

# Annuities and Retirement Happiness

By Steve Nyce and Billie Jean Quade

Prolonged economic uncertainty and high unemployment have been wreaking havoc on the American retirement dream. Over the last five years, most Americans have suffered losses to their retirement savings and home values, while the rising cost of essentials, such as food, gas and health care, is squeezing many household budgets. This Towers Watson's analysis examines retirement satisfaction over the last decade, including the cushioning effects of annuities.<sup>1</sup>

The financial crisis and recession that followed put new emphasis on the value of financial security and the risks of market dependence. While adverse economic conditions have affected all workers, older workers and retirees face additional risks, such as outliving their savings (longevity risk) and having less time to wait for markets to rebound. Annuities protect retirees from longevity risk and establish a floor of income — beyond the modest annuity paid by Social Security — safe from investment losses.

While for some retirees, a substantial portion of retirement wealth is annuitized through defined benefit pension plans, the increasing scarcity of these plans leaves more workers staring down retirement with a 401(k)-style lump sum. Many retirees and older workers are wondering whether to buy an annuity and how much of their savings to annuitize. With 76 million baby boomers making or about to make annuity decisions, the stakes are high for everyone — retirees, policymakers, employers, even taxpayers.

Many Americans consider annuities as illiquid and expensive and thus have avoided them in the past, even as research has shown that the security provided by annuities boosts retirement satisfaction.

A 2003 study found that retirees with a higher percentage of annuitized income were happier on a cross-sectional basis and maintained higher levels of satisfaction over time than their less annuitized counterparts.<sup>2</sup> A 2005 study found that retirees receiving annuities from defined benefit pensions were happier than those without pensions and those with only a defined contribution plan.<sup>3</sup>

## Key findings

- Retirement satisfaction has steadily declined over the last decade.
- Satisfaction is highest among those with high levels of wealth and income who are very healthy and annuitize their income.
- Among retirees with similar wealth and health characteristics, those with annuitized incomes are happiest.
- Annuities provide the biggest satisfaction boost to retirees with less wealth and those in poor health.
- Despite variations, the satisfaction effects of annuitized income and general decline in retirement satisfaction are long-term and extend across all respondents.

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## About the analysis

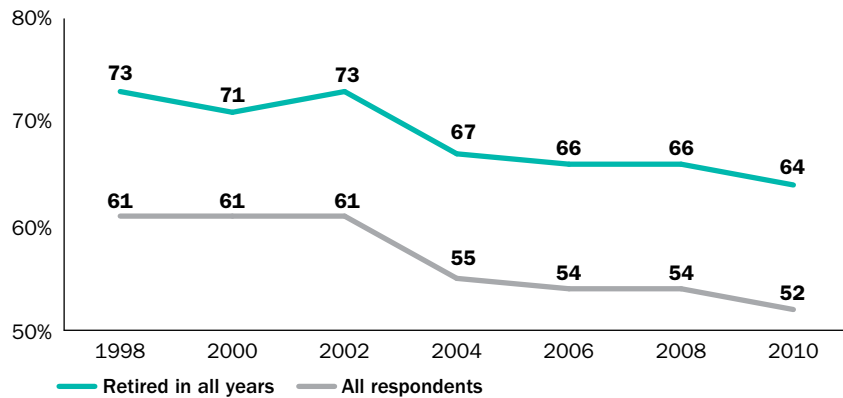
Launched in 1992 by the University of Michigan, the Health and Retirement Study (HRS) is a longitudinal panel study of retirement. The study, upon which our Towers Watson analysis is based, surveys approximately 26,000 Americans over age 50 every other year on retirement issues, such as wealth, income, job history, health and cognition. The analysis examines the seven survey waves from 1998 to 2010 and captures two cohorts. The HRS cohort, the largest cohort in the study, includes those born between 1931 and 1941, and the children of the depression age (CODA) cohort includes those born between 1924 and 1930. All survey participants considered themselves “completely retired” rather than “partly retired” or “not retired at all.” The study uses respondent-level sampling weights where appropriate (all figures show weighted values).

