Introduction:

Zachary Taylor joined the Federal Reserve Bank of New York in January 2009 to lead the team responsible for managing and unwinding the central bank’s Maiden Lane II and III portfolios, taken on through the interventions American International Group (AIG). He later took over responsibility for the Maiden Lane portfolio consisting of former Bear Stearns assets as well as the unwinding of the Term Asset-Backed Securities Loan Facility (TALF), another crisis-era program. All told, those portfolios amounted to more than $140 billion in residential mortgage-backed securities (RMBS), collateralized debt obligations (CDO), credit default swaps (CDS), commercial and residential mortgages and other loans and securities.

As of July 2020, when YPFS conducted this interview, Taylor is the Federal Reserve Bank of New York’s Vice President-Director of Counterparty, Valuation & Credit Risk. He emphasized that this interview is his own opinions, not that of the Federal Reserve Bank or the Federal Reserve System.

[This transcript of a telephone interview has been edited for accuracy and clarity.]

Transcript:

YPFS: We're going to focus on your observations about the global financial crisis and the lessons that could be learned by policymakers who will have to deal with future crises. However, before I get into 2009 and onto 2020, I'd like to start with a little bit about your private-sector

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1 The opinions expressed during this interview are those of Mr. Taylor, and not those any of the institutions for which the interview subject is affiliated.

2 A stylized summary of the key observations and insights gleamed from this interview with Mr. Taylor is available [here](#) in the Yale Program on Financial Stability's Journal of Financial Crises.
background. You joined the New York Fed in January 2009, but you had spent almost a decade at Morgan Stanley in securitized products. Could you talk just a couple minutes about what you did in your investment banking job and what perspectives that gave you as you moved into a government job?

Taylor: Happy to start there, and I should state upfront as well that today anything that I discuss, these are my own personal views and not necessarily those of the Federal Reserve Bank of New York or the Federal Reserve System.

I began my career in securitized products at Arthur Andersen, where I was in their structured finance consulting practice for about two and a half years before joining Morgan Stanley in 2000. All of my time at Morgan Stanley, I was in the structured products and in CDO business. I started out working on structuring new transactions, which basically is the creation of new securitization deals, developing models, working with law firms, rating agencies, and then ultimately investment managers for those deals to bring them to market. After doing that for a number of years, I moved into a marketing role where I was the syndicate manager for structured products. What that means is, I was responsible for ensuring that our pipeline of deals were sold into the market. That would involve working with the global sales force, educating sales people and investors, helping asset managers with their sales pitch, and then organizing and attending road shows to sell deals and develop investors.

I think I had a kind of a soup-to-nuts perspective of how the sausage is made and where all the bonds were placed through that experience. For me, I think that gave me a lot of perspective leading into the financial crisis. One of the big takeaways for me was that where I sat, in terms of monitoring the global demand for all of our products, I think I realized over the years that the insatiable demand for yield quite easily trumped any proper amount of due diligence and risk management for products. No matter how complex the products that were being created by Morgan Stanley and by other broker-dealers became, as long as there was a rating on it and some reasonable-looking projections and tools provided to investors to run their own scenarios for that product, there was a home. No matter how much we could produce, there was always a place to find existing or new investors to sell that product.

I guess another perspective, just to dovetail on that, I think that seat also gave me perspective into where all of this product was going. The global financial crisis affected the U.S. first and in the largest way, and then it leaked into the rest of the globe—but from the very beginning, what was considered to be the most risky parts of the capital structure in all these securitized products deals were largely being invested in by very specific parts of the world.
YPFS: **Such as?**

Taylor: In those areas of the world, I think they had a particular risk tolerance and demand for yield. For example, in the CDO space, most of the riskiest tranches in the deals were being sold into Taiwan, Australia, Korea, and Scandinavia. Over the 2000 to 2006 time frame, I think things were going reasonably well, in that the markets were able to absorb the risk-return equation in a balanced and diversified way. But then in 2005-2006, everything changed. I think there’s a very clear reason for that change, and this was the creation of synthetic RMBS. As soon as the structuring desk came up with this way to create an unlimited amount of supply by just referencing existing bonds and creating them synthetically, there was no limit on transaction flow. The desk could produce any amount of product to meet any amount of demand, and that’s really where things got completely out of control and the over-engineering of structures took place.

