The ALEXIncome Approach

ALEXIncome is developing an innovative platform-neutral approach to offering guaranteed income products for 401(k) plans.

Current guaranteed income TDF product solutions offered to plan sponsors have been developed by specific companies with existing TDF portfolios.

The potential bias created by an existing portfolio can lead to products designed that best meet the TDF product manufacturer's needs rather than the plan sponsor and plan member needs. As a result, integration of Guaranteed Income product solutions is complex and costly.

A platform neutral approach offers unbiased choice and smoother integration which should be more cost effective.

The Critical Role of Default Investment Strategy in 401Ks

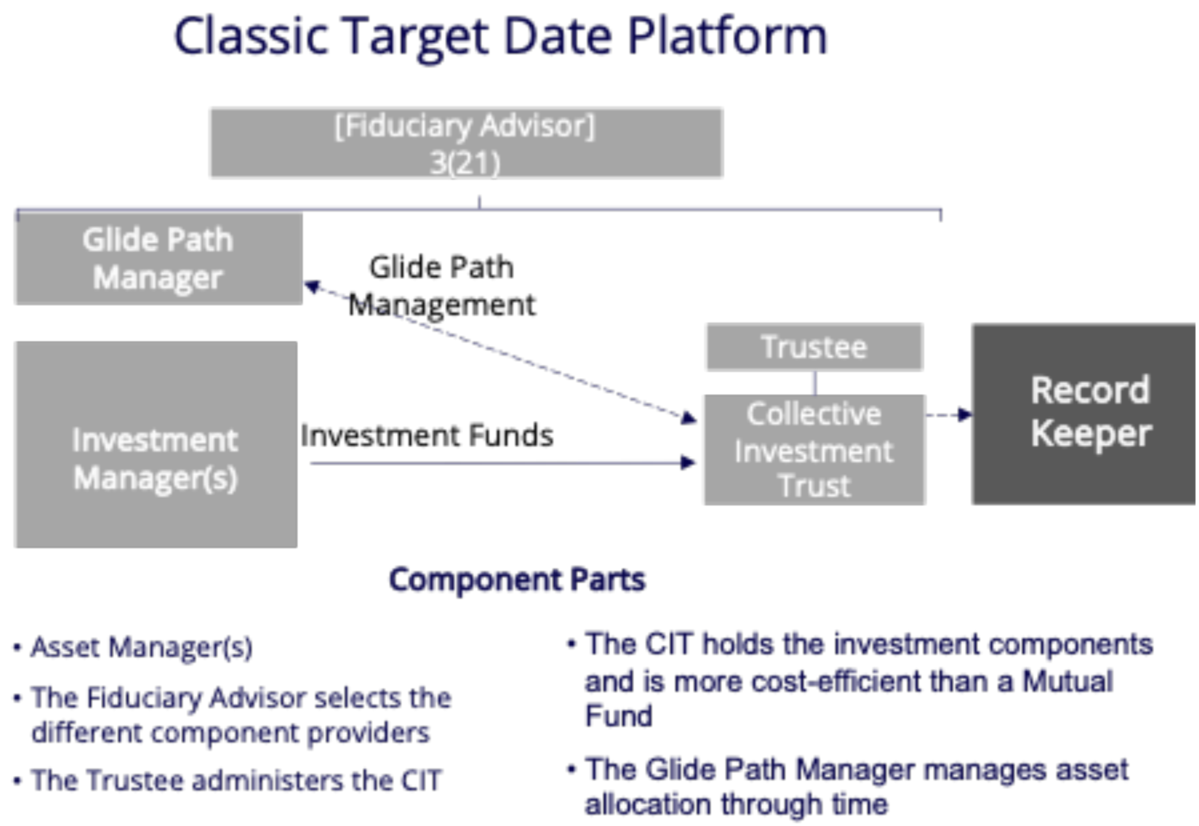
The Pension Protection Act of 2006 introduced the concept of the Qualified Default Investment Alternative ("QDIA"). These are default investment strategies, evaluated by investment professionals and chosen by plan sponsors, on behalf of 401K plan participants.

