past might inform the future after the latest financial crisis that we've all been through. They of course touch on digital assets and the future of digital currencies for central banks – obviously a hot topic for our firm, which continues to lead on the topic of digital assets. And of course, Dr. Sylla gives us his take on the musical "Hamilton" – which he has seen four times, by the way.

So we think you're really going to enjoy this conversation between our CEO Todd Gibbons and Dr. Richard Sylla. It's a really interesting look at our history, and a little bit of a glimpse into the future as well. As always, share your feedback, we want to know what you think. Listen, rate, wherever you listen to your podcasts, and we'll see you at the next episode. Thanks again, everyone.

TODD GIBBONS: Thanks, Dr. Sylla, for joining us. Just a few weeks ago, we celebrated our 237th Founder's Day. The Bank of New York was, if you can't do the math, founded in 1784 by Alexander Hamilton. And that was a pretty meaningful moment for global financial history, and certainly for U.S. financial history. Can you tell us about the historical perspective and significance of the moment? It must have been a very interesting time.

RICHARD SYLLA: Well, I'd like to start off by saying that New York used to have a holiday called Evacuation Day, and that was in November, and it commemorated the departure of the British troops at the end of the American Revolution. The peace treaty was signed in September 1783, but the British Army remained in New York until November 1783. And they had been there since 1776. And they'd made a bit of a shamble of the city. So New York was in kind of not great shape and less than a year later, the Bank of New York opened its doors.

So it was sort of the recovery of New York City from the mess the British left it in during the American Revolution. So the Bank of New York is one of those basic institutions of the country that helped us recover from the devastation of the Revolutionary War. And I think it started its business in June 1784, the actual foundation was when businessmen met, I think, in February or March 1784 and decided that they needed a bank to help the city recover. So it's a pretty basic institution in the United States.

TODD GIBBONS: It's a history we're really proud of. So Hamilton at the time, he was kind of thought of as someone engineering a financial revolution with widespread implications. How did this help influence the next few decades, and for that matter, even centuries, in U.S. financial history?

RICHARD SYLLA: Well, I think Hamilton wrote Robert Morris in 1781, when Morris was the Congress's Superintendent of Finance, and Hamilton said, you know, we'll win this war – which was still going on then – more by getting our finances in order than winning battles. And so Hamilton had

thought, from being a very young man in the army, that the financial foundations were very important to establishing the United States, and he founded the Bank of New York in 1784. Then in 1787, he was a member of the Constitutional Convention, and then he wrote the Federalist Papers, three-fifths of them, along with James Madison and John Jay, to get the Constitution ratified. And then on September 11, 1789, Hamilton becomes Treasury Secretary. And over the next four years, I think – basically most of it happened during Washington's first Administration – Hamilton engineers this financial revolution.

And what do I mean by that? Well, I think, from studying financial history for several decades now, "financial revolution" basically means the government itself gets its finances in order and is able to manage its debt, and then you have to have a solid currency, a stable currency, and you have to have a central bank. And if you do that right, then you're likely to get a banking system developing, and securities markets, and a key part of it is corporations. So there's about six components of a financial revolution. Earlier, it happened in the Dutch Republic, and it happened in Britain. And Hamilton knew that financial history, and he saw that the Dutch had done very well economically, and the British had done very well economically. So he thought the United States needed a similar thing.

So, one of the first things he does as Treasury Secretary is first create a report on public credit in January 1790. Four months into office, [it] says the United States should assume the state debts left from the Revolution and have a restructuring of the Revolutionary War debt into what we, today, would call the modern Treasury bond market with three brand new issues of securities: a 6 percent bond, a 3 percent bond and a 6 percent deferred bond that wouldn't pay interest for 10 years. I sometimes say Hamilton was the inventor of the zero-coupon bond for 10 years. And he did that because he didn't have enough money to pay the interest on it. So he said, after 10 years, we'll pay interest on it. And then he founds the Bank of the United States and he calls for it at the end of December 1790. Congress enacts the bill in 1791, and the bank opens its doors at the end of 1791. And his Mint report of January 1791 lays the basis for the U.S. dollar. It's defined both in terms of silver and gold, so it's a hard-base currency.

