Texas Department of Insurance

Income Benefit Adequacy in the Texas Workers' Compensation System, 2000-2011

Fiscal Year 2012 Results

Workers' Compensation Research and Evaluation Group
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Acknowledgements

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Ward Adams managed the project, conducted the analyses, and authored the report. DC Campbell, Botao Shi, and Dr. Soon-Yong Choi provided valuable editorial comments.

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Key Findings

The Texas Senate State Affairs Committee released its interim charges on January 24, 2012.[1] Several charges dealt with issues in the Texas Workers' Compensation system. One charge concerned the adequacy of income benefits paid to injured employees, especially those paid to high-wage earners who receive the maximum compensation rate.

The purpose of this report is to address the State Affairs Committee's charge by studying the adequacy of income benefits paid to injured employees in the Texas Workers' Compensation system. The study considered to what degree income benefits replace injured employee after-tax earnings.

The income benefits considered for this study were Temporary Income Benefits (TIBs), Impairment Income Benefits (IIBs), and Supplemental Income Benefits (SIBs). Major findings of this study include:

- The TIBs income replacement rate rose from 86 percent in injury year 2000 to 93 percent in injury year 2011.

- The weekly maximum TIBs payment increased to from $540 in Fiscal Year (FY) 2006 to $712 in FY 2007, resulting in a decline in the percent of injured employees capped at the maximum benefit amount from 23 percent in 2008 to 11 percent in 2011.

- The IIBs income replacement rate improved from 73 percent in 2005 to 79 percent in 2010.

- The percentage of IIBs recipients capped at the maximum benefit level dropped from 45 percent in injury year 2006 to 35 percent in injury year 2010 because of an increase in the maximum IIBs benefit amount from $378 a week in FY 2006 to $472 a week in FY 2007.

- The SIBs replacement rate increased from approximately 69 percent of after-tax income in injury year 2006 to 76 percent in injury year 2008.

- The percent of injured employees receiving SIBs benefits capped at the statutory maximum amount reached a high of nearly 35 percent in 2005, but decreased to 31 percent in 2008 after the 2007 benefit amount increases.

[1] http://www.senate.state.tx.us/assets/pdf/SenateInterimCharges82_Final.pdf .

1. Purpose of the Analysis

Income Replacement Rate (IRR)
This analysis presents estimates of the extent to which lost wages are replaced by income benefits received by injured employees during the injury period. **The IRRs of TIBs, IIBs, and SIBs recipients are analyzed**.

Income Benefits Capped at Maximum Benefits
Another important area of interest is the percentage and characteristics of injured employees whose income benefit amounts are capped at maximum benefit levels. This concept is further discussed below under Data Considerations and Methods.

Types of Income Benefits
There are five types of income benefits under the Texas Workers' Compensation Act.

- **Temporary Income Benefits (TIBs)**. TIBs are paid during the period of temporary disability (lost time from work) while the employee is recovering from an on-the-job injury.

- **Impairment Income Benefits (IIBs)**. IIBs are paid to injured employees for permanent impairments (impairment evaluations are currently based on the Guides to the Evaluation of Permanent Impairment, 4th Edition, published by the American Medical Association).

- **Supplemental Income Benefits (SIBs)**. SIBs are paid to injured employees for ongoing disability after IIBs have been exhausted, with all eligibility for SIBs ending at 401 weeks after the date of injury. Only employees with a 15 percent or higher impairment rating who are unemployed or underemployed as a result of their work-related injuries are eligible to receive SIBs.

- **Lifetime Income Benefits (LIBs)**. LIBs are paid for the life of the injured employee for specific catastrophic injuries as set forth in Texas Labor Code §408.161.

- **Death Benefits (DBs) and Burial Benefits**. DBs and burial benefits are paid to the deceased employee's spouse or eligible beneficiaries as a result of a death from a compensable injury.

2. Data Considerations and Methods

Data for the analysis are extracted from the Texas Department of Insurance, Division of Workers' Compensation's (TDI-DWC) claims, benefits, and impairment rating databases. The study includes injured employees who received TIBs, IIBs, or SIBs during injury years 2000 to 2011.

A sufficient amount of time must pass, however, before a complete picture of benefit adequacy can be calculated for the entire duration of the claim. Consequently, REG's ability to accurately report complete income replacement data is limited to earlier injury years. This is especially the case for SIBs, which requires 401 weeks (approximately 7 ½ years) for full maturity. SIBs data beyond injury year 2003 are therefore considered incomplete and must be interpreted with caution.

Calculating the Income Replacement Rate (IRR)

The formula for the IRR is the amount of income benefits paid to the injured employee during the calendar year divided by the amount of after-tax wages that would have been earned during that benefit payment period if the employee had not been injured.

Data on after-tax annual wages is vital to this formula, and is dependent on the marital status, number of children, the number of exemptions claimed, and the total deductions used to calculate annual income taxes. Some of that information, however, is not available. Consequently, the IRR is based on the following assumptions:

- married injured employees are assumed to have two children.
- married injured employees claim the standard deduction for married persons and four exemptions, two for the parents, and two for their children.
- single injured employees claim the standard deduction for single persons and one exemption.
- the dollar amount of standard deductions and exemptions is adjusted by calendar year to accommodate claims that span multiple calendar years.
- annual income is the average weekly wage times 52 weeks.
- sixty percent of spouses are working, and earn 75 percent of their spouse's annual wage.
- Medicare taxes are 1.45 percent of the injured employee's total annual wage estimate.
- Old Age, Survivor, and Disability Insurance (OASDI) taxes are 6.2 percent of injured employee's total annual wage estimate, and
- five percent of total annual income is added to total annual income to account for non-wage income.

Understanding How Marital Status, Wages, and Income Affect IRRs

Wages, federal tax status, and marital status have prominent roles in deriving IRRs. Typically, single injured employees have higher tax burdens than married injured employees, given the lower number of exemptions available to them. After federal income taxes, Medicare, and OASDI are deducted from annual income, single injured employees have lower after-tax wages, and therefore greater probabilities of having their lost wages fully replaced with income benefits.

Married injured employees, on the other hand, typically pay less tax than single injured employees because of the larger number of exemptions and larger standard deductions available to them. Their resulting higher after-tax incomes are more likely to be capped at the maximum benefit level, and therefore less likely to be fully replaced by income benefits.

Similarly, injured employees, whether married or single, with high weekly wages will have less of their income replaced by income benefits than injured employees with low wages, since high-wage employees are more likely to earn more than the maximum allowable benefit amount.

Capped Income Benefit Payments

A capped income benefit amount refers to benefit payments equaling the maximum benefit allowed at the ***time of injury.***[2] The capped level limits income benefit payments to injured employees with average weekly wages that are higher than the maximum allowable benefit amount. Maximum and minimum benefit amounts are set by the Texas legislature in accordance with Texas Labor Code Section 408.047, and go into effect on a fiscal year that begins on October 1st and ends September 30th. For example, fiscal year 2007 changes to the benefit amounts were effective from October 01, 2006 through September 30, 2007. For the purpose of this report, the year of benefit changes refers to the appropriate fiscal year.

Weekly TIBs payments. TIBs payments may not exceed 100 percent of the state average weekly wage rounded to the nearest whole dollar.

Weekly IIBs payments. IIBs payments may not exceed 70 percent of the state average weekly wage rounded to the nearest whole dollar.

Weekly SIBs payments. SIBs payments may not exceed 70 percent of the state average weekly wage rounded to the nearest whole dollar.

Weekly LIBs payments. LIBs payments may not exceed 100 percent of the state average weekly wage rounded to the nearest whole dollar.

Weekly DBs payments. DBs payments may not exceed 100 percent of the state average weekly wage rounded to the nearest whole dollar.

