Managing risk in a new world

Navigating the five major hurdles for hedge funds
Hedge funds are responding to new regulatory reporting requirements and investor demand for greater transparency, while trying to reduce operational risk. This paper looks at five major hurdles to risk management and suggests a best practices IT framework that can help hedge funds manage risk more effectively in this new environment.
The early 2000s saw an explosion of hedge fund managers and assets, accompanied by a transformation in the profile of investors. Once the preserve of ultra high net worth individuals and family offices, hedge funds began to attract institutional investors such as pension funds and endowments, as well as mass affluent investors via funds of funds.

The new breed of investor tended to have different risk tolerances from traditional hedge fund clients. Institutional investors and fund of fund managers wanted more insight into investment policies and performance attribution, as well as assurances that funds had adequate infrastructures to mitigate operational risk. The mainstreaming of the customer base also aroused regulatory concerns about investor protection, bringing more intense scrutiny of the sector, calls for greater transparency and the prospect of legislative action.

The financial crisis of 2008 proved to be the regulatory tipping point. New regulations that arose in its wake, notably AIFMD in Europe and Dodd-Frank in the US, meant an end to “closed book” operations and tightly guarded investment strategies. Transparency, reporting, disclosure, and demonstrable risk controls have become the order of the day.

The industry has largely adapted. Firms are finding solutions to meet their risk reporting requirements, particularly Form PF (under the US SEC) and Annex IV (under AIFMD). Hedge funds today are increasingly willing to tell their stories and share their risk approaches with prospective investors. Forward-thinking managers also recognize that an advanced risk management infrastructure can be an important differentiator, providing them with a competitive advantage in attracting and retaining assets. In fact, according to the EY 2014 Global Hedge Fund and Investor Survey, hedge fund managers made substantial investments in risk management, legal, and compliance solutions over the preceding 12 to 24 months. (See Figures 1 and 2.)
Five Hurdles to Effective Risk Management

Different hedge funds have different risk concerns and tolerances depending on their objectives, trading strategies, and the instruments they employ. Understanding that each fund must define risk for itself, there are five common challenges that many funds face.

1. Finding and reporting on firm-wide positions across asset classes

Each hedge fund needs to have an up-to-date view of its total risk position and the exposure it creates. However, the tendency of portfolio managers to work independently, combined with IT system limitations, can result in asset-class silos operating within a firm, making it difficult to obtain an accurate enterprise-wide picture of exposure.

Hedge funds may also face cross-asset exposure. For example, a manager may hold an equity stake in a company and a future or option on that equity, as well as a bond and a related CDO. Again, the use of non-integrated IT systems will make it hard to track the firm’s aggregated risk position.

2. Evaluating and quantifying counterparty risk

Counterparty risk is an ongoing concern. With trading speed constantly accelerating, evaluating the risk counterparties pose at any given moment becomes a monumental undertaking. Since the financial crisis, which saw numerous counterparty default situations, many fund firms have gone to a multi-prime model to diversify their relationships. While this can be an effective hedge against counterparty risk, it makes monitoring and managing exposures with multiple counterparties a challenge.

Figure 1

Percentage of funds investing in legal and compliance functions in the preceding 12-24 months, by AUM.

Source: EY 2014 Global Hedge Fund and Investor Survey
3. Reconciling data from various counterparties

A hedge fund must reconcile the trades and positions on its own books against those of its counterparties in order to understand its risk exposure fully. But getting accurate data in a timely, automated fashion from a myriad of trading counterparties and back office service providers can be difficult and time consuming. The firm then needs to reconcile the data received and address outstanding issues, further complicating the task.

4. Difficulty getting real-time risk and exposure reporting

Between escalating trading speed and volume, a more engaged client base, globalization, and closer regulatory scrutiny, hedge funds want to know their portfolio positions and accompanying risk exposures up to the minute. However, real-time data feeds, trade information and position monitoring are not always available, especially when dealing in emerging markets.

5. Valuing illiquid securities and portfolios

Determining the fair value of an infrequently traded, custom-built OTC derivative or complex loan product can be problematic. Furthermore, because illiquid securities are less frequently priced, the valuations may smooth reported returns, resulting in an underestimation of their volatility and of the risk they pose.

Hedge funds historically relied on the sell-side counterparty that created the instruments to provide valuations for them. This practice, however, has raised concerns about conflicts of interest, transparency, and valuation subjectivity, with attendant risks for the instrument holder.

As a result, pressure has been building for independent instrument and portfolio valuations, performed either by a fund’s in-house experts whose responsibilities are segregated from portfolio management, or by specialized pricing providers or third-party administrators.

The Financial Accounting Standards Board’s FAS 157 provides guidelines on how companies should determine, track and report on the fair valuations of securities, notably “Level 3” assets, which don’t have observable prices for one or more of their component inputs and are therefore valued according to estimates derived from models. Under FAS 157, companies must disclose how they arrived at a valuation and the changes in valuations from period to period. The stated value also must reflect what would happen if the holder were exiting the position in current market conditions, rather than a notion of long-term value.
Transparency, reporting, disclosure, and demonstrable risk controls have become the order of the day.
Creating a Best Practices IT Framework

Technology can play a significant role in helping firms navigate these hurdles. A sound technology infrastructure can help fund managers demonstrate that they have adequate control over investment and operational risks.

That helps explain why investments in technology continue to rise, as fund firms seek to implement comprehensive solutions encompassing portfolio management, order management, risk, compliance, and accounting capabilities. (See Figure 3.)

