Goldenson Center, University of Connecticut

2013 National Retirement Sustainability Index

A Paradigm Shift in Measuring Retirement Preparedness

Janet and Mark L. Goldenson Center for Actuarial Research

Illuminating Industry Innovation

Importance of retirement preparedness

Adequate preparation for a quality, sustainable retirement life is a preoccupation for many Americans. It is therefore important to develop an aggregate measure reflecting multiple aspects of retirement preparedness for the US population to guide in retirement decision making. Current retirement indices, however, share a shortcoming in that they are all based solely on economic factors impacting retirement readiness. The Goldenson Center's National Retirement Sustainability Index (NRSI) takes a holistic interpretation of retirement readiness by recognizing some key additional **non-economic** drivers of retirement sustainability. They are:

- Health status at retirement
- Level of job satisfaction
- Level of financial planning
- Level of adaptability

The NRSI combines both economic (or baseline) drivers of retirement sustainability and these lifestyle factors to produce an aggregate index.

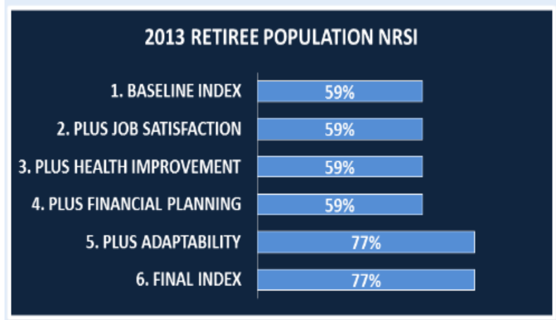
Key takeaway messages

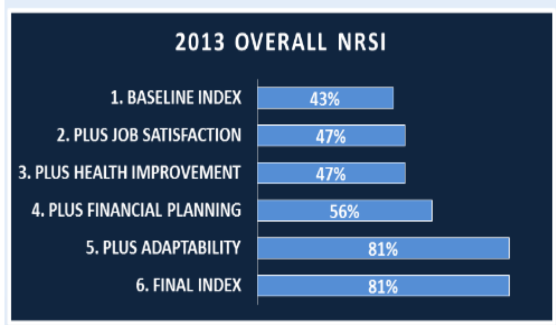
- **Retirement sustainability is not a manifest destiny driven entirely by current economic conditions** but can be managed and controlled by individual and societal actions
- The non-economic drivers of NRSI collectively have a significant impact on the overall NRSI value and are not impacted by the economic conditions of the time
- The non-economic factors demonstrate that retiree adaptability has the greatest NRSI impact
- Retirement financial planning that financial institutions can influence is the second most important non-economic factor impacting the overall NRSI.

NRSI interpretation

The higher the NRSI, the closer retirement living standards are relative to living standards prior to retirement. For example, an NRSI of 50% means that to achieve retirement sustainability or readiness, one's standard of living at retirement should be reduced to half of what it used to be just prior to retirement. On a relative basis, an increase in the NRSI between two successive time periods from 50 to 55 should be interpreted as a 10% improvement in the level of retirement living standards over the two time periods.

Results: The main results for 2013 are shown in charts below.





Comparison with prior years

The 2013 results are shown together with results for 2006 and 2008 to demonstrate how the NRSI changes with changes in economic conditions.

National Retirement Sustainability Index	2006 Overall	2008 Overall	2013 Overall
Baseline Index	46%	32%	43%
Final Index	83%	77%	81%

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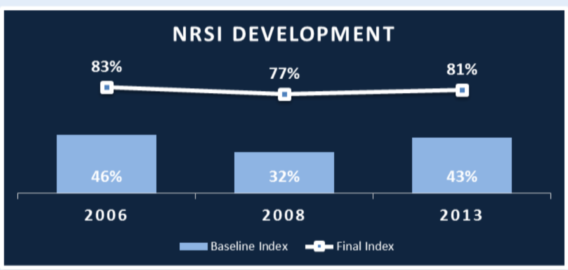
Implications of results

- The baseline NRSI in 2013 is only 43%, but after incorporating the non-economic factors, it increases to 81%. This means that non-economic factors are capable of raising the retirement standard of living relative to the standard of living prior to retirement by as much as 38 percent.
- The baseline NRSI reflects the economic conditions of the calendar year being modelled and this is similar to current retirement indices. For example, the baseline NRSI for 2008 which is the year of the financial crisis, is only 32%. This means that during the height of the financial crisis, economic assets at retirement could only sustain 32% of the living standards enjoyed prior to retirement.
- For two contrasting economic conditions, 2006 and 2008, there is only a 6% point difference in the final NRSI values, while the corresponding baseline NRSI values differ by almost 14%.



NRSI calculation

The baseline NRSI follows a similar logic to current indices. It is based on economic assets available at retirement and compared to future obligations or liabilities that need to be fulfilled throughout one's retirement life. Assets and liabilities are projected using typical interest rate assumptions and actuarial survival rates. The baseline net equity (assets less liabilities) is then increased by the non-economic factors and the final NRSI is normalized to range from 0 to 100 by comparing the resultant net equity to a benchmark equity which reflects the standard of living enjoyed just prior to retirement.

About the Goldenson Center for Actuarial Research

The Goldenson Center for Actuarial Research at the University of Connecticut (UConn) offers clients a unique combination of academic rigor and industry knowledge.

As part of the university community, the Goldenson Center is able to partner top actuarial students and faculty with industry professionals to provide high-quality applied research at cost effective rates. With students and faculty from UConn's acclaimed actuarial science program, the Center is able to provide innovative research projects designed to help industry professionals better understand and manage actuarial issues and challenges. The result of this distinctive collaboration between academia and industry is an exceptional research center that provides industry professionals with leading research while supplying actuarial students with an invaluable experiential education.

Our Director

As the Director of the Goldenson Center and UConn Professor, Dr. Jay Vadiveloo works on applied actuarial research projects using teams of academicians, students and industry professionals. Dr. Vadiveloo has a doctorate in statistics from the University of California, Berkeley, is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and a Chartered Financial Analyst. He has over 25 years of experience working in senior level management in the life insurance industry and more than 20 years of experience with UConn's actuarial science program.

In addition to publishing articles in the actuarial literature and speaking at actuarial conferences, Dr. Vadiveloo recently patented a new algorithm (Replicated Stratified Sampling or RSS) for risk modeling that exponentially reduces processing time at a pre-determined accuracy level for any complex actuarial modeling. Dr. Vadiveloo is also editor and co-author of a new text by the Society of Actuaries on Enterprise Risk Management for Small and Medium-Sized Enterprises.

NRSI - A paradigm shift

In these days of economic uncertainty, preparing for a sustainable life at retirement is everyone's **individual** responsibility. The NRSI demonstrates that individuals in good health, with a high level of education and training, and who have done the appropriate financial planning throughout their working life, can enjoy a long and sustainable retirement life

The full NRSI report is available upon request at the contact information shown below.

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