[2] Benefit information can be found in Texas Labor Code §408.061 .

3. Benefit Expenditures by Benefit Type and Injury Year

TIB and IIB payments constitute the majority of total income benefit expenditures (see Table 3.1). TIBs payments represent approximately 65 percent and IIBs payments represent approximately 30 percent of total income benefits paid. The remaining 5 percent of total income benefits consists of payments to SIBs, LIBs, and DBs recipients. Total payments for all income benefit types have been declining steadily since 2000, with modest fluctuations for TIBs and IIBs after 2005. TIBs payments increased from approximately 60 percent of total income benefit payments in injury year 2000, to 71 percent in 2009. It is important to note, however, that the additional income benefits do not begin until the injured employee receiving TIBs has reached maximum medical improvement (MMI) or 104 weeks of benefits. Consequently, more recent TIBs claims have not yet reached that qualifying duration, so the proportion of TIBs payments in relation to other income benefit types may decrease in the future.[3]

Table 3.1. Total Benefit Payments, by Benefit Type and Injury Year

Injury Year	TIBs	IIBs	SIBs	LIBs	DBs
2000	$627,350,661	$365,706,992	$28,393,871	$5,593,553	$21,169,915
2001	$583,526,197	$329,845,407	$21,989,360	$6,353,054	$12,521,159
2002	$507,503,291	$269,104,172	$16,144,022	$5,797,509	$10,557,653
2003	$426,197,666	$210,707,831	$11,589,508	$5,608,315	$14,938,339
2004	$399,639,803	$180,809,465	$6,973,723	$5,212,732	$13,610,770
2005	$350,085,197	$155,466,069	$4,116,538	$4,121,377	$10,488,096
2006	$313,929,283	$161,945,896	$3,510,510	$2,557,221	$12,117,932
2007	$349,535,997	$165,522,232	$2,206,117	$2,863,138	$10,738,091
2008	$426,721,722	$175,132,283	$4,710,525	$1,216,419	$13,135,480
2009	$396,046,272	$145,155,394	$1,880,505	$1,234,640	$9,497,425

Note: LIBS and DBs data may change pending an upcoming validation data call.

Number of Claims by Benefit Type and Injury Year, 2000-2009

The number of claims in each income benefit type continues to decrease over time (see Table 3.2).[4] TIBs claims decreased by 43 percent, IIBs 46 percent, SIBs 95 percent, LIBs 51 percent, and DBs decreased 24 percent from 2000 – 2009.[5] Not surprisingly, TIBs recipients comprise the largest share of injured employees receiving income benefits, ranging from a high of almost

[3] Data from injury years after 2009 are not included due to the presence of claims that have not sufficiently matured.
[4] The LIBs and DBs figures are currently the best estimate of total benefit payments for those benefit types. It is important to note that these estimates are subject to revision, and must be viewed with caution.
[5] It is important to note that the number of future SIBs claims may increase if the number of IIBs recipients with impairment rates of 15 percent or more increase over time.

85,000 in injury year 2000 to 48,000 in injury year 2009. Approximately 50 percent of TIBs recipients go on to receive IIBS. In other words, among all injured employees with more than seven days of lost time from work, fully half of these injured employees receive an impairment rating for their injury. IIBs recipients with a minimum of 15 percent impairment rating may also qualify for SIBS. Typically, less than two percent of IIBs recipients qualify for SIBs benefits. Even as the total number of recipients for LIBs has declined in recent years, during each injury year more than 100 injured employees sustain the kinds of catastrophic accidents that qualify them for lifetime income benefits. Catastrophic cases also account for approximately 200 fatalities in the workers' compensation system each year. The number of DBs beneficiaries in 2009 was 180, which was the lowest number since 2000, but this followed 2008 which had the highest number of DBs beneficiaries for the study years at 242.

Table 3.2. Number of Claims, by Benefit Type and Injury Year

Injury Year	TIBs	IIBs	SIBs	LIBs	DBs
2000	84,928	45,490	1,165	230	237
2001	80,031	46,343	894	230	201
2002	73,818	42,455	638	220	192
2003	65,080	36,271	408	157	212
2004	59,266	31,913	300	171	192
2005	55,286	27,714	231	183	190
2006	52,173	26,324	241	162	185
2007	52,694	26,068	194	141	208
2008	53,586	27,282	158	136	242
2009	48,172	24,177	53	112	180

Note: LIBS and DBs data may change pending an upcoming validation data call.

Interpretation of Income Benefits Duration

For the purpose of this study, income benefit duration is a measure of time from the date of injury to the benefit expiration date, or the cutoff date for the study data file, December 2011, whichever came first. Consequently, average durations for more recent injuries will most likely be lower than average durations for older injuries, especially since the former group might still be active recipients of income benefits.

Also, many new TIBs recipients may not have yet reached 104 weeks, the statutory time limit for TIBs, or attained Maximum Medical Improvement (MMI). MMI is defined as the point at which the injured employee's work-related injury or illness can no longer be reasonably anticipated to improve (i.e., has improved as much as it is going to improve) or, 104 weeks have passed from

the date income benefits began to accrue (i.e., statutory MMI).[6] Injured employees who reach clinical or statutory MMI are assigned an impairment rating, which directly impacts the number of IIBs cases and income benefit duration for the recipients. Similarly, recently injured employees receiving IIBs may not have completed their number of weeks of benefits, which in turn determines the start date of SIBs benefits (for qualified injured employees with impairment ratings of 15 percent or greater).

Length of Income Benefit Duration by Benefit Type and Capped Benefits

The average length of time that injured employees receive income benefits has been steadily decreasing since 2000. The amount of time that TIBs and IIBs are paid is very similar for injured employees whose benefits are capped at the maximum benefit amount and for injured employees whose benefits are not capped. The length of time that injured employees receive SIBs and LIBs, on the other hand, differs substantially. Injured employees with capped benefits receive benefits for longer periods of time than injured employees whose benefits are not capped. However, the pattern for DBs recipients is entirely different. Unlike the SIBs or LIBs durations, DBs recipients whose benefits are not capped receive benefits for longer periods of time (see Table 3.3).

Table 3.3. Income Benefit Durations in Weeks, by Benefit Type and Capped Status

	TIBs		IIBs		SIBs		LIBs		DBs	
Injury Year	Capped	Other	Capped	Other	Capped	Other	Capped	Other	Capped	Other
2000	21	22	24	24	96	76	263	139	129	223
2001	21	22	21	22	95	78	293	128	106	159
2002	20	19	20	20	85	90	320	134	72	161
2003	18	19	18	18	93	80	257	167	110	161
2004	18	18	18	17	77	55	294	141	113	173
2005	19	17	17	18	44	40	177	98	92	116
2006	15	16	17	17	27	37	150	88	85	108
2007	16	15	16	16	24	26	141	82	61	102
2008	18	16	15	17	15	18	83	83	79	97
2009	17	16	13	14	8	13	54	67	45	88

