



# **Insurance performance management:** Four ways to win with IBM Cognos software

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## Overview

The insurance industry will be reshaped and won by those innovators who can develop more flexible products, deliver new breakthrough services and create new business models and operational efficiencies. Advances in business intelligence, analytics, enterprise financial planning and risk management – all aspects of performance management – are key to staying ahead. These capabilities enable insurers to address changing customer demographics, reduce underwriting risk and fundamentally alter traditional industry boundaries, while meeting the rigors of a more regulated insurance environment.

This paper outlines the role of performance management technology in providing competitive advantage for insurers. It highlights four key areas where performance management is helping insurers win, and provides two real-life examples of insurers that are leveraging IBM Cognos software to unite systems, reduce costs and gain deep insight into key performance indicators.

## Introduction

The insurance industry revolves around assuming and managing risk. Both human-made and natural disasters are among the “known unknowns” insurance companies confront regularly. To help its customers manage risk, the actuarial community has made a science of understanding these unknowns, and making sound business decisions based on many variables.

How are the leading insurance companies applying this discipline? One of the key strategies is using performance management.

In the current economic climate especially, insurers sense the urgency of gaining better insight into their business processes and more transparency throughout the enterprise. Rating agencies, government entities, supervisors and regulators are demanding it. AM Best, Standard & Poors and Solvency II have brought heightened capital adequacy requirements into the day-to-day operations of insurers worldwide. With performance management, insurance companies can meet these corporate goals and objectives.

Performance management helps insurers address four core business imperatives:

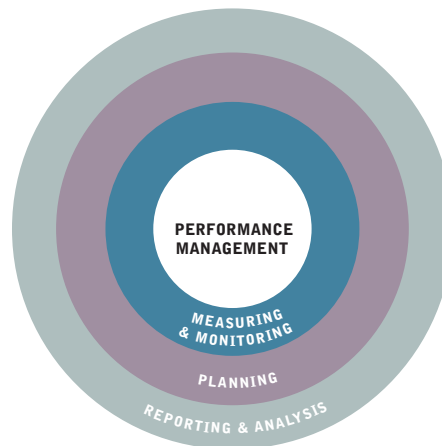
- **Provide deep executive insight.** Executive insight into operations has never been more important. With increased competition, growing regulatory scrutiny and increasingly informed customers, insurance executives, decision-makers and board members need to make better use of their data. Turning data into information and using it for timely and accurate decision-making is no longer a nice-to-have. Transparency is also key. Insurance personnel need to be able to report on and defend their decisions based on who knew what and when, and prove that their decisions were reasonable and defensible.
- **Manage and reduce risk.** Insurers need integrated risk management capability – a combination of insight, control and optimization of daily business practices. This is essential for complying with regulatory requirements such as capital adequacy, data retention and provisioning, and to analyze risk patterns and to identify and minimize fraud. The goal is to balance the cost of risk management against the impact on potential revenue, while also projecting risk effectively for customers.
- **Improve operational efficiency.** With a single view of business performance, managers can make better, timely decisions. Insurers can more easily manage multiple reporting and consolidation rules and requirements, such as IAS and GAAP, and reduce operational and IT costs by providing self-service reporting and analysis to users. The company can also provide timely, consolidated monitoring, analysis and planning of internal operations.

- **Increase customer service, satisfaction and profitability.** Performance management provides a single view of the customer for better service, sales and risk management. Insurers can identify the most profitable customers, products, services and regions, and analyze sales agent and claims process performance to serve customers more efficiently.

Performance management optimizes business strategy by enabling integrated, closed-loop, analytic processes that address financial as well as operational data. This way, an insurance business can define, measure and manage its financial performance against strategic goals.

Performance management software includes planning, budgeting, consolidation and reporting, analysis, forecasting and scorecarding capabilities. With performance management insurance decision-makers can answer these questions:

- *How are we doing?* Accomplished through measuring and monitoring.
- *Why?* Using effective reporting and analytics.
- *What should we be doing?* Applying planning, forecasting and budgeting.



## IBM Cognos solutions for insurers

Insurance companies around the world choose IBM Cognos performance management, including six of the top 10 insurance companies globally, and seven of the top 10 insurance companies in the U.S.

