

Welcome	Introduction	1. Distribution of Business: Buyer Age Profiles	2. Distribution of Business: In Force	3. Equity Market Experience Over the Study Period	4. Withdrawal Activity: Summary	5. Average Amounts Withdrawn - All Contracts	6. GLWB Specific - First Withdrawal by Owner Attained Age and Contract Year	7. GLWB Specific: Efficiency of Utilization	8. GLWB Specific: Withdrawal a..
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Fixed Indexed Annuity Experience Study

Policy Years 2016-2018



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Fixed Indexed Annuity Experience Study

Policy Years 2016-2018

About the Study

This joint study sponsored by LIMRA and the Society of Actuaries examines FIA full surrender, withdrawal, and GLWB utilization for experience years 2016-2018.

These factors are studied from the perspective of various owner, rider and product characteristics including "in-the-moneyness" of GLWB guarantees, systematic vs occasional withdrawal activity patterns, and the percentage of maximum GLWB benefit withdrawn. A Project Oversight Group (POG) comprised of actuaries and industry experts provided guidance for the survey design as well as the data analysis and reporting.

Confidentiality View Triggered:

The dashboard has been constructed to blank out cells in a view whenever those cells violate confidentiality safe harbors for this study. This is to prevent the user from being able to identify the experience of any one data contributor.

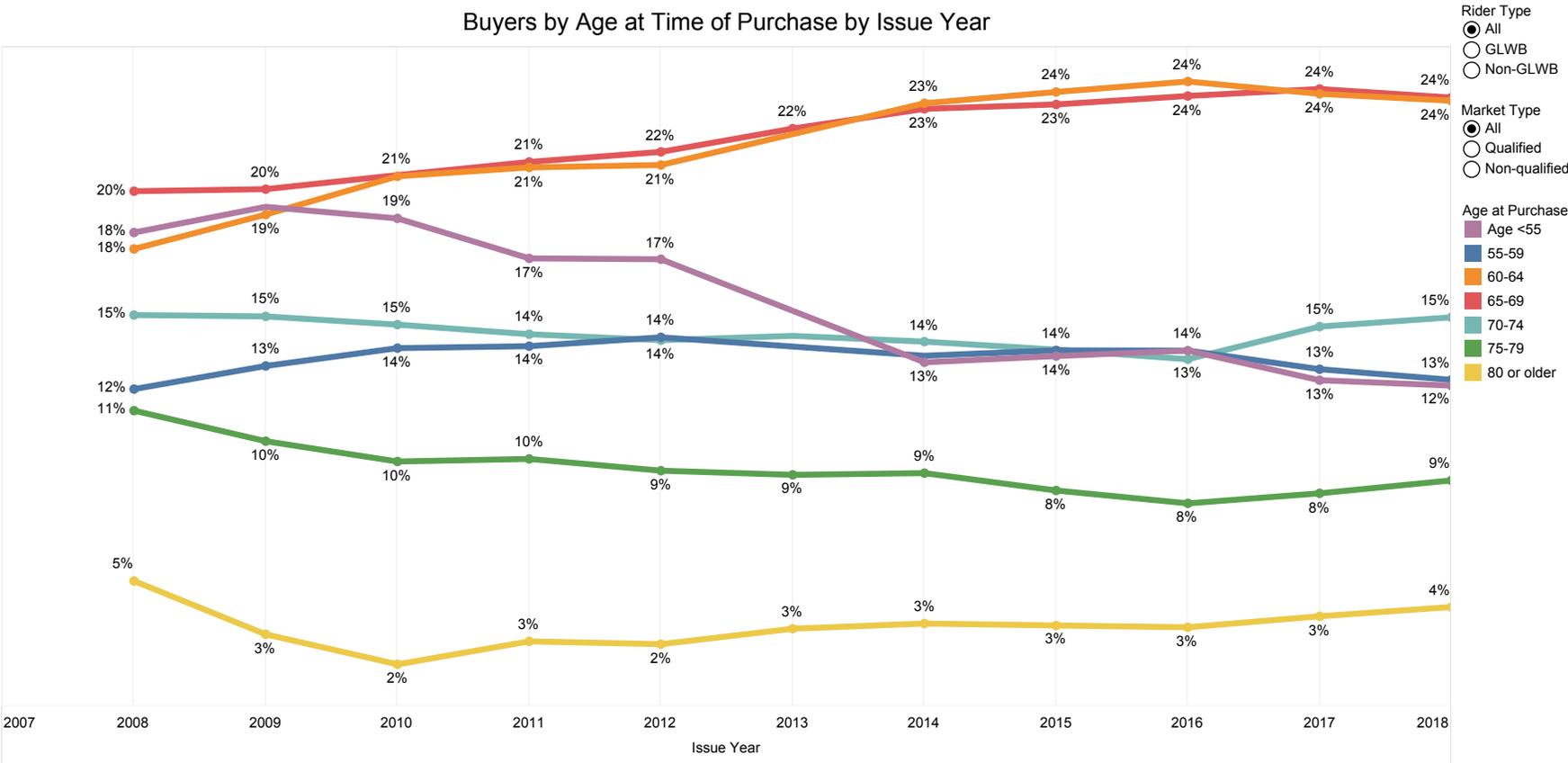
Questions on content, participation or methodology: ktewksbury@limra.com

Technical issues: jwilson@limra.com

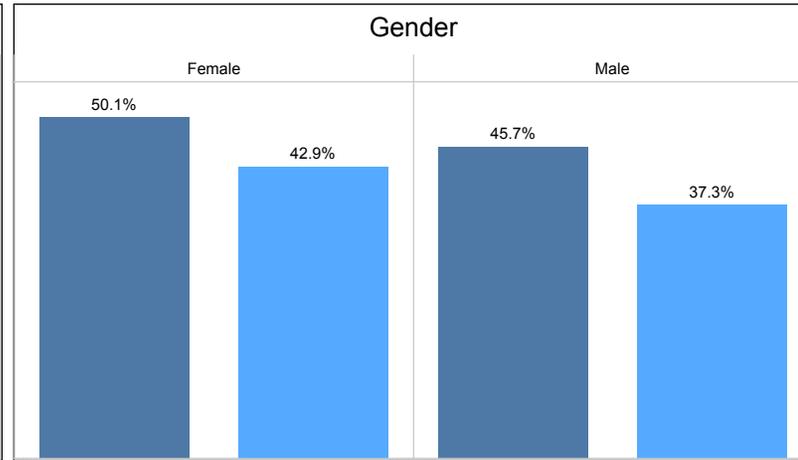
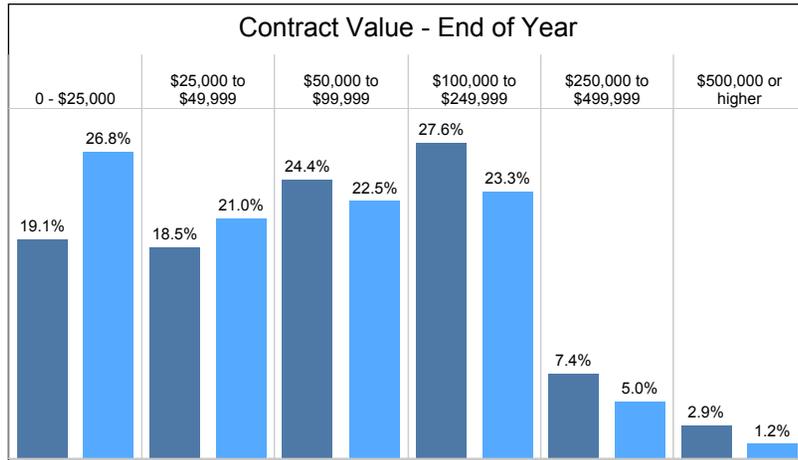
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Buyers by Age at Time of Purchase by Issue Year



