

# Claims Process Improvement and Automation

## CAS Annual Meeting

November 11-14, 2007

# Agenda

## Opening Remarks / Introductions / Q&A

Marcus Tarrant

## Evolution of Claims:

- Process
- Technology

Claire Louis  
Andrew Sawyer

## Change Drivers:

- Business Environment/Needs
- Talent Availability Crisis
- Technology Support

Claire Louis  
Jeff Bamundo  
Andrew Sawyer

## Claims Performance Measurement:

- Key Performance Indicators (KPIs)
- KPIs: It's Not Just About the Numbers

Jeff Bamundo  
Claire Louis

## Data Quality:

- Ease of Access
- General Data Quality Issues
- Technology Support

Jeff Bamundo  
Jeff Bamundo, Claire Louis  
Andrew Sawyer

## Wrap-Up /Closing Remarks :

- Technology and the Changing Business Environment

All

## Appendix

- Speaker Bios
- Contact information

# Opening Remarks / Introductions

# Evolution of Claims

- Process
- Technology

# Evolution of Claims - Process

## *Prior State (1980s and '90s)*

- Local or regionally-based claims handling policies and procedures
- Business rules with limited functionality and difficult to maintain
  - Policies and procedures manuals
- Few tools to manage the claims process
- Manual interfaces with outside data sources
  - CIB, NICB, PILR
- Limited and difficult-to-capture claims performance data
- Inability to easily create third-party interfaces
- Initially paper-intensive, then workstation with limited electronic notes, estimators, evaluators
- Limited word processing capabilities; paper forms

# Evolution of Claims - Process

## ***Current State***

- Global centers of excellence
  - Group-wide standardization of claims practices & processes
- Opportunities to reduce indemnity costs as well as expenses by freeing up more time for the adjuster to manage the claim rather than the process
- Business rules drive the claims process
  - Promote more consistent outcomes
  - Allow for more effective fraud detection & referral
  - Better opportunities for salvage & subrogation recoveries
  - Increased compliance with company policies, best practices, & statutory/regulatory requirements
- Automated workflow
- Electronic link with outside data sources
- Outsourcing of specialized claim activities
- Greater access to usable, meaningful data to measure performance
- Performance monitoring, metrics, and scorecards
- Supply chain management
- Automated preferred provider selection/assignment
- Electronic document creation/management/storage
- Personal lines have a significant head-start

# Evolution of Claims - Technology

## Pre-Computer

- Paper-based
- Mail, courier communications.
- Limited availability of supporting data.
- Inconsistent calculations and determinations of benefits
- Limited information that was not always shared
- Long cycle time to process and pay claims
- Customer with limited to no insight into the process

## First computers

- Claims “accounting” systems
- Line of business specific
- Multiple systems required to process, not integrated
- Telephone, fax, mail communications
- Increased consistency of benefits determination.
- Increased information around financial information
- Shorter process time to process and pay claims in the financial part
- Customer with limited to no insight into the process

# Evolution of Claims - Technology

## Now

- Claims Management Systems
- Single system, multiple Lines of Business
- Increased integration with other information systems
- eMail, telephone, mobile devices for communications
- Increased information with better accuracy and consistency
- Consolidation of information (Data Warehouses)
- Increased efficiency improve process times (Workflow and Decision Process)
- Consistent determinations of benefits and payments
- Customer provided with limited insight into the process

## Future

- True Claims Administrations Systems
- Faster (sometimes Instant) payment of benefits
- Exact value of benefits (Claims Leakage)
- Transparent process to the customer
- Increase in accurate claims data
- Real time (near real time) data collection
- Internet, GPS communications
- Integrated systems and information retrieval
- Consistent, accurate and timely claims reserving