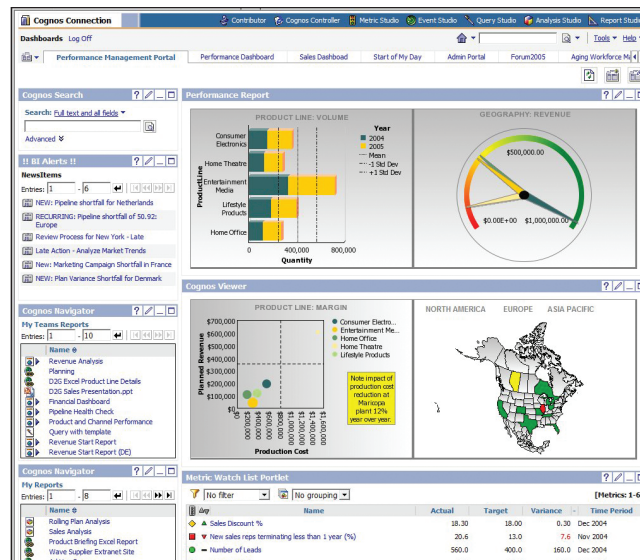
IBM Cognos software leverages our wealth of expertise in property and casualty, life and other insurance sectors. It addresses a variety of business initiatives, while improving profitability in underwriting and claims, sales and relationship management, marketing, operations and finance.

## The right platform

The integrated capabilities of performance management supply insurance decision-makers with valuable and actionable information throughout the organization.

### IBM Cognos 8 Business Intelligence

With all capabilities on one Web-service SOA platform, IBM Cognos 8 BI provides visibility into operations and strategy so people understand the part they play in making the business succeed – along with metrics to measure their success. Communicate your strategy and objectives through metrics-based *scorecards* and *dashboards* that provide an aggregate view of information from many different sources. *Reporting* and *analysis* consolidates your critical data and turns it into meaningful information and reports that everyone can use. You can quickly spot trends and drill down to discover underlying causes. Flexible, user-friendly reporting means everyone has the right information delivered in the right way – across all departments, locations, functions and roles.

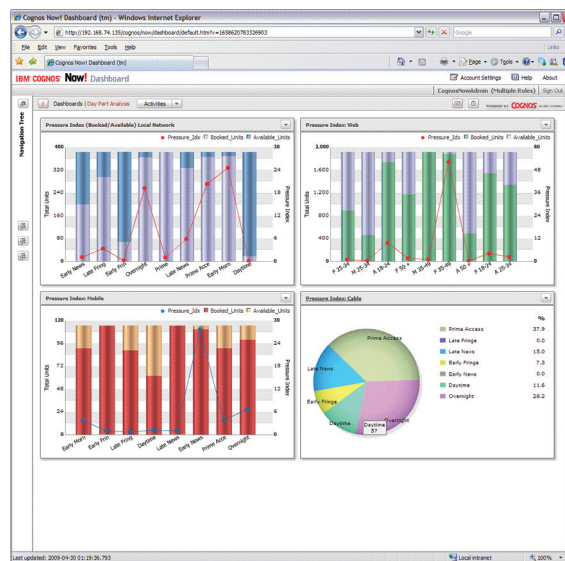


*IBM Cognos Analytic Applications*

IBM Cognos Analytic Applications are purpose-built for leading ERP and other data systems. They sit on top of a single data model, allowing the solution to rapidly integrate into enterprise environments with a minimum of IT effort. IT also benefits from easy customizations to reflect the organization's unique ERP environment and built-in best practices in BI and data warehousing, including automation of incremental data updates and slowly changing dimensions. Of particular interest to insurers is IBM Cognos 8 Banking Risk Performance – Credit Risk, an application that provides standard reports and dashboards to accelerate access to credit risk insight.

*IBM Cognos Now!*

IBM Cognos Now! is an operational BI solution – delivered as a prepackaged hardware, software or virtual appliance – that monitors time-sensitive KPIs and operational metrics. Operational BI lets decision-makers proactively track and respond to continuously updated operational metrics, with minimal IT intervention. The solution offers access to self-service dashboards with embedded query, reporting and analysis, tightly integrated with IBM Cognos 8 BI. It provides up-to-date, actionable intelligence for rapid, fact-based decision-making.



*IBM Cognos TM1*

IBM Cognos TM1 is a highly configurable solution that performs a wide variety of financial performance management functions, from basic planning and reporting to advanced forecasting and analysis. It provides a real-time approach to consolidating, viewing, and editing enormous volumes of multidimensional data, using a patented, 64-bit, in-memory OLAP server.