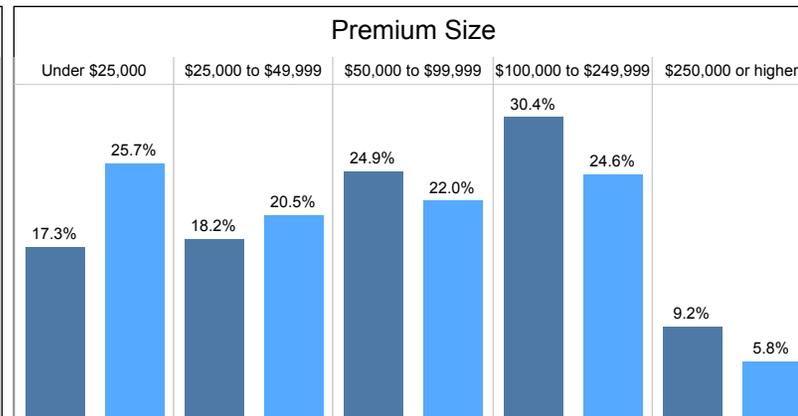
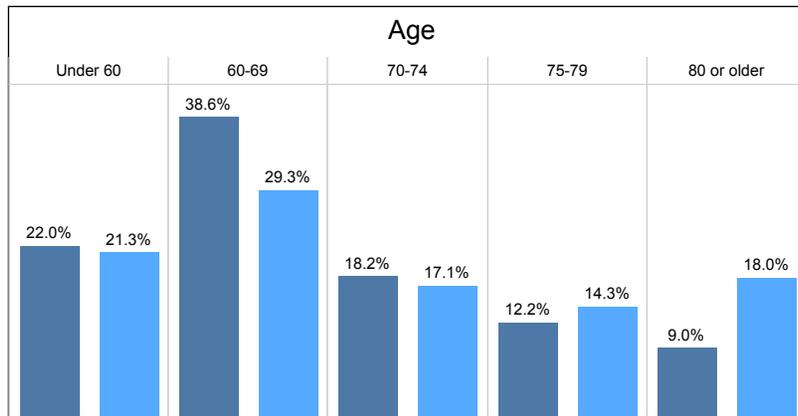
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Market Type
 All
 Qualified
 Non-qualified

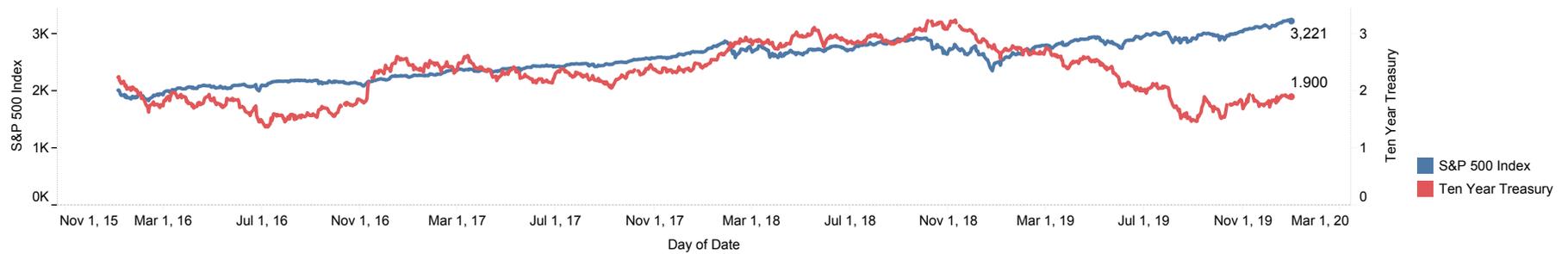
Distribution Channel
 All

Legend:
 █ GLWB
 █ Non-GLWB



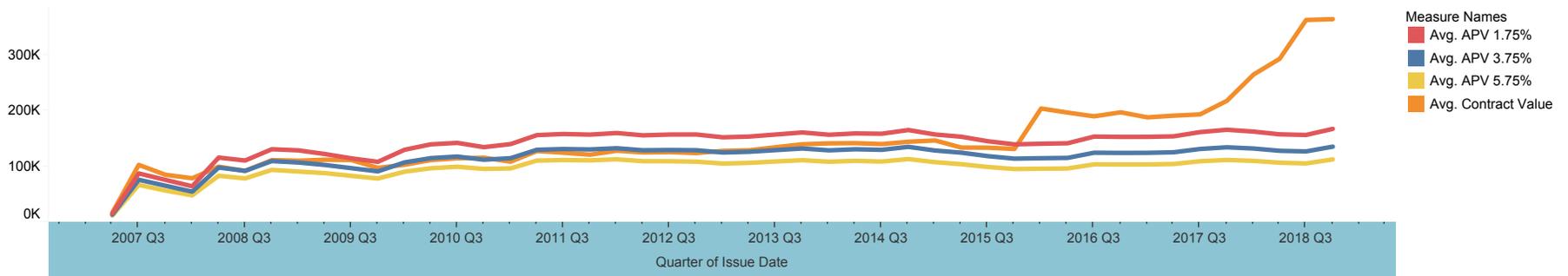
Equity Market Experience Over the Study Period

S&P 500 Price Index/10 Year Treasury Rates, 2016 - 2020 (Q1)



Note: Yahoo Finance

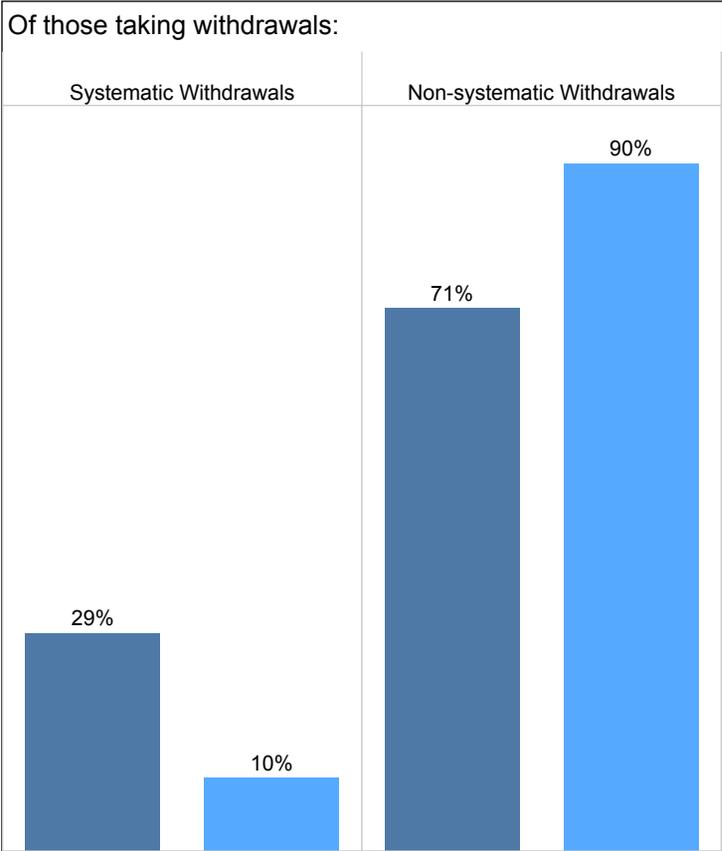
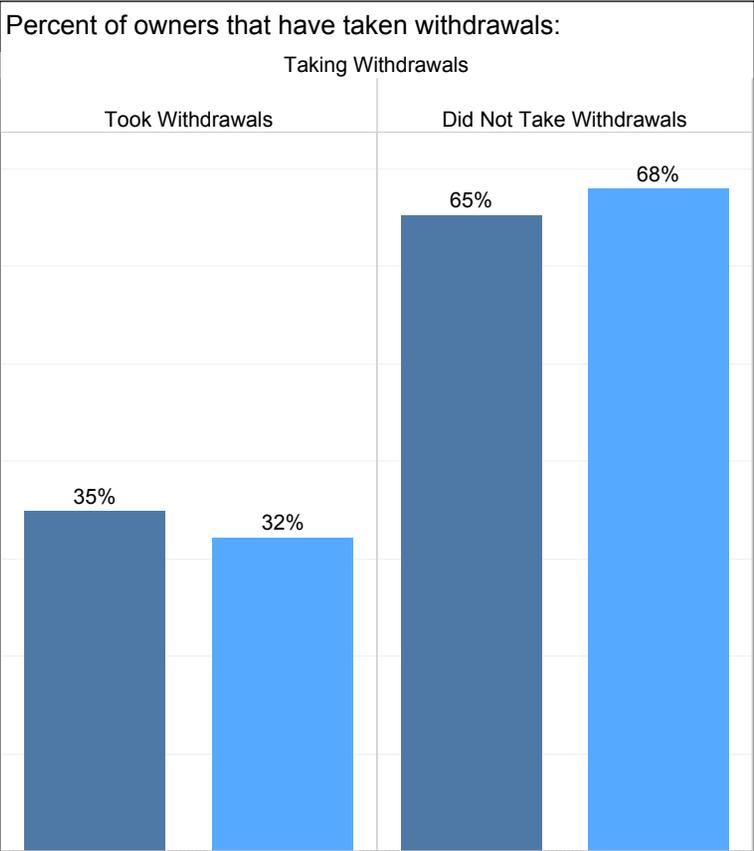
Withdrawals as a Percentage of Maximum Annual Benefit Amount by Issue Quarter - GLWB Only



