



## Lessons from the Crisis: What Failed, What Worked and What Will Change

A BNY Mellon Asset Management  
Roundtable Discussion

The financial dislocation that began last year sparked unusually strong reactions from seasoned market observers, including adjectives such as “unprecedented” and “without parallel.” Even investment professionals who would not go that far agree that the environment is among the most challenging that they have faced in their careers, with ramifications that are likely to be with us for a long time.

To help sort through the lessons for investors, BNY Mellon Asset Management convened a panel of senior professionals in Dubai in May 2008 to examine the crisis, which formed the basis of this report. Our participants were:

- **Phil Maisano**, Chief Investment Strategist, BNY Mellon Asset Management
- **Charlie Jacklin**, President and CEO, Mellon Capital Management Corporation
- **Ronald P. O’Hanley**, President and CEO, BNY Mellon Asset Management
- **David Forbes-Nixon**, Chairman and CEO, Alcentra
- **Dick Hoey**, Chief Economist, The Bank of New York Mellon

The panel was moderated by:

- **Cyrus Taraporevala**, Executive Director of North American Institutional Sales, Client Management and Marketing, BNY Mellon Asset Management

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**Cyrus Taraporevala:** We are clearly living through a fairly unique time in the financial markets right now. I recently heard an observation that sums up how a lot of people think about the current situation:

“On the *left* side of the balance sheet, nothing is *right*  
On the *right* side of the balance sheet, nothing is *left*.”

**This pithy observation, kind of Confucius meets FASB, sums it up rather neatly. I would like to pose four broad questions to our panelists:**

1. What has actually happened so far, and what are the root causes of the crisis?
2. Do these events represent a *failure of markets* or are they just part of a *normal boom and bust cycle* – of which we have experienced plenty since the dawn of finance?
3. How has the U.S. market disruption affected global markets?
4. What are the implications for the future?



**The threat posed by systemic leverage was compounded by the fact that so much of it consisted of short-term liabilities used to fund long-term assets. This so-called “maturity transformation” has been one of the biggest changes in our financial system over the past 20 years.**

**— Ronald P. O’Hanley**  
**BNY Mellon Asset Management**

*Ron is President and CEO of BNY Mellon Asset Management. He is also Vice Chairman of The Bank of New York Mellon Corporation and a member of the Executive Committee. Ron most recently graduated from Harvard University Graduate School of Business. He is Visiting Professor in the School of Economics & Management Studies of The University of Edinburgh. Additionally, Ron serves on the Boards of several not-for-profit institutions.*

## What has Actually Happened so Far and its Root Causes

**Cyrus Taraporevala:** Let us start with what has actually happened, and the root causes of the crisis.

**Phil Maisano:** I would start by pointing to the 24-month period, beginning in 2005, when sub-prime issuance was about 15% to 20% of the market. I think about 2.5% to 4% of the total sub-primes outstanding are in default. What really hurt the market was that everything issued over that 24-month period was suspect. At the peak of the crisis, there were no bids and no liquidity, so prices were very difficult to estimate.

The Wall Street securitization machine has gotten a good share of the blame, and deservedly so. Investors and underwriters who should have been doing due diligence relied on the rating agencies, which in turn relied on faulty models. But the real problem is that what went into the front end of the securitization machine were loans that made no economic sense. We should pause for a moment to appreciate the total insanity of houses bought with no money down. When investors buy stocks, bonds, or futures, a margin deposit is required. The framework of margin deposits is federally regulated. In the mortgage business, the idea was that “the market” should decide the appropriate level of margin deposits. That turned out to be a bad idea.

**Dick Hoey:** At the individual level, you had people with weak credit who were allowed to buy houses with excessive leverage, with negligible equity in the form of a down payment. We had triple leverage. The mortgage borrower was leveraged with little or no equity. The tranche structure of CDOs added another layer of leverage. Then leveraged investors and investment bankers added their own layer of leverage.