*IBM Cognos 8 Planning*

Connect strategy to plans, targets and operational objectives. This finance-managed solution provides real-time visibility into resource requirements and future business results. Set strategic initiatives and turn them into discrete plans and budgets for the entire enterprise. Plans can also be built to maximize operational effectiveness, and easily realigned as conditions change.

The screenshot displays the IBM Cognos 8 Planning interface. The top section shows an 'Employee Plan' table with columns for Employee/Position, Post Date, Grade, Cell Phone, Annual Salary, Raise Month, Raise Percent, Start Month if New, and CE. Below this is a monthly financial summary table with columns for months from Jan to Oct and rows for various financial metrics.

	Jan	Feb	Mar	Q1	Apr	May	Jun	Q2	Jul	Aug	Sep	Q3	Oct
9999 Gross Revenue	\$2,404,823	\$1,944,613	\$1,949,696	\$6,299,135	\$1,384,661	\$1,162,319	\$1,339,157	\$4,886,137	\$1,922,087	\$2,874,633	\$3,096,317	\$7,893,257	\$2,287,821
9999 Cost of Sales	2,251,691	1,700,044	1,367,726	5,319,461	1,180,876	1,020,592	1,299,164	3,500,631	1,601,111	2,402,202	2,958,298	6,561,611	1,904,010
Gross Margin	\$352,984	\$244,569	\$191,970	\$779,522	\$165,726	\$141,727	\$239,993	\$547,446	\$320,977	\$472,631	\$498,039	\$1,291,646	\$383,811
6099 Payroll	44,910	54,180	54,180	153,270	54,180	54,180	55,958	164,318	55,958	55,958	55,958	167,875	55,958
6199 Office Expense	23,594	23,594	25,135	72,323	23,793	23,594	24,621	72,007	29,031	23,594	23,594	76,218	23,594
6299 Travel	33,491	33,491	33,491	100,473	33,491	33,491	33,491	100,473	33,491	33,491	33,491	100,473	33,491
6399 Occupancy	19,768	19,768	20,279	59,816	19,768	19,768	20,279	59,816	19,768	19,768	20,279	59,816	19,768
6499 Marketing	30,142	16,791	16,791	63,725	16,791	20,807	16,791	62,389	16,791	26,137	33,079	76,007	16,791

*IBM Cognos 8 Controller*

Simplify your consolidation, compliance reporting and management reporting processes, and achieve transparency for sustained compliance with Sarbanes-Oxley. Pre-defined functionality lets you adapt to business and regulatory changes in real time; it also compresses the time to close and provides the data and metrics to drive better performance management.

IBM complements these integrated performance management capabilities with award-winning Global Customer Services and Consulting Services. Customers and support professionals consistently put us at the top of the list for best software support and innovative services. And customers gain additional insurance-specific expertise through our successful partnerships with industry-focused providers who can enable, augment and extend our performance management offerings.

### The fastest methods

Insurance organizations have no time to waste in implementing software to achieve maximum value and ROI. *IBM Cognos Performance Blueprints* address planning and performance management process areas that directly impact an organization's ability to create business value. Blueprints consist of targeted, pre-built data, process and policy models based on proven best practices in insurance planning, budgeting and forecasting.

The *IBM Cognos Insurance Product Profitability Performance Blueprint* enables insurers to create profit and loss statements and balance sheets at the business segment level, by product line, product and brand. The solution allows business analysts, product managers and finance executives to report on and analyze profitability, and to plan initiatives to improve business segment results.

## Performance management in action

### From data disparity to deep insight

This story is about a global insurer that offers diverse coverages ranging from personal automobile to satellite insurance.

As with many businesses, this insurance organization had relied on the ubiquitous spreadsheet as the primary tool for day-to-day financial activities, including information gathering, storing, analyzing and reporting. At the time the spreadsheet was the method of choice for actuaries and risk analysts when it came to exercising their insight against other company data. But was a spreadsheet really suited for all these functions?



Insurers have to consolidate raw data from many sources – databases containing policy information, claims transaction systems, accounts receivable, accounts payable and other corporate systems. One fairly common approach is to gather the information manually and input the data into a multi-tab spreadsheet.

As an example, one of the insurer’s international units gathered information into more than 80 spreadsheets. Then, after the time-consuming process of gathering information, the company stretched the spreadsheet by making it a “home” for the data. Through a combination of spreadsheets and basic database management systems such as Microsoft Access, the information was stored for future reference.