Actuarial Present Values above shown at discount rate indicated in legend

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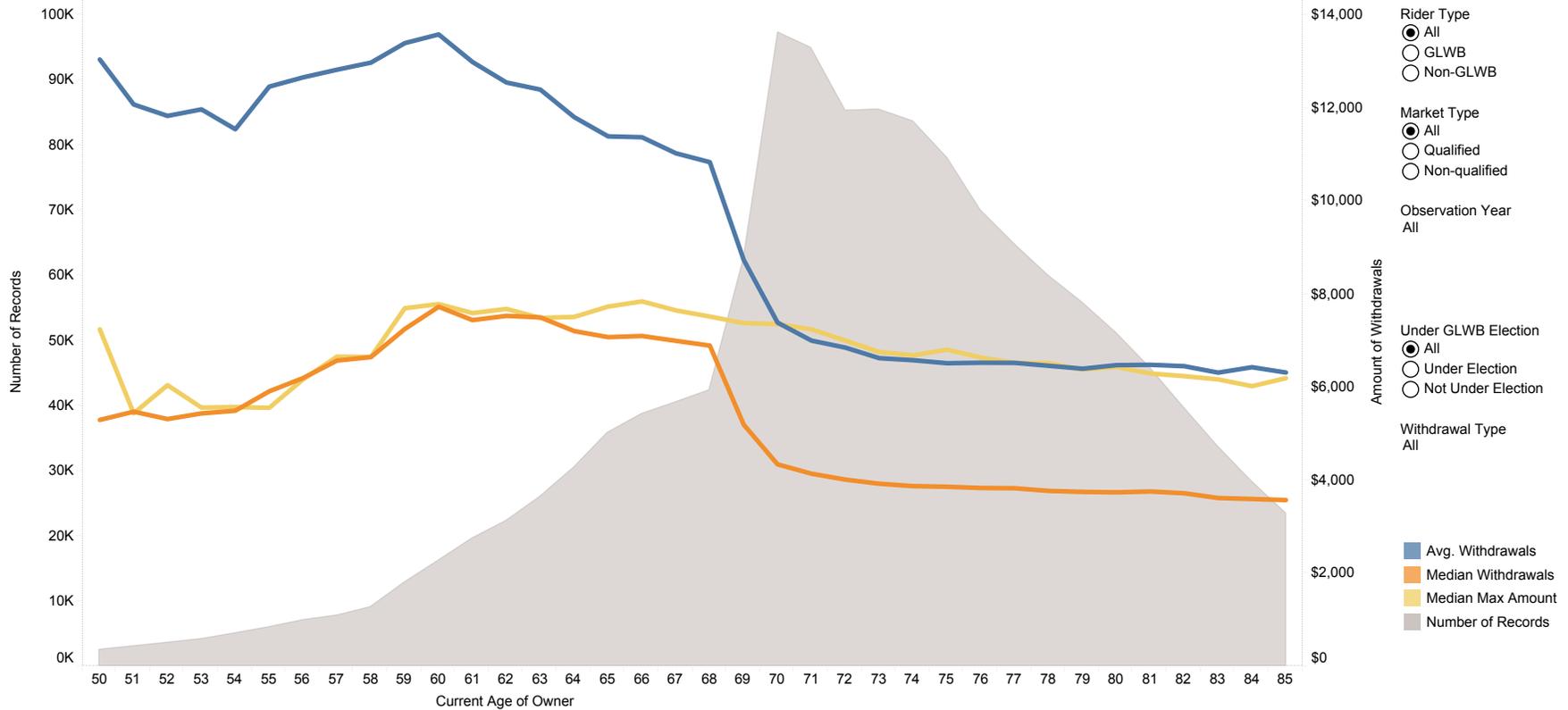
Withdrawal Activity During the Study Period



- Market Type
- All
 - Qualified
 - Non-qualified
- Under GLWB Election
- All
 - Under Election
 - Not Under Election
- GLWB
 - Non GLWB

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GLWB and Non-GLWB Contracts: Median/Avg Withdrawal Amounts by Owner Age



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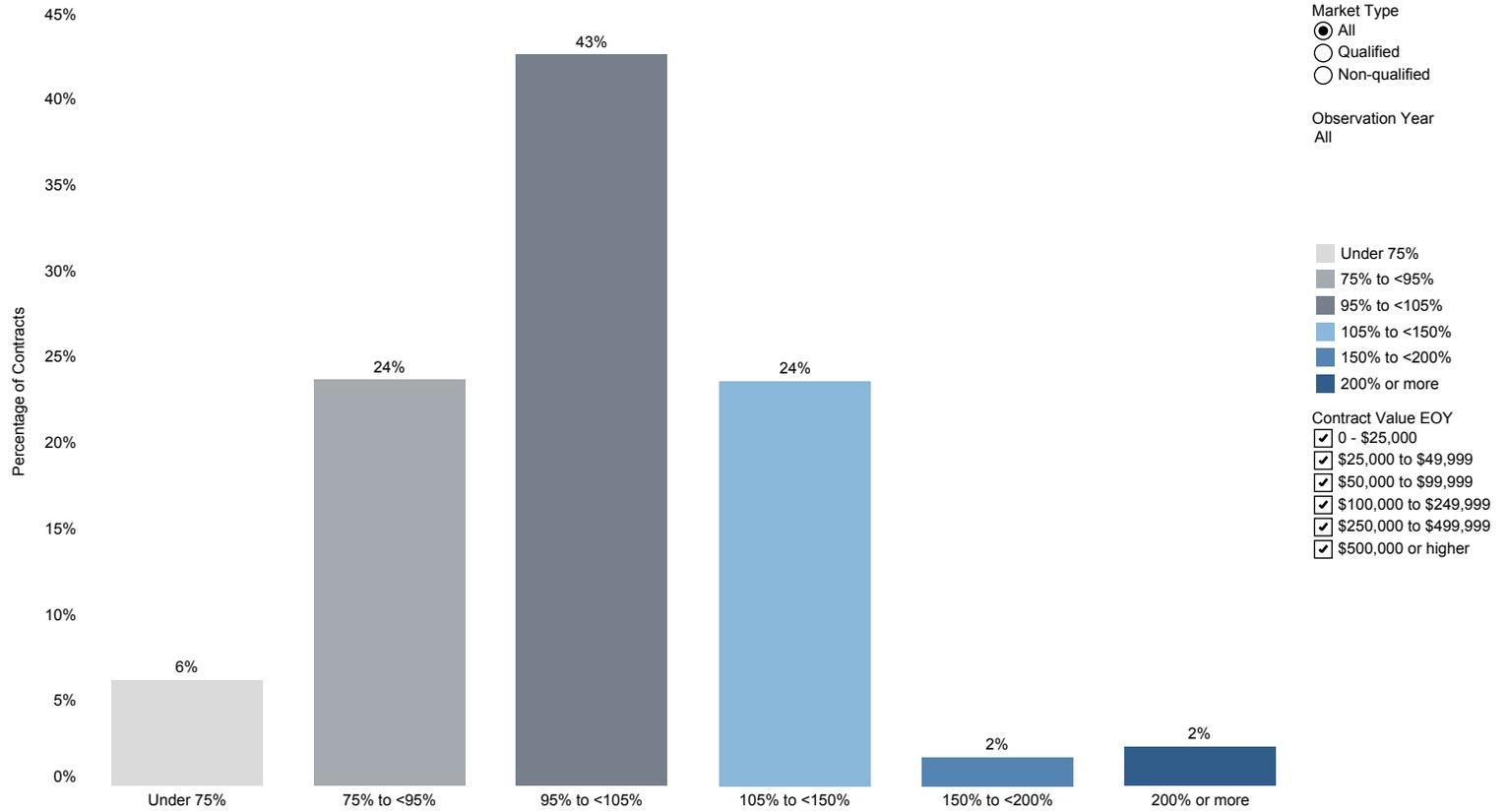
First Withdrawal During Study by Contract Year & Age