So then what happens? I mean, the new Treasury bonds hit the markets and people start trading them in 1790, 1791, and the state debts are assumed, and the Bank of the United States is a quasi-public-private corporation. It's 20 percent owned by the U.S. government, but it issues a lot of equity securities. And so, you have a national debt of some $70 million, and you have $10 million of equity in the Bank of the United States. People began to trade the stocks and bonds, and the trading picks up so much, that in the wake of a financial crisis – Wall Street's first crash in 1792 – a group of brokers get together under the Buttonwood tree in Wall Street, right near the Bank of New York, and they found what becomes the New York Stock Exchange and a sort of better trading system.

Meanwhile, Hamilton's financial innovations prod the states into founding more banks. And so America is off and running with more and more banks year after year. And the state governments, also taking a cue from Hamilton's corporation, the Bank of the United States, the state governments begin to charter more corporations besides banks. And so the United States, in just a few years, gets all the key components of a modern financial system and it begins to grow very rapidly, from that point on.

TODD GIBBONS: Wow. Amazing. And it's also, I understand that first equity traded under the Buttonwood tree was actually Bank of New York stock: BK was the first issue. So with that much going on in the financial world, it must have been interesting to know what the political climate was in the United States, and the impact on some of the others, the likes of Jefferson and Madison. How did that develop?

RICHARD SYLLA: Well, I think it's very interesting. I've actually thought about it over the years, because Hamilton's financial innovations were, I think, really very good for the country. They pointed us in the right direction and since that time, partly due to our financial expertise, we've become the sort of richest, most highly developed economy in world history. And so, if this started as I think it did, with Hamilton's innovations in 1790, 1791, 1792, why was it that Thomas Jefferson and James Madison began to oppose Hamilton? And they did. Madison is particularly interesting because he was an ally of Hamilton in the 1780s. They worked together to get the new Constitution, and then they did their best to explain it and defend it and get it ratified with the Federalist Papers. So Madison kind of does a 180-degree turn, sort of in 1790, and begins to oppose Hamilton's measures. I think one of the reasons is that Madison by then is a Virginia politician, not a national reformer, and his friends in Virginia don't particularly like Hamilton's policies.

I think there's two problems. One is Hamilton himself is known as an opponent of slavery, and secondly, Hamilton is working to strengthen the federal government. And it seems that to southerners, the main threat from what was going on in the national capital was that Hamilton was strengthening the federal government.

TODD GIBBONS: It must have impacted ultimately where the location for our capital ended up, right? Can you give a little color around that, how we ended up in D.C.?

RICHARD SYLLA: Well, the capital in 1790, in 1789 and 1790, when Hamilton comes into office, is in New York City. And right down there on Wall Street, in fact, the old City Hall was converted to a national Capitol, so the first Congress met down there. Hamilton wanted to have the federal government assume the debts of the states. He thought that would be a clean way of lightening the burdens on some states that were overburdened with that. And southerners didn't like that. The story is that Virginia had paid some of its debts and thought it was going to have to pay not only its own debts but some other debts. This is not really a true story, because there was going to be an accounting of which states contributed more and which less to the American Revolution, and there would be an adjustment.

So if Virginia paid some of its debt, it would get credit for that in the adjustment. But anyway, maybe some people in Virginia didn't understand that, so they opposed the assumption of state debts, and Hamilton thought that was a key part of his program. So Jefferson told the story of meeting Hamilton, and I think it was in May or June of 1790. And Hamilton is worried that the assumption plan won't go through. And Jefferson, who hasn't been back from France for very long – he's the Secretary of State – says, “I'll invite you and James Madison over for dinner at my place,” which is on Maiden Lane, right across the street from the Federal Reserve Bank in New York now. It's marked with a plaque in the wall. So they have this dinner in June 1790 and Madison says, “I want to support your plan, Hamilton, but I have enough influence with other southern Congressmen that I can talk them into supporting the

plan."

So Jefferson brokered this with the dinner, and Hamilton and Madison agreed that assumption would be a good thing for the United States, but they wanted something in return. Remember, Jefferson and Madison are Virginia slaveholders, they wanted the national capital to be closer to the south. And so they proposed that it be moved to the Potomac River, not too far from where they lived, and that was the deal. Hamilton would back the movement of the capital in return for Madison backing Hamilton's plan to get the state debts assumed by the federal government. And so there was nothing on the banks on the Potomac except the mosquito-infested swamp.