However, static spreadsheets offer limited collaboration functionality and present many challenges for version control, data accuracy and integrity as well as usage tracking and logging. For analysis, spreadsheets might allow an actuary to view numerical and financial information, see how numbers relate to one another and make judgments on that information. However, analysis on multiple dimensions is very limited – the actuary typically would want to consider a dozen or so dimensions.

And when the users reached the reporting stage, the spreadsheet again demonstrated its limitations. Any kind of ad hoc or production reporting required extensive formatting and adjusting. Despite this, many insurance companies continue to rely on the spreadsheet as their primary business tool.

## Beyond spreadsheets

Surveying its data systems, the insurance company realized it had 20 databases and seven systems from which it pulled information. To address the multiple challenges of data gathering, storing, analyzing and reporting in this complex environment, the insurance company realized it needed more than spreadsheets.

But it wasn’t ready to give them up, either. Spreadsheets were a familiar, flexible and trusted tool, despite their many drawbacks.

*“The company uses these applications for many different functions—profitability analysis, reserve analysis and report tracking by different variables such as time, business, geography and others.”*

By eliminating the need for manual input – through a data management and transformation capability that imports data directly from, or into, Microsoft Excel – the company could both minimize spreadsheet errors and significantly reduce the amount of time required to present its results.

And with real-time analytics and reporting capabilities, managers could take financial performance management from a quarterly process to an ongoing process. Managers and executives could perform analyses based on current information, resulting in more accurate predictions and expectations for the business.

To achieve these new capabilities while keeping the flexibility of spreadsheets, this insurer turned to IBM Cognos TM1 as its performance management solution. TM1 provides a Microsoft Excel-based solution for desktop and Web-based financial performance management.

Even though the company’s worldwide operations are dispersed and independent, the solution offers a single view and a single approach to the business – making it very easy for executives to grab a “snapshot” of the current state of affairs on an ad hoc basis and to perform “what-if” analyses to estimate the impact of a new demographic study. This single view also enables quarter-by-quarter comparisons for monitoring the performance of the business.

Other features in the spreadsheet interface can complement the real-time analytics – such as security, spreading and holds. For example, a spreadsheet environment based on a single platform can have cell-by-cell security, enabling actuaries to view and change vital information, but also not allowing them to mistakenly change other data. Or by being able to spread and hold, the actuary and executives can see the true impact of claims payouts on the company without the risk of losing current data. Such features improve accuracy and accountability.

The TM1 solution provides “cubes” of data into which the multiple data sources feed. The company has between 50 and 60 cubes of data, stored and replicated on a single server in Asia, and single servers in the U.S., Canada, Australia and England. Twenty-five people work with these applications.

The insurance company in our example has moved beyond spreadsheets and is using an Excel template for summary reports, as in the example below.

