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Reverse Mortgages and Linked Securities

The Complete Guide to Risk, Pricing, and Regulation

Edited by

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Reverse Mortgages and Linked Securities

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To FIFA
1999–2008

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Preface

Over the past few years, seniors and soon-to-be retirees (Baby Boomers) have lost tremendous value in their retirement plans and especially in their home values. In addition to the depreciation of assets held by this group of Americans, unprecedented amounts of leverage used to finance their daily living, automobile purchases, and children's educations, as well as to purchase primary and even secondary residences in many cases, have left a large number of older Americans on the brink of financial ruin.

The *Baby Boomers* (born between 1946 and 1960) currently comprise 26 percent of the population of the United States or roughly 78 million people. Encompassing two cohorts (people born between 1946 and 1955 make up the first cohort and the second cohort, aka "Generation Jones," is made up of people born from 1956 to 1964), the Boomer generation is one of the largest and wealthiest demographics in U.S. history. According to a study conducted by McKinsey & Company, the wealth of the Baby Boomers can be attributed to three major factors:

1. Size
2. Social change
3. Education

Clearly, the sheer size of the Baby Boomers cohort allowed them to generate more income on a collective basis, being that this generation is some 50 percent larger than the previous generation. Baby Boomers have earned an estimated $2 trillion more (roughly $3.7 trillion) than the previous generation had at the same age. Moreover, the Baby Boomers were the first generation to experience a much higher number of female workers, which also meant women having children at a later age and staying in the workplace for longer periods of time. Finally, the Boomer generation was one of the most educated generations to that point, which allowed them to capitalize on many economic and technological shifts.

Despite the awesome earning power of the Baby Boomers, this group of Americans is grossly undersaved. This financial unpreparedness was merely amplified by the global credit crisis; according to the Center for Economic and Policy Research, over 18 percent of Boomers had negative equity in their homes, and Boomers ages 45 to 54 lost an estimated 45 percent of their median net worth, and those ages 55 to 65 lost roughly 38 percent.

The financially vulnerable Baby Boomers are now facing an even worse crisis, as the U.S. government borrows record amounts of debt, thus jeopardizing the Social Security, Medicare, and Medicaid programs. In the United States, Social Security and Medicare currently account for roughly 7 percent of the GDP, but within the next 25 to 30 years these programs will account for nearly 13 percent, essentially the majority of the entire federal budget as Baby Boomers move toward retirement.

The aging crisis in America, and in other developed nations such as the U.K. and of course Japan, will put tremendous strain on an already-weak federal balance sheet. In *The Age of Aging*, UBS Senior Economic Adviser, George Magnus, states:[1]

> *The number of people aged over 60 is expected to reach one billion by 2020 and almost two billion by 2050, some 22 percent of the world's population. In Japan, this age group is expected to double to about 38 percent of the population, only a few percentage points higher than it is expected to be in China. In Europe and America it will account for about 28 percent and 21 percent respectively. And those aged over 80 are expected to account for about 4 percent of the world's population, four times as big as now.*

He continues to write:

> *These changes in age structure are going to lead to significant changes in dependency, which in turn will have enormous economic and financial consequences. Dependency ratios are defined as the number of old or very young people as a percentage of the working age population, that is, those aged 15–64.*
>
> *Most developing countries will still have falling dependency ratios for the next 20 years because youth dependency is falling, and old-age dependency isn't rising especially fast yet.* Western countries, on the other hand, have completed the decline in youth dependency and now face a rapid increase in old-age dependency.

With so much uncertainty in the reliability of government-run social safety nets, many Americans (as well as Europeans and Japanese) must rely on themselves to generate sufficient supplemental income to maintain their standard of living, pay down debts, or someday retire. In many cases, Baby Boomers continue to take care of *their* retired parents and their adult children who continue to live at home. These Kids in Parents' Pockets Eroding Retirement Savings ("KIPPERS," as coined in the U.K.), which is a phenomenon directly attributed to the success of the Baby Boom generation, are merely further strangling a financially strapped demographic that is desperately in need of liquidity.

As health-care costs rise and these Boomers realize that they cannot rely on their children or the government for financial support, they will turn to liquidating assets (that still have value) to fund their health-care and retirement costs. Currently the Boomers are the largest consumers of prescription medication in the United States. Seniors over the age of 65 spend on average $3,899 per year on health care and Boomers will spend roughly 22 percent of the U.S. GDP over the next 10 years to meet their medical needs.

In a post–credit crisis preretirement era, however, Boomers may not have enough time or sufficient capital to earn back the losses they have incurred in their equities and real estate portfolios to budget for increases in medical expenses or retirement costs. This will give rise to one of the greatest bull markets in history—*reverse equity transactions* (i.e., reverse mortgages and the secondary market for U.S. life insurance policies).

