SPONSORED BY
MIDLAND NATIONAL LIFE INSURANCE COMPANY

CANNEX RESEARCH

Performance Characteristics of the Midland LiveWell Freedom Variable Annuity Rider Design

OCTOBER 2019

CANNEX

Performance Characteristics of the Midland LiveWell Freedom Variable Annuity Rider Design

AUTHORS
TAMIKO TOLAND, HEAD OF ANNUITY RESEARCH
BRANISLAV NIKOLIĆ, SENIOR QUANTITATIVE ANALYST
DAMIAN BABOOLAL, QUANTITATIVE ANALYST

For more information about analysis and industry trends, contact Tamiko Toland, Head of Annuity Research: tamiko.toland@cannex.com, 203-826-8977

For more information about the data, contact Branislav Nikolić, Senior Quantitative Analyst: branislav.nikolic@cannex.com, 416-926-2239

SPONSORED BY MIDLAND NATIONAL LIFE INSURANCE COMPANY

Contents

Exhibits

EXECUTIVE SUMMARY

The guaranteed lifetime withdrawal benefit (GLWB) on the Midland LiveWell Freedom variable annuity (VA) has a novel income guarantee design that provides a unique value proposition that gives policyholders full liquidity of the contract value while continuing guaranteed income payments at the Freedom Date. The Freedom Date is 20 years after the contract is purchased for issue ages 60 and older or 25 years for contracts issued between ages 50 and 60. CANNEX performs analysis of VAs with GLWBs using a standardized framework for computing the value of different contract features. However, the characteristics of the new GLWB design make it difficult to directly compare without taking into account this special feature and how it affects those values.

In this study, we compare the performance of Midland LiveWell Freedom against four unnamed peers. We examine the new feature under two extremes of the choice available on the Freedom Date: no withdrawal or full withdrawal. With no withdrawal, the contract value remains as the death benefit. With a full withdrawal, the contract value at the Freedom Date is included with the income benefit, without any assumptions on how the funds are utilized. In addition, we analyze the contracts under two investment assumptions for asset allocation and portfolio fee: the standard for our service and customized to the maximum equity allocations and actual fees for the specific contract.

- Midland LiveWell Freedom provides a unique value proposition that often outperforms its peers.
- The value is realized as a boost to either the income or the death benefit, or it may be taken as any combination of the two.
- The value of the benefit generally increases with longer income delays.
- The client must be willing to wait at least 20 years to access the liquidity that is released at the Freedom Date in order to fully use the income potential of the product.
- The periodic income is lower than it is for peers and, on its own, provides less income than its peers regardless of the income delay. However, this also increases the growth of the account value that becomes available at the Freedom Date; because the total income includes this amount, the net effect is potentially much greater income than its peers.
- The benefit allows investment of up to 80% in equities and offers low-cost funds, increasing the power of asset growth in the accumulation value, which can be preserved as a death benefit or becomes available for income at the Freedom Date.
- Midland LiveWell Freedom is attractive for clients who are looking for a degree of income security but may end up not needing that income, in which case they want to leave money to heirs.
- Because the Freedom Date can occur between ages 75 and 95 (depending on the age at purchase), investors should consider their personal longevity expectations.

OBJECTIVE

The GLWB on the Midland LiveWell Freedom VA has a unique feature that allows the client to withdraw all money from the contract on the Freedom Date, which is 20 or 25 years from the inception date (25 years if the age at purchase is under 60). Guaranteed income payments begin or continue regardless of the actual contract value. Compared to peers, the guaranteed income is lower, but this design offers liquidity and the flexibility to either access this money or allow it to accrue as a death benefit that does not decrease with ongoing income. The purpose of this analysis is to assess the value of this trade-off compared to competitors with a range of features, both in terms of the guarantee design and investment restrictions.

BACKGROUND

The guaranteed lifetime withdrawal benefit on the Midland LiveWell Freedom variable annuity offers a new feature called the Freedom Date, at which point the contract value becomes fully liquid with no penalty to the guaranteed income payment. The client may elect to withdraw the money and the income will continue or, if the client has not started taking income withdrawals, income payments will begin automatically. From the Freedom Date, income payments do not reduce the contract value. Furthermore, the fee for the benefit discontinues at this point.

The Freedom Date is 20 years from the start of the contract starting at age 60. Under age 60, the Freedom Date is 25 years from the start of the contract.

There is a deferral bonus that is applied to the total premium and is calculated based upon 2.0% plus 75% of the performance of the Standard & Poor's 500 Index. If the index has zero or negative growth, the deferral bonus is 2.0%. The benefit base is capped at 200% of the total premium and continues either until the first withdrawal or the Freedom Date. The benefit base does not step up to the account value.

The base contract mortality and expense ratio is 1.25% of the contract value. The fee for the benefit is 1.45% with a maximum of 2.50% of the benefit base. The prospectus states that the fee may increase on any contract anniversary but, as disclosed in separate documentation, the company will not increase fees on currently issued contracts. It may change this practice in the future for new contracts only. The fee base is the benefit base value; however, the fee declines after withdrawals begin due to reductions in the fee base for income taken.

The lifetime payment percentage determines the guaranteed lifetime payments, which are also the maximum allowed during any contract year without reducing the benefit base. The percentage does not change after withdrawals begin. The schedule for a single person appears in Exhibit 1, below, (to match others that appear periodically). If the contract is issued to a couple, the percentage is based on the age of the younger person and is 0.5% less than the rate for a single person.

Exhibit 1: Lifetime Payment Percentage Schedule for a Single Person

Attained Age	Lifetime Payment Percentage
50 – 59	3.0%
60 – 64	3.5%
65 – 69	4.0%
70 – 74	4.5%
75+	5.0%

The contract offers six equity investment options and five bond options. The minimum allocation to equity is 60% and the maximum is 80%.

RESEARCH METHODOLOGY

To conduct the analysis, we use a combination of standard and custom versions of the CANNEX VA Benefit Analysis℠ service. As part of the service, we calculate the average actuarial present value of the contract features, obtaining the average income value, average death benefit value and average total economic value (sum of the average income and death benefit values) from the contract based on 10,000 randomly generated market scenarios using precise details of the contract and benefit design.

In addition to the statistics and performance averages that are part of the service, we generate detailed information on the specific results for each of these market scenarios and the distribution of results that give the relative income, death benefit, and total economic values. All analysis is based on a starting investment of $100,000.

Scenarios

We focus the analysis on a 60-year-old man who purchases the contract and delays the income start for 5, 10, 15, or 20 years. These delay periods serve to expose overall trends but do not predict performance if the delay were to take place at a different interval. In the Discussion section, page 13, (to match others that appear periodiclly) we provide general commentary on the effects of purchasing at younger or older ages and of increasing or decreasing the income delay.

Investment Assumptions

We analyze the products based on two sets of assumptions for the investments and associated fees. Benefits typically impose investment restrictions that limit the equity investment and portfolio fees can vary according to the specific investment options. Within the context of the CANNEX service, we apply the same investment and fee assumptions to all of the contracts as a means to test the performance of the benefits under identical conditions. We consider this to be the base case for our analysis.

However, with a limited selection of contracts, it is reasonable to consider the effect of the specific investment options on the performance.

Standard Investment Assumption: This assumption uses the CANNEX default fund fees and asset allocation that appears within our VA Benefit Analysis Service. The assumed asset allocation is 60% equity/40% fixed. The fund fees are 1.00%.

Custom Investment Assumption: This assumption uses customized fund fees and asset allocation levels that correspond with the fund options with the lowest fee and highest equity allocation up to an aggressive portfolio allocation (maximum 80% equity). We referred to prospectus disclosures for given products in the marketplace.

Investment Strategies

We also compare the performance of Midland LiveWell Freedom based on two strategies. We use these strategies because the Freedom Date feature gives the client an option that other products do not: the ability to take partial or full withdrawal at the Freedom Date without reducing the income payments guaranteed under the withdrawal benefit.

These strategies represent the two options that demonstrate the value of the feature depending on the client's intention to either take a withdrawal at the Freedom Date or reserve the money as a death benefit within the product. It is important to mention that these two scenarios represent two ends of the spectrum

Exhibit 2: Standard and Custom Investment Assumption Details

Assumption	Product	Fund Fee	Asset Allocation
Standard	All	1.00%	60/40
Custom	Midland LiveWell Freedom	0.43%	80/20
Custom	Peers	0.54% to 1.00%	60/40 – 80/20

and that clients can elect to use the liquidity feature fully, hold that potential in reserve by keeping the funds invested, or use it in a way that falls in between.

Strategy A (Accrue): Do not withdraw the account value from the contract on the Freedom Date; any money remaining at the Freedom Date is reflected in the death benefit value.

Strategy B (Withdraw): Withdraw the full account value from the contract on the Freedom Date, which is then added to the income value.

Peer Group

The peer group consists of white labeled versions of B share contracts from competitors available to retail clients in mid-2019. We selected a variety of designs that represent a range of features available today. The features include deferral bonuses that range from 6% to 7% per year for 10 to 12 years. Some allow resets of the bonus period at step-up and some do not. There are some that include an additional guarantee that the benefit base will double if there are no withdrawals taken over a stated period. All have higher withdrawal rates at respective ages, typically 0.50% to 1.50% higher.

The products also range in available fund options, including fees and the maximum possible asset allocations, as reflected in the analysis where contract-specific expenses are used in the comparison. In each case, we identified the lowest cost investment options that allowed the maximum equity allocation.

The credit ratings of Midland and the peer companies are equivalent or within one or two notches of each other, depending on the rating agency.

The peer group results are identical regardless of the investment strategy for Midland LiveWell Freedom. For our comparative analysis, we assume that withdrawals, once begun, continue at the maximum allowable level and never exceed that level. For those contracts, a full withdrawal of the contract value would disrupt the value of the guaranteed income.

