



# Opportunities in the Crisis

Investment firms have been buffeted by bad news, dire results, and a global economic crisis. By investing in the right technology, firms can radically improve their agility and intelligence. *By Daniel Chait*

These days, financial firms of nearly every stripe are facing dramatic change. Due to the unprecedented level of turmoil in the markets, companies are now more than ever being thrust into new lines of business before they are fully prepared. The nature of these changes—sudden, unplanned, and with far-reaching consequences—presents a unique set of challenges. What follows are some examples of businesses undergoing sudden disruptive change, and the technological steps such firms must take to survive and thrive in their new condition.

One example of such a business shift took place between February and August of 2008. The issue involved auction-rate securities (ARS)—bonds whose prices are determined via Dutch auction. This process, however, had never before been tested in a credit-driven downturn. Then, in February 2008, the ARS auctions started to fail, causing the securities to have no price and drying up liquidity. Practically overnight, the \$300 billion market for ARS ceased to exist. Bond holders, who had been led to believe that ARS were as liquid as cash but paid a higher yield, were left holding the bag. As a result, by August of that year the government stepped in and forced the banking industry to agree to buy back \$50 billion of ARS. While this eased the pain of the bond holders, it caused a whole new set of problems for the banks. These firms had never before actually held ARS on their own books, and many found themselves unprepared to manage such large positions in them. Quite suddenly, they needed to create an entire organization, and all the systems—legal documentation, collateral management, inventory systems, pricing, and so forth—to acquire and handle their new ARS portfolios.

In another notable pattern, many firms have participated in massive balance-sheet restructuring, often at the behest of governments or national central banks. While such “bailout” programs can help stabilize the target firms, they also introduce a tremendous amount of organizational and technological strain on the target firm. When a government provides assistance to a financial services firm, it can impose a high degree of control and oversight on that firm. For instance, a firm may need to seek prior

approval, and provide justification, for every trading decision. Defending a trading decision is complicated even under ordinary circumstances; in a bailout case, malfunctioning markets can make it even trickier. Truly fair pricing in such instances is as much a matter of opinion and speculation as of evidence and calculation. The management of bailed-out firms need to provide transparency and accountability to legislative bodies, regulatory agencies, debt holders, shareholders, and boards. Whether out of a sense of duty or simple fear, employees of these firms recognize that they are operating under a microscope and must take extra care to see that their IT systems support the appropriate levels and dimensions of review and transparency.

Hedge funds, too, have seen tremendous changes in their business. Over the last decade many hedge funds, using access to huge amounts of borrowed capital, amassed outsized profits in the equity markets. Lately, such funds have been doubly punished; dried-up credit markets have cut off their source of easy funding at the same time that stock prices have dropped, wiping out a decade of gains in a matter of weeks. Faced with such withering assaults on their business, many have simply gone under, while many more have had to radically retool to find new profit areas amidst a refashioned financial landscape. Ironically, the very problems in the credit and derivatives markets that caused such trouble for large investment banks, in some cases provided the way forward to hedge funds. By restyling themselves as buyers of distressed debt, including mortgage-backed securities, collateralized debt obligations (CDOs) and the like, hedge funds can outsmart the larger players and outlast the more troubled firms, reaping huge profit in the process. However, entering such a challenging market so abruptly is difficult and complex.

## MANAGING SUDDEN CHANGE

All of these types of sudden changes share three defining characteristics. They require firms to enter into new, unfamiliar areas of business where they may have little experience or expertise. They occur without warning, affording little time for planning and preparation. And the new business areas are not rising tides

where a firm can profit by simply going along with the pack. To survive these challenges, firms need to recognize the unique situation they are in and implement specific steps to account for these unique circumstances.

