

Fitting Home Equity into a Retirement Income Strategy

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RetirementResearcher.com/reverse-mortgages



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What's Different About Retirement?

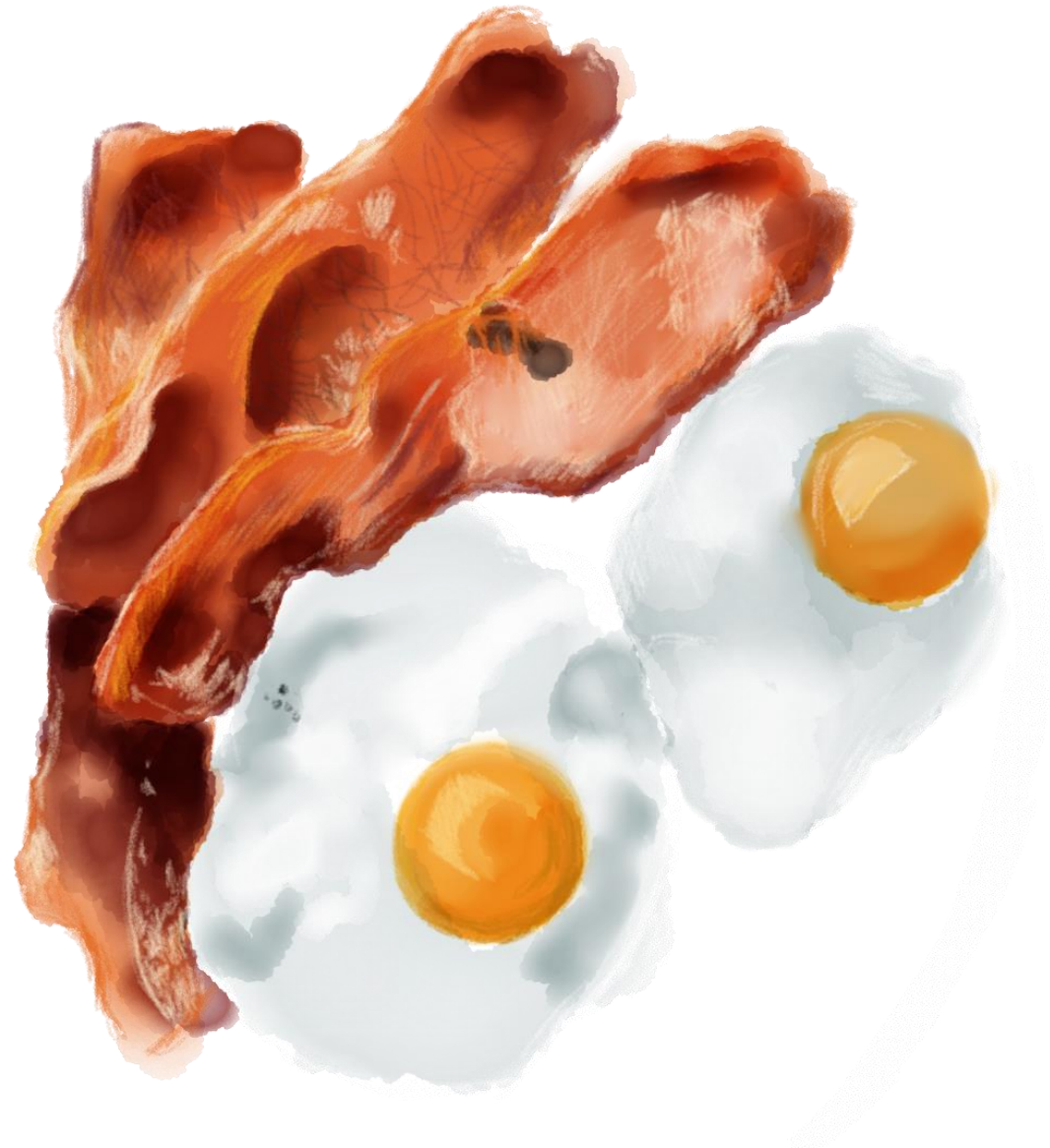
- Reduced earnings capacity
- Visible spending constraint
- Heightened investment risk
- Unknown longevity
- Spending shocks
- Compounding inflation
- Declining cognitive abilities



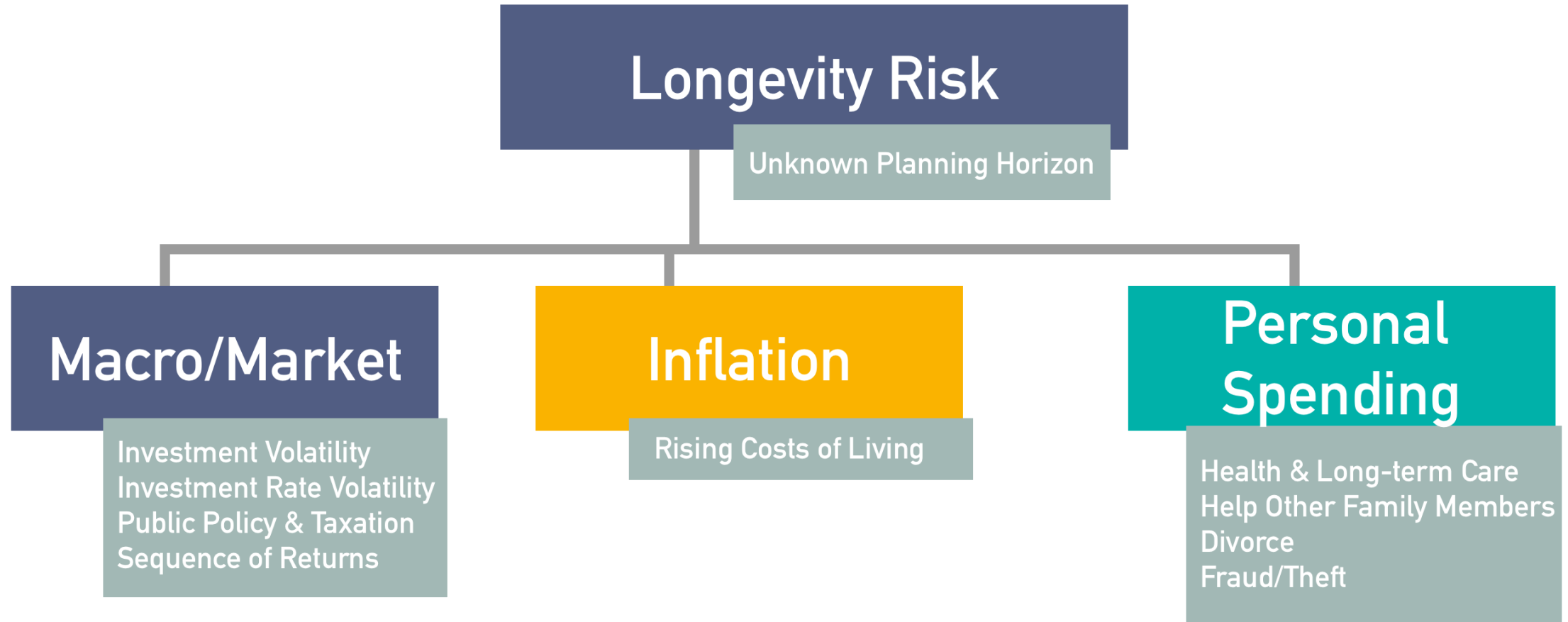
Pre-Retirement

vs.