RESULTS

Midland LiveWell Freedom's performance compared to peers shows the dynamic between the value of the death benefit and the value of the income stream, which varies by strategy as well as deferral period. It is important when looking at the results to not focus on averages alone but to take into consideration the

Preliminary Analysis

Before expanding the analysis fully, we conducted a preliminary analysis of Midland LiveWell Freedom against the peer group using the standard investment assumptions and high level (average) results for the benefit values. In this exercise, we looked at the APVs of Midland LiveWell Freedom and the four peer contracts at issue ages 55, 60, and 65 with delays of 5, 10, 15, or 20 years (full results are included in Exhibit 12 in the Appendix).

Based on this initial work, we ascertained that the fundamental dynamic of Midland LiveWell Freedom and its relationship to peer contracts generally held across different ages according to longer and shorter delay periods. In order to perform more detailed analysis, we narrowed the scope of the scenarios to a 60-year-old male investor.

It is important to bear in mind that the analysis details an investor of a specific age and starting income at the stated intervals but that performance is affected by factors such as the timing of the Freedom Date (25 years for policyholders younger than 60) and the lifetime withdrawal percentage that applies at a given age. For example, the withdrawal percentage increases at age 65, so an analysis done based on age 64 versus age 65 will have distinct differences.

entire distribution of results. The contract value on the Freedom Date, whether it manifests as a death benefit or a lump sum of income, depends on some of the account value surviving until that point. This is clearly affected by poor market performance in some of the market scenarios. In addition, it is diminished by a shorter deferral period, which means that there is a longer period for income withdrawals to potentially deplete the contract before the Freedom Date.

Standard Investment Assumption

The standard investment assumption provides a baseline for analysis. Using identical asset allocations and portfolio fees allows us to see the fundamental differences in the feature dynamics irrespective of other variations among products. First, we compare results based on the same metric we use within the CANNEX service: actuarial present value (APV).

Exhibit 3, below, shows the averages for the income benefit, death benefit, and total economic values. For Midland LiveWell Freedom, we provide results based on Strategy A (Accrue) and Strategy B (Withdraw). Strategy A (Accrue) corresponds to the methodology used within the CANNEX service. Strategy B (Withdraw) withdraws the account value available at the Freedom Date so it can be included with the income, so we see that the average death benefit value goes down as the average income value goes up.

Under Strategy A (Accrue), as the delay until the income start date increases, the average death benefit value rises consistently and significantly as the average income benefit value decreases. This reflects the fact that longer delays increase the probability that there is appreciable (or any) account value left at the Freedom Date but decrease the cumulative income before the Freedom Date. Shorter deferral periods amount to a longer period of withdrawing income from the account. Combined with market performance, this can reduce the account value to zero before the Freedom Date (see Freedom Date Values, page 11), though the lifetime income guaranteed payments from the GLWB continue.

After the Freedom Date, the death benefit value may increase due to market performance. Furthermore, the rider fee discontinues at the Freedom Date, giving it further opportunity to grow. At this point in the contract lifecycle, the fees are comparable with investment-only VAs, so it is reasonable to assume that the money remains within the contract rather than searching for an alternative investment.

Under Strategy B (Withdraw), the average income benefit value declines, though modestly, with longer delays in starting income. Nevertheless, it greatly exceeds the value of peers as the delay lengthens because the income benefit value for those contracts is limited to periodic withdrawals; for Midland LiveWell Freedom, the contract value available at the

Exhibit 3: Actuarial Present Value Results (Standard Investment Assumption)

		Income Start at Age 65 (5-year delay)			Income Start at Age 70 (10-Year Delay)			Income Start at Age 75 (15-year delay)			Income Start at Age 80 (20-year delay)		
		Average Income Benefit Value	Average Death Benefit Value	Average Total Economic Value	Average Income Benefit Value	Average Death Benefit Value	Average Total Economic Value	Average Income Benefit Value	Average Death Benefit Value	Average Total Economic Value	Average Income Benefit Value	Average Death Benefit Value	Average Total Economic Value
Peer A		$87,500	$25,800	$113,300	$81,800	$33,700	$115,500	$62,100	$47,000	$109,100	$35,500	$64,500	$100,000
Peer B		$94,000	$25,800	$119,800	$82,500	$36,800	$119,300	$60,200	$53,000	$113,200	$35,700	$72,200	$107,900
Peer C		$97,900	$23,000	$120,900	$85,200	$33,600	$118,800	$63,500	$48,700	$112,200	$37,400	$67,100	$104,500
Peer D		$91,400	$27,500	$118,900	$77,600	$39,800	$117,400	$55,200	$57,200	$112,400	$31,900	$77,100	$109,000
Midland LiveWell Freedom	Strategy A (Accrue)	$70,400	$49,600	$120,000	$65,800	$57,800	$123,600	$46,400	$81,500	$127,900	$24,400	$106,000	$130,400
	Strategy B (Withdraw)	$90,100	$27,300	$117,400	$88,300	$32,300	$120,600	$83,400	$39,300	$122,700	$80,500	$42,400	$122,900

Source: CANNEX Financial Exchanges Limited

Understanding Actuarial Present Value (APV)

When looking at these results, it is always important to remember what the APV represents. The results reflect longevity, meaning that the chance that a client is still alive affects the results. In the case of the income benefit value, it means that the result in each year is reduced to match the proportion of people expected to be alive. In the case of the death benefit, it means that the death benefit has value according to the number of people expected to die in a given year.

This effect is particularly noticeable in the average death benefit value in Strategy B (Withdraw), where the client withdraws all of the money at the Freedom Date, leaving no death benefit within the contract. Despite this, the average death benefit value is not zero because some clients are likely to die before the Freedom Date, so the death benefit value representing those individuals who do not live past the Freedom Date is accounted for in the APV calculation.

Freedom Date greatly increases the income benefit value and nearly offsets the loss of income for those who delay the income start. The delayed income start reduces the income benefit value while it increases the amount added to income on the Freedom Date.

Total Economic Value

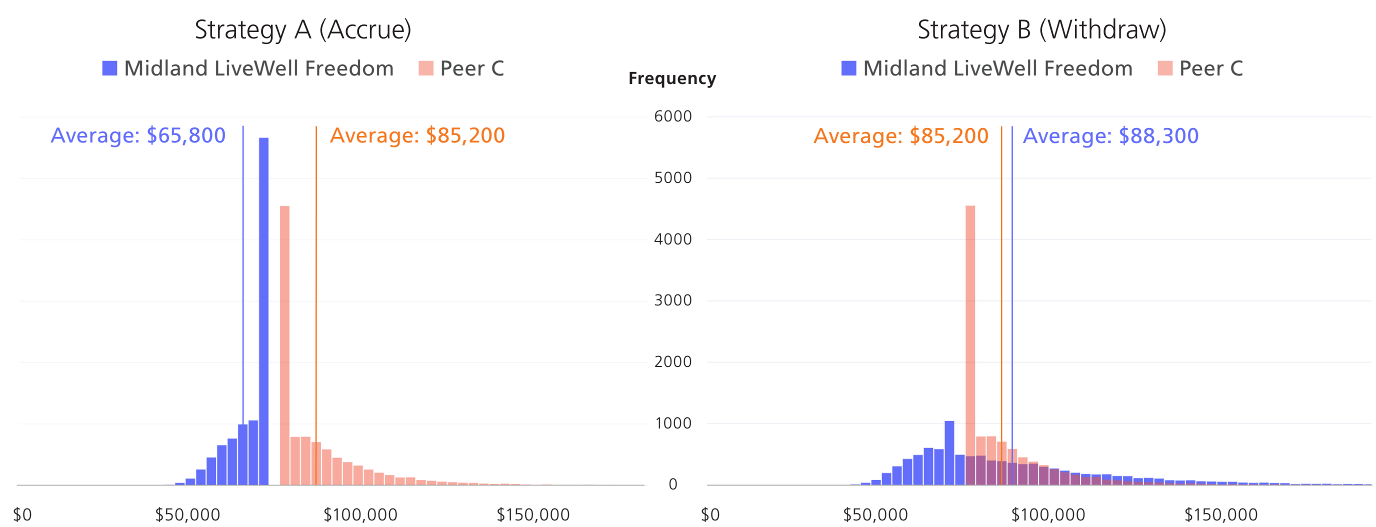
The average total economic value combines the income benefit and death benefit values together. With increasing delays, Midland LiveWell Freedom outperforms its peers on this metric, regardless whether the client withdraws all the money at the Freedom Date or leaves the money in the account to later pass to heirs as a death benefit. At the same time, the number remains relatively close for both Strategy A (Accrue) and Strategy B (Withdraw) because the value of both the income and death benefits is included within the total economic value.

In the two strategies here, we make an all-or-nothing decision about how to use the Freedom Date money in order to clearly delineate the value of those actions. The reality is that clients are able to decide to do anything within that spectrum at or even after the Freedom Date. In fact, they may want to leave money for heirs and then later tap into it for unexpected expenses.

Distribution of Results

While the average values are useful for a general comparison, they do not paint a complete picture of

Exhibit 4: Comparison Against Single Peer of Income Benefit Value Results (10-Year Income Delay)



Source: CANNEX Financial Exchanges Limited
Note: Analysis conducted using standard investment assumption

the actual performance of the various products under different market conditions. After all, they are averages that may be affected by outliers or tightly clustered results. The entire distribution of results conveys not only the average value but variability around the average number and is very useful to visualize the outcome of the entire set of simulation results.