<sup>1</sup> In this article, annuities refer to the broad class of financial instruments that pay a guaranteed distribution of income at specified intervals and amounts over a stated period of time. While the primary source of annuity income for most survey participants in this analysis is from a defined benefit plan, some purchased an annuity contract through an insurance company. In 2010, 44% of retirees received income from a defined benefit plan and 10% from an annuity.

<sup>2</sup> See Constantijn Panis, *Annuities and Retirement Satisfaction*, RAND Corporation, April 2003, available at [www.rand.org/pubs/drafts/2008/DRU3021.pdf](http://www.rand.org/pubs/drafts/2008/DRU3021.pdf).

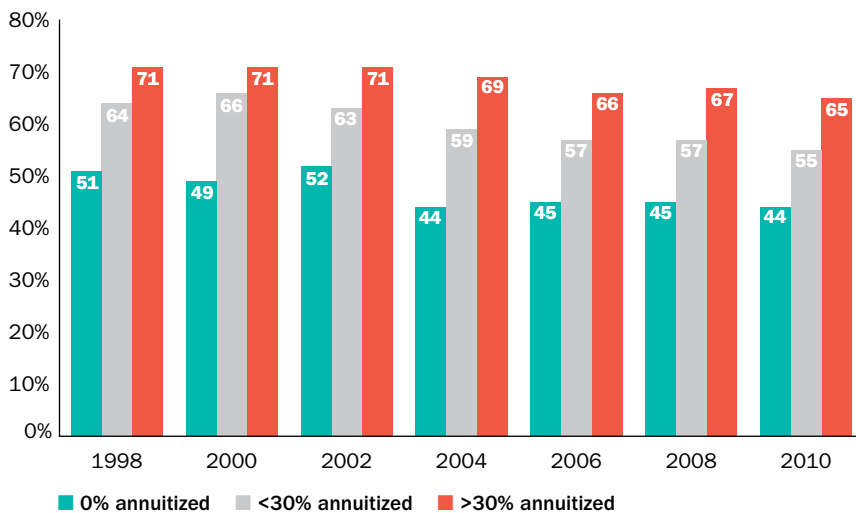
<sup>3</sup> See Keith A. Bender and Natalia A. Jivan, *What Makes Retirees Happy?* Center for Retirement Research at Boston College, Issue Brief, No. 28, February 2005, available at [http://crr.bc.edu/wp-content/uploads/2005/02/ib\\_28.pdf](http://crr.bc.edu/wp-content/uploads/2005/02/ib_28.pdf).

**Figure 1. Retiree satisfaction trends (% satisfied), 1998 – 2010**



Source: Towers Watson

**Figure 2. Retiree satisfaction rates by extent of annuitization, full sample, 1998 – 2010**



Source: Towers Watson

The study defines annuitized income as any steady monthly income from a pension or annuity other than Social Security. We utilize household measures of income and wealth but respondent-level measures of satisfaction.

All measures of wealth include total household assets (including real estate and all residences) as well as discounted values of pension and annuity benefits but exclude the value of Social Security benefits. The assets and income section of the HRS survey documents the amount, duration and frequency of respondents' current income sources. We use this information to calculate the present value of future income streams.

<sup>4</sup> See "The 2011 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds," Washington, D.C., U.S. Social Security Administration, 2011, available at [www.ssa.gov/oact/tr/2011/tr2011.pdf](http://www.ssa.gov/oact/tr/2011/tr2011.pdf).

<sup>5</sup> See "Period Life Table," U.S. Social Security Administration, Washington, D.C., 2007.

<sup>6</sup> See "United States Life Tables," Centers for Disease Control and Prevention, Monthly Vital Statistics Report, Volume 50, Number 9, Maryland, 2007.

<sup>7</sup> See A. L. Gustman, T. L. Steinmeier and N. Tabatabai, "Pensions in the Health and Retirement Study," Cambridge: Harvard University Press, 2010.

