October 1987, A Retrospective

By
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As I am unable to be physically present at the 20th anniversary panel on the "Market Meltdown of October, 1987," I have been asked to provide a paper outlining some of my thoughts on the subject after 20 years.

PREAMBLE

I have tried to concentrate on the larger events as I saw them, and as they impacted the New York Stock Exchange, of which I was the Chairman and Chief Executive Officer. Also, I have kept the mention of names to a minimum for fear that I would leave out other important participants.

Throughout the October 1987 "meltdown", as we came to call the precipitous drop, I was acutely aware that I had responsibility for the fourth oldest financial institution in the Country (the U.S. Treasury being the eldest, the Bank of New York second, the Philadelphia Stock Exchange third and then the New York Stock Exchange in 1792). A massive failure of the Exchange market would have meant the probable demise of the NYSE. I am very grateful for the various regulatory and oversight groups that let me do what I was paid to do, and gave me nothing but enthusiastic support. Lastly, I will be eternally grateful to all the investing public and to the people of this great country of ours who did not panic and because of their faith and decisions, the market bounced back and we did not have another 1929.

Coming from a business and a Marine Corps background, I had always played "What if?" and plotted a number of fall-back plans to fit the best case and the worst case scenario whatever the difficult situation. As I will mention later, when I spoke about "backup plans" to people who had a legislative background, it appeared they immediately jumped to the conclusion that we were about to close the Exchange. I suppose if you present legislation and talk of a backup plan, they all want to default to the backup plan. During those difficult days of October '87, many people were insisting that I should close the Exchange, but I was committed to keeping it open. I had absolute authority from my Board and its Executive Committee to close the NYSE market, if necessary. I did not need permission from regulatory or oversight groups. The only reasons I would have considered closing was if we had had: a massive computer failure; if I had lost the specialist system; or if the S.E.C. had requested we close after talking to the Fed Chairman and Secretary of the Treasury.

THE BEGINNING:

As early as 1985 the Exchange had learned from our marketing people, who were visiting members firms' trading desks, that there was an increasing interest in participation in program trading. A number of firms were active both as agents for customers, and more importantly, as principals for themselves. We also discerned that major institutions were using portfolio insurance to manage and protect their portfolios. Both of these developments were to have a significant negative affect on the market, as the insurance kept giving "sell" signals. We were at that time working on a trading capacity increase of significant proportions because my underlying belief for the last 20 years had been that the market for stocks would continue to broaden. We had set a target capacity to increase the number of trades that could by handled by three-fold to 600 million shares a day, up from 200 million. This required redoing the odd-lot system as well as expanding the super DOT system and enlarging the switch. All of this was to be completed by 1989-90. But the events of October 19, 1987 intervened.

OCTOBER 12-18, 1987

By the late summer and early fall of 1987, it seemed to me the market was too high and ready for a correction. Everyone was talking about their stock portfolios and speculating in real estate.

The market was weak Thursday, October 15th and Friday, October 16th of that week. On Friday the volume alone exceeded approximately 400 million shares and the Dow was off 88 points. I had been on vacation, but had returned to New York on Saturday, October 17. I spoke to a variety of people over the weekend and decided, because of the heavy volume, we should "batten down the hatches." I called a meeting of the major firms for Monday morning, October 19th at 8 a.m. I said we expected a weak market with high volume, and that we were opening all the systems early. I added, "No matter what happens, the Exchange will stay open." We would shut down individual stocks if severe imbalances occurred in them. We would then indicate their new bid and offer prices and get them open again. But under no circumstances would we close the Exchange. They all agreed with that plan. We then notified the rest of the firms about our actions.

Some people attributed the events of October 12th through the 18th to such factors as a weak dollar, increased interest rates because of fear of inflation and the nervousness in some overseas markets, as possible causes of the following week's weakness. But I have never given much credence to these supposed causes. The market was too high and had too much speculation and leverage, and was just looking for any excuse to correct.