In Exhibit 4, previous page, we compare the income benefit value of Midland LiveWell Freedom against the peer with the highest average income value when there is a 10-year income delay (similar results at the other delay periods appear in Exhibit 13, page 16 in the Appendix). The height of each bar represents how frequently the income benefit value for any sequence falls within a given range. We selected the 10-year delay because the average values are similar, though the distributions are quite different. The general dynamic is similar with other age delays, which appear in the Appendix along with the highest performing peer.

Under Strategy A (Accrue), the income benefit values for Midland LiveWell Freedom are all lower than those of the peer. The shape of the distribution has a "goal post" on the highest value, reflecting the high frequency that the benefit base reaches the maximum (twice the deposits) through the deferral bonus before income begins. Under Strategy B (Withdraw), the goal post disappears because any contract value remaining at the Freedom Date contributes to the income benefit value, allowing it to go past the constraint we see under Strategy A (Accrue). Furthermore, we now see the tail effect as market performance begins to play a role in that there is a small number of sequences with very high values. It is important to note that the tail effect does not disappear under Strategy A (Accrue), but it is accounted in the death benefit value and ultimately in the total economic value.

The peer contract has a goal post on the left that represents the guaranteed minimum income from its benefit, but its design includes step-ups to the account value and no cap, so total income does reflect the market performance and its effects on it. The custom investment assumption, which is covered starting on page 8, primarily increases the relative performance of Midland LiveWell Freedom under Strategy B (Withdraw). The shift in the averages is shown in Exhibit 6 (page 8) and the distribution of results look similar, but with an overall shift to the right.

Head-to-Head Comparisons

The best way to truly compare the performance of two products is to examine results based on individual sequences. In this head-to-head comparison, we look at the result in each sequence to determine which did better based on that particular market simulation. Results that are within 5% of each other are comparable.

In the tabulation of the horserace, we calculate the percentage of times the Midland LiveWell Freedom is greater than a certain peer, comparable, or less than the peer. Complete details are available in Exhibit 14, page 17 in the Appendix. In Exhibit 5, below, we focus on the income benefit value when income starts at age 75, which is a 15-year delay.

Exhibit 5: Income Benefit Value Head-to-Head Against Peers (Standard Investment Assumption, 15-Year Income Delay)

		Midland LiveWell Freedom Strategy A (Accrue) — Average Income Benefit Value $46,300			Midland LiveWell Freedom Strategy B (Withdraw) — Average Income Benefit Value $83,400		
	Average Income Benefit Value	Peer is better	Comparable	LiveWell is better	Peer is better	Comparable	LiveWell is better
Peer A	$62,100	100%	0%	0.00%	17%	10%	73%
Peer B	$60,200	66%	34%	0.00%	7%	11%	82%
Peer C	$63,500	100%	0%	0.00%	20%	10%	71%
Peer D	$55,200	54%	46%	0.00%	3%	9%	88%

Source: CANNEX Financial Exchanges Limited

The head-to-head analysis goes beyond the average income benefit value to provide more detail about the frequency at which Midland LiveWell Freedom outperforms a particular peer or vice versa in our simulation model. We know that Strategy B (Withdraw) produces the highest income benefit values, and in this case, the average is significantly higher than all of the peers (30% to 50%).

Custom Investment Assumption

The custom investment assumption integrates asset allocation assumptions and portfolio fees for each individual contract. With a small number of specific products, it is useful to analyze these under real world conditions. Exhibit 6, below, compares results for the custom and standard investment assumptions.

Average death benefit values for all products are higher in the custom investment assumption, with increases ranging from nominal to modest. The scale of improvement relates to the allocation and fees of the individual contracts because the death benefit is tied to portfolio performance minus withdrawals.

In the case of the average income benefit values, increases were more modest, as the guarantee structure of the benefit itself plays a stronger role in the ultimate value than equity performance. To this point, the average income benefit for Midland LiveWell Freedom under Strategy A (Accrue) is identical under both standard and custom investment assumptions. The benefit itself has no step-up that would tie income to portfolio performance. Instead, it is linked to the performance of the S&P 500; this does not vary between the two assumptions, so both produce the same results. The market performance of the portfolios does show up under Strategy A (Accrue) but is reflected in the death benefit value, as noted earlier.

Under Strategy B (Withdraw), equity performance and fees do play a role in the value through the amount of the money added to the income benefit value at the Freedom Date. Therefore, the custom investment assumption makes a greater difference as

Exhibit 6: Actuarial Present Value Results Comparing Custom to Standard Investment Assumption

			Income Start at Age 65 (5-year delay)			Income Start at Age 70 (10-Year Delay)			Income Start at Age 75 (15-year delay)			Income Start at Age 80 (20-year delay)		
			Average Income Benefit Value	Average Death Benefit Value	Average Total Economic Value	Average Income Benefit Value	Average Death Benefit Value	Average Total Economic Value	Average Income Benefit Value	Average Death Benefit Value	Average Total Economic Value	Average Income Benefit Value	Average Death Benefit Value	Average Total Economic Value
Custom Investment Assumption	Peer A		$95,500	$34,500	$130,000	$89,900	$45,300	$135,200	$72,400	$61,500	$133,900	$44,500	$83,600	$128,100
	Peer B		$103,700	$29,500	$133,200	$91,600	$43,200	$134,800	$69,100	$62,100	$131,200	$42,800	$84,600	$127,400
	Peer C		$99,400	$25,400	$124,800	$87,000	$37,000	$124,000	$65,200	$53,800	$119,000	$39,000	$74,200	$113,200
	Peer D		$92,100	$28,800	$120,900	$78,400	$41,700	$120,100	$56,200	$59,900	$116,100	$32,800	$80,700	$113,500
	Midland LiveWell Freedom	Strategy A (Accrue)	$70,400	$81,600	$152,000	$65,800	$93,700	$159,500	$46,400	$122,900	$169,300	$24,400	$151,000	$175,400
		Strategy B (Withdraw)	$107,000	$35,300	$142,300	$107,300	$41,100	$148,400	$104,900	$48,700	$153,600	$102,700	$51,800	$154,500
Standard Investment Assumption	Peer A		$87,500	$25,800	$113,300	$81,800	$33,700	$115,500	$62,100	$47,000	$109,100	$35,500	$64,500	$100,000
	Peer B		$94,000	$25,800	$119,800	$82,500	$36,800	$119,300	$60,200	$53,000	$113,200	$35,700	$72,200	$107,900
	Peer C		$97,900	$23,000	$120,900	$85,200	$33,600	$118,800	$63,500	$48,700	$112,200	$37,400	$67,100	$104,500
	Peer D		$91,400	$27,500	$118,900	$77,600	$39,800	$117,400	$55,200	$57,200	$112,400	$31,900	$77,100	$109,000
	Midland LiveWell Freedom	Strategy A (Accrue)	$70,400	$49,600	$120,000	$65,800	$57,800	$123,600	$46,400	$81,500	$127,900	$24,400	$106,000	$130,400
		Strategy B (Withdraw)	$90,100	$27,300	$117,400	$88,300	$32,300	$120,600	$83,400	$39,300	$122,700	$80,500	$42,400	$122,900

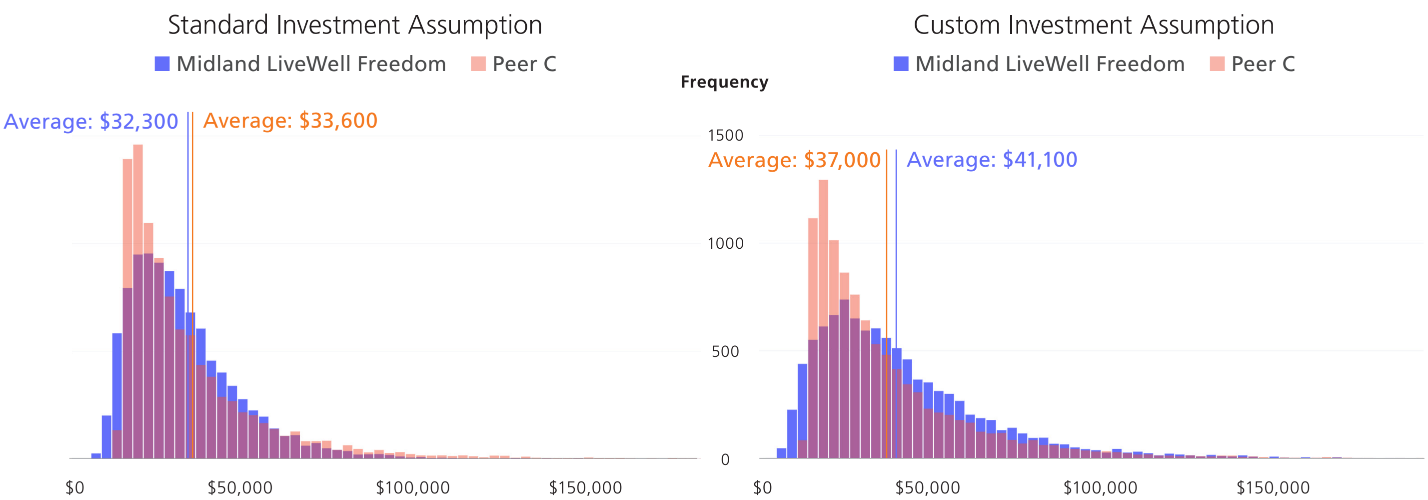
Source: CANNEX Financial Exchanges Limited

the income delay increases, since this also relates to the magnitude of the account value available at the Freedom Date. Overall, this effect is not as strong because much of the income benefit value comes from the periodic withdrawals and is not tied directly to portfolio performance.