Disciplined QDIA selection is critically important for plan sponsors in their responsibility as fiduciaries. It is equally important to participants as the QDIA will frequently be their core investment strategy. Statistics show that most plan participants simply choose to retain their assets in their plan's QDIA rather than opting for other available alternatives.

Target Date Funds are the predominant QDIA strategy, currently garnering 48% of new 401K contributions and comprising 26.6% of total 401K assets. Traditionally, Target Date funds offer a mix of Equity and Fixed Income investments, where the allocation to each asset class is based on the participant's age. This formulaic allocation process is commonly known as the Glide Path. A typical Glide Path favors higher relative allocations to risky assets (equities) for younger participants and increasingly conservative allocations (to fixed income) as the participant approaches retirement.

Despite the widespread use of Target Date Funds (TDFs) in 401K plans, they have several limitations:

1. TDFs offer ineffective protection against simultaneous downturns in both equity and bond markets. This was the case in both 2008 and 2022. In each instance, participants experienced considerable losses, despite diversification across equities and fixed income.
2. Traditional TDFs have been pure accumulation vehicles. The lack of guaranteed lifetime income options creates risks for participants transitioning from saving to spending in retirement



Income Driven Target Date Strategies

Given the favorable legislative backdrop and burgeoning consumer demand, we have the opportunity to craft efficient QDIA strategies that address both accumulation and decumulation. The ideal approach must cater to a broad swath of 401K participants. While a "One-Size Fits All" approach may not fit every individual, we believe a "One-Size Fits Most" approach addresses the widest possible audience. To wit, Social Security and Defined Benefit plans have enjoyed great success without the benefit of individual customization!

The Opportunity for Unbiased Products

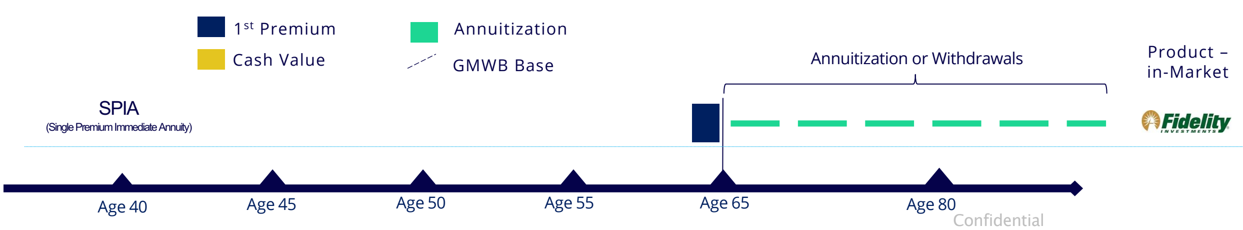
From the carrier perspective, standardization should be the best long-term solution. Retirement income solutions that can be underwritten by the largest number of carriers will be the ones that drive industry expansion. The fear of commoditization in our industry has been one of its biggest impediments. Over time, the result has been meaningful rotations of market leadership by different carriers and product styles. While those dynamics accrue to the benefit of whichever carrier or product happens to be in fashion, the result has been tepid growth at the industry level.

The arc of index funds from their early beginnings in the 1970s to their current predominance exemplifies the power of a benchmark product. Index funds -have been a gateway for expanded retail participation across the broad spectrum of equity investments. We believe the same principles can drive real growth in the retirement income market.

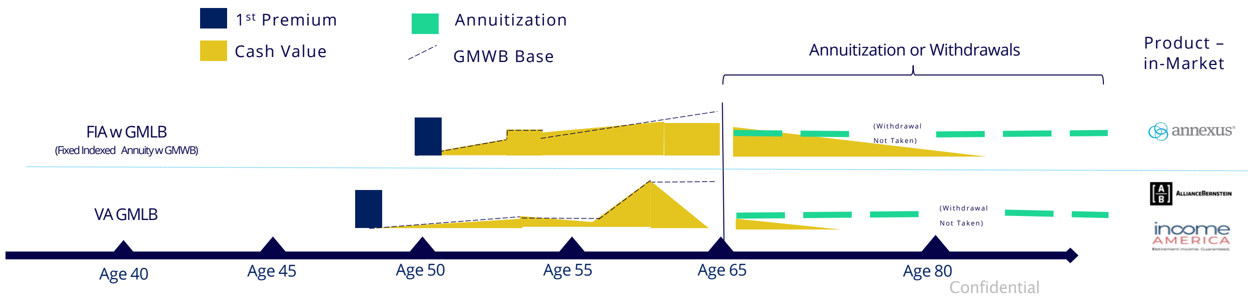
Taxonomy of In-Plan Annuities

Annuity styles can be split into three broad categories:

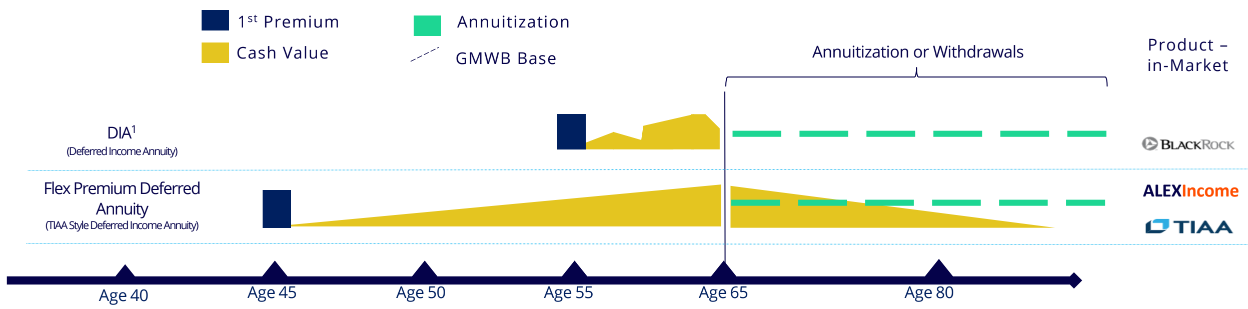
1) Single Premium Deferred Annuity – The participant has to affirmatively decide to acquire at or near retirement, often on exit from the 401K plan and receives automatic payments for life



2) The Fixed Indexed Annuity or Variable Annuity with Living benefits – The participant has to actively manage withdrawals in retirement but payments can continue for life



3) The Deferred Income Annuity or Flexible Premium Deferred Annuity – The participant gets automatic payments periodically in retirement for life



1. A DIA typically does not have a Cash Surrender Value but in the case of BlackRock, Participants can surrender for Market Value as this is needed for QDIA

The challenge of integrating solutions

Here are the key Criteria for evaluating and selecting the Best Guaranteed Income Solution:

Performance (Ranked in Order of Our View of Criticality)

1. Level of Income in Retirement
2. Likelihood of Ruin (Income from 401K Assets Runs Out)
3. Account Value at Retirement (Age 65)
4. Volatility During Accumulation
5. Possibility of Leaving Assets to Beneficiaries