Even through that time, I think most people were focused on the risk that was being taken by what was viewed as the riskiest part of the capital structure, those junior pieces that were going, as I said, to all corners of the world. What everyone lost sight of was that losses could be much greater than anyone was predicting and it was the much larger parts of the deals, the most senior pieces, that were going to bring down the market, and those were being bought by U.S. insurance companies, like AIG.

YPFS: **What did late 2008 look like from your perspective?**

Taylor: From my perspective, 2008, it wasn’t a surprise, because where we were sitting, we were at ground zero on any CDO desk on the street. So I had been sitting at Morgan Stanley on my hands, watching the world come down around us in our business, in our market, for 18 months, over a year, by the time that AIG and Lehman came about. I don’t think any of us were predicting the spillover into all financial markets that ultimately developed into the financial crisis, but our business had been shut. The losses were obvious. The things that were out of control were well known in our little world, so I think it came as less of a surprise to us as things continued to deteriorate and spill over into the other markets.

YPFS: **In 2008, before you switched from the private to the public side, the New York Fed had backed the Bear Stearns and AIG rescues through Maiden Lane, and the asset-backed securities market was with TALF, which landed up with the Reserve System holding tens of billions of dollars in each one of those facilities. You joined the New York Fed in 2009. Your job was to oversee the unwinding of these portfolios. Could you walk through what that involved, what the disposition involved and lessons that you may have taken from that experience and that you hoped others took?**
Taylor: Of course.

YPFS: This is big question. I’m sorry.

Taylor: Yeah. This could take a little time, so feel free to interrupt me as we go through this.

I was hired in January of 2009, so the facilities had already been put in place. We had closed on the purchase of the assets from both Bear Stearns back in March, and from AIG in the October to December time frame. I was the first outside hire, so the realization came, I think, towards the second half of 2008 in the New York Fed that they were going to need to hire some external expertise, that your traditional Fed staffer did not have the knowledge of these more complex structured products. So I was the first hire from the outside and joined a small team that had been working with BlackRock and our other vendors that had been in place since the creation of the facilities.

My initial responsibilities were with the oversight and wind down of Maiden Lane II and Maiden Lane III, which owned the RMBS and CDOs from AIG, given my background. Later on over the years, I took on responsibility for Maiden Lane and the Bear Stearns assets as well. As I mentioned, I think we internally quickly realized that the complexity of managing these portfolios was such that the initial premise that we could rely on our vendors and external expertise to sort of see us through what we hoped would be a faster unwind of these vehicles was just not really tenable, that we had to build out that internal expertise, so that we could not simply rely on advice, but to create and develop more of a partnership with our asset managers.

After I joined, we continued to expand the team of expertise, which required hiring in many of the different asset classes that we owned. So for example, we needed to hire workout specialists who had experience in commercial real estate, we needed to hire residential mortgage expertise, and we ultimately built out a team to—it was somewhere in the neighborhood of about 30 people internally to work on the unwind of these three facilities.

YPFS: That build up of the team takes place over all of 2009, or over three weeks?

Taylor: No. It doesn’t happen quickly. It was over, probably over the course of all of 2009, and even into 2010, specific expertise.

That was a very interesting experience. I think having that external vendor in place, no matter how much expertise we build up, even if we had all of the same level of expertise that BlackRock had in this case, it was still extremely valuable to have this external face to the financial markets. Where we were not negotiating with other broker-dealers and investors around restructuring and selling assets, and we could be the face behind the curtain. That made it
much easier for us to operate in the financial markets as a central bank. So, I think that was a big lesson learned, that no matter what, it was really helpful with this kind of complex asset to have that buffer between ourselves and the financial markets.

YPFS: And the buffer was the vendors, BlackRock, etc.

Taylor: Yeah, that’s right.

YPFS: ... with the Bank employee experts taking an active role, obviously, in 2009, with the vendors.

Taylor: Exactly. So in terms of the disposition of the assets, the ultimate premise was we have a low cost of funding as a central bank. We have the ability to hold onto these assets as long as necessary to make sure that we can recoup our investment. So the plan was, and ultimately was borne out, to hold onto the assets. They will be generating cash flows, reinvest those cash flows in safe, more liquid securities like agency MBS, Treasuries, money market funds, etc., and then sell at a time in which the markets have improved and we can be reasonably confident that we would recoup our initial investment. That was the general premise across the three facilities.