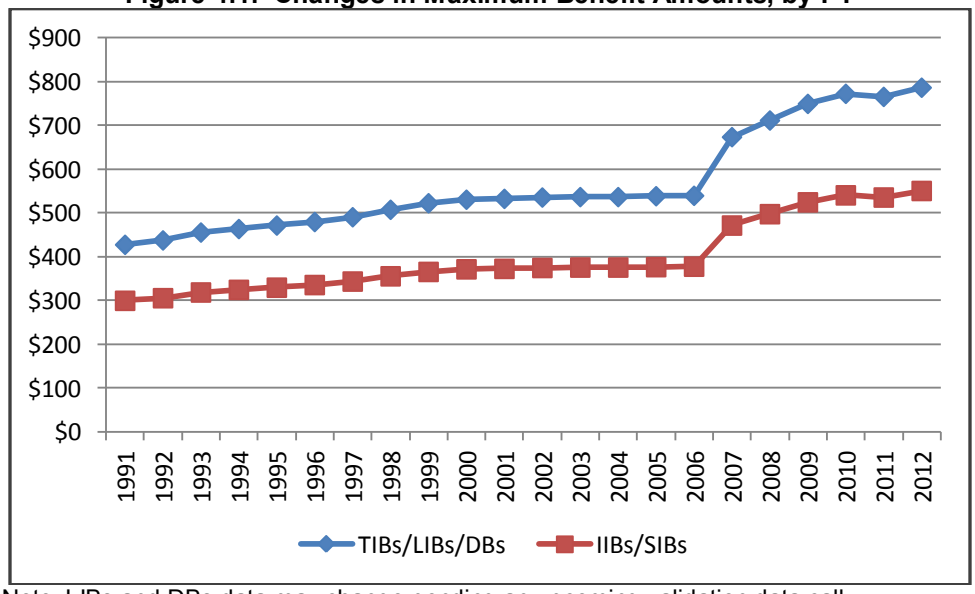
Note: LIBS and DBs data may change pending an upcoming validation data call.

[6] Additional information can be found in Texas Labor Code §401.011.

4. Changes in Maximum Income Benefit Amounts over Time

Maximum benefit amounts for all types of income benefits increased gradually from 1991 to 2000, but remained stable from 2000 until 2006. In 2006, the maximum income benefit amount for all levels of benefits increased by 25 percent. The maximum benefit amount for TIBs, LIBs, and DBs, increased from $540 per week in Fiscal Year (FY) 2006 to $672 per week in FY 2007.[7] SIBs and IIBs also have the same maximum benefit amounts, which increased from $378 per week in 2006 to $540 per week in 2007. Minimum benefit amounts increased by 25 percent as well, with the exception of SIBs and DBs, which have no minimum benefit amount (see Figure 4.1).

Figure 4.1. Changes in Maximum Benefit Amounts, by FY



Note: LIBs and DBs data may change pending an upcoming validation data call.

[7] In accordance with the Texas Labor Code §408.047, the workers' compensation state average weekly wage is equal to 88 percent of the average weekly wage in covered employment as computed each year by the Texas Workforce Commission under Texas Labor Code §207.002(c).

5. Temporary Income Benefits (TIBs)

Eligibility: Loss of more than seven (7) days of work due to work-related injury or illness.

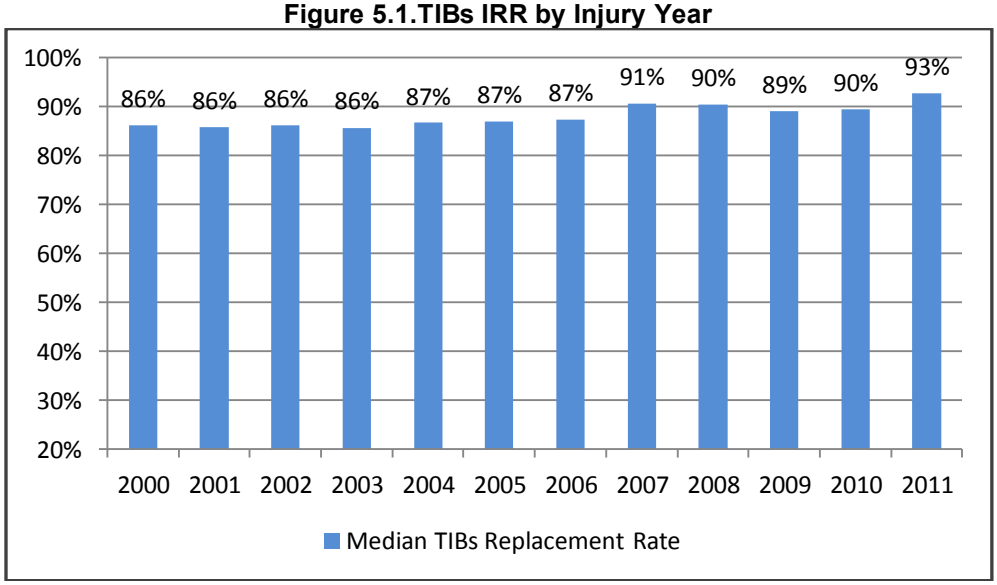
Benefit amount: 70 percent of the difference between the injured employee's average weekly wage and any wages earned after the work-related injury, capped at the State Average Weekly Wage (SAWW).

Time limit: Benefits end when the injured employee reaches MMI, or when the injured employee returns to earning the pre-injury average weekly wage or reaches the end of 104 weeks.

TIBs IRR by Injury Year

The TIBs income replacement rate (IRR) increased from 86 percent in injury year 2000 to 93 percent in injury year 2011. The average replacement rate across all years is approximately 88 percent, which indicates that on average, TIBs replace 88 percent of an injured employee's annual pre-injury wage. Future average IRRs will more than likely increase given the higher income replacement rates beginning in FY 2007 (see Figure 5.1).

Figure 5.1.TIBs IRR by Injury Year



TIBs IRR by Gender

Male and female injured employees had similar IRRs from 2000 to 2006 (see Table 5.1). Male IRRs increased in 2007 but remained stable until 2010. Fema1e IRRs also increased in 2007, but began to decline to pre-2007 amounts the following year. That decline is related to changes in weekly wages, marital status, the number of exemptions and income taxes.

Table 5.1. TIBs IRR by Gender

Gender	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Male	87%	86%	87%	86%	87%	87%	87%	91%	91%	90%	91%	93%
Female	85%	85%	85%	86%	87%	88%	87%	89%	87%	87%	86%	92%

TIBs IRR by Age

Trends in TIBs IRRs by age are likely influenced by job tenure and experience (see Table 5.2). Older injured employees have lower IRRs because their tenure and experience command higher salaries, unlike younger injured employees. IRRs increased after 2006 from approximately 85 percent to more than 90 percent for older age groups as the capped amounts decreased. Younger injured employees were less likely to experience this increase since they are less likely to have their benefits capped at maximum benefit amounts.

Table 5.2. TIBs IRR by Age

Age	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
16-29	87%	86%	88%	87%	89%	90%	90%	92%	91%	91%	90%	92%
30-39	86%	86%	86%	86%	87%	87%	88%	91%	91%	91%	91%	93%
40-49	86%	86%	86%	85%	85%	86%	86%	90%	90%	88%	88%	93%
50 and above	86%	86%	86%	86%	86%	85%	85%	89%	88%	88%	89%	93%

TIBs IRR by Marital Status

Single injured employee's IRRs are higher on average than those of married injured employees, but the difference is minimal (see Table 5.3). Both groups' IRRs increased from approximately 86 percent in 2000 to 92 percent in 2011. Married injured employees tend to earn higher annual incomes, which in turn increases the likelihood that benefits will be capped at the maximum amount. Also, married injured employees tend to have lower tax burdens that result in higher after-tax wages, and therefore higher chances of being capped. Relatively low taxes and higher incomes tend to result in lower IRRs.