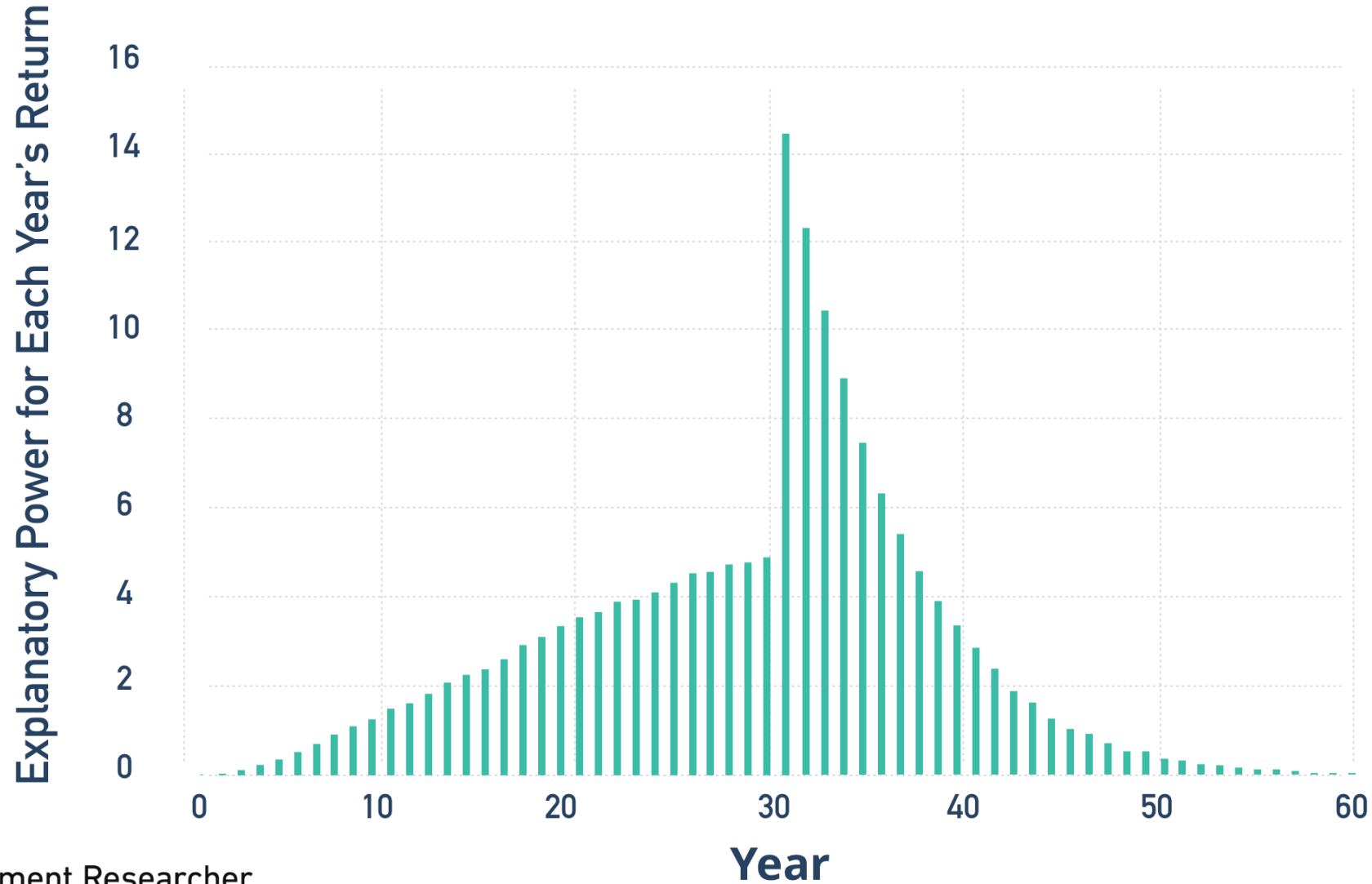
Retirement



Key Retirement Risks



Lifetime Sequence of Returns Risk



Challenges for an Individual Pension Plan

- **Asset Returns**

- *Pension Managers* – Pool returns across generations
- *Households* – One whack at the cat

- **Longevity Risk**

- *Pension Managers* – systemic increases in longevity
- *Households* – Idiosyncratic longevity risk

Retirement Goals



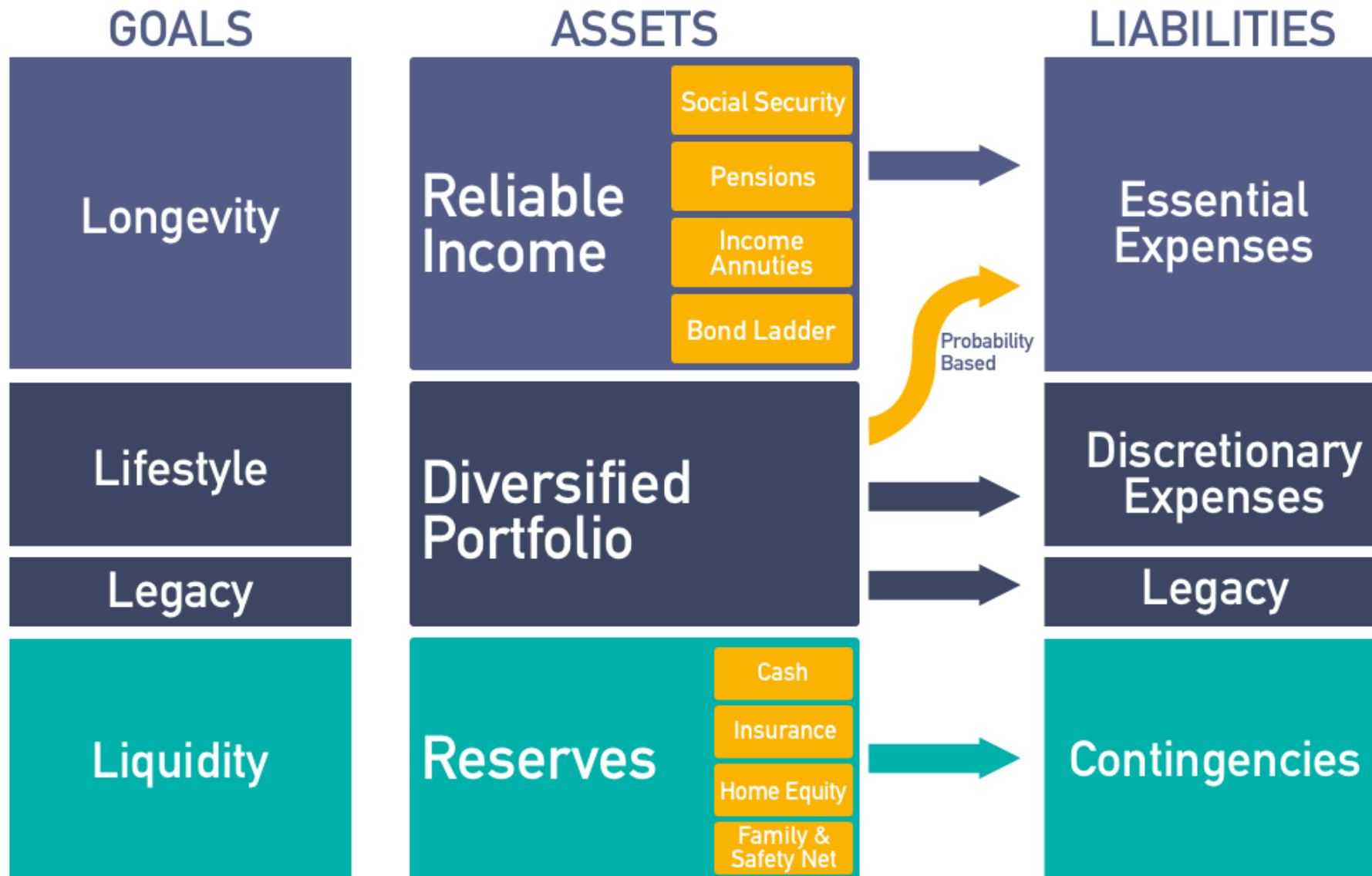


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Household Balance Sheet	
Assets	Liabilities
Human Capital	Fixed Expenses
Continuing Career	Basic Living Needs
Part-time work	Taxes
	Debt Repayment
Home Equity	
	Discretionary Expenses
Financial Assets	Travel & Leisure
Checking Accounts	Lifestyle Improvements
Brokerage Accounts	
Retirement Plans	Contingencies
	Long-Term Care
Insurance & Annuities	Health Care
	Other Spending Shocks
Social Capital	
Social Security	Legacy Goals
Medicare	Family
Company Pensions	Community & Society
Family & Community	

Retirement Optimization Plan

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Managing Sequence Risk

- **Spend Conservatively**
- **Spending Flexibility**
- **Reduce Volatility (When it Matters Most)**
 - Build a retirement income bond ladder
 - Build a lifetime spending floor with income annuities
 - Rising equity glidepath in retirement
 - Use funded ratio to manage asset allocation
 - Use financial derivatives to cut downside risks
- **Buffer Assets – Avoid Selling at Losses**
 - Cash reserve to fund near-term expenses
 - Cash value of life insurance
 - **Line of Credit from HECM Reverse Mortgage**



Uses for Reverse Mortgages



The Spectrum of Potential Reverse Mortgage Uses



<p>Portfolio/Debt Coordination for Housing</p>	<p>*Pay off an Existing Mortgage Transition from Traditional Mortgage to Reverse Mortgage Fund Home Renovations to Allow for Aging in Place HECM for Purchase for New Home</p>
<p>Portfolio Coordination for Retirement Spending</p>	<p>*Spend Home Equity First to Leverage Portfolio Upside Potential *Coordinate HECM Spending to Mitigate Sequence Risk *Use Tenure Payments to Reduce Portfolio Withdrawals</p>
<p>Funding Source for Retirement Efficiency Improvements</p>	<p>*Tenure Payments as Annuity Alternative Social Security Delay Bridge Tax Bracket Management & Taxes for Roth Conversions Premiums for Existing Long-Term Care Insurance Policies</p>
<p>Preserve Credit as Insurance Policy</p>	<p>*Support Retirement Spending After Portfolio Depletion *Protective Hedge for Home Value Provides Contingency Fund for Spending Shocks (In home care, health expenses, divorce settlement)</p>



