

Securities and Exchange Commission Historical Society
Interview with Catherine Kinney
Conducted on November 5, 2009, by Kenneth Durr

KD: Interview with Catherine Kinney, November 5th, 2009, in New York City, by Kenneth Durr. I want to start with the obvious. How did you end up coming to work for the New York Stock Exchange?

CK: I was graduating in 1974 from a very small liberal arts college in Westchester County. I was a language major, and I had been accepted to Georgetown to go to the School of Linguistics for a master's degree with the intention of either going into the foreign service or into academia. My father got very sick, and he was pushing me very hard to get a deferral and to get a job. So I went to the college counseling office and it turned out that they had a relationship with the Exchange and had recruited for the Exchange for a number of years. I went into the office and said, "Okay, if I'm going to really defer my plan, I really want to do something completely different than what I was intending to do."

There was a sign up that the New York Stock Exchange was coming to recruit, and I thought, "Well, I don't know anything about the Exchange, I don't really know anything about financial services, and I would learn something every day." So I put my name down. They cancelled the interview subsequently, but I called them because by then I was very interested because I'd done some research—very different than the research you do today—and I asked them if I could come down for an interview.

After a lot of back and forth, they said, okay, I could come down. In April, I went down for an interview, and they said there were no jobs. This was 1974, a terrible recession, no jobs. I was working at Dry Dock Savings bank, which I had done every summer when I was in college. They called and asked if I would come down for an interview, and asked me if I had found a job. This was in early August, around the first week in August. I said no, I hadn't. I went down for the interview, and they offered me a job, and I took it. It was a job as a senior clerk performing a task that no longer even exists, and it was more of a reconciliation of transactions that had occurred. If two trades were being put together and they failed, my job was to try to resolve those trades on the floor of the Exchange.

They hired me and another liberal arts major, two of us. For half of our day, we were given this task to do, and then we were essentially put out on loan to anybody in the regulatory group who needed work done, whether that was research, or writing memoranda. I think we were—this other gentleman and I—pretty good writers. In any event, we were on loan to anybody on the management team who needed help.

KD: Who was heading up regulation at this point?

CK: Jerry O'Donohue. I worked in the group that did market analysis investigations. It was that group in regulation, so it was market surveillance, not enforcement or member firm regulation. This was markets throughout. These were the people who were responsible for overseeing the trading floor and what happened on the floor. I would say we were in

those roles for maybe six months, eight months, and then I moved into a transaction on market analysis, and we were rotated through there. Then we were given jobs in the investigatory group, investigations, and then I went up to member trading.

There wasn't really a formal training program, but we were moved from group to group. So this was now about '74, so now this was about '77. The exchange has just decided that they're going to deploy technology into the business model. We had now formed the Securities Industry Automation Corporation in '74, DTCC was formed at the same time, so that whole infrastructure was put in place. They were going to start using technology. SIAC was really going to be the principle arm of development and operations, but they wanted people on the business side to really define what the technology was meant to do.

At the time, John Phelan emerged as a very senior person on the floor. He was a specialist at the time. And Jim Needham, who was the first chairman of the board, so to speak, was then succeeded by William Batten, who was the first paid chairman of the Exchange. So we had William Batten there, and he and John Phelan were driving the Exchange to really start thinking about how technology was going to be important. John really was the spearhead of it. This was very unusual because he was a member, and it was unusual that they would be pushing themselves.

KD: There's the belief that "We want to keep it the way it is."

CK: That's right, absolutely. There was a gentleman in the group that I was working in in regulation who was a real star. His name is Charlie Moore, and he went on to become the chairman of the Boston Stock Exchange. But Charlie was identified by John Phelan as a real young talent. Charlie said to me, "Aren't you going to apply for these jobs?" There were two jobs in this newly-formed product development group. It was by a guy who came over from SIAC, Chris Keith. I said, "I don't really have any experience." He said, "Well, I think you should apply." So I applied, and I got hired into this group.

The two products that I was responsible for were the Intermarket Trading System, or ITS, and SuperDOT, which was also being crafted and built as a way to take orders from the broker dealers to the floor of the Exchange and back electronically. Those were my two products, and I was really responsible—much as you would hear in a packaged goods kind of environment—for every dimension of it. It was the policy, the regulation, the pricing, the technology. Every dimension of these two products, and I was supposed to be at least managing that.

KD: Did you have teams working on this?

CK: There were two of us. I was a team of one, basically, and then there was Charlie and Chris. But it was a small group. Then there was a guy who did the bond system, and one other system. So I really got the two most important products. It was really revolutionary. We were going to link everything. Coming out of the SEC '75 Securities and Exchange Act amendments, we were required to disclose information about

transactions and quotations, and we were also required to link markets so that investors could get the best possible price so that no matter where they entered, they were always guaranteed the best possible price. Our challenge was to link the brokers first. At the same time that we were linking the brokers, we were also linking the exchanges. I was in that role—in and out because I had a child in the middle—but in that role to 1984. And we really did a lot to build out the systems, improve them. We had a limit order book, and we did a lot of very transformational things.

KD: Where did the technology come from? Did you license things?

CK: It was all designed and built by SIAC in those days. They had outside vendors they worked with. IBM, for example, was really responsible—and probably even to today—for all the back end processing. But most of the front end was built by SIAC directly.

KD: So you'd been in market surveillance, the enforcement. You talked about this process of rotating around. Presumably, you'd learned about every aspect of the Stock Exchange so that you could go in and design this program. Did it work that way?

CK: Yes. Knowing everything about trading after thirty-five years—I can still say no one knows it all. But I knew enough about the process and the operation of the specialists, and I knew enough about the order routing, I knew enough about how things worked. Did I really know everything? No. It was a team of people that we pulled together—people from operations, people from technology, people from regulation, policy people.