The calculations use a discount rate of 5.7% based on the Social Security Trustees Report's long-run projections.<sup>4</sup> If the respondent was covered under Social Security, which represented 92% of retirees in our study sample in 2010, we use life expectancies projected by Social Security in 2007.<sup>5</sup> If the respondent was not covered under Social Security, we use life expectancies calculated by the Centers for Disease Control and Prevention also published in 2007.<sup>6</sup> Alan L. Gustman, Thomas L. Steinmeier and Nahid Tabatabai conducted studies on pension values in this data set; after taking sample differences into account, our results are consistent with their pension values.<sup>7</sup>

### General patterns of retirement satisfaction

The HRS survey asks respondents, "All in all, would you say that your retirement has turned out to be very satisfying, moderately satisfying or not at all satisfying?"

Respondents who answered "very satisfying" were considered "satisfied." As shown in *Figure 1*, retirement satisfaction declined steadily between 1998 and 2010. Overall satisfaction dropped by nine percentage points — from 61% in 1998 to 52% in 2010. The pattern is similar for respondents who were retired for all 12 years of the study period, although they were considerably more satisfied than the full sample, largely because they tended to be wealthier, healthier and have more annuitized income.

### Full sample analysis

The full sample includes retirees born between 1924 and 1941, making them 69 to 86 years old in 2010, the most recent survey year. In 2010, 48% of the full sample population had annuitized income other than Social Security benefits, and 27% received 30% or more of their income in the form of an annuity.

*Figure 2* depicts satisfaction rates among those in the full sample with no annuitized income, those with less than 30% of their income annuitized and those with more than 30%. Over time, satisfaction scores are significantly lower for those without annuities, and retirees with less than 30% of their income annuitized are less satisfied than the highly annuitized group. While there is no "magic number" for how much to annuitize, historically, greater annuitization has proven beneficial to retirement satisfaction.

"Overall satisfaction dropped from 61% in 1998 to 52% in 2010."

**Figure 3. Retiree satisfaction rates by extent of annuitization and years into retirement, full sample, 1998 – 2010**

Years into retirement	Annuitization	1998	2000	2002	2004	2006	2008	2010	Percentage point decline from 1998 – 2010
0 – 4	0%	52%	48%	53%	45%	48%	50%	48%	-4 pps
	0% – 30%	62%	67%	62%	59%	60%	57%	52%	-10 pps
	>30%	66%	71%	63%	64%	60%	63%	64%	-2 pps
5 – 9	0%	47%	45%	52%	42%	39%	41%	40%	-7 pps
	0% – 30%	60%	66%	60%	55%	53%	50%	53%	-7 pps
	>30%	71%	68%	70%	69%	64%	63%	63%	-8 pps
10 – 15	0%	48%	49%	52%	40%	40%	39%	40%	-8 pps
	0% – 30%	62%	60%	61%	53%	56%	56%	53%	-9 pps
	>30%	74%	73%	74%	70%	67%	67%	65%	-9 pps
16+	0%	55%	53%	51%	46%	45%	45%	45%	-10 pps
	0% – 30%	68%	67%	67%	65%	63%	62%	60%	-8 pps
	>30%	72%	72%	73%	70%	69%	71%	68%	-4 pps
Overall		61%	61%	61%	55%	54%	54%	52%	-9 pps

