Axioma Briefing

A Next Generation Risk Management Solution…Now

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The impact of the global financial crisis continues to reverberate, even seven years out. Regulators and chief risk officers warm. The Fed scrutinizes. Investors demand transparency and answers. While initial efforts to manage risk focused mainly on oversight, increased “policing” is clearly only part of the answer. The reality is inescapable: the term “risk management” has taken on an entirely new meaning, in terms of functionality, scope and influence. Once considered largely a diagnostic tool, risk management must now become preventive medicine.

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To create such a solution, we at Axioma knew that success hinged on a thorough understanding of the challenges. Risk management—as it was once known by our clients and by us—is not what it used to be. Indeed, three watershed changes have permanently altered the risk landscape.

First, increased regulatory pressure quickly made its presence felt. Institutions are now required to submit a range of regular reports, including the results of mandated periodic stress tests. While many of those tests relate to the macro economy, regulators are also taking into account more and more quantitative measures to make sure that institutions are in good shape. And let's face it, levels of regulation are only likely to increase.

Second, the middle office has gone from a *risk-reporting* function to a *risk-management* function—a decidedly different situation. Risk managers' responsibilities went from an after-the-fact, tick-the-box exercise, to a truly collaborative process requiring a dialog between the middle office risk function and the people in the front office who actually run the portfolios and manage the money.

If this sounds like a small thing, it isn't. In the past, the front and middle offices were largely disconnected, separate silos. But in the wake of the crisis, effective risk management necessitated that they be connected. And to be connected, they have to speak the same language when it comes to risk. The front office people and their risk systems have to understand the people in the middle office and their risk systems, and vice versa.

And that's easier said than done. Prior to the crisis, the approach to risk management was concentrated on a per-function basis, so the link between the front and middle offices was never built. The front office effectively ruled the roost because they were the ones who produced the revenue. The middle office, on the other hand, quietly produced their risk reports—reports that were all-too-often dismissed by the front office. From the perspective of many portfolio managers, the middle office looked at aggregate information, or information that wasn't really relevant to the PMs. Some said the models used by the middle office were too antiquated or too coarse, or that the risk team didn't really understand the investment process. And when push came to shove, the front office usually won those arguments.

Even today, in some firms, such arguments continue to prevail. But the fact is, modern risk management is about is about building solutions that are flexible. Not only must they adapt to the investment approaches of the firms that implement them, but they must facilitate that crucial dialog between the front office and the middle office. A view of the entire risk landscape can only be captured by giving the middle office a number of different lenses that enable multiple perspectives on risk, while allowing portfolio managers to effectively understand and manage the risks they are taking.

In addition to increased regulation and the emergence of the middle office, there is a third key change to be addressed: the fact that risk management going forward is inherently a multi-asset class problem. Today, the middle office cannot afford to be single-asset-class focused. The implementation of separate, stand-alone risk solutions for each asset class is absurd; next generation risk management solutions must be natively multi-asset class.

As critical as these watershed changes are, there is considerably more a next generation risk management solution must address. For example, what about the granularity at which the risk is viewed? Can the risk be decomposed into meaningful attribution? Are systematic factors taken into account? The ability to decompose into systematic factors not only points to where the risks are coming from, but allows the potential to hedge some of that risk. Decomposition of risk is essential to helping a firm better understand the risks being taken.

In certain market conditions, asset returns—and even class returns—are highly correlated, which means that a traditional allocation policy may not allow for true diversification. Hence it is necessary to talk about factor allocation, not just asset allocation. There is a need to consider factor exposure, so that there can be better management of the correlation between the sources of risk.

Does the risk system truly capture the risks of the portfolio? Can it capture the non-linearity of some of the instruments in the portfolio? Can it cope with emerging market debt denominated in local currency? Can it provide a consistent view across a firm's portfolios and, at the same time, provide meaningful and granular data for each of the asset classes?

What were once simple and transparent portfolios may now have derivatives included—and many of those derivatives have optionality embedded in them. So managing the risk of even a traditional equity portfolio has become more complex.

And, of course, the oversight and execution teams must share a common vision of the risks that a firm is taking. And that common vision can only be achieved if the risk profile is expressed in a common language of risk—a language that bridges the gaps across mandates among asset allocation, investment strategy, portfolio management, traders and risk management overall.

Five years ago, Axioma assembled a dedicated team that took two years to build, from the ground up, a next generation risk management solution aimed at addressing all of these challenges. Axioma Risk is an innovative enterprise-wide risk-management system that gives clients timely, consistent and comparable views of risk across the entire organization and across all asset classes. Axioma Risk's first enterprise-wide implementation is now documented (http://axioma.com/news/articles/seb-implements-axioma-risk-as-its-global-enterprise-wide-risk-management-platform/).

For Skandinaviska Enskilda Banken AB (SEB), one of the largest financial institutions in northern Europe with more than €180 billion in assets under management, Axioma Risk works. Hans Johnsson, Head of Risk Control - Wealth Management for SEB, said, “We have now put in place one of the most sophisticated risk systems in the world.” Rikard Andersson, Asset Class Head – Equities at SEB, added, “With Axioma Risk, we now have one common system, with everyone talking about risk using the same numbers and looking at those numbers in the same system. And that has really moved us forward, not only in terms of knowledge, but in terms of cooperation within the organization itself.”

It is seven years after the onset of the global financial crisis, but innovative new solutions are now reshaping the way leading financial institutions think about, identify, manage and respond to risk.

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