The cornerstone of a workable risk management infrastructure is a robust and sophisticated technology architecture able to handle the complexities and speed of the modern trading world. A best practices IT framework for risk management would include a number of advanced capabilities:

**Multi-asset class coverage**

The continuous search for alpha takes managers across asset classes and markets. Yet in many cases they do not have the ability to easily accommodate many different or new instruments within their existing infrastructure.

Effective risk management calls for a portfolio management platform that can support complex financial instruments and strategies and include cross-asset class risk tracking and reporting. It should enable managers to track exposure by name or issuer across asset classes. The platform also needs to be able to break down the sources of risk in a portfolio by factors such as style, sector, interest rate, country and currency.

These capabilities will allow the fund to run timely, comprehensive stress tests for its entire portfolio, as well as individual products, to get a quick and accurate picture of the firm-wide risk position. The system should also be easily extendable to allow the addition of new instruments as they emerge.

**Enterprise-wide data mining**

Hedge funds often obtain their data from multiple sources and store it in product-specific system silos. This results in a profusion of data that is inconsistent in format and fragmented across the firm. While this may provide adequate individual fund or asset class reporting, it can aggravate firm-wide exposure or valuation risks. For hedge funds to compete effectively in today’s trading environments, they need data that is cleaned in a consistent manner and consolidated to produce an enterprise-wide view of risk in real time.

**Accurate instrument valuations**

Funds are increasingly using third-party price sources for hard-to-value securities, which require an automated feed of pricing information into the hedge fund’s risk management system. The hedge fund should also have an internal price modeling capability to validate third-party figures and test recent transaction prices against prior valuation prices.

---

Figure 3

Past and projected technology expenditure as a percentage of overall expenses, by AUM.

Source: EY 2014 Global Hedge Fund and Investor Survey
A sound technology infrastructure can help fund managers demonstrate that they have adequate control over investment and operational risks.

**Monitoring fund/portfolio manager thresholds**

Hedge funds need accurate monitoring of portfolio manager thresholds and fund concentration limits to guard against excessive exposure to particular positions, industries, economic sectors, or geographies. This is essential for a fund to avoid style drift and comply with restrictions set forth by management, investors, disclosure guidelines, or regulators. The limits should also be easily configurable in the system to accommodate future changes in the hedge fund's strategies.

**Intra-day Value-at-Risk (VaR) capability**

Many hedge funds employ dynamic trading strategies that result in rapid changes in their positions, although the end-of-day net effect may be zero. Therefore, VaR should be measured at frequent intervals throughout the trading day to reflect the rapidly changing situation. In addition, the risk tools should support stress, correlation and back testing for the VaR measures, as well as “what if” scenario modeling to guide portfolio decision making.

**Real-time reporting**

An effective risk management platform will offer real-time reporting for all assets by strategy, portfolio, counterparty, creditworthiness, or firm-wide position. This will provide managers with the information needed to manage risk effectively and meet investor mandates.

Finally, while infrastructure is crucial, it is just one pillar in a hedge fund's risk management framework. It must be supported by rigorous processes and procedures and well-trained, empowered risk specialists for the entire framework to be effective.
The cornerstone of a workable risk management infrastructure is a robust and sophisticated technology architecture able to handle the complexities and speed of the modern trading world.

The new breed of investor tended to have different risk tolerances from traditional hedge fund clients.
While infrastructure is crucial, it is just one pillar in a hedge fund’s risk management framework.

Risk Management for the New Reality

In light of the inevitable risks that come from the pursuit of superior absolute returns, hedge funds have long recognized the need for effective risk management and monitoring capabilities. Today, in the face of faster trading speeds, increased volume, growing instrument complexity and greater globalization, hedge funds must be prepared to meet higher investor expectations and tighter regulatory scrutiny.

Meeting these challenges begins with a risk assessment to gauge the firm’s exposure. A key part of that assessment is a review of systems and processes to ensure that they are sufficiently robust to support best practices in risk management. A best practices infrastructure requires a sophisticated IT platform that can track a broad range of assets, report on global positions by counterparty, and provide timely valuations and accounting for funds at multiple levels. The right technology solution will make real-time, actionable fund data readily available and reduce operational risk through a high level of automation.

With the right combination of proven technology, built-in controls and informed human judgment, firms can have the risk management framework that is essential for competing successfully in a new and dramatically different environment.
The shape of things to come
Who We Are

Advent, a business unit of SS&C, is helping over 4,300 investment firms in more than 50 countries—from established global institutions to small start-up practices—to grow their business and thrive. Delivering unparalleled precision and ahead-of-the-curve solutions for more than 30 years, we help our clients minimize risk, work together seamlessly, and shape the future of investment management. For more information visit www.advent.com.

Join the conversation

Advent Software, Inc.

[HQ] 600 Townsend Street, 5th Floor, San Francisco, CA 94103 USA / PH +1 800 727 0605
[NY] 1114 Avenue of the Americas, 33rd Floor, New York, NY 10036 USA / PH +1 212 398 1188
[HK] The Entertainment Building, 31st Floor Suite 3118-20, 30 Queens Road, Central, Hong Kong, HK / PH +852 2824 8720
[UK] 127-133 Charing Cross Road, London WC2H 0EW / PH +44 20 7631 9240

Copyright © 2015 Advent Software, Inc. All rights reserved. Advent is a registered trademark of Advent Software, Inc. All other products or services mentioned herein are trademarks of their respective companies. Information subject to change without notice. Printed on recycled paper.