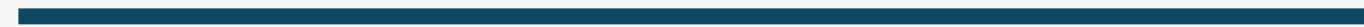




Balancing Benefits and Clawbacks: A Retirement Strategy Model



Introduction



Problem: Many Canadians don't know when to start OAS.

Early = smaller payments for longer.

Late = bigger payments, but clawback risk & mortality uncertainty.

Goal: Maximize net OAS + preserve personal savings.





Methodology



Model Setup

Assumptions

- Age of retirement is 65 years old & initial portfolio balance is \$1,000,000
- Have lived in Canada for at least 40 years (full OAS eligibility)
- RRSP is converted to RRIF at age 71 (mandatory minimum withdrawals)
- OAS is treated as additional income; doesn't affect portfolio withdrawals

Parameters

- OAS start age: 65–70
- Account type: RRSP vs. TFSA
- Gender: male, female, both
- Market returns

Monte Carlo Simulation

- 6 start ages × 2 account types × 3 genders × 2,000 simulations = 72,000 results
- Simulates total OAS received by Canadian retirees



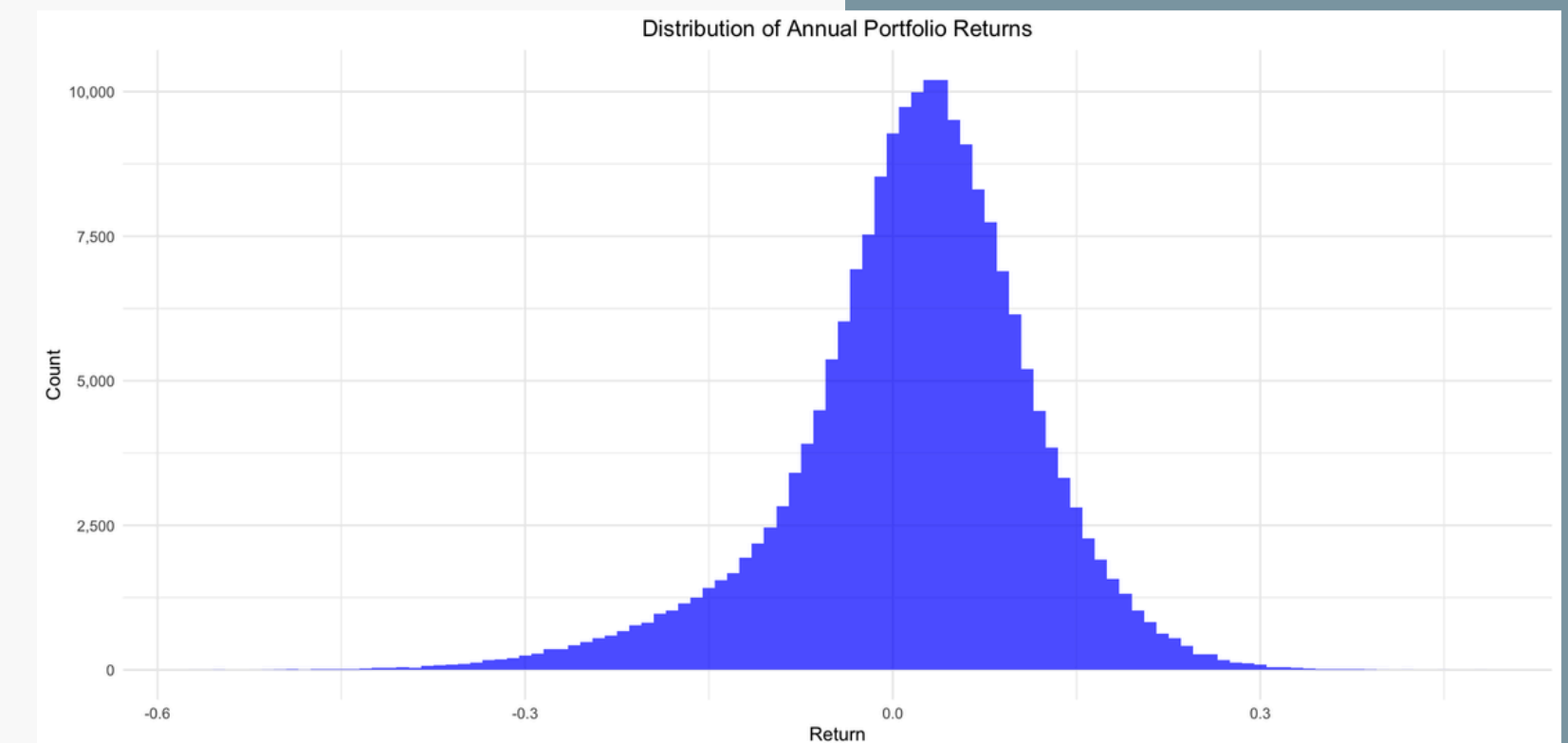
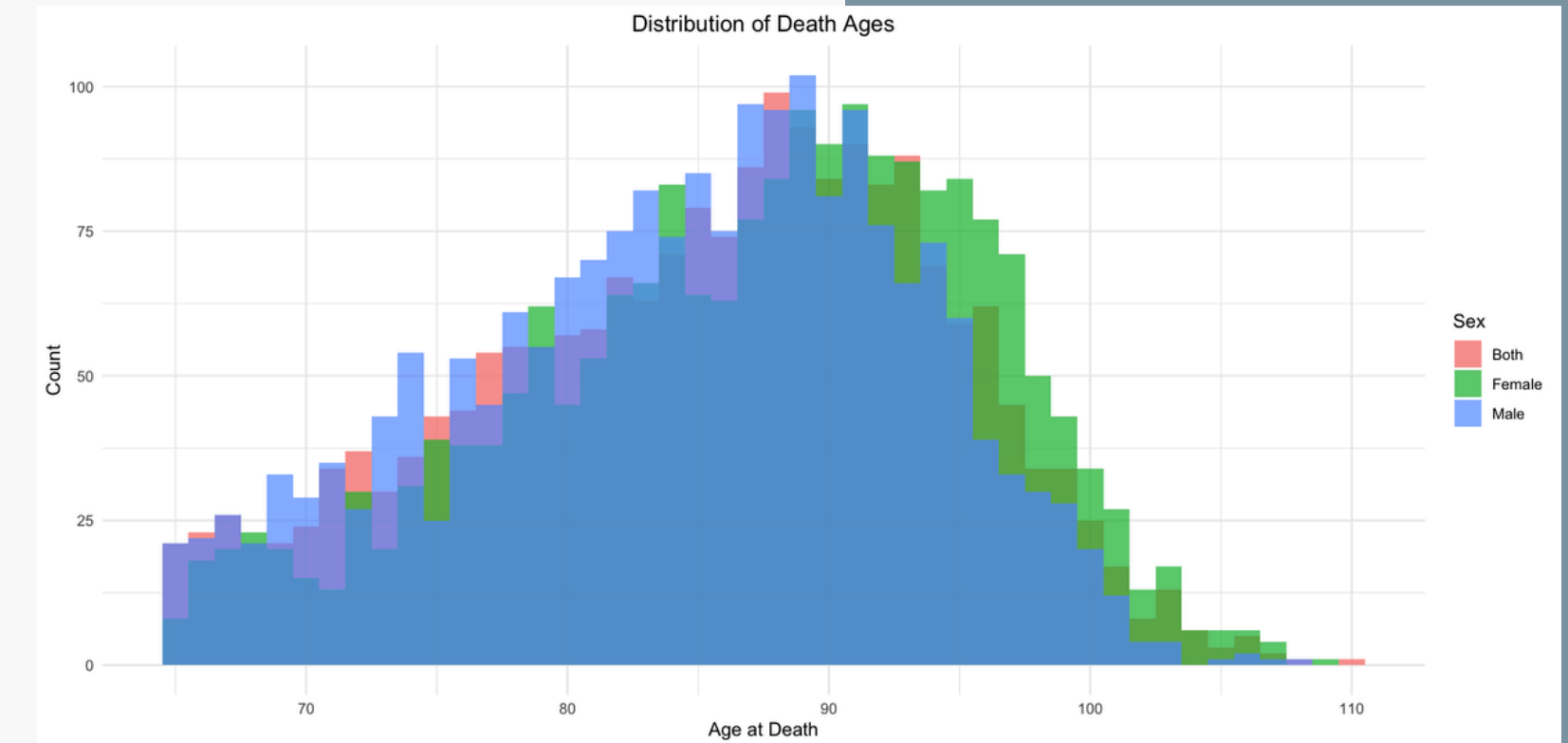
Maximum payments and income thresholds		
Old Age Security (OAS) pension amounts – April to June 2025		
Age	Maximum monthly payment amount	To receive the OAS your annual net world income in 2023 must be
65 to 74	\$727.67	Less than \$142,609
75 and over	\$800.44	Less than \$148,179