Effect of Custom Investment Assumption on Death Benefit Value

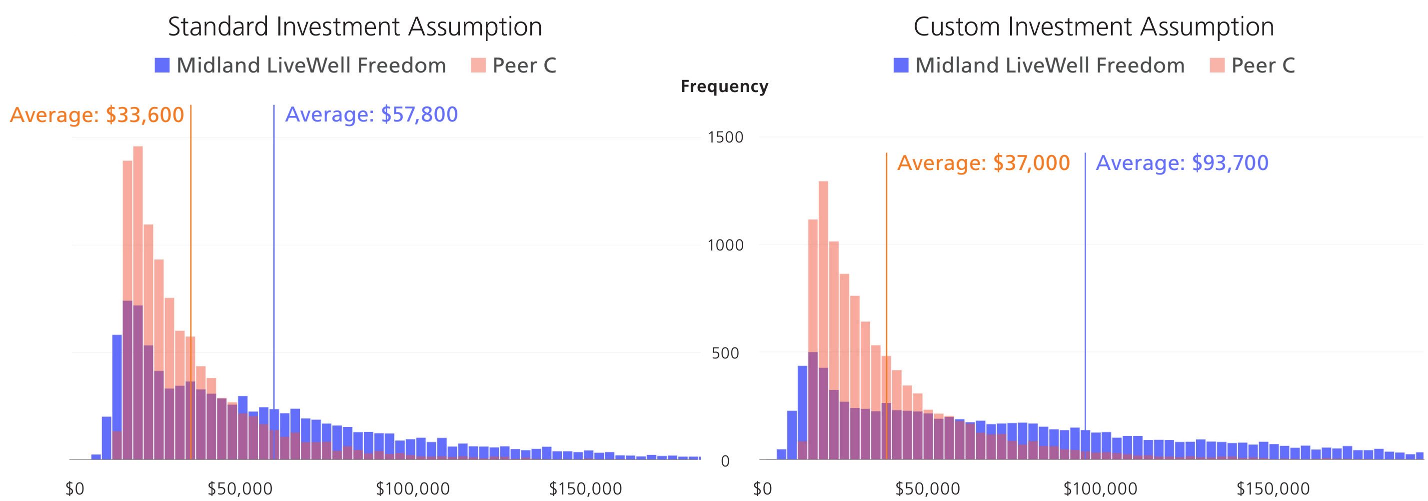
The death benefit value is most sensitive to differences in equity exposure and fees because the contract value itself drives the amount of the death benefit. Exhibit 7 compares the distribution of results for the death benefit value for the same peer contract with the same delay that we compared against for the income benefit value in Exhibit 4. In this case, the average death benefit value is close under the standard investment assumption, but the gap widens under the custom investment option. In either case, we would not expect a dramatic difference in results between the two assumptions and this is indeed what we find.

Exhibit 7: Comparison Against Single Peer of Death Benefit Value Results Using Strategy B (Withdraw) Under Standard and Custom Investment Assumptions (10-Year Income Delay)



Source: CANNEX Financial Exchanges Limited

Exhibit 8: Comparison Against Single Peer of Death Benefit Value Results Using Strategy A (Accrue) Under Standard and Custom Investment Assumptions (10-Year Income Delay)



Source: CANNEX Financial Exchanges Limited

The difference in the death benefit value under the custom investment assumption truly shows up under Strategy A (Accrue), as shown in Exhibit 6, which compares against the same contract and delay as Exhibits 4 and 7 (additional figures for the other delay periods appear in Exhibit 16, page 19 in the Appendix). In this case, Midland LiveWell Freedom has a much higher average death benefit value than the peer.

The boost to the death benefit values under the custom investment assumption is many times greater than it was under Strategy B (Withdraw). This is largely due to the higher equity allocation and lower fees increasing the Freedom Date money both before and after the Freedom Date itself. The effect is clear on the distribution of results with a proliferation of sequences returning more than the starting principal. The death benefit value has the opportunity to increase after the Freedom Date especially because periodic income payments no longer reduce the contract value and the benefit fees stop.

Of course, the improvement in performance between Midland LiveWell Freedom and individual peers using the custom investment assumption varies significantly according to the asset allocation and portfolio fees of the given peer. In some cases, the difference may be modest and in others, such as this example, it is tremendous.

Head-to-Head Comparisons

Especially given the tail effect, where there is a small number of unusually high results affecting the average, it is imperative to compare results using the head-to-head analysis. In Exhibit 9, below, we examine the death benefit performance under Strategy A (Accrue) against peers for both the standard and custom investment assumptions when there is a 15-year income delay. This analysis is analogous to the head-to-head comparison in Exhibit 5, and full results are available in Exhibit 15, page 18 in the Appendix.

A significant relative increase in average death benefit values for Midland LiveWell Freedom does not translate into a similar change in the head-to-head outcomes. The results under the standard investment assumption already include a tail effect and the custom investment assumption exacerbates this; there is still a cohort of sequences where the peers outperform and these do not change much with the different investment conditions. Overall, however, the dollar amounts of the death benefit values for Midland LiveWell Freedom are higher, so there is a net gain under most circumstances when considering the asset allocation requirements and portfolio fees.

Exhibit 9: Death Benefit Value Under Strategy A (Accrue) Head-to-Head Against Peers Under Standard and Custom Investment Assumptions (15-Year Income Delay)

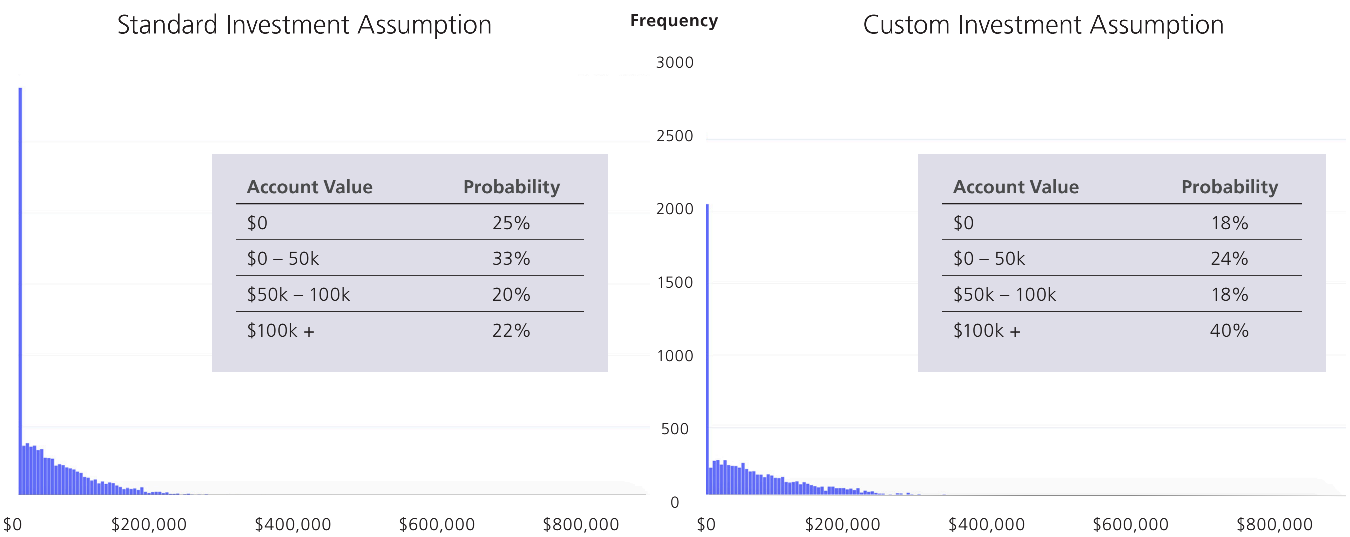
	Contract	Average Death Benefit Value	Peer is better	Comparable	Midland LiveWell Freedom is better
Standard Investment Assumption	Midland LiveWell Freedom	$81,500			
	Peer A	$47,000	10%	3%	87%
	Peer B	$53,000	12%	3%	85%
	Peer C	$48,700	10%	3%	87%
	Peer D	$57,200	12%	3%	85%
Custom Investment Assumption	Midland LiveWell Freedom	$122,900			
	Peer A	$61,500	8%	1%	91%
	Peer B	$62,100	9%	2%	89%
	Peer C	$53,800	8%	2%	90%
	Peer D	$59,900	9%	2%	89%

Source: CANNEX Financial Exchanges Limited

Freedom Date Values

The money available at the Freedom Date drives the value of the Midland LiveWell Freedom VA. There are two extremes to consider: the account value goes to zero before the Freedom Date and the account value rises significantly and the amount available at the Freedom Date is high. The account value increases through market performance and decreases from fees and withdrawals. The withdrawal rate is determined by two things: first, the benefit base, which rises at least 2% per year (more with positive S&P 500 returns); second, the withdrawal percentage, which increases as the client ages by 0.5% in five-year increments. Given all these moving parts, it is difficult to estimate performance, so the distribution of results provides more insight into the account value at the Freedom Date.

