

# Workers Compensation Claim Frequency

### Presented by Tony DiDonato FCAS, MAAA

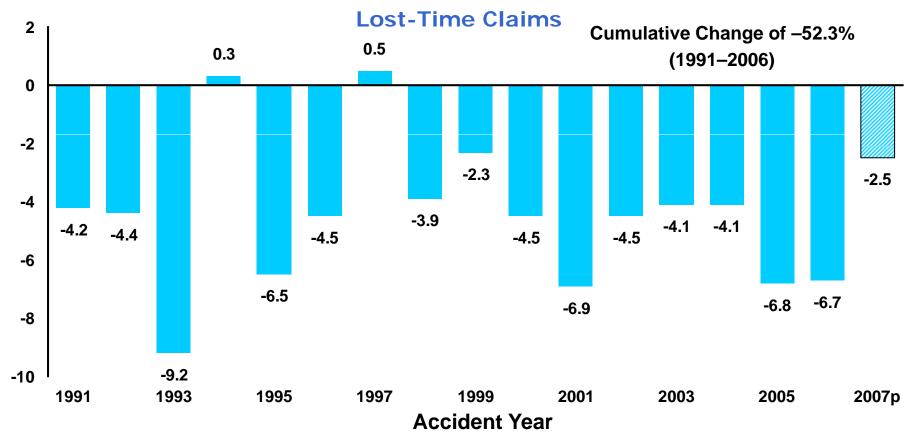
2009 CAS Ratemaking and Product Management Seminar Las Vegas, NV March 9-11, 2009



# Background

## Countrywide Workers Compensation Lost-Time Claim Frequency Continues to Decline

**Percent Change** 



2007p: Preliminary based on data valued as of 12/31/2007 1991–2006: Based on data through 12/31/2006, developed to ultimate Based on the states where NCCI provides ratemaking services Excludes the effects of deductible policies

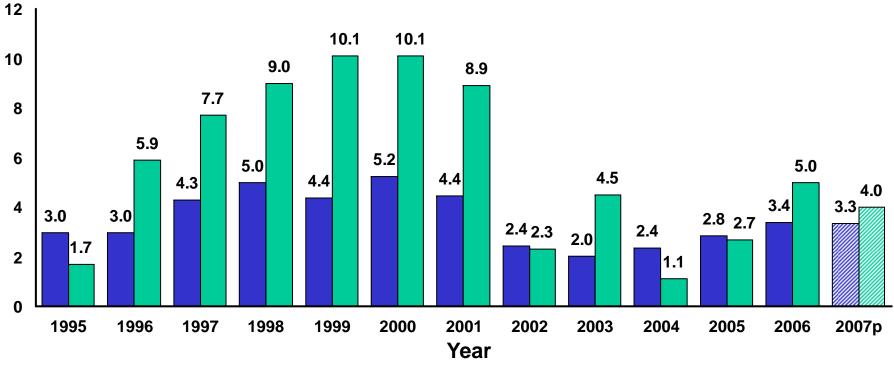
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## **Countrywide Indemnity Severity**

### **Lost-Time Claims**

#### **Percent Change**



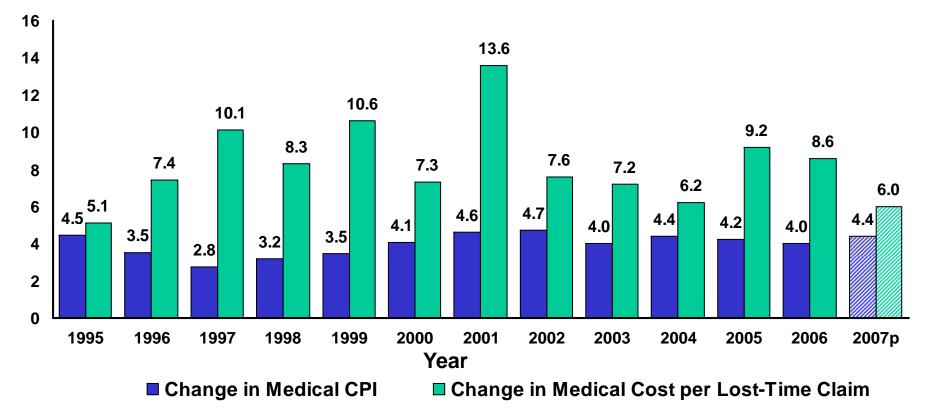
#### ■ Change in CPS Wage ■ Change in Indemnity Cost per Lost-Time Claim