We were a team, and we were really meant to move the Exchange forward. We tried as best we could not to simply replicate the process, but to advance the process in a way such that, the technology was enhancing our ability to do three things.

One, John Phelan had us out talking to the industry about capacity, and he was the one who had us out talking to the industry about doing 125 million share a day. Now I promise you—the Street, we were doing 7 million shares a day, 10 million shares a day—it's never going to happen. But he wanted us to have technology that prepared us to do that kind of volume. We were talking to the industry about the change process that we were going to have to take ourselves through to really make that happen and to do it with lower error rates, so that we were continuously lowering risk because people knew where they stood at any given moment.

We were focusing on risk, we were focusing on capacity, we were focusing on performance of the systems. They had to be ultimately reliable so that people knew they could come in and out and get the best price. And we had all this technology we had to build to link the exchanges as well. All of this was going on, and I was in that role until about 1984. It was remarkable because you were bumping up constantly against the members, not only on the floor, but even in the firms. No one wanted to change. They all felt that things were working well, and it was going to stay like this for a long time. A lot of visionaries saw it differently.

KD: A lot of the systems you're talking about, though, were ultimately going back to the specialists.

CK: They were. Everything was centered—the price discovery, correct—at the point of sale, which was run by the specialists.

KD: You'd think that they would be okay with that kind of scenario.

CK: But everyone kept saying or thinking that the efficiency would continue to progress, and that the process would be developed sufficiently to be able to create price discovery in a box. Now, of course, you remember alongside of this, NASDAQ started in 1968, so it was chugging along in a parallel fashion, as were all of the regional exchanges, with fully electronic models. Philadelphia, Pacific, Chicago—everyone had a fully electronic model but the New York Stock Exchange. But the New York Stock Exchange still was really the market share. We did price discovery. Everybody else priced their merchandise and their order flow around our pricing.

KD: And you were handling a lot more volume too.

CK: We were handling a lot more volume. We were probably handling multiples of the combined volume of all those markets, but they were growing, and they were taking a share, and they were getting listings of local companies. We didn't have multiple listings at that time, but that progressed and also became the way of things. I did that until 1984,

and then John Phelan asked me if I would start a sales and marketing team to go out and talk about all the technology we had built and what we were trying to do. So I did that. I started this group because we were competing in those days against the regional exchanges and NASDAQ for order flow as well as for listings.

KD: Did you work with the SEC much on this?

CK: Oh, my God. There were relationships between the regional exchanges and the SEC—the SEC was also responsible for taking the '75 Act amendments and breathing life into them.

KD: Building a national marketplace.

CK: Correct. And having that done in conjunction with the exchanges. So they were very much spearheading the actual development of that national market.

KD: Who did you talk to on that? Do you remember?

CK: I'm trying to remember. Rick Ketchum was clearly there, Bob Colby was there. I would say they were probably the two go-to people that were really at the forefront. They were there at that time.

KD: How concerned was the Exchange about NASDAQ moving in and cutting out their business?

CK: I don't think in those days they were very worried about that because it was very clear that the listings business and the trading business were linked, and they were separate. The companies that went to NASDAQ were not the companies that went to New York. They each had their own model for how things are going to happen, and they were probably very appropriate to the kinds of companies that they had at the time, given both the size of the company and the volume and the trading and that kind of thing. They were really quite separate and running along a track. The competition came from two places, and still today, the competition came from the broker dealers.

At that point in time, there was still a rule called 390. It was once called 394, and then it became 390. In those days, it was modified slightly as part of the national market in the sense that the dealers could do agency trades, but they could not do principal trades in their own offices. So there was a way that the broker dealers could internalize their order flow and execute it. So the real competition was the broker dealer community as well as the regional exchanges in those days. The NASD or NASDAQ was really running on a parallel track.

KD: This is the early eighties?

CK: The early eighties, correct.

KD: So despite Rule 390 being in place, people were still trading across the Exchange?

CK: Yes, but it was a very small percentage of the trading because, remember, we were still in the transition to an institutional market. Remember, at the end of the seventies, a couple of fundamental things happened—the '75 Acts amendments, and the abolition of fixed commissions. So from that, in comes discount brokerage, but it also assured a wave of a real fundamental change in mutual funds, discount brokerage and passive investing where institutions were becoming much more powerful than they had been up to that point. So there was this whole sea change going on in the industry from a trading perspective, a pricing perspective, a technology perspective, and even a customer perspective.

KD: And all the while, the volume's going up.

CK: All the while, the volume's going up.

KD: For ITS, did you set benchmarks and try to meet them or fail to meet them? Because I know that in the discussions around the SEC, there were a lot of big ideas, and then sort of stepping back away from some of these technologies.

CK: With ITS it's interesting. I think if you went back to some of the meetings that were held early on, there were things that people—maybe it was the SEC, I'm not even sure I remember completely at this point—but there were things that could've been done to

make that more automated. And the regional exchanges but really everyone rejected that, almost everyone rejected that, for different reasons. Everyone wanted to, basically, still control the price discovery.

KD: Including the New York Stock Exchange?

CK: Including the Exchange, including the regionals, for that matter. Because, generally, what was happening was they were guaranteeing the executions in their automated systems. So if an order came in from, in those days, Merrill Lynch, it was generally the specialist on the floor of the specific Stock Exchange who took the other side of that trade and then, in turn, would use ITS to manage their position. So they still wanted to have some control of that when, and how, and what. And I think with the regionals, nobody pushed as far as they might have for different reasons. The regionals were worried that the New York Stock Exchange thought it was a good idea. It was clearly a bad idea for them. And I think the Exchange saw that it had a major market share, and the disruption of that was a cause of great concern.

KD: And at the bottom of all of this is the black box.

