: What software can help implement the Basel accords?

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Identifying and evaluating software for a very broad purpose like supporting the Basel capital accords (http://www.bis.org/) is always difficult and complex. Some criteria that need to be considered by a specific financial institution include: 1) fit with current infrastructure and databases, 2) adequacy of the solution for meeting needs, and 3) cost/benefit considerations. More general criteria that can be considered include: 1) reputation of the vendor, 2) independent review of capabilities, and 3) customer comments. Who are major vendors and what do we know about current capabilities?

Using DSS to implement the Basel accords is an ongoing issue (cf., Power, 2004). The Basel Committee on Banking Supervision in Basel, Switzerland developed the Basel II capital adequacy framework in 2004. Basel II specifies guidelines for managing credit, market and operational risk. Basel III is an accord reached in September 2010 on capital and liquidity for large, internationally active banks. New requirements and the recent experiences with risk in the global financial system make the topic of using DSS to implement the accords increasingly important.

According to the web site Basel-ii-Risk.com run by Forward Looking Media Ltd., Basel II Software solutions should help an organization deal with a number of current information and decision support problem.

First, eliminate independent data silos. Risk data should be integrated in the enterprise.

Second, aggregate and consolidate all credit risk and operational risk data globally.

Third, support very large amounts of current and historical data. This requirement suggests that it is important to implement a risk data warehouse.

Fourth, help apply risk management and control principles. This requirement suggests some type of business rules engine should interact with risk management processes.

Fifth, support development and implementation of risk calculations and risk indicators.

Many vendors have products to help manage operational risk including:

- Algorithmics (http://www.algorithmics.com)
- Oracle Financial Services Software Limited
- Kamakura (http://www.kamakuraco.com/)
- FinArch (http://www.finarch.com/)
- Temenos Group AG (http://www.temenos.com/)
- MetricStream (http://www.metricstream.com/)
- BWise (http://www.bwise.com)
- SAP (http://www.sap.com/industries/banking/index.epx)

Forrester Research identified 115 Governance, Risk and Compliance vendors for operational risk management projects. The Gartner 2011 Magic Quadrant for Enterprise Governance, Risk and Compliance (GRC) Platforms includes 17 firms.

Some vendors specialize in credit risk software like SunGard (http://www.sungard.com/). Vendors like SAP also have software for market risk monitoring. Teradata is a major vendor of data warehouse products.

So what is the difficulty associated with using decision support software to help implement the Basel accords? The major difficulty is measurement and standards. What data should be collected to measure operational risk? or credit risk? or market risk? What indicates the level of a category of risk is becoming too high and potentially disruptive to sustainable operations? Are we interested in risk over a long or short time period? What do we do when the risk exceeds a standard? Who should act? How often should reporting occur? What is the role of modeling and forecasting risk? What is capital? Is Tier 1 capital level related to risk? Who will clarify what is measured and how it is interpreted? The vendors? the regulators? the individual bank managers? We need "one language" with clear, specific definitions for discussing and controlling risk in the global financial system.

Managers of financial institutions and regulators need to focus renewed attention on finding best-in-class solutions for identifying, mitigating and monitoring risk. Regulators need solutions that will help avoid financial crises from uncontrolled systemic risk.

References

Power, D. "How can DSS help implement Basel II?" DSS News, Vol. 5, No. 15, July 18, 2004.

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