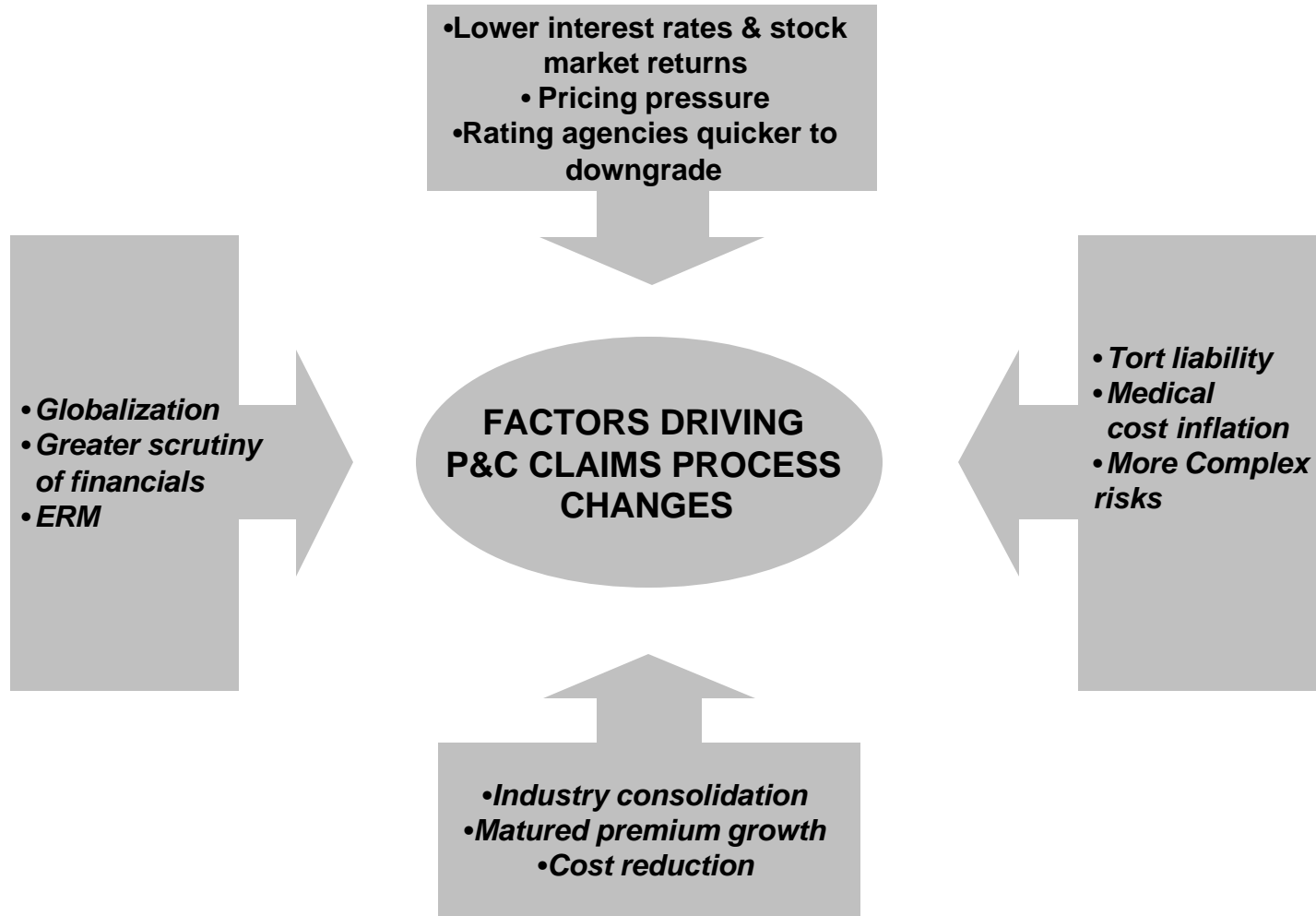


# Change Drivers

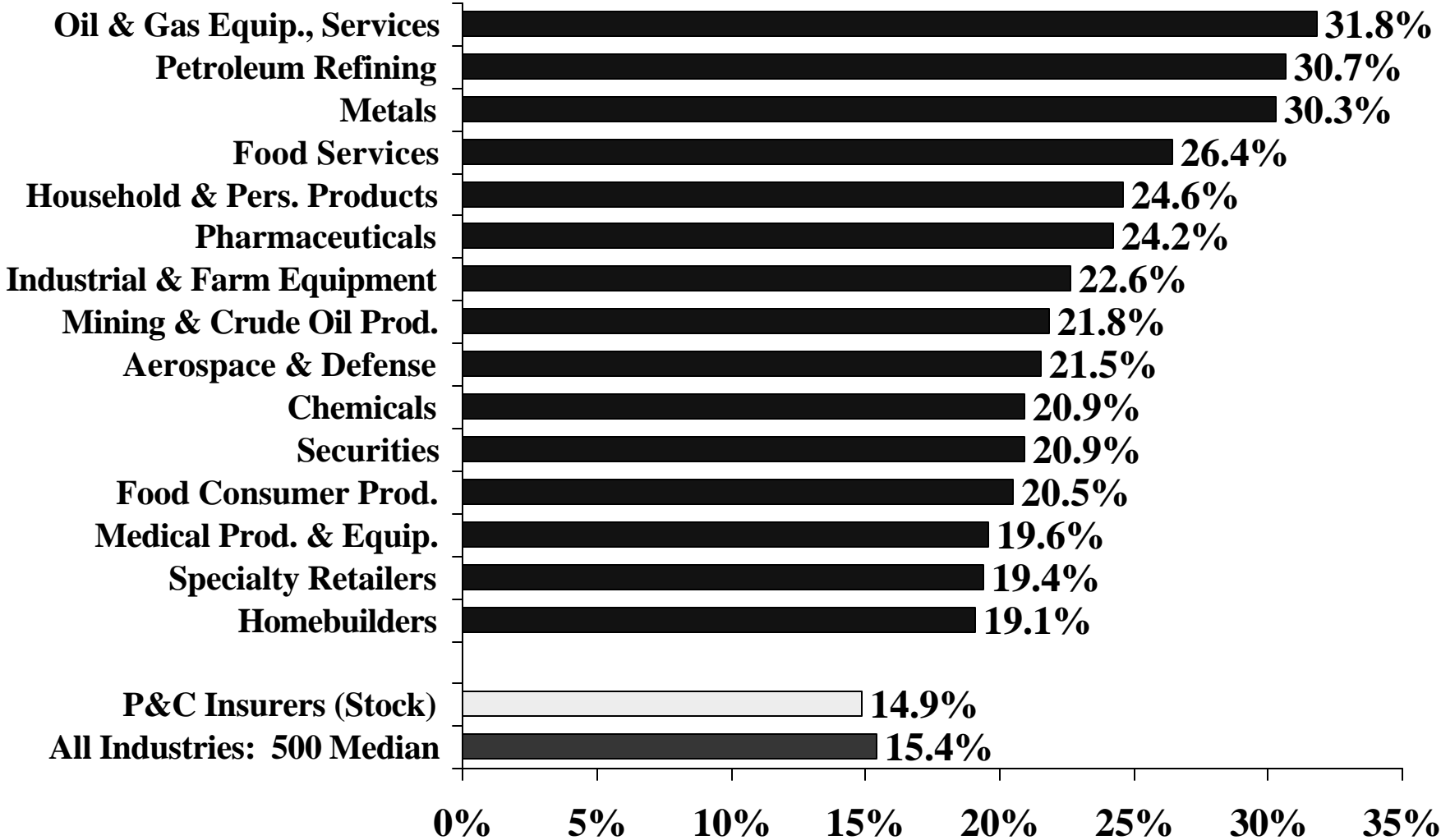
- Business Environment & Needs
- Talent Availability
- Technology Support

# Change Drivers – Business Environment/Needs

*Key trends in the P&C insurance industry are driving the need to better leverage capital by reducing claim costs*