CK: Yes, everybody's worried about a black box. But more importantly, I would say—and I still feel this way today—I think that if you looked at what the role of the Exchange was, it was to bring buyers and sellers together and to ensure that they got the best price in that auction at that given moment in time. It may not have been the best price of the day, but

it was the right price at that moment in time. I think the Exchange tried to stay true to that mission, but of course, as in all of what's happened then and what's happening now, this is all about how the world gets divided. And so I think there was a lot of ground breaking things that went on in the development of ITS.

KD: When did you start looking at the automation on floor itself?

CK: That really happened in the late seventies. We started with market orders, and the first thing that happened was hundred share market orders. Merrill Lynch could send a hundred share market order directly to the post where the specialist-traded IBM, and the specialist could, in turn, respond back to that client in electronic format. And so all of the files for the customer and the firm were debited, and then of course, separate submissions were made to the post-trade process. But we started with hundred share market orders. Now everybody thought that's where it should've begun and ended. Then we went to larger market orders. And then limit orders were much more complex, and much more challenging technology to build. We built some in the early eighties, and it wasn't very good.

KD: Did it get implemented?

CK: It did get implemented, but it wasn't very good. And then we realized what we needed to do: we needed to build more electronic books. At that time, we were only doing day limits, and we had to do overnight orders, so we had to build the sophistication in to

handle stocks that were going to go through multiple prices, that were going to be carried overnight. And in the early eighties, we fixed up and cleaned up both the technology and the service for limit order handling. And I think that, coupled with market orders, really put us on a path to build a fully electronic limit order book.

Our technology was always very interesting, because we always seemed to put it in a place where something happened. And remember, we built these limit order books in, I would say probably '85-86, that timeframe. We started these books and the first stock was Pan American. You probably remember Pan Am went through some very challenging times, and this was just at the outbreak of that. It was the outbreak of it doing well, and then not so well. I think Pan Am traded about 3 million shares that day, and it was on this electronic book. It actually worked quite well. And then the next application for it was for the divestiture of AT&T. We took all of the stocks that were being divested, and we put them on these electronic books so that we could actually handle the order flow.

If I remember, there were what they used to call “Winchell wagons” because when Winchell would recommend a stock or talk about a stock, it would inevitably take off. They had these wagons where they would basically pigeonhole the limit orders by price, and that was the way they managed them. So we imagined that the volume in AT&T divestiture would be very, very large because you had, I think, eight stocks at the time. All those stocks had a book, and it actually worked, and so that sort of pushed it off on its real application on the floor, this was '86.

KD: Now these were all separate books for separate stocks.

CK: All separate books, correct.

KD: So there's no way you could bring them together.

CK: Well, actually, no, there was a book for AT&T, and you had buy orders and sell orders and market orders, and everything was processed in this book. Now at the time, you're correct, we had basically one stock on one book at a time. But then ultimately, we were able to figure out how to put multiple stocks on a single book so that the specialist could handle it, because most specialists handled, on average, eight stocks, but it took time. So we now have had these "beta tests" in '86, and we start pushing the specialists to put these books. You can imagine the technologies ramping up at the firms quite aggressively. The other thing that's occurring in the background of all this is program trading.

Derivatives markets are growing, options markets are really flying, and people are starting to do arbitrage and to link synthetically futures options and cash. We went out in late '85 to talk to the major firms that were engaged in program trading—Morgan Stanley and Goldman Sachs were the two principle firms at the time, as was Credit Suisse. And we told them about the system because what was happening was, those firms, at the end of the day, would reconcile their entire position at the end of the day.. Close it out generally. At the end of the day, they would bring shoeboxes of orders to the specialists

and want them to be participating in the closing price so that they could have their position or liquidate their position as they were linked to these other products.

We got the idea that we could build something called list processing so that we could have, pre-programmed by the broker dealers with our software, the lists of orders. And, generally, these were orders linked to the S&P 500. They knew when they would get the transaction from the portfolio manager at Putnam, they would then release these transactions at the end of the day, and they were old transactions. So this is now in the background with, again, a big sea change occurring.

The technology now is robust. We're handling 250 million share days, we have our books on the floor, and the technology is able to incorporate all of the information flows and these products of options and futures in cash, and able to respond to what the institutions thought about where they were headed, which was passive management and indexing to the various indices, particularly the S&P 500. So, again, technology was enabling an entire new industry to develop.

KD: But you said that they were reconciling things at the end of the day with shoeboxes?

CK: What they would do is they would present the orders to the specialists, so they would want to say, "I'm a buyer of so much IBM," and all of this was to ensure that they were in balance with what the index price was for the S&P 500. So if the index, say, the S&P,

let's just pick 1,000, but let's say the S&P at that point was 250, that index price dictated what were the shares of IBM, GM, AT&T.

So what would happen is the portfolio manager would say, "I want to buy 500 S&P, and the broker dealers would then have to replicate that in the cash markets to make sure that they could deliver against the futures piece that they bought in the S&P.

KD: So they'd sort of recreate the day's business?

CK: They would actually put you in, they would either undo the future, or they would get you into the cash or undo the cash. All these transactions were very manual, very manual.

KD: Yes. It's sort of a low tech way to bring all this high tech stuff together.

CK: Exactly. This is 1985. This is not that long ago. We put together this idea that we could have the institutions and the broker dealers preload all of these portfolios of stocks. And instead of delivering them manually, they could trigger them right at the close, they could go through DOT, get executed and all be back in their offices in a matter of seconds, thirty seconds, whatever. That was a big deal. So that all took off, we had all the major firms using our DOT software to manage these big portfolios, and of course you remember volume surged. And then in the meantime, we're trying to get the specialists to adopt these books. We're making some progress, maybe a third of the floor is done.

And I was asked in September of '87 to run the trading floor, to go down and run the operation. I was thirty-five years old. No woman had ever done this. And so I said, "Yes, I would love to do it." It was a big management job—there were 800 people working for the Exchange at the time.

KD: And you're dealing with the tradition of traditions, right?