MONDAY, OCTOBER 19, 1987

Monday morning I was in my office and on the floor of the NYSE. At that time I was also Chairman of the President's Private Sector Initiative, and Fred Ryan from the White House staff was up to take a tour of the Exchange. This morning was much like any other, and there was little or no reason for alarm. However, when I returned to my office in the early afternoon, the market was off over 200 points on heavy volume, and I sat there and watched as it melted away.

The market went off 305 points between 1:30 p.m. and 4:00 p.m. on huge volume. The day ended with the Dow off a total of 508 points on 608 million shares. During this period, I took the following actions:

- Spoke to our systems and operations people and discovered we were having stress all along the line.
- Ordered a slowing into the switch by several seconds to slightly delay orders entering the system.
- Operations suggested we print out DOT orders entering the system away from the post, which we did.

- Ordered a press conference at 4:30 p.m. at the urging of the communications people.
- Called the SEC to establish contact with them and talked to Chairman Ruder several times to keep him up to date. He was a fine man and doing an excellent job.
- After the close, I brought all my senior operations people into my office and said "I want to know what went wrong, not right. Bad news first."
- Asked what could be done Tuesday, October 20 to improve our efficiency.
- Held a press conference at 4:30 p.m. in the NYSE Boardroom. I had never seen so many media people in one place. I told them:
    - o I thought the economy was in good shape. Inflation and taxes were low, and I gave President Reagan a big plug for the strong economic situation.
    - o We had many things go wrong - the odd lot system was swamped. But due to a recent upgrade, the tape was never late if accessed by machines.
    - o Despite everything, 85% of orders were executed on time.
    - o I had great confidence in American public and their courage and resilience and they would realize that this was just a correction and that the country was in good shape.
    - o The good news was we survived intact, but I believed Tuesday, October 20 was going to be a difficult day.

I answered all questions, stressing what went wrong because I knew everyone would check to see if I had been straightforward with them. The press conference ended a little after 6 p.m.

STEPS WE TOOK TO MAINTAIN CONTINUITY AFTER MARKET CLOSE ON OCTOBER 19:

- We established contact near or after the close with the other stock, option and Commodities Exchanges (Chicago Mercantile Exchange).
- Either I or one of my senior people was in close communication with the depository and clearing corporations throughout the day and the other market participants through our operations and marketing group.
- As I stated before, I had several contacts with the SEC to keep them up to date.
- Spoke with Howard Baker, the White House Chief of Staff. He asked to be kept posted, and was very supportive of keeping the market open.
- At the end of the day and for several days to come, I maintained contact with Representative John Dingell, Chairman of the House Oversight Committee and Senators Reigle and Daniel Moynihan of the Senate Oversight Committee.

KEY CONTACTS IN THE PROCESS:

The key contacts and the essential players in all this, however, were Alan Greenspan, Chairman of the Federal Reserve, and Gerald Corrigan, President of the Federal Reserve Bank of New York. I contacted both of them, and each immediately asked what they could do to help. I asked them to pump money into the system. The three of us agreed that what we were facing was a liquidity crisis. The situation had become such that dealers who usually borrowed $10 million a day wanted $100 or 200 million from the banks, etc. Both Mr. Greenspan and Mr. Corrigan provided an enormous service to the financial system and to our country. Not only did they infuse liquidity as needed, but when the market had stabilized over the coming weeks and months, the Fed slowly withdrew the excess liquidity, so we never had an asset bubble because of too much money in the system. I discovered several years later when talking to the number two person at the Bank of Japan that the Japanese thought October 19th and 20th would be another 1929, so they flooded their market with liquidity and left it there. This created a giant asset bubble that took ten years to correct.

I am also grateful to James Baker, Treasury Secretary at the time. He said "Whatever you need to get through this, you've got it," and he worked closely with Fed officials. At my request, he asked President Reagan to send a telegram on Thursday, October 22 to the Exchange, congratulating all market participants on helping to get through the crisis. He was also kind enough to give me a note of praise in his current autobiography.