Source: Towers Watson

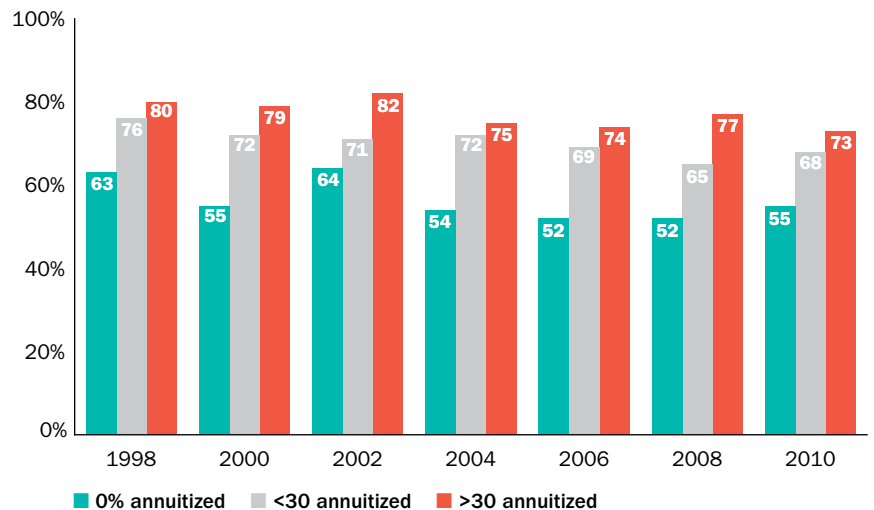
Previous research has shown that older members of the CODA cohort are more satisfied than younger respondents.<sup>8</sup> To isolate the effects of annuities from cohort/age factors, we divided the full sample into groups at various stages of retirement. In this way, we were able to demonstrate that annuities boost satisfaction at all stages of retirement.

As *Figure 3* shows, in every year, annuitants — particularly those with more than 30% of their income annuitized — were happier than non-annuitants. Although retirement satisfaction has been declining over time, satisfaction rates remain higher for those who annuitized more than 30% of their income. Consistent with Panis, those further into retirement tend to be more satisfied, particularly if they also have more annuitized income.

### Longitudinal analysis

The number of retirees within the full sample rises and falls as workers enter retirement and retirees drop out of the study due to death or other reasons. Because of the panel nature of the HRS data set, we also looked at 930 retirees who were retired throughout the study period, examining patterns of annuitization in consecutive years.

We divided respondents into two groups: those who had annuitized income in all waves and those without

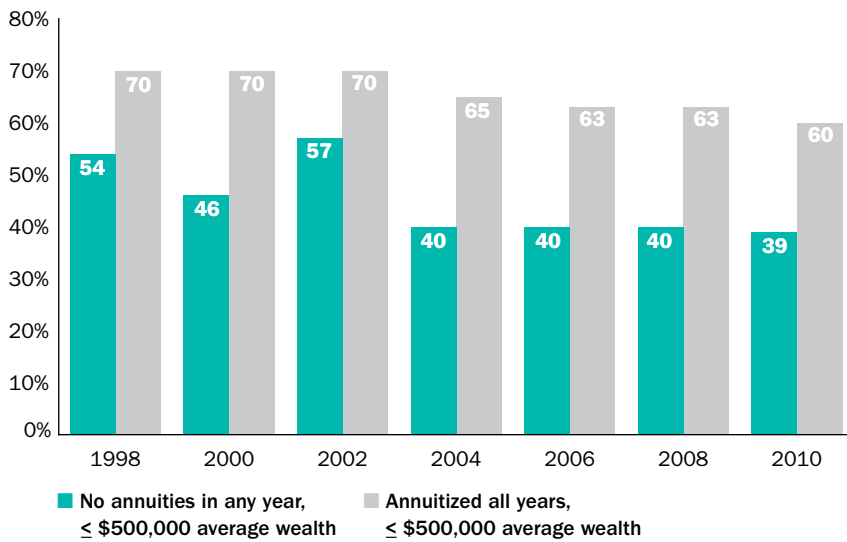
**Figure 4. Retiree satisfaction trends by annuitization, all-retiree sample, 1998 – 2010**

