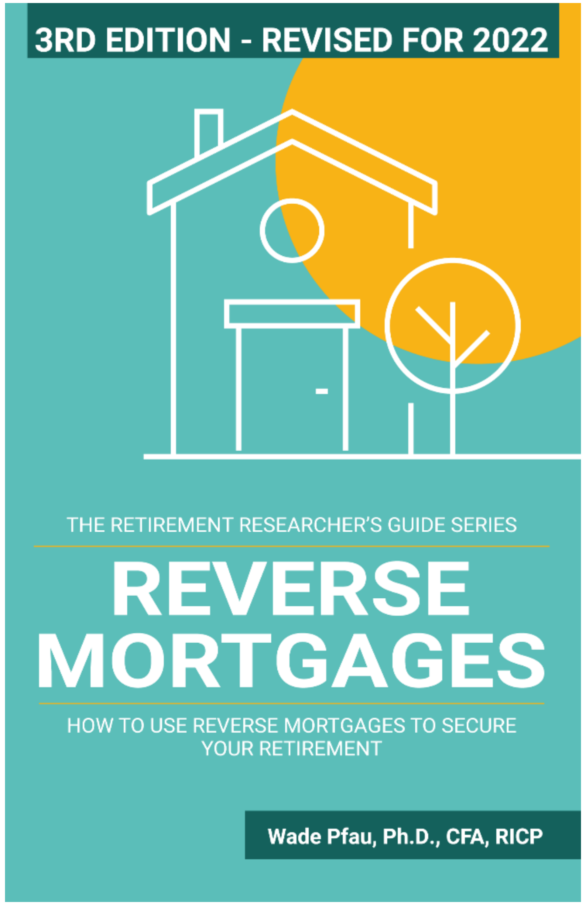
Retirement Researcher

PREPARE FOR YOUR BEST RETIREMENT™

How to use Reverse Mortgages to Secure Your Retirement
(An Introduction to the 3rd Edition)



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Presented by:

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The American College for Financial Services & RetirementResearcher.com

THE AMERICAN COLLEGE OF FINANCIAL SERVICES

Retirement Planning Guidebook:

Navigating the Important Decisions for Retirement Success

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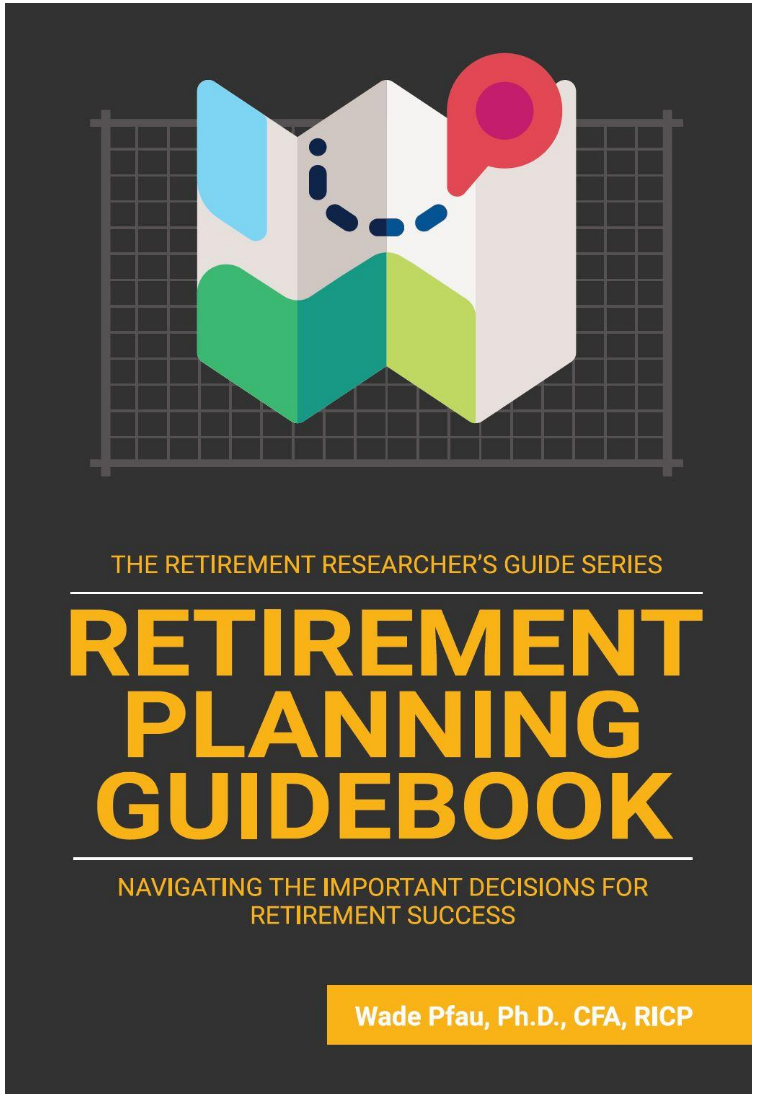

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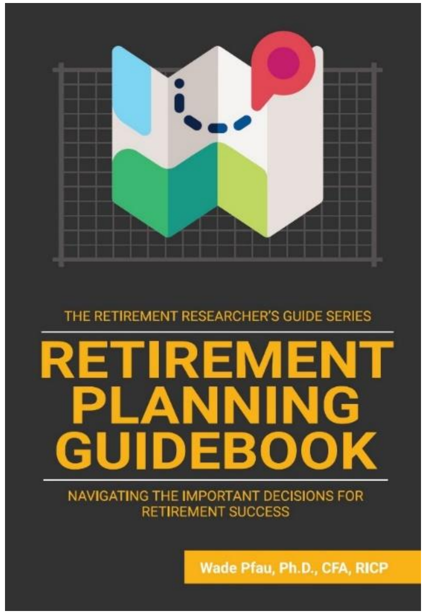
1. Retirement Income Style
2. Retirement Risks
3. Goals & Preparedness
4. Investment & Annuity Strategies
5. Social Security
6. Health Care & Medicare
7. Long-Term Care
8. Retirement Housing
9. Tax Planning
10. Legacy & Incapacity Planning
11. Non-Financial Aspects
12. Implement & Monitor



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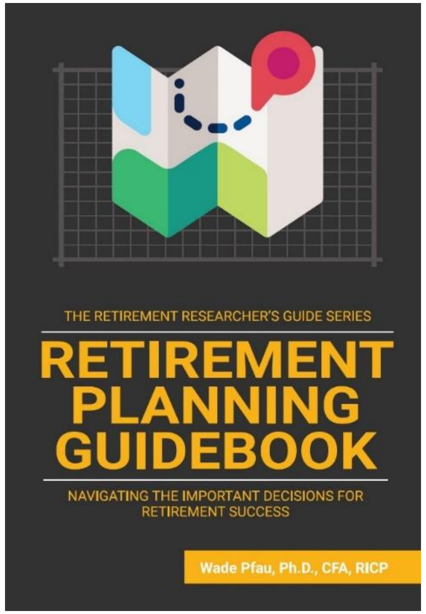

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What's new in the 3rd Edition

- New case study examples based on historical market data
- The case studies fully incorporate income tax calculations
- Emphasis on intuition about how reverse mortgages can help manage retirement risk
- Simple new decision rule for portfolio coordination strategies
- More content about using HECMs with tax planning
- A new section on proprietary reverse mortgages
- A new section on the growing trend of refinancing
- Use the Retirement Income Style Awareness to help summarize the broader picture of retirement planning

Investing for Distribution in Retirement is Different from Accumulation

Key Retirement Risks

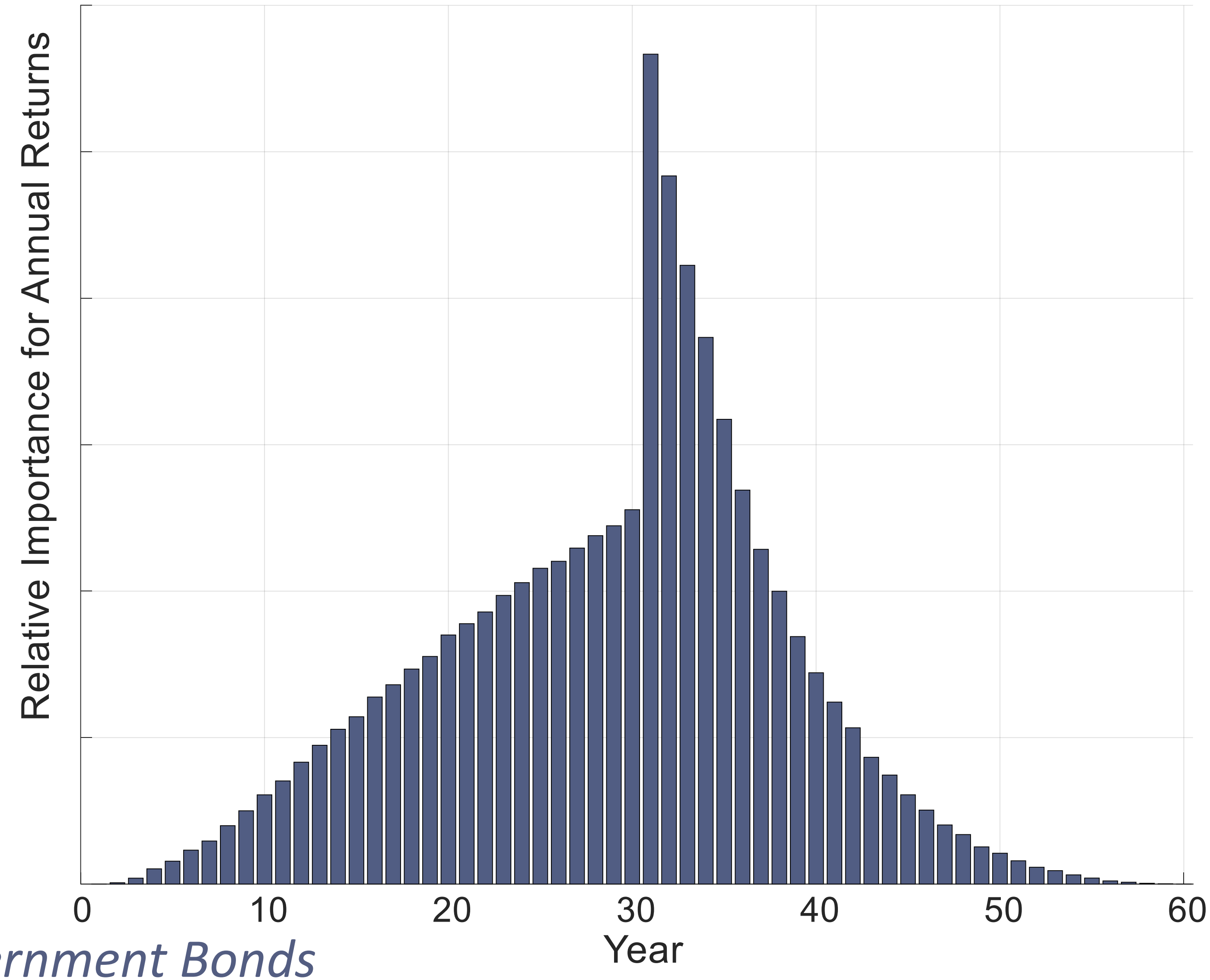
Longevity Risk
- Unknown Planning Horizon