In addition to the gentlemen already named above, I want to thank all the regulators and the members of the House and Senate Oversight Committees who basically said "You are the tip of the spear (an old Marine term) - do what you have to do and we will support you."

THE PERIOD IMMEDIATELY FOLLOWING OCTOBER 19TH:

At 2 a.m. on October 20th, I looked out my apartment window over a sleeping New York City, and wondered what impact the prior day's stock market events would have on Manhattan's citizens and all our great country. I worried about the October 20th trading day, and hoped the whole system would not come unhinged because in three trading days the Market was off almost 33%.

On Tuesday, October 20th, I took the following actions:

- Called all heads of the specialist firms to a meeting in the NYSE's Boardroom and told them the market was oversold, so they must sell into all rallies and get themselves liquid again, in case the market decided to test the lows.
- Opened all systems early.
- Had a capital check made of all specialist units, as well as a sampling of member firms.
- When several units threatened to give up a stock rather than make a market in it, I told them the Exchange would make the market - none gave up a stock.
- Went to the floor at 11:30 a.m., had a meeting with Floor Directors and Floor Governors and told them "We must stay open." They were to continue to shut down stocks with imbalances, put up new bids and asks and then reopen them. The future of the NYSE depended on their doing this.
- At 12 - 12:30, I assembled my senior staff and told them that regardless of pressure from many sources, come hell or high water, we were going to stay open.
- Derivative exchanges (options, futures) were closing due to no fault of their own. You can't run options and futures when the underlying is so erratic.
- On this day, program trades could only be done manually to clear the system for individual investors.
- The Floor had had the wind knocked out of it - down 508 points the day before, plus a nervous market on the 20th - and I thought to myself, either this is the eye of the storm or the storm had passed. I was betting the storm had passed. The market had to rally.

By about 12:30 p.m. on the 20th, the market was down about 125 points and I began to worry that it might go down another 400 or 800 points. That would mean the market would be off over 50% in five trading days. I had already spoken to the Federal Reserve and Treasury about this remote possibility. However, my whole training from business school and the experience of running my own business and the Exchange all taught me to have back up plans. If the slide in the market continued, we could have kept shutting down individual stocks and still kept going. We had over 1500 listings and they would not all be under intense pressure at once. However, I was worried that if another significant market dive took place, I might lose the specialist system and at least some member firms and that the decline would cause huge damage to the whole financial system.

Should the extreme happen, I knew that Greenspan, James Baker and Corrigan were already thinking about backup plans because I had mentioned the subject to them. But when I mentioned a backup plan to the SEC and the White House, they seemed to interpret this as if I were about to shut the market down. This, of course, was not true and I had nine senior executives and the vice chairman from the floor and the executive vice chairman of the Board in my office all listening to the conversation I was having with the SEC and White House on the speaker phone. All my staff knew I was determined to keep the market open. The SEC never expressed an opinion on whether we should stay open or close. They merely wanted to be kept posted. The White House, on the other hand, was very interested in our staying open. I thought at the time - and still do - that the President had to be protected in case of a massive failure and should not be out on the very edge of the market, so to speak. A person who was at the White House that day said he thought the President had spoken with me twice on October 20 between noon and 1:00 p.m. But

President Reagan and I never spoke on that day. The White House knew I was determined to keep the market open, barring a total collapse.

Within half an hour, the market rallied and I knew the crisis had passed. Our stock list people were calling on listed companies and urging them to institute buy-back programs. Many responded on October 20th that they had indeed gone to their Boards and were initiating such programs. At the end of the day we had a second press conference where I discussed some more problems, but I did say I thought the crisis had passed.

At this point I should say something about the specialist system. After October 19th and 20th, there were articles written in the financial press about the impending demise of the specialist system. However, as it turned out, they performed better than any equities dealer system. Having defined obligations to the stocks they were allotted and a reasonable responsibility to make continuous markets, their performance was better than any dealer system**,** listed or over-the-counter.