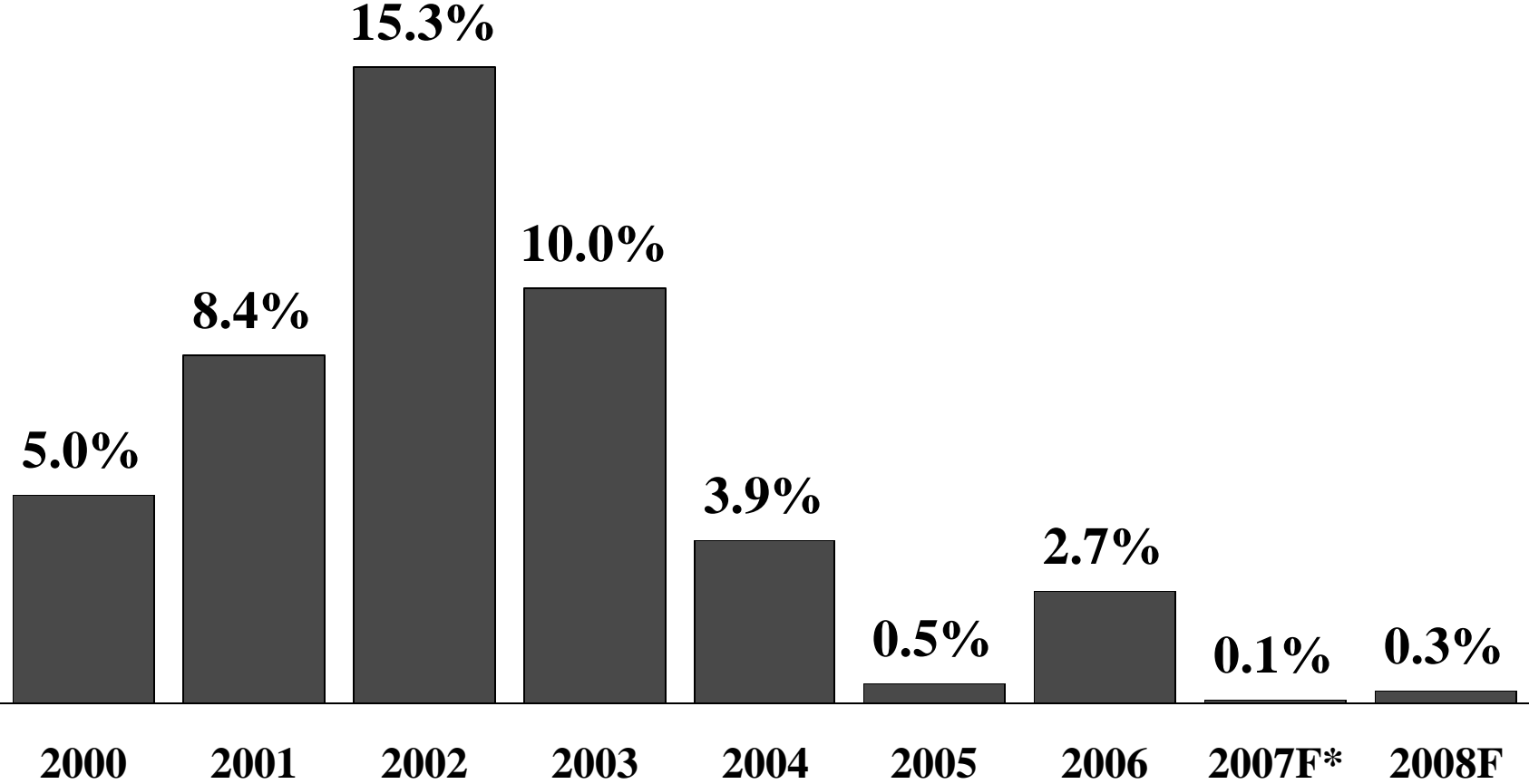


# Top Industries by ROE: P&C Insurers continue to lag



Source: Fortune, April 30, 2007 edition; Insurance Information Institute

# Growth in P&C Insurer Net Written Premium: 2000 - 2008



2007 figure based on 2007 actual first half result of 0.1%.  
Source: A.M. Best; forecasts from the Insurance Information Institute.

# Change Drivers – Talent Availability Crisis

What is being said...

**“Human capital represents the largest cost factor for organizations.”**

– PwC, Mgmt Barometer Survey, 2006

**“Ensuring effective execution of talent development contributes to organizational effectiveness and profitability by more than 15.4% in shareholder return.”**

– 2005 Corporate Executive Board,  
Realizing the Full Potential of Rising Talent

**“...in TowerGroup surveys for the past several years, carriers’ top concern in claims had been leakage. This year... The number-one concern... is the retiring baby boomers and their knowledge leaving the company,”**

– Techdecisions, August 2007, The Shrinking Pool

**“70 percent of the insurance claims work force now is over age 40, projecting a shortfall of 84,000 adjusters by 2014.”**

– Techdecisions, August 2007, The Shrinking Pool  
(Deloitte Consulting)

**“72% of CEOs surveyed are concerned about the availability of employees with key skills.”**

– PwC, 10th Annual CEO Survey

**“The big question for the insurance industry is where is the next generation of talent—who will be my successor?”**

(Margaret Resce Milkint, The Jacobson Group.)  
– Techdecisions, August 2007, The Shrinking Pool

**“The talent crisis is real. Competition for claims talent already is more intense than I’ve ever seen...”**

(Margaret Resce Milkint)  
– Techdecisions, August 2007, The Shrinking Pool

**“There is a void in the industry,”**

(George Fay, EVP Worldwide P&C Claims, CNA Financial)  
– Nat’l Underwriter, 9/10/07  
Can Training Close Adjuster Talent Gap?