CK: Oh, yes.

KD: These are the specialists on the floor, some of whom, I suppose, had been there for half a century.

CK: Yes, absolutely. Lions of the industry.

KD: How did you gain everyone's confidence?

CK: Well, that was a little challenging. Because remember, I was the technology face at the time. I was the person who was managing these other products, I was the person who was doing the list processing, so I was a little bit of the devil himself, because they saw me as the disruptive force. So it was challenging. But the best thing that happened—talk about disruptive forces—the board approved this in September, I take the job and October comes, and the world gets turned inside out. So every process that we had was completely turned over.

We worked immediately to figure out how to get the entire floor on the electronic books because the people who had them did much better in managing risk and understanding where their positions were. We worked to automate the back end, so we went to T5 clearing, completely automated so that the firms didn't have to resubmit things. If the order came into the system, it went all the way through to clearance and settlement through the system.

KD: So you started that right after the market break in '87.

CK: Right after '87, yes, because we had innumerable problems, which you can go back and document.

KD: Yes. And you couldn't, of course, shut down and build all that and then start up. You were doing it piece by piece.

CK: Right.

KD: How long did it take until you had the system revamped?

CK: I think it went very quickly, actually. I would say within eighteen months, we had really modified the processes and procedures. The entire floor was on the electronic book. That catalyst for change pushed everybody very quickly.

KD: Okay. Something that's in with this that gets back to your first job, which is the idea of self-regulation and the governance. When it's all personal transactions, there's a lot that can take place in the interstices. Did this automation and these new systems make a change there as far as the way people did business day to day and how accountable they were?

CK: Yes. I think it certainly changed the process of doing business in the sense that they had different tasks, but the basic price discovery, the responsibility for their market, the responsibility for committing capital when supply and demand were disconnected—all of those basic missions of both the floor and the specialist were still intact. It was surrounded by an enormous amount of technology to help them fulfill those missions, given the volume and the volatility of the market, and really the birth of all these other products. I think it was in '87 when everybody declared the markets were linked.

Now the one thing that never happened until 2000 when we had the other difficulties with the specialists was that we never linked regulation with the trading. In other words, trading went on, and we surveilled and did all of our enforcement and review after the fact. The systems today are linked, and there are times when we would prevent something for happening.

KD: You couldn't do that back then.

CK: We could not do that back then.

KD: Did it cross anyone's mind that this might become possible with the technology where, essentially, you could capture everything step, by step, by step?

CK: Well, I think what regulation got comfortable with was they did have everything. I mean everything was captured step, by step, by step. I mean, there were timestamps on everything, all the way through.

KD: Even manually.

CK: No, the timestamps weren't in milliseconds, but they were certainly in minutes and seconds. So I think regulation felt that in those days they had made a big leap forward because when I got there, you were looking at things, but you might be looking at it days later. They were able to, the next morning, be in looking at capital positions. It had made a great stride forward. I think there was an important point here, and that was we didn't want to stop trading for a violation of a rule because you're not really sure whether the violation of the rule was true. And disrupting the flow of trading was not the thing you ever wanted. You never wanted to shut down, and you never wanted to stop trading. If there was any reason that you could possibly keep it open, you did.

KD: I wanted to talk about upgrading post-1987, and you did that.

CK: Yes. We really updated then, and then we did in 1992. We started another completely new technology project to revamp the floor using distributed processing, networking capability, linking all the floors, and putting the firms on our networks. It was a very fundamental change. It was born out of a much greater acceptance of the technology, a much greater understanding that it was now a facilitator and enabler of business. I think the technology itself had come so much further in its cost, its reduction of cost, and its speed. We wanted to give brokers handheld terminals so they, too, could be brought in. Remember, the specialists at this point were almost 99 percent electronic because they were getting most of their order flow coming through the systems from the broker dealers, but we still had about 30 percent of the volume that the brokers were doing on paper. That was the early nineties.

We embarked on that in 1992, and we finished it up in '95. It took us three years to completely revamp all the hardware, all the software, all the networks, everything. And that was the last big project I did when I was working in operations technology.

KD: And then you moved up to a vice president?

CK: By then, when I became the head of the floor, I was the senior VP, and then I moved up to EVP, and I took on technology as well as operations. And then in '95, when Dick Grasso became the Chairman, he asked this other gentleman and I to swap roles, and I went to the listing side of the business, which was revenue producer, so for the first time, I was actually bringing in revenue. And I had a lot of other roles. I had internal audit, I

had a bunch of things, and I was a group EDP at that point. So I went into the listing side of the business. And then when Bill Johnston retired in 2001, right after 9/11, Dick Grasso made Bob Britz and I co-presidents of the Exchange. We took on that role in 2002.

KD: Tell me a little bit about the Exchange when Dick Grasso came in. Did he want to do more of the same, or did he want to change things? What was his vision?

CK: I do think Dick wanted to change things. I think he very much bought into the notion of technology as the enabler, and a builder of business. I think Dick was extremely close, though, to the membership, very close to the floor. They respected and they loved him. He'd been there for many years. He had come up on the listing side. So when John Phelan was the Chairman, he put Dick in charge. He did the same thing to Dick on the other side, put him out of listings and into operations, and there was a gentleman who ran listings. So I think Dick came into the role in operations in the nineties, and I do think that he saw change. But to me, Dick's greatest contribution to the Exchange was he was an incredible marketer. He built the brand, the international brand of the Exchange. He knew how to get things done; he knew how to convince the companies that the New York Stock Exchange was the only place to be.

By now we were in competition with NASDAQ. It had come up, it had been through its own trials and tribulations, and when it did go through those, it built up its brand in a way that it had to. It strengthened technology. So we were competing with them for listings.

And they had, at the time, in the nineties, all of the high-tech companies, the Microsofts, the Intels.

KD: Right, and they were selling that big time.