Because of this, the specialists wanted me to run advertisements in the newspaper saying what a wonderful job they had done. I refused. I remembered that with President Eisenhower's first heart attack in the late 1950's, the market took a steep plunge in the morning but rallied strongly in the afternoon. Keith Funston, then President of the New York Stock Exchange, said the specialist system had saved the market. This met with all sorts of derision and investigations which culminated in the Special Study of 1960-1962. I told the specialists they were a part of the whole NYSE and we would only talk about how the whole Exchange and the sum of its parts did during this period. That was by far the right decision.

I could go into much more detail, but I think you get the general tenor of those two days. I once had a professor ask me, when I mentioned chaos, "What makes you think there is no order in chaos?" Well, during this period there was chaos, but with it there was also order.

ACTIONS TAKEN AFTER THE EVENT:

In the aftermath of "Black Monday," many safeguards were instituted across the market system. The NYSE:

- Required a 10-fold increase in specialist capital.
- Removed stocks from specialists who performed way outside the bell curve. When they complained, I explained that that is what self-regulatory organizations do.
- I had a meeting in London with our European Advisory Committee and gave them a full report of what had happened and what we were doing about it. They all viewed derivatives as a threat to their shareholders and to their ability to raise capital. This was also true of our domestic listed companies although some of them were using program trading in their pension funds.
- Hired A.D. Little to review our system and to work with Congress to determine how much excess capacity we should have.
- Over the next 18 months, we had all member firm operations in on a number of Saturdays and stress-tested the system to see if any weaknesses popped up.
- Worked closely with S.E.C. and Brady Commission to limit volatility in the equity markets.

- Because of the continuing hostility of various constituents to portfolio insurance and program trading, I asked the Board to form an Individual Investor and Pension Fund Advisory Committee.
- Prior to the meltdown, we had commissioned an independent study of program trading by former U.S. Attorney General Nicholas Katzenbach. This was not finished until December of 1987, so we tried to incorporate his recommendations into the Brady Report.
- Working with the CME, we adopted "circuit breakers" as Brady recommended, which slowed down the two markets in times of extreme volatility. This has worked extremely well.
- Working with the CME, we moved the futures expiration dates from the close of NYSE to the opening, where time and visibility were far more available. This worked well.
- Adopted an Individual Investor Express Delivery service giving small orders express delivery to the super DOT system.

Market volatility continued into 1988 and 1989. In 1989 I called a meeting of the Upstairs Traders Advisory Committee of the Exchange and asked them not to trade as principals in programs. The first time it worked for two weeks, the second time for ten days, and the third time for two days. The fourth time, I asked for a halt again, and they began trading again within hours. Two weeks later we published the news of who was doing principal program trades and the amount of their share volume. All hell broke loose from their customers! The net result was trading desks and firms were forced to give out good information about their activities, and to try to convince their customers the firms were not out to destroy the markets but that program trading increased liquidity and was a bona fide hedging method.

I spoke to many groups about program trading and volatility, pointing out how recent events had brought to light the large number of corporations with pension funds so committed to portfolio insurance that when the market collapsed, the corporations literally had to unplug their computers to stop selling.

For several months after October 19th and 20th, my office received up to 1,000 bomb threats a week because of program trading. We arranged with the New York City Police Department to monitor calls to see if they thought any of them were serious.

It was very difficult to convince floor traders at the Exchange, individual investors, research firms and the firms who dealt mostly with the public that derivatives were here to stay, and that when used properly, derivatives were an essential hedging mechanism and the market for them would continue to grow.

I also traveled overseas in late 1987. The first stop was Madrid, Spain, where the government had interfered in the market with bad results. I then visited the other exchanges in Europe, all of which had had great difficulty on October 19th and 20th.

In 1989, because of a broad spectrum of public dislike for derivatives of all kinds and the volatility that it was perceived they brought, I formed a Blue Ribbon Panel on Market Volatility and Investor Confidence, chaired by Roger Smith, who was Chairman and CEO of General Motors at the time. This Panel had 19 members representing a broad spectrum of constituents included customers, academics and other exchanges to explore the causes and effects of volatility. It was a fine effort and helped to spread oil on troubled waters.