# Change Drivers – Talent Availability Crisis

## Facts, Figures and Indications:

- More than 100,000 insurance claims and underwriting professionals will be retiring in the next 5-10 years
- Looking more and more like a classic “supply-and-demand” scenario (note estimated shortfall of 84,000 positions in claims alone)
- Recruiting younger people, always a priority, is perhaps more important than ever – while the experienced resources are still available to be mentors and maximize the necessary knowledge transfer
  - Any training must be addressed with a strong and highly structured program that receives a *priority consideration* in the setting and execution of day-to-day responsibilities
- The aging of the baby boomers and concern over the ability to hire younger professionals is forcing the industry to invest heavily in IT solutions

# Change Drivers – Talent Availability Crisis

What the Industry is or will be doing...

*To combat what will be a serious professional dearth, the industry will seek ways to mitigate the risks of the talent loss by:*

- ✓ *Investing in IT solutions to further enable the underwriting and claims processes*
- ✓ *Use modern systems to not only decrease demand for (and on) staff but to entice recruits by making their workplace a more attractive place to work.*
- ✓ *Continuing to think outside the box and look to trade craftsman such as contractors, boat builders, etc., and train them on claims matters*
- ✓ *Talent management model which includes use of flexible, just-in-time force made up of:*
  - *Retirees*
  - *Former employees*
  - *Technical specialists*
  - *Networks of experts for hire (e.g. Gerson Lehrman Group, greenbrim.com)*

***“The solution to staff retiring and taking with them their skills and methods of doing work and to meeting the needs of newer people coming in... lies in technology.”***

*(Donald Light, senior analyst at Celent) – Techdecisions, August 2007, The Shrinking Pool*

# Change Drivers – Technology Support

Four core areas of focus address the following business needs:

- Increase customer satisfaction
- Reduce risk
- Decrease costs

## 1. Customer-Centric/Customer Service

- Increase demand due to increase of knowledgeable customers.
- Increased customer involvement leads to increased customer satisfaction
- Web access, self-service portals

## 3. Data and Reporting

- Increased demand (internal and external) for accurate and timely information
- Near real-time and automated capturing of data
- Improved claims analytics based on more and better data used to improve underwriting, pricing, reserving, compliance

## 2. Workflow and Decision-Making

- Increase efficiency in workflow and process efficiency will reduce processing time and resources required to handle a claim
- Claims process knowledge captured in table-driven rules engines

## 4. Claims Leakage (Fraud Reduction)

- Improved data and advances in analytic techniques help detect potential fraudulent behavior (internal and external)
- Improved, consistent processes reduce overall claims costs and chances for litigation



# Claims Performance Measurement

- Key Performance Indicators
- Role of KPIs in Process Improvement

# Claims Performance Management

## – Key Performance Indicators

The foundation of a best-in-class claims operation should include:

***“A system of performance indicators or benchmarks that provide a means of targeting and measuring results in qualitative and quantitative terms used by management and stakeholders to measure the success of the claims operation.”***

*-- PwC Insurance Digest, Americas Edition, October 2004*

Key Performance Indicators (KPIs) provide insurance companies with just such a means for measuring organizational performance.

The measures can help quantify how well the activities within the claims management process are achieving a specified goal as well as identifying areas in need of improvement.

The measures focus on issues of cost, quality, and time:

- The cost-based measures cover the financial side of performance.
- The quality-based measures assess how well a company's products or services meet customer needs.
- The time-based measures focus on the efficiency of the process.

By focusing attention on all three categories of performance simultaneously, companies can optimize performance for an entire process.

# Claims Performance Management

## – Representative KPIs

Response time to first notice of loss (FNOL) claims inquiries	Employee retention rate in the claims department	Percentage of claims in litigation
Quality Assurance Measurements (aka 'internal audits')	Loss and Claims handling expense ratios	Volume of backlogs in the various processes within the claims value chain
Average time from notification to claims settlement	Recovery ratios (subrogation or salvage)	Value of under-reserved and over-reserved claims
Existence of and adherence to claims diary systems	Reopened claims ratios	Reinsurance recovery rate
Productivity of claims adjustors	Automated fraud identification systems	New claims reported and created
Percentage of experienced claims handlers	Manual fraud identification units	Claims leakage

**Note:** The performance measures presented here are an extract compiled from industry sources and PwC knowledge capital. The complete listing can be used as a starting point to determine the performance measures that are relevant to the specific processes and company needs being reviewed.