Macro/Market
- Investment Volatility
- Interest Rate Volatility
- Public Policy & Taxation
- Sequence of Returns

Inflation
- Rising Costs of Living

Personal Spending
- Health & Long-term Care
- Help Other Family Members
- Divorce
- Fraud/Theft

Lifetime Sequence of Returns Risk



50/50 Asset Allocation,
Inflation-Adjusted Spending
100,000 Monte Carlo Simulations
Based on SBBI Data, 1926–2021,
S&P 500 and Intermediate-Term Government Bonds

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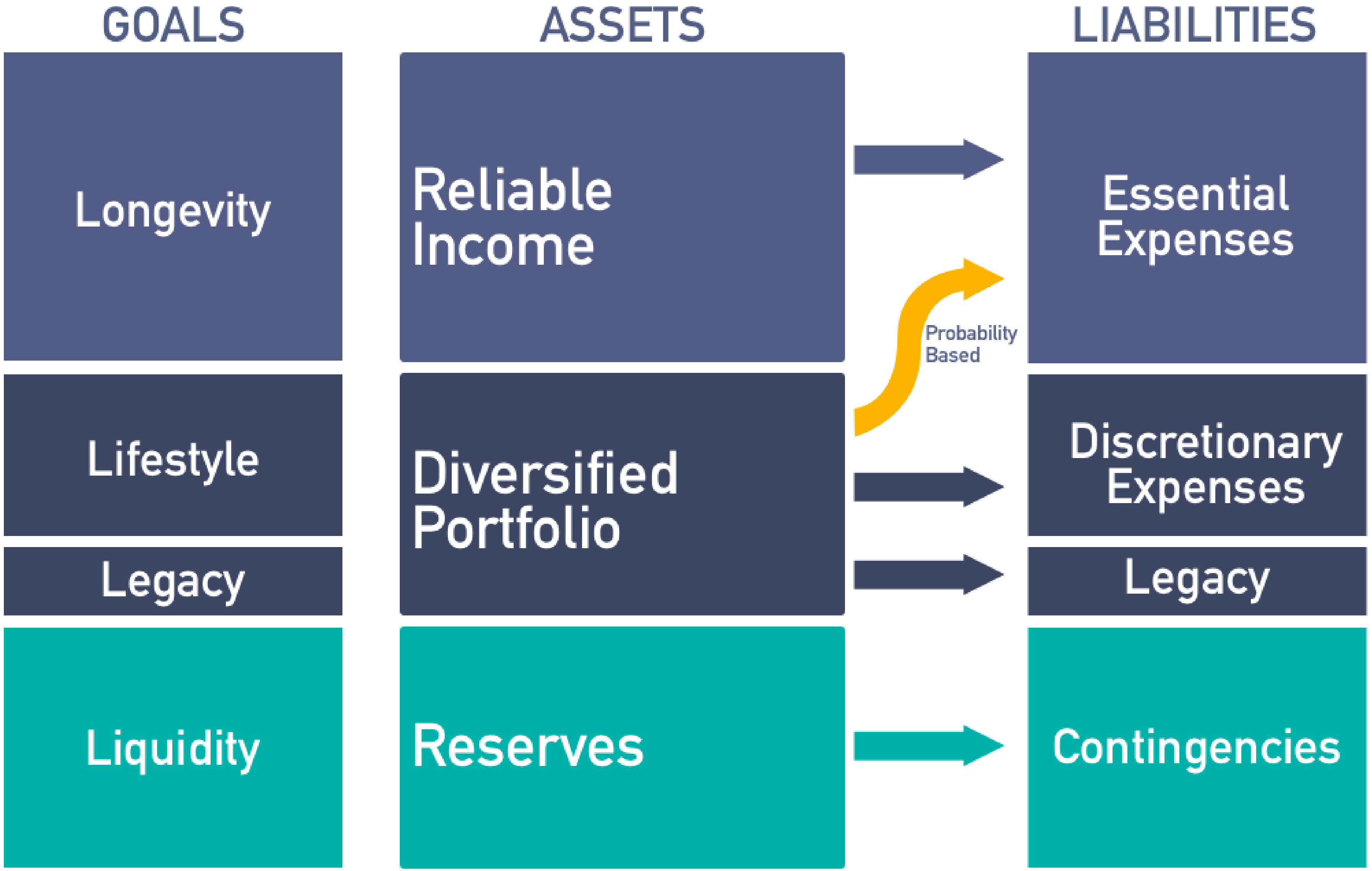
Retirement Income Optimization Map



Potential Reverse Mortgage Uses

Portfolio Coordination for Retirement Spending	Use HECM as a Last Resort
	Use Tenure Payments to Reduce Portfolio Withdrawals
	Coordinate HECM Spending to Mitigate Sequence Risk
Portfolio/Debt Coordination for Housing	Refinance Existing Mortgage to Eliminate Ongoing Payments
	HECM for Purchase for New Home
	Fund Home Renovations to Allow for Aging in Place
Funding Source for Retirement Efficiency Improvements	Social Security Delay Bridge
	Tax Bracket Management or Pay Taxes for Roth Conversions
	Tenure Payment as Annuity Alternative
	Pay Premiums for Existing Long-Term Care Insurance Policy
Preserve Credit as Insurance Policy	Support Retirement Spending After Portfolio Depletion
	Protective Hedge for Home Value
	Provides Contingency Fund for Spending Shocks (In home care, health expenses, divorce settlement)

Managing Volatility in Retirement

- **Spend Conservatively**
  (tenure payment, refinance mortgage, Social Security delay bridge)
- **Spending Flexibility**
- **Reduce Volatility**
- **Buffer Assets – Avoid Selling at Losses**
  (coordinated spending strategies)

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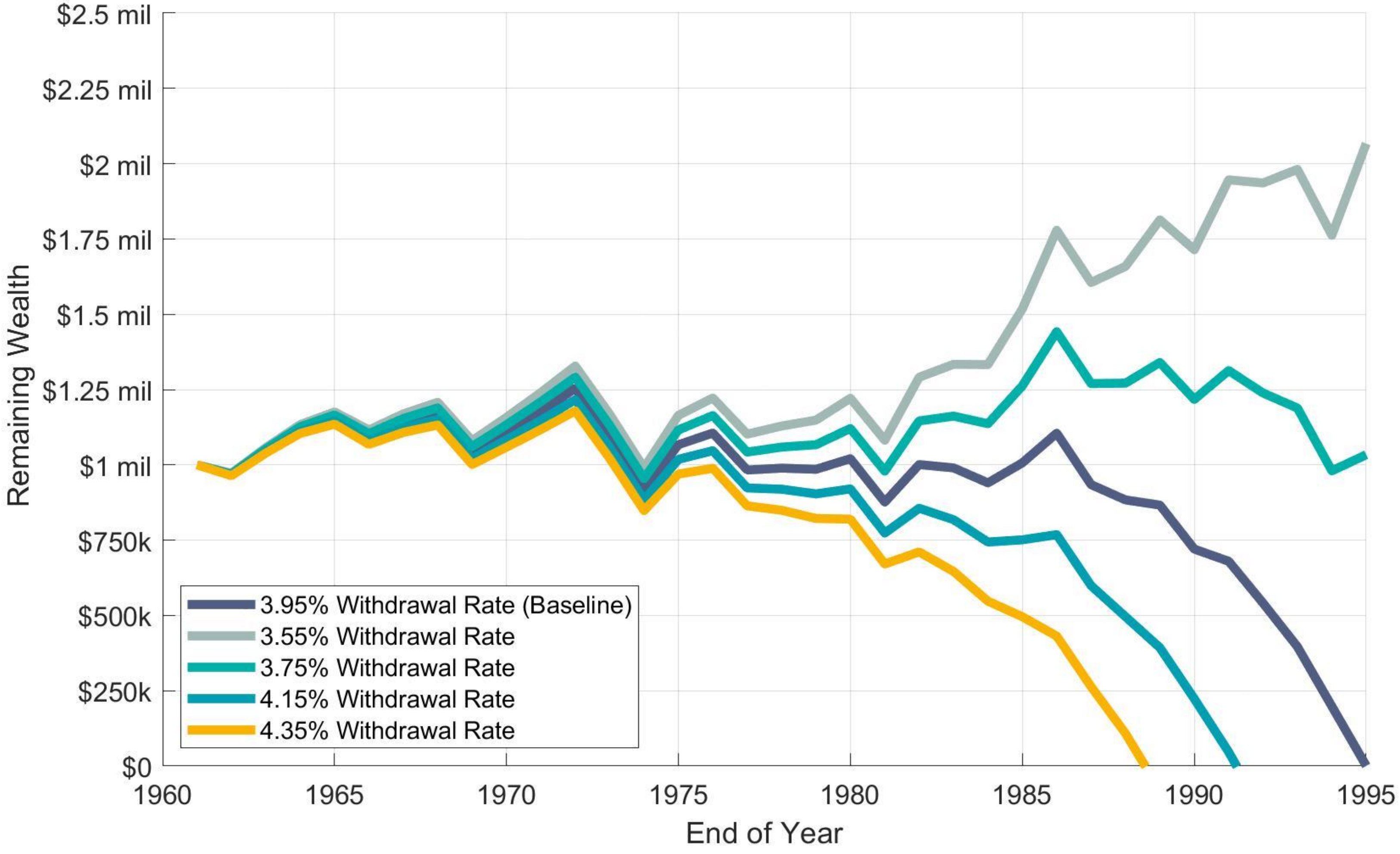
Sequence Risk and the Impact of Changing the Withdrawal Rate



