RiskTech100® 2011

IBM Highlights

2011 Overall Winner

December 2011
About Chartis Research

Chartis is a leading provider of research and analysis covering the global market for risk management technology. Our goal is to support enterprises seeking to optimise business performance through better risk management, corporate governance and compliance. We help clients make informed technology and business decisions by providing in-depth analysis and actionable advice on the broad spectrum of risk technology offerings. Areas of expertise include:

- Credit risk
- Operational risk and Governance, Risk and Compliance (GRC)
- Market risk
- Asset and Liability Management (ALM) and Liquidity Risk
- Financial Crime
- Insurance risk
- Regulatory requirements including Basel II, Basel III, Dodd Frank and Solvency II

Chartis is solely focused on risk technology giving it significant advantage over generic market analysts.

Chartis has brought together a leading team of analysts and advisors from the risk management and financial services industries. This team has hands-on experience of implementing and developing risk management systems and programmes for Fortune 500 companies and leading consulting houses.

Chartis Research is authorised and regulated in the United Kingdom by the Financial Services Authority (FSA) to provide investment advice.

www.chartis-research.com
### Table of Contents

1- Introduction .......................................................................................................................................................... 5  
2- RiskTech100® Rankings ...................................................................................................................................... 6  
3- IBM Rankings per Category .............................................................................................................................. 10  
4- Related Research ............................................................................................................................................... 12
List of Figures and Tables

Figure 1: RiskTech100® Research Methodology – 2011 (January to October 2011)........................................6

Table 1: RiskTech100® Assessment Criteria ....................................................................................................7
Table 2: RiskTech100® Top 10........................................................................................................................9
Table 3: IBM ranking per category ..................................................................................................................10
1- Introduction

IBM’s risk offerings are spearheaded by its Business Analytics and Optimization practice. The practice has nearly 8,000 consultants, including almost 300 researchers, based in a network of analytics solution centres all over the world.

In the past four years, the computing giant has made several acquisitions with a view to enhancing its risk management consulting services and adding to its Cognos software offering. Recent notable acquisitions include OpenPages and Algorithmics.

OpenPages, which was acquired by IBM in October 2010, offers a single system that helps companies identify and manage risk and compliance activities across the enterprise, thus promoting integrated risk management solutions. It allows them to develop a comprehensive compliance and risk management strategy across a range of domains including operational risk, financial controls management, IT risk, compliance and internal audits. The acquisition brought to IBM 200 clients across various industries including companies such as Allianz, Duke Energy, Barclays and SunTrust.

Algorithmics became an IBM company in October 2011. It provides solutions for market, credit and operational risk, as well as collateral and capital management. Users of its software include 25 of the world’s top 30 banks and over two thirds of the CRO Forum of leading insurers.

Its products include:

- Market Risk solutions – providing a scalable integrated risk platform to measure, manage and control capital market exposures across asset and liability functions
- Credit and Capital solutions – delivering real-time access to accurate, integrated credit data, enabling regulatory compliance, enhanced decision making and improved financial performance
- Collateral and management solutions – providing timely access to accurate collateral related data, reducing operational risk and increasing business opportunities
- Operational risk solutions – providing an integrated approach to the identification, management and measurement of operational risk in support of GRC programs
- ALM and Liquidity risk – providing a simulation based framework to handle sophisticated products, address regulatory requirements and support advanced calculations such as stochastic scenarios
- Actuarial modeling – providing key decision makers of insurance firms with critical business information for managing risk, meeting regulatory requirements and protecting shareholder value.

Both acquisitions have broadened IBM’s advanced analytics capabilities for the financial services industry and continue its long term strategy to expand its business analytics and optimization software services.
2- RiskTech100® Rankings

The RiskTech100® is recognized globally as the most comprehensive and prestigious study of the top technology companies active in the risk management market.

The technology companies covered in the rankings range from tier-one enterprise software powerhouses to specialized boutiques. Achieving a place in the RiskTech100®, however, means that they are among the top 100 providers of risk technology solutions in the corporate and financial services sectors and among the best in their specific sector or risk class. The rankings in Chartis’ RiskTech100® report reflect our analysts’ considered opinions, along with research into market trends, participants, expenditure patterns and best practices.

The data collection for this study started in January 2011, and the analysis has been validated through several phases of independent verification. This study is the most comprehensive of its kind and is a core element of Chartis’ annual research cycle.

Figure 1: RiskTech100® Research Methodology – 2011 (January to October 2011)

- Performed market sweep of 8000 risk technology buyers globally (80% financial services, 20% non-financial services)
- Collated 812 completed questionnaires from risk technology buyers and end-users
- Collected data on expenditure priorities and vendor preferences
- Collated 332 completed questionnaires from risk technology vendors
- Conducted 129 interviews and product briefings with risk technology vendors

- Conducted 123 interviews with risk technology buyers to validate survey findings
- Conducted 68 interviews with independent consultants and systems integrators specializing in risk technology

- Applied RiskTech100® assessment criteria to filter top 150 vendors
- Reviewed data with 24 independent consultants and 112 risk technology buyers
- Interviewed 68 ex-employees of top 25 risk technology vendors to validate findings
- Undertook final data validation with 110 vendors – received 82 completed questionnaires and 43 vendor briefings

- Concluded final top-100 rankings, category winners and report write-up
RiskTech100® Assessment Criteria:

The RiskTech100® assessment criteria comprises of six equally weighted categories:

- Functionality
- Core technology
- Organizational strength
- Customer satisfaction
- Market presence
- Innovation

Within each category, there are a number of sub-criteria that have been weighted according to the level of importance that end-users and system integrators attached to these aspects of risk technology provision.