CK: And they were selling it big time, until 2003 when the bubble burst. So we were very much then competing with NASDAQ. That was the competition, again with the broker dealers, who continued to become very powerful in their ability to trade.

KD: Right. But again, feeding back to the specialists, this base of power or support.

CK: Correct.

KD: And Grasso didn't have any intention of getting beyond this.

CK: No, I think it actually worked very well. I think up to that point, it was working extremely well. I think with the benefit of hindsight, we probably should have done a little bit more automation in the sense of the execution. But it changed, and you see it now, it fundamentally changes the way price discovery occurs. And I think things were working fine, and were working very well. There wasn't really, at that moment, the push to close that one last loop. And the specialists were still doing well, and were still committing capital. So I think one of Dick's great contributions was that he built the

Exchange into, I think, one of the greatest global brands. And we were really at the top of our game.

KD: What does it mean to do listings?

CK: There were two parts of listings. One was to bring companies in. There were really three parts. One was to bring them in, one was to take care of them while they were with you in their life as a public company, so that meant doing things like press releases, dividends, all kinds of processing that goes on, actually, when a company is public. The last piece was to do oversight of their compliance with the listing standards, because we were basically telling the world these were companies meeting certain financial criteria, meeting certain governance standards. We also set the standards for governance, and still do, I believe, for what a board had to look like, how it operated, that kind of thing.

KD: That gets to one of the interesting questions. NASDAQ's benefitting from the dot-com bubble, and even earlier, they're benefitting from the general understanding that it's easier to get listed on NASDAQ.

CK: Sure. It was.

KD: But when NASDAQ is really taking off in the late nineties, did you start thinking about doing something with your entry standards?

CK: Yes. I came in in '95, and in early '96, we changed the organization, recruited some people, and we also started to look at our listing standards, because it was very clear that we were the home for very stable, very large companies, but we didn't take that many risks on IPOs, which was also a very big part on bringing companies in. So we did a couple things. We opened an office in Silicon Valley so that we could be closer to the banking teams and to the companies, and to the law firms that were really in the flow of business. We looked at our listing standards, and we made modifications to accept companies on a cash flow basis, and then about two years later, to accept companies on revenues, as long as they had a certain market cap. It was a billion dollars initial, and revenues of \$250 million.

KD: Were these, in some sense, relaxing standards?

CK: No, I think it was changing standards. To the degree that it wasn't what we had, I guess you could say that was a change, but I think it was much more recognition that getting companies to move off of NASDAQ became more, and more, and more challenging because their brand was going up, and they had the new companies for them. They branded that and marketed it very aggressively. So for a while, before the bubble burst, it was, "Well, why would you want to be there?" That was, remember, the old economy, new economy. Remember we went through that?

KD: Right, right.

CK: So I think from our perspective, it really was a recognition that if we wanted to build the companies of the future, we really needed to take more of a risk with young companies. But we had to have companies that were a certain size, and where we felt they had a likelihood of succeeding. A good risk. So we built out, with the SEC's help, a set of parameters and what we were prepared to do, and we were successful.

KD: At some point, you were in a war. And you were doing listings at the time, so you would've been on the front lines. Aside from bringing this new face to what the Stock Exchange could offer, what other things did you do? I mean, there's the truism that the Stock Exchange is always going to be the most efficient mechanism.

CK: Right. So I think we did three things. One, I think over here, we kept the brand. We kept building the brand internationally. For example, we would travel to China. So Dick was doing that, and we were all building that brand. We were also looking at the standards and figuring out how we could go after the companies that we thought would build our brand for the future so we could really beat NASDAQ in that space. They probably would still get the small companies, but we would get the ones that we really thought were the commerce, the future stars.

We also changed how stocks got allocated, which was a huge deal. In 1997, we made a change that said that the company could come and interview specialists and choose their specialists, because there used to be an allocation committee, and the committee of insiders allocated the stocks, the franchises, to the various specialists. That was huge,

and it really did change. We went from fifty-four specialists units down to probably fifteen or twenty very, very quickly because they either didn't have the capital, or the stature or the technology. When AOL came in from NASDAQ and said, "Okay, why do I want to pick you?" we went into a selection by the company that was huge.

KD: So suddenly, the ones with the track record are all getting chosen, and you're washing out lots of others.

CK: Correct.

KD: Was there a negative to that, a downside?

CK: Well, it became a little bit of a beauty contest, and people were getting very aggressive, and I think it changed the collegial nature among the specialist community, but I think it was the right thing to do. I would say the last piece, as I said, was opening the office in Silicon Valley. We adjusted our fees slightly to make sure that we kept people very happy.

KD: One of the things, looking over on NASDAQ side, was that they had their big crackup with the odd-eights, and you had the division of regulation and commercial function. Was there any sense that this was something that the Stock Exchange might be looking at sooner or later?

CK: You mean the separation of the two –

KD: Yes, splitting up regulation.

CK: No, I don't think so. I think there was always a view that both in fact and in operation, the regulatory group operated very separately. They were part of our company, but the notion that we influenced them, no. They were in a different building—they were at 55 Water Street for a very long time, so we were very set apart. Other than the people who did market surveillance because they needed to be close to the market, they would go down there and do things. Everybody else was in a completely different building, completely different management.

KD: Would people move back and forth? You, yourself, moved from regulation into other things.

CK: Sometimes. We always thought it was really good to move people back and forth because they got a better appreciation and understanding for the other side. So some people did, but there weren't too many of us that moved back and forth that much.

KD: I think I saw somewhere that there were times when it was hard to keep people in enforcement. There was a lot of turnover.

CK: To be honest I don't know the answer to that because I didn't bump into them that often, happily.

KD: Well, talk about some of the things you were doing then, moving from the late nineties into 2000.