A few days before the Bear Stearns intervention by the Fed, we had the forced liquidation of Carlyle Capital, which triggered fears of a cascade of liquidation of hyperleveraged portfolios. According to news reports, Carlyle had about \$22 billion worth of assets and roughly 30-to-1 leverage when the banks called in their loans. Carlyle reportedly had high quality assets including Fannie Mae and Freddie Mac securities, whose spreads had widened significantly. The market was worried, with a lot of justification, about a cascade of further hedge fund liquidations. If you expect a cascade of forced liquidations of hyperleveraged portfolios, you aren’t likely to make a bid anywhere near the prior price level. That’s totally rational.

**David Forbes-Nixon:** The big over-the-counter players did try to protect themselves from highly leveraged counterparties through the use of “NAV triggers.” Many total return swaps, for example, were written so that if the net asset value of a fund fell by 25%, the assets backing the swap had to be liquidated to close out the contract. This contributed to the fire sale of assets and the downward spiral that almost crashed the financial system.

**Ron O’Hanley:** The threat posed by systemic leverage was compounded by the fact that so much of it consisted of short-term liabilities used to fund long-term assets. This so-called “maturity transformation” has been one of the biggest changes in our financial system over the past 20 years. About 40% of the \$15 trillion in maturity-mismatched funding was done by non-bank players such as brokers, hedge funds, and structured investment vehicles (SIVs).



**My feeling is that the crisis was about 70% liquidity and 30% credit issues, with fear of sub-prime driving the market. Once sub-prime issues started to tank, everyone was scared into believing that all credit was bad, and they stopped buying opaque instruments.**

**— Phil Maisano**  
*BNY Mellon Asset Management*

*Phil is Chief Investment Strategist for BNY Mellon Asset Management, Chairman of EACM Advisors LLC and Vice Chairman and Chief Investment Officer of The Dreyfus Corporation. Phil holds a B.A. in Economics from Belmont Abbey College and an M.B.A. in Finance from Iona College. He was awarded an honorary doctorate of law degree by Belmont Abbey College.*

Brokers and other unregulated players used to strive for matched funding, so that their assets were supported by liabilities of roughly the same duration. No longer. We saw brokers and hedge funds financing mortgage securities and other long-term assets through repurchase agreements (repos), which are short-term loans. Banks, too, sought to move much of their mis-match financing off the balance sheet, where it tied up capital. This gave rise to SIVs, which financed a range of asset-backed securities through commercial paper. This maneuver proved illusory for banks because they ended up bailing out the SIVs they sponsored by taking them back on their balance sheets.

**Cyrus Taraporevala: We have touched on three factors:**

- **The loose underwriting practices in the sub-prime sector, with the chickens coming home to roost due to a combination of rising borrowing costs and falling house prices**
- **Broader problems in the credit markets, magnified by leverage and securitization structures**
- **The lack of liquidity, caused by the loss of confidence and trust among market players**

**What importance would you assign each of these as causative factors?**

**Charlie Jacklin:** I believe the sub-prime issues led to a broader liquidity crisis. Part is credit related, but a bigger part is related to a breakdown in the dealer market. All markets are dependent on dealers to some extent, but bonds especially so because bond transactions lack transparency. Once credit problems began to surface, given the high degree of leverage on the Street, dealers began abandoning the market. They stepped back from making markets and became brokers – rather than taking positions themselves, they were only willing to search for the other sides of trades. To understand the dynamics, remember that mortgage-backed securities (MBS) are very heterogeneous, even in normal times. The pricing models are very dependent on transactions, but those were becoming scarce as bid-ask spreads widened. It was a vicious spiral that ultimately demonstrated the paradox of liquidity: when everybody wants it, nobody can have it.

**Ron O’Hanley:** I agree with Fed Governor Kevin Warsh, who has called this a crisis of confidence. Without confidence, there is no liquidity. When information, securities, collateral, markets, and participants work well in a seamless business system to intermediate the flow of funds between investors and borrowers, confidence is high and liquidity flourishes. When confidence in all or part of this system is impaired, liquidity also fails.

**Phil Maisano:** My feeling is that the crisis was about 70% liquidity and 30% credit issues, with fear of sub-prime driving the market. Once sub-prime issues started to tank, everyone was scared into believing that all credit was bad, and they stopped buying opaque instruments.