So they had to plan over ten years to establish the capital, which we now call Washington, D.C. And in those ten years, the capital moved a little closer to the south to Philadelphia. And so when we go to Philadelphia today, we see a lot of the old government buildings from the 1790s. For ten years, Philadelphia was the capital, but then Washington, D.C. opened for business in late 1800, and John Adams was actually the first President to live in the White House. He only lived there for two or three months before Jefferson replaced him as president, but that's the kind of story though. So again, finance, getting the state debts assumed, had a lot to do with where we see our national government today.

TODD GIBBONS: That's incredible. What a fantastic compromise. Well, it was great that we built off the financial foundation that Hamilton had the vision to see. So I know you've attended the show "Hamilton" on Broadway…

RICHARD SYLLA: Four times.

TODD GIBBONS: Four times? OK, more than us, and we're big fans. So, any thoughts around [Lin-Manuel] Miranda's incredible rap lyrics? Did he get the history right?

RICHARD SYLLA: I think it's mostly right, a few liberties were taken. Sometimes people that were involved in a particular conversation weren't the actual people involved, but there was no point in having a few extra actors and roles to play. So some of the people that were visiting Hamilton on one occasion in the musical were being portrayed as being present at some particular meetings. But I think for the most part – it's my opinion, not everyone agrees – I think it's a fairly accurate presentation of what Hamilton did, his role in the Revolution, his background from the West Indies, the key role at the Constitutional Convention, and of course, he was a lieutenant colonel in the Continental Army during the war and actually led a bayonet charge at Yorktown.

I think that's one of the reasons I got so interested in Hamilton, because I couldn't believe that this Founding Father – I thought he was just a statesman – read a lot of books and wrote a lot of papers. But no, I mean, he led several hundred troops at Yorktown to capture a British redoubt. And that made it possible for the Americans to win that battle, which was kind of a key battle, where the British decided that it wasn't worth fighting the Americans anymore. He was a man of action, but he was also an intellectual. And Miranda, I think, captures that in the musical. Of course, there's a lot of other stuff there, with the dancing and the ladies and all that, but I think he did a very good job.

TODD GIBBONS: I'm glad to hear that, maybe I'll go back just for another history lesson. We're a global institution that has our roots in New York City. I mean, we've been here throughout our history. The city is going through an incredible time. I know that you've served in a number of fine institutions here in New York. And as we work our way through the pandemic, what lessons do you think that we've learned and how do you see the future from that? And specifically, have you thought back to the impact on finance and cities, for example, with the Spanish flu? Are there lessons that we should be incorporating into our own thinking right now, as we move out of the pandemic, into more of a normal environment?

RICHARD SYLLA: Well, I think the history of New York City is that it goes through various crises, but it always seems to recover and come back. Even more than come back, it becomes vibrant again and advances. And I started out by saying that the Bank of New York was founded to help New York recover from the devastation of the American Revolution, when the British occupied the city for seven or eight years. And there was fire, there were pandemics, of course, before. There were yellow fever outbreaks in New York in the 1790s and other American cities. And so New York has an experience with pandemics or epidemics anyway, and fires in the 1830s, and there was a lot of disagreement in New York City about what the position should be in the Civil War.

There were some draft riots and things like that, and then there were financial problems of the city later on. In the 1970s, I remember in particular, I wasn't living in New York then, but New York City almost went broke there in the middle of the 1970s. And what I see is that, as in the very first recovery from the Revolution itself, finance played a leading role. The financiers. . . go back to the 1970s, when New York was in tough shape financially, and the financial leaders of New York came together and worked out a plan in conjunction with the politicians to restore the city's finances. So in my view, New York has recovered many times and will again, and finance will play a leading role, I think, in that recovery.

TODD GIBBONS: I have to agree with you on that one. I've seen the resilience of the workforce in the city, and also the leaders in the city, I'm highly confident that we'll be back, and probably sooner than people had expected. Let's shift to another topic. I know it's near and dear to your heart, you've done a lot around interest rates. And there's an awful lot of debate now among economists about inflation and interest rates. And I think it's starting to become a little more split than it had been.

