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Since the market meltdown of late 2007 and the ensuing global recession of 2008 and 2009, risk management as a critical business function has been thrust into the limelight, especially across the sell side. [Steve White](#), RiskCare's CEO, assesses prevailing practices and outlines how risk management technology will develop over the next 10 years.

Risk managers cannot see all risks. New initiatives promise better clarity but risk management nirvana—a complete, concise and timely view of all exposures—remains far off. This two-part article is designed to be a roadmap to risk management nirvana, enabling you to benchmark your organization. It will help you plan your future and understand your rivals' and your own competitive advantage so that you can choose which investments you prioritize. It will then help your bank decide the timeframe and the investment required for whatever changes you choose to make—vital to managing expectations.

This article describes the levels of risk management competency that cover every investment bank. You can identify your own bank's place on the ladder and consider how, when and why to step up to a higher level.

Level Zero: Dysfunctional Risk Management

In the past, many financial institutions have paid only lip service to risk management. They might have tools in place, but they have used them only to tick boxes for regulators, clients or management. Or the risk manager was just a puppet figure—no teeth, no power.

Such banks cannot manage risk independently of those who take trading and investment decisions. The risk–reward decisions are intertwined; the decision is taken by either a single person or a team acting without an independent view. For some types of business this may be appropriate—trading boutiques, for example—but for most it is either a naïve or cynical decision since in many cases people will not stay in their jobs long enough to witness the consequences of their decisions.

Banks can be dysfunctional in other ways also. For example, there can be too little detail of the risk measures; too much detail—for example, receiving reams of output every day that no one can possibly assimilate and act on; or inaccurate data or no risk-control feedback cycle—i.e., not acting on what is reported. There are many ways to avoid risk management.

Level One: Decentralized Risk Management

An investment bank at this level has business units that are self-contained and responsible for their own risk management. Risk management practices are typically independent, but they are not centralized and risk is only reported, not managed. Here, risk management is expensive since

there are no economies of scale and some risks are over-hedged, while other exposures are higher than reported. Nevertheless, this situation is better than a false sense of security or nothing at all. Institutions in this category are well placed to move forward.

Level Two: Consolidated Risk, Inconsistent Methodologies

Financial institutions at this level have responded to pressure—both from regulators and internally—to have a single risk-reporting platform. Meanwhile, bank-wide risk metrics are gathered from different entities, systems, products and desks. Many banks are currently implementing risk aggregation technologies so that there is a single focal point for all risk and finance information. The resultant picture is unclear because it is impossible to measure the accuracy of the information, except by back-testing Value at Risk (VaR) against profit-and-loss (P&L). Yet few banks have institutionalized back-testing as a due-diligence practice. This is surprising given that it is a simple mechanism for reconciling risk with finance—it can remove duplications of effort and provide a practical tool to build confidence in, and an understanding of, risk.

This consolidated approach may



be useful for whetting the appetites of senior management for the art of the possible, but it falls short of being an effective risk control. To function as a control, the measures need to be consistent and accurate, so that the data is credible for limit monitoring, hedging and other risk management tools.

Level Three: Consolidated Risk Methodologies, Inconsistent Valuation Methodologies

In the rush to implement risk systems over the past two decades, risk managers have duplicated models for each financial product, often by buying vendor systems. This has led to a proliferation of models and irreconcilable valuations. But many financial institutions are now considering using their front-office valuation models for wider risk management.

There are important principles at stake here. Should valuations be owned by the front office, or should they be independent? Some argue that the front office ought to be responsible for the risks that it undertakes; therefore it should carry the burden of valuation. This is convenient for risk managers because it shifts implementation responsibility to front offices and reduces their own roles to advising and policing. Others argue that an inherent conflict of interest occurs when traders can influence their valuation processes—independent valuations are therefore a necessity.

Let us take a broader perspective: Imagine a bank as a production line. Like at a manufacturing company, all the processes that add value can be categorized as either a competency or a capability. A competency is hard for competitors to replicate because it requires specific knowledge that can be protected, and typically takes the form of a body of expertise. A capability is hard to replicate because it takes time to establish, and often takes the form of infrastructure or

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social networks.

A bank makes use of its raw material (capital) and then apportions it to business lines according to expected risk return profiles (so risk quantification is a core competency). It then processes the economically weighted capital into new financial products and services—nobody disputes that front-office product design is a core competency—and then distributes these through channels (this is a capability).

In this blueprint for banking, risk means “risk to the balance sheet.” This means that the role of the risk manager is to optimize the use of the balance sheet independently of the trading desk. This is a healthy balance of power between the two competing objectives of stability and growth. The risk manager looks after the long-term interests of the bank; the trader looks after the need for growth. The contentious question is: Which of these objectives comes first?

If this economic model of a bank is correct, then it seems more appropriate for each front-office product line to adopt the risk manager’s models and enhance them to support their own purposes, rather than vice-versa.

Common Models

Certain investment banks use common valuation models at all points in their production line—trading, risk, finance and ecommerce. This means that the model needs to



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be modal and provide different outputs, and sensitive to the context in which it is being used. Each model should be configurable, both in terms of functionality, such as netting and collateral, forward valuation, stress testing, sensitivities, and exposures, and in terms of its behavior—i.e., accuracy versus compute time.

From a return-on-investment perspective, the choice is stark: Either trading and risk management use the same models and you pay the price in terms of hardware infrastructure, or they have different models and pay the price in human labor for constantly reconciling the front office, risk and finance valuations.

Pitching the economic debate as a trade-off between manual labor and infrastructure investment, many organizations recognize that it is more scalable and reliable to opt for standardized pricing models; the front office and risk must use the same code. The logic is compelling because computational power costs are decreasing while skilled labor costs are going up. In other words, you are better off with an army of CPUs than an army of experts.

Most banks are at one of these first three levels of risk management competence. Next month, Steve White describes the higher levels, where only a few banks are right now and where risk modeling becomes a mission-critical core competence. **W**