	Didn't Take WD	First WD Prior to Study	1	2	3	4	5	6	7	8	9	10	11
50 or younger	88.85%	6.76%	0.50%	0.67%	0.60%	0.56%	0.42%	0.38%	0.33%	0.29%	0.30%	0.22%	
50 to 54	87.63%	8.61%	0.48%	0.67%	0.59%	0.42%	0.31%	0.28%	0.25%	0.22%	0.25%	0.18%	
55 to 59	87.20%	8.07%	0.49%	0.80%	0.72%	0.62%	0.49%	0.42%	0.33%	0.28%	0.28%	0.19%	
60 to 64	80.72%	10.85%	0.60%	1.44%	1.41%	1.21%	0.91%	0.76%	0.60%	0.53%	0.45%	0.31%	
65 to 69	71.19%	16.34%	0.65%	1.52%	1.67%	1.76%	1.51%	1.43%	1.13%	1.03%	0.83%	0.59%	
70 to 74	37.28%	33.26%	1.60%	2.65%	2.88%	3.17%	3.10%	3.32%	3.19%	3.30%	2.89%	2.05%	
75 to 79	34.50%	37.52%	1.25%	1.99%	1.95%	2.21%	2.21%	2.65%	3.10%	3.71%	3.82%	2.98%	
80 or older	36.76%	38.02%	0.31%	0.78%	1.10%	1.51%	1.76%	2.26%	2.90%	3.67%	4.15%	3.64%	

- Market Type
- All
 - Qualified
 - Non-qualified
- Under GLWB Election
- All
 - Under Election
 - Not Under Election

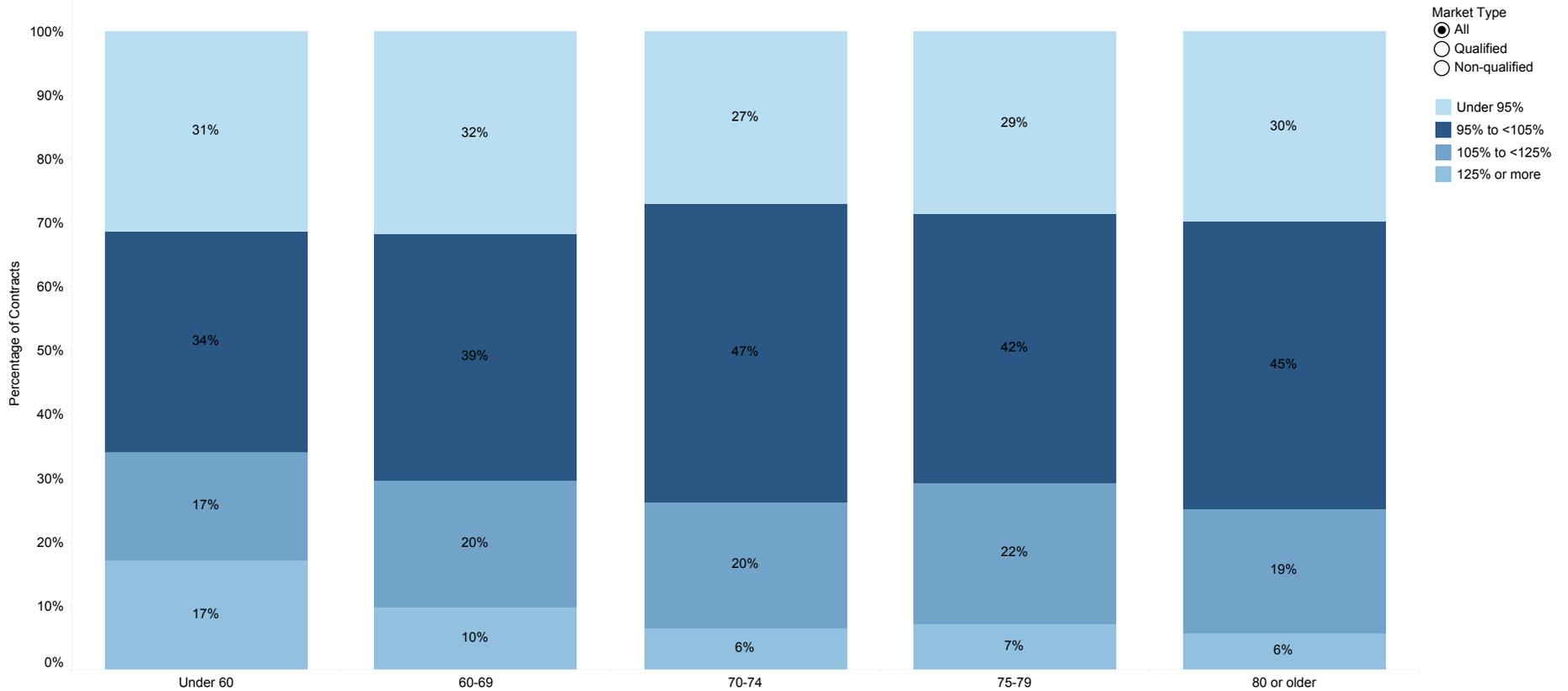
2	3. Equity Market Experience Over the Study Period	4. Withdrawal Activity: Summary	5. Average Amounts Withdrawn - All Contracts	6. GLWB Specific - First Withdrawal by Owner Attained Age and Contract Year	7. GLWB Specific: Efficiency of Utilization	8. GLWB Specific- Withdrawals as a Percentage of Annual Benefit Maximum by Age	9. GLWB Specific - Ratio of Total Withdrawals to Contract Value and Benefit Base	10. Total Withdrawal Activity by Distribution Channel and Age	11. All Contracts - Withdrawal Rates by Selected Characteristics	12. GLWB Specific..
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GLWB - Withdrawals as a Percentage of Annual Benefit Maximum