Source: Towers Watson

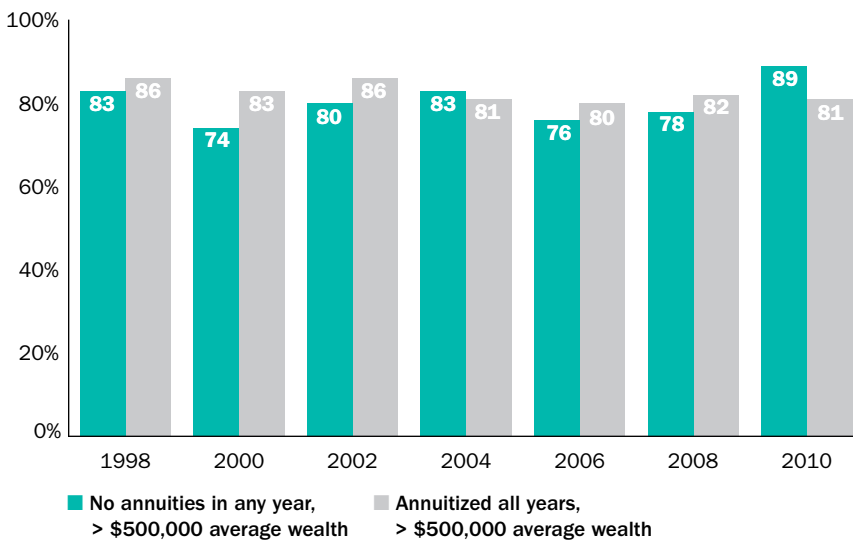
any annuitized income in any wave. We further separated the annuitants by share of total income that was annuitized. Since income and wealth fluctuated over the 12-year span, we used the average share of annuitized income and wealth held over the 12 years to categorize retirees. *Figure 4* again shows the positive effects of annuities, which are built to withstand time and financial market downturns.

<sup>8</sup> See footnote 2.

**Figure 5a. Retiree satisfaction rates when wealth is \$500,000 or less, all-retiree sample, 1998 – 2010**



**Figure 5b. Retiree satisfaction rates when wealth is more than \$500,000, all-retiree sample, 1998 – 2010**



Source: Towers Watson

“At each wealth level, annuitants were consistently more satisfied; the effect is particularly striking among families with less wealth.”

## Impact of wealth on satisfaction

Not everyone has a defined benefit pension or can afford an annuity. Defined benefit pensions are typically offered to higher-income workers, and more skilled and wealthier workers are also more likely to be attracted to firms with them, as evidenced by their job selection.<sup>9</sup> As such, there is a strong link between wealth and annuitization.

Figure 5a shows the relationship between satisfaction and annuitization for retirees with \$500,000 or less in household wealth, and Figure 5b shows the relationship for those with more than \$500,000. Overall, retirees with more than \$500,000 in household wealth were much more satisfied than those with less wealth.

At each wealth level, however, annuitants were consistently more satisfied; the effect is particularly striking among families with less wealth. And the effect of annuitized income on satisfaction has grown over the last decade for those with less household wealth. In fact, less affluent retirees with annuitized income were more than 50% more likely to be highly satisfied in 2010 than their peers without annuitized income, compared with only 30% in 1998. This suggests that in periods of economic distress and uncertainty, retirees with lower wealth have an even greater need for and appreciation of a steady, reliable income stream than more affluent retirees.

