

# Risk Intelligence

## Editorial

The new year is nearly upon us and while the agonizing end of last year may seem far off, with the Lehman and Madoff events, recovery mode continues. Indeed, resilience, i.e., a company's ability to recover from a major shock, should be at the top of the list of concerns after such surprising turns of fortune.

Resilience is as essential for a company as it is for the environment or macroeconomics, so it was logically the topic of the 1st annual **R.I.S.K. event** organized by OTC Conseil in early December. In this month's newsletter, we briefly discuss the issues addressed during the event, which met with great success and will take place on a yearly basis.

An approach centered on the issues of vulnerability and resilience can be applied in very practical ways, in particular to liquidity risk. Managing risk and being able to manage with risks is one of OTC Conseil's major concerns. **Managing liquidity risk** and defining the overall strategy of a bank must be done jointly. Indeed, as liquidity is directly linked to a bank's business model, it should be made part of the management toolkit. In this month's newsletter, we offer some keys to implementing strategic and efficient management practices.

So have a good read, and see you next year!

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## >> R.I.S.K.: A Project, an Event

Jean-Paul Nicolai, CEO of OTC Conseil

R.I.S.K. is an initiative aimed at developing research and best practices with regard to risk. The recent crisis has highlighted the importance of much ongoing work and the need to reinvigorate ideas and practices concerning risk. In particular, it seems essential today to mutually enrich approaches coming from apparently separate areas of application.

Each year, R.I.S.K. will recommend topics for research and reflection to researchers directly tied to the operational concerns of professionals. An annual event will offer a meeting-place for these professionals and the world of academic research. The exchanges are meant to promote the development of partnerships that provide the basis for the following year's event. An annual event journal and a website publish the minutes and serve to bolster the communication and circulation of the different theoretical and applied advances made.

The event took place for the first time on December 3rd in Paris.

### Event 2009: Resiliency

This year the chosen theme was resiliency.

Resiliency is the capacity of a system to return to its initial state following a shock. The major shocks of recent years (September 11, pandemics, subprimes, etc.) have prompted all of us to rethink the notion of risk along broader lines than the approaches coming out of banking regulations did at the turn of the century. Concepts that are part of an ecological perspective – by nature systemic – like system vulnerability offer two additional dimensions that are today indispensable: systemic reasoning and the temporal dimension. Resiliency thus plays a key role in reinvigorating our approaches, since it allows us to take into account the system's reaction to a shock over time.

The intersection of concern for sustainable development and rethinking risk is therefore not surprising. What is surprising is the diversity of conceptual tools and practical approaches. R.I.S.K. has sought to begin its history by engaging with this diversity.

To that end, four central themes have been identified:

- > It was difficult not to account for the current crisis by examining the world of credit derivatives by way of the theme of Resiliency.
- > Another obvious, topical fact: climatic risk.
- > The third theme, which the decline in the markets has also made timely with regard to pension funds, is the sustainability of retirement systems.
- > Finally, the fourth, more generic theme is the use of stress scenarios to reinvigorate risk measures.

Two hundred participants had the opportunity to exchange thoughts with round tables speakers and to meet and discuss topics related to risk. While resiliency was not an unfamiliar concept for most of them, it appeared at the end of the day as a particularly productive way to rethink a lot of current problems. Vulnerability, coping capacities, "no-regret" strategies, sequential optimization, etc., have to become tools in major fields of risk management.

### And now?

The themes of Research and Development that will be submitted to the participants, encouraging them to develop partnerships, are currently being discussed. "Long term risk management" is a clear candidate as a topic guiding work on issues related to R&D.

Presentation proceedings, synthesis, discussions, and a call for papers will soon be available on a dedicated website ●

R.I.S.K. was initiated by the University Paris Ouest and OTC Conseil. It has received the support of the "Fondation du Risque" and the "Institut Louis Bachelier". Already in this first year the initiative has numerous partners, among which the Institut CDC (Caisse des Dépôts et Consignations). Other notable partners include: BNP Paribas Securities Services, CACEIS Investor Services, EconomiX, Metnext, OFI Asset Management, SCOR, SLIB, Viel & Cie. Certain among them are already committed to long-term involvement with the R.I.S.K. initiative.

# >> Strategic Management of Liquidity Risk

*Ulf Clerwall, Junior Manager  
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Because it materializes at the level of the balance sheet, liquidity risk provides a synthesis of the sum of risks a company faces. A structure dedicated to operational monitoring is indispensable, but its purview must be sufficiently expansive to contribute to the governance of the firm. Strategic management of liquidity risk must be underpinned by the implementation of early-warning indicators, by a dynamic process of stress testing, and the drawing up of contingency plans running from the most operational to the most strategic. It is important to have a clear understanding of the time constants of each of the measures aimed at responding to the growth of potential risks and, in this way, to manage the vulnerability of the firm.

