

**DISABLED WORKER ALLOWANCE RATES:
 VARIATION UNDER CHANGING ECONOMIC CONDITIONS**

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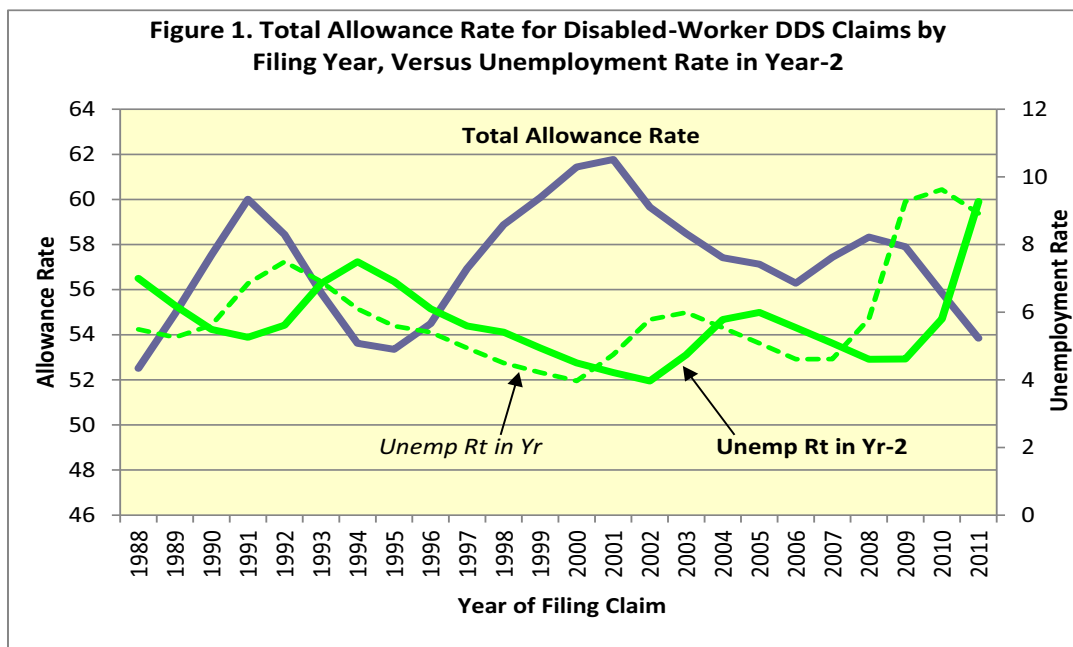
This note explores the relationship between changing economic conditions and the percent of disabled worker claims (applications) that are awarded under the Social Security Disability Insurance (DI) program.

Introduction

Economic conditions influence the number and timing of disabled worker claims and awards under the DI program¹. This is true in spite of the fact that the DI program’s definition of disability is based on a medical determination of the inability to engage in any substantial gainful activity without regard to the current state of the economy. Because disability claims have historically increased in response to periods of high unemployment, it is reasonable to expect that the percentage of claims that are allowed would drop under conditions of high unemployment. Evidence presented in this note supports that expectation.

Background and Data

Figure 1 shows disabled worker total allowance rates for claims filed in years 1988 through 2011² using complete reported data from the Social Security Administration Disability Research File. The total allowance rate (solid blue line) reflects all allowances made for claims filed in each year at the Disability Determination Services (DDS), both initial and reconsideration determinations, as well as allowances made for those claims on subsequent appeals. Rates are expressed as a percent of initial claims received at the DDS after screening for disability insured status and other non-medical criteria, generally at the time of receipt of claim at Social Security field offices.



¹ During periods of low unemployment rates, when labor supply is tight and demand for production is high, workers with developing medically-determinable impairments are likely to be retained beyond the point at which they are able to maintain their capacity to function fully in the job. However, when unemployment rises and demand for production drops, such workers with developed medically-determinable impairments who are laid off will often be significantly less likely to find reemployment opportunities. Thus, many individuals who apply for disabled worker benefits after being laid off from recent employment can be expected to fully qualify for benefits under the disability definition in spite of the fact that they have been recently employed and there has been no precipitous change in their impairment.

² Claims and allowances are based on non-published data from the SSA Disability Research File (DRF) with complete counts of actions through June 2012 for DDS and July 2012 for appeals. For the purpose of these estimates, appeals still under consideration are assumed to result in allowance in half the cases pending. Cases with appeals in process represented about 29 percent of claims filed in 2011, less than 9 percent of claims filed in 2010, less than 3 percent of claims filed in 2009, and less than 1 percent of claims filed in 2005 through 2008. Tables 59 through 64 in the “Annual Statistical Report on the Social Security Disability Insurance Program, 2011” present similar data from the DRF for claims through 2010 including actions only through a part of 2011 (http://www.ssa.gov/policy/docs/statcomps/di_asr/index.html).