As a result, we moved from five-day comparisons to three days, and we moved settlement up as well. It should be mentioned that throughout the meltdown and during the ensuing capacity buildup, the Security Industry Automation Industry Corp. ("SIAC") and the Depository Trust Company behaved in an exemplary manner, as did all the member firms..

This was the time period when the Exchange began exploring automated off-hours trading in NYSE equities, a process that should have continued into the 1990's and beyond, but was discontinued when I left the Exchange. Moreover, the Exchange operated a futures and options market. These also were discontinued after I left.

It is almost impossible to give the reader a feeling of the tension and hostility that was in the air for nearly two and a half years. It was most helpful to have Congressional oversight hearings during this time because with the aid of the CME, member firms and ourselves, it helped to set a better understanding of how the markets were changing, for better or worse.

The amount of interaction we had with different groups cannot be overstated. When you are responsible for the survival of the fourth oldest financial institution in this country and you think it is threatened, you reach out to whomever you can to try to spread calm and understanding.

The cooperation and support of the Federal Reserve and Treasury were absolutely essential during and immediately following the market meltdown to restore credibility and stability of the markets. After that, the political as well as financial initiatives were absolutely necessary for the future. While the futures market already had limits up and down to restrict volatility in their markets, those markets were used to and could tolerate a lot more volatility than the equities markets. Also, regulation in the futures markets was basically to protect the market as a whole. These markets were essentially used by professionals of all sorts. Regulations in the equities markets were basically to protect the individual investor, who was not accustomed to the same amount of volatility.

I have always assumed that Howard Baker, the White House and James Baker at the Treasury had put together the Brady Committee. I was sure others were involved as well, but it was this Committee that resolved what might have become a major political problem by introducing what became known as the circuit breakers. These "circuit breakers" linked together two markets, compensating for the difference in volatility and preventing the uncoupling of these two markets when volatility became too great. Nick Brady and his Committee, as well as all those who put together that group deserve high praise for their efforts.

At this juncture, I would also like to thank Leo Melamed and his associates at the Chicago Mercantile Exchange (the CME). We both had our own problems with constituent groups, but despite that, when local weather conditions permitted, we worked together to put aside the New York-Chicago in-fighting and agreed before testimony in April 1988 at the House Oversight hearing to cast aside our differences and to work to solve our common problems. Earlier in the paper I mentioned but two examples.

By the end of 1987, many people thought that this market meltdown was the end of the derivatives markets. The term "meltdown" had come become so popular in connection with the Chernobyl, Russia nuclear disaster that I used it to describe the October, 1987 events because the market slowly but steadily melted down. As a fact, after 2 p.m., the Dow Jones Industrial averages were ticking down about 1 point in the Dow every 17 seconds.

One morning, Arthur Levitt and I had breakfast, during which the subject of derivatives came up. At that time, Arthur was Chairman and CEO of the AMEX, the second largest options exchange, and doing a fine job. Arthur then went on to several successful entrepreneurial ventures. Subsequently, he became the longest serving chairman of the SEC. His main concern was and still is the individual investor. During our meeting, I told Arthur that I thought the derivatives markets would survive because one common denominator for all our country's 50 states is that they grow agricultural products, and Congress would never do anything to hurt those markets. Derivatives would continue to grow as the markets broadened worldwide and people had a greater desire to hedge their risks. That observation proved to be correct. Slowly but surely, the individual investor has adjusted to all these changes.

IN SUMMARY:

Looking at the period following October 19, we had a plan in place. We constantly adjusted it as conditions warranted, but stuck to the basic principle that we would stay open no matter what the pressures were to close. It would also have been irresponsible for me not to have urged others to have backup plans in the unlikely event that everything went south.

