

# IMPROVED FINANCIAL RISK MANAGEMENT

## A FOUNDATION FOR THE FUTURE



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**Recent events related to the global economy, the regulatory environment and database technology have all combined to present the insurance industry with unprecedented challenges in financial risk management and reporting. These same conditions are also presenting savvy industry executives with unprecedented opportunities to better manage their business performance and bottom line results.**

### Introduction

If the past 18 months have taught us one thing, it's the fundamental need for insurance companies to incorporate real-time market movements into their risk models. Pressure from regulators, rating agencies, investors and public opinion following the recent financial meltdown are motivating insurers to upgrade their use of financial risk modeling — abandoning the periodic financial analysis that has characterized the industry to date, in favor of greater day-to-day management of risk and capital.

Financial modeling and data quality certification requirements are forcing movement away from an actuary's desktop and toward controlled information governance and a distributed computing environment. As insurance companies emerge from the rubble of the financial crisis, they are left to ponder the question: *What can we do to generate more reliable, timely financial risk results?*

### Data Management Is Especially Challenging for Insurance Companies

Data management processes are being examined for their historic weaknesses, inefficiencies and latency. In the insurance industry, data sources are typically siloed — much like the organizations themselves. Departmental tactics affecting data warehousing over the years have left organizational data fragmented, built with differing standards and overly focused on narrow requirements.

This gap further widens when discussing data used by actuaries and financial analysts. As actuarial and financial modeling and valuation have evolved, individual business units have negotiated their own data needs on a unit-by-unit basis. Consequently, insurers who have attempted to upgrade and enhance the quality of their risk management and financial data all too often report failed programs or mismanaged expectations. **Exhibit 1** highlights some of the different objectives of key organizational units.

BUSINESS SOLUTIONS  
TECHNOLOGY  
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**Exhibit 1. Organizational Objectives**

## Desktops and Spreadsheets are No Longer up to the Task

Financial risk models, and fundamental reporting of asset valuations and reserve levels, are labor-intensive. Data durability and traceability, along with a geometric increase in data volume, make utilization of desktop computing more and more difficult. Coupled with increasingly complex calculations requiring staggering computing power and trending to daily analysis for quicker results, the actuarial analyst is overwhelmed and unable to sustain manual processes to produce timely financial reporting.

Clearly, the days of “my data” and “your data” are gone. Insurers must focus on a platform to ensure accountability for data management at the enterprise level, requiring consideration across three primary domains:

1. **Data Management.** Locating, extracting, cleansing and harmonizing source system data to load into a data warehouse; integrating and aligning the data for financial risk modeling processes. These are the unique capabilities and expertise that CSC brings to each project.
2. **Financial Modeling.** Staging the model data by transforming and grouping the model points; creating the model through the process of building, validating, adjusting and running risk models. This is Towers Perrin’s particular strength and contribution to the new process, leveraging the strengths of their proven financial modeling software solutions, including RiskAgility™, MoSes™, and TAS Tillinghast Actuarial Software™.
3. **Reporting and Analytics.** Selecting, targeting, formatting and presenting the results of the risk modeling process to the appropriate audience. This is the output of our combined CSC-Towers Perrin service offering, including reports and analyses of the data.

CSC and Towers Perrin have developed our Financial Risk Intelligence maturity model to help clients assess their current capabilities and prioritize investments to enhance the capabilities needed to support the financial risk management and reporting functions. This is highlighted in **Exhibit 2**.

|                                | BASIC  | FOUNDATIONAL   | ADVANCED  | DISTINCTIVE   |
|--------------------------------|--|--|---|---|
| <b>Data Management</b>         | Manual data cleanup                                    | Cleanup using tools but not automated                  | Automated data feeds from most data sources                       | Automated data feeds from all data sources                      |
|                                | Changes posted end of month                            | Changes posted weekly                                  | Changes posted daily  | Changes posted immediately                                      |
|                                | Data definitions undefined                             | Data definitions defined but no concurrence            | Data definitions defined and agreed but limited change management | Common data definition set across enterprise; change management |
| <b>Financial Modeling</b>      | Desktop modeling                                       | Desktop modeling with local distributed computing      | Desktop modeling with enterprise distributed computing            | Enterprise modeling and distributed computing                   |
|                                | Model-building process spreadsheet-based               | Model points within local database                     | Model points available for multiple users                         | Model points auditable, reusable, optimized                     |
|                                | Ability to reproduce results sporadic                  | Reproduce results with manual archive                  | Standardized process across enterprise                            | Reproduce results with automated versioning                     |
| <b>Reporting and Analytics</b> | Key metrics/indicators defined but not complete        | Key metrics available from multiple reports            | Key metrics assembled in an enterprise scorecard                  | Key metrics support drill-down analysis                         |
|                                | No integration between financial modeling applications | Reports are standard but aggregation of results manual | Results updated through periodic batch processes                  | Real-time aggregation   |