Indemnity severity 2007p: Preliminary based on data valued as of 12/31/2007 Indemnity severity 1995–2006: Based on data through 12/31/2006, developed to ultimate Based on the states where NCCI provides ratemaking services, excludes the effects of deductible policies Source: CPS Wage—All states (Current Population Survey), Economy.com; Accident year indemnity severity—NCCI states, NCCI

## **Countrywide WC Medical Severity**

### **Lost-Time Claims**

#### **Percent Change**

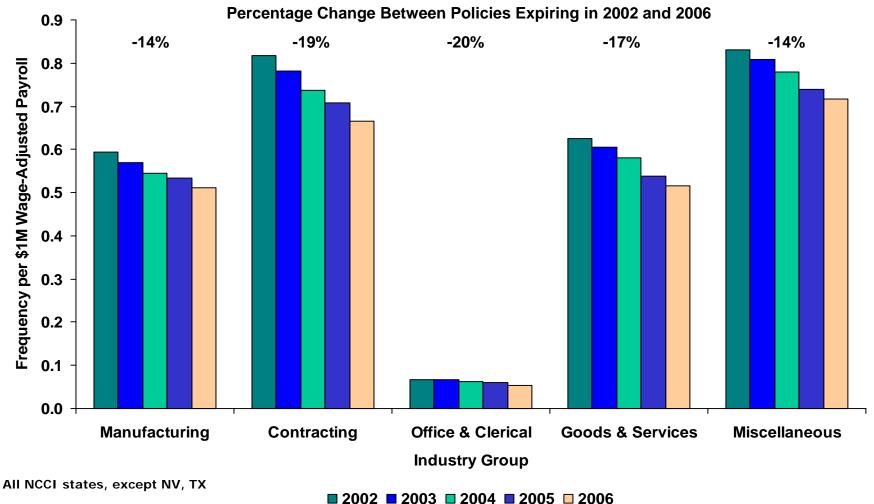


Medical severity 2007p: Preliminary based on data valued as of 12/31/2007 Medical severity 1995–2006: Based on data through 12/31/2006, developed to ultimate Based on the states where NCCI provides ratemaking services, excludes the effects of deductible policies Source: Medical CPI—All states, Economy.com; Accident year medical severity—NCCI states, NCCI

# Claim Frequency Declines That Have Been Consistent In Every Updated Study

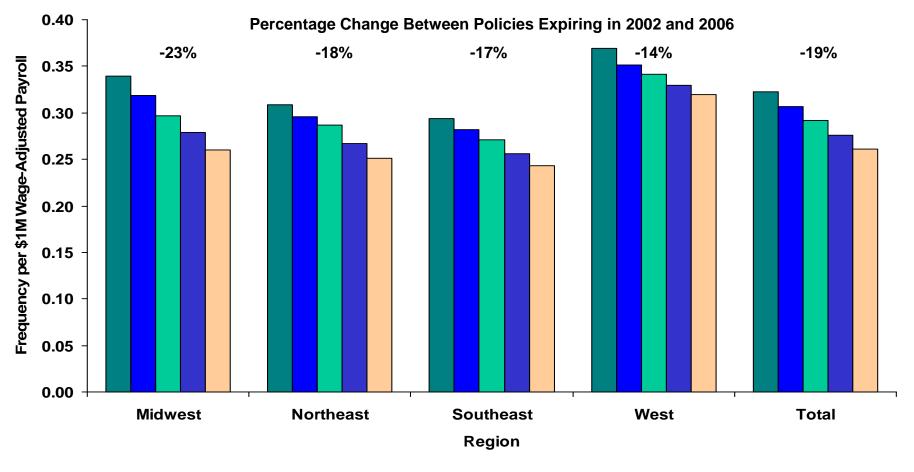
## **Countrywide Lost-Time Claim Frequency by Industry Group**