However, there was a specific plan with respect to Maiden Lane III with selling the CDO assets. In Maiden Lane III we became, by taking over AIG’s positions in each of these CDOs, we became the largest controlling note holder by owning primarily the entire senior tranche of each of these CDOs, and along with that comes certain rights. The expectation was all of these CDOs would hit what’s called an event of default trigger based on the losses borne on the underlying assets. CDOs have a provision when an event of default occurs, the note holders can vote to liquidate the deal, basically break apart the structure of the CDO, and then you auction off the underlying assets. So the premise was, the underlying assets are more liquid and are worth more on their own than the CDO itself because of the added complexity of the structure. And so the plan was, let’s have all of these CDOs hit an event of default, and let’s unlock the value by auctioning off all of the individual pieces.

We did that in two or three cases, and it didn’t work. The reason it didn’t work is because each of these deals—frankly, the legal structure of the CDOs was done in different ways. Oftentimes, there were poor provisions that created some barrier to being able to follow through on that liquidation. Also, you oftentimes have to find all of the original investors to vote on these liquidations, and that wasn’t always easy to do. It took us almost nine months to do these three deals that we actually were able to liquidate, and I think we had 89 CDOs, if I recall correctly, in the vehicle. So we quickly realized that we
were going to be better off just selling the CDOs than trying to go through the
difficult process of doing this unwind.

YPFS: And that's selling the CDOs rather than, as you were talking about some
of the other assets, letting the cash flow in?

Taylor: That's right, that's right.

So then, we were effectively managing and triaging a portfolio, reinvesting
cash flow until the markets came to the point at which we felt like they had
healed to the point of being able to start selling assets. We decided to start
with Maiden Lane II, and this was all of the…

YPFS: That's the Bear Stearns?

Taylor: No. Maiden Lane II is still AIG.

YPFS: Oh, okay.

Taylor: This would be RMBS.

YPFS: Oh, yeah. Maiden Lane I is Bear Stearns, II is AIG RMBS, III is AIG CDO.
Sorry.

Taylor: Yes, II and III both AIG. So we started with Maiden Lane II, and we
determined that we were going to auction off the blocks of the securities into
the market and do a series of auctions over time, and provide access to
investors and financial markets, who at that time were interested in buying
these assets. There was this new demand for …

YPFS: And what time is it, roughly?

Taylor: This is in 2011, spring of 2011.

YPFS: Okay.

Taylor: I guess I'm going to jump ahead. This would be a good time to talk about a
lesson learned, something sort of unique and interesting I think that we
uncovered as a result of our approach here.

At the time we were designing this auction, any auction theory would tell you
that the more bidders you have in an auction, the better price you ultimately
would be expected to receive for the assets. We were discussing how we were
going to go about this with our economists, and we spent a lot of time
designing the most open and inclusive process that we could. So we invited
any broker-dealer who had passed a know-your-customer compliance
process with BlackRock and ourselves to participate in these auctions. We
had somewhere in the neighborhood, I think, of at the peak almost 65
broker-dealers who participated in the auctions, and we were running auctions about once a week.

YPFS: **The broker-dealers were global or all U.S?**

Taylor: They were primarily U.S. registered broker-dealers, and some were larger global firms, like a UBS or Credit Suisse.

YPFS: **Okay. So you’re running weekly auctions.**

Taylor: We’re running weekly auctions, and it’s going quite well. We’re seeing good demand, we’re getting good prices, and we’re doing this for about six weeks to two months in the spring of 2011, I think it was. Then a strange thing happened, and sort of this went against that auction theory. What we realized was, by opening up the auctions to any broker-dealer that wanted to participate, we actually were creating a chilling effect for the investor community. The broker-dealers were representing end investors, and if the end investor wanted to buy one of the assets in our auction, they would submit an offer through one of these broker-dealers. But because there were 60 broker-dealers participating in the auction, the investors didn’t really know who to submit their bids through, and oftentimes they would submit them through a lot of broker-dealers, and they were being bombarded with inquiry from salespeople from every single desk on the street.