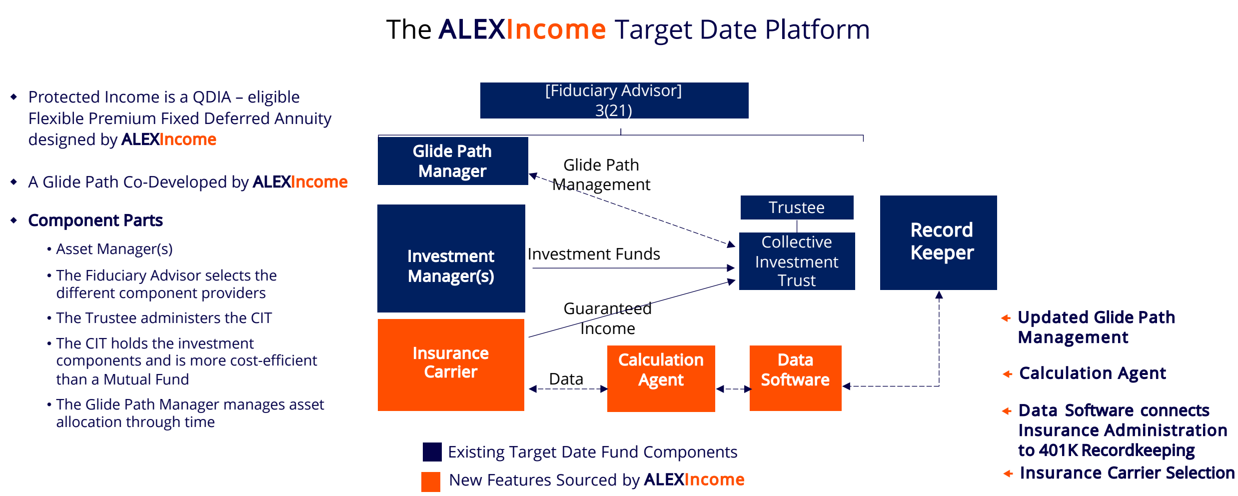
Other Attributes

- Efficiency
- Sustainability
- Simplicity
- Scalability
- Sponsor and Participant Education
- Portability

The Alex Income Approach / Value Prop

The Alex Income Solution

This is a solution aimed at TDFs that want to integrate a Guaranteed Income Solution in the Accumulation phase



Based on the ALEXIncome team's extensive experience in this space, we determined that optimizing for simplicity and sustainability would be the most effective solution for Plan Sponsors and Participants AS WELL AS for carriers.

- We analyze Guaranteed Income from the Plan/ Participant perspective AS WELL AS the carriers' perspective
- We are fundamentally structure/ product agnostic with the caveat that we have been around since the beginning of many of the structured annuity products and are intimately aware of their potential pitfalls
- We are wary of "derivatives-based" annuity designs because of the previous challenging results for carriers
- We are very focused on sustainability and scalability– can a carrier offer and support the annuity product for decades?
    - Onshore – the carrier must be able to earn a reasonable and stable return on-shore – e.g. the product doesn't require regulatory arbitrage to be profitable - as regulations could change
    - Does the annuity product require continued hedging from Wall Street which could face capacity issues due to market forces or regulatory change?

Many of the current In Plan offerings were derived from retail annuity designs, often foregoing the opportunity to reduce complexity and improve cost efficiency.

By contrast, the development of ALEXIncome started at first principles, with the goal of simplicity and sustainability for the key stakeholders: plan participants, plan sponsors and carriers.

Key Characteristics

- Simple, Cost Efficient Fixed Deferred Annuity
- Crediting rate that resets annually
- Allocations determined by Glide Path
- Replacement for fixed income allocation
- Allocations that start as early as age 40

The ALEXIncome Approach to Designing an In Plan Guaranteed Income Solution

1. Analyze the performance of the Target Date Funds under consideration and quantify performance relative to fee levels
2. Evaluate each annuity chassis based on one standard Glide Path
    a. ALEXIncome (TIAA style Annuity)
    b. VA with LB (Alliance Bernstein, Income America)
    c. FIA with LB (Annexus, Allianz)
    d. Synthetic DIA with cash surrender (BlackRock)
3. Run Stochastic Scenarios to Calculate:
    a. Guaranteed Income in retirement
    b. Amount of equity exposure retained at retirement
    c. Volatility of Account Value during accumulation period
4. Compare Percentile performance
5. Test for a “2008 Style” market shock near retirement to check for “Sequence of Returns” risk

For this Case Study, we will focus on the annuity chassis analysis.