# Claims Performance Management

## – KPIs: It's Not Just About the Numbers

*KPIs should be viewed through the lens of the claims operation and claims handling environment*

- *The P&C claims organization and the claims handling environment are not static*
- *Claim practices, procedures, staffing models, expertise, vendor relationships, case law, statutes, and regulations can all vary—sometimes significantly—from one period to another*

*Therefore, what KPIs measure also may change*

- *Compare “apples to apples”: the same numbers appearing in two periods may mean something entirely different if there have been significant changes in the claims process, the claims handling environment or both*

*KPIs create transparency with respect to claims performance. That which can be observed can be measured and managed*

*As KPIs help drive claims performance improvement, so may they also impact indemnity costs and expenses, claim settlement and payment patterns, and loss reserve development.*

# Claims Performance Management

## – KPIs: It's Not Just About the Numbers

*Three segments of the claims process where KPIs are helping to drive claims performance improvement in the P&C industry*

- Fraud Detection
- Litigation Management
- Subrogation

# Claims Process Segments and Sample KPI's

## **Segment: Fraud Detection**

KPI: Automated fraud identification systems

Short Description:

Evaluates whether or not the entity maintains automated fraud indicators within its systems.

How to Calculate the KPI:

Existence of automated fraud identification protocols

Additional Information about the KPI:

Claims fraud can take many different sizes and shapes. Companies need to enhance their Special Investigations Unit (SIU) capabilities by not only creating an effective SIU staff but they must also build the IT infrastructure.

Fraud must be monitored by LOB, geography, class, and coverage (e.g. no-fault).

## **Segment: Litigation Management**

KPI: Percentage of claims in litigation

Short Description:

The measures the number of disputed claims that company has been unable to resolve without litigation.

How to Calculate the KPI:

Total number of claims in litigation divided by total number of claims

Additional Information about the KPI:

Number of claims refers to total number of claims that were opened as of the beginning of the most recently completed fiscal year. Number of claims in litigation with litigation commencing in the beginning of the most recently completed fiscal year.

## **Segment: Subrogation**

KPI: Recovery Ratios (subrogation or salvage) expressed as a percentage of gross paid losses

Short Description:

Measures claims department success at claims recoveries and must be assessed on a LOB basis.

How to Calculate the KPI:

Gross Recoveries (salvage or subrogation) divided by Gross Paid Losses

Additional Information about the KPI:

This KPI can be charted year over year to assess trends by LOB and by claim office. It can also be compared with industry results or companies that are similar in nature.

# Claims Performance Management

## – KPIs: It's Not Just About the Numbers

### ***Fraud Detection Segment***

*“Annual loss figures relative to non-health insurance fraud are estimated at \$26 billion.”  
(Coalition Against Insurance Fraud)*

#### ***Prior State***

- Manual process frequently not given priority by the adjuster
- Individual claim-based
- Dedicated SIU
- Staff trained in fraud indicators & investigation/evaluation/settlement procedures
- Adjusters retained control of decision-making with input from SIU
- Little data available for performance measurement
- Late referrals to SIU

#### ***Current State***

- Use of predictive analytics to identify potentially fraudulent claims based on structured/unstructured data
- Trends across claims can be identified and tracked
- SIU may be outsourced
- Collaborative process between SIU and adjuster
- Does not replace the SIU: the SIU has better data to enable it to do its job more effectively

# Claims Performance Management

## – KPIs: It's Not Just About the Numbers

### *Litigation/Legal Expense Management Segment*

#### **Prior State**

- Manual bill review process: paper bills, labor-intensive adjuster review for exceptions based on company legal billing requirements
- Manual case referral
- Lawyers submit budgets, which are often not critically reviewed by the adjusters who do not have the benefit of historical budget data; budgets frequently not updated as the case advances
- Litigated cases are often abandoned to counsel

#### **Current State**

- Electronic case assignment, litigation plans, and bill submission
- Collaborative case budgeting and litigation plans, which can be easily updated as the case progresses
- Promotes closer working partnership between counsel and the adjuster, which can translate into better case outcomes
- Aggregates billing information & assists with future budgeting in instant and future cases
- Identifies law firm staffing practices so as to more efficiently staff cases, reduce legal spend, and improve litigation outcomes
- Allows for comparative analysis of law firm practices
- Provides leverage in law firm selection and rate negotiations



# Claims Performance Management

## – KPIs: It's Not Just About the Numbers

### *Subrogation Segment*

#### ***Prior State***

- Entirely manual
- Frequently decentralized: the adjuster retained responsibility for identifying and pursuing subrogation
- Lack of specialized expertise
- Process not well-controlled: adjusters generally viewed as low-priority
- Closed files were often sent to a law firm which had little incentive to pursue but the claims with the greatest recovery potential since the law firm was generally compensated on a contingency basis