I don't think in my career that I've ever heard the Fed mentioned so frequently, how inflation is kind of welcome and it's transient. In some ways, it's similar to the comments that were made in the late 1960s before we did actually see inflation. The Fed, at the time, was indicating that they only thought things were going to be transient. Any thoughts about it? Are there any lessons to be learned here? Any thoughts about where we might see interest rates going in the future?

RICHARD SYLLA: Well, I'm a co-author of a book called *A History of Interest Rates*, which actually covers several thousand years of interest rate history. And as a result of that, I've gotten a lot of media calls to discuss where we were. And one of the points I make is that right now, we seem to have the lowest interest rates that we've had in 4,000 or 5,000 years of history. And this seems to be related to the actions of the central bank. Now, like you, I always thought central bankers were the ones who were considered to be fuddy-duddies because they wanted the inflation rate to be zero.

And so it is a kind of unique experience when the central bankers in the last 20 or 30 years started saying we should aim for an inflation rate of 2 percent – I think it's been the common target.

That was really unusual, and I know a little bit of the reason why – that somehow labor markets work better if there's a little bit of inflation, but I couldn't really understand why you should sort of make that a target. What I see today is that the central banks, particularly our Federal Reserve, seem to think that the pandemic caused unemployment to go up a lot, and we should forget about everything else until we get back to full employment – as we had before the pandemic. And that's led them to say, well, there might be a little bit of inflation, but we didn't have as much inflation as we wanted before, so we can have a little bit more now and even things out.

And I'm a little puzzled by that. My view is that the Federal Reserve doesn't seem to care as much about inflation as I think maybe they should. I'm old enough to remember the inflation of the 1970s, which ended up with double-digit inflation. And the late Paul Volcker was a friend of mine, he did some teaching with me at NYU when he was a visiting professor there. Neither he nor I could understand why 2 percent was a magic number. And what's wrong with zero? I think what I see is that modern central bankers – Ben Bernanke would be a classic example – remember the 1930s, when deflation was a big problem in the 1930s. And so modern central bankers sort of think that deflation is the worst thing in the world. And in order to avoid getting even close to it, we should have a little bit of positive inflation.

That seems to be the reasoning. As an economic historian, I know we had deflation in the late 19th century along with very rapid economic growth in the United States. So deflation, in general, is not the worst thing that can happen to an economy, but I think that history is not really consulted by modern central bankers, they just remember the 1930s. And therefore, they want to avoid that sort of deflation, which was terrible. And therefore, they're willing to allow more inflation now. I think the markets may have something to say about that. But if the inflation rate picks up, and this is what I remember from the late 1960s, the 1970s, the markets sensed that we were having more inflation, and so they marked up interest rates.

The Fed can fight that, but I think in the 1970s, when the Fed tried to deal with rising interest rates, the inflation rate got worse. And so we ended up with stagflation, and by the end of the 1970s, we had double-digit inflation. Paul Volcker came in and saved us from that. I think today's central bankers are a little too sanguine about inflation being temporary, and some of the recent data are just based on a low base a year ago because of the pandemic. I mean, there's a lot of excuses made for why not to worry about inflation. I, myself, worry about it a little more than the central banks do.

TODD GIBBONS: Yeah. It's very interesting. It sounds like this could end badly, similar to what we might have seen. We shouldn't forget the history of what we've seen 50 years ago.

RICHARD SYLLA: Right.

TODD GIBBONS: So we talk a little bit about innovation. In order to survive for centuries, our firm certainly had to be innovative, as well as resilient. And resiliency is something that's being discussed more and more, it's actually understood more and more, especially given the threats from cyber and

other outside types of risks. So we've gone through many of the big three, I'll call it. The Great Depression, [then] two of them that you and I have been involved in: the Great Recession of 2008, now the pandemic. Many people don't really appreciate what we've done through some of these, as BNY Mellon. Do you have a perspective? And you could help our listeners understand how institutions, including our firm, have played a role in helping support the U.S. economy through some of these difficult times and the operations of the global financial system.

RICHARD SYLLA: Right. Well, I think that going back a long ways, the early Bank of New York was, and I think it's maintained this reputation throughout its history, as being a rock-solid institution that had a strong balance sheet, that didn't take undue risk but it could be innovative in some ways. One of the innovations of the early history of the Bank of New York, I think it was in 1830, the leaders of the Bank of New York founded the New York Life Insurance and Trust Company. And what's interesting about that, of course, it shows that there was a need for insurance and trust companies, so those were innovations in themselves. And in colonial America, there wasn't much in the way of insurance or trust services.