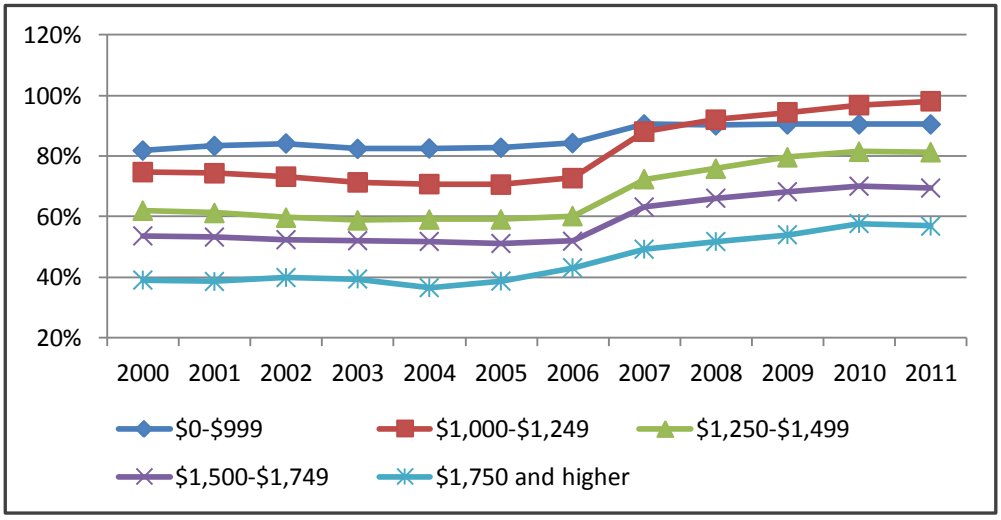
Table 5.3. TIBs IRR by Marital Status

Gender	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Single	86%	86%	87%	87%	87%	88%	89%	91%	91%	89%	90%	93%
Married	87%	86%	86%	85%	86%	86%	85%	90%	90%	89%	89%	92%

TIBs IRR by Pre-Injury Weekly Wage

The largest change in IRRs occurred for injured employees earning $1,000 or more a week (see Figure 5.2). The IRR for injured employees who earn less than $1,000 a week remained flat at 90 percent from 2007 to 2011, although that wage group has the highest IRR across all study years. Injured employees who earn $1,000 or more per week saw the largest increase in IRRs beginning in 2006, when minimum and maximum weekly TIBs payments increased significantly. Maximum benefit amounts increased from $540 per week in 2006 to $766 per week in 2011, an increase of 42 percent.

Figure 5.2. TIBs IRR by Pre-Injury Weekly Wage



TIBs IRR by Industry

The IRR of injured employees in most industries, with the exception of mining, manufacturing, and professional industries, saw little patterned change from 2000 to 2011 (see Table 5.4). The mining, manufacturing, and professional industries, however, saw an increase over this time period. Public administration had the highest IRR at 97 percent in 2011. The arts, accommodations, and food services industries tend to have the lowest IRRs. On average, for injured employees in these industries, TIBs replace approximately 88 percent of their pre-injury wages in 2011.

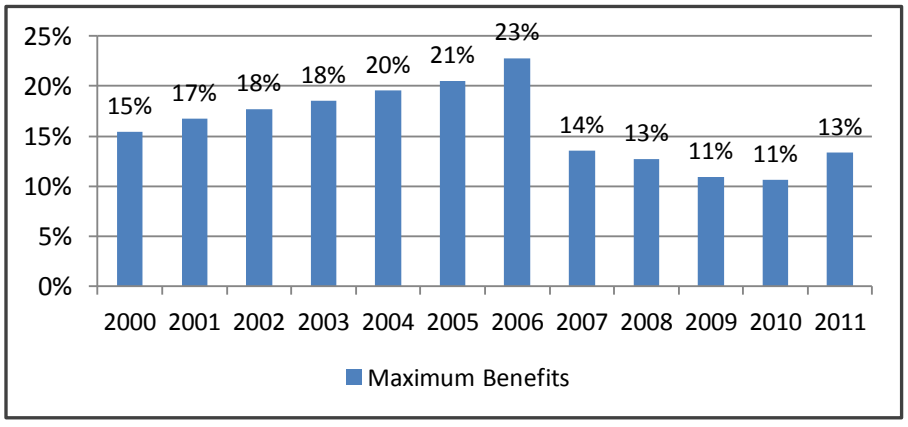
Table 5.4. TIBs IRR by Industry

Industry	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Agriculture	84%	87%	87%	87%	90%	87%	91%	90%	85%	86%	86%	93%
Mining/Utilities/Cons	87%	87%	88%	86%	88%	88%	90%	91%	91%	91%	91%	94%
Manufacturing	86%	85%	86%	86%	85%	83%	84%	89%	89%	89%	91%	93%
Wholesale/Retail/Trans	86%	85%	85%	83%	85%	85%	85%	89%	88%	85%	85%	92%
Professional Group	85%	85%	84%	84%	85%	85%	86%	88%	87%	87%	88%	92%
Education/Health	86%	86%	86%	87%	88%	88%	87%	89%	88%	87%	86%	92%
Arts/Accommodation	84%	83%	84%	83%	84%	84%	84%	83%	83%	82%	83%	88%
Other Services	84%	86%	87%	85%	84%	84%	87%	91%	84%	80%	87%	92%
Public Admin	94%	96%	95%	93%	95%	96%	100%	97%	97%	96%	94%	97%

Percent of TIBs Recipients with Benefits Capped at Maximum Rate

The weekly maximum TIBs payment remained virtually unchanged from 2000 to 2006 (from $531 to $540 during those years) resulting in an increase in the percent of injured employees capped at the maximum benefit amount from approximately 15 percent to 23 percent as wages increased. The weekly maximum TIBs payment increased in fiscal years 2007 and in 2008 to $674 and $712 respectively, resulting in a decrease in the percent of injured employees capped at the maximum benefit amount. The maximum TIBs benefit amount decreased slightly to $766 a week in FY 2011, but increased again to $787 in FY 2012 (see Figure 5.3).

Figure 5.3. Percent of TIBs Recipients Capped at the Maximum Benefit Level



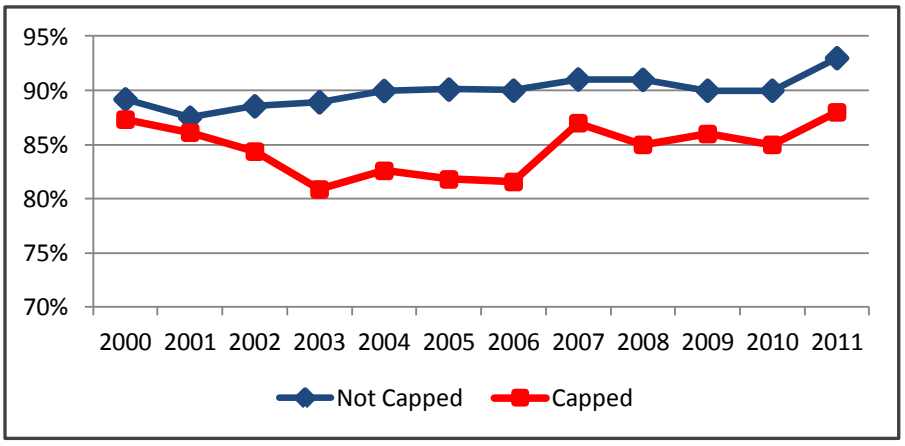
IRR of Injured Employees with TIBs Capped at the Maximum Benefit Amount

While the differences in IRRs between capped and non-capped wages were quite narrow in 2000 and 2001, that gap widened from 2002 to 2007 (see Figure 5.4). This is not surprising, given that for most of those years the maximum benefit amounts remained relatively unchanged as injured

employees' wages increased. By 2003, the replacement rate had fallen to almost 80 percent, but rebounded by five percentage points after the benefit increases in fiscal year 2007.

The trend in IRRs for those with capped benefit amounts appears to have stabilized between 85 and 88 percent since the benefit amount increases, although the IRRs for both capped and non capped injured employees increased in 2011. Employees capped at the maximum benefit amount tend to earn higher average weekly wages. Consequently, their IRRs are lower than those below the capped benefit level. Injured employees with capped benefits, compared to injured employees without capped benefits, also experienced the most improvement in TIBs IRRs after the increase in the maximum benefit amount.