Age	Percentage increase	How much you could get for your OAS pension (April to June 2025)
65	n/a	\$727.67
66	12 months X 0.6% = 7.2%	\$780.06
67	24 months X 0.6% = 14.4%	\$832.45
68	36 months X 0.6% = 21.6%	\$884.85
69	48 months X 0.6% = 28.8%	\$937.24
70	60 months X 0.6% = 36%	\$989.63

Longevity & Market Returns

Longevity

- Based on Ontario annual survival probabilities (p_x) for ages 65-110 (for males, females, and both)
- Deaths are simulated by drawing random numbers against these probabilities



Withdrawals & Clawback

Waring-Siegel Model

- Withdrawals are calculated using the Waring-Siegel method, in which the remaining expected years of life are based on the simulated death ages

OAS Clawback

- RRSP: taxable income for OAS clawback includes both withdrawals and OAS received
- TFSA: only OAS benefits are considered, withdrawals are tax-free

Recovery tax period	Income year	Minimum income recovery threshold	Maximum income recovery threshold	
			Age 65 to 74	Age 75 and over
July 2024 to June 2025	2023	\$86,912	\$142,609	\$148,179
July 2025 to June 2026	2024	\$90,997	\$148,451	\$154,196
July 2026 to June 2027	2025	\$93,454	\$151,668 ¹	\$157,490 ¹

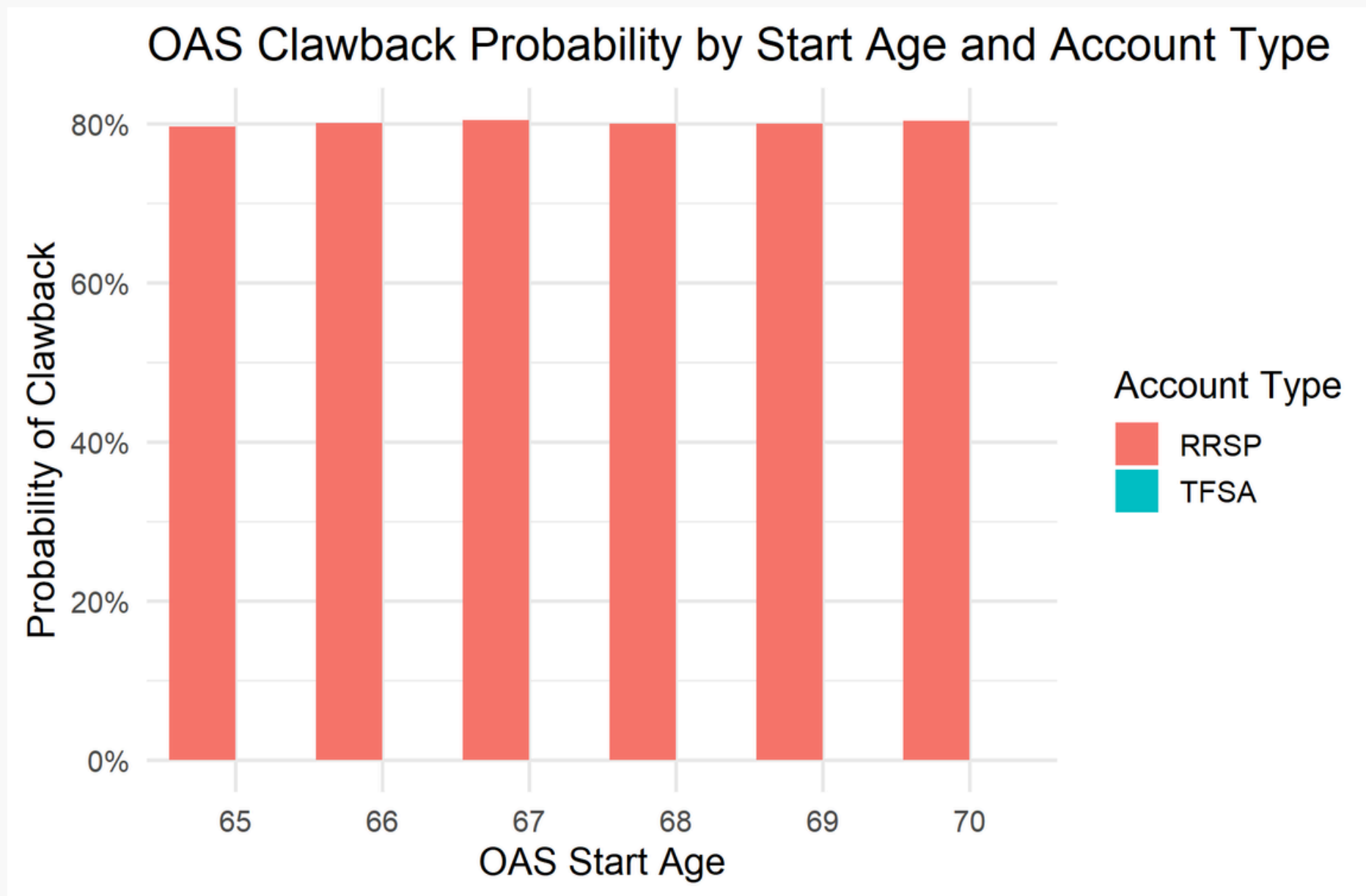




Analysis



Investment Account Type:



TFSA-Funded:

- Clawback probability is **zero** at all OAS start ages.

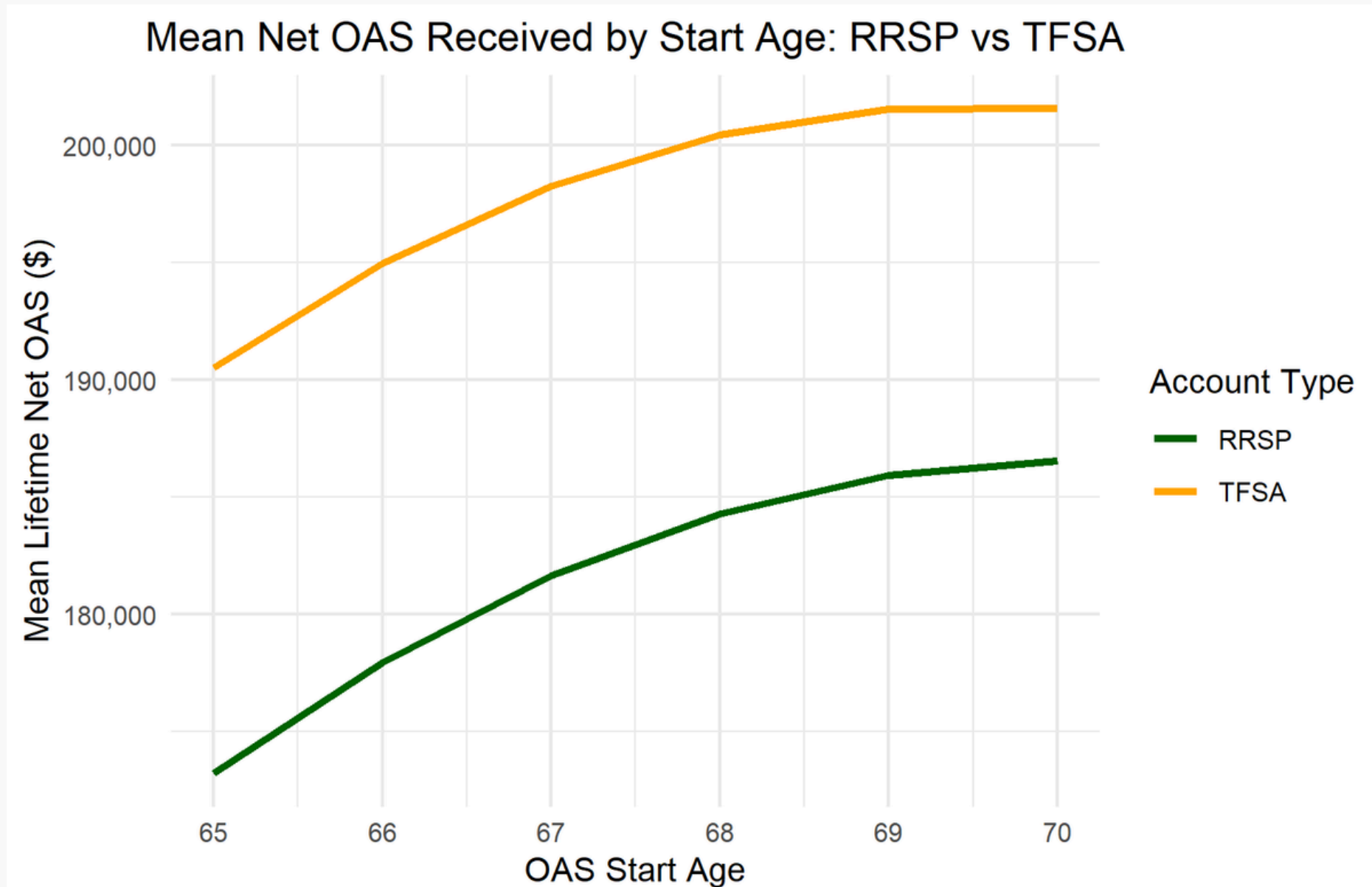
RRSP-Funded:

- Approximately **80% retirees** faces OAS clawback at least once in their lifetime.
- Deferring OAS increases benefit **(36%)**, but simultaneously increases total taxable income.