3	4. Withdrawal Activity: Summary	5. Average Amounts Withdrawn - All Contracts	6. GLWB Specific - First Withdrawal by Owner Attained Age and Contract Year	7. GLWB Specific: Efficiency of Utilization	8. GLWB Specific- Withdrawals as a Percentage of Annual Benefit Maximum by Age	9. GLWB Specific - Ratio of Total Withdrawals to Contract Value and Benefit Base	10. Total Withdrawal Activity by Distribution Channel and Age	11. All Contracts - Withdrawal Rates by Selected Characteristics	12. GLWB Specific - Average Actuarial Present Value vs. Average Contract Value by Age	13. GLWB Specific..
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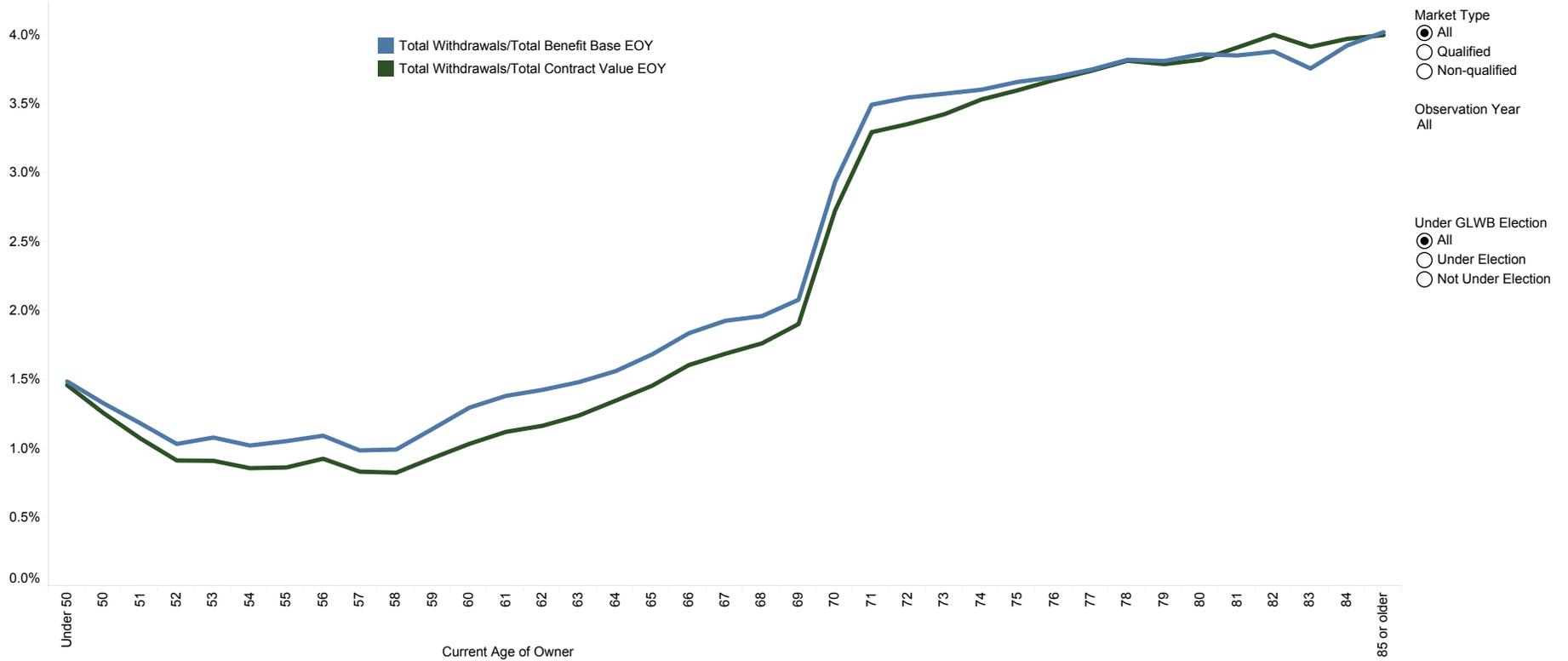
GLWB - Withdrawals as a Percentage of Annual Benefit Maximum by Age



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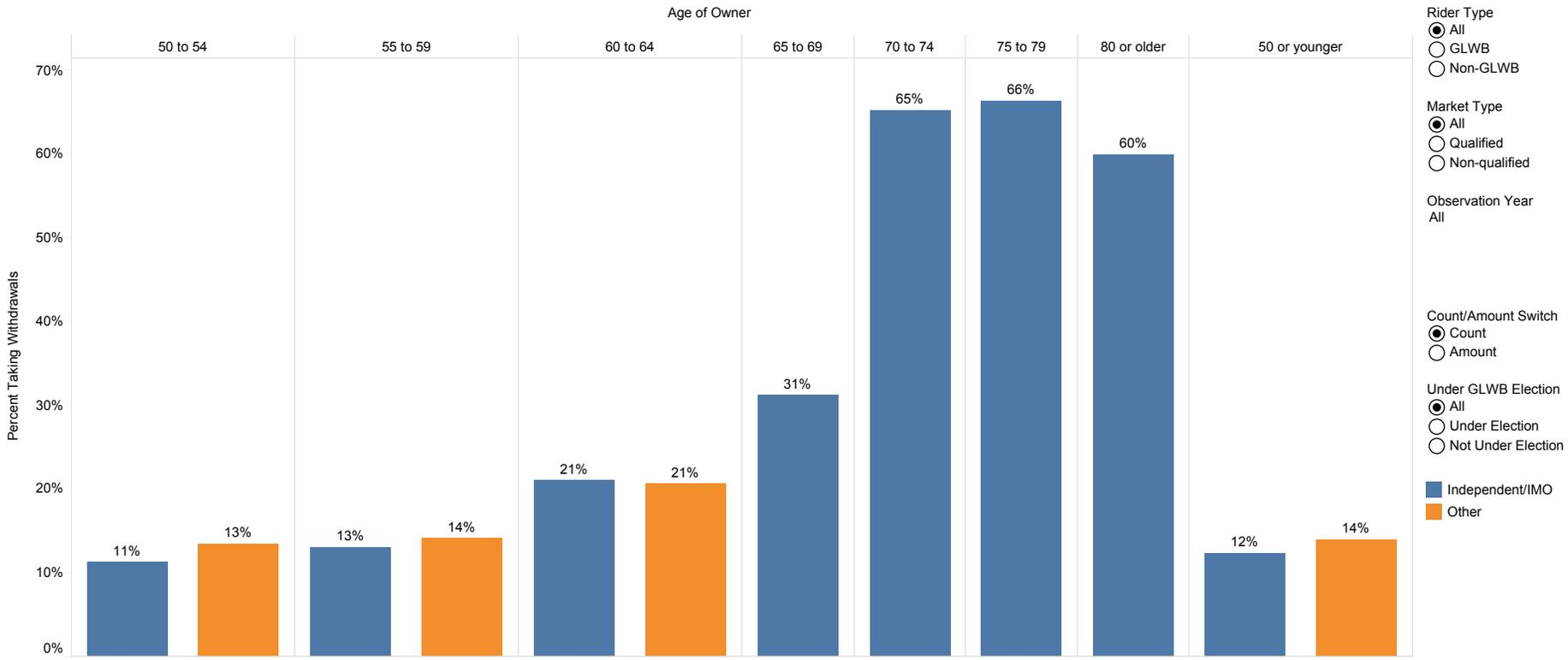
4	5. Average Amounts Withdrawn - All Contracts	6. GLWB Specific - First Withdrawal by Owner Attained Age and Contract Year	7. GLWB Specific: Efficiency of Utilization	8. GLWB Specific- Withdrawals as a Percentage of Annual Benefit Maximum by Age	9. GLWB Specific - Ratio of Total Withdrawals to Contract Value and Benefit Base	10. Total Withdrawal Activity by Distribution Channel and Age	11. All Contracts - Withdrawal Rates by Selected Characteristics	12. GLWB Specific - Average Actuarial Present Value vs. Average Contract Value by Age	13. GLWB Specific - Comparison of In-the-Moneyess Definitions	14. Additional Pr..
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GLWB - Ratio of Total Withdrawals to Total Contract Value and Benefit Base



5	6. GLWB Specific - First Withdrawal by Owner Attained Age and Contract Year	7. GLWB Specific: Efficiency of Utilization	8. GLWB Specific- Withdrawals as a Percentage of Annual Benefit Maximum by Age	9. GLWB Specific - Ratio of Total Withdrawals to Contract Value and Benefit Base	10. Total Withdrawal Activity by Distribution Channel and Age	11. All Contracts - Withdrawal Rates by Selected Characteristics	12. GLWB Specific - Average Actuarial Present Value vs. Average Contract Value by Age	13. GLWB Specific - Comparison of In-the-Money Definitions	14. Additional Premium	15. Surrender Ra..
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GLWB and Non-GLWB: Withdrawal Activity by Distribution Channel