Figure 5.4. TIBs IRR by Capped Benefits



6. Impairment Income Benefits (IIBs)

Eligibility: An injured employee becomes eligible for IIBs when MMI is reached, and the injured employee is assigned an impairment rating greater than zero. The impairment rating is assigned by a doctor using the American Medical Association's *Guides to the Evaluation of Permanent Impairment*, 4th edition.

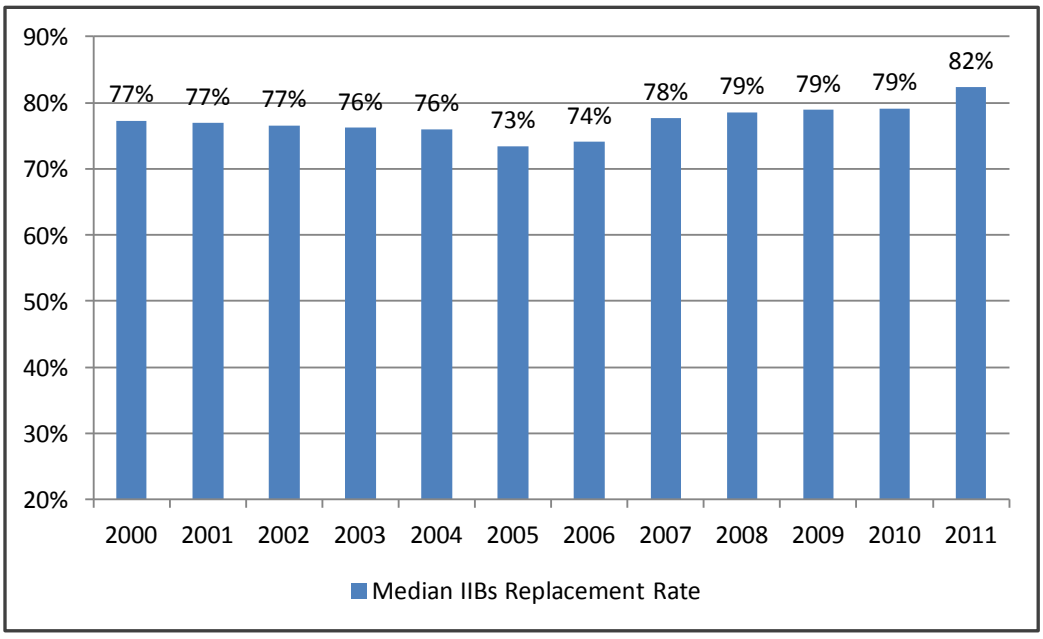
Benefit amount: 70 percent of the injured employee's average weekly wage, capped at 70 percent of the state average weekly wage. Three (3) weeks of IIBs are paid for each percentage of impairment.

Time limit: Benefits end after the number of benefit weeks (three times the impairment rating) is reached.

IIBs Income Replacement Rate (IRR) by Injury Year

The IIBs IRR increased from 77 percent in injury year 2000 to 82 percent in injury year 2011 (see Figure 6.1). The lowest replacement rate occurred during the 2004-2005 timeframe, when IRRs decreased to 73 percent and 74 percent respectively. In FY 2007, weekly maximum benefits IRRs increased significantly over 2006 benefit amounts (from $378 to $472) and led to higher IRRs in the years following.

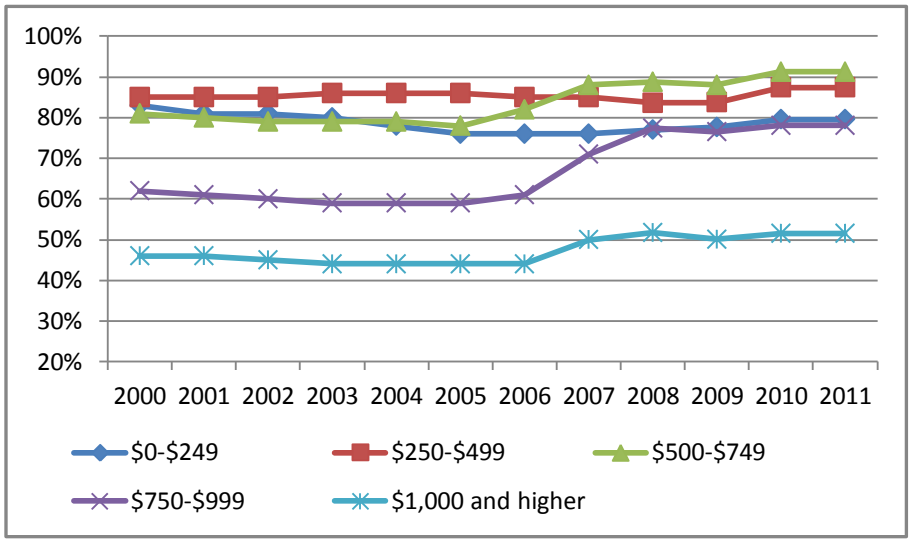
Figure 6.1. IIBs IRR by Injury Year



IIBs IRR by Pre-Injury Weekly Wage

IRRs for injured employees receiving IIBs were the highest for those earning less than $750 per week (see Figure 6.2). After benefit amounts increased in fiscal year 2007, IRRs improved for those earning $750 or more per week, especially for injured employees in the $750 to $999 wage group. The IRR for this group rose from 60 percent in FY 2006 to approximately 78 percent in FY 2007. Higher wage earners who receive IIBs also have lower IRRs, since more of those injured employees tend to be capped at the statutory maximum weekly benefit amount than injured employees with lower incomes.

Figure 6.2. IIBs IRR by Pre-Injury Weekly Wage



IIBs IRR by Age

IIBs IRRs improved substantially for all age groups beginning in 2007, though at a slower pace for injured employees 40 years or older, than those of younger age groups. The 16-29 years age group has consistently experienced the highest IRRs. That group's rate increased from approximately 76 percent to 88 percent from 2005 to 2010. That increase can be attributed to the group's lower median weekly wage of $464, a figure that is less likely to be capped at the maximum benefit level, as opposed to the median wage of $583 for those 50 years or older (see Table 6.1).

Table 6.1. IIBs IRR by Age

Age	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
16-29	79%	78%	79%	78%	78%	76%	77%	80%	81%	83%	83%	88%
30-39	78%	77%	77%	76%	76%	73%	74%	78%	80%	79%	78%	82%
40-49	77%	77%	76%	76%	75%	72%	72%	77%	78%	78%	78%	80%
50 and above	77%	77%	76%	76%	76%	73%	74%	77%	78%	78%	78%	81%

IIBs IRR by Gender

Female injured employees receiving IIBs replaced a higher percentage of their income than men, due primarily to the lower median weekly wages women earn. Women earned a median weekly wage of $454 during the 2000 – 2011 timeframe, while men earned $605 per week during the same timeframe. However, IRRs reversed after 2008, resulting in higher IRRs for men than for women. This is partially explained by the six percent increase in women's median wages from 2009 to 2011 compared to three percent increase for men during the same timeframe. Increased wages for injured female employees led to a higher percentage of women with benefits capped at the maximum benefit amount and therefore, lower IRRs (see Table 6.2).