Summary:

- TFSA → No Clawback → **Defer to 70**
- RRSP → Increasing Clawback → **Early at 65**

Investment Account Type:



TFSA-Funded:

- Retirees receive **full OAS** at all start ages.
- **No clawback** due to tax-free withdrawals.

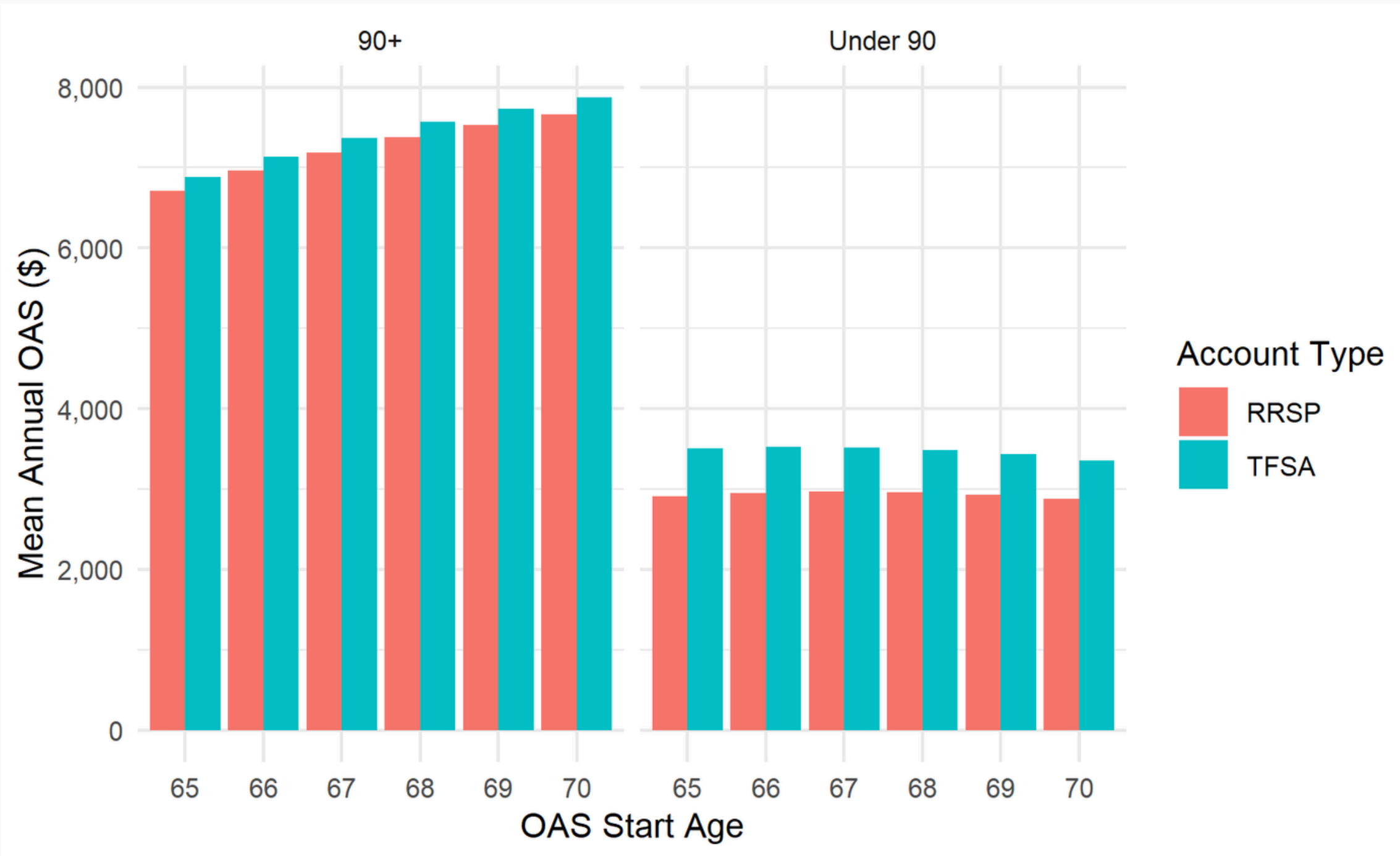
RRSP-Funded:

- Lower total OAS due to taxable income potentially triggering clawback.
- Curve ideally **should** flatten or peak earlier (age 67-68).

Summary:

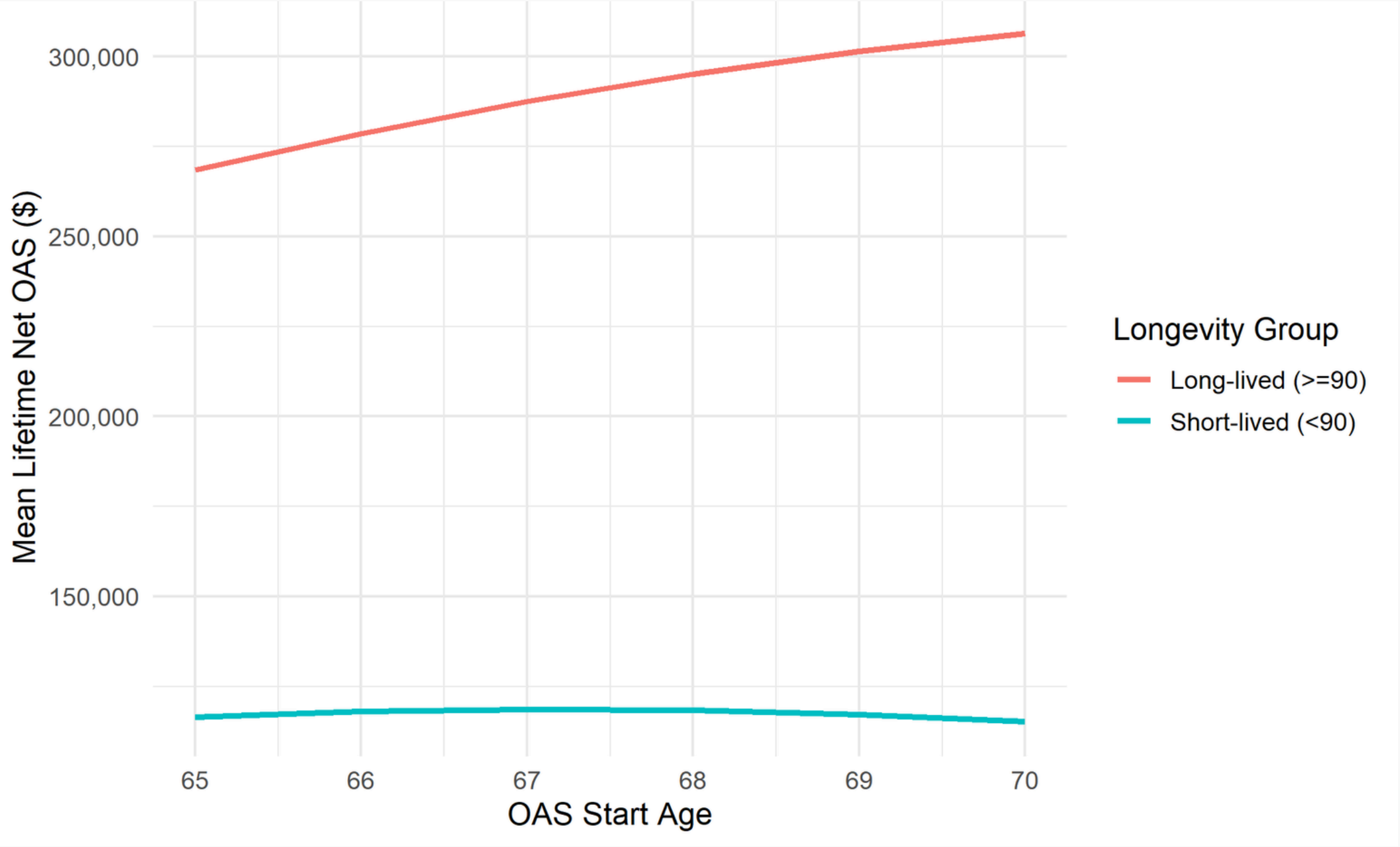
- TFSA → No Clawback → **DEFER TO 70**
- RRSP → Deferring may lead to higher clawback → **EARLY AT 65**