C51		=DBR(CubeName,Source,Broker,PTType,Currency,ClaimType,Line,\$B\$6,PolDate,\$A\$1_ReportDate,ValDate,\$A\$1_C\$9,1,"Q"),\$C\$2)																			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q				
1																					
2																					
3	Line:	Inland Marine - All																			
4	Source:	US																			
5	Account:	All																			
6	Rate:	Ceded MEAE																			
7																					
8	Accident	Earned	Valuation Month																		
9	Period	Premium	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45				
23	1998Q3	(4)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
30	1998Q4	(5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
31	1999Q1	(1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
32	1999Q2	(47)	-	-	(270)	(275)	(275)	(291)	(395)	(354)	(367)	(367)	(367)	(367)	(367)	(367)	(367)				
33	1999Q3	(25)	-	(8)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)				
34	1999Q4	(477)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
35	2000Q1	(612)	(875)	(904)	(904)	(904)	(904)	(904)	(904)	(912)	(912)	(912)	(912)	(912)	(912)	(912)	(912)				
36	2000Q2	(658)	(6)	(82)	(104)	(84)	(85)	(85)	(85)	(85)	(85)	(85)	(85)	(85)	(85)	(85)	(85)				
37	2000Q3	(537)	(70)	(715)	(720)	3	3	3	1	(2)	(2)	(3)	(3)	(3)	(3)	(3)	(3)				
38	2000Q4	(60)	50	(141)	(90)	(91)	(100)	(101)	(105)	(104)	(100)	(103)	(47)	(47)	(42)	(42)	(44)				
39	2001Q1	(794)	(258)	(277)	(376)	(322)	(365)	(342)	(342)	(384)	(384)	(385)	(385)	(385)	(385)	(385)	(385)				
40	2001Q2	(156)	(24)	(31)	(249)	(241)	(457)	(455)	(427)	(434)	(434)	(434)	(433)	(433)	(433)	(433)	(433)				
41	2001Q3	(2,05)	(785)	(957)	(1,343)	(1,459)	(1,430)	(1,388)	(1,385)	(1,381)	(1,233)	(1,286)	(1,295)	(1,295)	(1,295)	(1,295)	(1,295)				
42	2001Q4	(1863)	(139)	(172)	(81)	(85)	(87)	(82)	(82)	(82)	(82)	(82)	(82)	(82)	(82)	(82)	(82)				
43	2002Q1	(156)	(845)	(874)	(958)	(949)	(923)	(926)	(921)	(896)	(896)	(896)	(896)	(896)	(896)	(896)	(896)				
44	2002Q2	(150)	(143)	(165)	(149)	(145)	(117)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)				
45	2002Q3	(777)	(12)	(8)	(8)	(7)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)				
46	2002Q4	(935)	(29)	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
47	2003Q1	(778)	-	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)				
48	2003Q2	(88)	(268)	(344)	(327)	(406)	(1,168)	(1,321)													
49	2003Q3	(882)	(4)	(4)	(82)	(70)	(70)														
50	2003Q4	(1415)	(1)	(1)	(1)	(1)															
51	2004Q1	(1155)	1833	(96)																	
52	2004Q2	(1468)	(2)	(106)																	
53	2004Q3	(183)	(72)																		
54	All Periods																				
147	Median		1238	1090	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
148	Excl. 2 hr 2 lo		1314	1060	1049	1034	0.990	1011	0.995	0.999	1003	0.999	1001	1000	1000	1000	0.999				
149	Excl. 1 hr 1 lo		2128	1682	1525	1081	0.995	1013	0.944	0.981	1024	0.988	1003	0.984	1000	1000	0.987				
150	Weighted Average		1282	1099	0.931	187	0.990	1009	1003	1.011	1432	0.994	0.998	0.939	1003	1003	0.996				
151	Average		4,837	1,939	2,288	128	0.922	1017	0.770	0.893	26,472	1.098	1.004	0.958	1.01	0.975	1.014				
152	Latest 5																				
153	Median		1142	1038	1120	1008	0.983	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
154	Excl. 1 hr 1 lo		1142	1161	1120	1008	0.983	1000	1000	0.963	1008	0.996	1002	0.994	1000	1000	0.997				
155	Average		4,111	5,099	1,199	1403	0.796	1073	0.993	0.942	107,946	1.023	1.004	0.958	1.01	0.975	1.014				
156	Latest 3																				
157	Median		27,080	1532	1241	1017	1059	1156	1000	1000	1023	1000	1000	1000	1000	1000	1000				
158	Average		27,080	7,698	1,295	1,632	1,059	1,156	1000	0.921	179,245	1.002	1.000	0.999	1.002	0.989	1.075				
159	Prior Selected		3,000	1,200	1,270	1,210	1140	1,059	1,080	1,070	1,040	1,020	1,020	1,016	1,010	1,005	1,005				
160	Selected		2004Q3	2004Q2	2004Q1	2003Q4	2003Q3	2003Q2	2003Q1	2002Q4	2002Q3	2002Q2	2002Q1	2001Q4	2001Q3	2001Q2	2001Q1				
161	t+1		3,000	1,200	1,270	1,210	1140	1,059	1,080	1,070	1,040	1,020	1,020	1,016	1,010	1,005	1,005				
162	t+8		8,746	3,249	2,499	1,989	1,626	1,426	1,321	1,223	1,143	1,099	1,077	1,056	1,040	1,029	1,024				
163	B-F Factor		0.897	0.882	0.600	0.492	0.385	0.299	0.243	0.182	0.125	0.090	0.072	0.063	0.038	0.028	0.024				
164	B-F Factor SEND		0.897	0.882	0.600	0.492	0.385	0.299	0.243	0.182	0.125	0.090	0.072	0.063	0.038	0.029	0.024				

The actuary performs the analysis in Excel, but grabs the data from the analytical tool. The actuary then selects different patterns, saves the forecasts and then creates reports. It is still Excel-like, which is comforting to the end user, but has powerful drill-back capabilities and allows users to look at summarized data.

The team has the flexibility to change data structures and dimensions as the business itself changes – and receive responses within a few seconds to a few minutes. To speed reaction time, the solution works highly effectively with data sparsity. Its calculations show matrices and provide patterns that are immediately obvious to the user, who can see how things develop over time. It also summarizes the data in a way that makes it possible to present to management.