THE TWO DECADES SINCE:

I do not believe the 1987 crash could have been prevented. A new product, program trading, had come online, and people and firms were making a lot of money with it. It was, in effect, an intellectual market oligopoly, limited to a small number of firms. The rest of the world was oblivious to this product and the potential problems it could cause. Program trading participants were not going to run to the regulators and say "Look what I may cause!" Lastly, those like myself who tried to warn against the potential pitfalls of this product suffered much verbal abuse.

One advantage of being ahead of the curve and warning of potential dangers was that when the worst did happen, the Oversight Committee in Congress said, "Well, at least your warned us - now what do you think we should do?" To their great credit, the Oversight Committee and Congress did not throw a lot of new legislation at the problems. For that we should all be eternally grateful.

COULD A SIMILAR TYPE OF CRASH HAPPEN TODAY?

History never does repeat itself in quite the same way, especially to markets that are now linked via circuit breakers, such as the equities and financial futures markets. However, a number of market disturbances have taken place over the last 20 years:

- Metallgesellschaft - $1.5 billion loss around 1994.
- Orange County, California - bankruptcy
- Barings Bank - in 1995 - an individual trader put the bank under
- 1997 the Asian Market collapse
- 2003 - Fannie Mae lost $8.4 billion as derivative portfolio

- Sumitomo Metal Industries - concentration in copper in the mid-1990's
- Amaranth Advisors LLC - concentration in natural gas futures through trading to a great extent on the Intercontinental Exchange Inc. ("I.C.E.")

I am sure others could be added to the list.

However, the above were merely shock waves compared to the risk potential in the hedge fund industry as demonstrated in 1998 by the near collapse of Long Term Capital Management:

- Its ripple effect caused near collapse of global markets.
- This has been studied by various groups many times and measures taken to help prevent another LTC. It had the effect of helping correct excesses in many derivative markets.
- However, the immediate solution was much like 1987: a major liquidity crisis had occurred, and the Fed once again had to step in and organize a bailout.
- Long-Term Capital Management pointed out the way flawed assessment of risk was handled in the newly developing markets in 1998.

A major problem existed - and still does exist - with many risk models used by major financial institutions. The models are usually contingent on some form of VAR (Value at Risk) which is based on the bell-shaped distribution curve with the use of, say, two standard deviations. In the LTC case, the bell curve went to eight to ten to twelve estimated standard deviations. The great thing about VAR is that it always works when you don't need it. Of course, there are way more sophisticated models. But none or very few are based on random events. Major work needs to be done in this area. I hope a great effort is being made in risk assessment. This has been highlighted recently in the sub-prime mortgage problems. The ability to value and assess risk in these illiquid and rarely traded instruments only points out the need for a great deal more work in assessing risk in these particular markets.

The more transparency there is, the less likely a major disturbance will occur. Hopefully, when there are minor eruptions, the self-correcting mechanism of the market can work. Nevertheless, the market for derivatives is so immense that one can imagine all kinds of horror stories. Add to this the huge amount of money in hedge funds and in the hands of private equity firms that is being put to work in derivative and equity markets all over the world. It is, therefore, extremely important that central banks, regulators and financial institutions carefully and continuously monitor developments in their markets and across all markets.

Since I am no longer active in the markets, I do not know what systems or actions have been taken over the last two decades.

WHICH ENTITIES ARE BEST ABLE TO HANDLE A MARKET CRISIS TODAY?

- If liquidity crises continue to occur, the first line of defense should be the central banks and bank oversight agencies, both domestic and international.
- The SEC and the CFTC must carefully monitor their markets and have backup plans whenever a crisis or excessive concentration hits, and must work together to coordinate their efforts.

