ASSESSMENT & MITIGATION

Basel II: a guide to operational risk implications

One school of thought about the new Basel Capital Accord says it has almost nothing to do with operational risk.

It's main concern, instead, is recalibrating *credit* risk to accommodate ever more complex instruments and keep banks from the taint of moral hazard. In this line of reasoning, Basel II merely touches on new reserve requirements for operational risk as an afterthought.



In some sense, the market of ideas supports this notion. Outside of a few exceptions, the presence of the evolving accord hasn't provoked much discussion about process transformation within individual banks. Neither have many bankers presented views on how Basel itself might play a positive role by "normalizing" risk, that is, getting everyone more openly sharing information to reframe it from random inevitability to something that can be evaluated and tamed. Nor has there been much publicly said about what will need to go on differently *inside* a given financial services firm so it might enhance itself sufficiently to determine: 1. its own explicit capital reserve charge as a "set aside" for potential loss related to automation, process, workflow, and people; and 2. how it needs to be managed differently to become, in fact, more resilient.

Even if the regulators intended otherwise, this thinking goes, most of the large, internationally-active banks will add reserves for operational risk quite routinely without much difference in day-to-day functioning.

This is because operational risk is too new a discipline and the data the industry has on what contributes to loss is still too sketchy to give bankers much in the way of meaningful, predictive information that they can really act on.

If the true agenda of the Basel Committee, a Banking Supervision, is to give firms more control, say critics, the money would be better spent on a case-by-case basis. Six Sigma or other business process improvement projects might work wonders in the absence of generally mandated preparations for enterprise risk measurement and mitigation procedures.

Transformation—or more of the same?

Yet not everyone sees Basel as either a nuisance or non-issue for operational risk. In fact, forerunners in the field mostly side with the Basel Committee.

"We support Basel II," says Joe Sabatini, managing director, head of corporate operational risk at JP Morgan Chase.

"The committee was surprisingly flexible in the development of operational risk practice guidelines. They offered options for measurement. They worked collaboratively with us and were open to suggestion," Sabatini explains. "The basic direction and approach of the accord is on target."

JP Morgan Chase uses a mix of centralized and line-of-business controls but is gradually heading toward an enterprise method, which is a prerequisite to meeting the new accord's expectations. (For more see, p. 55)

Wachovia also stands behind Basel II. More importantly, it approves of engaging in a thorough risk management approach that yields true protection. Wachovia sees this as a responsibility to customers and other stakeholders and a source of competitive advantage, "whether the Basel Committee requires it or not," says Yousef Valine,

senior vice-president and group executive, head of operational risk management. "We believe that firms who make this a priority of corporate governance—evaluating risk and setting up controls effectively—have fewer losses, less earnings volatility, and happier customers," says Valine.

Having a strict focus on credit risk without really assessing and possibly rethinking operations would be missing the point entirely, adds Keith Stock, global director of financial services, Cap Gemini Ernst & Young, based in New York City. There aren't neat demarcations between credit, market, and operational risk. They intermingle.

"The Basel Committee intended for risk to be thought of holistically," Stock continues. "For banks to come up with a *living* picture of risk."

Although very large, sophisticated banks have been doing some form of operational risk measurement and capital "set asides" for some time, according to Stock and others, "it's never been treated by regulators formally before the Basel Committee made it an issue."

Nor, notes Stock, has operational risk been treated systematically enough to truly blanket the enterprise protectively, even by the best practitioners. "Although, in theory, people will discuss having an enterprise framework, in reality, operational risk practices have been deployed in a limited way around certain processes or certain instruments such as complex derivatives," Stock explains.

Starting to see linkages between individual processes is an important step. Another is simply becoming more aware of what the process controls are and how they are handled. Pam West, senior vice-president and operational risk executive for Bank of America, says the bank has been, in a sense, preparing for the new rules for years, anticipating and predating the Basel Committee's efforts.

"We've always handled operational risk. The difference is, we formalized our approach about three years ago and began to work on allocating capital differently," West explains. "We now rely on more advanced modeling to determine our loss distribution and look at internal and external loss event data sources to pattern more concise risk curves." West adds: "We needed to employ these more advanced methods to feel like we had a better sense of our exposures."

BofA's measurement work coincided with Six Sigma efforts to improve business process and is, in West's mind anyway, all of a piece as the bank becomes more aware of its threat matrix and operational profile.

This kind of clear vision is needed throughout the global banking system, say Basel II's defenders. As the world's economy and cash flows have become dependent on the activities of a relative few, regulators need to be able to evaluate vulnera-

More on the impact of Basel II

The new Basel Accord, Basel II, addresses operational risk formally for the first time in the context of broad regulatory prescriptive. Defined as the risk from people, processes, and systems, operational risk as envisioned by the Basel Committee on Banking Supervision is the functional dimension of a complex business entity. (That is, how the parts functionally interact with each other and how the institution steers all facets of business process.)