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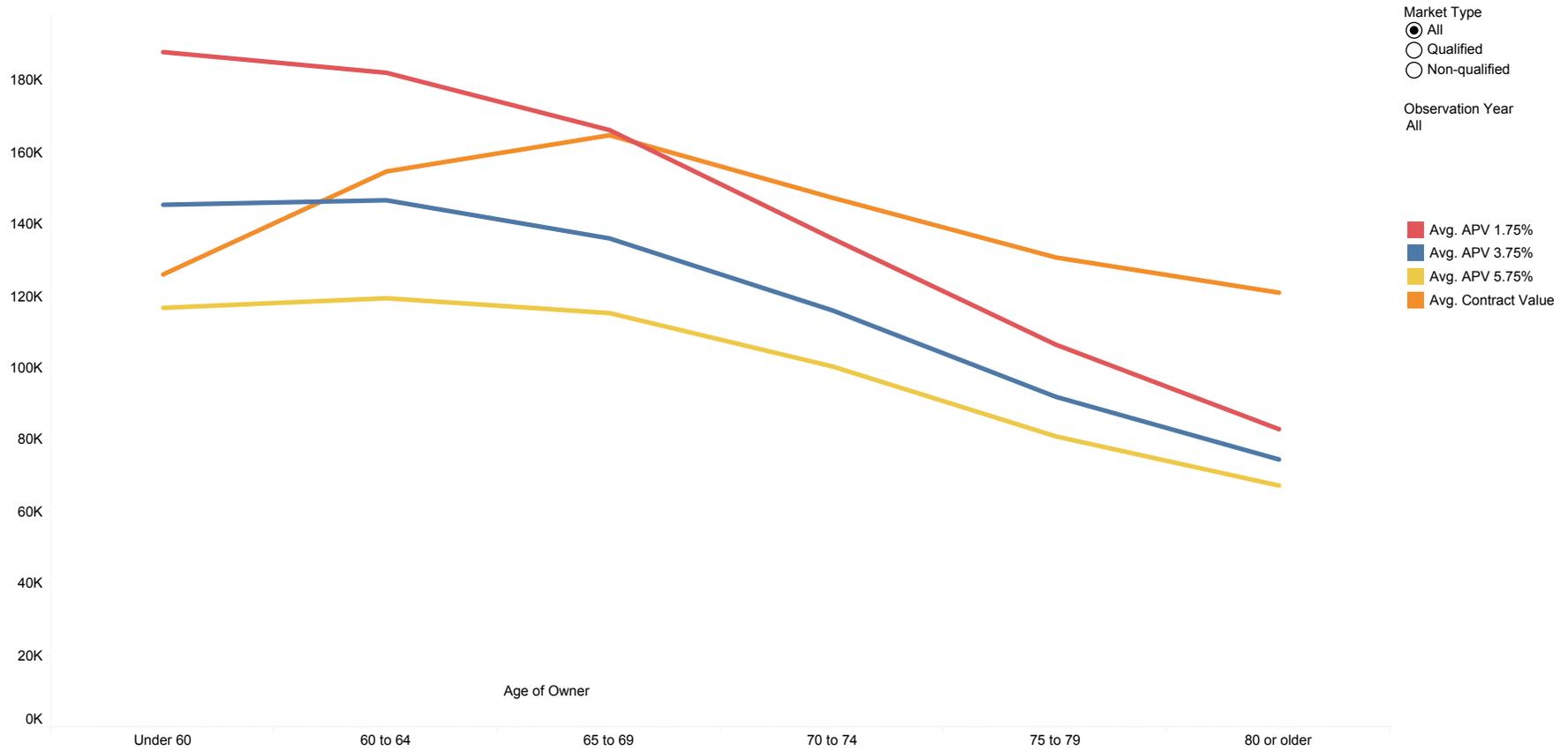
6	7. GLWB Specific: Efficiency of Utilization	8. GLWB Specific- Withdrawals as a Percentage of Annual Benefit Maximum by Age	9. GLWB Specific - Ratio of Total Withdrawals to Contract Value and Benefit Base	10. Total Withdrawal Activity by Distribution Channel and Age	11. All Contracts - Withdrawal Rates by Selected Characteristics	12. GLWB Specific - Average Actuarial Present Value vs. Average Contract Value by Age	13. GLWB Specific - Comparison of In-the-Moneyness Definitions	14. Additional Premium	15. Surrender Rates by Contract Year	16. GLWB Specific..
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Withdrawals Rates by Age of Owner

	<u>By Count</u>		<u>By Amount (Contract Value)</u>		
	Percent of Owners Taking Withdrawals	Percent of Owners Taking Withdrawals Through SWP's	Percent of Contract Value Being Withdrawn	Percent of Contract Value Being Withdrawn Through SWP's	
50 to 54	8.36%	0.21%	1.64%	0.05%	Rider Type <input checked="" type="radio"/> All <input type="radio"/> GLWB <input type="radio"/> Non-GLWB Select Breakout <input checked="" type="radio"/> Age of Owner <input type="radio"/> Gender <input type="radio"/> Distribution Channel <input type="radio"/> Contract Value BOY Market Type <input checked="" type="radio"/> All <input type="radio"/> Qualified <input type="radio"/> Non-qualified Observation Year All
55 to 59	9.24%	0.40%	1.48%	0.07%	
60 to 64	14.90%	2.35%	1.86%	0.24%	
65 to 69	23.18%	6.14%	2.26%	0.50%	
70 to 74	57.97%	13.87%	3.90%	0.94%	
75 to 79	60.49%	13.73%	4.28%	1.05%	
80 or older	52.97%	11.38%	4.23%	1.03%	
50 or younger	8.48%	0.14%	2.50%	0.06%	
Grand Total	36.02%	7.95%	2.92%	0.61%	

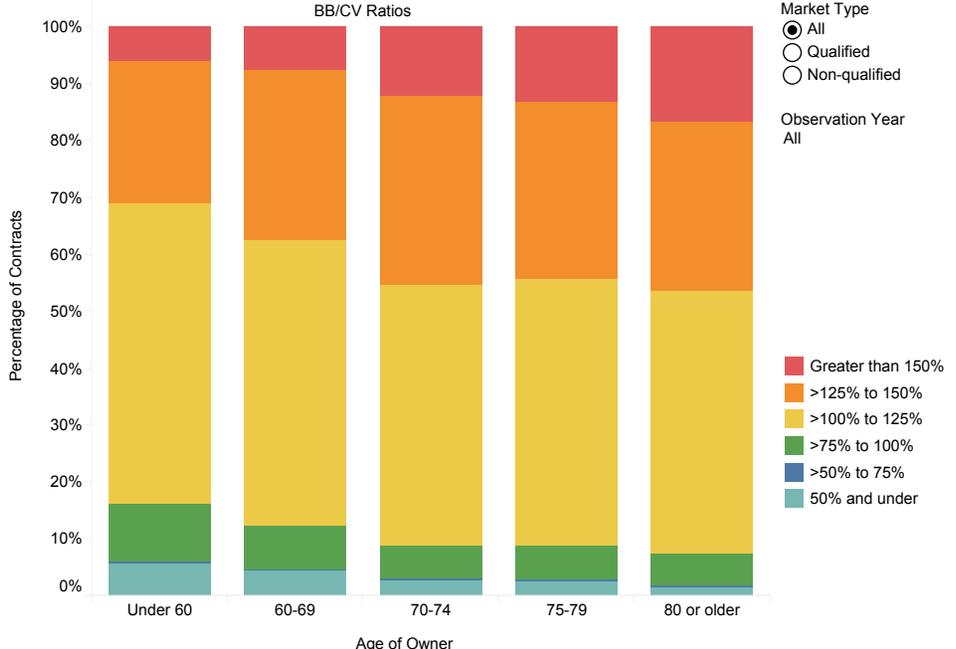
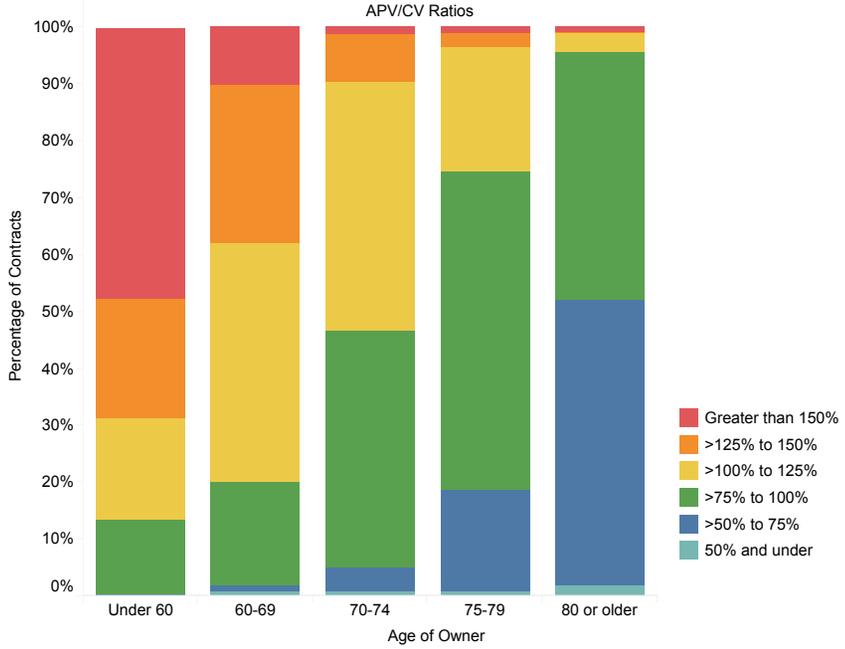
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GLWB - Average Actuarial Present Value vs. Average Contract Value by Age