CK: As I said, I went in and really looked at the listings, and knew that our goal was to try to get some of the big companies to move off of NASDAQ, but also to build a base for the future. Our list turned over, about every 10 years, literally. And it's still true today, I'm sure, if you went through the statistic between M&A, which was the principle reason companies left. So we were doing all that. We had an audit. When I first got there, Lori Richards' group came in, and we didn't do very well in the audit of our compliance and oversight of our listing standard, so we had to then build out a very, very robust compliance function for the listings group.

KD: What's involved in compliance?

CK: Well, it was absolutely having availability of the financials of the company on a monthly basis, quarterly basis, annual basis. So we were really tracking their financials. It was looking at all of the standards for governance, for the board, for all the construction. Tracking companies if they went below our listing standards, and putting them on morning, or watch, or delisting them. Up to the time I got there, it was hard for me to find any company that was delisted.

KD: Was this after Enron had happened?

CK: No, this was actually a little bit before that. This was before that, and then Enron and all that happened subsequently.

KD: And I suppose you got even more—

CK: Oh, we got even more aggressive after that.

KD: What did your customers, the companies, were they happy to keep dishing out more and more information, or was there some push-back?

CK: Well, the good news was that a lot of the information was publicly disclosed. Remember, the SEC has the oversight responsibility for disclosure. So a lot of this information was available. We simply told the companies that we had standards, and we were going to enforce them, it was our responsibility to do that. And, actually, even companies that got in trouble were very grateful because we gave them time, we put in processes and procedures. If you fell below our standards, you presented us with a plan, and we had a team of people and a compliance committee that actually looked at it and said, "Zero chance of making this plan work. We're going to have to delist it." So I think the companies were grateful. I think they understood. They didn't like it, necessarily, but they understood. When they were in trouble, they were grateful that we had people there

were who were trying to help them actually restore their health, or make a transition if that's what had to happen.

KD: From your position as the head of this function, what were you spending most of your time on?

CK: I would say three things. One, developing the strategy, because this, at the time, was 37 percent of the revenue listings. It's a huge contributor, so it's transaction fees, market data, and listings. And listings is the single largest contributor. So this is a big deal. I'm trying to think about the strategy of how we're going to be able to make sure that we're continuing to contribute this kind of revenue to the company and, in fact, grow it. In the meantime, the fellow who ran international left. We can get to that later. But in any event, strategy was one part. How were we going to compete with NASDAQ, because they were really our main competitor for listings. Number two, I also had other responsibilities other than just listings. I was on the management committee.

I had my Exchange hat I wore, and then senior management, the three of us, Dick and Bob and I. Then I would say compliance was a big thing because I really felt we needed to strengthen the governance and the compliance of our companies. Because at the end of the day, the thing companies were most proud of was that they were listing on the New York Stock Exchange. And we wanted that to still mean everything to them, as well as to the investors who were buying the stock, so it was really important, really important. I

would say that that's how I spent my time, trying to market, and build, and strategize, and I made a lot of calls with the team. I also traveled a lot.

KD: Visited a lot of companies.

CK: Oh, I visited a lot of companies, a lot of companies.

KD: Walked across a lot of shop floors.

CK: Absolutely. Visited a lot of management teams, greeted them when they came to the Exchange.

KD: So you were bringing your concerns about the strategizing to the management committee.

CK: Absolutely.

KD: What other issues were front and center in those discussions—where's the Exchange going?

CK: I think there was always the question about how far to take the technology. We went in a direction of doing something before Dick left in 2002, which did automatically execute trades, so we started down that path because we were going to have to go there. The volumes we were doing, you could see, were going to necessitate further and further and

further creation. And it was also really important—this was a very symbiotic relationship. The listing, the trading all worked together, and we wanted to have the market share.

KD: Who was doing technology at that point?

CK: Bob Britz was, so I had the listings and I had the functions and, as I said, internal audit. I also had regulation at that point. In 2002, Dick asked me if I would take regulation, so I now had the full responsibility of regulation as well as listings. Bob Britz had technology and operations, and he actually had SIAC reporting to him at this point. SIAC had been separate and reporting to Dick, so they were now reporting to Bob. We really had quite a separation, again, of the technology and regulation.

KD: If you had regulation, this is a big time to have big regulation. This is 2002.

CK: Yes.

KD: And corporate governance is everywhere.

CK: Right, and right after Enron and WorldCom, and before Sarbanes Oxley, we had established a blue ribbon panel which put out its findings in 2002.

KD: Was that with NASDAQ?

CK: Actually, we did it ourselves. We did not work with NASDAQ on it. But the SEC made NASDAQ adopt everything we did. So this was in the context of independent audit committee. A lead director had to be assigned. The board had to meet, there's a whole report about it, which you can find, I'm sure. So, again, we were asserting our leadership role in the governance arena. So when you asked me what I was doing, oh my gosh, we were doing a lot of different things. That was also in the context of both a regulatory responsibility and a listings responsibility, which went very well together.

KD: Along with the corporate accountability that everyone's doing, then we get Chairman Donaldson coming out and saying, "I want to know all about the exchanges, I want them to be transparent."

CK: Right, right.

KD: What was behind that? Did it make sense?

CK: It made total sense. I think the exchanges were setting the standards for disclosure and transparency for the companies, and he said, "I think the exchanges have to follow suit. You're setting the standards, you've got to stand up and do what's right."

KD: So it was cause and effect.

CK: It was, absolutely. And it was the right thing.

KD: Did you think that it would shake out the way it did?

CK: No, never. No idea.

KD: Seemed like an overreaction to some extent?

CK: I certainly think the standards we had set were the right standards. I think everything was fine until WorldCom hit. It's a little bit like today. Everybody's calling for the government to step in and do something. And, honestly, I can say I think the soft regulatory process is the right one. It's not perfect. Everybody doesn't do everything perfectly all the time, but it is the right system. I think Sarbanes-Oxley was a complete overreaction, and it hurt us competitively for a long time.