OAS Received Based on Longevity



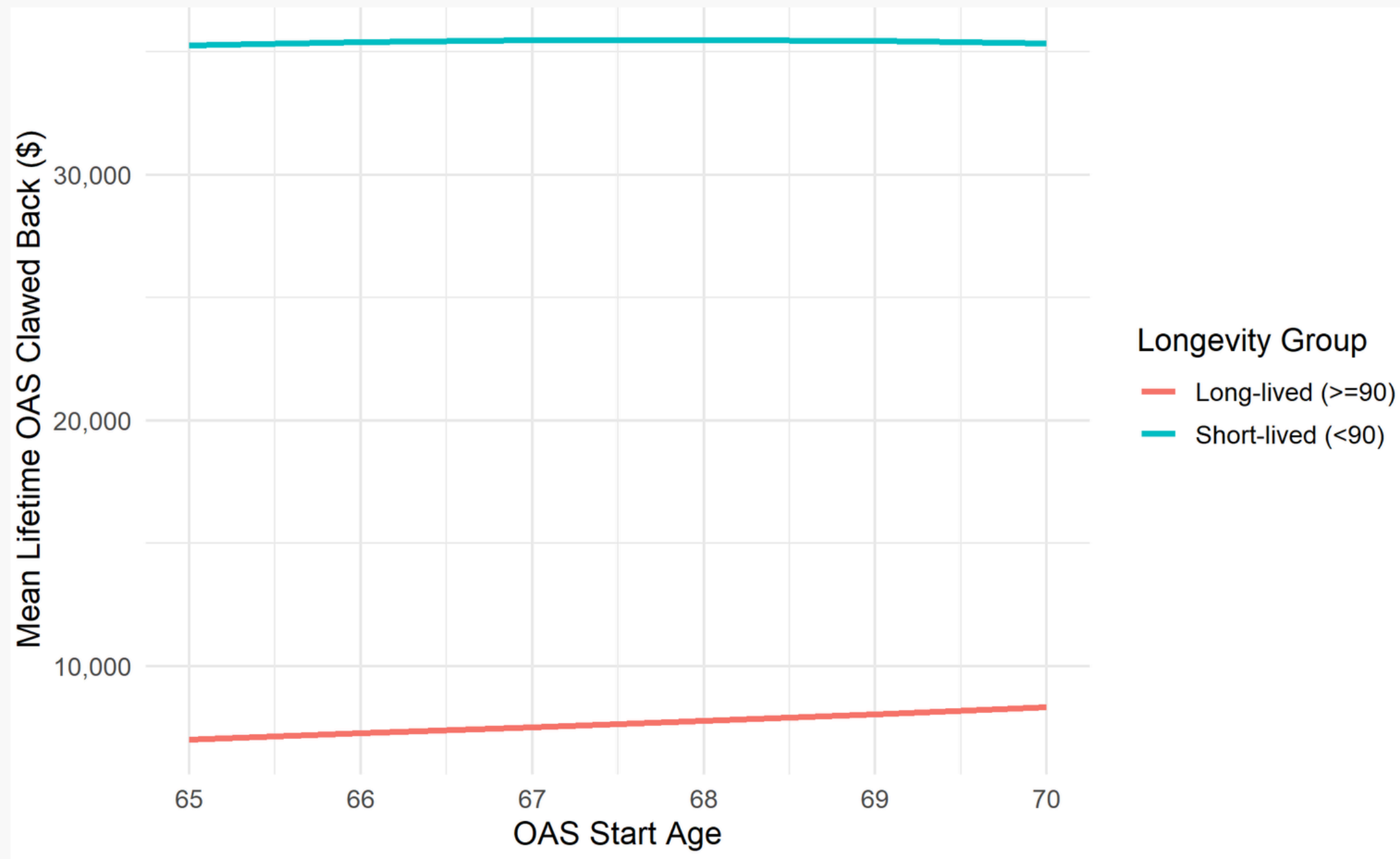
For those living to 90+, mean annual OAS peaks at \$7,500 (TFSA, age 70); for those under 90, it's lower at \$3,500 (TFSA, age 70), showing longer life increases OAS, with TFSA consistently higher than RRSP due to no taxable withdrawals.

Net OAS Received vs Start Age (RRSP)



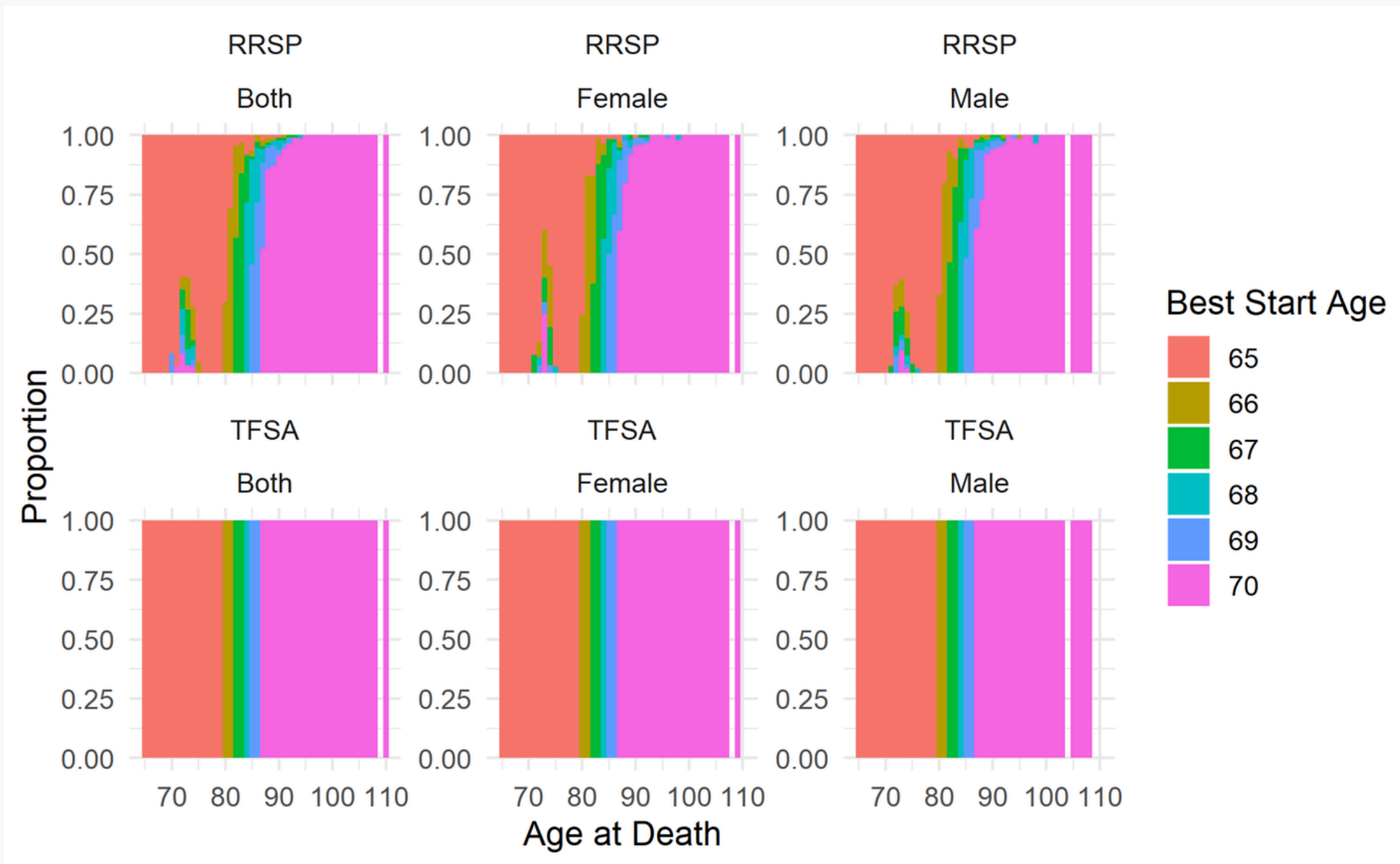
Long-lived retirees (≥ 90) see mean lifetime OAS rise from \$260,000 to \$310,000 as start age increases from 65 to 70, while short-lived (< 90) receive \$120,000 regardless of start age, highlighting deferral benefits for longer lifespans.