Table 6.2. IIBs IRR by Gender

Gender	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Female	79%	78%	78%	78%	77%	76%	77%	80%	80%	79%	79%	82%
Male	77%	76%	76%	75%	74%	71%	71%	77%	78%	79%	79%	83%

IIBs IRR by Marital Status

Single injured employees have higher IRRs than married injured employees (see Table 6.3). Married injured employees tend to have lower IRRs, especially those with higher incomes of dual-earner families with children (which increases tax deductions, lowers tax burdens, and therefore results in higher after-tax incomes). Married injured employees with higher after-tax incomes are more likely to have their IIBs capped at the maximum benefit amount. The IRRs for married and single injured employees was similar in 2008, but returned to the prior pattern in 2009. Single injured employees who received IIBs saw 90 percent of their income replaced in 2011, compared to an approximately 76 percent IRR for married injured employees.

Table 6.3. IIBs IRR by Marital Status

Marital Status	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Single	85%	85%	85%	85%	84%	82%	83%	85%	77%	81%	83%	90%
Married	81%	79%	77%	76%	76%	76%	75%	77%	78%	76%	76%	76%

IIBs IRR by Industry

IRRs by industry generally increased from 2000 to 2010 (see Table 6.4). Injured employees working in public administration had the highest IRR of approximately 80 percent during most of this timeframe. The wholesale, retail, and transportation industry group had the lowest IRR of 76 percent in 2011. Except for injured employees in the wholesale/retail/transportation and public administration sectors, all other sectors experienced increased IIBs IRRs.

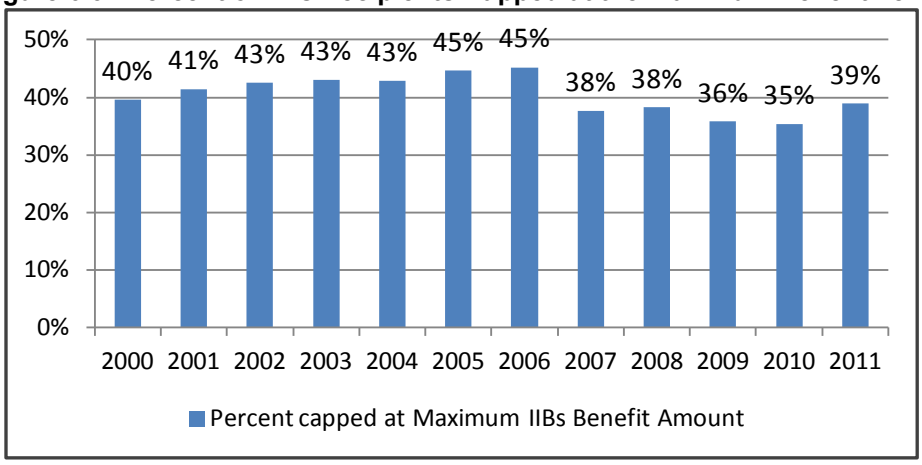
Table 6.4. IIBs IRR by Industry

One-digit NAICS code	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Agriculture	78%	77%	76%	76%	76%	78%	76%	81%	82%	84%	78%	85%
Mining/Utilities/Cons	80%	79%	77%	76%	75%	71%	70%	76%	77%	81%	80%	85%
Manufacturing	77%	77%	76%	75%	76%	72%	73%	78%	78%	80%	81%	85%
Wholesale/Retail/Trans	75%	72%	72%	72%	75%	72%	74%	76%	76%	76%	76%	76%
Professional Group	79%	78%	77%	76%	76%	76%	76%	77%	77%	77%	77%	85%
Education/Health	80%	80%	78%	76%	76%	76%	76%	77%	76%	76%	76%	79%
Arts/Accommodation	78%	78%	76%	76%	76%	76%	76%	76%	77%	79%	76%	83%
Other Services	79%	79%	78%	76%	76%	76%	76%	79%	80%	80%	77%	85%
Public Admin	77%	78%	77%	77%	76%	75%	74%	85%	85%	84%	84%	81%

IIBs Recipients with Benefits Capped at the Maximum Amount

The percent of injured employees receiving IIBs at the maximum benefit amount increased from 40 percent for injuries that occurred in 2000 to 45 percent for those that occurred in 2006 (see Figure 6.3). Similar to the pattern of the TIBs IRRs patterns, the percentage of IIBs recipients at the maximum benefit amount dropped seven percentage points from 45 percent in 2006 to 38 percent in 2010, followed by a slight increase in 2011.

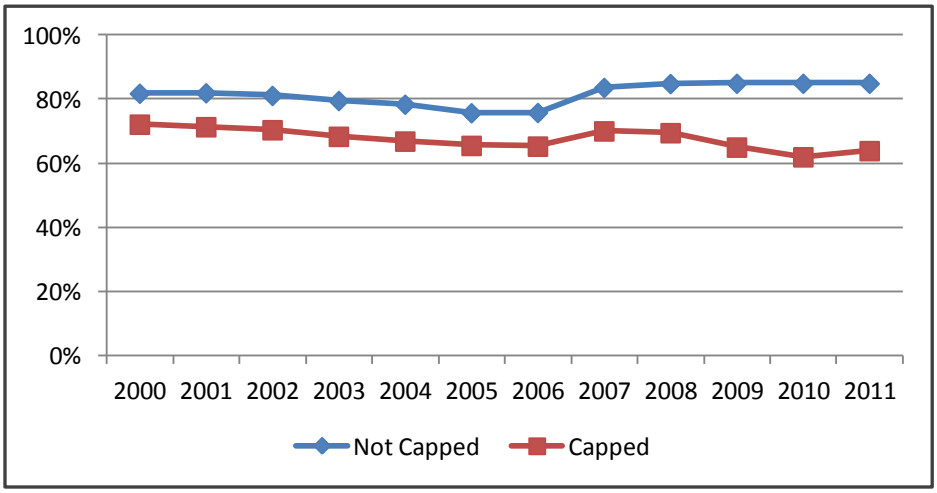
Figure 6.3. Percent of IIBs Recipients Capped at the Maximum Benefit Level



IIBs by Capped Benefits

IRRs for injured employees whose benefits are capped at the maximum benefit amount are lower than those whose benefits are not capped (see Figure 6.4). Injured employees who do not receive the maximum benefit level recover approximately 10 percent or more of their after tax incomes each injury year than their counterparts whose benefits are capped. The IRR increased for both groups in 2007 following an increase in the maximum benefit amount from $378 a week in 2006 to $472 a week in 2007. The "capped'' group's benefit IRR decreased in 2008, while it stabilized for the "not capped" group. By 2011, the IRR of the "not capped" group was approximately 85 percent compared to 64 percent for the "capped" group (see Figure 6.4).

Figure 6.4. IIBs IRR by Capped Benefits



7. Supplemental Income Benefits (SIBs)

Eligibility: An injured employee becomes eligible for Supplemental Income Benefits (SIBs) when the employee

- has an impairment rating of 15 percent or more
- has not returned to work because of the impairment, or has returned to work but is earning less than 80 percent of his or her pre-injury average weekly wage because of the impairment
- did not take a lump sum payment of impairment income benefits, and
- has tried to find a job that matches his or her ability to work.

Benefit amount: 80 percent of the difference between 80 percent of the employee's average weekly wage and the weekly wage after the injury, capped at 70 percent of the state average weekly wage.

Time limit: Benefits begin the day after IIBs end. Total benefits can be received for a maximum of 401 weeks (approximately 7.5 years) from the date of injury, unless the injured employee qualifies for LIBs.