Table 1: RiskTech100® Assessment Criteria

(sub-category weightings are shown in brackets)

<table>
<thead>
<tr>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth of functionality (0.5) – The level of sophistication and detailed features in the software product. Aspects assessed include: innovative functionality, practical relevance of features, user-friendliness, flexibility and embedded intellectual property. High scores are given to those firms that achieved an appropriate balance between sophistication and user-friendliness. In addition, functionality linking risk to performance is given a positive score.</td>
</tr>
<tr>
<td>Breadth of functionality (0.5) – The spectrum of risks covered as part of an enterprise risk management solution. The risk spectrum under consideration includes treasury risk management, trading risk, market risk, credit risk, operational risk, energy risk, business/strategic risk, actuarial risk, asset-liability risk, financial crime and compliance. Functionality within and integration between front-office (customer-facing) and middle-back office (compliance, supervisory and governance) risk management systems are also considered. High scores are given to those firms achieving (or approaching) integrated risk management – breaking the silos between different risk management functions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data management (0.35) – The ability of enterprise risk management systems to interact with other systems and handle large volumes of data. Data quality is often cited as a critical success factor, and ease of data access, data integration, data storage and data movement capabilities are all important factors.</td>
</tr>
<tr>
<td>Risk analytics (0.35) – The computational power of the core system, the ability to analyze large amounts of data in a timely manner (e.g. real-time analytics), and the ability to improve analytical performance are all important factors.</td>
</tr>
<tr>
<td>Reporting (0.30) – The ability to surface information in a timely manner. The quality and flexibility of reporting tools and ease of use are important for all risk management systems.</td>
</tr>
</tbody>
</table>
## Organizational Strength

- **Sales execution (0.25)** – The size and quality of sales force, sales distribution channels, global presence, focus on risk management, messaging and positioning are all important factors.

- **Financial strength /stability (0.25)** – Revenue growth, profitability, sustainability and financial backing. (The ratio of license to consulting revenues is key to business scalability.)

- **Implementation and support (0.25)** – Important factors include size and quality of implementation team, approach to software implementation, post-sales support and training.

- **Thought-leadership (0.25)** – Business insight/understanding, new thinking, formulation and execution of best practices, and intellectual rigor are considered important by end-users.

## Customer Satisfaction

- **Value for money (0.4)** – Price to functionality ratio, total cost of ownership versus license price.

- **After sales service and support (0.4)** – Important factors include ease of software implementation, level of support and quality of training.

- **Product updates (0.2)** – End users consider frequency of updates, keeping pace with best-practice and regulatory changes to be important.

## Market Presence

- **Market penetration (0.4)** – Number of customers in chosen markets, rate of growth relative to sector growth rate.

- **Market potential (0.3)** – Brand awareness, reputation, and the ability to leverage current market position to expand horizontally (with new offerings) or vertically (into new sectors).

- **Momentum (0.3)** – Performance over the last 12 months, including financial performance, new product releases, quantity and quality of contract wins and market expansion moves.

## Innovation

- **New product development (0.4)** – New ideas, functionality and technologies to improve risk management for target customers. Chartis assesses new product development, not in absolute terms, but in relation to the vendor’s closest competitors.

- **Exploitation (0.4)** – Developing new products is only the first step in generating success. Speed to market, positioning of new products and translation to incremental revenues are critical success factors.

- **New business models (0.2)** – Innovation is not limited to the product dimension. Some risk technology vendors are also actively working toward new business models for generating profitable growth.
The table below presents the top 10 firms of the RiskTech100®:

Table 2: RiskTech100® Top 10

<table>
<thead>
<tr>
<th>Rank 2011</th>
<th>Rank 2010</th>
<th>Company</th>
<th>HQ</th>
<th>Total Score</th>
<th>Functionality</th>
<th>Core Technology</th>
<th>Organizational Strength</th>
<th>Customer Satisfaction</th>
<th>Market Presence</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
<td>IBM</td>
<td>US</td>
<td>69.8%</td>
<td>79%</td>
<td>73%</td>
<td>65%</td>
<td>63%</td>
<td>72%</td>
<td>67%</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>SunGard</td>
<td>US</td>
<td>66.8%</td>
<td>76%</td>
<td>63%</td>
<td>70%</td>
<td>60%</td>
<td>71%</td>
<td>61%</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>SAS</td>
<td>US</td>
<td>65.8%</td>
<td>77%</td>
<td>74%</td>
<td>63%</td>
<td>58%</td>
<td>62%</td>
<td>61%</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>Oracle</td>
<td>US</td>
<td>63.3%</td>
<td>70%</td>
<td>72%</td>
<td>61%</td>
<td>57%</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>Moody’s Analytics</td>
<td>US</td>
<td>62.5%</td>
<td>61%</td>
<td>64%</td>
<td>64%</td>
<td>62%</td>
<td>62%</td>
<td>62%</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
<td>Wolters Kluwer FS</td>
<td>US</td>
<td>62.0%</td>
<td>63%</td>
<td>56%</td>
<td>69%</td>
<td>61%</td>
<td>63%</td>
<td>60%</td>
</tr>
<tr>
<td>7</td>
<td>17</td>
<td>Misys</td>
<td>UK</td>
<td>61.7%</td>
<td>68%</td>
<td>59%</td>
<td>62%</td>
<td>59%</td>
<td>62%</td>
<td>60%</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>Fiserv</td>
<td>US</td>
<td>61.3%</td>
<td>62%</td>
<td>58%</td>
<td>69%</td>
<td>63%</td>
<td>61%</td>
<td>55%</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
<td>MSCI</td>
<td>US</td>
<td>61.3%</td>
<td>59%</td>
<td>53%</td>
<td>60%</td>
<td>63%</td>
<td>63%</td>
<td>61%</td>
</tr>
<tr>
<td>10</td>
<td>12</td>
<td>NICE Actimize</td>
<td>US</td>
<td>60.3%</td>
<td>60%</td>
<td>59%</td>
<td>62%</td>
<td>58%</td>
<td>61%</td>
<td>62%</td>
</tr>
</tbody>
</table>

Source: RiskTech100® 2011
## 3- IBM Rankings per Category

Table 3 details specific rankings of IBM for each RiskTech100® category and supporting explanations.

### Table 3: IBM ranking per category

<table>
<thead>
<tr>
<th>Assessment Category</th>
<th>IBM Ranking</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Functionality</strong></td>
<td>1st</td>
<td><em>Depth of Functionality:</em> Algorithmics has deep functionality and intellectual property in market risk, credit risk, actuarial risk, liquidity risk and collateral management. The range of features and methodologies covered by these solutions positions IBM as a leader in the risk technology marketplace. OpenPages has a leading operational risk and GRC (Governance, Risk and Compliance) solution covering many of the qualitative risk management requirements of end-users. This combination of qualitative and quantitative risk capabilities is a key differentiator for IBM.</td>
</tr>
<tr>
<td><strong>Core Technology</strong></td>
<td>2nd</td>
<td>IBM has a number of core technology capabilities that have been established through organic R&amp;D as well as through acquisitions. These include deep capabilities in data integration technology, data management, business analytics and business intelligence. The combination of these core capabilities with the existing technology embedded in the Algorithmics and OpenPages solutions places IBM in a very strong position in the risk technology marketplace.</td>
</tr>
</tbody>
</table>
| **Organizational Strength** | 5th         | *Sales execution:* IBM and the recently acquired companies (OpenPages and Algorithmics) have established global direct sales and marketing teams supported by experienced product management professionals.  

*Financial strength and stability:* IBM is an established and financially strong firm. It achieved one of the highest scores in this category.  

*Implementation and support:* The capacity and expertise for implementing risk technology solutions is often the Achilles heel for many vendors. IBM has a sizeable, knowledgeable and growing professional services team that is a key differentiator compared with other leading risk technology vendors.  

*Thought leadership:* Algorithmics has a strong tradition in risk management thought leadership and continues to develop new ideas and approaches for enterprise risk management. |
<p>| <strong>Customer Satisfaction</strong> | 3rd         | Algorithmics and IBM OpenPages have consistently received very good scores in our end-user surveys. Relative to its key competitors, IBM provides more of a one-stop shop and this is often more attractive for larger financial institutions. |</p>
<table>
<thead>
<tr>
<th>Market Presence</th>
<th>1st</th>
<th>IBM has achieved a dominant position in the banking, capital markets, investment management and insurance sectors globally through both organic and inorganic growth. Multiple reference sites and success stories support this position. This success provides a good platform for future growth in areas such as insurance risk, Basel III and ERM.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation</td>
<td>1st</td>
<td>IBM generally and Algorithmics and OpenPages specifically have established a continuous flow of innovation in both risk and technology. New approaches and methodologies in risk management are enabled through the innovative use of technology with clear benefits for end-user organizations. This is a key differentiator for IBM.</td>
</tr>
</tbody>
</table>
4- Related Research

• RiskTech100® 2011
• Technology Solutions for ALM and Liquidity Risk Management 2010
• Operational Risk & GRC 2011
• Global Risk IT Expenditure
• Financial Crime Risk Management 2011
• Market for Solvency II Technology 2011
• Liquidity Risk Management Systems 2011
• Counterparty Credit Risk Management Systems 2011
• Credit Risk Management Systems 2010

www.chartis-research.com