**David Forbes-Nixon:** In the first half of 2007 we had been expecting a correction, but one based on credit deterioration in the underlying business fundamentals. Instead, it was contagion from two Bear Stearns hedge funds that blew up. The effect was staggering. From the perspective of the leveraged loan market that we specialize in, you saw a price drop over six months that was four times as big as the last major crisis in 1998, when Russia’s default and Long Term Capital were the cause. This crisis was not driven by fundamentals but purely by technicals – by the huge unwind in the market. Absolutely unprecedented.



**The global economy is in better shape than it has been during other crises. In large part that is because the U.S. economy, while struggling, still has a relatively strong non-financial sector. Companies are in excellent shape – they have \$2 of marketable securities for every \$1 of debt.**

**— Charlie Jacklin**  
*Mellon Capital Management Corporation*

*Charlie Jacklin is President and CEO of Mellon Capital Management Corporation, overseeing all investment and operational areas of the firm. His previous roles at the firm have included chief investment strategist where he was responsible for investment strategies and research, and director of asset allocation strategies. Charlie received his Ph.D. in finance from Stanford University in 1985.*

## Market Failure or Cyclical Event?

**Cyrus Taraporevala:** Do these events reflect a *failure of markets* or are they part of a *normal boom and bust cycle*? There are two points of view on this question:

- One group views the current events as just a *normal boom and bust cycle*, of which we have had plenty since the dawn of finance. This group says: “The history of financial markets is not a stable one. Markets have imploded every decade or so, whether French and Spanish kings reneged on their debts in the 16th century or whether speculators inflated railway stocks in the 19th century or Nasdaq stocks in the late 1990s. These boom-and-bust cycles are as normal as fear and greed.”
- The other has a much darker view of free markets, and believes that *markets have fundamentally failed* and gotten us into a mess. This group’s view is best summarized by the words of the CEO of a major investment bank, who recently said: “I no longer believe in the market’s self-healing power.”

**Which of these paradigms strikes you as appropriate for the current environment?**

**Dick Hoey:** This experience was not as unprecedented as has been claimed. Those who lost money on complex mortgage securities in the Askin Capital meltdown in 1994 or on the Collateralized Bond Obligations of junk bonds in 1989-1990 could see a lot of similarities in the way securities performed. The market value triggers in the SIVs were not that different from the triggers for automatic selling from portfolio insurance programs in 1987.

I would emphasize the cyclicity of this event – the “boom and bust” aspect of it. It was somewhat more severe than other financial crises, but it fits a historical pattern. It is easy to list examples such as the Penn Central commercial paper crisis of 1970, the first oil price shock of 1973-1974, the Hunt silver crisis of 1980, the Continental Illinois crisis of 1984, the stock market crash in 1987, the S&L/junk bond crisis of 1990, the Mexican peso crisis of 1994, the Asia/Russia/Long-Term Capital Management crisis of 1998, the dot.com bust and Worldcom/Enron bankruptcies of 2001-2002. In each case, you see a cycle between reckless risk-taking and frightened risk aversion. Underpricing of risk is just a phase in the attitudinal cycle. Once again, the risk-loving phase of the cycle was fueled by easy monetary policy, as it had been in prior crises.

**Ron O’Hanley:** This is a story we have seen before, but it is hardly large enough to cause the wreckage we are witnessing. There are less than \$100 billion worth of subprime mortgages in foreclosure, but we are seeing predicted losses of many times that figure just among investment and commercial banks alone. That does not account for the virtual cessation of some sectors of the credit markets and the extreme widening of spreads on debt unrelated to housing.

Paradoxically, the market was actually failing when it appeared to be working in full gear: in the years leading up to the crisis, when the belief was widespread that everything was priced efficiently and that liquidity would be cheap and enduring. The market disruption was actually an attempt to absorb knowledge and re-price it – that is a functioning market, albeit a very unpleasant part of it.

**Charlie Jacklin:** Fair enough. But in one key respect, the markets did fail, in the sense that there was a breakdown in the dealer market for bonds, as I touched on earlier. The bond market became more like the real estate market, in terms of liquidity. But someone selling a bond just is not conditioned to waiting for days for a transaction.