Total OAS Clawed Back vs Start Age (RRSP)



Short-lived retirees (<90) face higher clawbacks, around \$35,000, across all start ages due to more years of withdrawals, while long-lived (≥90) have clawbacks near \$10,000, slightly increasing with later start ages due to larger deferred OAS amounts.

Optimal OAS Start Age by Longevity



For shorter lifespans (death before 80), starting OAS at 65 (red) is optimal; for longer lifespans (90+), ages 68–70 (blue to purple) dominate, especially for TFSA where deferral benefits are clearer due to no clawbacks; females favor later start ages more than males.

Sequence of Returns Risk

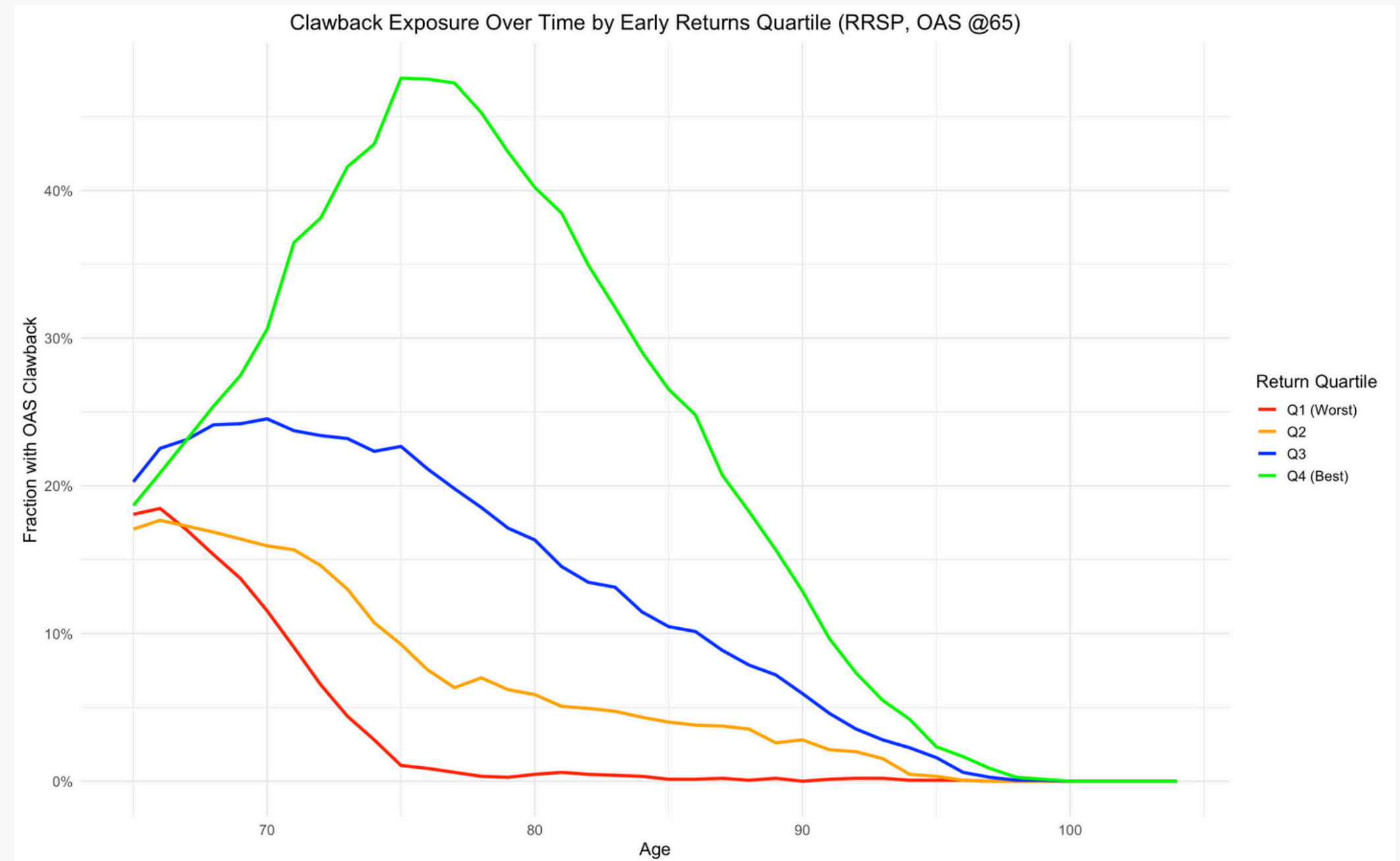


Pattern:

- Retirees with **bullish early returns** have a **greater probability** of OAS clawback exposure over time.
- Retirees with **bearish early returns** have **lower probability** of OAS clawback exposure over time.

Timing:

- **High-return retirees:** Small clawback in 60s, but higher in 70s and 80s.
- **Low-return retirees:** Small clawback initially, but avoided in later period of retirement.



Sequence of Returns Risk

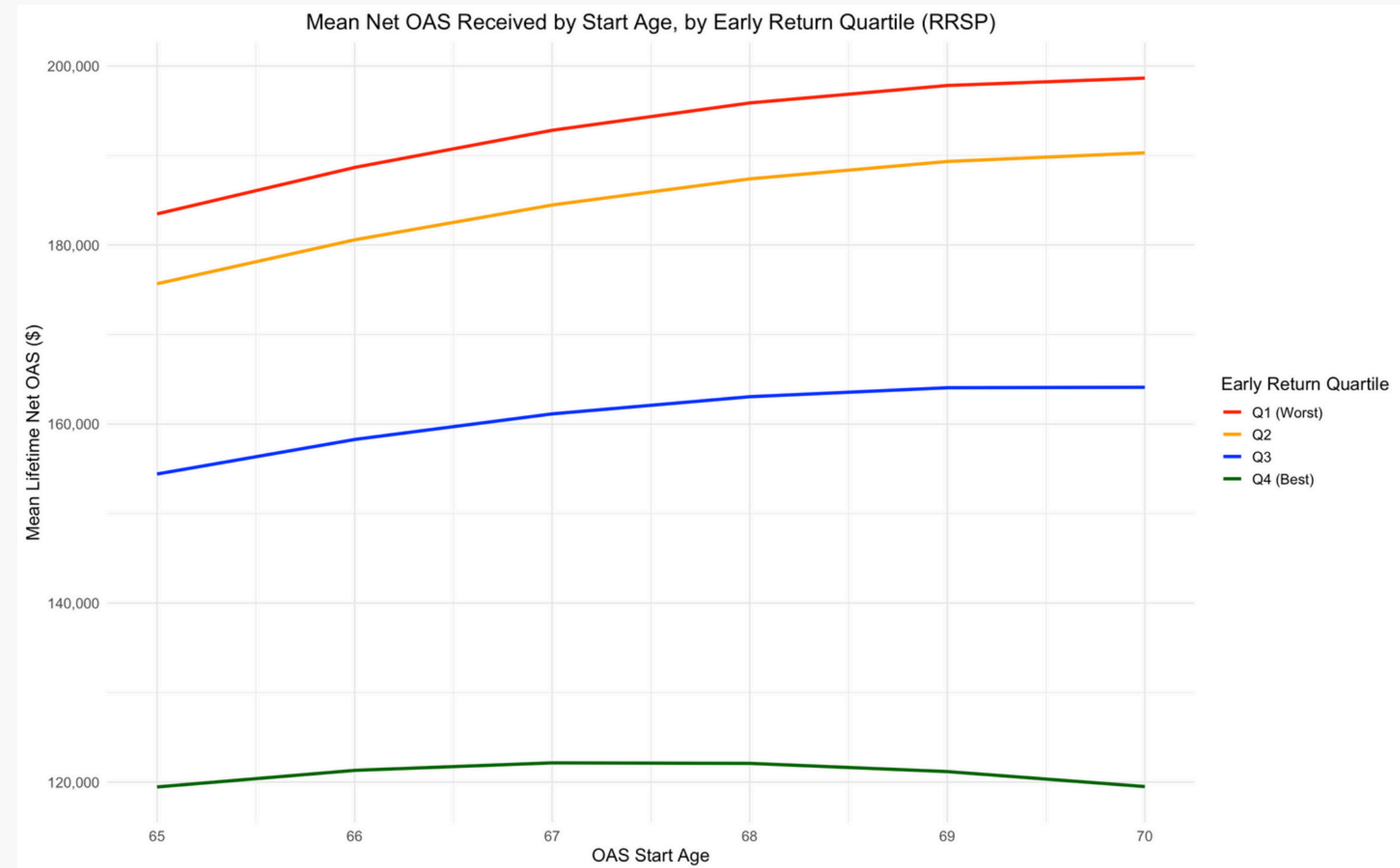


Pattern:

- The better the early market performance, the less advantageous deferring OAS becomes.
- **Worst Early Returns (Red Curve):**
 - Lowest taxable income → Minimal Clawback
- **Moderate Returns (Orange & Blue Curves):**
 - Some clawback begins after 68-69.
 - Optimal age for OAS: 68-69.
- **Best Early Returns (Green Curve):**
 - Strong portfolio growth → higher taxable income → Potentially higher clawback.