As many readers already know, the Basel Committee, which was established by the central bank governors from Group of Ten countries, doesn't have direct rule making authority. Yet, specifics outlined in the accord offer guidelines for bank supervision and regulation in each of the respective countries in the global banking systems.

In the United States, regulators have issued an advanced notice of proposed rule making concerning which institutions will be subject to Basel II.

As of this writing, both the rule making schedule and specific points of difference need to be ironed out. At the end of the day, U.S. regulators will raise the bar on compliance higher for the top 10 or so—that is, the top 10 globally active financial holding companies and/or bank holding companies by asset size. (This means that Citigroup and Merrill Lynch would both qualify.)

There are policy builders and opinion makers that may never fully buy into the Basel committee's directives. Yet, if anyone believed that conflicting views would keep Basel II from taking root in the United States, they were mistaken. The Senate Banking Committee has ordered the Federal Reserve, the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corp., and the Office of Thrift Supervision to coordinate comments and directives throughout the advanced notice of proposed rule making period.

Additionally, the Senate Banking Committee introduced legislation entitled, the United States Financial Policy Committee for Fair Capital Standards (H.R. 2043), to give them and the U.S. Treasury greater say in how the regulations plays out in the U.S. (This bill was still pending as of mid October.)

Basel asks that the most sophisticated banks measure their risk profile instead of relying on static assessments of risk that don't reflect individual bank differences in business practice and risk appetite.

Institutions to whom Basel II applies will need to adopt the advanced Internal Ratings Based (IRB) approach to credit risk, which is beyond the scope of this supplement but addressed regularly in *ABA Banking Journal* (see *www.ababj.com* for a list of articles). They must also comply with the Advanced Measurement Approach (AMA) for operational risk, which we'll reference throughout but explain in the most detail on p. 56

The intelligent guess is that those mandated to apply Basel II will be joined, voluntarily, by the next group of ten here for competitive reasons. Outside the U.S., all institutions will need to comply.

bilities from a systemic perspective.

And, while confusion may remain on some points of the Basel Committee's true priorities, members did take the time to define operational risk formally, if blandly, as the risk from "people, processes, and systems." Moreover, supporting detail appears in a series of Consultative Papers accompanying each revision of the Basel II draft, all of which can be found at *www.bis.org/bcbs*.

The Basel Committee also presents Working Papers for guidance, including the Working Paper on the Regulatory Treatment of Operational Risk. The latter indicates options for advance risk method measurement and presents, at an overview level, best practices around developing risk mitigation programs. Guidelines touch on how loss categories should be set up; make suggestions about how risks might be monitored; and offer samples of mathematical methods of risk calculation and prediction, and in one section of the paper, examples are provided of how capital charges for operational risk might be calculated.

The perils of "distributed processing"

The bureaucratic, high-minded tone of the new



Basel Accord can tend to distract its readers from the flesh and blood—and bloody—backdrop of events spurring regulatory concern.

Fraud, or the unchecked "cowboy" ruthlessness of more than a few individuals at more than a few banks, along with the financial activities of terror cells have been among the most significant drivers behind the newest regulatory push for safety and soundness.

Further compounding the risk picture is that the operating environment itself is highly distributed and can pose information technology management challenges. Both the applications and the systems that inhabit the trading floors, middle, and back offices increase the chance of processing errors.

Although straight through processing is a kind of mandate in the capital markets industry right now, islands of automation are still a common feature and there is still plenty of manual process around trading and settlement, notes Dushyant Shahrawat, senior analyst, with TowerGroup, Needham, Mass.

Server-based, so-called "heterogeneous" technology, offers some benefits—such as redundancy—and has drawbacks—such as the potential for distributed pools of information that can be hard to locate in an emergency. The point is, this architecture has changed the risk profile dramatically. Add in a bit of cyber threat and a dash of involution surrounding the instruments themselves and even the routine day can begin to look like a heroic battle to be correct in an environment where error passively lingers.

At the root of Basel's treatment of operational risk seems to be the sentiment: what goes on at large, global firms creates too much data, information, and detritus, to be assessed in anything other than a thorough, systematic and computerized way.

The "fat tail" effect

The argument for systematic measure is murkier when it comes to tracking and responding to "outlier" or "fat tail" events (sometimes referred to as a "long tail" events). These are unforeseen losses that pull far away from a normal distribution curve of probable risk in terms of severity and have long term effects on the institution or system that are unknowable at the time of incident, according to International Risk Management Institute, Inc., Dallas, at *www.irmi.com*.