**Frequency at First Report** 



## Lost-Time Claim Frequency by Region

### **Frequency at First Report**

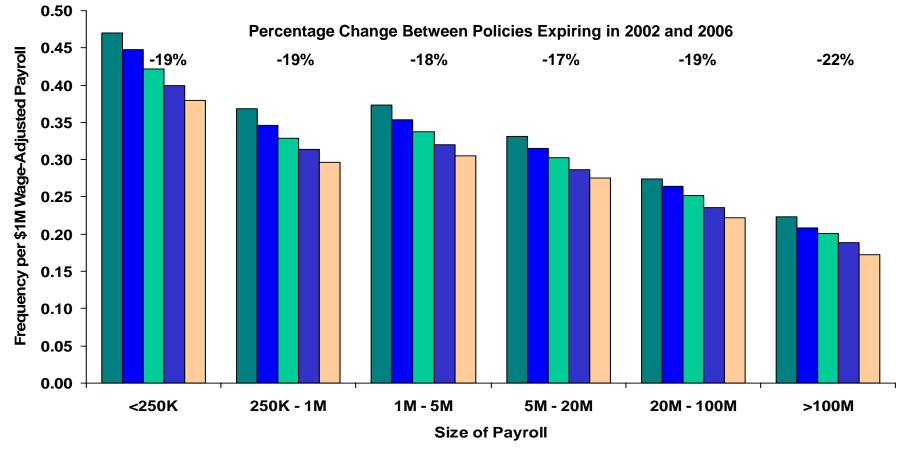


**2002 2003 2004 2005 2006** 

All NCCI states, except NV

## Countrywide Lost-Time Claim Frequency by Size of Payroll

#### **Frequency at First Report**



**2002 2003 2004 2005 2006** 

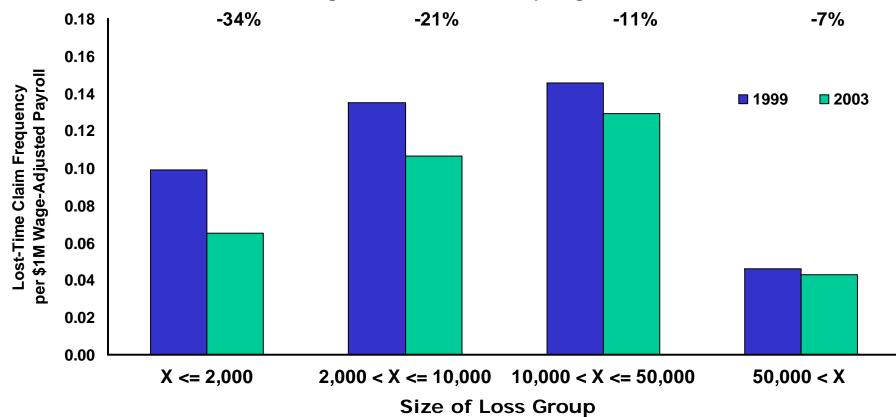
All NCCI states, except NV



# Claim Frequency by Size of Loss 1999 - 2003

## Lost-Time Claim Frequency by Size of Loss

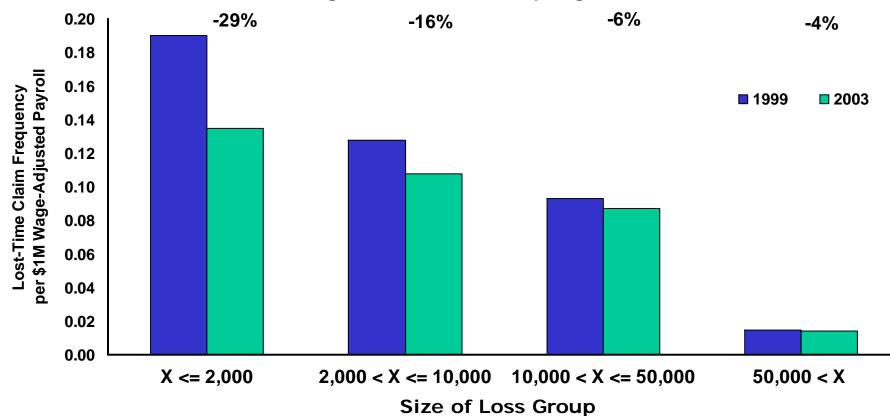
Five-Year Change Between Policies Expiring in 1999 and 2003



Annual Loss Size Adjustments: 4.2% Indemnity, 7.4% Medical Frequency = Lost-time claims / payroll; Payroll adjusted for inflation Claim count determined at first report NCCI states, excluding Texas

## Lost-Time Claim Frequency by Size of Indemnity Loss

Five-Year Change Between Policies Expiring in 1999 and 2003



Annual Indemnity Loss Size Adjustment: 4.2% Frequency = Lost-time claims / payroll; Payroll adjusted for inflation Claim count determined at first report NCCI states, excluding Texas