Sequence Risk and the Portfolio Impact of Spending Levels
Inflation-Adjusted Spending Defined as a Percentage of Retirement Date Assets, No Fees
Using Robert Shiller's Data, 1962-1995, Asset Allocation: 60% Large-cap Stocks, 40% 10-Year Treasuries

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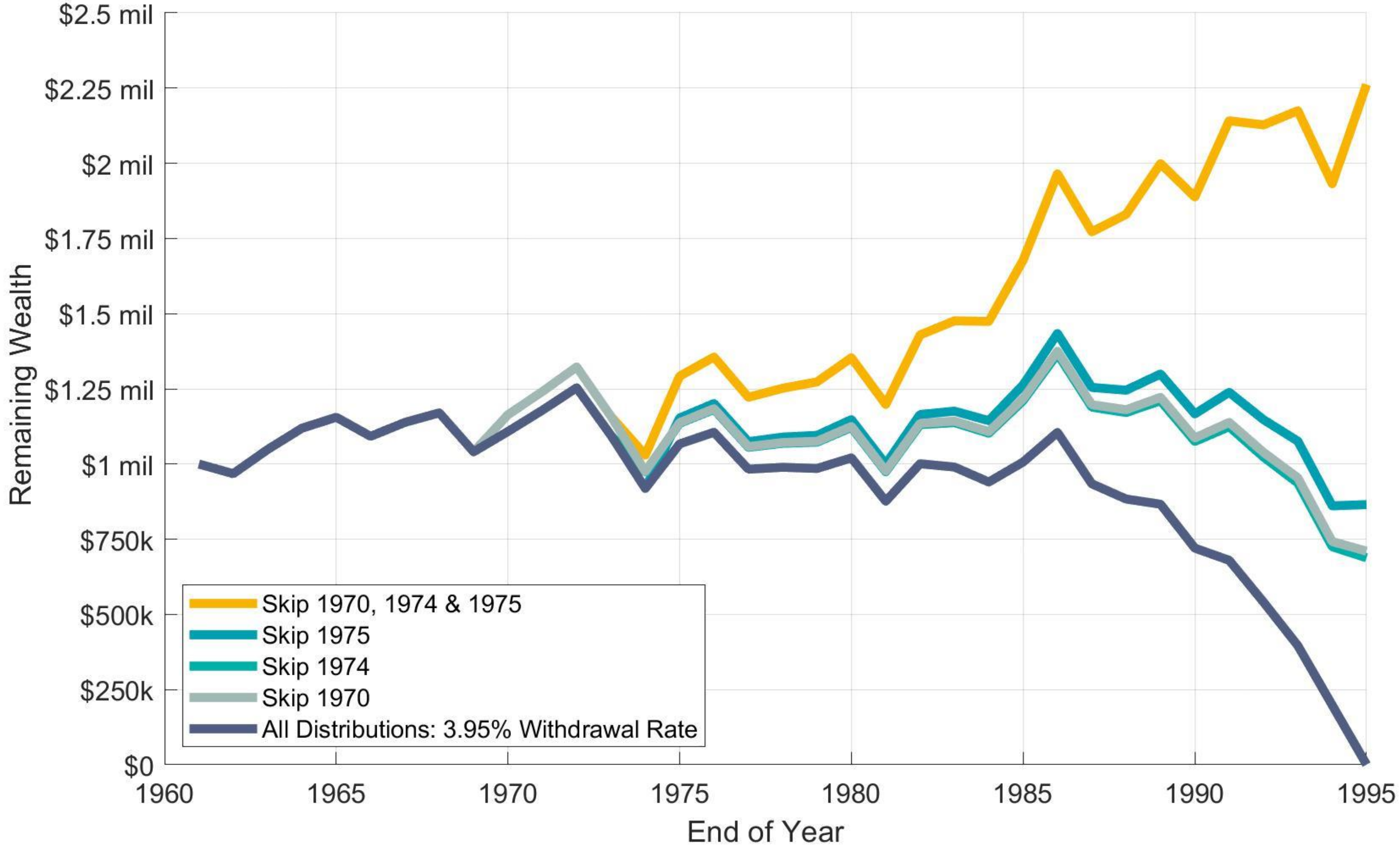
Sequence Risk and the Impact of Skipping Distributions



Sequence Risk and the Portfolio Impact of Skipping a Year of Distributions
Using Robert Shiller's Data, 1962-1995, Asset Allocation: 60% Large-cap Stocks, 40% 10-Year Treasuries

Understanding How Reverse Mortgages Work

Eligibility Requirements for HECMs

- Borrowers: 62 and older
- Primary residency
- Equity in the home (HECM can refinance existing mortgage)
- Financial resources to cover property taxes, homeowner’s insurance, and home maintenance
- Counseling session with FHA-approved counselor
- FHA Home Appraisal & FHA eligible property type
- FHA Lending limit: $970,800

Essential Jargon

1. Principal Limit / Principal Limit Factor (PLF)
2. Expected Rate
3. Effective Rate

Reverse Mortgage Interest Rates

Type	Components	Applies to:
Expected Rate	10-year Treasury Rate + Lender's Margin	Initial Principal Limit Factor
Effective Rate	1-year Treasury Rate + Lender's Margin + Mortgage Insurance Premium (0.5%)	Ongoing Principal Limit Growth Rate
		Loan Balance Growth Rate
		Line of Credit Growth Rate
		Growth Rate for Set Asides