What's interesting about that particular innovation of the 1830s is that in 1922, the Bank of New York merged with the trust company – New York Life Insurance and Trust Company that it had done – and that showed that then you could put banks and trust companies together. And as the country got wealthier, of course, there was need for these trust services. Asset management, I guess, is what people call it today. And then I think coming up closer in time, we had an over-regulated banking system from the 1930s, I would say, into the 1980s. And banks could only grow, because of regulation, through mergers and other types of innovative activities. And the Bank of New York grew kind of quickly as regulation was relaxed a little bit.

Sometimes it grew before the regulations were relaxed, just to better serve its customers through achieving scale. But I think in the last 30 or 40 years, and you probably know this very well, it's been a huge amount of merger activity, and the growth of the Bank of New York, which was for a long time, it was by no means the biggest Bank of New York. It may have been the best Bank of New York, but it wasn't the biggest Bank of New York.

TODD GIBBONS: And I'm with you on that point.

RICHARD SYLLA: And I think Hamilton would like that: to say that the Bank of New York was, throughout its history, was one of the best banks in New York, if not the country. So anyway, I think what I see is that in terms of that early innovation with the trust company and insurance, the financial system becomes more complex over time, banks have to adjust to that. And when I look at the Bank of New York today, I remember when I came to New York, 30 years ago, there were branches of the Bank of New York around the city and they disappeared. And I think the Bank of New York has, in a modern huge financial system, has carved out a kind of important role as a servicer of other financial institutions and assets, rather than being a retail bank.

And so it's been able to reinvent itself and find a comfortable niche in the modern financial arrangements, where it kind of plays a key role. I think you have $40 trillion of assets in custody and under management. I mean, what do you say? Custody and administration, I think.

TODD GIBBONS: That's right.

RICHARD SYLLA: So you've become a huge institution and playing a specialized but very important role in the financial system. So I would say, getting back to your main point, was that an institution has to be able to adjust to the changes that take place in the economy around it. And banks that have lasted for 200 years or more were able to do that. They were able to grow with the country and adjust to the changes and trends and find a comfortable position in the financial system and do a good job of it.

TODD GIBBONS: Yeah. You're making a lot of good points there. One time, we were a universal bank and we chose to focus more on the payments in clearing and the transaction banking side of banking. Can I get your thoughts about that? Many institutions continue to be universalist, and they've opted to perform a wide variety of functions, while we encapsulate – although it's a diverse set of those transaction banking services – it is a more focused approach. How do you think that sets us apart? And where do you see the trajectory of the industry? You think it'll continue to go universal, and you'll have a few focused institutions? How do you think, and have you given that some thought?

RICHARD SYLLA: Well, I have. I was the Henry Kaufman professor at NYU for many years. Henry Kaufman Professor of the History of Financial Institutions and Markets. Henry and I are good friends, and he thinks that these modern universal banks are not so easy to manage. If you try to be all things to all people, you may have some problems somewhere in that. He also thinks modern banks, especially the universal-type banks, are way too large, and so they're difficult to manage. I think the focused approach probably can lead to better management. And for many years, economic historians talked about the Anglo-Saxon banks and markets model versus the German universal banking model, where the German universal banks did all things for their clients.

And these were held up as two ways to go. And I think the recent history shows that if we examine European banks, they have, in general, more of the universal banking model. The European banks have been having a lot of troubles in the last 10 to 20 years. And so I think Henry Kaufman is onto a good point there, when he says it's just difficult to manage. Think of a bank, all over the world, you're doing all things to all people all over the world, but you know this better than I do. Somebody's got to be in charge and take the responsibility at the top: the CEO. So I think there are risks to the universal banking model, especially when banks are very international. I think the focus model is probably the wave of the future. I think universal banking is not as attractive a model as it was maybe 30 or 40 years ago.

TODD GIBBONS: Thanks for that. That debate will probably go back and forth, as the debate around conglomerates always has. You raised some comments, and you basically said the banking system was probably over-regulated post the Great Depression from the 1930s and into the 1980s, I think, is where you had indicated. I'd kind of love your perspective on the cycles of regulation – because it certainly has had an impact of how we've managed and formed ourselves – and how important is regulation either at preventing, or perhaps in some instances, even maybe leading to some financial crashes?