#### ***Current State***

- Predictive analytics used to identify claim files with subrogation potential
- Quicker throughput and reduced cycle time
- May be outsourced
- Specialized task-based expertise: investigation, evaluation, litigation, settlement
- More consistent outcomes

# Data Quality

- Ease of Access
- General Quality Issues

# Data Quality

## – Ease of Access

**Companies are working hard to leverage what they already have in place:**

- Using existing systems to make data more accessible to more of their people;
- Reducing the guesswork associated with handling a claim; and
- Realizing benefits through better routing decisions and better information in a more timely manner with enhanced access to data.

**In order to improve the overall leveraging and quality of claims data, carriers should look to:**

1. Break down the silos that exist between departments and *create a single data warehouse* that stores all claims data;
2. Consider *addition of data-mining solutions* to maximize the value of the warehouse structure, examine for trends (e.g. fraud or frequency issues) and perform predictive modelling, in addition to regular forecasting exercises;
3. The final piece of the claims management makeover is to *add workflow capabilities*:
  - a. Workflow software typically creates a list of administrative actions based on user criteria, and specifies the procedure associated with each action.
  - b. These tasks may include alerting associates to a particular trend, or prompting a manager or underwriter to complete a claim.
  - c. Documents can be physically moved over the network or maintained in a single, shared database. (The appropriate users can securely access the data at required times. )

# Data Quality – General Quality Issues

## Data quality is an ‘old problem’...

- An issue that has plagued the insurance industry from the origins of ‘information’ processing: Whether processes are 100% manual or “straight through”, the effects remain.
- It can easily be argued that nowhere is the effect more pronounced than in insurance due to the industry’s heavy reliance on data. Common examples include:
  - Management decision-making;
  - Regulatory requirements and compliance
  - Operational effectiveness.

## Sometimes obvious... and sometimes not so obvious

These are very obvious impacts of data quality. An example of a more subtle impact that data quality can have is seen in the area of Catastrophe Reserving. Some related ‘best practice’ considerations recognize that:

- Industry data may be based on a mix of limits and retentions and may not be valid for primary Insurers (especially if a company is using the Loss Development Method);
- Cedant loss information received from brokers may be not be as accurate or complete as desired --because of ongoing renewal discussions and data collection issues. (This was seen after Katrina, where key data needed to present a claim may have been lost or needed to be reconstructed.)

# Data Quality – Claims Process

- The availability of meaningful data has enabled the development of KPIs which, in turn, have helped drive P&C claims performance improvement
- There should be regular cross-functional dialogue between Actuarial and Claims to ensure there is a common understanding regarding what the claim data means
- Actuarial should attempt to “get behind” the claim data to identify and understand any significant changes in the claims operation or claims handling environment which may impact the data. Examples of significant changes include:
  - A book of business going into run-off
  - A recent acquisition
  - Reorganized Claims operation

# Data Quality - Technology Support

Technology support helps data quality

- Single source of information (real and virtual)
  - Data Warehouse
  - Integration of systems
    - Internal
    - External
- Improved quality of data at the data capture point
  - Online edits at point of capture
  - Dynamic data capture and processes
  - Data service bureaus and provider
  - Recorded Data sources

## Wrap-Up / Closing Remarks

- Technology and the Changing Business Environment

# Wrap-Up

## What's Next within Technology? Claims Administration vs. Claims Management

- Current Claims systems are *management* systems
  - Tracks events and data that are historic
  - Reactive
- Future Claims systems will be true administration systems
  - All the current functionality of claims system processing, plus:
    - Real time data gathering
    - Predictive (as well as Reactive)
    - Lines will blur between Claims and Risk Management
    - Claims data and analytics will increasingly impact the up-front process like product development, underwriting and rating

## **“Claims management may not represent a form of capital punishment, but, poorly managed, will surely punish capital, and that could well be fatal”**

- Of a combined ratio of 100, the vast majority of costs are loss-related (generally, 80 to 85%); proper claims management represents a significant opportunity to improve performance and increase shareholder value
- Significant changes in claim settlement and payment patterns and loss development can accompany claims performance improvement