Exhibit 10: Account Value at Freedom Date Under Standard and Custom Investment Assumptions (10-Year Income Delay)



Standard Investment Assumption

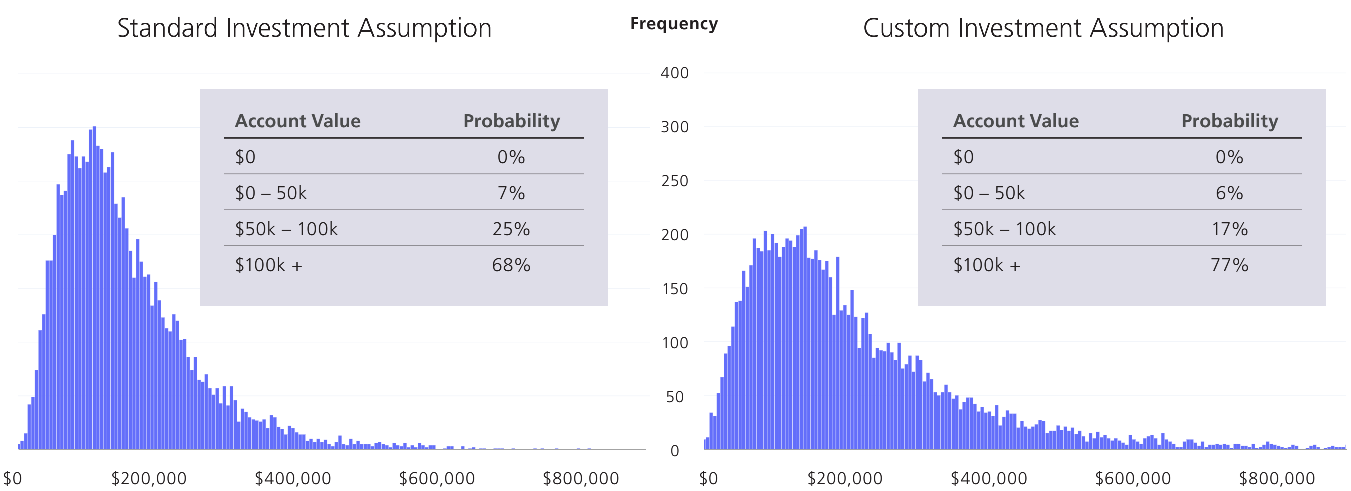
Account Value	Probability
$0	25%
$0 – 50k	33%
$50k – 100k	20%
$100k +	22%

Custom Investment Assumption

Account Value	Probability
$0	18%
$0 – 50k	24%
$50k – 100k	18%
$100k +	40%

Source: CANNEX Financial Exchanges Limited

Exhibit 11: Account Value at Freedom Date Under Standard and Custom Investment Assumptions (20-Year Income Delay)



Standard Investment Assumption

Account Value	Probability
$0	0%
$0 – 50k	7%
$50k – 100k	25%
$100k +	68%

Custom Investment Assumption

Account Value	Probability
$0	0%
$0 – 50k	6%
$50k – 100k	17%
$100k +	77%

Source: CANNEX Financial Exchanges Limited

Exhibits 10 and 11, above, show how frequently the account value at the Freedom Date falls within a given range for the 10-year and 20-year delays (the other delay periods appear in Exhibit 17, page 20 in the Appendix). The detail box gives the percentages for the probability the account value falls into four buckets, including the low value (no money) and the high value (return of principal or more). In both exhibits, we provide results based on both the standard and custom investment assumptions to demonstrate the effect of the higher equity allocation and lower fee. The contract does allow an equity allocation as low as 60%, which is used in the standard investment assumption, so this also serves as a proxy for the effect of a lower equity allocation and the use of a different portfolio.

Probability of Account Depletion

After initiating withdrawals from the contract, there is a risk that the contract value in Midland LiveWell Freedom reduces to zero before the Freedom Date. Furthermore, the account value at that point drives the value of benefit overall, whether the client is more concerned about income or legacy.

Note that account depletion does not affect the guaranteed periodic income. However, the risk that there may ultimately be no additional liquidity at the Freedom Date is real and depends heavily on how long income withdrawals take place before the Freedom Date.

In Exhibit 10, the probability the account reaches zero is 25% under the standard investment assumption and 18% under the custom investment assumption. Though this is a significant improvement, bear in mind that some accounts that previously depleted now provide some liquidity at the Freedom Date, but that amount is still likely very small. Regardless, the possibility that the client may reach the Freedom Date and have little or no money is very real and should play a role in consideration of the initial purchase, particularly when the client intends to initiate income withdrawals on the earlier side.

In Exhibit 11, the account will not deplete at all because withdrawals do not begin until the Freedom Date. Nevertheless, there is a small percentage (less than 10%) of sequences with an account value less than half of the starting principal, reduced primarily through poor market performance. In these cases, it is plausible that the client would initiate income sooner than expected in order to maximize income with the expectation of spending down the account before the Freedom Date. This is not likely, but it is a reminder that there is no guarantee that there will be significant money left at the Freedom Date, regardless the income withdrawal strategy.

Probability of Significant Account Increase

On the flip side of the coin, there is a chance that the contract value at the Freedom Date will equal or exceed the starting principal. In Exhibit 10, that figure ranges between 22% and 40%, depending on the assumption. Under the standard investment scenario, the probability that the account is depleted is greater than the probability that it will return principal or greater. Under the custom investment scenario, the opposite is true and, in fact, it is more than twice as likely to return principal or greater.

In Exhibit 11, when the client delays income until the Freedom Date, the account value at that time is likely to be at the level of principal or higher. This result is improved slightly under the custom investment scenario, but the biggest difference in the distribution of results is that the tail results extend and are extraordinarily high at the maximum. This is true regardless of the income delay but is most pronounced in this case.

Because the custom investment assumption increases exposure to equities, it is possible that the outcome is worse in certain sequences where the market performance is especially poor. Nevertheless, it is clear that the benefits of accessing higher equity participation greatly outweigh the risks. The custom investment assumption serves to increase both the probability that there will be account value at the Freedom Date and that it will match or exceed the starting principal.

DISCUSSION

In breaking down the performance of Midland LiveWell Freedom, it is not surprising that the results rely on the contribution of the money available at the Freedom Date, whether that is reflected in the income benefit value or the death benefit value. The contract offers lower income than peers, which ultimately increases the Freedom Date funds.

For this reason, Midland LiveWell Freedom significantly underperforms peers in generating income when considering the benefit based solely on the periodic income available through withdrawals and then through the lifetime income provided from the Freedom Date on. Many competing products are designed to incentivize the delay of income through roll-ups and increases in the withdrawal benefit percentages that further enrich the periodic income.

As investors in these products delay taking periodic income withdrawals, they will be taking income over fewer years. The effect of this delay shows up in the average income benefit values for those products, as it does for Midland LiveWell Freedom under Strategy A (Accrue), as shown in Exhibit 7. The Freedom Date effect neutralizes this dynamic, since it is possible for the investor to withdraw the contract value at or after the Freedom Date and receive periodic income.

In practice, many advisors recommend a VA with GLWB for clients who may or may not need future income but want to leave any unspent money to heirs. With this planning mindset, the opportunity to spend the money invested in the contract during retirement diminishes as the client ages and the focus shifts to the death benefit.

The design of Midland LiveWell Freedom means that the investor does not lose the option to take income even after the income window diminishes with other products. In order to make the benefit work for investors and increase the amount available at the Freedom Date, the guarantee on periodic income is constrained. All of the benefits included in the study have constraints on the guarantees. However, Midland LiveWell Freedom has certain limits that are unlike the peer contracts and therefore allow the benefit to be generous in other areas. To that point, Midland LiveWell Freedom, unique in this cohort, limits the benefit base at 200% of premium and does not step up to the contract value.

Of course, the same dynamic also affects the death benefit, as it is based entirely on the account value, either before or after the Freedom Date. Furthermore, we see that the average death benefit value under even Strategy B (Withdraw) is competitive under the earliest withdrawal date because the withdrawals themselves are comparatively modest. Recall that, with Strategy B (Withdraw), the death benefit value accounts only for death benefit collected before the Freedom Date, since this strategy depletes the account value and therefore eliminates the death benefit on that date.

With Midland LiveWell Freedom, the investor receives lower periodic income in exchange for greater access to growth potential. The analysis shows that the potential gain for the client using the benefit this way can be significant and is enhanced by the availability of low-cost index funds and the ability to invest up to 80% in equities. There is a risk that the client dies before the Freedom Date or that market performance and withdrawals eliminate the account value before then. Nevertheless, clients who can tolerate that risk have the opportunity for equity participation with unique liquidity.

Performance Under Different Ages and Income Delays

As noted earlier, we narrowed the scope of our in-depth analysis after an initial pass at higher-level data as a practical matter. Looking at the APVs alone, it is clear that there is a similar overall dynamic that translates in general terms to other ages and income delays. There are two factors in particular that are important to bear in mind when doing so:

- For clients younger than 60, the Freedom Date is in 25 years, not 20. For example, this means that income taken after a 10-year delay will extend for 15 years, not 10, until the Freedom Date. This potentially affects the amount of money left at the Freedom Date and it may increase the chance that there will be no money left at the Freedom Date.

- The lifetime payment percentage goes up by 0.5% every five years from age 60 until age 75. The jump in percentage increases the periodic income and simultaneously increases the reductions to the account value, affecting the amount of money left at the Freedom Date. This change occurs abruptly from one year to the next, so the changes in performance based on the length of the delay are uneven. This is not unique to Midland LiveWell Freedom and applies to most other VAs with GLWBs.

The effect of age is primarily the shift of the Freedom Date. The contract may be issued as early as age 50 and as late as age 75, which gives Freedom Dates ranging from ages 75 to 95. Later ages increase the chance that the investor will die before the Freedom Date and would bring down the average income benefit value; we see this in the data using a starting age of 65 (see Exhibit 16, page 19 in the Appendix).

Taking income sooner increases the value of the periodic income—the total of withdrawals taken before the Freedom Date and the guaranteed payments received after, which appears under Strategy A (Accrue) as the average income benefit value. It also reduces the amount of money left at the Freedom Date and increases the chance that the account value is zero at the Freedom Date.

Taking income later decreases the value of the periodic income because those payments take place over a shorter period of the life and at a time that one is more likely not to be alive to collect. However, it also increases the chance that there is money left at the Freedom Date and that the client gets at least premium back at this point. This factor may give investors a reason to delay income but it also means that there is no urgency to start income in the absence of a sincere need for guaranteed payments.