And as I refer to that, if you go back before the great financial crisis, regulation had led to a shadow

banking system that was taking on a lot of leveraged type of risk outside of the traditional banking system. And I'm wondering if you see any parallels today, and what we're starting to see with fintechs entering the transaction banking side, where counterparty risk is probably not as well known or the importance of resiliency and just the investment in infrastructure. So just generally, your thoughts around regulation, and how it's not too cold, not too warm, but just about right?

RICHARD SYLLA: Yeah. Well, the 1930s, of course, the Depression was a disaster. Something like 10,000 banks failed from 1930 to ’33. And so, in terms of cycles of regulation, if you have a major crisis like that, you can probably expect that regulation is going to become more strict. Whether it's wise regulation or not, that is more open to question. But the fact that regulation will be beefed up in the wake of a crisis is kind of one of the staples, I think, of financial history. So I think the regulations of the 1930s began to cause problems for banks in the 1950s and ’60s, when our banking system was pretty much organized along state lines, and banks in many states, banks had to operate out of only one office. And this didn't make a lot of sense when banks were trying to grow.

For one thing, if you keep a bank small, but you have big firms in the economy, it becomes harder for the small bank to make a loan to a big firm, because regulation said you can't lend more than 10 percent of your money to any one particular institution. So the banks were sort of hemmed in by anti-branching regulations. I think, for a time, you might be able to branch within New York City or parts of New York City, and only later on could you open branches upstate. And then finally, in 1994, not so long ago, we got interstate banking. Congress passed that law in 1994. So, I mean, the regulations of the 1930s caused more and more problems for banks in the 1960s, ’70s and ’80s. And the banks worked to have those regulations relaxed; we repealed Glass-Steagall, which separated commercial and investment banking, in 1999.

Now, I think it was wrong to say, but people said it: that the repeal of Glass-Steagall is what caused the 2007 to 2009 crisis. Actually, that didn't seem to be true. Lehman Brothers was not a commercial bank, and it was an investment bank, and they existed before that. So I think it's easy to claim that a deregulation of sorts causes a crisis. And, of course, we got Dodd-Frank in the wake of the 2007-9 crisis. I haven't quite understood Dodd-Frank. I mean, it seems like they're still implementing some of its provisions. Even though it was a stack of paper, one or two-thousand pages high, it didn't really settle a lot of issues. It left a lot to be interpreted and argued about ever since then.

So if the banks are over-regulated, you're going to get things like shadow banking. I think we see that, not just in the United States, but in China, I'm told that where the government regulates the banks, there's a shadow banking system growing there. Financiers are good at finding ways around regulations. The banks may not be able to do it on their own, but they'll find ways, off balance sheets and things like that. Bankers did that, leading up to the crisis 10 or 12 years ago. We want the right balance of regulation. I do believe that banks have to be regulated, because the early banks, they wanted to hold as little capital as possible, and they wanted to hold as few reserves as possible, and that often got them into trouble. So, I think that regulation is justified, but we can have over-regulation or under-regulation. I think that we're still searching, two or three hundred years into the history of American banking, we're still searching for the right balance of regulation in terms of not making the industry unsafe, you want to make it safe, but not so safe that you prevent innovation and serving the growth needs of the economy – which is what the banks are really about. I believe in finance-led

growth. In many places in the world, finance was kind of a key driver of economic growth, and we don't want to lose that ability of the financial system to innovate and even drive economic growth.

TODD GIBBONS: Yeah. Don't kill the golden goose in the process, which you make a very interesting point: that regulation kind of goes back and forth, given circumstances. So we went through the great financial crisis, and Dodd-Frank followed to try to prevent something like that happening again. So as we've just gone through the pandemic, and initially it was triggering a financial crisis, which was managed through. The banks seemed to come into it much, much better off, and maybe grant some credit to what was done under Dodd-Frank with the capital and liquidity regulations. I know for ourselves, it was all about our clients, our colleagues, and also having the strength of our balance sheet to support our clients through what was going to be a very difficult time. And that was our mantra internally in March of 2020, when things really started happening. Do you think there's additional regulation going to come into the financial system because of what we just went through?