The Reference Case

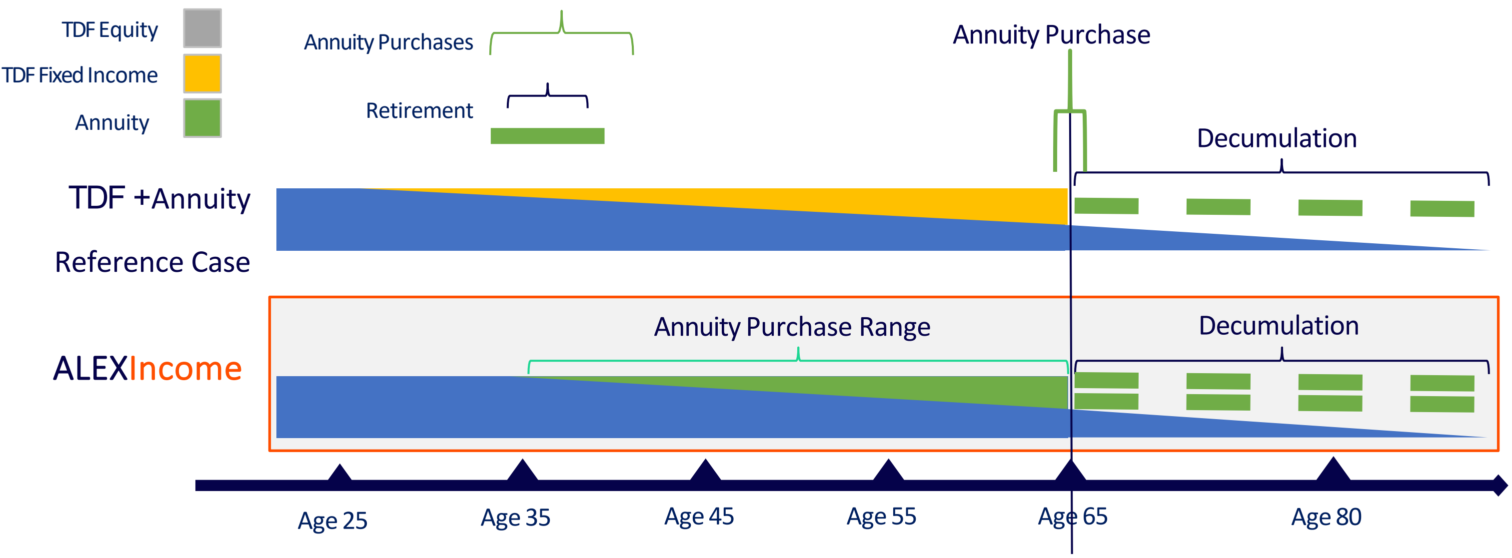
- Widely used TDF Glide Path[1] with Equity, Bond, Inflation Protected allocations
- Fixed Income Sleeve rolls into a SPIA at Age 65

[1]Source: Vanguard

The ALEXIncome Approach

We propose replacing the majority of the Fixed Income Investments in the Glide Path with a Flexible Premium Fixed Deferred Annuity.

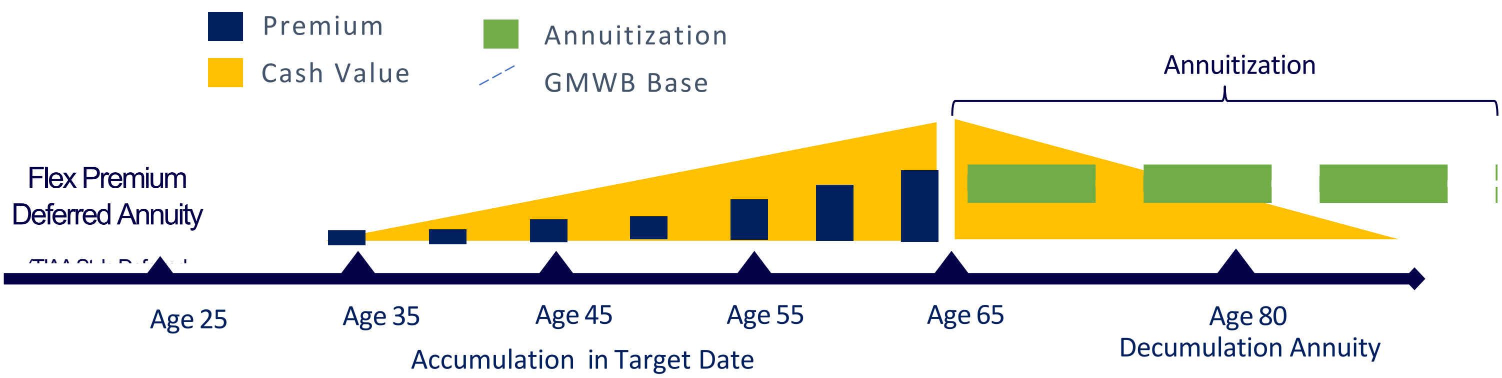
The Incorporation of the Annuity into the TDF[1] Glide Path Would be as Follows:



[1] The TDF Glide Path algorithm is adjusted so that no Annuity is sold during accumulation period.