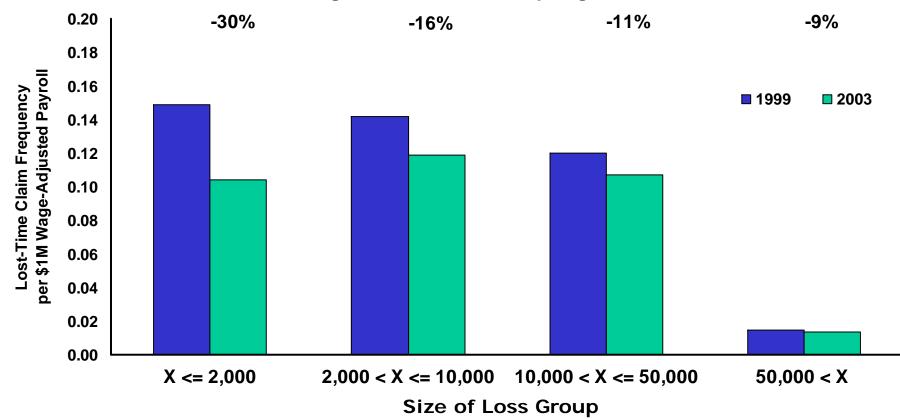
# Lost-Time Claim Frequency by Days Away From Work

Five-Year Change Between Accidents in 1999 and 2003 -30% -26% -21% -14% 100 +6% Rate of Nonfatal Injuries and Illnesses per 10,000 Full-Time Workers 80 60 Accidents Occurring in ■ 1999 ■ 2003 40 20 0 1-5 days 6-10 days 11-20 days 21-30 days 31 days or more **Days Away From Work** 

Source: Bureau of Labor Statistics

## Lost-Time Claim Frequency by Size of *Medical* Loss

Five-Year Change Between Policies Expiring in 1999 and 2003



Annual Medical Loss Size Adjustment: 7.4% Frequency = Lost-time claims / payroll; Payroll adjusted for inflation Claim count determined at first report NCCI states, excluding Texas

## Frequency Change by Size of Loss: Impact on Severity

Average Annual Changes Between 1999-2003

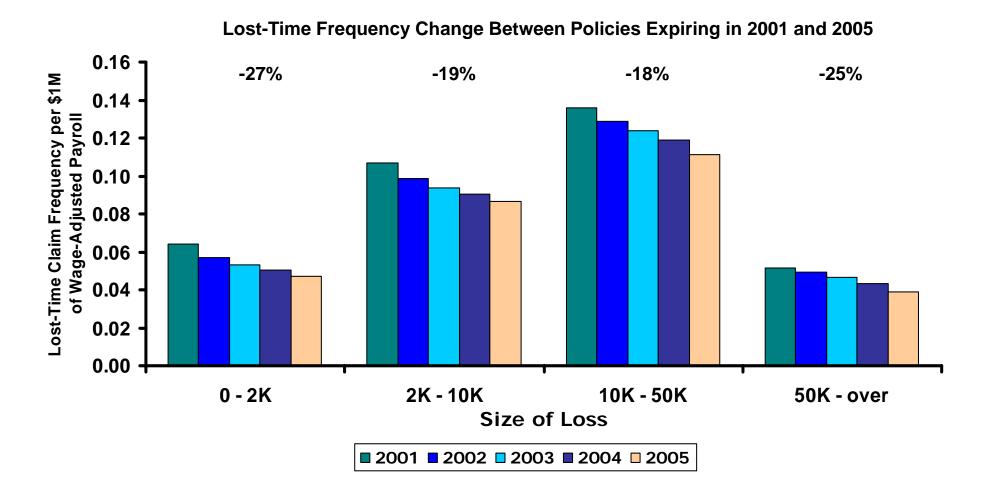
		Frequency	Adjusted
	Severity	Change	Severity
	Change*	Impact	Change
Indemnity	7.2%	3%	4.2%
Medical	9.4%	2%	7.4%
Combined	8.4%	2.5%	5.9%