8	9. GLWB Specific - Ratio of Total Withdrawals to Contract Value and Benefit Base	10. Total Withdrawal Activity by Distribution Channel and Age	11. All Contracts - Withdrawal Rates by Selected Characteristics	12. GLWB Specific - Average Actuarial Present Value vs. Average Contract Value by Age	13. GLWB Specific - Comparison of In-the-Money Definitions	14. Additional Premium	15. Surrender Rates by Contract Year	16. GLWB Specific - Surrender Rates by Percent of Annual Benefit Maximum Withdrawn	17. Surrender Rates by Different Contract Characteristics	18. Participant List
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GLWB - Ratios of APV and Benefit Base to Contract Value



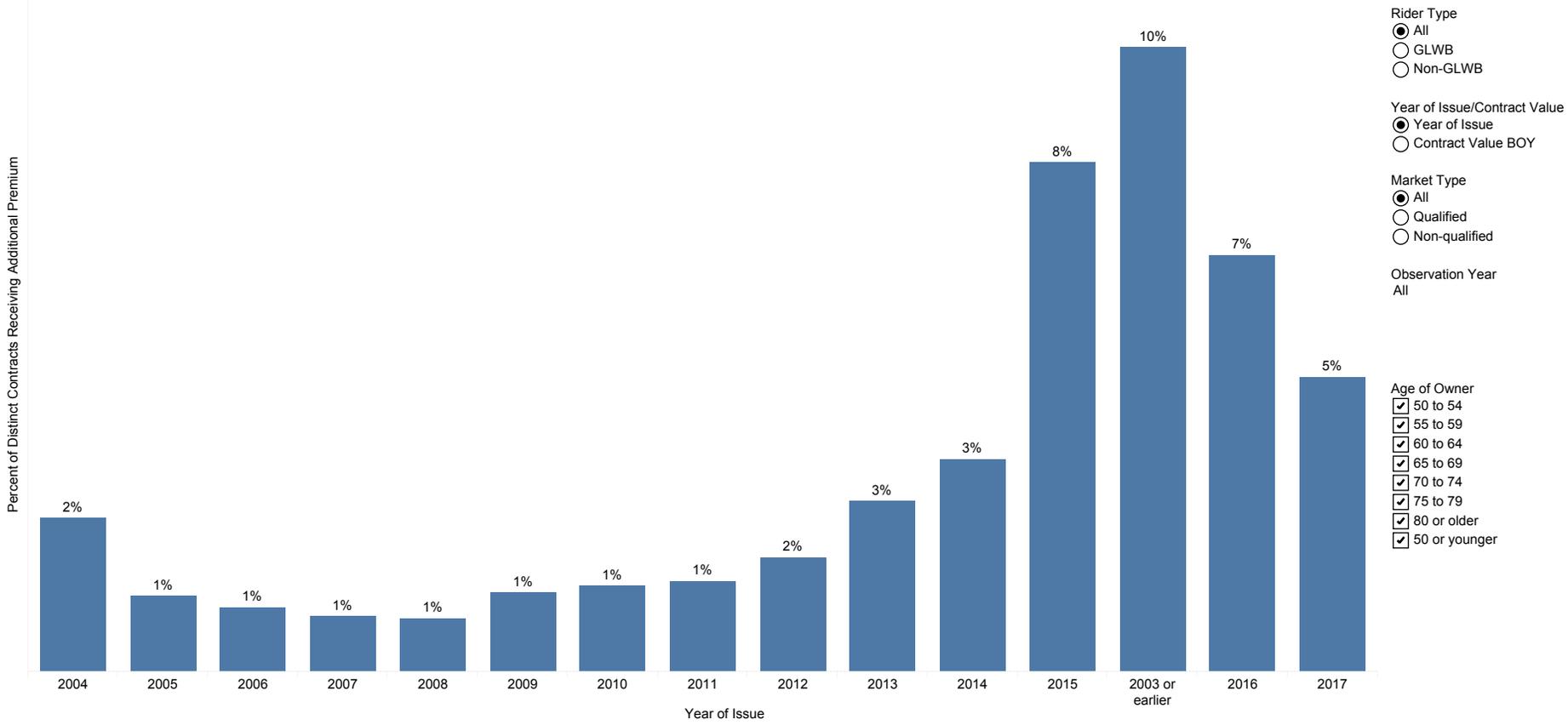
APV Percentage 1.75%

These charts compare the two approaches to ITM:

- 1) Ratio of Actuarial Present Value to Contract Value (APV/CV)
- 2) Ratio of Benefit Base to Contract Values (BB/CV)

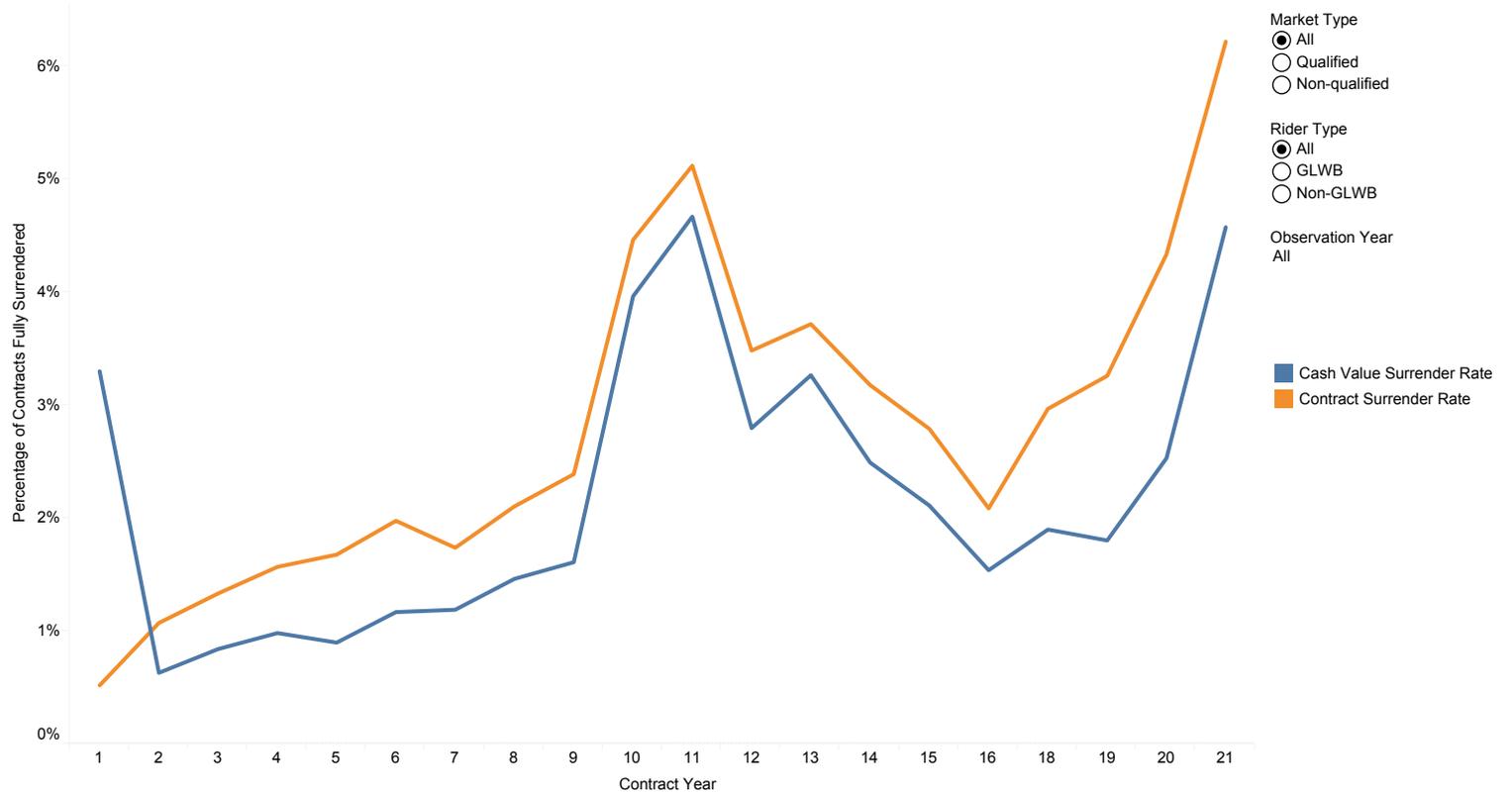
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Additional Premium