The total allowance rate for applicants in a year has varied between about 52 percent and 62 percent of the screened claims received at the DDS (excluding those screened out at the field office for non-medical reasons). It is important to note that this screening of disability claims eliminates a significant portion of the claims taken at field offices on the basis of technical denial. Table 59 in the “Annual Statistical Report on the Social Security Disability Insurance Program, 2011,” at http://www.ssa.gov/policy/docs/statcomps/di_asr/index.html, indicates that screened claims represented about 90 percent of initial claims at the fields offices during the 1990’s. Beginning in 2002, the Social Security Administration adopted a policy that required taking a formal OASDI application for any individual who applied for Supplemental Security Income in order to make sure eligibility for OASDI benefits would be determined. As a result, the percentage of formal claims that were sent to a DDS after screening dropped to about 70 percent by 2005. Thus, allowance rates expressed as a percent of all DI claims received at field offices before this screening would be substantially lower than shown in Figure 1.

The allowance rate for those filing claims in each year is compared in Figure 1 to civilian unemployment rates, which are a standard measure of the state of the economy. The dashed green line shows the unemployment rate in the year that the initial claim was filed. The solid green line shows the unemployment rate for the second year prior to filing the initial claim. The unemployment rate for the second year prior to filing a claim has a clear inverse relationship with the allowance rates. The lag between the annual unemployment rate and the year claims are filed is consistent with behavioral responses that are common in economic downturns.

- First, many individuals who lose employment early in a recession would hope to become reemployed quickly, particularly if it is not yet evident that the economy is in recession and jobs are becoming increasingly scarce. For example, while the economy was technically in recession throughout 2008, the average level of unemployment for the year was still close to the full-employment rate of 5.5 percent.
- Second, once an unemployed worker realizes that job opportunities are limited, often after a period of job search, application for unemployment insurance benefits generally follows. Application for unemployment insurance benefits may also occur immediately upon job loss. Krueger and Mueller (http://www.whitehouse.gov/sites/default/files/ui_report_final_121511.pdf) found that application for disabled worker benefits often comes as unemployment insurance benefits are about to expire.
- Third, in times of recession, the duration of unemployment insurance benefits is generally extended beyond the usual 6 months.
- Fourth, because disabled worker benefits (a) require a 5-month waiting period after becoming disabled (including not working in substantial gainful activity) and (b) may be paid retroactively for up to 12 months prior to the date of filing a claim, claimants may not be in a rush to apply, particularly if they are actively seeking reemployment.

Preliminary Statistical Analysis

Statistical analysis of the data presented in Table 1 supports the clear relationship seen in Figure 1 between disabled worker allowance rates and unemployment in the second prior year. We present two examples of simple model specifications without any suggestion that these are optimal models. Clearly, further research on this relationship is warranted.

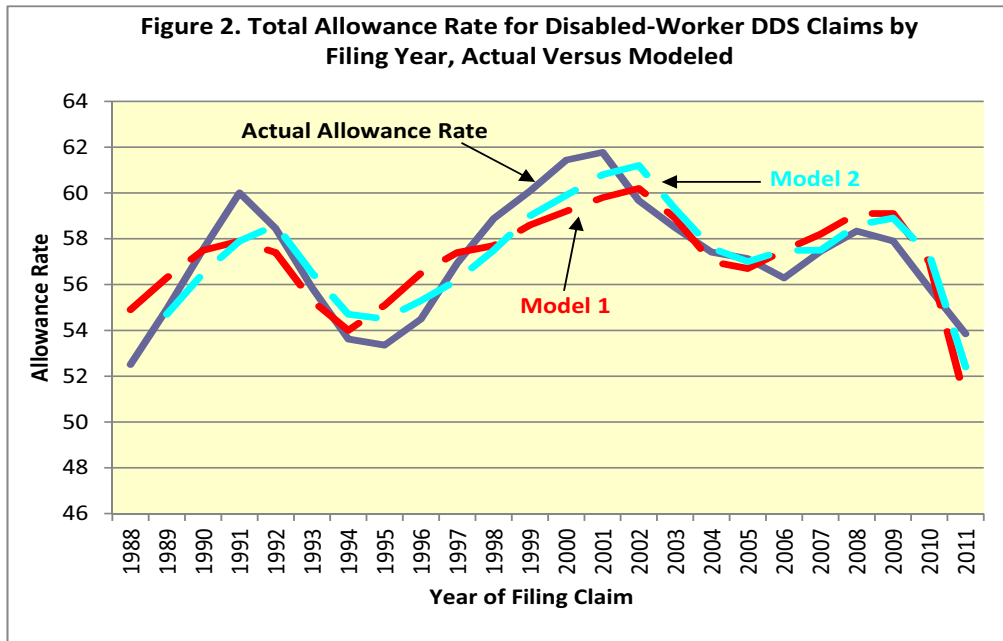
Model 1: we estimated a simple regression where the total allowance rate (in year t, from 1988-2011) is a function of the unemployment rate in the second year prior to the year of filing a claim (year t-2). This model specification yields an R-squared coefficient of 0.67 and a standard error of 1.48 percentage points.