It created this fatigue where the end investors decided at some point, six weeks to two months into this process, “This is just too difficult. There’s too much competition here, there’s too much of a process for me to try and buy the bonds through the Fed auctions. I’m just going to step back. I’m going to stop taking all the calls from all of these salespeople and all these broker-dealers, and I’m going to wait until the broker-dealers buy the bonds in the auction, and then I’ll buy it from them.” This happened pretty quickly, and it really happened across the board. We saw this sort of cliff effect, where there was a big drop-off in the prices we were seeing in the auctions, and we realized that we went from getting a strong investor bid to getting a weak broker-dealer bid. The broker-dealers were still willing to provide bids in the auctions, but it was at a lower price because they were going to be taking it into their own balance sheet and then selling it, and there’s a risk in that holding period.

YPFS: **And they also know what the sale price is going to be.**

Taylor: And they know what the sales price is, too. So what we realized is that the process wasn’t going to work, or we weren’t going to get best price by continuing with that process. We were creating fatigue in the market, and we were not doing ourselves a service in terms of maximizing value for the taxpayer. So we actually ceased the auctions that spring, I think in the June time frame, and we reevaluated how we were going to go through and sell off
the remainder of the portfolio. Two-thirds at that point was still on our balance sheet.

What we decided to do was to create more pent-up demand and a tighter circle. Still provide broad access to end investors, but to sell off all of the assets in large blocks rather than these auctions of individual bonds, and to limit those auctions to four to five broker-dealers rather than 60. The way we chose those broker-dealers was by nature of the strength of their bid or the amount of bids that they had provided in the previous auctions up until that date. So we started up the sales again in December of that year, and I think we did just three auctions in order to sell all of the remaining assets in the portfolio in three large blocks. That was much easier for us, it was easier for the market to digest it and, in our mind, the same investors still had access to those bonds because their bids were just being collected and collated up into a large bid by the smaller number of broker-dealers that participated in those auctions.

YPFS: If you could, distill that down to what would be the lesson that you took from that?

Taylor: The lesson I guess that we took from that is that sometimes it's easier to do things in a less complicated manner. Auction theory might tell you one thing, but the markets might tell you another. You need to listen to the markets. You need to closely evaluate what investors are telling you, what you're seeing through pricing, and you need to be able to shift strategy and reevaluate approach.

YPFS: You've talked mostly about the AIG portfolio so far, but now let's talk a little about Bear. Were there differences in unwinding those assets?

Taylor: Yes. Huge differences. Just quickly, we finished the Maiden Lane II portfolio, and then we used that same process to sell off the CDOs in Maiden Lane III, which went reasonably well once we had established that new method. During this entire timeframe, we were in the process of winding down the [Bear] Maiden Lane portfolio. The Maiden Lane portfolio was much, much different, much more complex, had a much more heterogenous portfolio of assets that required more, effectively triage, I would say.

The issues with the Bear Stearns portfolio were mainly focused in the commercial real estate assets, in the residential whole loans, and in the credit default swaps. Also in that portfolio, we had agency MBS, we had corporates, we had munis, all sorts of things, but we had some very large portfolio commercial real estate, and that commercial real estate was distressed. It was complex. That's where a large portion of the expertise we needed to hire was, in folks that has this workout experience, because the way to maximize the value there was, there wasn't a liquid market for selling off those assets. We
effectively had to go into workout mode with many of them, which was labor intensive, and a very unusual position to be in for a central bank.

For example, we were the largest holder of the senior debt of Hilton. So effectively, when Hilton needed to be restructured, we were effectively an indirect owner of the Hilton hotel chain, and that required a lot of complicated negotiations with other investors and private equity firms that had a more junior stake in that portfolio. We owned a portfolio of large office buildings in downtown Chicago, five or six skyscrapers right in the central business district of Chicago. We owned a mall in Oklahoma, where all of the major anchor tenants had already vacated. We had hotels that were hit by hurricanes and hailstorms, all sorts of things that required specific attention on a property-by-property basis, to either repair, workout, individually sell off, or try and package and sell the assets. Along with that comes a lot of long-term litigation as well, so the commercial real estate portfolio, I’d say, was the most difficult aspect in Maiden Lane.

**YPFS:** This is ancient, but it strikes me that there’s one other time that a federal government-related entity had to unwind a huge commercial real estate portfolio and that was the Resolution Trust Corp. Were there, from your perspective, any similarities, anything that carried on from that experience in the 1990s, or are we in a completely different world by the time you’re in 2010-2011?