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

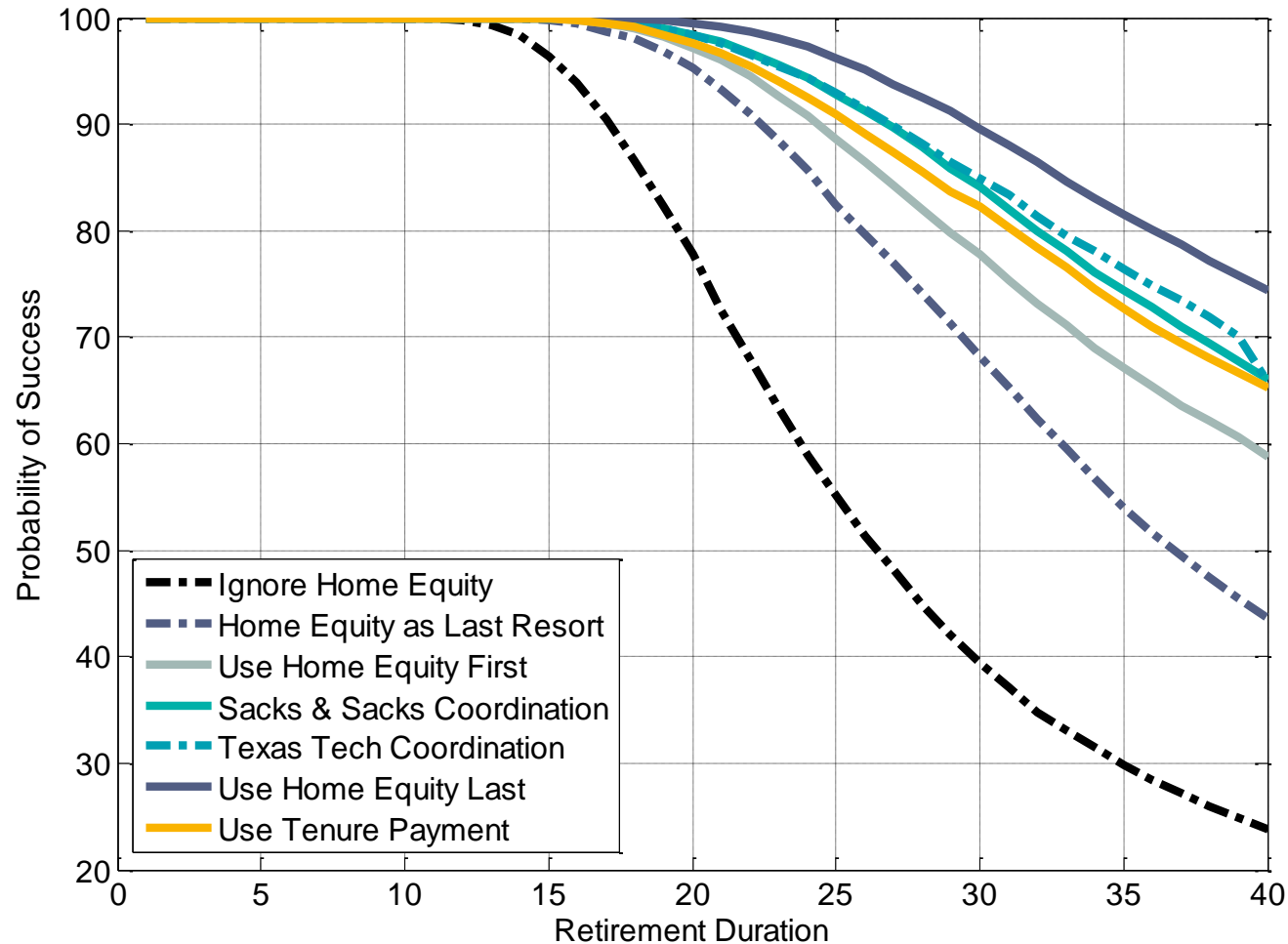
HECM Strategies for Portfolio Coordination

- Ignore Home Equity
-

- Home Equity as Last Resort (“Conventional Wisdom”)
- Use Home Equity First
- Sacks and Sacks Coordination Strategy
- Texas Tech Coordination Strategy
- Use Home Equity Last
- Use Tenure Payment

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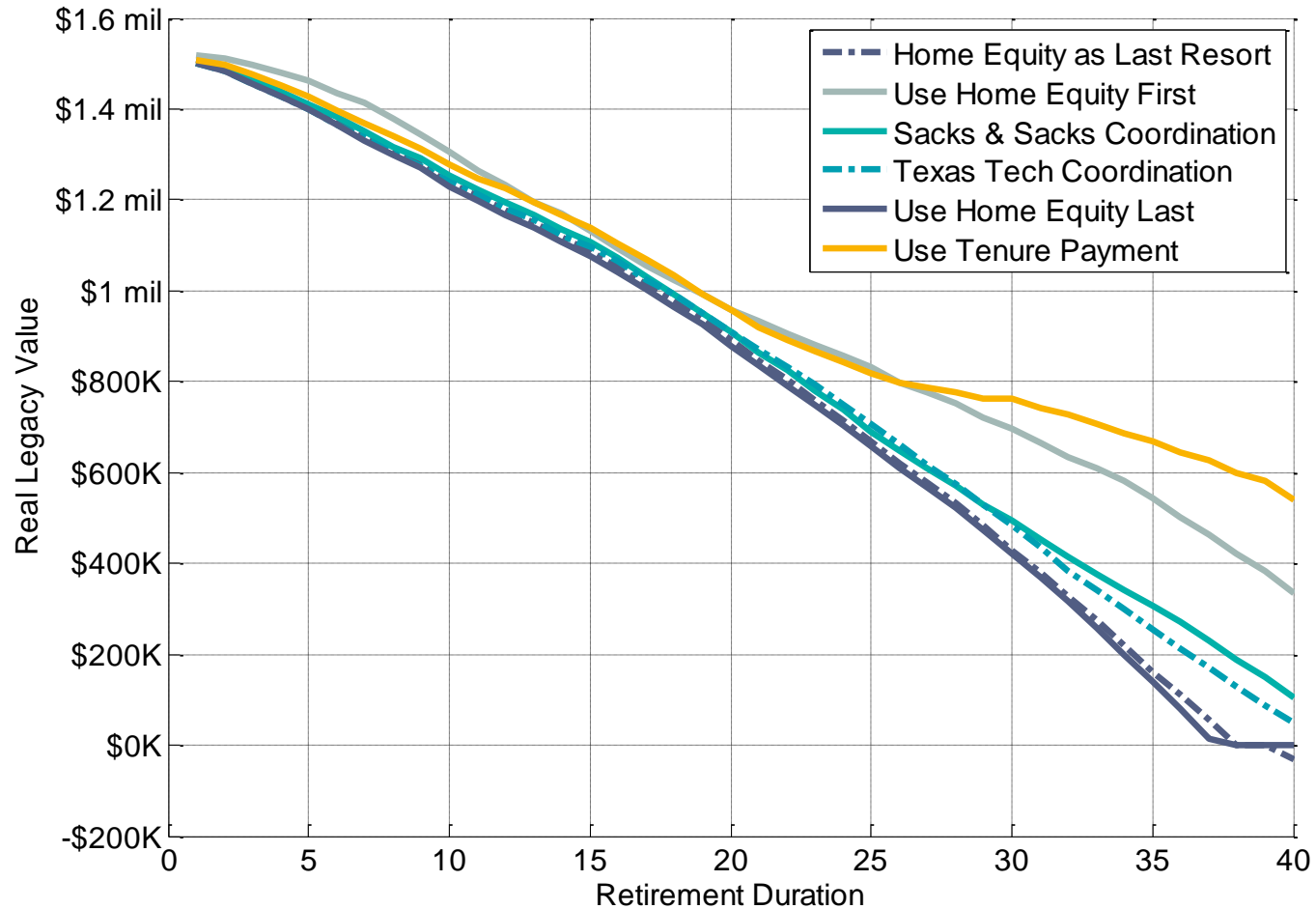
Probability of Success for a 4% Post-Tax Initial Withdrawal Rate
\$1 million portfolio, \$500,000 home value, 25% Marginal Tax Rate





