Dresdner Kleinwort Wasserstein, London, Frankfurt, New York, Tokyo, Hong Kong

Leading international investment bank sets the standard for other banks to follow

Dresdner Kleinwort Wasserstein has, in designing, developing and implementing an operational risk solution with Raft International, taken a leading position in operational risk management. Their Raft Radar system is already generating operational loss and exposure data, providing a platform for meeting the proposed regulatory requirements for an advanced measurement approach under the New Basel Capital Accord, scheduled for compliance in 2005.

Background

Operational risk may be defined as any form of exposure resulting in an organisation making either an expected or unexpected loss or gain which arises as the result of some abnormality or error within the day-to-day operating environment. For the financial services world, the definition of operational risk is taken to exclude both market (price) risk and credit risk, with these other two pillars of risk management each being the focus of specific risk management techniques, methodologies and approaches.

Operational risk is nothing new, being the oldest and most common form of risk faced by early financiers – the insurance markets for shipping, for instance, were built on the transfer of operational risks. More recently, the financial world has seen many well-publicised operational losses – Barings, Orange County, Proctor & Gamble, Daiwa Bank, Sumitomo, etc. But operational risks are not only single extreme events, they are daily problems as well – client lawsuits, industrial relations, computer system viruses and failures, or late settlement and interest claims arising from poor process controls.

At Dresdner Kleinwort Wasserstein, in 1999, a strategic decision was taken to establish a specialist operational risk unit within the Group Risk Control, with a full mandate across the entire Investment Bank. Due to the strategic importance of the London financial markets, the Operational Risk project started in London, and has since gone global. The Bank quickly found the importance of having a central operational risk information process – regular, transparent reporting of critical risk indicators and loss incidents by key business function has become an essential senior management tool.

The initial strategy for the Operational Risk team was to establish the framework for an operational risk model, based on generic business
Operational risk management started as a manual activity…

initially, data was captured manually. This delivered good basic management information, but the team wanted to continue making improvements in the quality, detail, and timeliness of the data. it became apparent that the Bank had to automate the operational risk process if it was to gain a long-term benefit from its initiative.

During the same period that Dresdner Kleinwort Wasserstein was establishing its operational risk management infrastructure, market forces were at work subsequently proving the Bank’s strategy to have been forward thinking. Economic volatility during the late 1990’s was invalidating many traditional approaches to managing business risk. Participants within the financial services industry have had to pay far greater attention to their own financial situation and to any potential exposure that could affect their market value. Over the same period, new entrants and consolidations of existing players changed the market structure, while more sophisticated customers were forcing a different approach in business. The combination of competition and changed demand created considerable downward pressure on margins, again making market participants much more aware of adverse impacts on their income statements.

Given the global attention created by some of the larger loss incidents such as Barings, there was little surprise when regulators decided to look at operational losses to try both to quantify the problem and introduce measures to protect the broader community. In Dresdner Kleinwort Wasserstein’s case, the Bank’s pre-emptive operational risk initiative was able to address various statutory and regulatory developments. First, the Turnbull Report in the UK, issued by the Institute of Chartered Accountants in England and Wales, requires directors and senior executives of all firms to be aware of potential loss exposures and to ensure adequate policies and procedures are in place to manage and prevent them. Secondly, in Germany, the ‘KonTraG’ (Control Transparency Law), introduced in 1998, requires firms to implement an early warning system for all risks. These corporate governance principles demand that the highest levels of management are fully aware of potential risk exposures across the organisation.