**Taylor:** Yeah. I think there was a little bit of discussion about some of that experience, which was before my time. But I think our issues were so specific that we were sort of in the weeds in each of these assets, that I don’t think the large-scale Resolution Trust experience really helped us all that much in terms of approach.

**YPFS:** And how about the people on your end? It strikes, from what your talking about, this is a very different experience requiring different expertise than setting up an auction for securitized products.

**Taylor:** Yes.

**YPFS:** How does the team handle this?

**Taylor:** Like I said, it was a different type of individual that we had to hire that had this level of expertise. It is extremely challenging in an institution like ours, which is not ever accustomed to taking this sort of risk. We spent an enormous amount of time educating internally for our senior constituent in the bank and in the Federal Reserve System on the decisions we were making, the risks that we were taking, recommendations on approach. That was probably the most challenging thing for the folks that we hired from the outside, who are used to, “All right. Let’s get in there, and let’s negotiate and
work these things out.” Doing that sort of thing in an institution like ours is a totally different process.

**YPFS:** Talk a little about that. In what ways is that different?

**Taylor:** We're a risk-averse institution, and we have different risks that we weigh in different ways. We have political risk, we have a lot of reputational risk, things that your typical commercial real estate investor may be concerned about, but not certainly to the extent that we as a central bank are. So, some decisions need to be made with a different lens. It was really helpful to have a cross-section of expertise of people who were used to the transactional aspects and a healthy debate with those that came from a central banking background, to come to the right decision in terms of how we should approach each of these situations in terms of working them out.

**YPFS:** Among all three, and we haven't even got to TALF yet, this is a long process. How do you set up everybody to accept that, that this is not something you're going to happen overnight?

**Taylor:** I think it was a long process for that acceptance to occur as well. We haven't even talked about the credit default swaps. It was only a year ago that we finally finished selling the assets in the Maiden Lane vehicle, one year before our current crisis. The reason for that was the credit default swaps. There was this expectation at the outset that the CDS market had some level of liquidity, where we would ultimately be able to sell off our CDS positions, which were both long and short. When the financial crisis started to heal and the markets came back, that market didn't. So that sort of level of financial engineering, I think as a whole, the financial markets realized we don't need this. We don't need to create synthetic RMBS. That went too far. That was sort of the crux of the financial crisis, and so there was no trading of these assets any more, no desire to take on positions that would be required by a broker-dealer to help us unwind our positions.

The commercial real estate, it took three or four years to unwind. It took 11 years to unwind the credit default swaps. The last five or six years of that process was a real thorn in our side of trying to exit this last vestige of the financial crisis.

**YPFS:** The CDS market, though, it functions.

**Taylor:** Corporate CDS, yes. But unfortunately, our CDS were credit default swaps referencing commercial mortgage-backed securities and residential mortgage-backed securities, and CDOs. So that market was gone for good. Unfortunately those were all of the CDS positions that we owned.

**YPFS:** Can you touch a little on the unwinding of TALF?
Taylor: The unwinding of TALF was a natural process, and it went as expected. The terms of the TALF deals were in the three-year context, and most of those deals, when markets came back, were prepaid prior to their maturity. A few of them were held by investors to maturity. So I think we knew going in to TALF, when we set the terms of the program, that it was going to be around for about the amount of time that it ultimately was. So that process was much smoother, went as expected. It still came with the need to manage the staff and the vendors and all the things that come with one of these emergency lending facilities, but nothing unusual and challenging around the unwind per se.

YPFS: Those were less complicated. Okay.

Taylor: Yes.

YPFS: Could you put your finger on what have been one or two of the more surprising things that you discovered when you were managing this through the whole 10-year-plus process?

Taylor: Sure. Surprising things. I think I’ve touched on a couple of them already. The auction mechanics for Maiden Lane II, I think we all found that very interesting and surprising. We never expected to be in this for 11 years. That was obviously a surprise to everyone. The CDS positions that we had, we were both long and short, and we expected to be able to close out those positions by... If we were short, the way you close out a CDS is you go into the market and you buy the cash bond, and then you deliver it to the counterparty to unwind that position, and it extinguishes the CDS.