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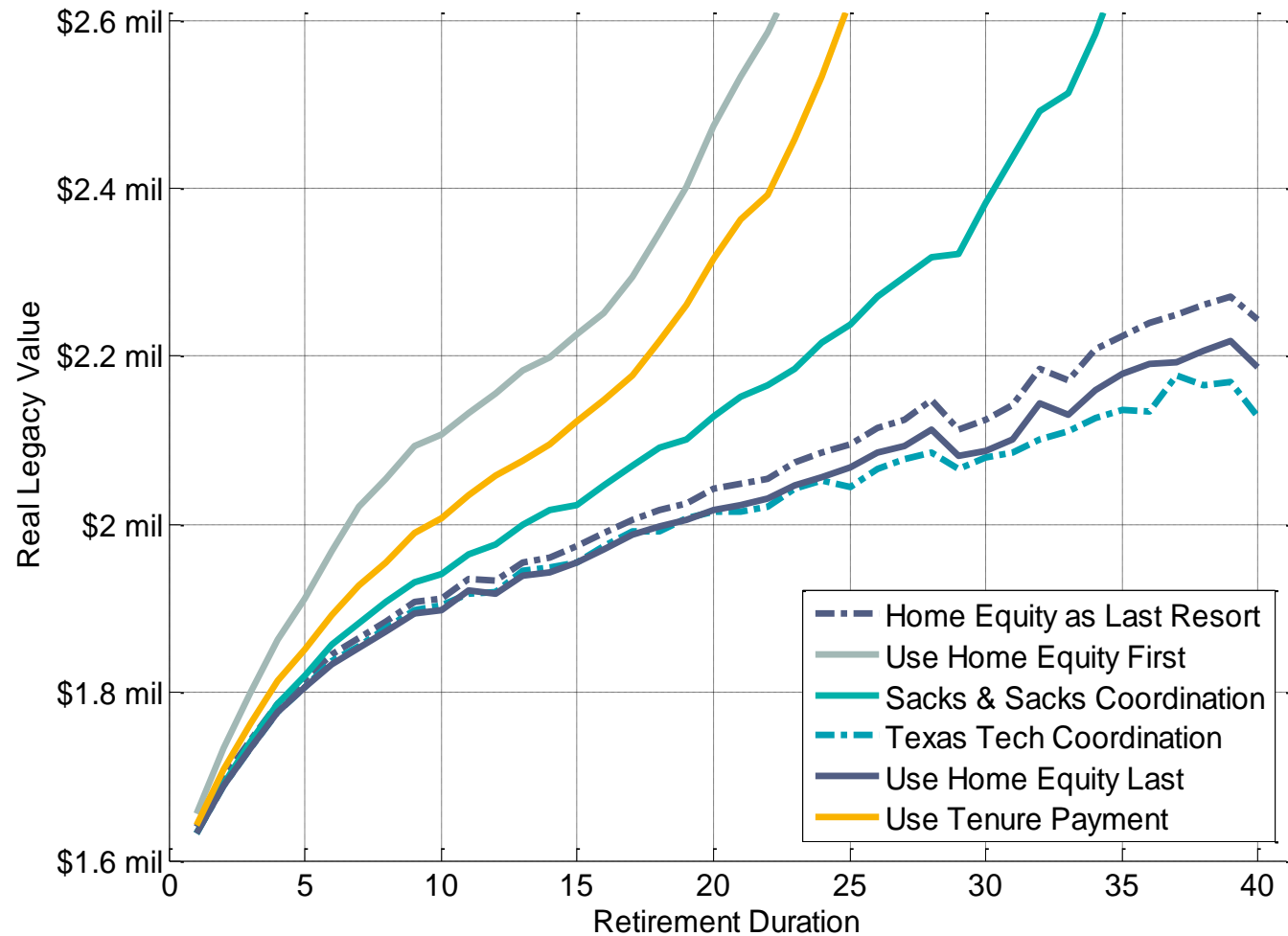
Median Real Legacy Value for a 4% Post-Tax Initial Withdrawal Rate
\$1 million portfolio, \$500,000 home value, 25% Marginal Tax Rate





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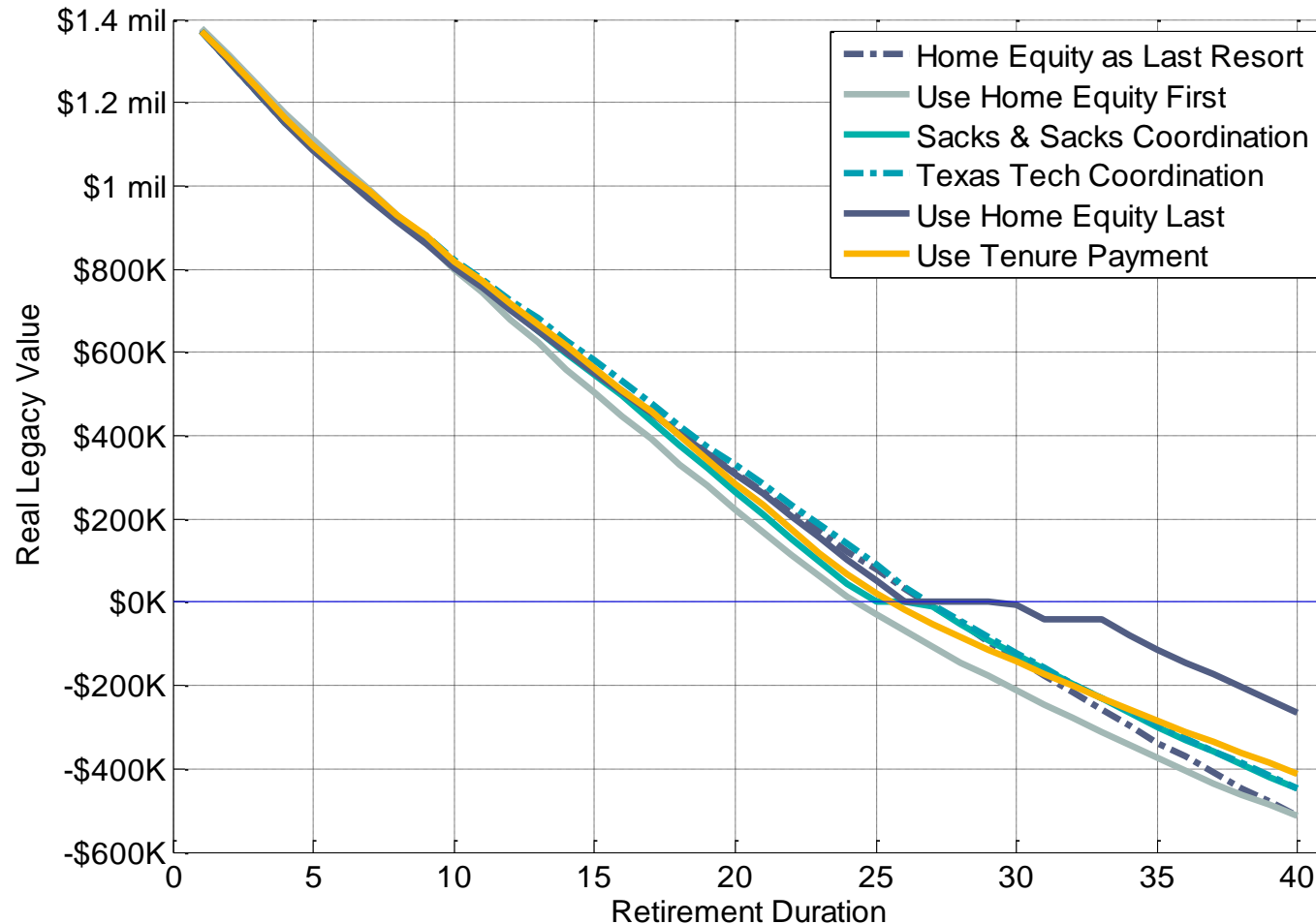
90th Percentile Real Legacy Value for a 4% Post-Tax Initial Withdrawal
\$1 million portfolio, \$500,000 home value, 25% Marginal Tax Rate





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10th Percentile Real Legacy Value for a 4% Post-Tax Initial Withdrawal
\$1 million portfolio, \$500,000 home value, 25% Marginal Tax Rate