# \* Average annual severity change underlying WCSP data

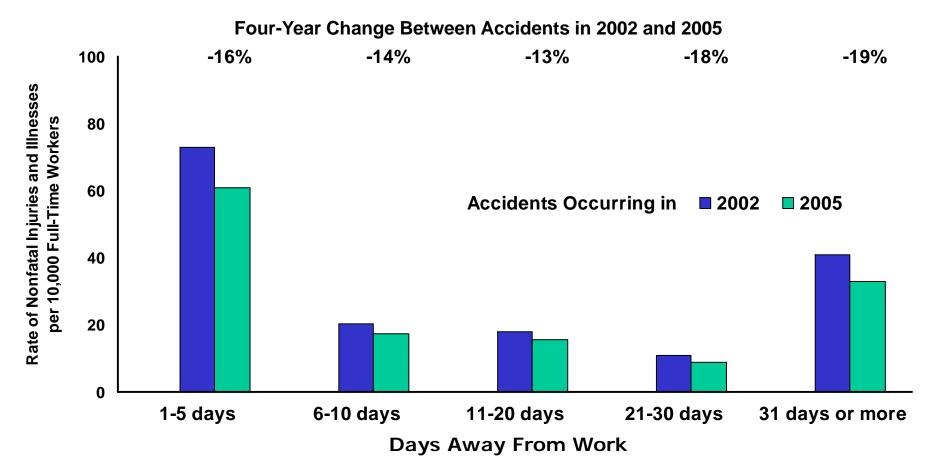


# Claim Frequency by Size of Loss 2001 - 2005

### Lost-Time Claim Frequency by Size of Loss Frequency at First Report



## Claim Frequency by Days Away From Work



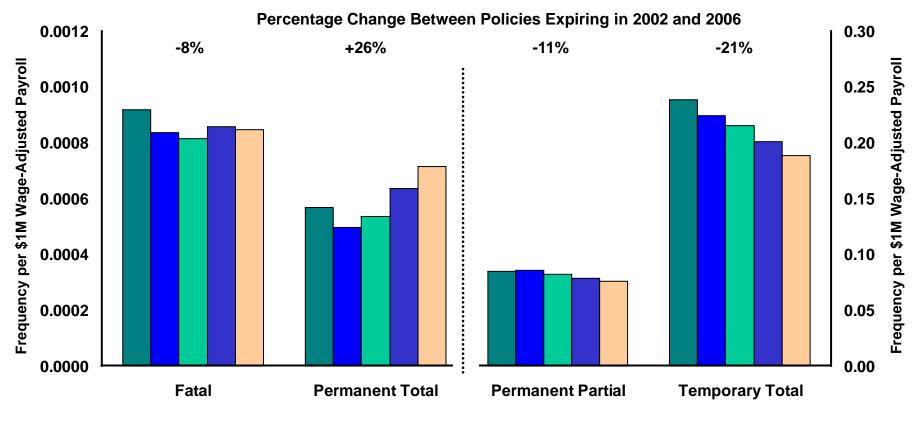
Source: Bureau of Labor Statistics



# **Recent Increases in PTD Claims**

## Countrywide Lost-Time Claim Frequency by Injury Type

### **Frequency at First Report**

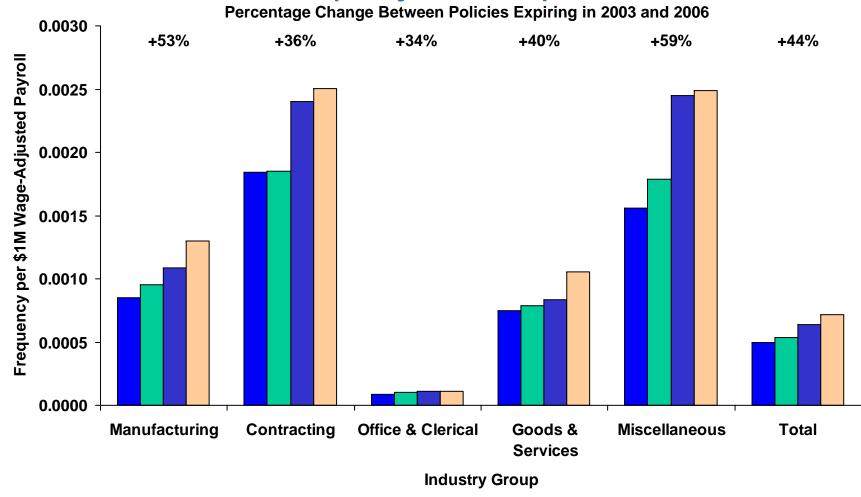


■ 2002 ■ 2003 ■ 2004 ■ 2005 ■ 2006

All NCCI states, except NV, TX

## Countrywide PT Frequency by Industry Group

**Frequency at First Report** 

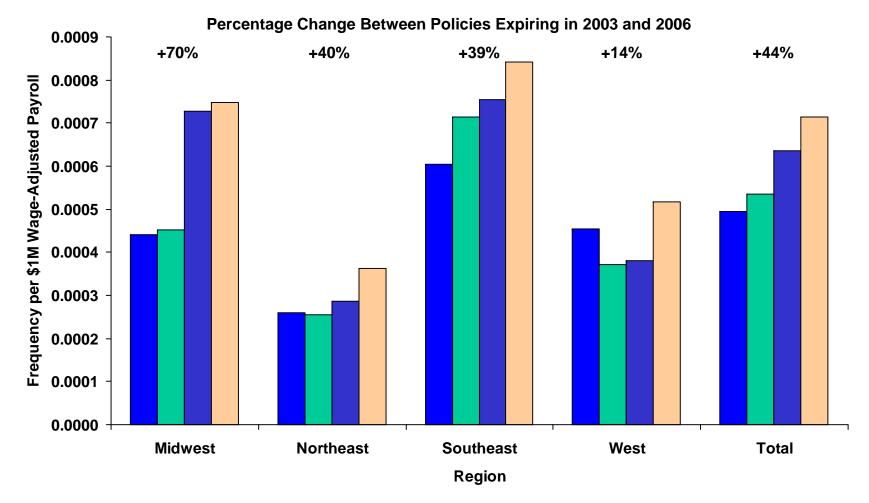