# Appendix

- Speaker Bio's
- Contact Info

# Speaker Bio's

**Marcus Tarrant** is a Manager in PwC's Actuarial practice in New York. Marcus has about seven years of experience as a P&C actuary. Since joining PwC, Mr. Tarrant has assisted on a variety of loss reserving and Sarbanes Oxley engagements for primary insurance and reinsurance companies, and major self-insured corporations. He has assisted in reviewing catastrophe reserving processes for a number of major reinsurance companies, and has moderated industry panels on the recent catastrophe losses. Prior to joining PwC in New York City, Mr. Tarrant was employed by PwC in London, where he worked on insurance and risk management analyses. Among the clients served were personal and commercial lines carriers, including London Market and Lloyd's entities, reinsurance companies and captive insurance companies. His experience also included loss reserving for audit support and consultancy assignments, and insurance liquidation support services. Mr. Tarrant holds a Bachelor of Science Education degree with first class honors in Actuarial Science from City University, London.

**Claire Louis** is a Director in PwC's Actuarial and Insurance Management Solutions (AIMS) practice in New York in New York. Ms. Louis has more than 22 years' experience working with self-insureds, insurers, regulators, and other clients to assess complex property-casualty claims financial and operational issues. During her twelve years with PwC, Ms. Louis has led a variety of claims-related projects, including claims process controls reviews, case reserve studies, leakage studies, transaction due diligence, and dispute support engagements. She has played a lead role in insurer, reinsurer, regulatory, and self-insured reviews of TPA operations. She has extensive experience working with actuaries, accountants, and finance professionals to evaluate the reasonableness of case reserve levels and corporate accruals for self-insured claim liabilities. Before joining PwC, Ms. Louis was the global claims manager for a multi-national petrochemical manufacturer and distributor where she was responsible for managing all property-casualty exposures worldwide. Previously, she was an executive with a major U.S. P-C insurer where she oversaw an Excess & Surplus claims office & a large commercial accounts regional claims services center, and coordinated TPA services on all unbundled large commercial accounts. Claire attended Georgetown University, and graduated with a Bachelor of Arts from l'université Laval in Québec.

**Andrew Sawyer** is a Manager in the PwC's, IT Effectiveness team of its Insurance Advisory Practice. Andrew has over 20 years experience in the IT industry, supporting the financial and telecommunication sectors. He has extensive experience focusing on the improvement of the relationship between the Business and IT organizations within insurance companies. Prior to joining PwC, Andrew worked for several insurance companies. His responsibilities included the creation of a PMO office, managing the selection and implemented mission critical applications, developed IT and corporate strategies and developed IT application architecture. Andrew holds a Bachelor of Science degree in Mathematics and Masters degree in Management of Technology from The University of Pennsylvania/Wharton School of Business.

**Jeff Bamundo** is a Manager in PwC's Technology and Operations Team of its Insurance Advisory Practice. In addition to over 25 years of industry experience, Jeff has spent the last 14 years of consulting experience focused on a wide variety of technology assurance, performance improvement, business process and technology initiatives, including underwriting and loss control services automation, data conversion, agent-carrier portal development and reinsurance operations. Before joining PwC, Jeff developed extensive experience in analysis and operations at an international insurance holding company, in their Life and Property-Casualty Actuarial Divisions, as a Commercial Property Underwriter, and as Business Systems Development Manager for a reinsurance affiliate. Additionally, he has focused on Business Requirements and Client Relations in support of field force automation initiatives for operational units of national, regional and smaller insurance carriers. Jeff received his BS in Actuarial Sciences from St John's University, School of Risk Management, in New York (formerly The College of Insurance).

# Contact Information

**If you have any questions, please do not hesitate to call us.**

- Marcus Tarrant, Manager, Actuarial & Insurance Management Solutions  
email: [marcus.tarrant@us.pwc.com](mailto:marcus.tarrant@us.pwc.com)
- Claire Louis, Director, Actuarial & Insurance Management Solutions  
email: [claire.a.louis@us.pwc.com](mailto:claire.a.louis@us.pwc.com)
- Andrew Sawyer, Manager, Information Technology Effectiveness  
email: [r.andrew.sawyer@us.pwc.com](mailto:r.andrew.sawyer@us.pwc.com)
- Jeff Bamundo, Manager, Technology & Operations / Insurance Advisory  
email: [jeffrey.p.bamundo@us.pwc.com](mailto:jeffrey.p.bamundo@us.pwc.com)

For more information about process frameworks, benchmarking, best practices and risks and controls, visit:

- [www.globalbestpractices.com](http://www.globalbestpractices.com)

For more information about revolutions in business, visit:

- [www.pwc.com/view](http://www.pwc.com/view)

# Thank you.