Pay Off Existing Mortgage



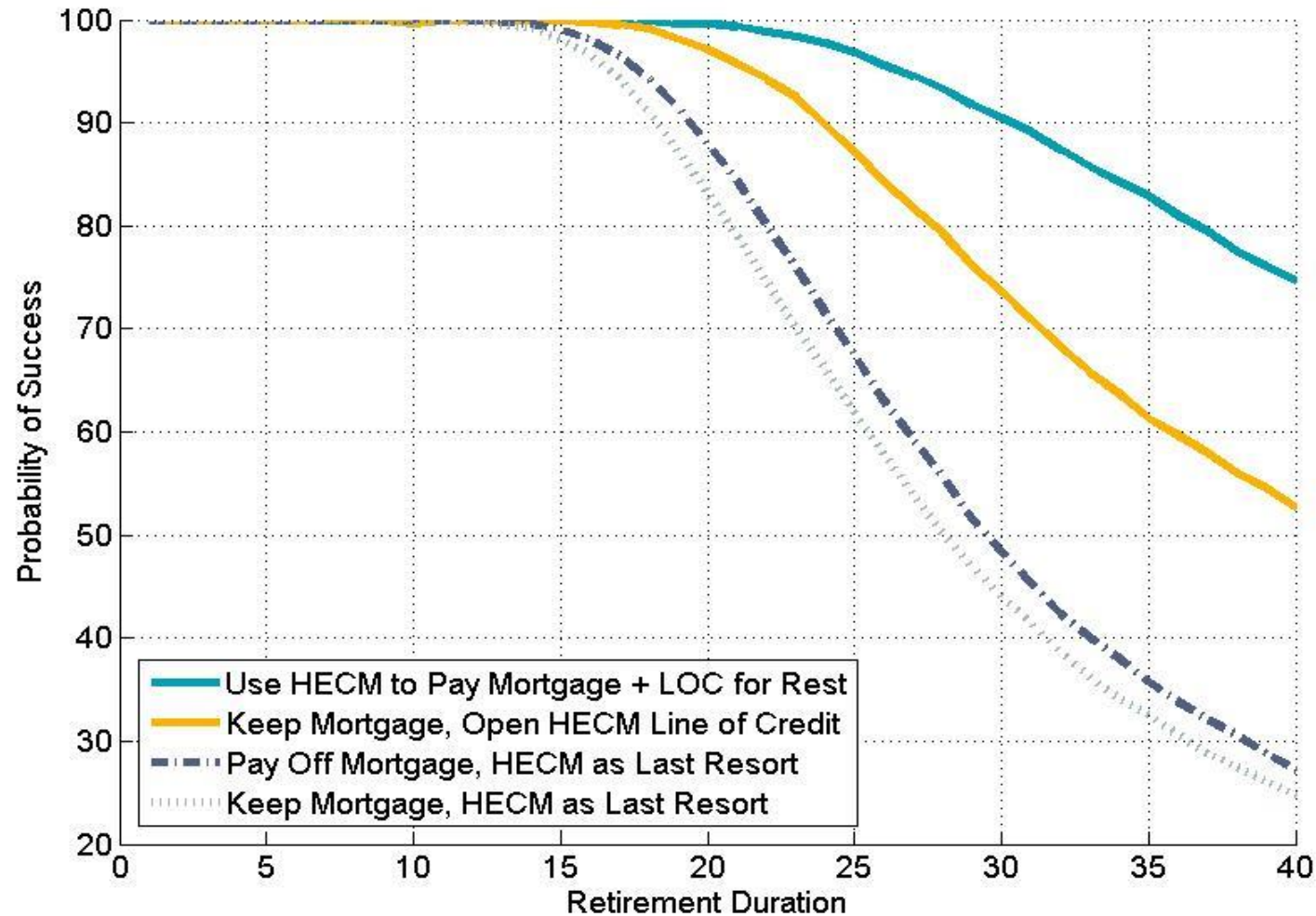
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Example for Carrying Mortgage into Retirement

- 65-year old couple enters retirement
- Twenty years ago, purchased a \$300,000 home with a 20% down payment, using a 7.5% fixed 30-year mortgage for the rest
- Annual mortgage payments = \$20,321
- 10 years left on mortgage; Remaining mortgage balance = \$139,485.
- Home value grew at 3% for past 20 years. It is worth \$541,833 today.
- The principal limit is 52.6% of \$541,833, or \$285,004. 60% of this value is \$171,002

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Probability of Success for a 4% Post-Tax Initial Withdrawal Rate
\$1 million portfolio, \$541,833 home value, 25% Marginal Tax Rate





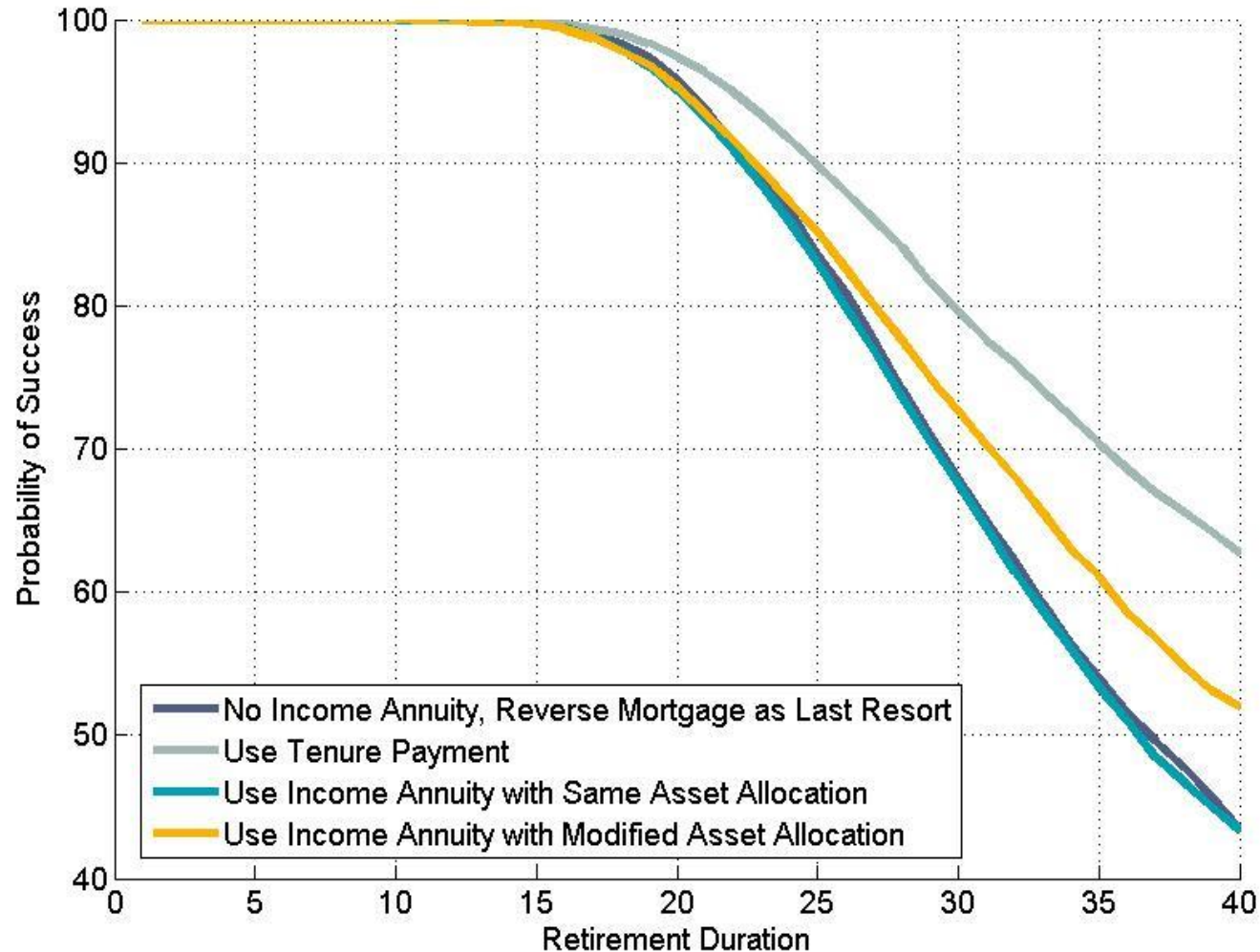
Tenure Payments as Annuity Alternative

Tenure Payment vs. Income Annuity

- Income while eligible vs. Income for life
- Different calculation formulas
 - Income annuity: age, gender, current interest rates & mortality projections
 - Tenure payment: Higher interest rate (more income) > Age 100 (less income)
- Tenure payment: lump-sum premium not required; in practice behaves more like income annuity with a cash refund provision
- Income annuity mortality credits vs. tenure payment “mortality credits” based on non-recourse aspect of principal limit and home value

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Probability of Success for a 4% Post-Tax Initial Withdrawal Rate
\$1 million portfolio, \$500,000 home value, 25% Marginal Tax Rate