Expected and Effective Rates: Example

1-year Treasury rate: 0.4%

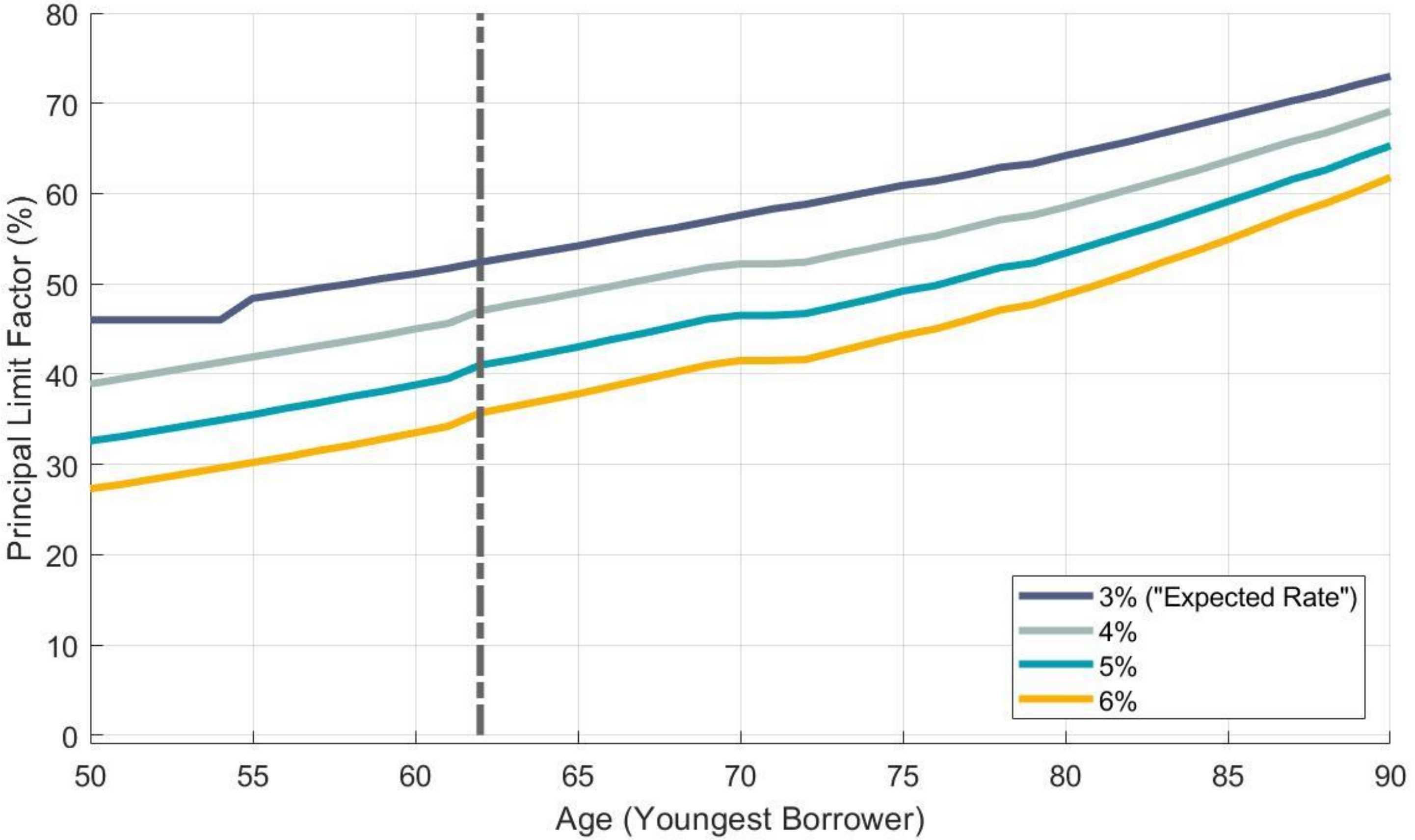
10-year Treasury rate: 1.6%

Lender's margin: 2.125%

Expected Rate = 1.6% + 2.125% = **3.725%**

Effective Rate: = **0.4%** + 2.125% + 0.5% = **3.025%**

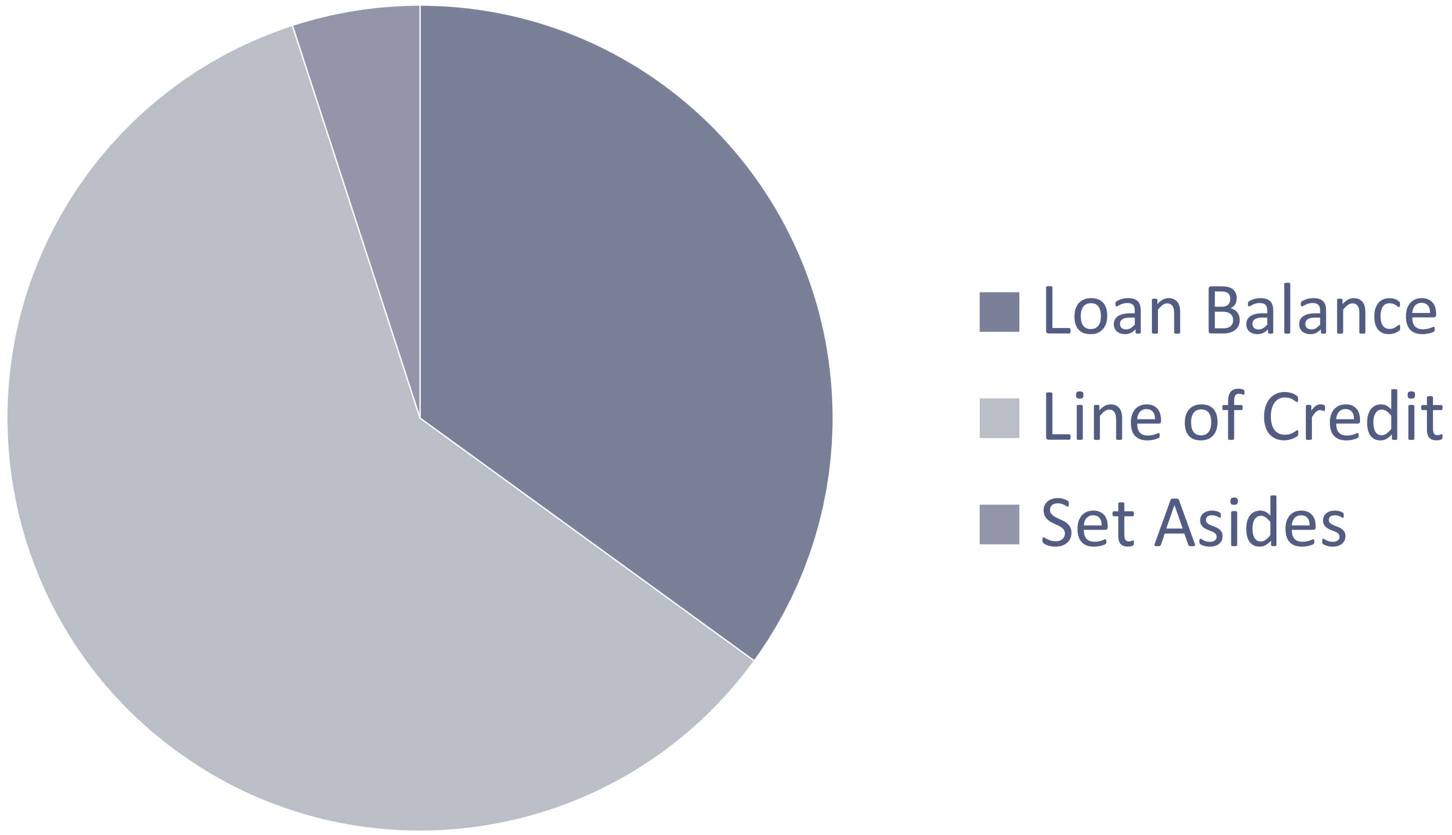
Initial Principal Limit
(Principal Limit Factor)



Expected rate =
10-year Treasury Rate +
Lender's Margin

Understanding Line of Credit Growth

Principal Limit = Loan Balance + Available Line of Credit + Set-Asides



HECM Spending Options (Variable-Rate HECM)

1. Lump-sum payment
2. Tenure payment
3. Term payment
4. Line of Credit

5. Modified tenure or modified term payment

Reverse Mortgage Calculator

https://retirementresearcher.com/reverse-mortgage-calculator/

HECM Calculator: Net Available Line of Credit or Tenure Payment for a Variable Rate Loan

Home's Appraised Value	$430,000		
HECM Eligible Amount	$430,000		
10-Year Constant Maturity Treasury Rate	1.50%		
Lender's Margin	2.15%		
Monthly Insurance Premium	0.5%		
Age of Youngest Eligible (Borrower or Non-Borrower) Spouse Note: Round age up if birthday falls within six months of the first day of the month that the loan will close	62		
		Age	Modified Expected Rate
Principal Limit Factor	49.60%	62	3.625%
		Maximum Possible Amount	
Loan origination fee	$6,000	$6,000	
Initial mortgage insurance	$8,600		
Other closing costs (appraisal, titling, etc.)	$2,500		
Total Upfront Costs	$17,100		
Percentage of Upfront Costs to be Financed	100.00%		
Debt Repayment, Repairs, or Other Life-Expectancy Set-Aside (LESA) Requirements	$0		
Net Available HECM Credit	$196,180		
	Monthly	Annual	Payout Rate
Net Available as a Tenure Payment	$853	$10,233	4.80%
Term Payment Calculator			
Desired Term Horizon (Years)	8		
	Monthly	Annual	
NET AVAILABLE AS A TERM PAYMENT	$2,397	$28,761	

Case Studies with Historical Data

Case Study Characteristics

- Case is based on current HECM rules and tax laws
- Historical data is used to test strategies in different market environments.
- A couple both turn 62 in early 2022; already retired.
- Planning age: 95
- $870,000 in investments ($260k taxable with $130k basis, $510k in IRA, $100k in Roth IRA)
- $435,000 home, no mortgage
- HECM terms: 2.125% lender’s margin, $18,600 upfront costs financed, uses 1-year Treasury for effective rate
- Social Security: $45,000 annually if claimed at 67

Case Study Characteristics (continued)

- Spending goals: $66,000 pre-tax inflation-adjusted; An extra $10,000 fixed through age 74; And federal income taxes need to be paid
- Spending strategy: Any Social Security, HECM distribution, and RMDs first, then spend from (1) taxable, (2) IRA, (3) Roth IRA
- Taxes are tracked for federal income tax for ordinary income and preferential income sources, tax on Social Security benefits, Medicare IRMAA surcharges, net investment income surtax
- Asset allocation: 60% stocks (large-cap US), 40% bonds (10-year Treasuries)
- Legacy: 100% of taxable account, 75% of IRA, 100% of Roth IRA, 95% of home value less loan balance due on HECM (not less than $0 because non-recourse)