**The winners are going to be the larger, blue chip fund managers, as there will be a lot of consolidation in the fund management space. Only the top tier will have access to capital, and you will see less leverage, simpler structures and more specialization.**

— **David Forbes-Nixon**  
*Alcentra*

*David is Chairman and CEO of Alcentra. He also serves as senior portfolio manager of Alcentra's European funds and chairs the Alcentra European Investment Committee. David joined Alcentra in February 2003 and graduated from Birmingham University with a BSc (Hons) in Chemical Engineering.*

**Dick Hoey:** On the other hand, at the height of the crisis, markets were rationally discounting the prospects of a systemic financial meltdown. The fact that we know in retrospect that the system did not fail does not mean the market was not acting rationally then. Some of the dealers weren't sure whether they would be able to stay in business, so avoiding any market-maker risk whatsoever was a totally rational short-term strategy on their part.

**Phil Maisano:** My earlier comments on the lack of margin deposits point to a big market failure. Margin deposits are a very effective governing mechanism, in place on all the major stock, futures and options exchanges. But the over-the-counter markets for swaps, forwards and other derivatives are utterly different: there are hundreds of counterparties, margin deposits are optional, gains and losses are not realized, and in the crunch the market becomes paralyzed by the fear that the losers cannot afford their losses.

The problem with the OTC derivatives market is not size or leverage: it is the absence of sensible mechanisms for dealing with the leverage. David pointed out the existence of NAV triggers as a margin substitute – but they were part of the problem.

## Global Spillover

**Cyrus Taraporevala:** **Let us turn now to global spillover effects. To what extent has the disruption, which started in the U.S. markets, affected the wider global marketplace?**

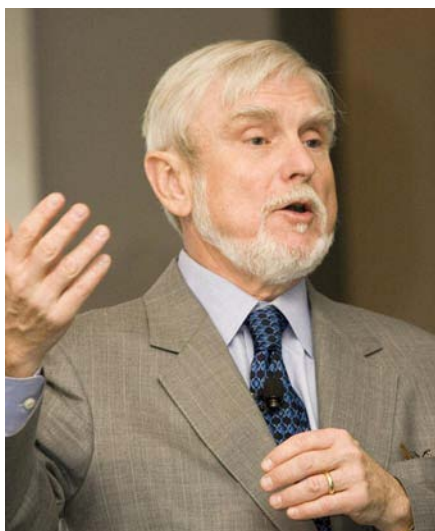
**David Forbes-Nixon:** U.K. and European banks had about \$100 billion worth of unsold leveraged loan underwriting positions when the crisis hit. They also had large loan trading positions, as well as warehouses they maintained for debt offerings known as collateralized loan obligations (CLOs).

All of these positions were hit very hard but there has been a big discrepancy in the degree to which banks have recognized their losses. The U.S. banks, especially the investment banks, have been far more disciplined about marking their assets to market. European banks have conveniently recategorized loans from underwriting positions to 'hold to maturity' assets on their books, where they do not have to be marked to market.

European bank share prices have been suffering very badly over the past few months. I think investors have factored in that the banks have not written down those loans. I believe it is better to bite the bullet and kick out positions at market level. That is more prudent than parking them on the balance sheet and hoping for the best.

**Ron O'Hanley:** I am not sure there is a bright line anymore between domestic and global markets – there are liquidity users and liquidity suppliers (such as sovereign wealth funds) in all places. At some level, it is a positive, because we see many global players stepping in to help recapitalize banks that need it.

**Charlie Jacklin:** We may see that economies are decoupled, but not the markets. Global markets have been fairly correlated, and the interesting thing is that the U.S. markets have underperformed less than others. The global economy is in better shape than it has been during other crises. In large part that is because the U.S. economy, while struggling, still has a relatively strong non-financial sector. Companies are in excellent shape – they have \$2 of marketable securities for every \$1 of debt. To the extent the consumer is still the driver of the global economy, the consumer sector poses the biggest threat. The crisis is taking its toll on many sources of consumer credit, such as home loans, auto loans credit cards, and of course, mortgages.