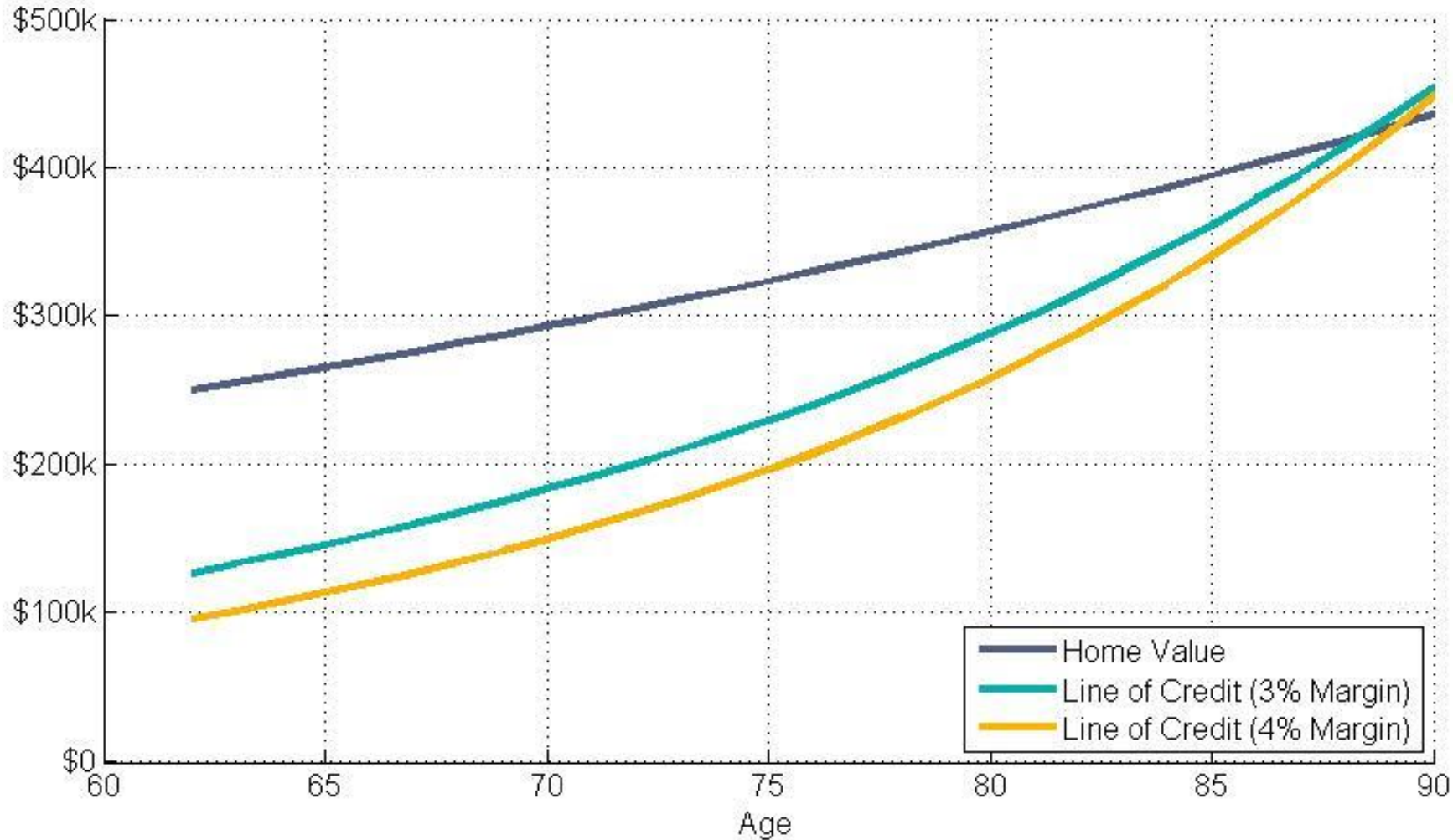
Protective Hedge for Home Value

Protect Housing Wealth

- Housing wealth is a significant but undiversified asset
 - single home vs. housing price index
 - single stock vs. stock index
- HECM: Non-recourse loan
 - (Mortgage insurance premium protects lender)
- HECM = Hedge for falling home prices (“put option” on the home)



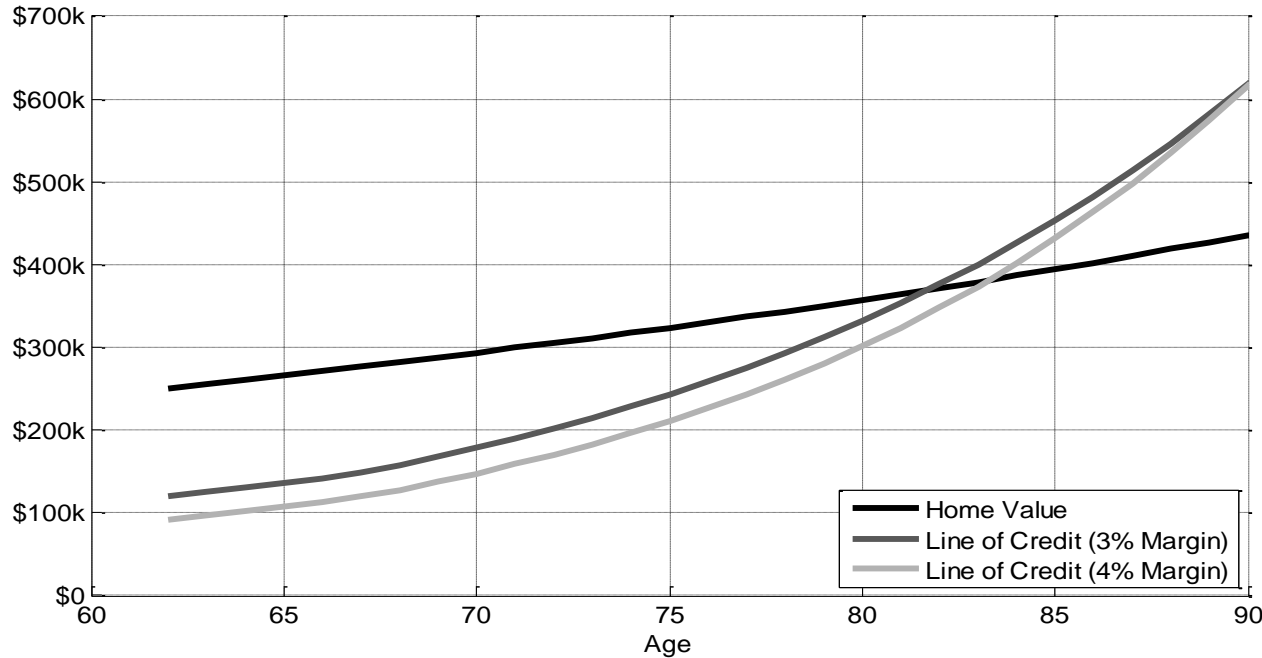
Home Price vs. Line of Credit





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Home Price vs. Line of Credit



Home Value: \$250,000

Age of Youngest Borrower: 62

10-Year LIBOR Swap Rate = 2.375%

3% Lender's Margin: PLF = 47.5%

4% Lender's Margin: PLF = 36.4%

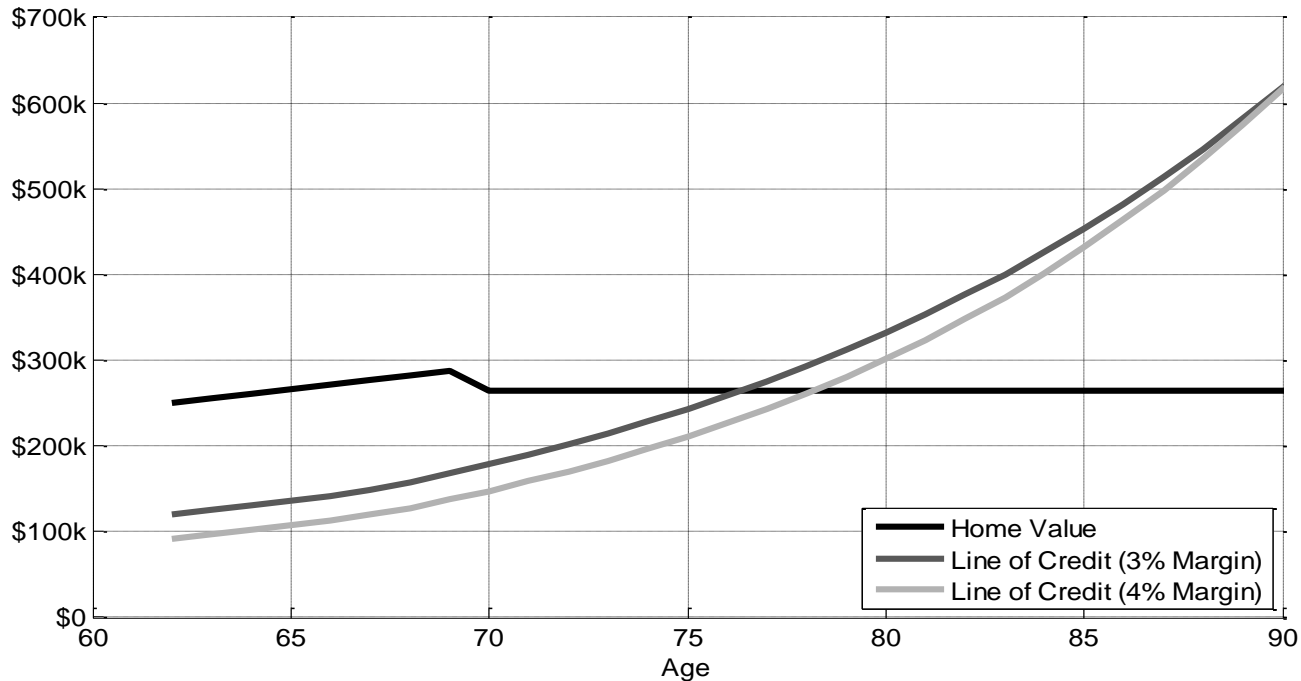
1-Month LIBOR rates: 0.19% for 5 years,
then 2.19% thereafter