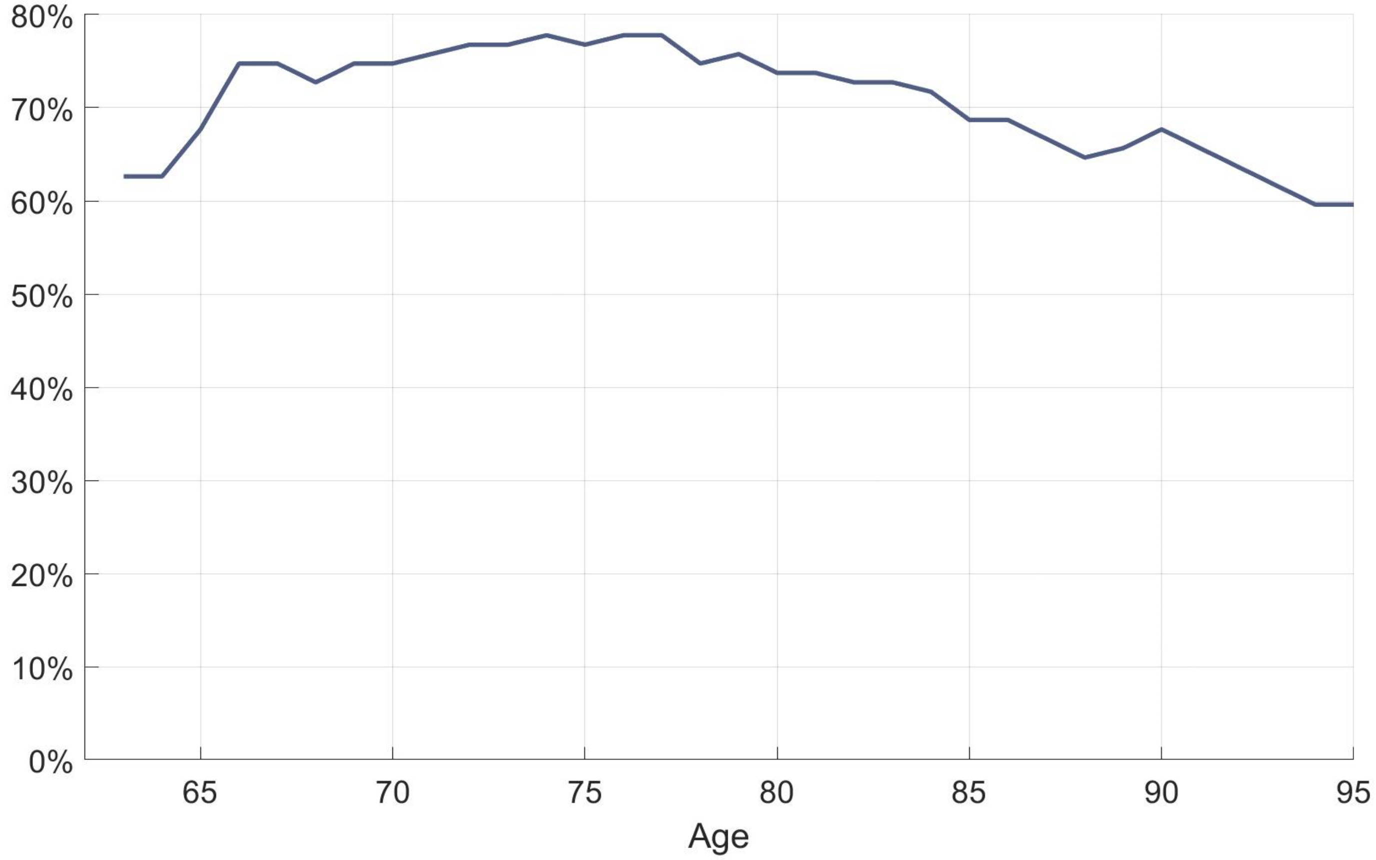
Summary Statistics of U.S. Returns and Inflation Data, 1890-2021

	Arithmetic Means	Geometric Means	Standard Deviations
Large-Cap U.S. Stocks (Total Returns)	11.0%	9.5%	18.0%
Large-Cap U.S. Stocks (Dividend Yield)	4.1%	——	1.6%
10-Year Treasury Bonds (Total Returns)	4.8%	4.6%	6.6%
10-Year Treasury Bonds (Bond Yields)	4.5%	——	2.4%
1-Year Treasury Bills	4.3%	4.3%	3.0%
Home Prices (Case-Shiller Index)	3.7%	3.4%	7.3%
Inflation (Consumer Price Index)	2.9%	2.8%	5.2%

Source: Robert Shiller's website (www.econ.yale.edu/~shiller/data.htm)

Understanding Line of Credit Growth

Probability that the Net Principal Limit is Larger at a Subsequent Age When Opened at Age 62 as Compared to Opening at a Later Age



Age 62 vs. Later Ages

Lender's Margin: 2.125%

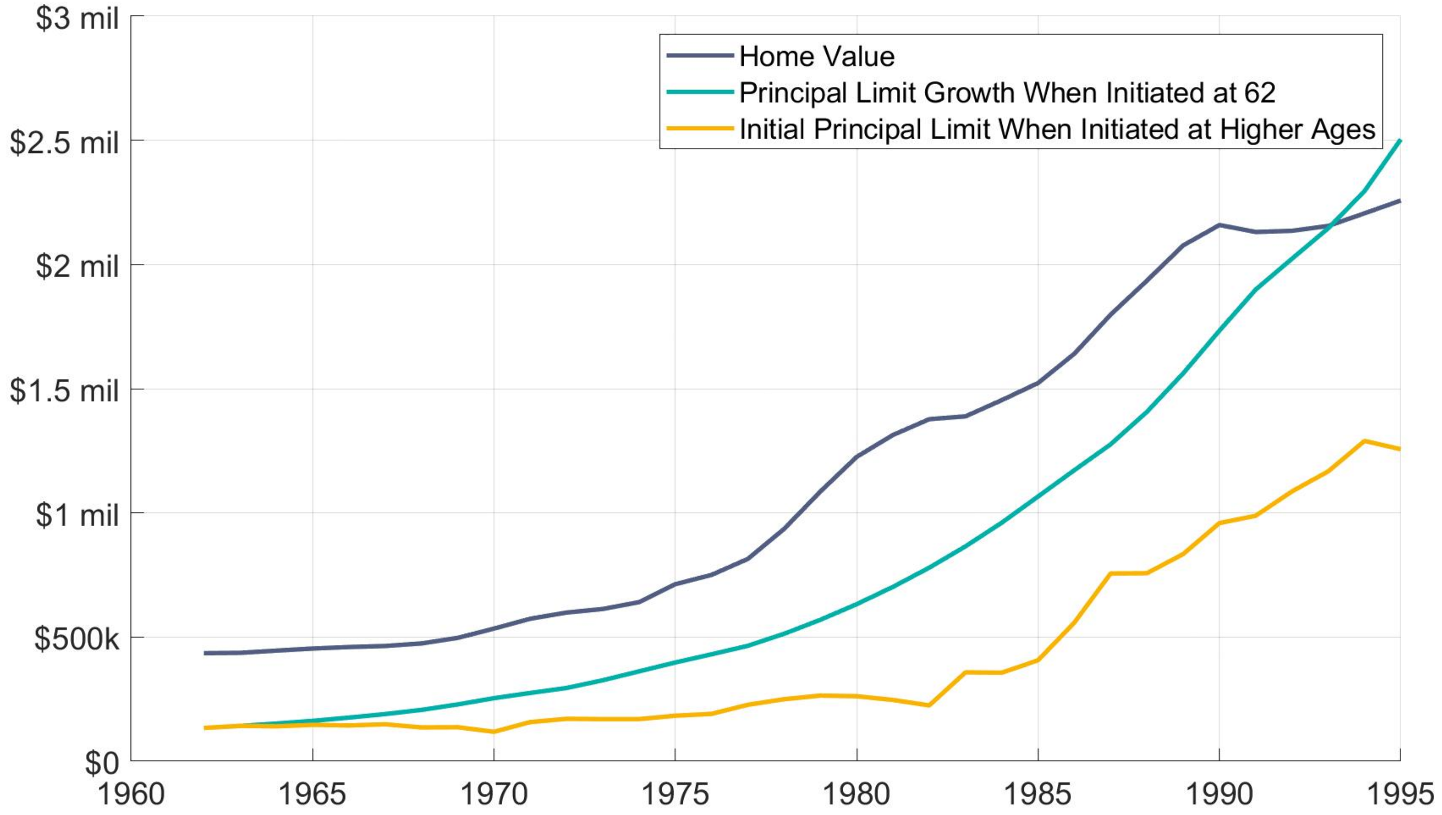
Home: $435,000

Upfront Costs: $18,600

Source: Own calculations using Robert Shiller's dataset at http://www.econ.yale.edu/~shiller/data.htm

Understanding Line of Credit Growth

Comparing Principal Limits Based on When the Reverse Mortgage Opens
For a 62-Year Old, Market Data for 1962-1995



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Source: Own calculations using Robert Shiller's dataset at http://www.econ.yale.edu/~shiller/data.htm

HECMs and the Interest Rate Environment

Low interest rates *favor* HECMs:

- Lower expected rate = larger initial principal limit
- Subsequent principal limit growth is lower, unless interest rates subsequently rise and accelerate growth

Portfolio Coordination for Retirement Spending

An idea whose time had come?