$$AR(t) = 67.15 - 1.74939*UR(t-2)$$

Model 2: we added additional explanatory variables regressing the total allowance rate (in year t, from 1989-2011) on (a) allowance rate for the prior year (year t-1), (b) the second prior year (year t-2) unemployment rate, and (c) the change in unemployment rate from third prior year (year t-3) to second prior year (year t-2). This model specification yields an R-squared coefficient of 0.80 and a standard error of 1.155 percentage points.

$$AR(t) = 35.97 + 0.47135*AR(t-1) - 0.99053*UR(t-2) - 0.2041*(UR(t-2)-UR(t-3))$$

Figure 2 shows the actual and modeled total allowance rates by filing year.



Conclusion

The inverse relationship between the allowance rate for disabled worker claims filed in a year and the unemployment rate in the second prior year is evident in Figure 1. The most recent recession which started in 2008 is no exception. The unemployment rate rose from 4.6 percent for 2007 to 5.8 percent for 2008, and allowance rates for claims filed in 2010 are lower than rates for claims filed in 2009. The more dramatic further increase in the unemployment rate to 9.3 percent for 2009 suggests a further drop in allowance rates for claims filed in 2011. Preliminary data for claims filed in 2011 suggest that allowance rates will be lower than in 2010 as expected.

Table 1.—Total Allowance Rates for Social Security Disabled Worker Claims Received at State Disability Determination Services by Claim Filing Date, Compared to Unemployment Rate for Current Year and Second Prior Year¹

Filing Date	Total Allowance Rate	Unemployment Rate in Year	Unemployment Rate in Year-2
1988.....	52.5	5.49	7.00
1989.....	54.9	5.26	6.20
1990.....	57.5	5.62	5.49
1991.....	60.0	6.85	5.26
1992.....	58.4	7.49	5.62
1993.....	55.9	6.91	6.85
1994.....	53.6	6.10	7.49
1995.....	53.4	5.59	6.91
1996.....	54.5	5.41	6.10
1997.....	56.9	4.94	5.59
1998.....	58.9	4.50	5.41
1999.....	60.1	4.22	4.94
2000.....	61.4	3.97	4.50
2001.....	61.8	4.74	4.22
2002.....	59.7	5.78	3.97
2003.....	58.5	5.99	4.74
2004.....	57.4	5.54	5.78
2005.....	57.1	5.08	5.99
2006.....	56.3	4.61	5.54
2007.....	57.4	4.62	5.08
2008.....	58.3	5.80	4.61
2009.....	57.9	9.28	4.62
2010.....	55.9	9.63	5.80
2011.....	53.8 ²	8.93	9.28
2012.....	n/a	8.08	9.63

¹ Source: Social Security Administration, Disability Research File, 100% data. Data for the initial and reconsideration levels are current through June 2012. Data for the hearing level or above are current through July 2012. Total allowance rate adds half of all pending initial, reconsideration, and appeals.

² Preliminary.

Table 2.—Actual and Modeled Allowance Rates for Social Security Disabled Worker Claims Received at State Disability Determination Services by Claim Filing Date

Filing Date	Actual Allowance		
	Rate	Model 1 ¹	Model 2 ²
1988.....	52.5	54.9	
1989.....	54.9	56.3	54.7
1990.....	57.5	57.5	56.5
1991.....	60.0	57.9	57.9
1992.....	58.4	57.4	58.6
1993.....	55.9	55.3	56.5
1994.....	53.6	54.0	54.7
1995.....	53.4	55.1	54.5
1996.....	54.5	56.5	55.3
1997.....	56.9	57.4	56.2
1998.....	58.9	57.7	57.5
1999.....	60.1	58.6	59.0
2000.....	61.4	59.2	59.9
2001.....	61.8	59.8	60.8
2002.....	59.7	60.2	61.2
2003.....	58.5	58.9	59.3
2004.....	57.4	57.0	57.6
2005.....	57.1	56.7	57.0
2006.....	56.3	57.5	57.5
2007.....	57.4	58.2	57.5
2008.....	58.3	59.1	58.6
2009.....	57.9	59.1	58.9
2010.....	55.9	57.0	57.3
2011.....	53.8 ³	50.9	52.4

¹ Explanatory variable for Model 1 is the unemployment rate in the second year prior to the year of filing a claim (year t-2).

² Explanatory variables for Model 2 are (a) the allowance rate for the prior year (year t-1), (b) the second prior year (year t-2) unemployment rate, and (c) the change in unemployment rate from third prior year (year t-3) to second prior year (year t-2).

³ Preliminary.