Economic forces at play…

Corporate governance…

About Raft International

Founded in 1995, Raft International plc is a pioneer in component-based Rapid Application Development for financial institutions, specialising in risk management, investment banking, energy and wealth management. It focuses on the provision of business consulting and the design, development and deployment of leading-edge business solutions. With offices in the United Kingdom, Denmark and India and a global customer base, Raft International’s mission is to be the first choice supplier of advanced business solutions for the financial services industry, facilitating business agility through highly flexible strategic solutions designed and delivered with unparalleled speed-to-market. The Company is a Microsoft Managed Partner and its component-based architecture is based on Microsoft’s Windows DNA architecture. Raft International is listed on London’s Alternative Investment Market (AIM).
Most recently in 2001, the Bank for International Settlements (BIS) has stated its intention to charge capital for operational risks for the first time. With the introduction of the first Basel Accord in 1988, the BIS had introduced capital charges on all banks, which were subsequently implemented by all major financial regulatory authorities. While it was clear that the predominant focus of the initial Basel Accord was market/price risk and credit risk, there was some acknowledgement of other forms of risk as well. The new Basel Accord now explicitly defines operational risk and banks will be required to set aside capital to cover them from 2005. The implications are clear – banks will be forced to give attention to their operational risk management environment and those who pay more attention through introducing more advanced measurement and management techniques will be rewarded by a reduction in the capital charge.

**Dresdner Kleinwort Wasserstein’s Solution**

Having started early with its operational risk initiative, Dresdner Kleinwort Wasserstein had already established a manual process for collating operational risk data, but now wanted to realise a long-term benefit in achieving an automated solution. In early 2000, a project team was assembled between Operational Risk Control, the IT function, and Raft International, under the management of Dresdner Kleinwort Wasserstein’s Head of Operational Risk, Jonathan Howitt. “Having put into place a process model framework for our operational risk, we wanted to instil a more proactive risk identification culture, in particular for the trading and operations areas, but we were constrained by manual processes” states Howitt. “Manual reporting would not stand up over time and we knew that automation onto a single Operational Risk platform was the answer. Raft provided top quality development resource and within a short timeframe, we had a prototype which the front-office and operations were happy with.” The project was code-named “Radar”, reflecting the intention to build an integrated early warning system for operational risks.

The initial focus was to automate incident capture and loss data collation mechanism In this regard, Dresdner Kleinwort Wasserstein’s membership of various associations and working groups such as the British Bankers Association (BBA), the International Swaps and Derivatives Association (ISDA) and the Institute for International Finance (IIF) proved invaluable, as early
Comprehensive product coverage on a global basis…

Flexibility to:
- Identify
- Investigate
- Assign ownership
- Authorise
- Validate and close

A wide range of loss incidents.....

Reporting and Risk Indicators

industry thinking was included into the design to ensure that Radar would have the flexibility to comply with any form of risk categorisation the regulators would eventually settle on.

Radar went live in London for the Global Equity Division in December 2000. Since then, additional product capability has been added and a full global roll-out achieved, with the result that today, the application is live for all the bank’s major products and process areas. Specific deal and profit/loss calculation algorithms are in place for cash equities, warrants, convertibles, equity futures and options, cash bonds, interest rate futures and options, as well as an interest claim and funding cost engine for settlement and cash management. For other products and non-trade related incidents, a free-form profit/loss calculation engine allows for multi-cause loss explanation for all the Basel risk event types, with further sub-categorisation to satisfy local regulators and meet the specific needs of the business.

The design of the application is flexible in that the mapping of the Bank’s organisation structure, product set, and detailed processes can all be easily parameterised. Key individuals at each location and for each major function are assigned to control groups in the application with responsibility for error investigation and monitoring, resulting in a “living” matrix of how Dresdner Kleinwort Wasserstein conducts its business. “It was critical for us to build a solution which represents the Bank today, while retaining the ability to evolve as both the Bank evolves and as the regulators define their compliance requirements” states Howitt. Radar uses a workflow-enabled process over this matrix, incorporating a loss identification stage, an investigation stage, allocation of the loss to the responsible owner, an authorisation process (employing loss value, product, process and location criteria to ascertain the desired authorisation levels and stages) and a final validation and closure stage.