All NCCI states, except NV, TX

**2003 2004 2005 2006** 

## **PT Claim Frequency by Region**

### **Frequency at First Report**

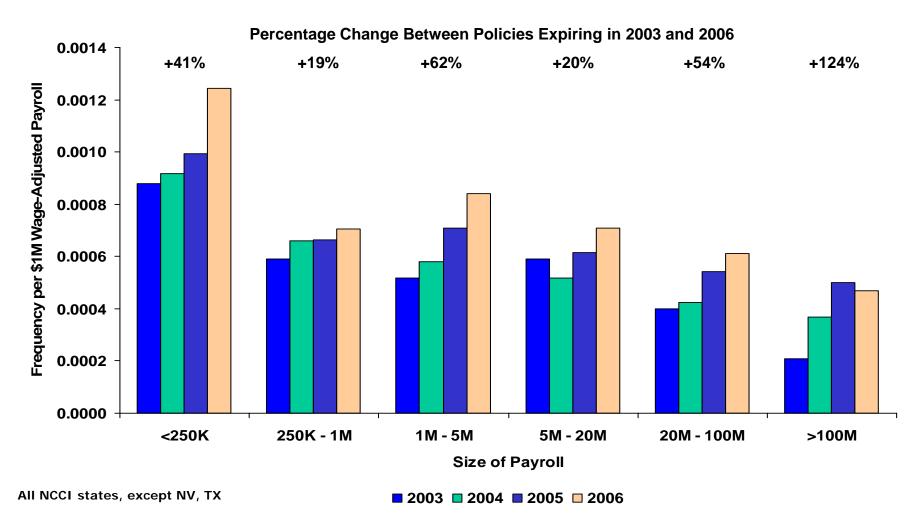


All NCCI states, except NV, TX

**2003 2004 2005 2006** 

## Countrywide PT Claim Frequency by Size of Payroll

### **Frequency at First Report**



# **Impact of PTD Increase**

- The recent relative increase in PTD claims has caused upward pressure on lost-time severities
- On the following slides, the impact on lost-time (L-T) severities was estimated using the simplified formula below, separately for indemnity and medical:

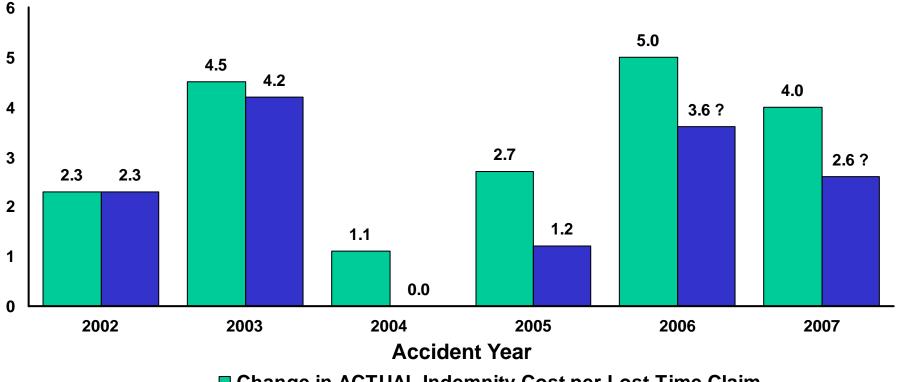
Impact on L-T severity

= [PTD proportion of L-T costs] x [PTD relative increase]