Summary:

- High Early Returns → More Clawback Later →
Deffering may reduce Net OAS → **Early at 67/68**
- Low early Returns → Less Income → More
Retained OAS → **Defer to 70**



Key Takeaways



TFSA avoids clawbacks entirely: Using a TFSA for retirement income ensures full OAS benefits, making it the most tax-efficient option.

Demographics and returns shape strategy: Women benefit more from deferring due to longer life expectancy. Men and those with strong early returns should consider starting OAS earlier.

Negative early returns? Defer: Poor early investment performance reduces clawback risk, making age 70 a better time to claim.

Deferring boosts value—if you live long enough: Delaying OAS to 70 maximizes benefits only if you expect to live past 90; otherwise, starting at 65 may yield more.

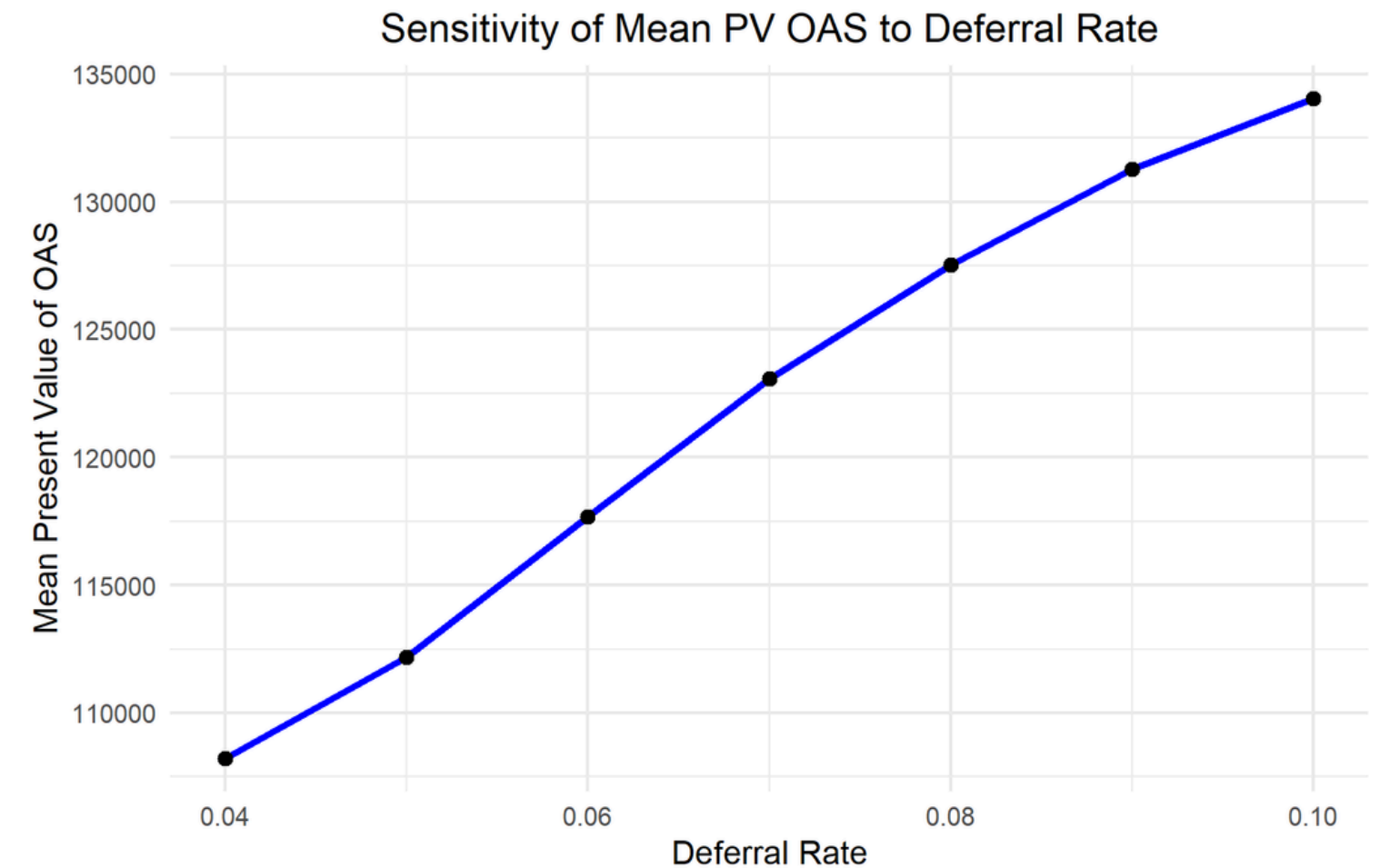
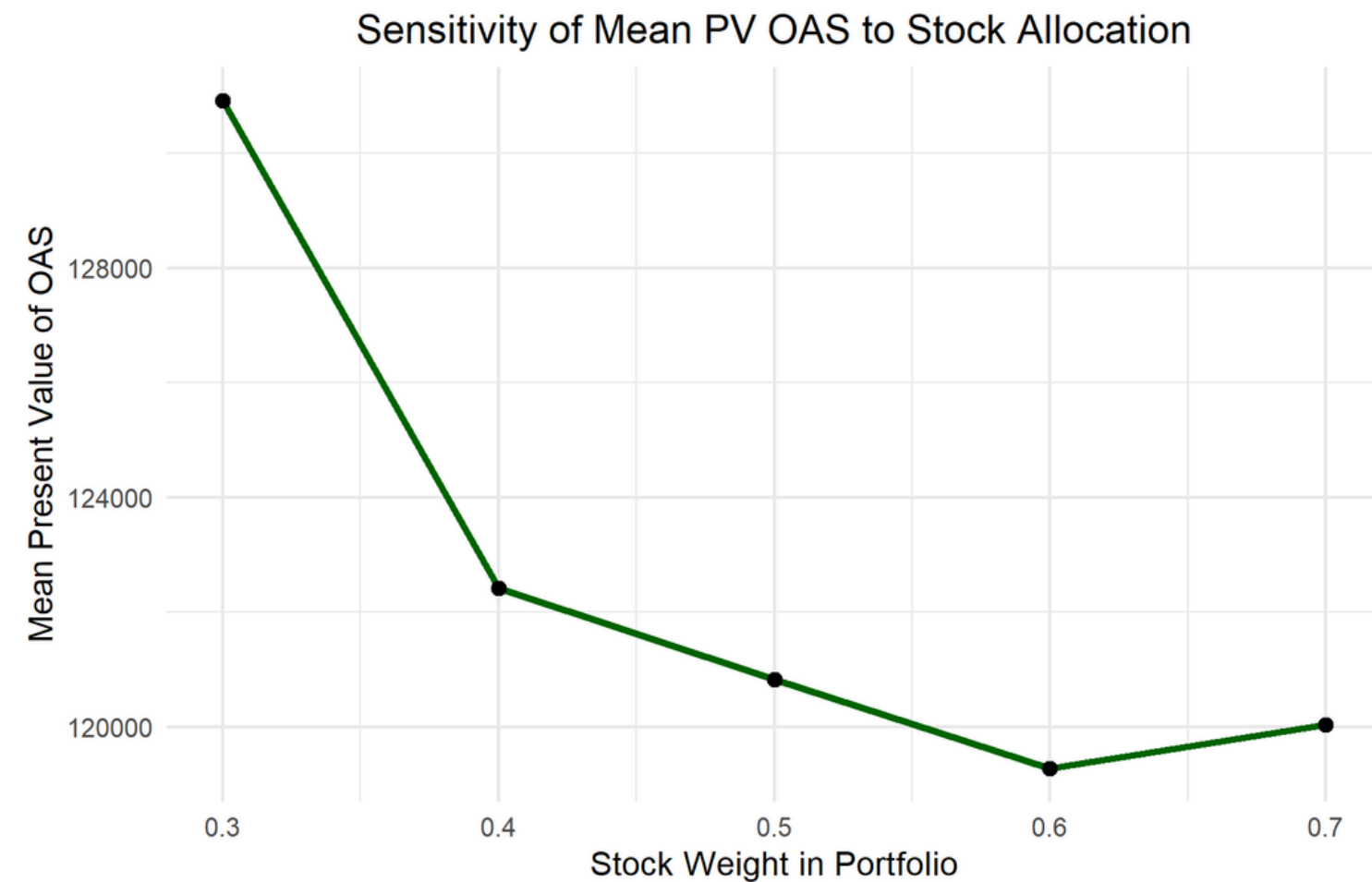