**The flaw is in human nature. I am not sure anybody ever learns anything for long. Despite all the financial pain, Wall Street will probably forget this financial hangover when the next speculative party begins.**

— **Richard B. Hoey**  
*The Bank of New York Mellon Corporation*

*Dick Hoey is chief economist of The Bank of New York Mellon Corporation. He is responsible for monitoring all aspects of the economic environment for The Bank of New York Mellon Corporation including the U.S. economy, the global economy and currencies. Dick holds an M.B.A. from NYU and a B.A. from Yale College.*

## Implications for the Future

**Cyrus Taraporevala:** Let us turn to our final broad topic: the implications for the future. After the events we have lived through recently, change is inevitable. Not all the changes will ultimately be good for the future of the financial system. After all, the pendulum tends to swing too far in both directions. But change is inevitable.

There are so many aspects of the future to consider; so let us touch briefly on a few of the most important aspects of future changes, starting with *regulatory reform*. New regulations probably became inevitable the moment the Federal Reserve rescued Bear Stearns and pledged to lend to other Wall Street firms as the lender of last resort. What role do you think regulation will play in restoring markets?

**Charlie Jacklin:** Regulators do not have to get involved to fix the securitization market - the market is doing that by becoming much more selective with the deals it will accept. Regulators should try to increase transparency - it is very important for investors in supporting a strong credit discipline.

**David Forbes-Nixon:** One of the most debated topics on the regulatory side is mark-to-market, or "fair value" accounting. I discussed the discrepancies among U.S. and European banks in this regard earlier. The big issue is how to deal with marking to market, when the market is shut. Banks argue that it is unfair to mark something to zero, or close to it, when there are temporarily no buyers and the asset is performing well. But it is hard to know whether a slowdown is short-term, or reflects the fundamental re-pricing of an asset class.

In my mind, one of the most important initiatives will be achieving consistency across banks in how they treat loans. Along those lines, a revamping or setting higher capital requirements and the consistent use of Basel II rules by banks would go a long way to help investors assess and compare the capital adequacy of financial institutions across the world.

**Ron O'Hanley:** I am a big supporter of the Fed's actions. I have never quite understood the talk of a "bailout" for Bear Stearns, because there were no equity holders who were made whole. I think the realities of the way commercial banks and broker-dealers operate - with some having access to the Fed window and others not - are going to change, allowing brokers access. We will be moving to a more uniform regulatory construct - moving away from a rules-based system to a principles-based system. The guiding principle is the safety and soundness of the financial markets.

**David Forbes-Nixon:** I would go so far as to say that the difference between commercial and investment banks will fade into insignificance. In the U.K., following the Northern Rock debacle the government will strengthen the depository insurance scheme and set up a formal procedure for taking over failed banks. The dithering we saw in the Northern Rock failure looked bad in comparison to the decisive action by the Fed on Bear Stearns.

**Dick Hoey:** One of the big things for reform is to have a "stake in the game." There needs to be retained risk along the way. Many unregulated mortgage originators made loans and sold them into the mortgage securities market, with no incentive to do careful underwriting. Some of the worst sub-prime problems started this way.

**Phil Maisano:** There are now some promising discussions about bringing exchange-like margin mechanisms into the over-the-counter market, but don't hold your breath. There is a lot of Wall Street turf at stake here. On the other hand, establishing that kind of framework for OTC derivatives would be a big step forward to head off future systemic problems of this kind.



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**— Cyrus Taraporevala**  
*BNY Mellon Asset Management*

*Cyrus is Executive Director of North American Institutional Sales, Client Management & Marketing at BNY Mellon Asset Management. He is a member of the Executive Committee of BNY Mellon Asset Management and a member of the Operating Committee of The Bank of New York Mellon Corporation. Cyrus holds an M.B.A. from the Johnson Graduate School of Management at Cornell University and a bachelor's degree from Sydenham College, University of Bombay. He serves as a corporate trustee of The Trustees of Reservations.*

**Cyrus Taraporevala:** Let us talk about the *future of securitization and financial institutions' business models*. The core functions of financial intermediation – creating, distributing and owning risk – have evolved radically over the past few decades. Securitization of assets formerly held on bank balance sheets has been a hallmark of this evolution. How will this model change in the wake of the crisis?