## Triangulation – A visual representation of the data

The insurance company in our example uses performance management applications for many different functions – profitability analysis, reserve analysis and report tracking by different variables such as time, business, geography and others. Perhaps the most strategic use is for triangulation.

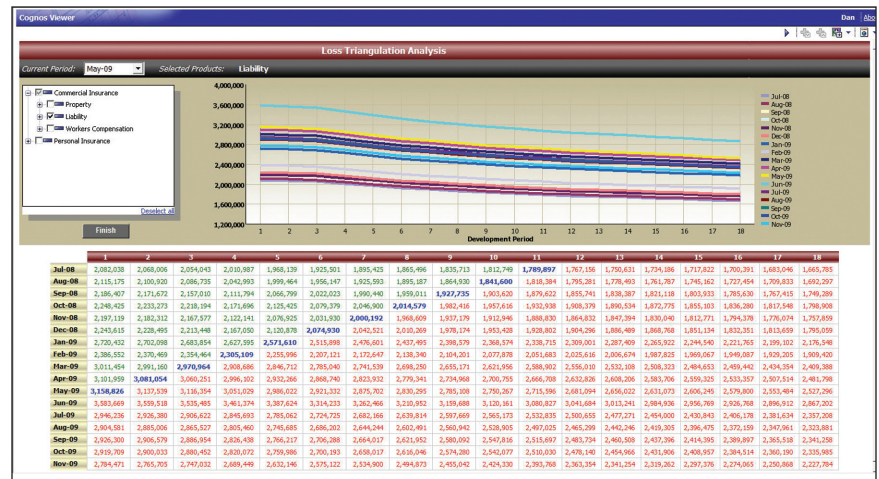
The analysis of many statistics is enhanced by looking at data in a triangle format. The insurance company's actuarial department performs triangulation for reserving, rate-making and planning. Using the TMI solution, actuaries in each region perform “what-if” analyses on quarterly and ad hoc bases.

To illustrate the approach, consider the impact of a natural disaster. Businesses in areas prone to hurricanes, such as the Caribbean and Florida, have those risks factored into their premiums. However, any given year might have no hurricanes, or might have three (in the case of 2004). Or they may hit in unexpected areas like the deadly New England Hurricane of 1938. The timing, location and impact of a natural disaster cannot be accurately predicted.

By using the flexible TMI solution, the insurer can quickly triangulate the submitted claims, expected claims and projected payouts in order to understand how those events affect the insurer's bottom line and core assets.

## From spreadsheets to speed

In a similar case, another US insurer experienced challenges when actuaries shared their insight across the organization. They honed their predictive analytics formulae, then reported results using spreadsheets. The actuaries spent hours creating scenarios, exchanging and rationalizing versions but still had no way to effectively apply their insight across the organization. A quick review revealed that 80 percent of the staff’s time went into creating and maintaining the spreadsheets.



### A new alternative

Using IBM Cognos CAFÉ – Cognos Analytics for Excel – allowed the actuaries to continue to use Excel but with the added capabilities of BI along with powerful scenario analysis. Working within the secure IBM Cognos 8 platform also made the actuarial analyses available for other reports and analyses across the company. Now less than 20 percent of the actuary’s time is spent creating analyses, leaving more time for interpreting and applying results.

Loss development analysis is also a straightforward exercise within the IBM Cognos BI environment. Once done, the results can be reported and applied to other BI as well as enterprise financial planning, reporting and forecasting.

## Summary

Today's global economic uncertainty demands that insurers be flexible and resilient. Yet, many are unable to do so because of factors ranging from outdated technology to out-of-date business processes.

The organizations that will succeed and thrive know how to strategically adopt performance management to manage the "known unknowns," both today and in the long term. Consider how performance management solutions from IBM can help your business.



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## About IBM Cognos BI and Performance Management

IBM Cognos business intelligence (BI) and performance management solutions deliver world-leading enterprise planning, consolidation and BI software, support and services to help companies plan, understand and manage financial and operational performance. IBM Cognos solutions bring together technology, analytical applications, best practices, and a broad network of partners to give customers an open, adaptive and complete performance solution. Over 23,000 customers in more than 135 countries around the world choose IBM Cognos solutions.

For further information or to reach a representative:

[www.ibm.com/cognos/insurance](http://www.ibm.com/cognos/insurance)

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