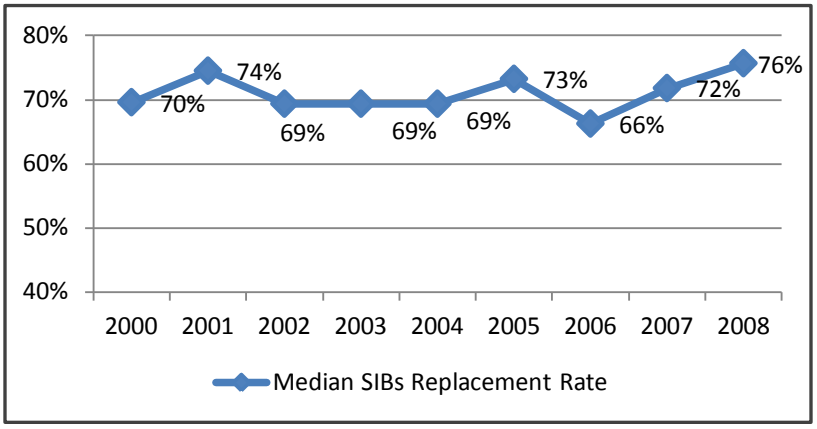
Interpreting SIBs Income Replacement Rates (IRR)
Due to the extended timeframe required for most qualifying SIBs recipients to reach MMI and to exhaust the statutory maximum total benefit duration, this study is limited to injury years from 2000 to 2008. Therefore, SIBs outcomes for those injured employees whose claims have not reached 401 weeks must be interpreted with the understanding that future data might change current results.

The total number of SIBs cases by injury year and weekly wage, age of employee, and industry are too few to provide stable results. In order to provide more reliable findings for characteristics in this analysis, all SIBs cases are analyzed together, rather than by injury year.

SIBs IRR by Injury Year

SIBs replaced approximately 69 percent of the after-tax income of employees injured in 2000 (see Figure 7.1). The median IRR increased by approximately 10 percent after the 2007-2008 benefit amount increase. That increase in the IRR is associated with an increase in maximum benefit amounts from $378 a week for employees injured in 2006, to $498 a week for those injured in 2008, an increase of approximately 32 percent.

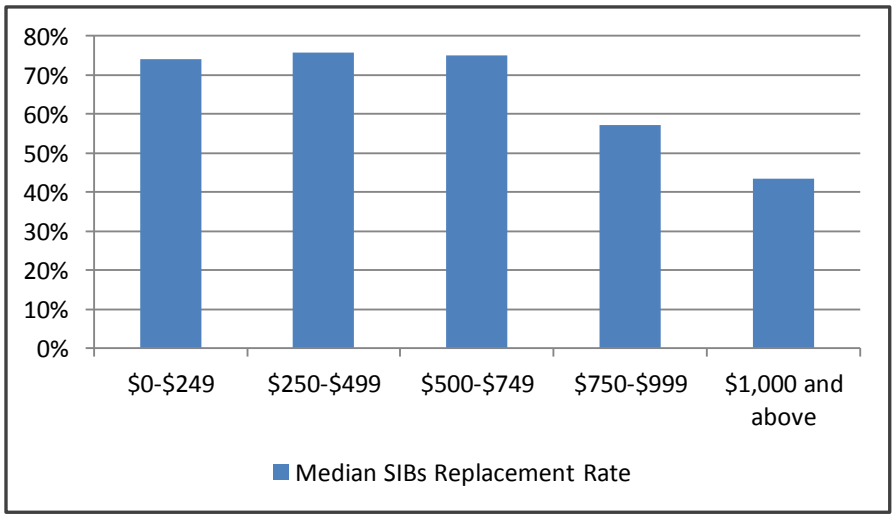
Figure 7.1. SIBs IRR by Injury Year



SIBs IRR by Pre-Injury Weekly Wage

Injured employees earning less than $750 a week receive benefits of over 70 percent of their after-tax income. The benefits received by employees who earn $1,000 or more per week in pre-injury wages are significantly less of their pre-injury after-tax wages. The median IRR for this group is 43 percent (see Figure 7.2).

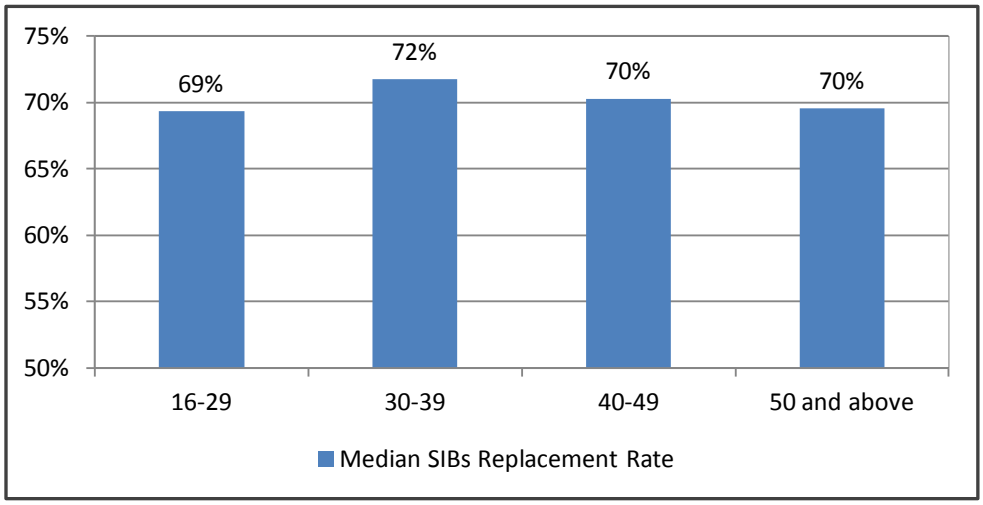
Figure 7.2. SIBs IRR by Pre-Injury Weekly Wage



SIBs IRR by Age

IRRs of injured employees who received SIBs do not differ in a meaningful way by age. All age groups receive benefits of approximately 70 percent of their pre-injury after-tax income (see Figure 7.3).

Figure 7.3. SIBs IRR by Age



SIBs IRR by Gender

Female injured employees who receive SIBs tend to have higher IRRs than male injured employees who also receive SIBs (see Table 7.1). Because female injured employees tend to earn less income than male injured employees, the likelihood of having their benefits capped at the maximum amount is lower. SIBs IRRs for men and women increased after FY 2006, because of benefit amount increases that raised the maximum SIBs payments from $378 a week in 2006 to $498 a week in 2008.

Table 7.1. SIBS IRR by Gender

Gender	2000	2001	2002	2003	2004	2005	2006	2007	2008
Male	69%	71%	69%	63%	64%	73%	63%	70%	72%
Female	71%	77%	76%	76%	75%	74%	70%	75%	77%

SIBs IRR by Marital Status

Married employees whose injuries occurred during the years 2000 to 2003 tend to have slightly lower IRRs than single injured employees (See Figure 7.5). This trend became more pronounced from 2004 to 2008. Married injured employees tend to have higher after-tax incomes which results in benefits capped at the maximum amount for the year of injury. In 2008, single injured employees who qualified for SIBs receive benefits of approximately 78 percent of their wages, in contrast to 69 percent of IRR for married injured employees.