But as I said earlier, when the market got out of control, there was no limit to the amount of synthetic product that you could create that referenced existing cash bonds. So there were many, many cases in the CDS space where we were short, but we owned maybe four or five times the notional amount of the original cash bond in existence. The premise of going out and buying the cash bond and then delivering it to extinguish that position is impossible when that is the case. Once you get into sort of the weeds of things, you start to uncover these sorts of issues.

That was a big one. That extended the timeframe, and then you fall back on the only other option to unwind these CDS positions is to find another investor to step into your shoes, which is something with the limited liquidity and sort of a forgotten corner of the financial markets is also extremely difficult. Or you negotiate an unwind with your counterparty, which the broker-dealers that were on the other side of many of these trades had many years prior offset their positions with another investor, and there’s a chain of synthetic positions that extended beyond being able to find out or get
everyone to come together and agree to unwind all of the positions at the same time, so that made it very challenging.

YPFS: And unfortunately, you didn't find out you were your own counterparty on all of them.

Taylor: That's right. You didn't know where the end of that chain was in all cases.

YPFS: Have we missed talking about anything, lessons or advice or anything that you wished someone had told you back in 2007-2008?

Taylor: I think one of the big lessons that we learned, which is I think you can see through our actions here with the current intervention: transparency for a central bank is critical. We learned lessons and became more transparent over time with these and our other facilities that we set up in the 2008 financial crisis. I think there were times in which we were too focused on a fear that transparency might impact our maximization of returns for the taxpayer. As we started to test the waters with becoming more and more transparent, I think we quickly realized that increased transparency had little negative impact on our ultimate return.

YPFS: You were sort of segueing in there to 2020. We have TALF again. We have a Fed balance sheet pushing seven trillion, I think was at seven trillion when I looked last week. How have policymakers applied the lessons of the last time around? Could you discuss that?

Taylor: I'm not going to talk too much today about the current state of the facilities.

YPFS: Understood.

Taylor: But I would say that obviously, the work that was done, that many of these facilities that we set up in the 2008/2009 financial crisis, things like CPFF [Commercial Paper Funding Facility] and PDCF [Primary Dealer Credit Facility] and TALF, they took a long time to set up, and they were all being sort of come up with out of thin air. We were developing them, we were thinking about them, we were setting up a legal framework for them. And I think we did a good job over the last 10 years of keeping the knowledge fresh, keeping many of those facilities in a preparedness state such that we were able to react very quickly this time around.

YPFS: The reaction was very quick. It was like the lawyers had already signed off on things.

Taylor: It wasn't so easy as simply, we're going to turn on the facility again, but it was certainly much easier having that institutional knowledge and the shell of what each of them looked like from the last time around. Obviously, some of the programs are new and unique in the current slate of programs for a
different financial crisis, designed for a different purpose, and those have taken longer to put in place, similar to the last time around.

YPFS: You’re seeing new ones last week.

Taylor: Right.

YPFS: Can you put your finger on, besides having done it once and having it in the file folder metaphorically, how the lessons of the last time around are affecting the approaches? And then again, knowing that you cannot talk too much about these things right now, but whatever you can say.

Taylor: I think things like, as I said, the approach to transparency. I think from the outset we have made it clear that that is a major goal for all of our new facilities. The lessons learned around our use of vendors, so we have also made it clear that to the extent that we needed to react very quickly in this crisis to hire external vendors, in that those vendors did not go through a competitive bidding process, that we would revisit each of those contracts and ensure that we did open them up over time, which is being borne out. I think those are two big lessons learned.

YPFS: To clarify there, for the contractors in 2020, did they go through bidding, or was there already an open contracting authority? How did that work?

Taylor: No. Some did go through an open bidding process, and others were hired through a noncompetitive process, given the timing constraints.

YPFS: Just wanted to get that clear there. And this is your chance to sum things up and other lessons that we haven’t touched on that you would like to distill.

Taylor: I think you can probably gather from my commentary, it was a very, very unique and challenging experience. I think for me it was very eye-opening, exciting. I learned a great deal, and I found it really refreshing to be still involved with assets that I had been involved with in my private career but in a more noble cause at the central bank. That team that we put together of 30 individuals, I think even outside of the Maiden Lanes, we hired expertise for TALF, we hired expertise for many of these things that we were involved in, in the last financial crisis. Many of those individuals, they came in, they did their job and returned to the private sector. And others, like myself, found this to be a refreshing environment and we’re still here.