CONCLUSION

Midland LiveWell Freedom offers a unique value proposition that is not currently available among competitors. Though the benefit does provide guaranteed periodic income, it does so at a lower level than peers. In exchange, the client may make use of the account value 20 or 25 years after buying the contract. The client further has the option of using that money for income or as a legacy for heirs, however they see fit at the time.

As a new concept, the benefit does not fit well into established analysis. Further muddying the waters is the option to either withdraw money at the Freedom Date or leave it within the contract as death benefit, or anything in between. This creates two different perspectives that are not separate in practice; the client may choose any combination of income and legacy.

In practice, many advisors look to annuities with income guarantees to serve one of two purposes. On the one hand, some investors who want to establish a retirement income floor seek to maximize guaranteed periodic payments; annuities with GLWBs can serve this purpose well, especially for those who will be waiting a few years to start income. On the other hand, some investors use the VA as a means to gain income security but would like to leave the money to heirs if they end up not needing it. In this case, there is less need to maximize the income guarantee and more desire to capitalize on market gains if that is how the winds blow.

Midland LiveWell Freedom is designed to appeal to the second category of investors, those who have goals that may shift depending on personal circumstances and do not expect to take income for a number of years. Furthermore, investors should consider their longevity expectations, given the importance of the Freedom Date in the value of the guarantee. The design uniquely allows for growth in strong markets and has flexibility even after starting income through periodic withdrawals.

APPENDIX

Exhibit 12: Preliminary Analysis: Actuarial Present Value Results Across Various Purchase Ages, Delay Periods

		Age 55, Income Start at Age 60 (5-Year Delay)			Age 60, Income Start at Age 65 (5-Year Delay)			Age 65, Income Start at Age 70 (5-Year Delay)		
		Income Benefit Value	**Death Benefit Value**	**Total Economic Value**	**Income Benefit Value**	**Death Benefit Value**	**Total Economic Value**	**Income Benefit Value**	**Death Benefit Value**	**Total Economic Value**
Peer A		$87,400	$22,500	$109,900	$87,500	$25,800	$113,300	$69,300	$36,800	$106,100
Peer B		$98,300	$17,100	$115,400	$94,000	$25,800	$119,800	$77,500	$31,000	$108,500
Peer C		$95,900	$20,100	$116,000	$97,900	$23,000	$120,900	$77,500	$33,700	$111,200
Peer D		$91,300	$25,400	$116,700	$91,400	$27,500	$118,900	$72,200	$39,100	$111,300
Midland LiveWell Freedom	Strategy A (Accrue)	$74,500	$44,600	$119,100	$70,400	$49,600	$120,000	$62,700	$49,200	$111,900
	Strategy B (Withdraw)	$91,800	$24,800	$116,600	$90,100	$27,300	$117,400	$73,400	$37,700	$111,100

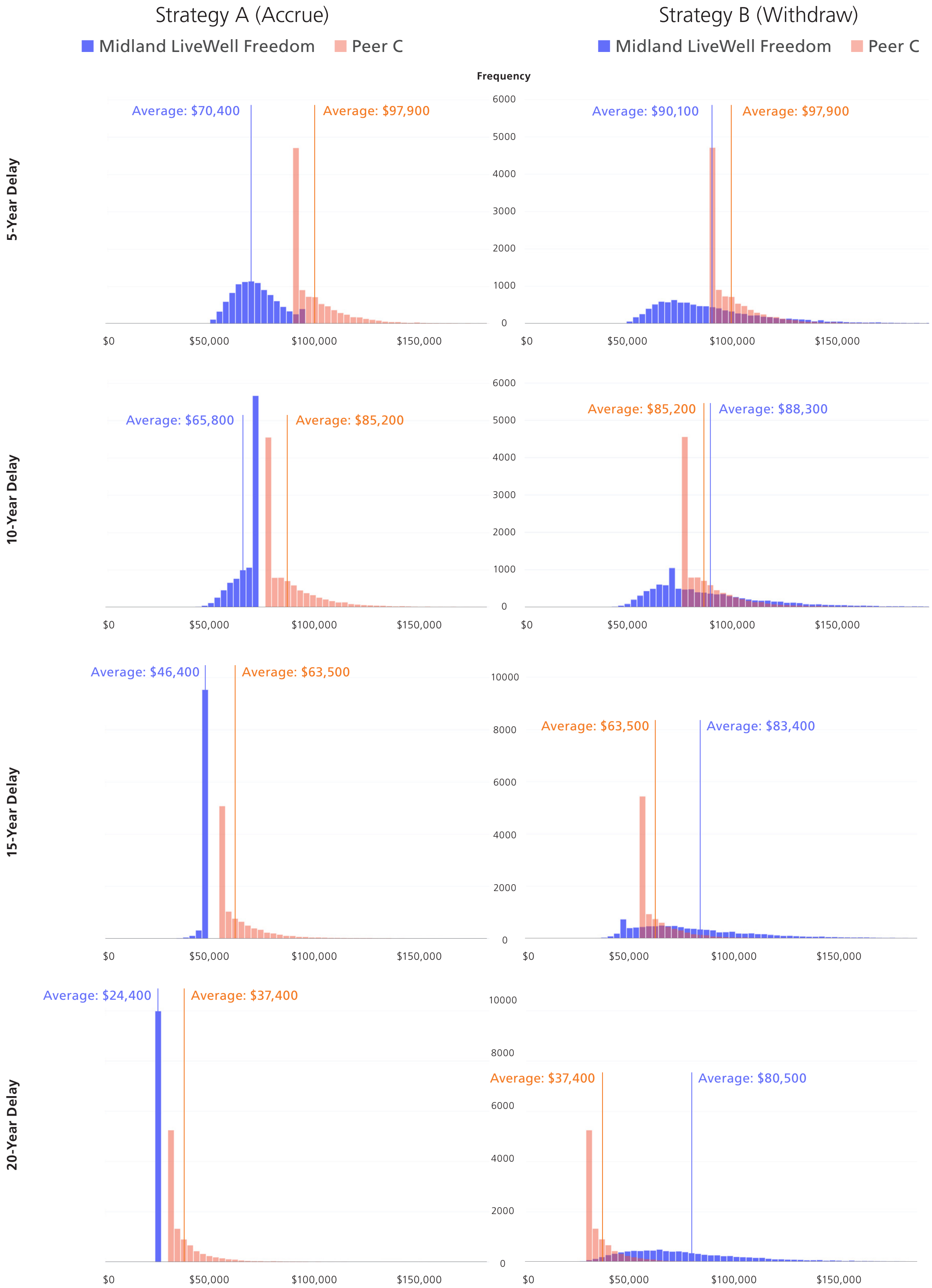
		Age 55, Income Start at Age 65 (10-Year Delay)			Age 60, Income Start at Age 70 (10-year delay)			Age 65, Income Start at Age 75 (10-Year Delay)		
		Income Benefit Value	**Death Benefit Value**	**Total Economic Value**	**Income Benefit Value**	**Death Benefit Value**	**Total Economic Value**	**Income Benefit Value**	**Death Benefit Value**	**Total Economic Value**
Peer A		$105,500	$22,900	$128,400	$81,800	$33,700	$115,500	$64,400	$45,500	$109,900
Peer B		$104,100	$25,700	$129,800	$82,500	$36,800	$119,300	$61,900	$46,000	$107,900
Peer C		$110,100	$22,500	$132,600	$85,200	$33,600	$118,800	$64,800	$46,400	$111,200
Peer D		$100,400	$27,600	$128,000	$77,600	$39,800	$117,400	$60,700	$51,800	$112,500
Midland LiveWell Freedom	Strategy A (Accrue)	$75,600	$46,500	$122,100	$65,800	$57,800	$123,600	$52,500	$60,500	$113,000
	Strategy B (Withdraw)	$92,200	$27,600	$119,800	$88,300	$32,300	$120,600	$65,900	$46,000	$111,900

		Age 55, Income Start at Age 70 (15-Year Delay)			Age 60, Income Start at Age 75 (15-Year Delay)			Age 65, Income Start at Age 80 (15-Year Delay)		
		Income Benefit Value	**Death Benefit Value**	**Total Economic Value**	**Income Benefit Value**	**Death Benefit Value**	**Total Economic Value**	**Income Benefit Value**	**Death Benefit Value**	**Total Economic Value**
Peer A		$80,200	$34,700	$114,900	$62,100	$47,000	$109,100	$38,800	$63,600	$102,400
Peer B		$82,400	$38,700	$121,100	$60,200	$53,000	$113,200	$39,200	$66,700	$105,900
Peer C		$85,400	$35,300	$120,700	$63,500	$48,700	$112,200	$42,000	$64,400	$106,400
Peer D		$72,200	$44,400	$116,600	$55,200	$57,200	$112,400	$34,300	$73,900	$108,200
Midland LiveWell Freedom	Strategy A (Accrue)	$59,400	$64,300	$123,700	$46,400	$81,500	$127,900	$28,900	$84,000	$112,900
	Strategy B (Withdraw)	$85,100	$35,100	$120,200	$83,400	$39,300	$122,700	$54,200	$56,700	$110,900

		Age 55, Income Start at Age 75 (20-Year Delay)			Age 60, Income Start at Age 80 (20-Year Delay)		
		Income Benefit Value	**Death Benefit Value**	**Total Economic Value**	**Income Benefit Value**	**Death Benefit Value**	**Total Economic Value**
Peer A		$58,100	$48,000	$106,100	$35,500	$64,500	$100,000
Peer B		$58,800	$54,800	$113,600	$35,700	$72,200	$107,900
Peer C		$57,800	$51,400	$109,200	$37,400	$67,100	$104,500
Peer D		$52,500	$60,300	$112,800	$31,900	$77,100	$109,000
Midland LiveWell Freedom	Strategy A (Accrue)	$40,100	$85,200	$125,300	$24,400	$106,000	$130,400
	Strategy B (Withdraw)	$78,600	$41,400	$120,000	$80,500	$42,400	$122,900

Source: CANNEX Financial Exchanges Limited
Note: Analysis performed using standard investment assumption.