## Managing liquidity risk

Defining a risk profile and liquidity risk appetite helps to better manage the overall balance sheet. This effectively means: (1) managing internal liquidity allocation according to a risk/return profile, thereby optimizing refinancing costs, and thus (2) above all, managing in a decentralized way the sizing of business activities. Internal transfer rates effectively indicate the cost of refinancing activities and, combined with risk budgets, more or less encourage functional units to develop their business.

The management practices put in place should also allow for management all along the development path the firm has set for itself, by anticipating risks and the responses to implement should the unexpected occur – or disaster become more probable. This means identifying vulnerabilities, stresses and points of concern and drawing up contingency plans in response. As we shall see, identification can be carried out through forward stress-testing. And we shall also see that strong management can't wait for disaster to occur before putting in place the appropriate responses, but should initiate advance responses, thus reducing the potential scope of the crisis, even if this means a reduction in anticipated income. In the context of strategic liquidity risk management, the ALM function should be part of a management culture that unites operational cash management and the strategic vision of executive management.

## Building liquidity risk management

Liquidity risk makes numerous other risks visible: each risk factor (credit, market, operational risk) that is likely to lead to a distortion in the balance sheet is a potential driver of liquidity risk.

Fundamentally, we are dealing with a risk that requires strategic and transversal management. The need for the latter goes beyond cash management/business line concerns and established risk silos. Ultimately, managing liquidity risk means managing, in real time, the economic balance sheet of the bank.

Putting in place short-, medium-, and long-term liquidity management means drawing up 1st level contingency plans: liquidity shocks and squeezes. Policies for building and using liquidity reserves should be predefined, so as to include the supplementary value or cost incurred by decisions affecting the reserves. In particular, determining the size of reserve portfolios is naturally contingent on prior definition of the rules of growth in line with early-warning indicators.

Next come 2nd level contingency plans, triggered as part of crisis management. They include contingent rules for reorientation towards other external sources of financing.

Finally, certain measures involve long-term time constants. They cannot be immediately put in place in response to a crisis without major, and potentially fatal, additional expenditure. They must, however, be incorporated from the outset into thinking about long-term liquidity policy, which must be developed today. Crisis exit strategies are an essential part of this, including risk/return analysis of the different business activities, as well as potential balance sheet restructuring

carried out through the discontinuation of certain operations or, at the very least, the reallocation of economic capital. This is where considerations of the firm's risk profile must be brought to bear in advance, while accounting for the cost of adapting.

## The cornerstone of management practices: Stress tests

This type of management, sometimes called sequential, seeks out the option values of strategies, advancing those that maximize adaptive capacities.

Stress tests mustn't be constructed only to identify structural worst-case situations. For it is always possible to imagine the worst in a stress scenario. Stress tests must be considered management instruments in their own right. This means imagining the worst in order to identify the vulnerability and thereby the response strategy that reduces that vulnerability.

Stress tests must therefore be regularly redefined in order to best ensure the solidity of the firm. From a theoretical point of view, this method allows us to construct a series of futures contingent on what the managed firm's real position is currently. "Futures space" is optimized along with action space (see the article in the June 2009 OTC Conseil Parisian newsletter and the viewpoint expressed in the January 2010 newsletter). The theoretical foundation is in practice the result of common sense. But that doesn't mean that one should rely solely on common sense; it is essential to officially implement a systematic process that offers not simply business reporting indicating figures devoid of interest and of an indication of the action to take, but rather offers the means to achieve genuinely solid firm governance.

## Changes in the ALM function

In this context, the ALM function must evolve. Indeed, it is important to better account for funding liquidity risk in transfer pricing.

It is equally important to examine the close relationship between funding liquidity (the ability to mobilize and direct financing onto the market) and asset liquidity (the ability to quickly sell an asset at a price close to its intrinsic value).

It is especially important to genuinely manage and not simply passively record the liquidity cost and pass the information along. ALM is in fact the starting point for decentralized management of the firm's development. Above all, equip ALM with a management culture (or reinforce this culture) that unites operational cash management and the strategic vision of executive management.

## All in all...

All in all, liquidity risk must be thought of as the fundamental risk that firms face. Whether it is a strategic or business risk, in any case it is a risk included in Basel II's pillar 2, and managing it concerns the governance of the firm itself. That is why an approach centered on the issue of vulnerability leads to genuinely strategic management of liquidity risk ●