Due to the tight timeframes, internal technology groups often do not have the luxury of detailed prior analysis or strategic planning. Internal IT staff are forced to focus exclusively on setting up and running basic technology infrastructure and process, resulting in mostly ad hoc processes and continuous firefighting. Furthermore, people on the business side are forced to operate on the same basis, and thus many decisions about the long-term operation end up being deferred for some time. To help manage priorities amidst this chaos, firms should implement a dedicated issue tracking system. Such a system generally has the following functionality: capturing “tickets” with a customizable set of fields, some simple workflow—whereby issues can be routed either to certain groups or individuals—and reporting. Although most companies have some form of issue tracker already in-house, these are often only thought of as relevant to IT staff. This is a mistake. A good issue tracker has a central role to play in organizing business issues as well, especially when it is integrated together with operational systems. For instance, by tying together a reconciliation system with your issue tracking tools, management can highlight data inconsistencies, and generate trackable issues that can themselves be prioritized, assigned, and reported on. This provides a sophisticated level of operational control and insight into the running of the organization and is key to keeping things on track during periods of chaos.

Another set of problems during these upheavals revolves around document management. All manner of data, documents and discussions will be produced and shared at a furious pace. For example, various staff members will each scramble to gather together prospectuses, trustee reports, and other deal documentation; this is an inefficient use of time, in addition to posing an operational risk. Moreover, it can be difficult to know, a priori, which documents may be needed later and leaving retention decisions up to individuals poses further risk potential. Requirements for government or investor accountability and oversight indicate further caution. Finally, like it or not, these periods often result in high staff turnover, which makes it even more critical to ensure that needed information is not stored in individuals’ home directories, e-mail, and the like, but rather in a centralized repository. A well-suited document management system (DMS) provides features such as sensible organization structures such as folders and tags, metadata management, discussions and commentary, change control, versioning and flexible permissions.

While issue tracking and document management systems provide benefits as standalone tools, they really shine when fully integrated with other operational and management applications. For example, analyst tools should integrate with the document management system, allowing capture of sector and position color and easy generation of tear sheets, while position and inventory systems ought to store collateral-related documents such as offering memoranda and the like, and reporting/business intelli-

gence tools, described below, should produce time-based reports such as profit-and-loss (P&L) changes, market value changes and so on, which are periodically “snapshotted” and stored in the DMS for later review.

The final key ingredient to maintaining order amidst chaos is the creation of a data warehouse and reporting capability. Invariably, when a firm is going through periods of upheaval and change, operational and transactional database systems will be subject to constant flux, making it difficult to produce consistent reports as implementation of new systems progresses. The database schemas are designed to facilitate day-to-day operations, rather than data mining or consistent reporting. This creates a situation in which new reports cannot be created easily, specific one-off analysis projects must be done as bespoke IT tasks, and non-technical users have no hope of looking at data without IT intervention. In these instances, a reporting database serves as a common, stable point of reference to draw reports from, which also isolates business users from the underlying IT disruption.

Additionally, modern business intelligence tools provide the ability to add on additional perspective that is otherwise impossible to achieve—for instance, providing time-based snapshots to see P&L changes by day, data mining to uncover patterns, and advanced data visualization for creation of dashboards and tracking key performance indicators (KPIs).

As with issue tracking, reporting should be integrated with operational systems—for example, position keeping, pricing, trading and so forth—as well as with the other systems outlined herein, such as reporting on the issue tracker and document management to help see patterns there as well.

## CONCLUSION

More and more, firms in our industry will be presented with sudden-change situations, whether out of necessity or opportunity. Even as the immediate crisis subsides over the next couple of years and the sector begins to recover, change will always be an important aspect of our industry. Already, we have seen hints of coming dislocations: in the exodus of banking executives to lesser-regulated hedge funds; in the looming specter of rising credit card default rates; in new and far-reaching regulatory regimes; in areas driven by technological change such as green energy, biotech and cloud computing; and certainly in ways as-yet-envisioned. In all these situations, firms must be able to handle sudden and far-reaching dislocation with a calm and proactive IT execution capability. By bringing to bear a proven architecture for managing risk and providing clarity and agility during times of great change, firms can adapt and respond with precision and decisiveness, enabling them to take best advantage of market opportunities while minimizing downside. ■

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## Citi Eyes Tech Consolidation

Citigroup is looking to slash billions from its technology costs by integrating hundreds of systems, media reports say.