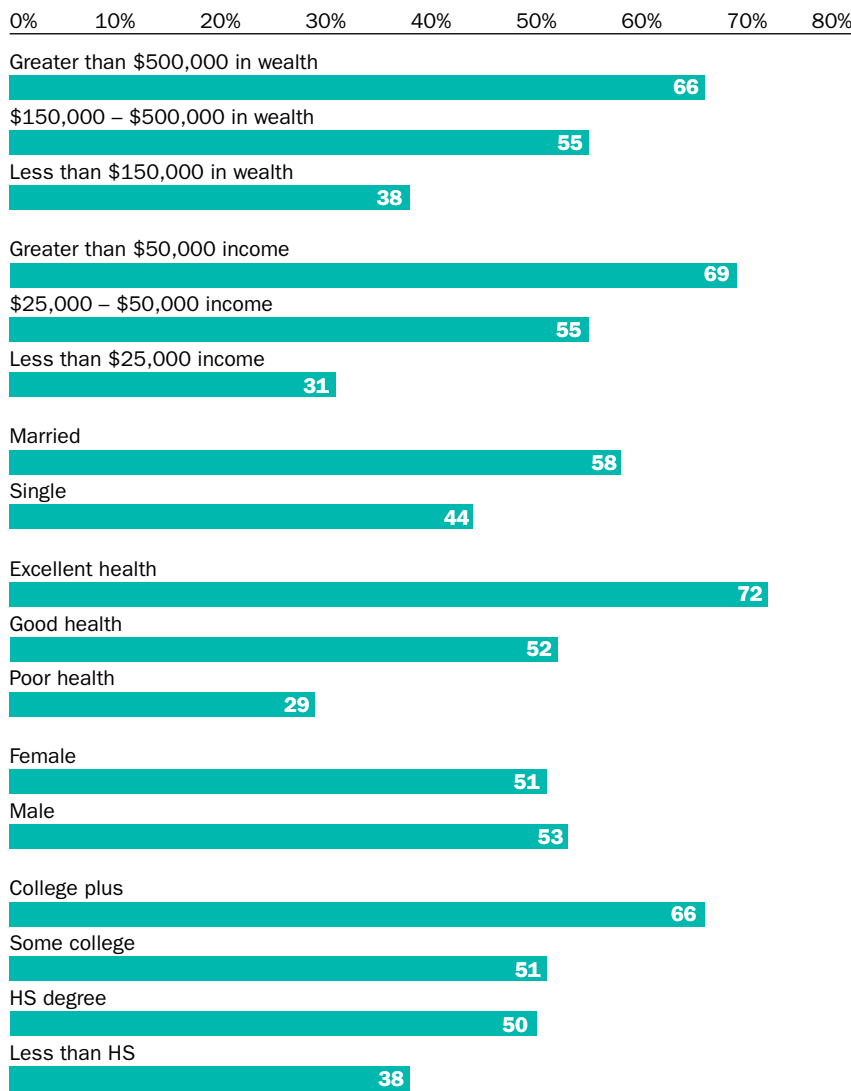
## Other socioeconomic factors influencing retirement satisfaction

Many factors influence retirement well-being. Unsurprisingly, the wealthy and healthy are the happiest, followed by those with more annual income and then those with a college or advanced degree (Figure 6, next page). Married couples are happier than single-person households. Satisfaction does not differ substantially for men and women.

The satisfaction gap is widest between those in excellent health and those in poor health. Although Figure 6 depicts only 2010, the pattern was similar for earlier years and for the all-retiree group.

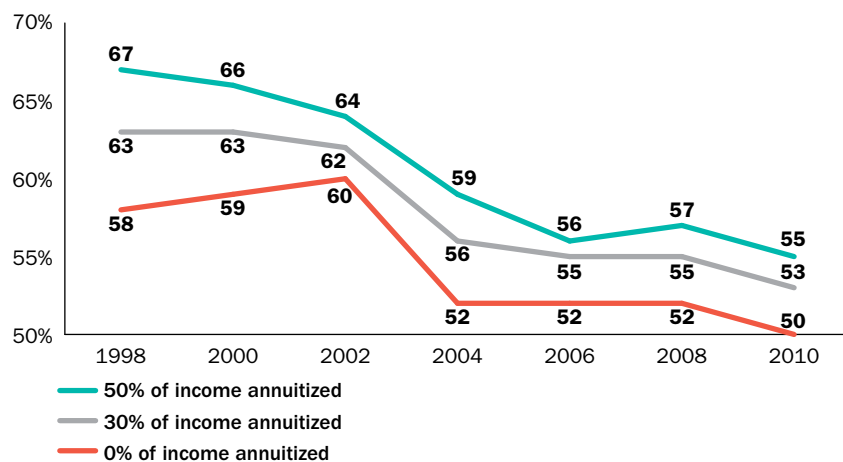
<sup>9</sup> See footnote 7.