**Phil Maisano:** The market will be spending a lot of time on “know your credit.” Credit work has come back as a way to validate what the credit rating agencies are doing. The agencies will have to work harder to get their credibility back. Another negative impact, at least for a while, is that there will have to be a new source of credit that securitization used to supply. Banks currently do not have that capacity – they will over time. People will be charging an appropriate amount for credit, and lending will be a better business as a result. Securitization is not dead forever – but it is dead as we have known it.

**Dick Hoey:** There is not much excess capacity in the risk budgets of financial institutions for new loans. Their risk budgets have been absorbed by old loans, such as the SIVs and other securitized assets that have been reintermediated back onto the balance sheet. This situation should gradually ease as the balance sheets recover. The steeper yield curve should raise the profitability of lending. This should slowly improve the availability of credit.

**Ron O'Hanley:** We will see increased scrutiny of counterparties going forward. Much of that scrutiny, I am sure, will pertain to how the counterparty is funded – i.e., is the company funding long-term assets with short-term debt. We have learned a lot of lessons about liquidity – that it is not necessarily cheap or enduring. Going forward we will find cycles in liquidity, like everything else. The profit pools of financial institutions will be impaired – those with recurring fee income will be in the best position.

**Charlie Jacklin:** “Simple” will come back. CDO-squared and SIV complexity will be shunned.

**Dick Hoey:** Absolutely. I do not think that the complexity was always fully understood by the buyers. The purchasers were writing hurricane insurance but didn't always focus on how much they might lose if there was a Category 5 hurricane.

There is nothing wrong with securitized debt, but buyers have to understand it. The route back is through simplicity. I believe John Pierpont Morgan once said something like: “I do not buy what I do not understand.” That's probably just as good an idea for mathematical wizards in the 21st century and those who listen to them as it was for the quill pen guys in the 19th century.

**David Forbes-Nixon:** The winners are going to be the larger, blue chip fund managers, as there will be a lot of consolidation in the fund management space. Only the top tier will have access to capital, and you will see less leverage, simpler structures and more specialization. Investors can expect longer lock-up periods for hedge funds than we have seen in the past.

**Cyrus Taraporevala:** When do you foresee the markets returning to normalcy – or at least a new version of normalcy?

**Charlie Jacklin:** Ultimately, when housing prices stop falling, we will see a return to normalcy – the end of this year or early 2009. The number of houses being built is now less than the number being sold. The slowing of foreclosures is a good thing. The Fed's low rates made housing more affordable. You have to let the market catch up. Equities tend to recover before the economy – stocks look reasonably attractive, and better than bonds – Treasuries are especially overvalued.

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**Ron O'Hanley:** It may be years before we get to liquidity levels we saw in 2007, and that liquidity is going to cost more.

**Phil Maisano:** We should see something approaching normalcy later this year – but the norm will be wider spreads, and more expensive borrowing.

**Cyrus Taraporevala:** **How do you look at the financial markets differently, if at all, in the wake of this crisis?**

**Ron O'Hanley:** All of a sudden three-sigma events do not look that rare.

**Dick Hoey:** The flaw is in human nature. I am not sure anybody ever learns anything for long. Despite all the financial pain, Wall Street will probably forget this financial hangover when the next speculative party begins. The financial markets aren't dancing now, but they will dance again someday. We may not make exactly the same mistakes in the same way. We will probably make new and creative mistakes next time. You certainly shouldn't assume that people have now learned to be prudent.

**Cyrus Taraporevala:** *Thanks to the multifaceted perspectives of our panelists, several factors stand out clearly: loose monetary policy, easy credit, leverage, the "boom" mentality, the erosion of due diligence by lenders and investors, and regulators who struggled to keep up. These contribute to almost every financial bubble.*

*But some factors truly were different this time. Innovations such as securitization, derivatives and structured investment vehicles enabled massive leverage to permeate every nook and cranny of our financial system. We have heard numerous prescriptions for avoiding a repeat performance, such as increased transparency, leveling the regulatory playing field and a return to the basics of sound underwriting. Our BNY Mellon Asset Management panelists viewed these kinds of initiatives as the best ways to help the market heal itself and achieve a degree of normalcy.*

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