In response to the "fat tail," skeptics point out that some of the costliest unforeseen events that either severely cripple or take down firms had to do with the unchecked activities of "bad apples." (These are typically rogue traders, but sometimes incompetent or sloppy employees, married to inadequate management of them.) Others take the view that bad events are "entirely random" and, as such, can't be dealt with by measurements and indicators—even by firms with the best intentions.

Lingering behind these arguments is the notion that the typical corporate culture (assumed here to place a lower priority on controls to accommodate sales) can't be mitigated by risk controls.

As this argument goes, these firms, almost by definition, wouldn't step up to stricter requirements and may be causing the bar to be raised to ludicrous heights for already well-run firms.

As an instance of this, consider the highly publicized fraudulent activities of Allfirst currency trader, John M. Rusnak, who doctored systems and created a trail of phony counterparties to cover a series of significant losses—$600 million—in foreign exchange trading.

Bad behavior is not the only ingredient for the low-frequency, high-loss fat tail: everything from poor routine decision making, laissez-faire management, or sudden mistakes of business partners or outsources, to hidden incompetence at multiple lev-

els of an organization, to sudden power outage can take a huge toll on a business by touching off a series of loss events or leading to failure.

Juan Pujadas, global leader for financial services risk management with PriceWaterhouseCoopers, based in New York, says, keeping the bad apple argument out of the picture, that even in the best run, best intentioned firms, teasing out root causes and remedies is extremely difficult.

"The regulators are well intentioned, but we would argue that operational risk management is so difficult because of the essentially distributed nature of the risk," he says.

That is, notes Pujadas, every minute of every day, complex organizations are made up of people at every level enacting procedures, handling exceptions, and making decisions in response to shifting market conditions, conducting themselves in business in ways that reflect their personalities and personal agendas as well as the wishes of the firm.

"Can you ever really place centralized controls on that the way you can with credit and market risk? I don't think so."

To Douglas Hoffman, president of Operational Risk Advisors, Fairfield, Conn., who's done much to advance operational risk and has written extensively on the subject, "bad apples" are precisely a reason to get *systematic* about risk and assume nothing.

"The world isn't divided up between good guys who occupy one zone and bad guys who sit in another. Hoffman says "There are bankers who insist that fraudulent trades can't happen at their firm. But history disproves this idea, which is why this risk should be measured, normalized, and factored in as an ordinary operating loss."

Hoffman's worked with quantitative and qualitative risk measures during his time spent as the head of risk management at Banker's Trust. Use of both types of approaches, he says, will contribute to tamping down risk at *all* firms.

Better response not elimination of error

The "bad apple" argument annoys Sabatini for different reasons.

"Nobody in risk management is saying you can catch criminals by doing it. You practice risk management to put yourself in a better position to respond to loss events," says Sabatini, who staunchly believes that attributing capital charges at the line-of-business level will yield better behavior and result in an improved risk profile.

Systematic measure of operational risk is a huge undertaking and an inexact science. Still it can yield real process improvements and save money.

"People at the forefront of this discipline aren't thinking in terms of pulling all the error out of the system or radically centralizing decisionmaking authority," Pujadas explains. "They understand that a simple error-reduction mindset won't accomplish what they want and will be too expensive to enact."

"Can you really place centralized controls on ops risk the way you can with credit risk?"

Guillermo Kopp, director, financial services strategies and IT investments with TowerGroup, Needham, Mass., agrees. "When all is said and done, the new Basel Accord will change the way banks are run by making them more responsive and alert," Kopp predicts.

What progress *has* been made? Kopp notes that the largest banks have been in discussions alternately with regulators, consultants, and in peer groups to enhance measurement and containment, which will please regulators sufficiently at the outset.

"Regulators don't want to punish banks by asking them to come up with pristine, exact risk picture," says Kopp. "They want to push for innovative thinking about measurement and, ultimately, removal of the problems."

What's been done, what will follow

Gerry Wilkinson, operational risk director, with the London office of Raft International, a risk management and technology firm which has developed a workflow-based business process improvement system with risk management in mind, believes that Basel II will force U.S. bankers to get their act together in short order.

"The push is on to get systems that can create visibility throughout the firm," says Wilkinson. "The U.S. banks are no-nonsense about wanting to be in compliance when the rules change."

"Most of global, internationally active banks are past the first review of their operations," Kopp adds. "They have a grip on the systems, processes, and events currently being actively monitored for exposures and also have a handle on what needs to be evaluated differently."

These banks are in the mode to rebuild investor confidence and—in their retail, commercial, and insurance businesses—attract stickier relationships, points out Kopp.

Wilkinson thinks that the foundation has been laid for "predictive math" (use of simulations such as Monte Carlo to, essentially, compensate for gaps in historical data), with the efforts of vanguard banks pushing the discipline forward. *BJ*

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