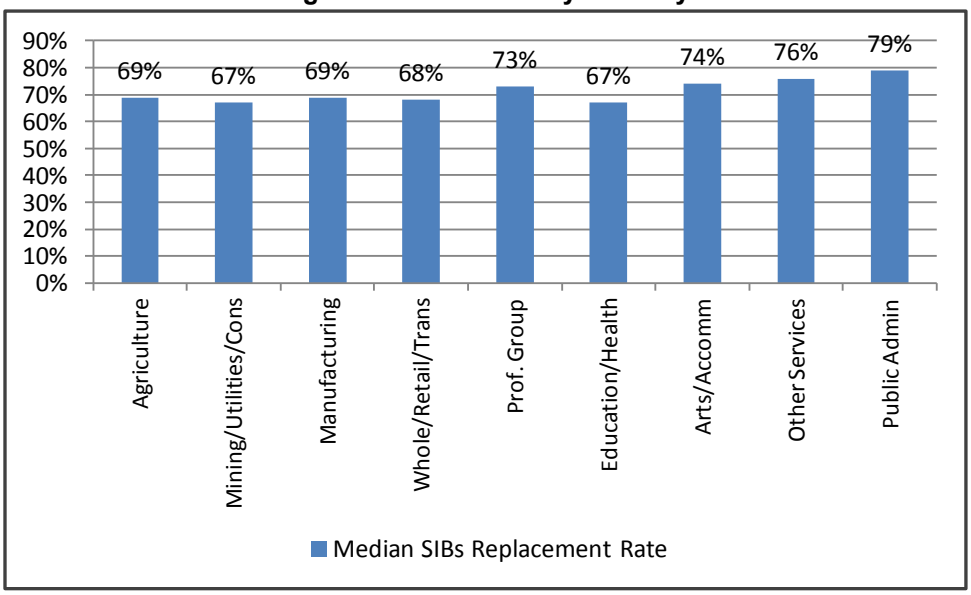
Table 7.2. SIBs IRR by Marital Status

Marital Status	2000	2001	2002	2003	2004	2005	2006	2007	2008
Single	70%	75%	69%	68%	73%	70%	69%	75%	78%
Married	69%	74%	69%	71%	66%	74%	63%	61%	69%

SIBs IRR by Industry

Injured employees who work in public administration have the highest SIBs IRR (79 percent). Injured employees from the professional group, arts and accommodation, and other services also have relatively high SIBs IRRs (see Figure 7.4). The rates of the other industry groups are similar; however injured employees on SIBs in the education and health services industry group, receive benefits of 67 percent of their pre-injury, after-tax income.

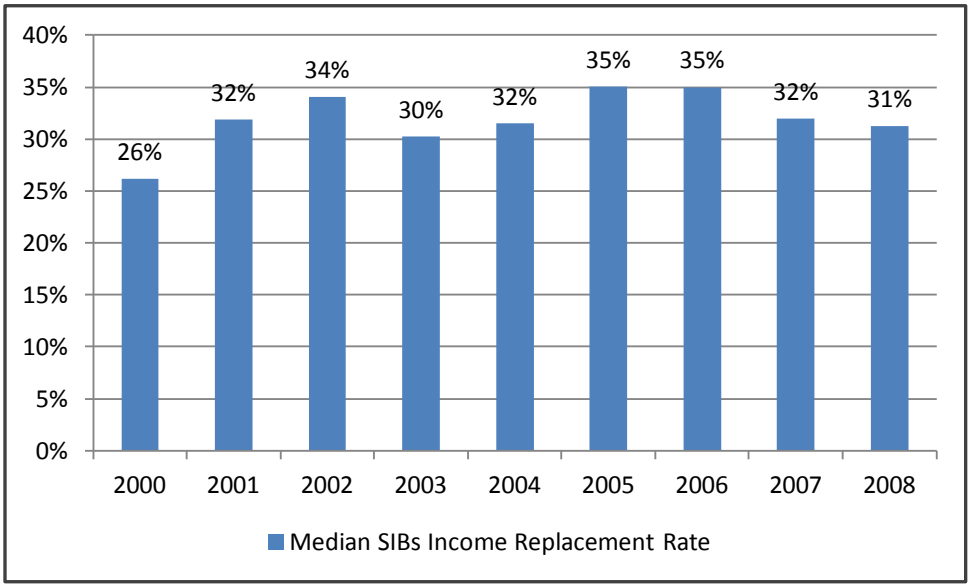
Figure 7.4. SIBs IRR by Industry



Recipients with Benefits Capped at the Maximum Amount

The percent of injured employees receiving SIBs benefits capped at the maximum benefit amount reached a high of nearly 35 percent in 2005 and 2006, but decreased to 31 percent in 2008 after the benefit increases of fiscal years 2007 and 2008 (see Figure 7.5). However, the 2008 results are still five percentage points higher than for injured employees whose benefit amounts were capped in 2000.

Figure 7.5. Percent of SIBs Recipients Capped at the Maximum Benefit Level



SIBs IRR by Capped Benefits

The IRR for injured employees receiving SIBs benefits capped at the maximum benefit amount peaked in 2005 at 74 percent, but decreased during 2006 (see Table 7.3). Beginning in 2007 the IRR began to improve. Injured employees whose benefits were not capped at the maximum benefit amount had IRRs that remained relatively stable over this timeframe, and increased after 2006.

Table 7.3. SIBs IRR by Capped Benefits

Capped Benefits	2000	2001	2002	2003	2004	2005	2006	2007	2008
Capped	67%	72%	68%	64%	64%	74%	65%	59%	62%
Not Capped	70%	76%	69%	70%	72%	70%	69%	74%	78%

8. Summary

This study examined the extent to which an injured employee's after-tax income is replaced by workers' compensation benefit payments. In the years prior to FY 2007, Income Replacement Rates (IRR) fell as benefit levels remained unchanged relative to average weekly wages, which continued to experience moderate increases. Another contributing factor to the declining IRRs prior to 2007 was marital status. Married couples generally see higher tax deductions and credits, resulting in more after-tax income.

These conditions resulted in a steadily climbing percentage of TIBs recipients with benefit amounts capped at the maximum benefit levels, and relatively low IRRs. TIBs payments increased substantially, however, in FY 2007. Higher benefit amounts resulted in a decline in the percentage of injured employees with benefit payments capped at the maximum rate allowed by statute. The percentage of injured employees receiving TIBs payments with capped benefit amounts decreased from a high of 23 percent in 2006 to 13 percent in 2011. Higher benefits also significantly increased IRRs. The IRR for this group of injured employees increased from 86 percent in 2000 to 93 percent in 2011.

Injured employees receiving IIBs and SIBs did see their IRRs increase, but not to the extent that TIBs recipients experienced. The IIBs IRR improved from 73 percent in 2005 to 82 percent in 2011. A lower percentage of injured employees receiving IIBs had their benefits capped at the maximum benefit amount, dropping from 45 percent in 2006 to 35 percent in 2010, and increased slightly to 39 percent in 2011. This was the result of the increase in the maximum IIBs weekly benefit amount from $378 a week in FY 2006 to $472 a week in FY 2007.

The SIBs IRR increased from approximately 70 percent of after-tax income in 2000 to 76 percent in 2008. The percent of injured employees receiving SIBs benefits capped at the statutory maximum amount reached a high of nearly 35 percent in 2005, but decreased to 31 percent in 2008 after the FY 2007 benefit amount increases. The IRR of SIBs recipients with payments capped at the maximum rate decreased from 74 percent in 2005 to 62 percent in 2008.

In short, the findings show that injured employees receiving TIBs payments saw the highest IRRs, and benefited the most from the benefit amount increases beginning in FY 2007. Injured employees receiving IIBs or SIBs saw more modest increases in their IRRs. Adequate income replacement by workers' compensation benefits is an important component of the Texas workers' compensation system. The Research and Evaluation Group (REG) will continue to monitor benefit adequacy to detect any changes in Texas' IRRs.

Texas Department of Insurance
Workers' Compensation
Research and Evaluation Group

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Texas Department of Insurance Website:
http://www.tdi.texas.gov/wc/regulation/roc/

Per Chapter 405 of the *Texas Labor Code*, the Workers' Compensation Research and Evaluation Group (REG) at the Texas Department of Insurance is responsible for conducting professional studies and research on various system issues, including:

- the delivery of benefits
- litigation and controversy related to workers' compensation
- insurance rates and rate-making procedures
- rehabilitation and reemployment of injured employees
- the quality and cost of medical benefits
- employer participation in the workers' compensation system
- employment health and safety issues, and
- other matters relevant to the cost, quality, and operational effectiveness of the workers' compensation system.