RICHARD SYLLA: I don't really see that much discussion of the pandemic crisis itself revealed a need for more regulation. As you say, I think the banks handled it pretty well. And American banks in particular, even before the pandemic broke out, the American banks had recovered from the financial crisis much better than European banks did. I'm glad to hear you say that maybe Dodd-Frank has some good effects because typically, many bankers will say, well, regulation is just too strict. And so it's nice to think that the leading banker thinks that there were some good points to Dodd-Frank. I think the pandemic crisis came from outside the economic and the financial system, and it doesn't seem to me to reveal any flaws that need to be corrected by regulation.

In fact, I think we should congratulate our banks on staying strong throughout the crisis and keeping the financial system running pretty carefully, running well. I watched the stock market flop out a bit late last February and into March of 2020. And it looked like things might be getting bad, but then somehow the Fed stepped in, working. The Fed works through the banks and the central bank, even going back to Hamilton and his financial revolution. You have a central bank and a banking system and the securities markets, and the Fed came in there and did what was necessary to stem that crisis that rose for one month, a year or so ago. So I think that we should probably conclude, in thinking about the pandemic, that it doesn’t show that we need more banking regulation. I think we should pat ourselves on the back a little bit for saying that the financial system actually worked pretty well.

TODD GIBBONS: I appreciate that comment. We're quite proud of our role in it. We were the operator of a number of the facilities that got liquidity where it needed through the government. The Primary Dealer Credit Facility operates on our infrastructure. Even the Municipal Liquidity Facility that helped out some of the states and municipalities, the PPP program, so a number of facilities that we work closely with. And the other thing we're quite proud of is that we're important to market infrastructure, and we were up and running throughout. Even though we did go to a work-from-home, but it was a proven level of resiliency that I'm very proud of.

And by the way, the new level of resiliency, it's not just about operations and infrastructure, it's also about your people. And your people being able to get it done while they're dealing with some of the inevitable concerns, the personal concerns that they had during that time.

But let me switch the topic, Professor. We've been talking about innovation a lot and we recently made a noteworthy announcement where we are starting kind of the first Digital Asset unit here at the Bank of New York Mellon, we announced that back in February.

So it will be an opportunity to customize, tokenize and manage, administrate, value digital assets. From your vantage point, what's the significance of this announcement in financial history? And how might it shape things as we look forward? Is it a yawn, or is this something much more significant?

RICHARD SYLLA: Well, I've been a skeptic of things like Bitcoin, but sometimes I look in the mirror and say, "Well, you're just an old guy, you don't understand what's going on anymore." But I think the digital revolution is something really big and we may be in the early stages of it. So I think there's going to be digital assets. Almost everybody has digital assets, though. My computer is stuffed full of papers I've written and drafts and things like that, so I think almost everybody in the world has some digital asset of one sort or another. But now they're innovating things like non-fungible tokens, I guess, and these are going to be ways in which you can invest and maybe store wealth.

So even though I'm skeptical of some of these things, I think this is maybe the wave of the future. And I'm glad to hear that a bank like yours is getting interested in the growth of this market, because I said before, banks have to adjust with changes in the world and the ones that do the best job of adjusting to the trends in the world – sometimes it means you want to be safer, but sometimes you want to go out and take advantage of some new opportunities. So I think that despite the fact I don't understand it all, I can kind of sense from having studied economic development over long periods of time, that this is the way the world is going, and people who understand more about it than I do will get in and take advantage of it and perform a service by offering facilities for handling digital assets.

TODD GIBBONS: Yeah. As we look at it, there's multiple components of it. So one is just to digitize something that, in fact, as you point out, the central bank currency – really it's an electronic, it's a digital asset today. By far and large, the most dollar volume of transactions are done solely electronically. But as we think through it a little bit more, it's about digitizing securities so that they can trade 24/7, or digitizing the central bank currency. And then you also have the cryptocurrency aspect to it, with something like Bitcoin, where it's probably a less effective payment system, but there certainly are institutions and individuals – and its value is probably telling us something – that are concerned about that earlier conversation we had around inflation, that maybe this is an alternative to holding wealth in gold is holding it in cryptocurrencies.