**Figure 6. Retirement satisfaction rates by selected demographics, full sample, 2010**



Source: Towers Watson

**Figure 7. Predicted retirement satisfaction rates under increasing annuitization scenarios, full sample, 1998 – 2010**



Source: Towers Watson

## Logistic regression analysis

To expand the analysis of socioeconomic factors and effects of annuities, we ran a series of logistic regressions. After holding wealth, health, income, age, education and other factors constant, annuitized income still boosts retirement satisfaction (Figure 7).<sup>10</sup> In every year, respondents with more annuitized income were more satisfied. However, the differences among annuitization levels become less pronounced after controlling for socio-demographic factors.

The analysis strongly links health to satisfaction, and poor health is the strongest predictor of unhappiness, a finding echoed by other research as well. Yet annuities affect satisfaction even after accounting for health.<sup>11</sup> Figure 8, next page, shows retirement satisfaction for four wealth and health groups. As expected, those in excellent health are happier than those in poor health and those with more wealth are happier than those with less.

Within these groups, however, higher levels of annuitized income are linked to higher satisfaction in retirement. Between those with no annuity and those who annuitize 50% of their income, the widest satisfaction gap is among those in poor health with lower wealth (lower left quadrant). Yet this group also experienced the greatest erosion in retirement satisfaction over the last decade, and annuitized income does not appear to dampen this trend. Conversely, very affluent retirees in excellent health report only modest declines in satisfaction over the last decade.

<sup>10</sup> A logistic regression estimating the likelihood of the sample to be satisfied was calculated for every participant wave from 1998 to 2010. The estimate controlled for annuitized income, health, annual income, wealth, education, age, gender, race, survey cohort membership and years into retirement. Marginal effects were calculated to find predicted satisfaction rates, the results of which appear in Figures 7 and 8. Similar results were found for year-over-year regressions with the longitudinal sample. We also estimated models using a pooled sample over the study period, including year dummies, and found similar patterns in predicted satisfaction rates and annuitized income over the study period. More information about the models is available upon request.

<sup>11</sup> See footnote 2.

“Between those with no annuity and those who annuitize 50% of their income, the widest satisfaction gap is among those in poor health with lower wealth.”

“The declining trend in retirement satisfaction is particularly worrisome given the broader economic and fiscal challenges lying ahead for the U.S.”

### Conclusion

Today’s workers face very different retirement challenges than their parents and grandparents once did. Retirement plans and savings vehicles are changing, and today’s retirees must choose from a sometimes bewildering array of options. But while workers and retirees might have very different needs, almost all of them can benefit from annuitizing some portion of their retirement income (beyond Social Security). But annuitized income is not the only answer. While a steady stream of income imparts a sense of security and thus boosts satisfaction in retirement, its impact is relatively modest compared with other socio-economic factors, most notably health and wealth.

The declining trend in retirement satisfaction is particularly worrisome given the broader economic

and fiscal challenges lying ahead for the U.S. While annuitizing income might help, it does not appear to mitigate this downward trend for any socioeconomic group. However, retirees within the most vulnerable populations — least affluent and in poor health — tend to benefit the most from annuitizing more of their income. Although those with shorter life expectancies must balance the increased security and satisfaction with the reality that annuities are a better financial deal for those who live longest.

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**Figure 8. Predicted retirement satisfaction for various wealth and health levels under increasing annuitization scenarios, full sample, 1998 – 2010**

Health	Annuitization	Wealth					
		\$500,000 or less			More than \$500,000		
		1998	2004	2010	1998	2004	2010
Excellent	50%	76%	72%	65%	89%	84%	83%
	30%	74%	69%	64%	88%	84%	82%
	0%	72%	65%	63%	86%	84%	81%
Poor	50%	55%	41%	41%	69%	67%	59%
	30%	51%	38%	37%	67%	64%	59%
	0%	44%	34%	32%	64%	60%	58%

Source: Towers Watson

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