9. GLWB Specific - Ratio of ..	10. Total Withdrawal Activity by Distribution Channel and Age	11. All Contracts - Withdrawal Rates by Selected Characteristics	12. GLWB Specific - Average Actuarial Present Value vs. Average Contract Value by Age	13. GLWB Specific - Comparison of In-the-Moneyess Definitions	14. Additional Premium	15. Surrender Rates by Contract Year	16. GLWB Specific - Surrender Rates by Percent of Annual Benefit Maximum Withdrawn	17. Surrender Rates by Different Contract Characteristics	18. Participant List
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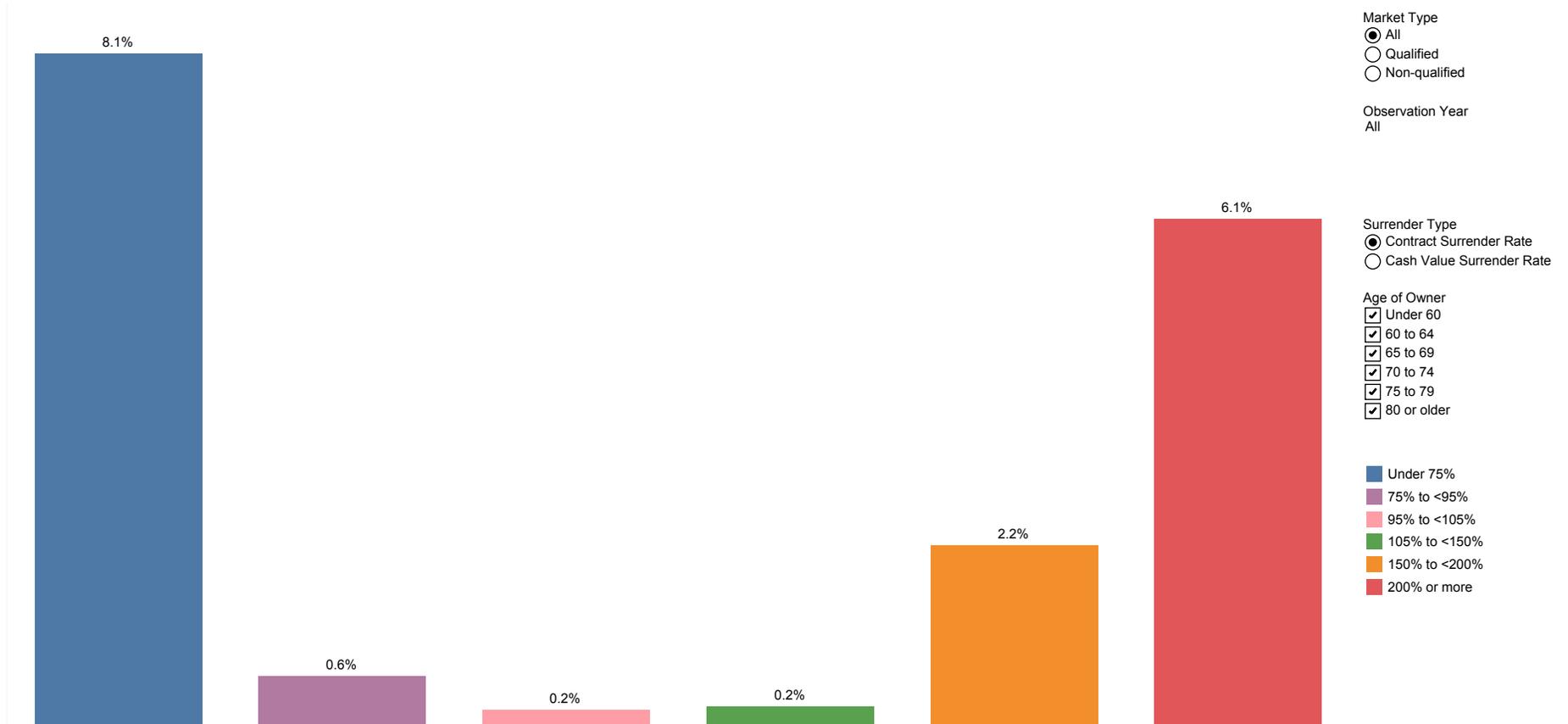
Surrender Rates by Contract Year



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9. GLWB Specific - Ratio of ..	10. Total Withdrawal Activity by Distribution Channel and Age	11. All Contracts - Withdrawal Rates by Selected Characteristics	12. GLWB Specific - Average Actuarial Present Value vs. Average Contract Value by Age	13. GLWB Specific - Comparison of In-the-Moneyess Definitions	14. Additional Premium	15. Surrender Rates by Contract Year	16. GLWB Specific - Surrender Rates by Percent of Annual Benefit Maximum Withdrawn	17. Surrender Rates by Different Contract Characteristics	18. Participant List
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GLWB - Surrender Rates by Percent of Annual Benefit Maximum Withdrawn



9. GLWB Specific - Ratio of ..	10. Total Withdrawal Activity by Distribution Channel and Age	11. All Contracts - Withdrawal Rates by Selected Characteristics	12. GLWB Specific - Average Actuarial Present Value vs. Average Contract Value by Age	13. GLWB Specific - Comparison of In-the-Moneyess Definitions	14. Additional Premium	15. Surrender Rates by Contract Year	16. GLWB Specific - Surrender Rates by Percent of Annual Benefit Maximum Withdrawn	17. Surrender Rates by Different Contract Characteristics	18. Participant List
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Surrender Rates by Different Contract Characteristics

This tab provides a summary of surrender rates by various product and owner characteristics.

Market Type

- All
- Qualified
- Non-qualified

Rider Type

- All
- GLWB
- Non-GLWB

Observation Year
All

Surrender Rate in All Markets by Years Until Surrender Charge Expires

	Contract Surrender Rate	Cash Value Surrender Rate
5 or more years until expiry	1.3%	0.9%
4 years until expiry	1.8%	1.0%
3 years until expiry	2.2%	1.3%
2 years until expiry	2.7%	1.6%
1 year until expiry	4.6%	3.7%
Year surrender charge expi..	6.6%	6.3%
1 year after expiry	4.1%	3.2%
2 years after expiry	4.3%	3.3%
3 years after expiry	5.3%	4.1%
4 years after expiry	5.6%	4.5%
5 or more years after expiry	2.6%	1.6%

- Year of Issue
- Age of Owner
- Contract Value BOY
- Gender
- Distribution Channel
- Current Surrender Charge
- Premium Bonus Expiry
- Benefit Base to Contract Value Ratio

Surrender Rate in All Markets by Year of Issue

	Contract Surrender Rate	Cash Value Surrender Rate
2003 or earlier	2.7%	1.9%
2004	3.9%	3.3%
2005	3.6%	3.1%
2006	3.8%	3.3%
2007	4.6%	4.2%
2008	5.0%	4.5%
2009	2.3%	1.6%
2010	1.8%	1.2%
2011	1.8%	1.2%
2012	1.8%	1.2%
2013	1.8%	1.1%

9. GLWB Specific - Ratio of ..	10. Total Withdrawal Activity by Distribution Channel and Age	11. All Contracts - Withdrawal Rates by Selected Characteristics	12. GLWB Specific - Average Actuarial Present Value vs. Average Contract Value by Age	13. GLWB Specific - Comparison of In-the-Moneyess Definitions	14. Additional Premium	15. Surrender Rates by Contract Year	16. GLWB Specific - Surrender Rates by Percent of Annual Benefit Maximum Withdrawn	17. Surrender Rates by Different Contract Characteristics	18. Participant List
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Participants

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