Radar has powerful reporting functionality whilst at the same time respecting the sensitivity of loss data and maintaining firewalls between different businesses or functional areas. The application provides analysis of thousands of incidents instantly with complete drill down into the details of any single incident. The reporting functionality is being extended to include risk indicators alongside loss data. In early 2002, Dresdner Kleinwort Wasserstein expects to have automated all of its monthly operational risk reporting – risk indicators and scorecards – into Radar.

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Raft Radar, as the application is known, is housed on Dresdner Kleinwort Wasserstein’s corporate intranet and is thus available globally via a browser-based front-end. It consists of a number of server-based components, written in Java, with Microsoft’s SQL Server 2000 as the database repository. The Bank employs a single global database, physically situated in London at present. Raft Radar’s application server is available either under UNIX, as employed by Dresdner Kleinwort Wasserstein, or Windows NT/2000.

**Business Benefits**

Dresdner Kleinwort Wasserstein’s Howitt cites many business and financial benefits of Radar. He admits to initially underestimating senior management participation and interest in Radar. “They asked for all new joiners to be introduced to Radar upfront and given examples of loss experiences and how they happened. There was a strong appetite for consistent corporate memory on losses, not just anecdotes. Management knew that simple lessons on the trading floor like always repeating orders back to a client could save them a lot in revenues.” From traders and support staff, Howitt had also expected more scepticism and defensiveness, but the speed and ease of the electronic workflow have been warmly welcomed at all levels. Loss recording and process transparency are becoming the accepted norm.

Whilst it’s difficult to put a hard number on the financial benefits in terms of costs, Howitt states that there have been concrete manpower saves in automating paper processes for stock exchange errors and interest claims. “The real benefits are a more risk aware and homogenous control culture though – losses are better understood, processes can be benchmarked more easily, and the statistics from Radar will ultimately drive the decision-making and change management process.” Finally, although it’s still too early to put a firm number on potential regulatory capital savings, Howitt estimates that for a large financial institution the annual funding benefit of an advanced measurement approach would be tens of millions of dollars.

**The Future**

Raft International and Dresdner Kleinwort Wasserstein are already building key risk indicator functionality into Radar, which will be
followed by a linkage into a quantitative modelling solution for the generation of exposure probabilities and “OpVaR” values. The extension of Radar and the Bank’s operational risk management framework into other areas of the Bank and its parent group, including retail and corporate banking activities, is being pursued.

Raft International and Dresdner Kleinwort Wasserstein have also concluded a strategy to take Radar to the market. Mike Finlay, Raft International’s Sales & Marketing Director believes that Raft Radar can contribute a great deal to every financial services organisation: “Given the market and regulatory pressure to address operational risk, every player needs to do something and do it now – if the regulators pursue their current intentions of demanding a minimum of five years internal loss data for analytical purposes to qualify for an advanced measurement approach to reduce capital charge, you need quality loss data from 2000 onwards, implying that we already have a year’s worth of historical catch-up. Radar can be implemented within a month and at a cost which makes trying to develop something in-house unjustifiable”. Howitt adds “Dresdner Kleinwort Wasserstein has put a lot of effort getting to where we are now – in commercialising Radar, Raft International is offering market participants an extremely fast start, one which I wish was available to the Bank 18 months ago”.

Raft Radar will be available for organisations to license for their own use, either as a “plain-vanilla” solution or with additional modifications according to specific requirement. On this basis, Raft Radar can either be managed in-house by the organisation or outsourced, something Dresdner Kleinwort Wasserstein has considered. “Currently, it makes sense to run Radar in-house” says Howitt, “however, once we have completed the key risk indicator functionality, we will look to outsource the systems management. We are talking to Raft International about this, as an ASP solution is attractive for us”. Raft International is currently working with Hewlett-Packard on constructing an ASP model which will offer Raft Radar on a pay-per-use basis to the global financial services community. “This will allow participants in the ASP forum access to a comparative, obviously desensitised, external loss database”, states Finlay. “The financial services market normally only matures once market standards are in place. As of yet, there are no market standards for operational risk and Raft International intend Raft Radar to become the standard in this area”.

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