We're finding enough interest. I'm not going to speculate on its value or what it should or shouldn't be, but if investors see it as a potential hedge, whether it's a general account of an insurance company, or a personal investor sees it as a diversifying investment, we want to be there to be able to have them hold it safely, value it appropriately and move it safely. So the counterparty risk involved in it is quite substantial. But I do agree with your point that the world is just going to digitize faster and faster and faster. So we can debate whether an NFT has any value, but it's probably not much worthy of that debate.

So we're kind of coming to the end of our time. I certainly appreciate all of the insights, the points that you made. Is there anything I should have asked you or anything else you really wanted to touch on

in the last few minutes here?

RICHARD SYLLA: Just to pick up on your last point about all the digital currencies coming out. Cryptocurrencies: I'm reminded a little bit of the U.S. between the 1830s and the 1860s, when we got rid of our second Bank of the United States, a sort of successor to Hamilton's first Bank of the United States. And we went in for free banking, without any central bank, and the situation then was the banking system continued to grow. So there were maybe six or seven hundred banks in the 1830s, and there were about 1,600 banks by 1860. Each one of these banks issued several denominations of banknotes. And so the U.S. currency supply was sort of chaotic, and the Civil War was used as an excuse to take away the rights of banks to issue their own banknotes and sort of make all the currency of the country an obligation of the federal government.

This got rid of some of the currency chaos of that time. I think today we're talking about central bank digital currencies, and I have thought that with all the different cryptocurrencies coming out, we're creating a situation like it was in the 1840s and ’50s in the U.S., a sort of currency chaos or crypto chaos, let's call it. And probably central bank digital currencies would be the solution here, just like the U.S. going to a uniform national currency in the Civil War. The worry is, of course, and I think this is behind the cryptocurrencies and ties in with our discussion of inflation, that since the 1970s, we've been off, maybe even since the 1930s, we've been off a metallic standard.

Hamilton put in the dollar link to gold and silver, and that was a way of keeping currency stability. But we got rid of that in the 1970s, and people now worry that we're on a totally fiat money system, and the Federal Reserve can conjure money just by hitting a few buttons on the computer. So people's trust in the stability of national currencies is going down, I think, and that explains some of the attraction of the cryptocurrencies. I hope that the fact that we're on a fiat currency doesn't lead us into an inflationary situation. But I think some of the interest in crypto is because of the feeling people have that there's no real constraint on what the Federal Reserve can do in conjuring up money and that may mean that the value of the dollar will fall and so they're looking for some safe place to store wealth.

TODD GIBBONS: I agree with you, Professor. So one last question on the topic: Can the U.S. government regulate cryptocurrencies and how?

RICHARD SYLLA: I don't really know. I mean, I'm sure they can figure out how to regulate it, but I think the best way that they will think of to regulate it is by creating their own cryptocurrency, which will then tend to dominate the wide variety of cryptocurrencies that are being invented now. Though cryptocurrencies may exist as a digital asset, I don't think they're really such a great medium of exchange right now. And that's what money is supposed to be, a medium of exchange. It may be a little more attractive as a store of value, since there are limits, I guess, to how much cryptocurrency can be created. But I think that the central banks’ way of dealing with cryptocurrencies will be to try to come up with a digital currency of their own, and then the cryptocurrency may continue to exist as some sort of asset to invest in, which may be a store of value. But I don't expect to buy bitcoins and use them as currency in the remaining years of my life.

TODD GIBBONS: So I think great insight: If somebody wants to invest in cryptocurrency, it’s not in

order to make efficient payments, it's in order to somehow get away from fiat currencies and investing.

RICHARD SYLLA: I think that's the real worry, because of the fiat currency problem.

TODD GIBBONS: Yes. Well, Professor, thank you so much for spending some time with us. I think you hit on all the topics that I wanted to hear about, and the breadth of the detailed knowledge of the founding of this country and our company is fantastic and hugely appreciated. Thanks for all your time.

RICHARD SYLLA: You're welcome. It was my pleasure.

TOM HOARE: Hey everyone, Tom here again. Thanks again for joining. I hope you enjoyed that conversation. As I said at the top, keep listening on Apple Podcasts, on Spotify or wherever you consume your podcasts. Most importantly, if you're willing, leave a review or a rating and tell us your feedback. You can find us on social media – LinkedIn, Twitter, Facebook, Instagram – and BNYMellon.com. Thanks for listening. We'll see you at the next episode.