## **Countrywide Indemnity Severity** Before and After Estimated Impacts of PTD Increase

**Lost-Time Claims** 

### **Percent Change**



Change in ACTUAL Indemnity Cost per Lost-Time Claim
Change in ADJUSTED Indemnity Cost per Lost-Time Claim

Indemnity severity 2007p: Preliminary based on data valued as of 12/31/2007

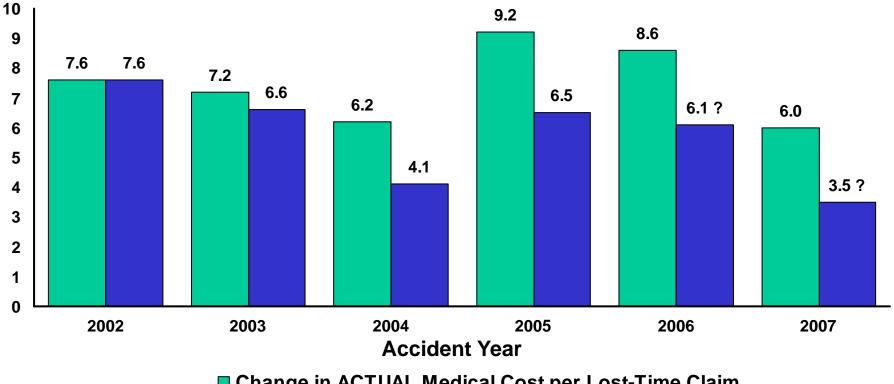
Indemnity severity 2002–2006: Based on data through 12/31/2006, developed to ultimate

Accident year indemnity severity-NCCI . Based on the states where NCCI provides ratemaking services, excludes the effects of deductible policies

### **Countrywide WC Medical Severity** Before and After Estimated Impacts of PTD Increase

**Lost-Time Claims** 

#### **Percent Change**



Change in ACTUAL Medical Cost per Lost-Time Claim
Change in ADJUSTED Medical Cost per Lost-Time Claim

Medical severity 2007p: Preliminary based on data valued as of 12/31/2007

Medical severity 2002–2006: Based on data through 12/31/2006, developed to ultimate

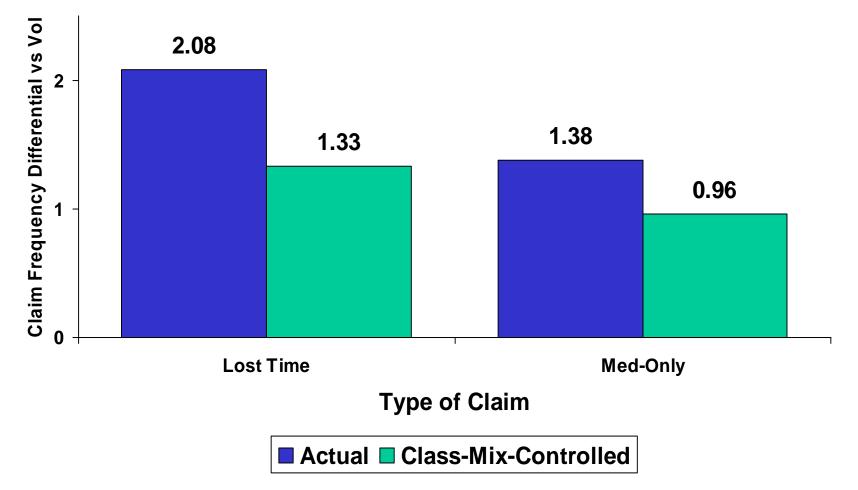
Accident year medical severity—NCCI. Based on the states where NCCI provides ratemaking services, excludes the effects of deductible policies



# An Analysis of Assigned Risk Claim Frequency

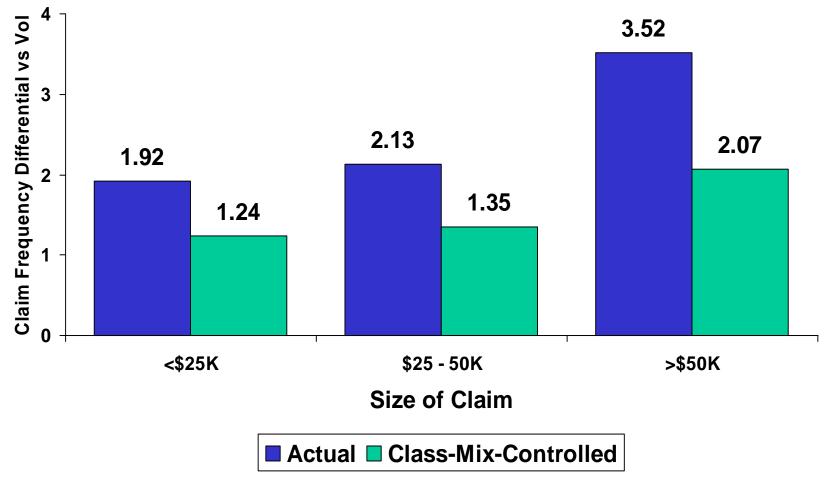
### **Assigned Risk Claim Frequency** Expressed Relative to Voluntary Market = 1.00