- As derivative products continue to expand in each market and across markets, closer association and/or communication with all interested parties should continue to occur.
- Studies should be made of clearing corporations and depositories to assure sufficient capacity for existing products and in anticipation of new products to come. Dialogue should continue to be held between domestic and foreign clearing corporations and depositories so they can anticipate and act on each others' problems.
- I am a great believer in transparency, but I am sure many on the panel will articulate the competitive difficulties encountered. However, I still believe efforts should be made to push forward in this area.
- Technology has greatly enhanced the distribution of market information, at ever increasing speed. The danger, of course, is an overload of data and the inability to separate out the wheat from the chaff.
- Use of automated trading systems will continue to grow as trading is done increasingly off exchange floors and on automated systems. However, in time of stress, the speed of automated trading may drive out liquidity - this is a major problem. Highway analogy works well: when the traffic volume is moderate, then 55 miles per hour speed limit is in effect. When fog appears, traffic is slowed to 20 miles per hour. With a deluge, traffic virtually comes to a halt. This has worked well with circuit breakers linking the equity and financial markets, slowing the markets down with time outs as volatility up and down accelerates.

- As stated earlier, derivatives have had and will continue to have enormous impact on all markets: equity, debt, commodities of all kinds. Derivates are being used in all markets by many managers, research people, asset managers, mutual funds, pensions, corporations and individual investors. These individual investors and fund managers are finding more ways into different markets to help diversify their portfolios.

WHAT ARE THE LASTING LESSONS LEARNED FROM OCTOBER, 1987?

I would offer these observations:

- First, allow markets to correct before throwing new rules or laws at them.
- Always keep the Federal Reserve and Treasury, SEC, CFTC etc. plugged in during a market crisis.
- Always get the bad news out first. If you don't, the markets, the media and the regulatory authorities will eat you up. Remember: good news is no news, so the media will be constantly probing for the bad. This probing is also one of the most important of the checks and balances in the system.
- Always ask "What if?" and have back up plans in case of real trouble.
- Not all markets have circuit breakers to connect them. When a disconnect occurs, the standard deviation assumption goes out the window.
- People will rewrite history as soon as it occurs. I certainly witnessed this happening after 1987.

A certain question seems to arise from time to time:

(A) When and under what circumstances should all markets in the US be closed? and

(B) What is the process by which this should be done?

My answer to (A) is: Never. However, the assassination of a President (Kennedy, for example) or the sudden death of another President might be reason to close all markets for the remainder of that day. Also, the direct attack by a foreign power (Pearl Harbor) could be another reason for closing all markets. Whatever the precipitating circumstances, the decision to close all markets should not be made by individual markets, the SEC and/or CFTC. A recommendation should be made, after consultation with market centers and regulatory bodies, by the Chairman of the Federal Reserve and Treasury Secretary, to the President. Let us hope this will never happen.

I want to thank Brandon Becker and Carla Rosati and the SEC Historical Society for extending to me the opportunity of submitting this paper, and I hope that in some small way, it helps the panel focus on the future and not spend too much time on the past. While history repeats itself, it never does so in exactly the same way.

My health prevents me from participating in the Panel, but my thoughts and best wishes will be with all of you in your work.

Sincerely,

EPILOGUE:

The Exchange also shortened trading hours on Friday, October 23 until early November in order to help facilitate clearing and settlement of the huge volume of the past five trading days. This is covered in one of the press releases that is enclosed.

Also enclosed is a copy of President Reagan's telegram to John J. Phelan, Jr., Chairman and CEO of the New York Stock Exchange on Thursday, October 22, 1987.

While keeping names to a minimum in case I forget someone, I would be remiss if I did not mention these senior people at the Exchange who performed so magnificently during the October meltdown:

- Gerald Clark - head of Government Relations
- Robert Birnbaum - President and COO of the NYSE
- Richard Grasso - Executive Vice President, NYSE Operations
- Catherine Kinney - VP in charge of Floor Operations and now Co-President, NYSE
- Richard Torrenzano - Head of Communications, NYSE
- Charles McQuade - Head of SIAC (Security Industry Automation Corp.)
- William Denzer - Head of the Depository Trust Co.
- Richard Shinn - Executive Vice Chairman, NYSE Board
- Donald Stone - Senior Floor Director, NYSE Board

I also want to thank Patricia Christiansen and Joan Schultz for their very able assistance. Without their help, this paper would not have been possible.