Exhibit 13: Comparison of Distribution of Income Benefit Value Results with 5-, 15-, 10-, 20-Year Delays



Source: CANNEX Financial Exchanges Limited
Note: Analysis performed using standard investment assumption.

Exhibit 14: Head-to-Head Comparison Against Peers Under Standard Investment Assumption

		Income Benefit Value			Death Benefit Value			Total Economic Value		
Income Start at Age 65 (5-Year Delay)	**Peer**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**
Strategy A (Accrue)	A	95%	5%	0%	2%	5%	93%	35%	19%	46%
	B	100%	0%	0%	2%	5%	93%	49%	20%	31%
	C	100%	0%	0%	1%	3%	96%	50%	18%	32%
	D	98%	2%	0%	3%	8%	89%	43%	22%	35%
Strategy B (Withdraw)	A	46%	16%	38%	15%	14%	71%	36%	20%	44%
	B	62%	14%	24%	12%	13%	75%	51%	22%	27%
	C	64%	14%	22%	6%	8%	86%	51%	19%	30%
	D	53%	15%	32%	21%	20%	59%	44%	25%	31%
Income Start at Age 70 (10-Year Delay)	**Peer**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**
Strategy A (Accrue)	A	100%	0%	0%	11%	10%	79%	36%	17%	47%
	B	88%	12%	0%	18%	10%	72%	37%	24%	39%
	C	100%	0%	0%	13%	10%	77%	40%	19%	41%
	D	77%	23%	0%	21%	8%	71%	28%	25%	47%
Strategy B (Withdraw)	A	43%	14%	43%	28%	26%	46%	36%	18%	46%
	B	40%	18%	42%	56%	29%	15%	38%	27%	35%
	C	48%	14%	38%	32%	32%	36%	41%	20%	39%
	D	29%	18%	53%	74%	23%	3%	29%	29%	42%
Income Start at Age 75 (15-Year Delay)	**Peer**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**
Strategy A (Accrue)	A	100%	0%	0%	10%	3%	87%	17%	12%	71%
	B	66%	34%	0%	12%	3%	85%	13%	15%	72%
	C	100%	0%	0%	10%	3%	87%	19%	14%	67%
	D	54%	46%	0%	12%	3%	85%	11%	11%	78%
Strategy B (Withdraw)	A	17%	10%	73%	66%	24%	10%	17%	14%	69%
	B	7%	11%	82%	91%	8%	1%	15%	20%	65%
	C	20%	10%	70%	76%	22%	2%	20%	15%	65%
	D	3%	9%	88%	99%	1%	0%	13%	17%	70%
Income Start at Age 80 (20-Year Delay)	**Peer**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**
Strategy A (Accrue)	A	100%	0%	0%	3%	2%	95%	4%	5%	91%
	B	70%	30%	0%	4%	2%	94%	3%	5%	92%
	C	100%	0%	0%	3%	2%	95%	6%	5%	89%
	D	59%	41%	0%	4%	2%	94%	3%	4%	93%
Strategy B (Withdraw)	A	0%	0%	100%	99%	1%	0%	5%	7%	88%
	B	0%	0%	100%	100%	0%	0%	7%	13%	80%
	C	0%	1%	99%	100%	0%	0%	8%	10%	82%
	D	0%	0%	100%	100%	0%	0%	9%	15%	76%

Note: Green shading indicates Midland LiveWell Freedom 50% or better
Source: CANNEX Financial Exchanges Limited

Exhibit 15: Head-to-Head Comparison Against Peers Under Custom Investment Assumption

		Income Benefit Value			Death Benefit Value			Total Economic Value		
Income Start at Age 65 (5-Year Delay)	**Peer**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**
Strategy A (Accrue)	A	99%	1%	0%	2%	3%	95%	27%	13%	60%
	B	100%	0%	0%	2%	2%	96%	35%	13%	52%
	C	100%	0%	0%	2%	3%	95%	34%	11%	55%
	D	99%	1%	0%	4%	4%	92%	28%	12%	60%
Strategy B (Withdraw)	A	39%	13%	48%	19%	10%	71%	29%	15%	56%
	B	51%	12%	37%	9%	6%	85%	38%	15%	47%
	C	48%	11%	41%	4%	5%	91%	36%	12%	52%
	D	39%	12%	49%	9%	8%	83%	30%	13%	57%

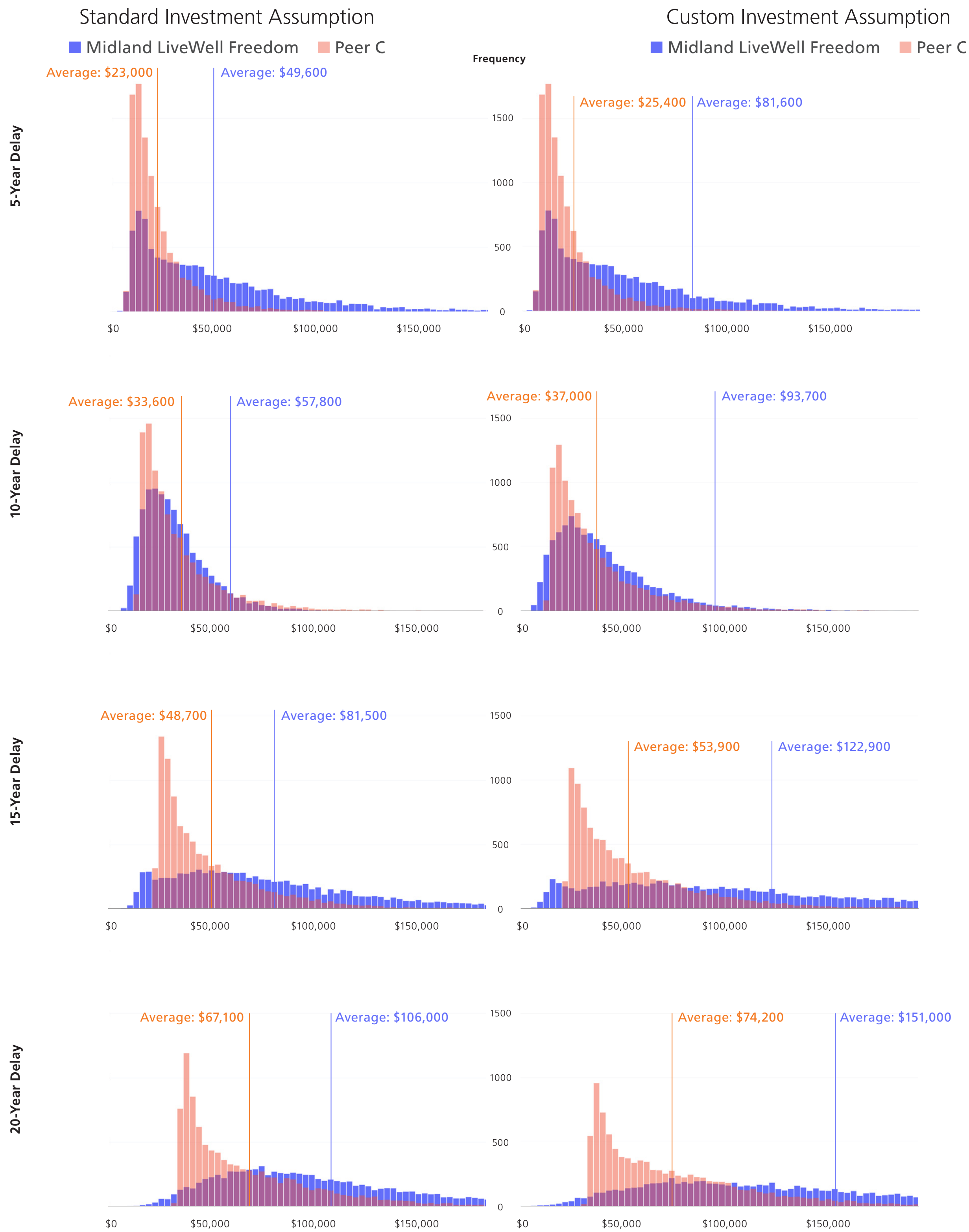
Income Start at Age 70 (10-Year Delay)	**Peer**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**
Strategy A (Accrue)	A	100%	0%	0%	8%	6%	86%	27%	12%	61%
	B	93%	7%	0%	10%	6%	84%	26%	13%	61%
	C	100%	0%	0%	11%	5%	84%	27%	11%	62%
	D	78%	22%	0%	13%	5%	82%	19%	11%	70%
Strategy B (Withdraw)	A	35%	11%	54%	32%	18%	50%	29%	14%	57%
	B	33%	13%	54%	32%	21%	47%	27%	16%	57%
	C	35%	10%	55%	21%	16%	63%	27%	13%	60%
	D	21%	13%	66%	36%	22%	42%	20%	13%	67%

Income Start at Age 75 (15-Year Delay)	**Peer**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**
Strategy A (Accrue)	A	100%	0%	0%	8%	1%	91%	14%	8%	78%
	B	74%	26%	0%	9%	2%	89%	10%	8%	82%
	C	100%	0%	0%	8%	2%	90%	14%	7%	79%
	D	56%	44%	0%	9%	2%	89%	8%	5%	87%
Strategy B (Withdraw)	A	16%	8%	76%	63%	20%	17%	16%	12%	72%
	B	8%	8%	84%	70%	18%	12%	11%	11%	78%
	C	14%	7%	79%	53%	23%	24%	15%	8%	77%
	D	3%	7%	90%	77%	15%	8%	9%	7%	84%