"Reversing the Conventional Wisdom: Using Home Equity to Supplement Retirement Income"

Barry Sacks and Steven Sacks

Journal of Financial Planning, February 2012

"Standby Reverse Mortgages a Risk Management Tool for Retirement Distributions"

John Salter, Shaun Pfeiffer, and Harold Evensky

Journal of Financial Planning, August 2012

Thesis: Strategic use of a reverse mortgage standby line of credit can create retirement income efficiencies through its contribution to managing sequence of returns risk in retirement

HECM Strategies for Portfolio Coordination

- Use Tenure Payment
- Portfolio Coordination Strategy
- Portfolio Coordination Strategy with Voluntary Repayments

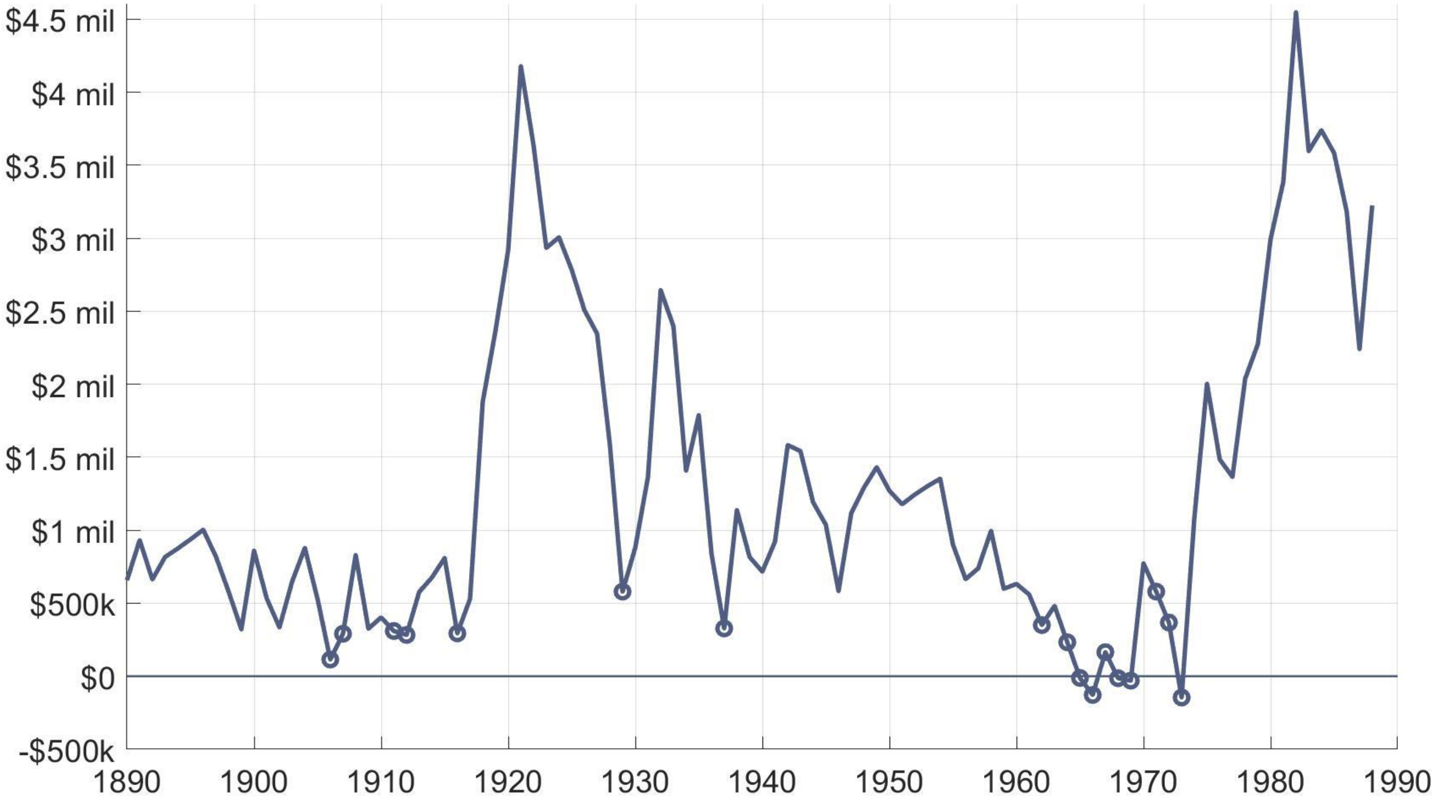
- Home Equity as Last Resort (“Conventional Wisdom”)

Comparing Net Legacy Wealth for Various HECM Strategies

		HECM as Last Resort	Tenure Payment	Portfolio Coordination Strategy	Portfolio Coordination Strategy with Voluntary Repayments
Legacy Wealth Percentile	Best Case	**$4,548,160**	$4,399,058	$4,145,013	$4,394,144
	90%	$3,000,725	**$3,277,006**	$3,053,333	$2,921,695
	75%	$1,738,787	**$2,029,228**	$1,957,260	$1,783,271
	50%	$902,396	**$1,093,850**	$988,320	$977,700
	25%	$577,965	**$736,271**	$660,413	$654,293
	10%	$292,096	**$522,499**	$466,225	$407,094
	Worst Case	-$145,447	**$140,600**	$26,471	$26,471
Success Rate for Covering all Spending		95.0%	100.0%	100.0%	100.0%

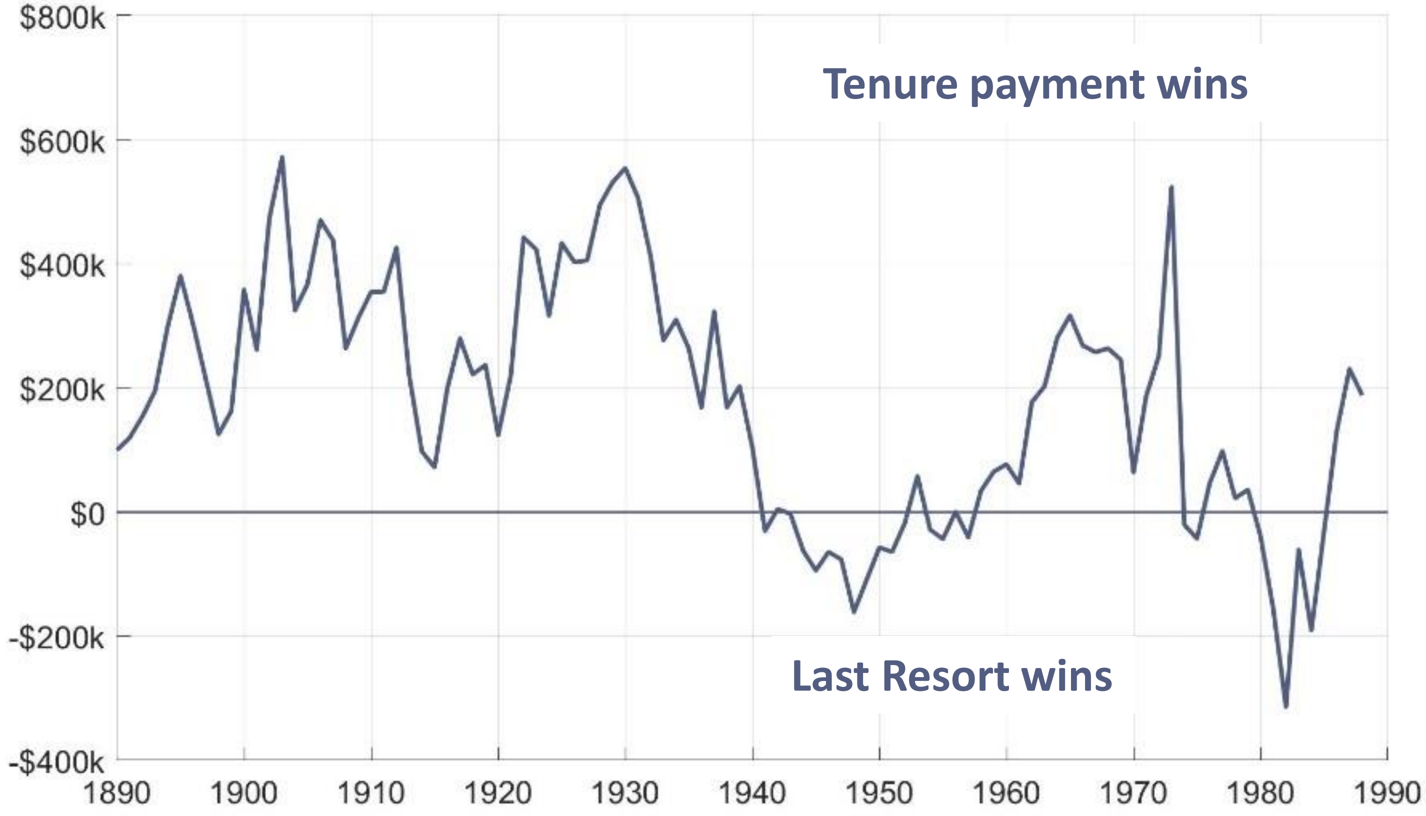
Source: Own calculations using Robert Shiller's dataset at http://www.econ.yale.edu/~shiller/data.htm

Net Legacy Value with Last Resort Strategy



Source: Own calculations using Robert Shiller's dataset at http://www.econ.yale.edu/~shiller/data.htm

Comparing the Tenure Payment Strategy to the Last Resort Net Real Legacy Wealth (Tenure Payments - Last Resort)