KD: But then in the aftermath of this, you did split off the regulation.

CK: We did ultimately split. But that happened after John Thain. Dick left, and we ushered in even more automation. We really set out then to be a public company, to be fully transparent.

KD: Now in the stories about Dick Grasso, there's always this sort of Greek chorus of specialists out there who are with him and against him. Did you see that phenomenon?

CK: Oh, yes. I think it goes back to your earlier question. This was, in my view, a love-hate relationship. I think nobody loved, appreciated and did more for the business of the New York Stock Exchange than Dick, and I think every one of the members knew that. On the other side, however, the job involved change, the job was pushing us to a different place. That's what good businesses do. They change, and they respond to the environment or push ahead of the environment that they're in. So they loved him, but there was always the pushing and pulling.

KD: Was it that Grasso wanted too much change, or was it that the change that the Exchange needed wasn't coming?

CK: No, I think it was more the amount of change they knew that had to come. It wasn't that it wasn't coming, it was going to come. And, again, it was more that there generally were people on the floor, some very, very enlightened people, who knew exactly what was happening and what was going to happen.

KD: When did you meet John Thain and know that he was going to come into this position?

CK: Well, this all unraveled very quickly for Dick, and I remember he left on the night of September 17th, 2003. And the next day, they called in the director, and we went to a meeting on Saturday to try to find someone to chair. John Reed was selected and took the position. That was in early October. And he came to the Exchange. Then in January,

he called us in to tell us that he had convinced John Thain to join the Exchange as the CEO, and that his plan was to leave in a year, giving Thain some time to transition, but Reed's plan was to be gone in a year. He would like us to meet with John Thain. In January, I shook John Thain's hand at the IPO, Goldman Sachs.

It was the first and only time I'd ever even talked to John Thain. He came in, and he met with us, and I really loved working for him. I think he had a very hard job to do, coming in. He was hit by a barrage of things, whether it was management issues for the people, whether it was the investigation that ensued with the regulatory side for the specialists. He had to do the technology changes that were inevitable. He had a very tough job, but I think he was the right person, and he took us public, which I'm sure that will be debated forever more. We certainly weren't the first to do that, so in the environment, I think it was the right thing to get us in a competitive position.

KD: Did he say right away that he was going to not only take the Exchange public, but take the technology to its logical end?

CK: Yes. He was a really, really thoughtful guy. He spent a lot of the first couple of months on the floor. He was an engineer, and he spent a couple months on the floor. Every single day, he was down on that floor for a lot of the time just observing, watching, standing with the traders, watching the specialists, doing all this. He'd say to me, "Why couldn't we do this?" And I'd say, "Well, John, we do do that. We just only do it this much, we don't do it this much." And he'd say, "What would be the reasons not to do

that?" And so we'd go through them. And, "What would be the reasons to do that?" I think it was hard—he had a very tough job. And in the background of all this is, as you said, was the Greek chorus saying, “What's the future of the New York Stock Exchange?” So he had a tough job.

KD: Were you in on the discussions with Archipelago?

CK: Yes. That was a process that took place. John also brought McKinsey in very early to help develop a strategy for the Exchange. So we were very much a part of the strategy, discussions, what was the right time. But I would say that there were others who were much more at the forefront of that. I definitely had a view that it was kind of amazing sometimes to go into some of the meetings that occurred at the Exchange afterwards with Jerry Putnam, Duncan Niederauer, Rick Ketchum. I mean, these were people who were in a different space.

And I just would say, no one would believe this would happen. If someone had told me this was going to happen, I would've said—and very quickly. So I can't say that I was at the forefront of that deal. We all knew we had to do something, and I think John had the brilliant stroke of doing that merger because it got us public in a stroke of a pen as opposed to the agony that it would've taken. It was already hard, but otherwise it would've been almost impossible.

KD: And at the same time then, the implications of going public.

CK: Oh, gosh, yes. And the members and what that meant. Many were for it. Many had seen CME and the great success that had occurred there. There was a lot of push for it. At this point, remember, seat prices are declining. It's 2004, 2005 and seat prices are really plummeting. The members had been very well treated because they all had been leasing their seats because, remember, in early eighties, the SEC ruled against us and said that somebody could lease their seat. Previously, you had to own your seat and work your seat. So the SEC ruled against us. There are certain changes that occurred in the business that I think set a path. I think that was one of them.

KD: No kidding. Explain that to me.

CK: I think we've come full circle to the issues that we're discussing right now. When it's other people's money, behavior, risk taking—lots of things occur in a very different way. If you were the person who owned that seat and you were renting that seat—but later what happened was that people came in and they never owned a seat, they didn't have their capital in it, they were renting the seat, and they were an operator on the floor. They were very much at odds in the membership context. Those people, the lessees, were very much at odds with the lessors.

The lessors had a valuable asset that the only way they could equitize, get equity in, was to go public. The lessees, this was their job. They made their living here. The lessees paid the lessors a lot of money. Over the years, I forget what the average price of a seat

was, but let's say it was \$250,000. Those leases were going for \$350,000 a year for a number of years. So the lessors got very restless because the seat prices were going down and they were earning less on their leases. Anyway, it was a maelstrom.

KD: So all the while, you're still out there doing the marketing and listings, right?

CK: Right. And working. I was still on the management committee, we're still doing all our strategy, we're still working on the technology, we're trying to make sure. We were all in it then because we wanted to go quickly.

KD: And the next big front is international. Give me a little bit of the back story to that. How much had been done previously?

CK: A lot had been done. I would say John Phelan really got it started. In 1986, John Phelan took a delegation to China and met with Deng Xiaoping. I promise you, if you go on websites in China, that image is still there. He met him in the People's Hall. That was followed on by the opening up of China. So the notion of the capital markets coming, capitalism coming to China—oh, my God. You know, Deng Xiaoping had those two very famous sayings. How will we make China great? And he said some will be rich first.