Income Start at Age 80 (20-Year Delay)	**Peer**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**	**Peer is better**	**Comparable**	**LiveWell is better**
Strategy A (Accrue)	A	100%	0%	0%	2%	1%	97%	3%	3%	94%
	B	77%	23%	0%	3%	1%	96%	3%	3%	94%
	C	100%	0%	0%	3%	1%	96%	5%	3%	92%
	D	61%	39%	0%	3%	2%	95%	3%	3%	94%
Strategy B (Withdraw)	A	0%	1%	99%	97%	3%	0%	7%	8%	85%
	B	0%	0%	100%	98%	2%	0%	6%	8%	86%
	C	1%	1%	98%	95%	4%	1%	6%	5%	89%
	D	0%	0%	100%	98%	2%	0%	4%	5%	91%

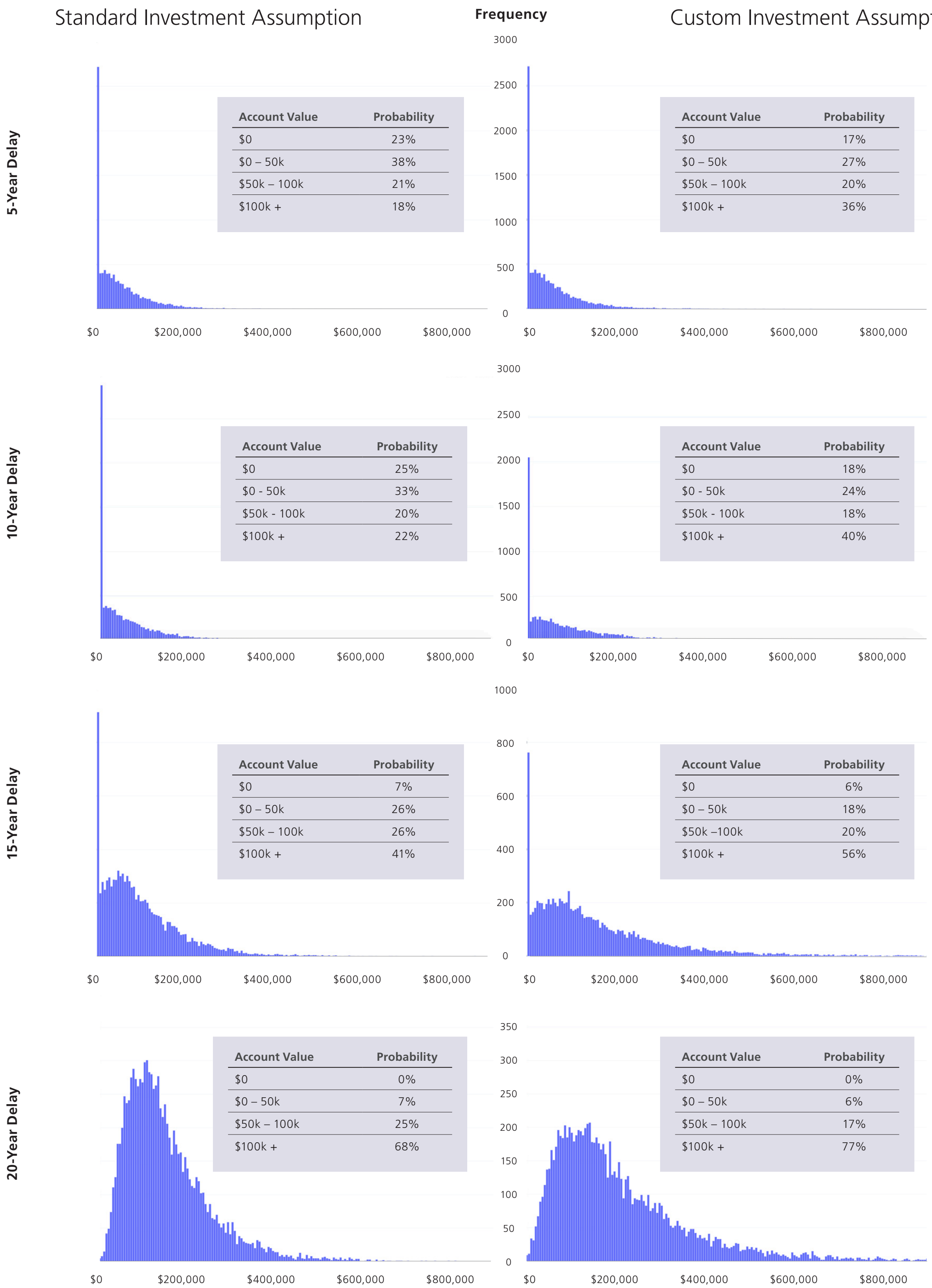
Note: Green shading indicates Midland LiveWell Freedom 50% or better
Source: CANNEX Financial Exchanges Limited

Exhibit 16: Comparison of Distribution of Death Benefit Value Results Under Standard and Custom Investment Assumptions with 5-, 10-, 15-, 20-Year Delays, Strategy A (Accrue)



Source: CANNEX Financial Exchanges Limited

Exhibit 17: Account Value at Freedom Date Under Standard and Custom Investment Assumptions (5-, 10-, 15-, 20-Year Income Delays)



5-Year Delay — Standard Investment Assumption

Account Value	Probability
$0	23%
$0 – 50k	38%
$50k – 100k	21%
$100k +	18%

5-Year Delay — Custom Investment Assumption

Account Value	Probability
$0	17%
$0 – 50k	27%
$50k – 100k	20%
$100k +	36%

10-Year Delay — Standard Investment Assumption

Account Value	Probability
$0	25%
$0 - 50k	33%
$50k - 100k	20%
$100k +	22%

10-Year Delay — Custom Investment Assumption

Account Value	Probability
$0	18%
$0 - 50k	24%
$50k - 100k	18%
$100k +	40%

15-Year Delay — Standard Investment Assumption

Account Value	Probability
$0	7%
$0 – 50k	26%
$50k – 100k	26%
$100k +	41%

15-Year Delay — Custom Investment Assumption

Account Value	Probability
$0	6%
$0 – 50k	18%
$50k –100k	20%
$100k +	56%

20-Year Delay — Standard Investment Assumption

Account Value	Probability
$0	0%
$0 – 50k	7%
$50k – 100k	25%
$100k +	68%

20-Year Delay — Custom Investment Assumption

Account Value	Probability
$0	0%
$0 – 50k	6%
$50k – 100k	17%
$100k +	77%

Source: CANNEX Financial Exchanges Limited

DISCLAIMER

The results presented in this report are based on the set of assumptions currently used for the analysis at the time it was conducted. CANNEX retains the discretion to update those assumptions in the future. Analysis of the same products using different assumptions may vary from what is included in this report.

CANNEX Assumptions and Disclosures

Capital Market Assumptions	
Fixed Income Expected Rate of Return	**4.00%**
Equity Expected Rate of Return	**8.00%**
Fixed Income Volatility (Standard Deviation)	**8.00%**
Equity Volatility (Standard Deviation)	**16.00%**
Fixed / Equity Correlation Coefficient	**30.00%**

Sub-Account Composition	
Cash Weighting	**0.00%**
Fixed Income Weighting	**40.00%**
Equity Weighting	**60.00%**

Management Expense Ratio (MER)	
MER Fee (Frequency)	**1.0% (Monthly)**

1. CANNEX is not a fiduciary. CANNEX is not providing any investment or other financial advice of any kind. All material contained in this report is for informational purposes only. No action should be taken based solely on the contents of this report. Results from this tool will vary based on the criteria selected by the user. Neither CANNEX nor the issuers guarantee any use of this information.

2. This evaluation and analysis is primarily focused on the economic performance of the embedded guarantees within the annuity. The values presented for each contract are average discounted stochastic values. With regard to the income benefit, the underlying assumption is that the client will withdraw the maximum allowed under the contract.

3. Market projections are based on a continuous time stochastic process calibrated to prevailing rates and capital market assumptions. Human mortality is modelled using Gompertz-Makeham calibrated to RP2000 (Healthy Annuitant) from Society of Actuaries.

4. Each product is modeled based on best match between a) the specifications and information provided by the product manufacturer, and b) the specifications of the CANNEX proprietary methodology and analytic process. Enhancements and calibration between these two sets of specifications are done at the discretion of CANNEX.

5. The results provided may not correspond with certain limits or restrictions set by a particular state or the product manufacturer.

6. Credit ratings of product manufacturers are not taken into account.

7. For joint accounts, income continues at 100% continuation to surviving members. Death benefits, if any, are paid upon the death of both annuitants (to the estate).

8. The effect of taxes (if any) has not been taken into account. Fund type (e.g., qualified versus non-qualified) and RMD requirements are not considered as part of the analysis.

ABOUT CANNEX

CANNEX supports the exchange of **pricing information** for annuity and bank products across North America. We provide financial institutions with the ability to evaluate and compare various guarantees associated with retirement savings and retirement income products.

Our **quantitative research** team provides methodologies that help optimize the selection and allocation of annuity and insurance guarantees in support of retirement programs and practices.

Our pricing and analytic services can be deployed to support a variety of processes, including:

- Research & Market Intelligence
- Financial Planning & Education
- Sales & Compliance
- Transaction Processing
- Product Service & Administration

Contact Information

CANNEX Financial Exchanges Limited
1200 Bay Street, Suite 1001
Toronto, Ontario
Canada
M5R 2A5

Phone: (416) 926-0882
Toll Free: (800) 387-1269
Fax: (416) 926-0706

Email: cannex@cannex.com
Web: cannex.com