REVERSE EQUITY TRANSACTIONS

A *life settlement* is a transaction in which a senior citizen, usually 65 years and older, sells his or her existing life insurance policy to an institutional investor, through a state-licensed intermediary known as a *provider* for more than the cash surrender value but less than the death benefit. The investor makes an offer on the policy based on the expected life expectancy of the individual. Once the transaction is complete, the investor continues to make all future premium payments until the maturity of the policy, at which point the death benefit of the policy is paid out to the investors. The legal foundation for the life settlement market was established in 1911 by Justice Oliver Wendell Holmes, who deemed life insurance an asset similar to real estate, stocks, bonds, or gold, which could be sold to a third party. Holmes wrote about life insurance: "Life insurance has become in our days one of the best recognized forms of investment and self-compelled saving." The life settlement market is currently estimated at roughly $16 billion and is estimated to grow to roughly $160 billion over the next few years, according to Conning Research.

Transactions such as life settlements and reverse mortgages will allow seniors to tap into equity in their homes and life insurance policies that are largely independent from traditional creditworthiness metrics such as FICO credit scores and income levels. These transactions are instead based on the projected life expectancy of the individual(s). Simply put, the shorter the life expectancy for an individual the higher the payment she may receive for her life insurance policy or the higher the amount she may be eligible to borrow from a reverse mortgage.

Although life settlements and reverse mortgages differ in many ways, the longevity-linked asset class offers institutional investors steady returns that are largely uncorrelated to more traditional markets. Life settlements, and synthetic longevity-mortality structures, offer returns almost completely isolated from the real estate, equities, commodities, and bonds markets. Although reverse mortgage investment profits (or losses) are linked directly with the relative value of the underlying homes, the credit rating of the borrowers is not as important as in the traditional mortgage market. Therefore, a portfolio of reverse mortgages or a reverse mortgage–backed security is vulnerable mainly to longevity risk, the risk of longer-living borrowers, and home price risk. A complete list of all associated risk will be discussed in detail later in this book.

Although the concepts of life settlements and reverse mortgages have been in existence for quite some time, these transactions are now more important than ever. Over the next 5 to 10 years, the reverse mortgage will play an increasingly important role in the market for structured financial products and a strong grasp on the part of financial services firms and asset managers of longevity- and mortality-linked securities will be vital to compete in the modern marketplace.

The purpose of this introductory book is to create a foundation for understanding the mechanics of the reverse mortgage transaction (for information on life settlements and longevity finance, please reference *Life Markets: Trading Mortality and Longevity Risk with Life Settlements and Linked Securities,* also published by John Wiley & Sons). The book covers a wide array of reverse mortgage–specific topics from the history, taxation, and actuarial underwriting to the rating methodology and analysis of reverse mortgage–backed securities. Chapters are pulled from the foremost experts in their specific fields and the contributors to book are highly regarded in the longevity/mortality–linked markets.

There are four parts to *Reverse Mortgages and Linked Securities*. Part One provides the reader with a formal introduction to the asset class touching on basic concepts, the history of reverse mortgages, and a discussion of the Home Equity Conversion Mortgage (HECM), which accounts for the majority of loans in the reverse mortgage market today.

Part Two deals with the actuarial underwriting of reverse mortgages and other associated risks. As it is discussed at length in the book, reverse mortgages are actuarially dependent as opposed to credit dependent, so understanding the various methodologies of determining life expectancy is critical. The section also discusses interest rate and housing price risks and also offers up possible risk mitigation solutions. It may be confusing as to why the chapter called "Longevity Risk and Fair Value Accounting" is in Part Two, as opposed to Part Three, but despite the title, the chapter serves in understanding the development of actuarial analysis. Part Two also includes Standard & Poor's rating mythology for reverse mortgage–backed securities, which focuses on the risks of these assets.

Part Three establishes the tax treatment of reverse mortgage borrowers and lenders, and investors in reverse mortgage–backed securities.

Part Four puts reverse mortgages into varying contexts, first discussing the viability of the reverse mortgage product in Japan, and then comparing the economics of reverse mortgages to other products such as life settlements and home equity lines of credit.

Appendix A, "Housing Wealth among the Elderly," is a simple discussion of the wealth possessed by seniors in the United States, Australia, and Japan.

Appendix B, "Reverse Mortgage Analytics," provides another view on the quantitative aspects of reverse mortgages. Although the subject matter in this section is discussed in previous sections, it is isolated in this appendix for quick reference.

At the end of each chapter I provide a very brief commentary on the subject matter discussed by the contributing author. The purpose for doing this is to emphasize certain key points or offer up some further considerations and discussion points.

NOTE

1. George Magnus, *The Age of Aging: How Demographics Are Changing the Global Economy and Our World*, (Hoboken, NJ: John Wiley & Sons, 2008).

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