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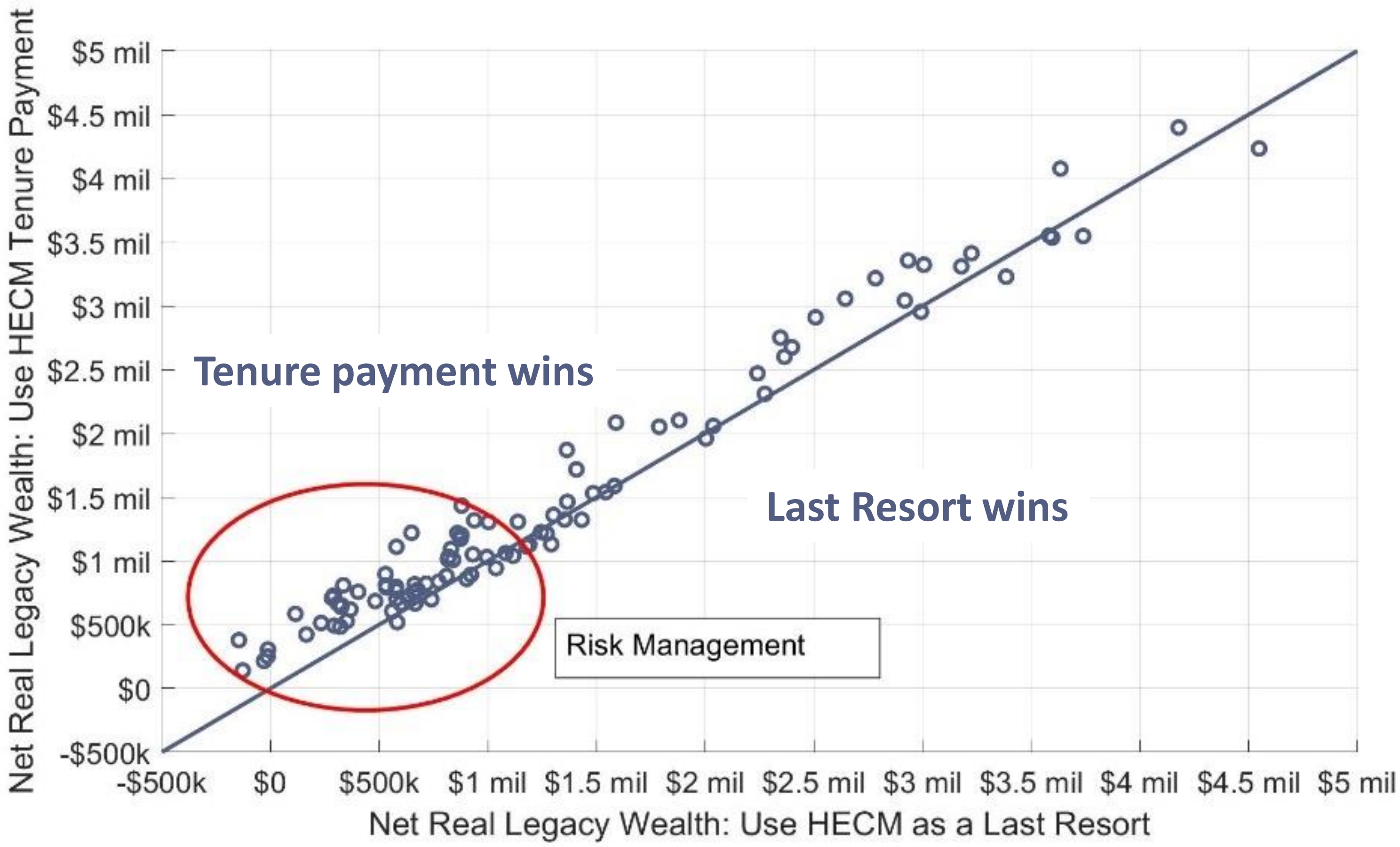
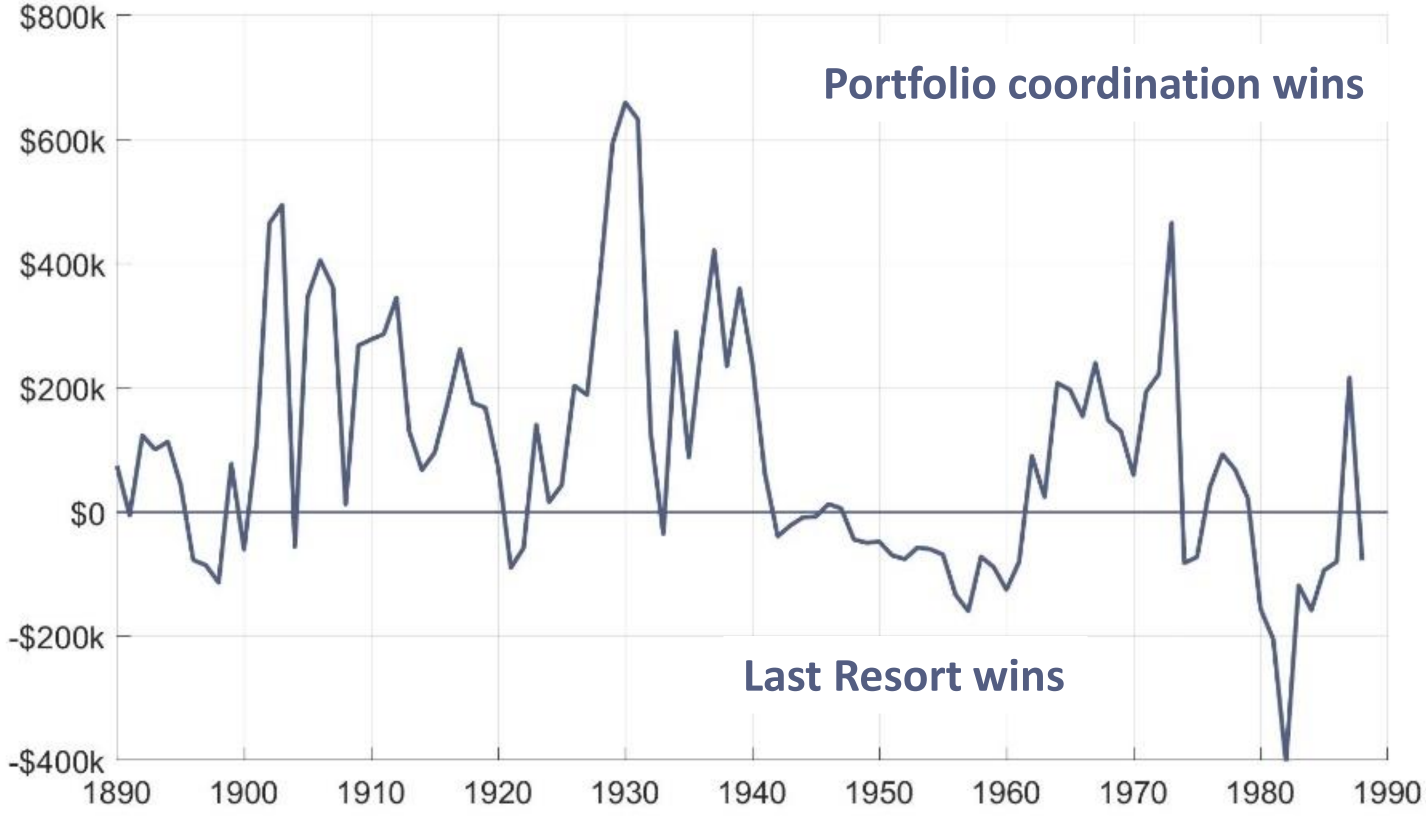


Source: Own calculations using Robert Shiller's dataset at http://www.econ.yale.edu/~shiller/data.htm

Comparing the Portfolio Coordination Strategy to the Last Resort Net Real Legacy Wealth (Portfolio Coordination - Last Resort)