Home inflation: 2%

Breakeven Ages: 82 with 3% Margin, 84
with 4% Margin



Home Price vs. Line of Credit



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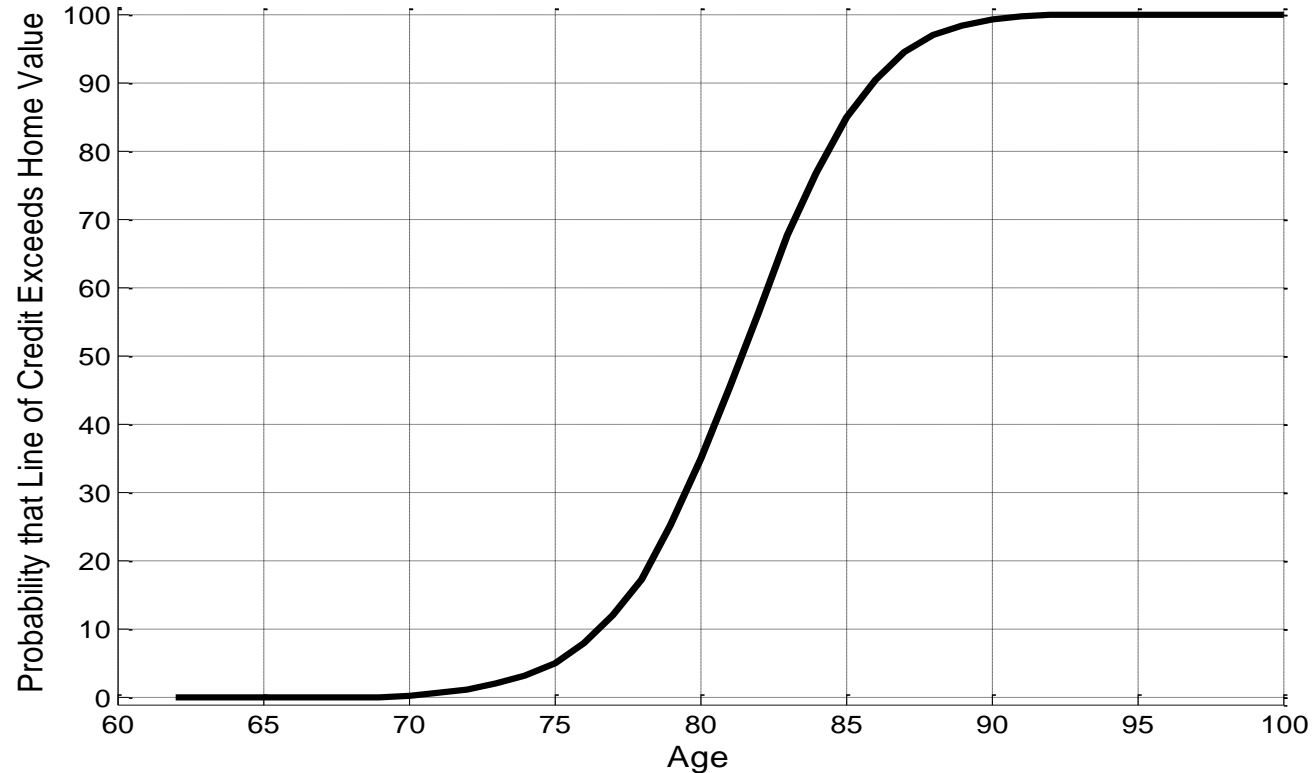
1-Month LIBOR rates: 0.19% for 5 years, then 2.19% thereafter

Home inflation: 2% until 70; Then 10% Drop & Stagnation

Breakeven Ages: 77 with 3% Margin, 79 with 4% Margin



Probability: LOC > Home Value



Age of Youngest Borrower: 62
10-Year LIBOR Swap Rate = 2.375%
3% Lender's Margin: PLF = 47.5%

Monte Carlo simulations for 1-month LIBOR rates & Home Prices

Median Breakeven Age: 82

Conclusions

- Conventional wisdom hurts retirement sustainability: HECM shouldn't be last resort
- Strategic HECM use: improved retirement sustainability, larger legacy
- WHY IT WORKS: 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 (and when home value is under \$625,500)
- Responsible use of HECM can improve retirement income efficiency

Thank you! Any Questions?

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Presentation Slides Available At:
www.RetirementResearcher.com/reverse-mortgages



Appendix

Overview for How Reverse Mortgages Work



Addressing the Negative Image

- Quickly Deplete Home Equity for Questionable Reasons
- Family Misunderstandings
- Non-borrowing Spouses
- Home Title
- Desperate Borrowers & Foreclosure Risk
- High Costs
- Taxpayer Risk
- Stigma About Using Debt

Eligibility Requirements for HECMs

- Borrowers: 62 and older
- Equity in the home
- Financial resources to cover property taxes, homeowner's insurance, and home maintenance
- Counseling session with FHA-approved counselor
- FHA Home Appraisal
- Primary residency
- FHA Lending limit: \$625,500



Essential Jargon

1. Principal Limit
Principal Limit Factor
2. Expected Rate
3. Effective Rate



Reverse Mortgage Interest Rates

Type	Components	Applies to:
Expected Rate	10-year LIBOR Swap Rate + Lender's Margin	Initial Principal Limit Factor Set-Asides for Servicing Costs in Old Mortgages
Effective Rate	1-month LIBOR Rate + Lender's Margin + Mortgage Insurance Premium (1.25%)	Ongoing Principal Limit Growth Rate Loan Balance Growth Rate Line of Credit Growth Rate Post-2014 Set Asides for Financially Strained

Expected and Effective Rates: Example

One-month LIBOR rate: 0.4%

10-year LIBOR swap rate: 2.1%

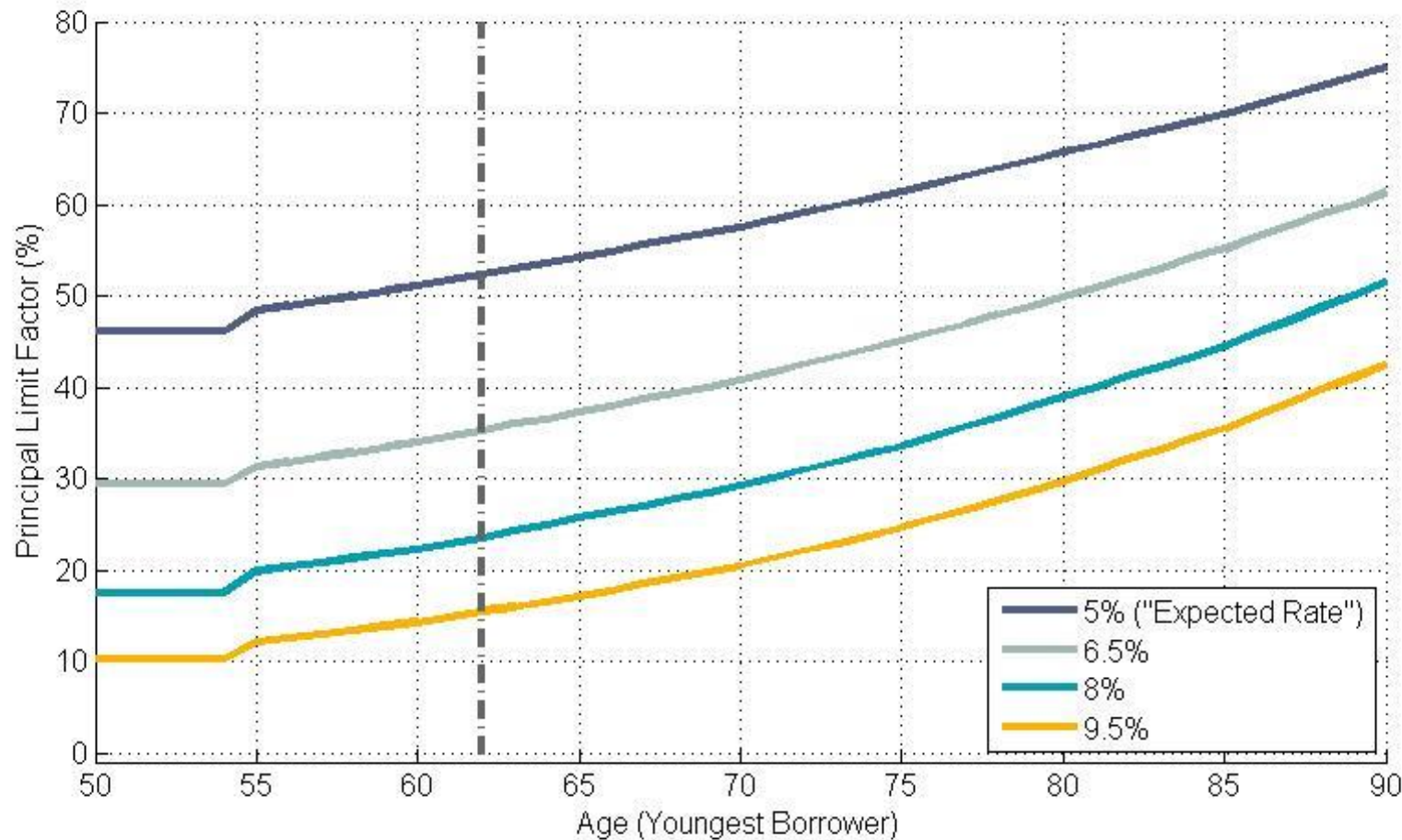
Lenders margin: 3%

Expected Rate = 2.1% + 3% = **5.1%**

Effective Rate: = 0.4% + 3% + 1.25% = **4.65%**



Initial Principal Limit (Principal Limit Factor)