Sensitivity Analysis



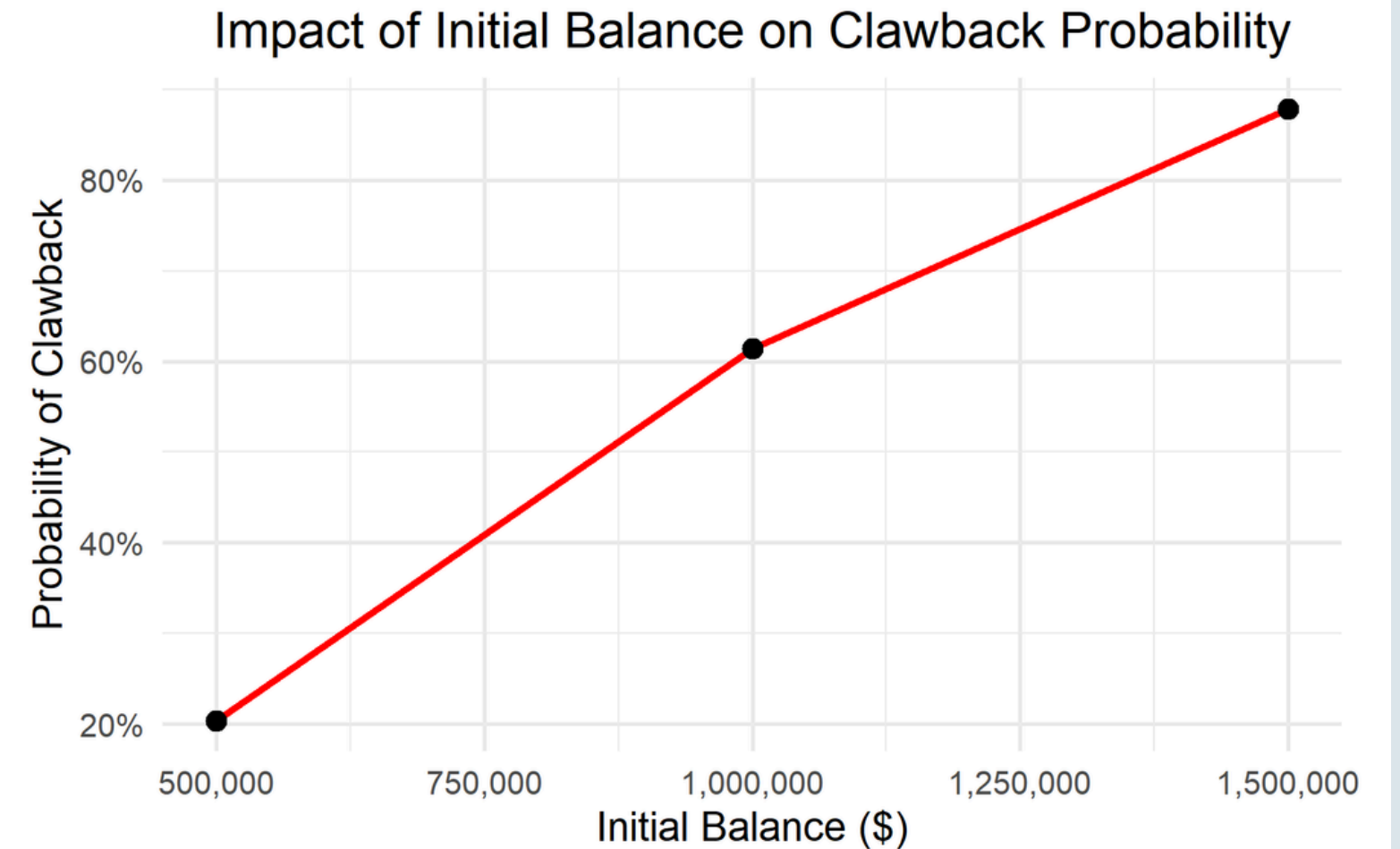
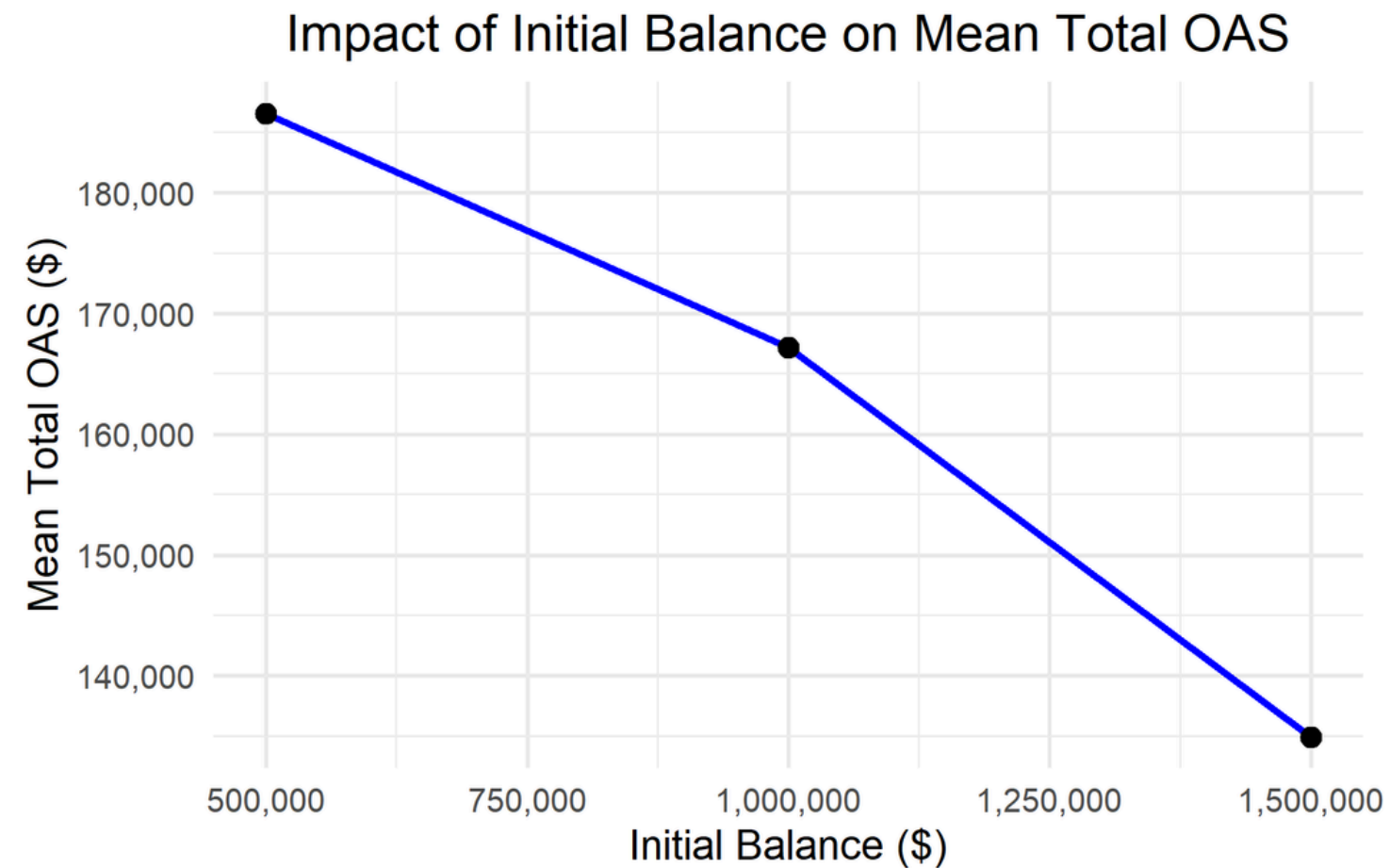
Sensitivity of Mean OAS Trends

Increasing stock weight (0.3 to 0.7) slightly lowers mean PV OAS due to higher volatility, while a higher deferral rate (0.04 to 0.10) significantly increases mean PV OAS by enhancing deferred benefits.