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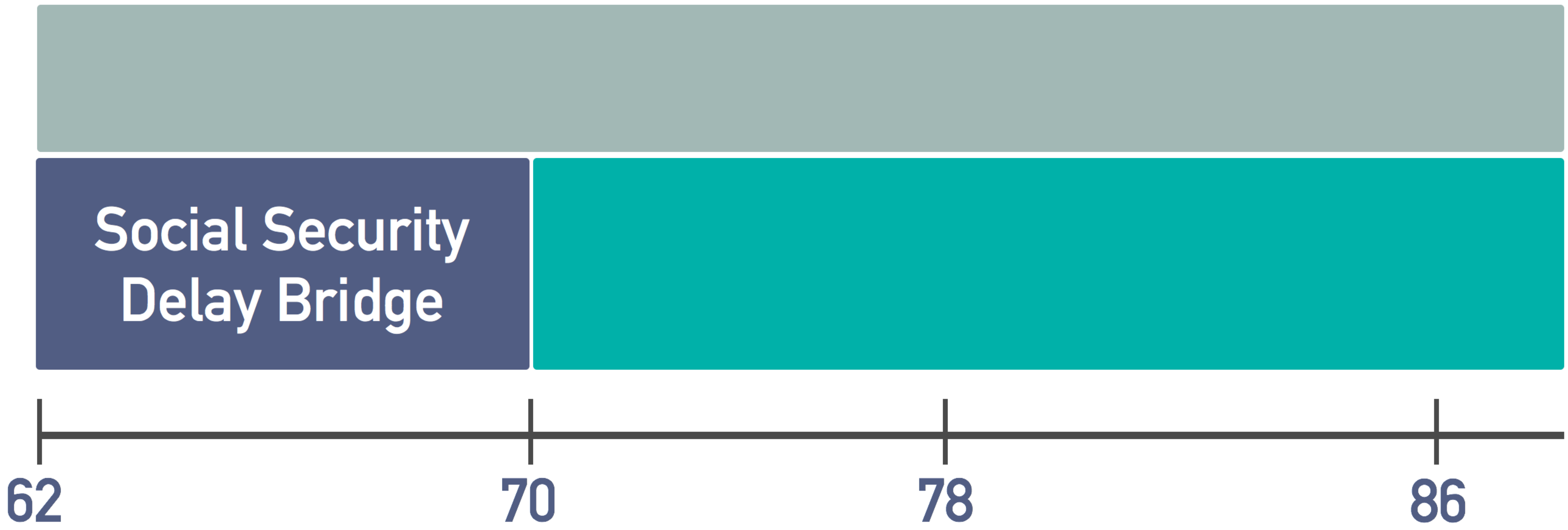
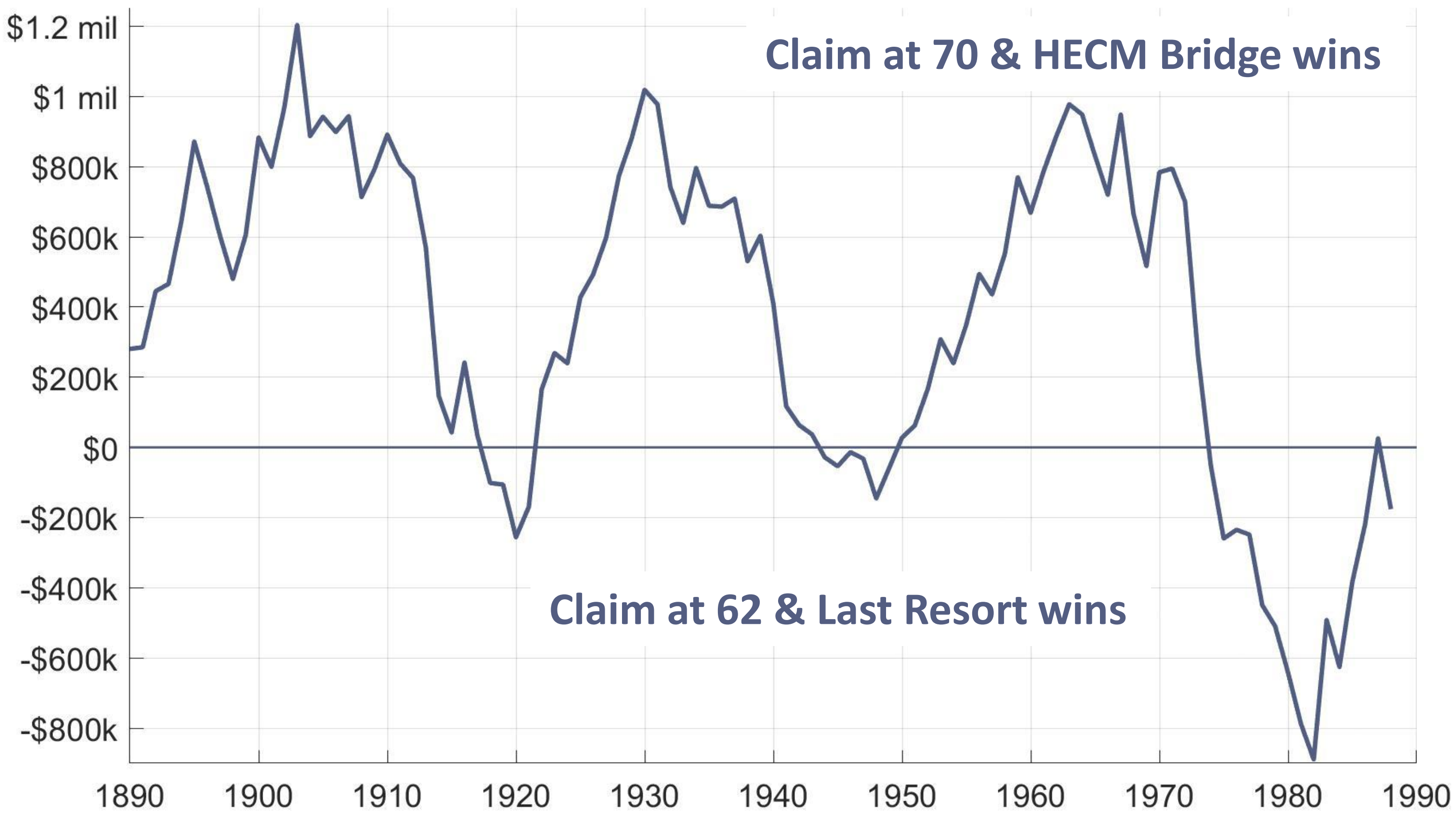
Social Security Delay Bridge

Social Security Delay Bridge

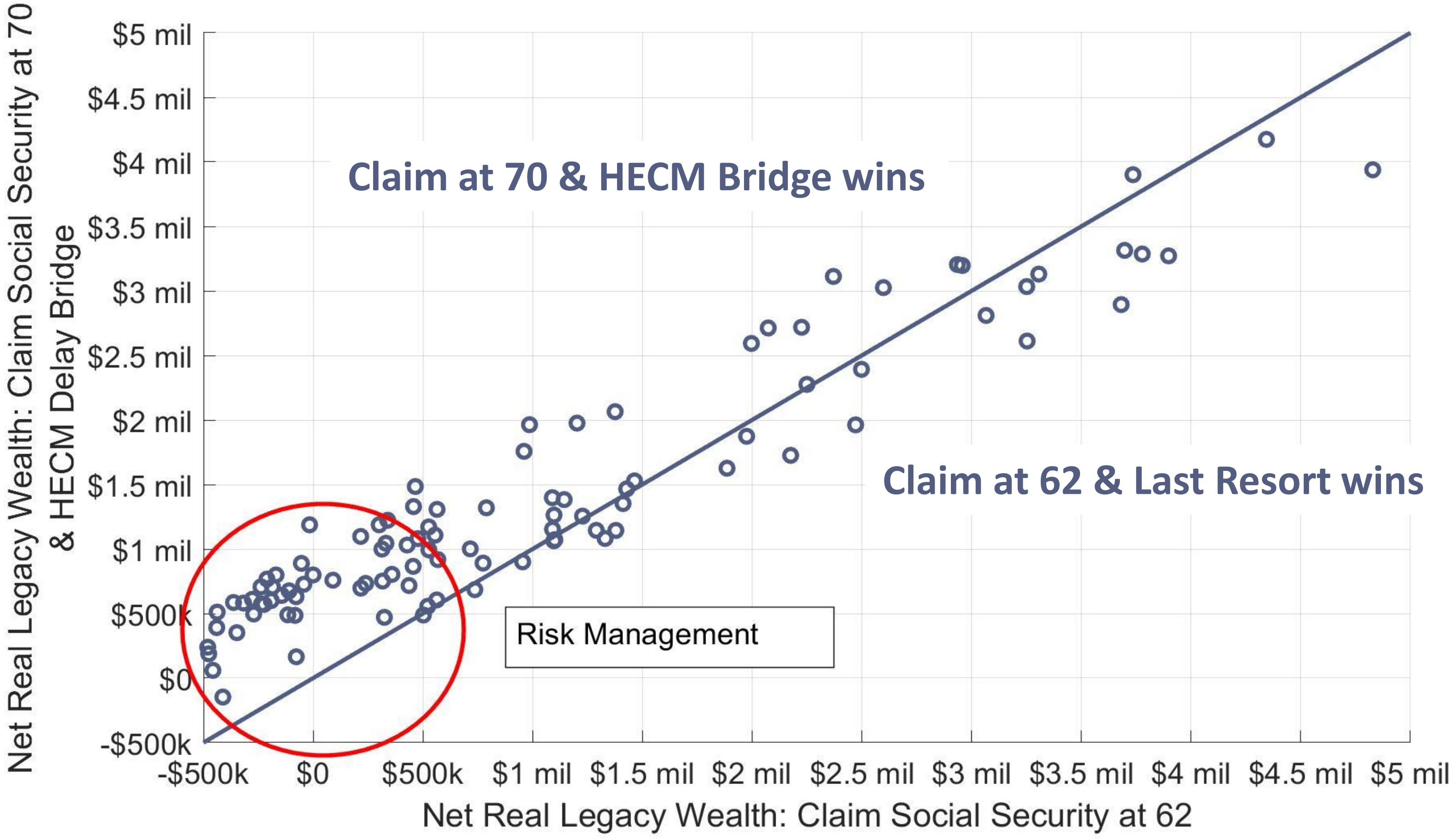


Comparing the Claim @ 70 and HECM Bridge to the Claim @ 62 and Last Resort
Net Real Legacy Wealth (70 and Bridge – 62 and Last Resort)



Source: Own calculations using Robert Shiller's dataset at http://www.econ.yale.edu/~shiller/data.htm

Comparing the Claim @ 70 and HECM Bridge to the Claim @ 62 and Last Resort Net Real Legacy Wealth



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Conclusions

- Reverse mortgages cannot be viewed in isolation: their costs can be more than offset by gains elsewhere in the financial plan
- Conventional "last resort" wisdom hurts retirement sustainability
- Strategic HECM use: improved retirement sustainability, larger legacy
- <u>WHY IT WORKS</u>: Buffer to Mitigate Sequence Risk; Growing Line of Credit
- Low interest rates favor HECM (unlike everything else)
- HECM helps middle class: more benefits when home value is large relative to portfolio size
- Responsible use of HECM can improve retirement outcomes

THANK YOU!
ANY QUESTIONS?

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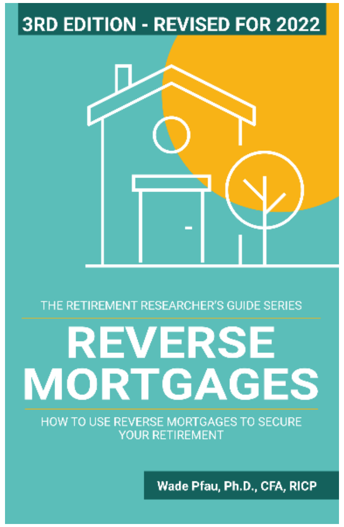

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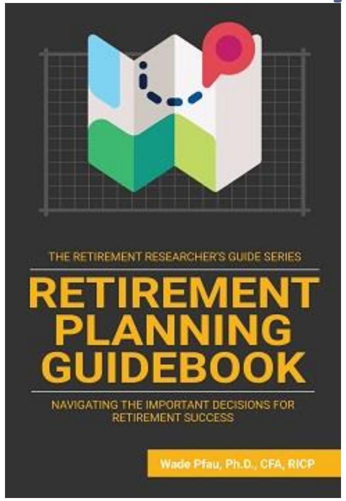

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