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

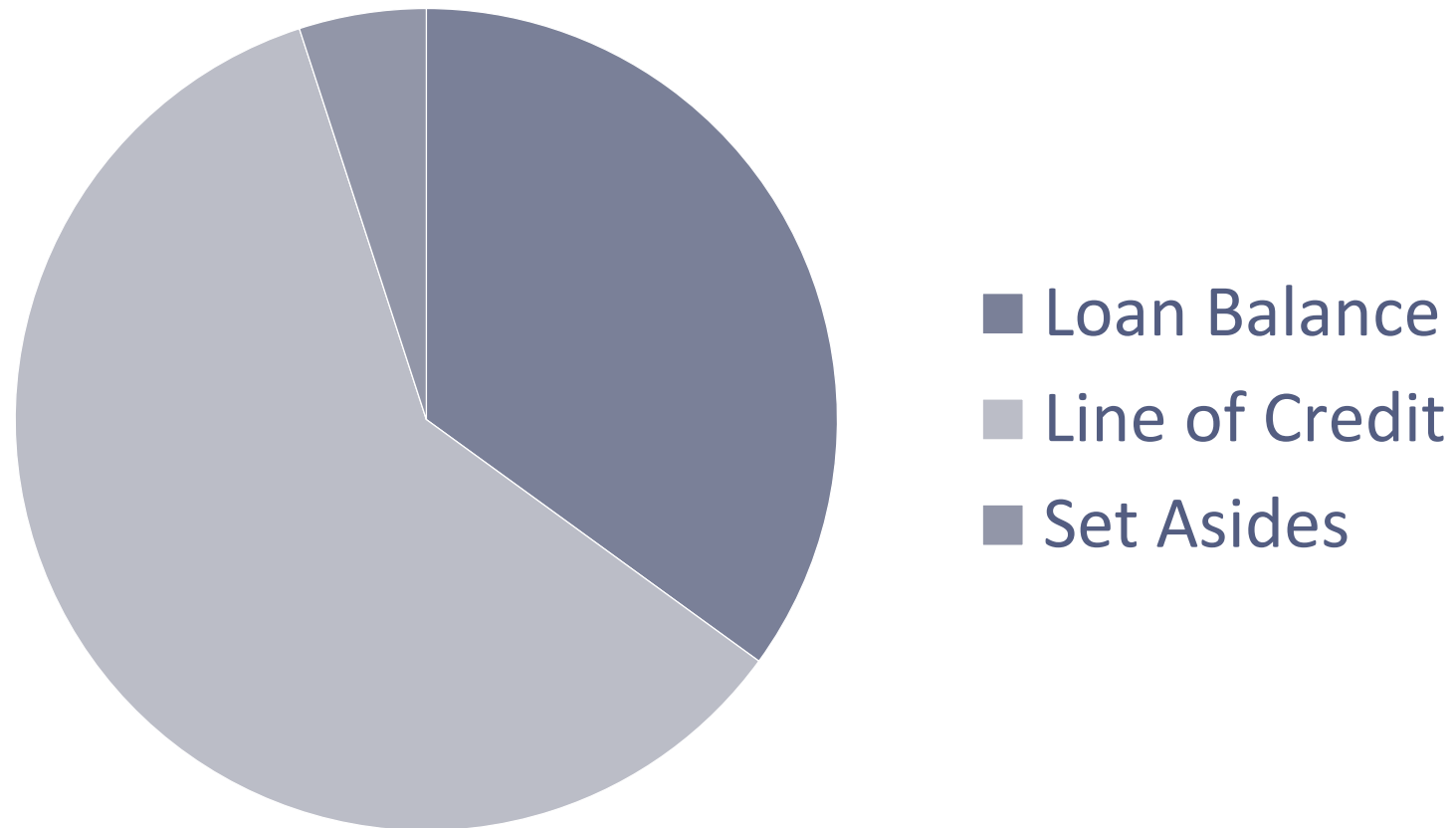


HECM Calculator: Net Available Credit

Home's Appraised Value	\$400,000		
HECM Eligible Amount	\$400,000		
10-Year LIBOR Swap Rate	2.10%		
Lender's Margin	4.00%		
Monthly Insurance Premium	1.25%		
Age of Youngest Eligible Spouse	65		
Principal Limit Factor	41.40%	Age 65	Modified Expected Rate 6.000%
Loan origination fee	\$0	\$6,000	<- Maximum Possible
Initial mortgage insurance	\$2,000	<- When borrowing less than 60% of available credit in the first year	
Other closing costs (appraisal, titling, etc.)	\$2,500		
Total Upfront Costs	\$4,500		
Percentage of Upfront Costs to be Financed	0%		
Life-Expectancy Set-Aside (LESA) Requirements	\$0		
Net Available HECM Credit	\$165,600		

Understanding Line of Credit Growth

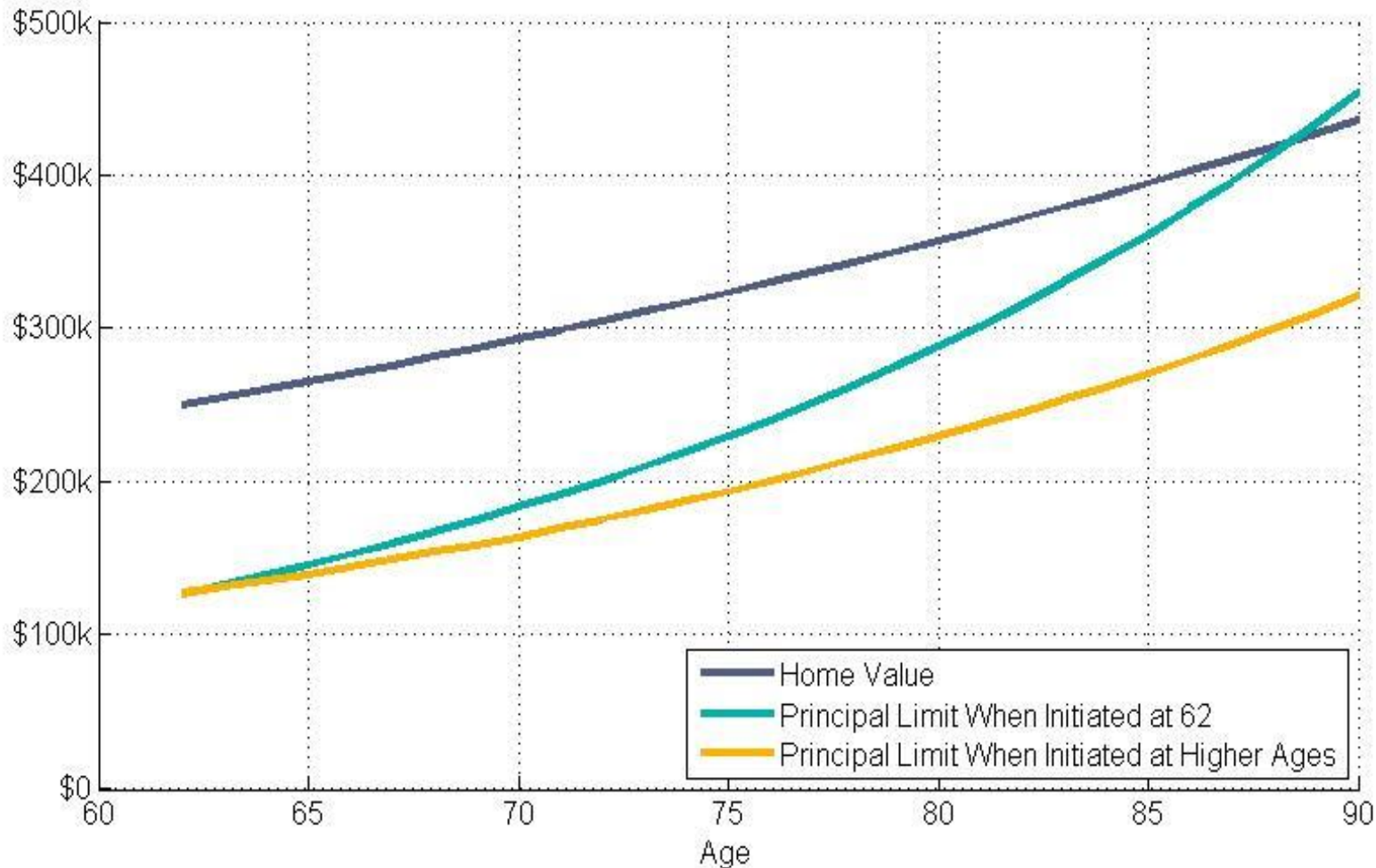
Principal Limit = Loan Balance + Available Line of Credit + Set-Asides





Understanding Line of Credit Growth

Comparing Principal Limits Based on When the Reverse Mortgage Opens



HECMs and the Interest Rate Environment

Low interest rate environment favors HECMs:

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



HECM Spending Options

1. Lump-sum payment
2. Tenure payment
3. Term payment
4. Line of Credit
5. Modified tenure or modified term payment