The banking giant has set its sights on nailing down savings significantly higher than the \$1 billion originally targeted for technology this year, according to the *Financial Times*, which quoted sources close to the bank.

The move could be the latest in a series of cost-cutting measures spearheaded by Vikram Pandit, Citi's CEO. Citi has reduced its expenses by as much as 25 percent since early 2008 and cut headcount by about 20 percent since a peak in the fourth quarter of 2007. It

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plans to reduce annual expenses to between \$50 billion and \$52 billion by the end of the year, down from \$71 billion last year. Citi's technology integration issues may in part stem from the 1998 merger between Citicorp and Travelers Group. Sources were quoted as saying that Sandy Weill, who ran Citi until 2003, preferred to keep IT systems separate, as it made it easier to sell off individual businesses.

Citi has benefited from \$45 billion in bailout funds from the US government and had suffered five straight quarters of losses until turning a \$1.6 billion profit for the three months to March 2009. Worries that its problems could be compounded were voiced when, as a result of the recent stress tests on US banks, it was ordered to raise additional capital worth \$5.5 billion. However, Pandit said Citi would not require more federal funds, instead generating the sum through an expanded public exchange offer. ■

## Equity Risk Spending Surges

Global spending for equity risk models is forecast to reach \$451 million this year, up from \$339 million in 2007, according to a Tabb Group research note.

Assessing portfolio risks and making subsequent adjustments is increasingly important, says Adam Sussman, director of research with Tabb Group, and author of the note. "This process should be undertaken as often as conditions on the ground warrant. In other words, even portfolio managers with longer time horizons should be doing more risk analysis, not less, in today's volatile trading environment."

Risk managers are employing more enhanced equity risk models to deal with extreme market volatility, Sussman says. He adds that knowledge gained from the quantitative meltdown in late July and August 2007 helped portfolio managers to

weather recent market conditions.

Sussman says that equity risk models still have plenty of room for improvement and in an ideal world should enable investment professionals to view timely and relevant portfolio risk analytics, align the parameters of the equity risk model to

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Tabb Group*

the investment strategy, understand sources of risk within the portfolio, study the performance of the portfolio under different scenarios and analyze, and even construct, portfolios using a mix of outcomes rather than just the most probable.

However, he points out that there will never be a perfect equity risk model. "Trade-offs must always be made between the sample size of a model and its sensitivity, the explanatory power of a model and our ability to explain the model," he says. ■

## Asian Exchanges Expand Horizons

Asian stock exchanges are being forced to look for alternative revenue opportunities as trading volumes slump, according to a Celent report.

To remain competitive in tough market conditions, the major Asian exchanges are turning to other business lines including listing, trading, products, market data, and systems, says Arin Ray, analyst with Celent's securities and investments group, and author of the report.

Exchanges in Asia are continuously looking to upgrade their trading systems and facilities to benefit investors by reducing latency and improving speed, Ray says. Initiatives include developing alternative investment markets for fast-growing companies and cross-border trading, and developing Islamic financial products are also being considered.

That said, budgetary constraints may hamper such projects. In the short-term, Ray forecasts that revenue and profits will

suffer due to diminished growth in trading volumes and increased competition for remaining market share. "As a result of the financial turmoil, implementation of some planned initiatives may be delayed in the near future. However, the fundamentals of the Asian economies are strong in the long term. Economic development in Asia's emerging countries is expected to spur initial public offerings (IPOs), and trading activities in the long run, and the Asian stock exchanges are well-positioned to play a central role in these developments," she says.

IPO capital raised by Asian exchanges, which grew at a compound annual rate of 35 percent from 2002 to 2007, fell in 2008. Ray says the larger stock exchanges are focusing on regional markets—especially smaller and emerging markets—which will provide the opportunity to increase listings by companies in the smaller countries at these exchanges. ■



## From chaos, order.

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