### **Assigned Risk Claim Frequency** Expressed Relative to Voluntary Market = 1.00

Lost-Time Frequency and Severity at First Report, Undeveloped



## **Drivers of Claim Frequency**

- Business Cycle—Employment growth
- Age of workforce
- Long-Term Downtrend—Key factors

## **Frequency of Injuries - Experience Matters**

**Inexperienced Have a Disproportionately High Share of Total Injuries** 

Time With Current Employer	Share of Employment ('04)*	Share of All Injuries ('04)**	Relative Difference Share of Injuries vs Employment
Less Than 1 Year	23.0%	33.4%	45.3% Higher
1 Year to 5 Years	38.3%	35.5%	-7.3% Lower
5 Years or More	38.8%	30.4%	-21.6% Lower

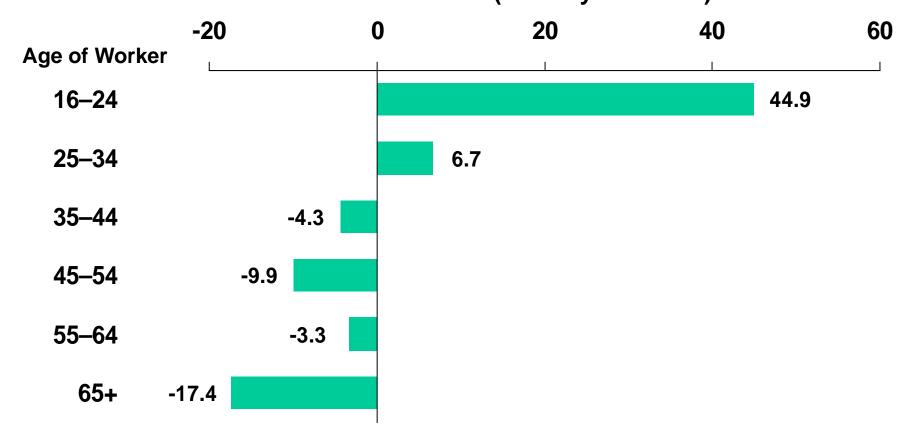
\* As reported by the BLS

\*\* Not reported = 0.7%

Source: U.S. Bureau of Labor Statistics

## **BLS Incidence Rates by Age of Worker**

Percentage Above or Below the Average Manufacturing Incidence Rate in 2001 (Countrywide Data)



Source: U.S. Bureau of Labor Statistics

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## **Long-Term Impacts on Claim Frequency**

- Competitive labor markets require continuing improvement in working conditions and productivity
- Impact of global competition
- Technology
- Indirect impacts of OSHA

# **Claim Frequency Study Summary**

- The decline in the frequency of workers compensation claims continues to span all industry groups, geographic regions and payroll sizes.
- In the late 1990's, smaller claims experienced more of a decline than larger claims. This placed upward pressure on average indemnity and medical costs per claim.
- Over the last several years, the claim frequency decline appears to be just as strong for the medium and large claims as for the small lost-time claims. This is corroborated by BLS data showing claim frequency by days away from work.

# **Claim Frequency Study Summary**

- The frequency of PTD injuries, however, increased over the latest 3 years.
- The rise in PTD claims is generally evident across industries, regions and payroll sizes.
- From AY 2004-2006, the increase in PTD claims may have increased lost-time indemnity severities by approximately 1%-1.5%/yr and lost-time medical severities by approximately 2%-2.5%/yr.

# **Claim Frequency Study Summary**

- The assigned risk market has a higher frequency of lost-time claims than the voluntary market, especially for the larger claims. This is true even after controlling for class-mix differences between the two markets.
- A shift in occupational mix is a minor contributor to the decline in claim frequency.
- The business cycle, an aging workforce, technological advances and increased competition are some of the many factors that have contributed to the claim frequency decline.