The second one that everybody always talked about was, "What's the difference between the black cat and the white cat?" And he said, "They both catch mice." There was not

going to be any difference. There was going to be a capitalist kind of mentality. That really, in my view, ushered in the beginning of the Exchange being viewed as the international place. Capitalism was moving. Whether it was in Russia, then into China, all over the world, and it was really bringing the message of capitalism at a time when people were very eager to have that message.

That was in the nineties. John Phelan left in '90, Donaldson picked it up then for three years. He did a lot in trying to get things. There some, I think, heated moments with the SEC relative to the international nature of the markets. And then Dick, all the while, was in listings at this point, and then into operations. But he really did a lot to travel all over the world. There was a listings group that only did international. I was only doing domestic at that point. There was a team of people that did international listings. We had opened an office in London, we had an office in Tokyo—we did a lot with the Tokyo Stock Exchange. So in any event, it ushered in a whole era of internationalization of capital markets. And John started it. They all contributed in their own way to advancing that.

KD: Was there a sense that this was building really quickly, though?

CK: Oh, absolutely. Yes. It was definitely building. We were getting record numbers of international companies coming to the Exchange. Every privatization of a major company around the world came as a second or dual listing in New York. So the biggest

rush in telecom companies, the biggest Chinese insurance companies took place in New York. We owned the space in the international markets.

KD: Now did you get the assignment to deal with Euronext? I know you ended up going to France, right?

CK: Right, I did. Well, what happened was interesting. In the early nineties, Jean Francois Theodore came to the Exchange. I was running technology at the time, and he wanted to buy some software that we had built to optimize the performance of a number of the technologies we had developed. It was Tandem, which ultimately became Compaq, which ultimately became HP. We had worked with Tandem to build something called Non-Stop Processing, in the vein of reliability. We were known to have done some very special things with that, and Tandem put us in touch with Jean Francois Theodore, who had this vision of putting all the markets in Europe together, and he was going to use a lot of the technology we had built for ITS and for our own systems, our own books, electronic books.

He was going to use a lot of that software and the hardware. So he wanted to buy this. I met him then, and it was the first commercial deal we ever did, selling software to what was the Paris Bourse at that time and ultimately became Euronext. He actually fulfilled his vision—he put four or five exchanges together, including mine.

So anyway, again, John was there, there was a lot going on. But, again, in the context of the big McKinsey study that we had done for the board and the strategy, there was a domestic strategy. But John had a strategy that we needed to be more diverse from both a product perspective and a geographic perspective, and that we needed to have futures, because that was really where the growth was going to come in. And I think he was absolutely right on the money—that the equities business was going to get more and more challenging, the futures and derivatives businesses were going to be the growth engine, and that they were much more of a monopoly than the equities markets were. Very transparent, very low cost. They're ubiquitous.

We were trying to decide which was the best, which was our greatest opportunity, and Euronext was the opportunity we landed on, and John closed the deal. He wanted someone to leave the U.S. team to go, and the four of us went. So it was a natural because we were doing international listings. I was spending a lot of time traveling to China anyway, so it was a lot easier for us.

KD: And you knew French.

CK: I knew a little French, enough to stay alive. And I knew Jean Francois, and I respected him a great deal. It was a really exciting time for us. I also knew at some point I was going to retire. I mean—thirty-five years. I said to John before I went, “This will be my last assignment.”

KD: How much had you accomplished? How much had you done there?

CK: By the time I got to France, John had laid out the organization and we knew what we wanted to do. When I got to France, I learned so much. We had no idea what it was like to work in another culture. Until I got there, I didn't know either. We knew what it was on a piece of paper, but living it is different.

KD: So that's probably still something that the Exchange is dealing with.

CK: Absolutely. The twenty-two person board, the governance structure. But it was the right thing.

KD: Terrific. Is there anything that we haven't talked about that we should?

CK: I don't think so. So much of it is chronicled in the press and all over. I guess the only thing I'd say is the Exchange, in my mind, had the incredible, incredible knack of having the right person running it at the right time. It was just remarkable to watch in thirty-five years. Some organizations don't get that lucky. And even our own organization, given some of the possibilities in the mix of consideration, might not have yielded the same response. It was remarkable. For all of its challenges and difficulties, it is an amazing institution, iconic institution.

KD: And a very interesting time too.

CK: Oh, interesting time, interesting history, interesting people. It was a magnet. You could look at all of the things that have gone on in its history and look at what's going on today, and it just is definitely an industry of fear and greed—those two cycles. And it vacillates within those two cycles. Periodically, we get these periods of peace, and then we get these incredible cataclysms. But it's the cataclysms that push the change because it just is hard to change in a more stable fiscal environment.

KD: Something very human about that.

CK: Oh, yes. It's the greatest industry, and I wouldn't have changed anything.

KD: How many other liberal arts majors did you meet along the way as you went through this?

CK: There were a number of them. I think there were a fair number of liberal arts majors. I would say the predominant people I met along the way were lawyers. Most of the people, at least at the Exchange, a lot had legal training. Of course, there were the technology people, but a fair number of liberal arts people, but a lot of financial people and a lot of lawyers.

KD: Well, I was struck by your discussion of regulation running around saying, "Well, we have liberal arts majors if you want to use them," as if they're some kind of special animal.

CK: Yes.

KD: It's good to have folks taking a different perspective on things.

CK: Absolutely. Even in the technology side, a lot of us were being trained on the job. Late seventies, the PC wasn't even around until '82. People were engineers. There weren't computer science majors. That sort of came in the late seventies, early eighties—that was the first crop probably. So it was just a very different moment.

KD: Good time to think big.

CK: Absolutely.

KD: Well, thank you so much. I appreciate it.

CK: Not at all.

[End of Interview]