**Exhibit 2. Your Level of Maturity Will Dictate the Entry Point and Focus Areas**

## CSC + Towers Perrin: Reliable, Timely Financial Risk Reporting

CSC and Towers Perrin have developed a joint solution to address the challenges of assembling and managing actuarial data. The solution combines CSC’s proven Insurance Industry Data Model and integration accelerators with Towers Perrin’s financial modeling platform, data mart, methodologies and services. The result is an efficient, auditable and repeatable process for deriving accurate risk and capital management analytics across the enterprise (see Exhibit 2).

## Not a One-Size-Fits-All Approach

No two client projects are the same. We work directly with clients to address their unique needs according to four distinct levels of data management maturity and sophistication — Basic, Foundational, Advanced or Distinctive (see Exhibit 2). Clients get all the support they need, but *only* the support they need. This means targeted, economical support *and* faster results.

## Making the Business Case for Better Financial Risk Management

The new CSC-Towers Perrin information governance model directly addresses the various business objectives of the three key organizational units highlighted earlier in Exhibit 1:

### For the CIO: Cost Reduction

Enterprise-wide data access:

- Provides an on-demand source for *companywide financial risk applications*
- Eliminates costs by automating data aggregation, transformation and cleansing, resulting in a *centralized data source*
- Supports future regulatory and compliance demands
- Cost-effectively *consolidates multiple processes and information flow issues into a single, integrated business tool*

### For the Chief Risk Officer/Chief Actuary: Risk Management

- *Reduces financial risk* through automated data and increased frequency and accuracy of risk modeling

- Presents an opportunity to *refine and potentially reduce reserves* through improved data quality and processes
- Creates a shared services framework by unlocking data currently stored in multiple silos to attain a *cost-effective approach to technology consolidation* and modernization

#### **For the CFO: Financial Insights**

- Provides *accurate, reliable and relevant data* in a configurable format — *data is accessible to the people who need it* and at the frequency they dictate, allowing the financial analyst to focus on decision making rather than data gathering and rationalization
- Delivers *transparency* through an efficient, auditable, repeatable process, yielding accurate data with verifiable lineage
- Assumptions and techniques used to perform the analysis are compatible throughout the organization and are *centrally managed and controlled*

### **Learn More**

CSC and Towers Perrin each have proven successes in their respective roles in data gathering/mapping and financial risk analysis applications. The CSC-Towers Perrin information governance model combines the two separate areas of expertise into a single new level of automated, end-to-end financial analysis and reporting — key to success in today's dynamic global economy and regulatory environment.

#### **To learn more, visit:**

[www.csc.com/financialriskintelligence](http://www.csc.com/financialriskintelligence) or contact [inforequests@csc.com](mailto:inforequests@csc.com) or [software.solutions@towersperrin.com](mailto:software.solutions@towersperrin.com).

### **About CSC**

CSC is a global leader in providing technology-enabled solutions and services through three primary lines of business. These include Business Solutions and Services, the Managed Services Sector and the North American Public Sector. CSC's advanced capabilities include systems design and integration, information technology and business process outsourcing, applications software development, Web and application hosting, mission support and management consulting.

Headquartered in Falls Church, Va., CSC has approximately 92,000 employees and reported revenue of \$16.2 billion for the 12 months ended July 3, 2009. For more information, visit the company's Web site at [www.csc.com](http://www.csc.com).

### **About Towers Perrin**

Towers Perrin is a global professional services firm that helps organizations improve performance through effective people, risk and financial management. The firm provides innovative solutions in the areas of human capital strategy, program design and management, and in the areas of risk and capital management, reinsurance intermediary services and actuarial consulting.

The Software Solutions group is a leading provider of risk and financial modeling solutions, with over 400 software clients worldwide. We combine the thought-leadership of our consulting practices with the systems expertise of our software professionals to provide comprehensive solutions for measuring risk, economic performance and value creation. More information about Towers Perrin is available at [www.towersperrin.com](http://www.towersperrin.com).