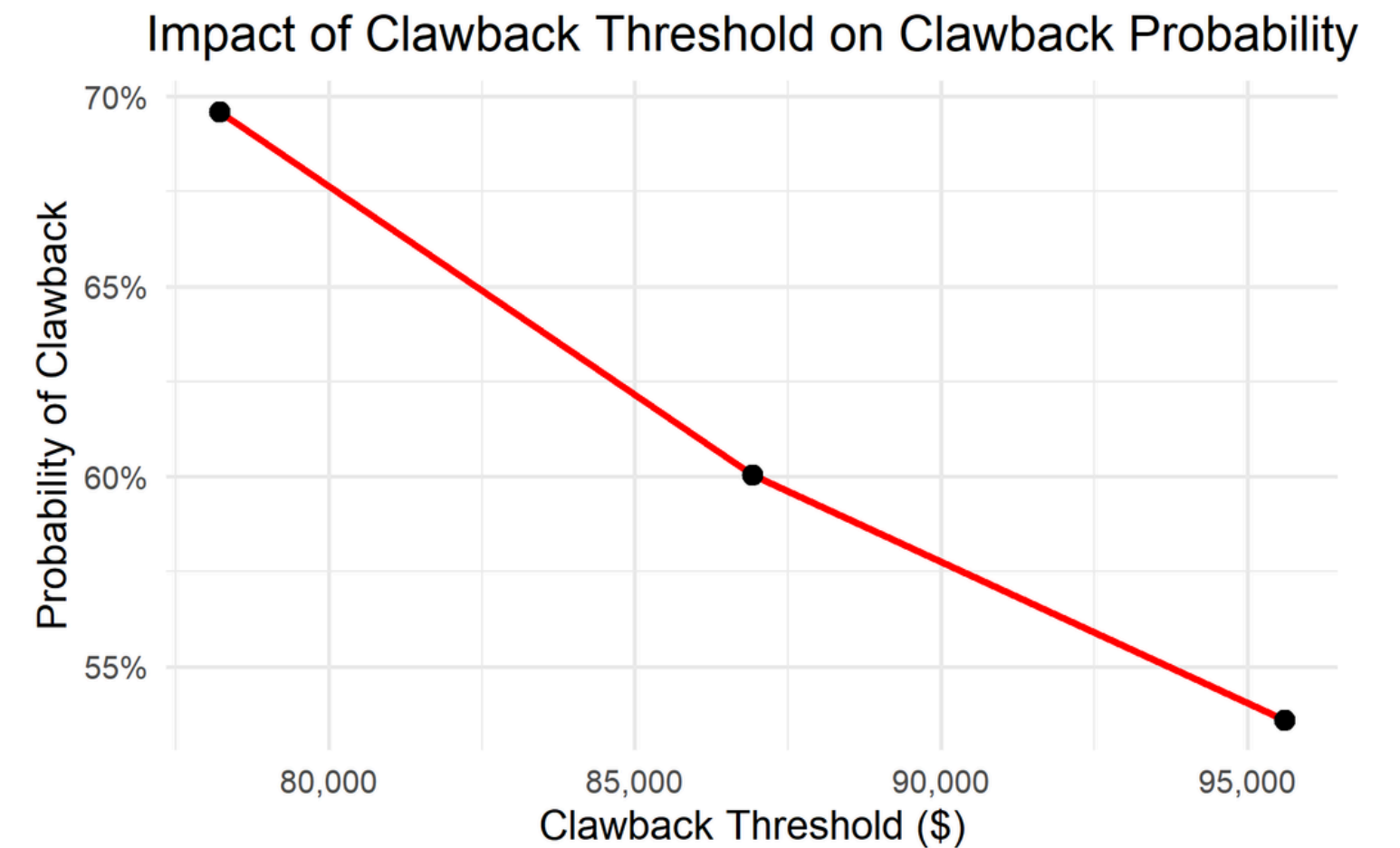
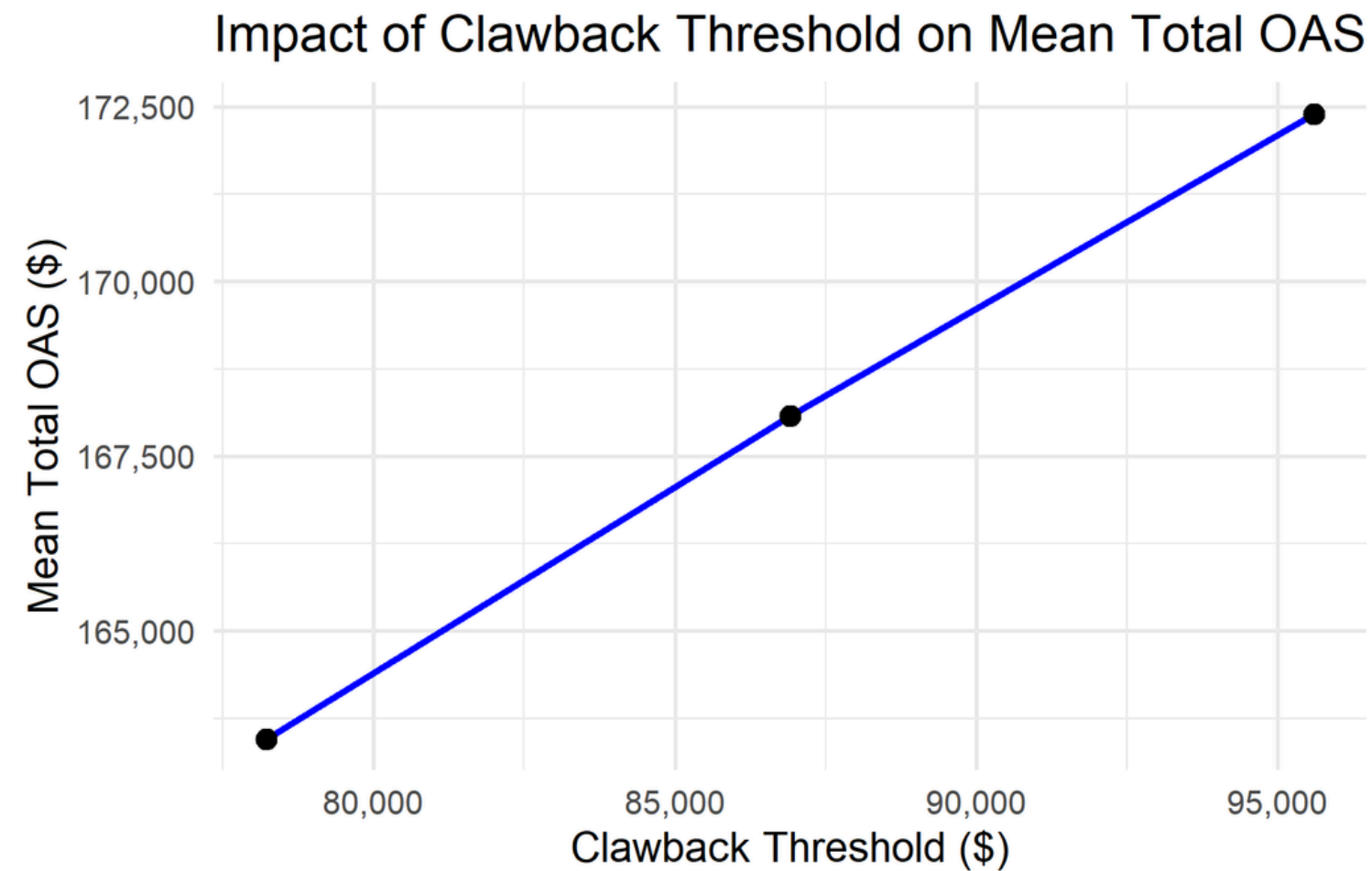
Impact of Initial Balance

A larger initial balance (\$500,000 to \$1,500,000) reduces mean total OAS as higher withdrawals trigger more clawbacks; clawback probability rises from 20% to 80% with increased taxable income.



Impact of Clawback Threshold

Raising the clawback threshold (\$78,221 to \$95,603) increases mean total OAS from \$165,000 to \$172,500 by reducing deductions; clawback probability drops from 65% to 55% as fewer retirees are affected.





Thank you