- Start the annuity allocation as early as age 40.
- Test additional annuity start dates, including ages 45, 50 and 55.
- Our initial choice of Annuity Chassis was selected based on simplicity, cost, sustainability for the carrier, and scalability
  - Simplicity – the Flexible Premium Deferred Annuity with Cash surrender has no capital markets linkages and accumulation can easily be calculated with one parameter – the annually resetting crediting rate
  - The annuity has no explicit charges for the participant
  - The annuity is sustainable as it is not capital intensive for the carrier and doesn't have ongoing hedging/ optionality that have damaged carriers in the retail annuity space – plus it has a decades-long track record of having been offered by the insurance industry
  - The annuity is not subject to available capacity in the capital markets for hedging as are option-based products which could become expensive due to market forces or regulatory change in the derivatives markets

ALEXIncome Guaranteed Income Solution



The Methodology

The Methodology involves generating one thousand stochastic scenarios of market evolutions through time for interest rates and various equity indices. A classic Target Date Fund investment (the Vanguard TDF Glide Path) was simulated for monthly periods and rebalanced to calculate account values at each monthly step. The analysis begins with an assumed 401K plan participant at age 40. At age 65, the Fixed Income sleeve (in the Vanguard TDF – 50%) is rolled into an "At Market" Single Premium Deferred Annuity at a rate consistent with the level of interest rates along that path.

For ALEXIncome, the Fixed Income sleeve was replaced by the Flexible Premium Deferred Annuity in the Glide Path. The annually crediting rate on the annuity was assumed to be 10 Year CMT + 75 bps with a floor crediting rate of 1.5%. At age 65, the annuity enters decumulation at rate consistent with the level of interest rates along that path and equal to the payout rate of the SPIA in the test case.

We tested various start ages, from age 40 to age 55. We found that starting at age 45 or earlier was significant which is why the ALEXIncome begins allocation at age 40.

ALEXIncome completed this analysis on its own and then contracted with Cannex to replicate the results.

We compared five criteria listed above:

1. Level of Income in Retirement
2. Likelihood of Ruin (Income from 401K Assets Runs Out)
3. Account Value at Retirement (Age 65)
4. Volatility During Accumulation

5. Possibility of Leaving Assets to Beneficiaries

With the least emphasis on the possibility of Leaving Assets to Beneficiaries.

Initial Findings

In the comparison versus a TDF plus SPIA, ALEXIncome delivers greater guaranteed income in retirement up to the 75th percentile of the 1,000 stochastic paths. It further delivered greater account value at age 65 at the 73rd percentile:

Market Scenario Performance	Percentile	1 Income ALEXIncome vs TDF + Annuity	3 Account Value ALEXIncome vs TDF + Annuity
	75%	0.80%	-0.07%
	50%	6.80%	4.10%
	25%	12.70%	8.90%
2008 Scenario 1	50%	23%	8%

➢Likelihood of Ruin (Income from 401K Assets Runs Out)	2	Zero for Both
➢Volatility During Accumulation	4	ALEXIncome
➢Possibility of Leaving Assets to Beneficiaries	5	ALEXIncome

1. 2008 Scenario assumes a 50% Equity Drawdown/ 20% Debt Drawdown at Age 60 with a 4 Year Recovery

Scorecard

1	ALEXIncome
2	Tie
3	ALEXIncome
4	ALEXIncome
5	ALEXIncome

1. Level of Income in Retirement

2. Likelihood of Ruin (Income from 401K Assets Runs Out)

3. Account Value at Retirement (Age 65)

4. Volatility During Accumulation

5. Possibility of Leaving Assets to Beneficiaries

The key conclusion is that including a Guaranteed Income product should be integrated into a Target Date Fund during the accumulation phase and the earlier the age, the better.

Further

ALEXIncome has conducted the same analyses for competing In-Plan annuity structures including VA with GMWB, Systematic Withdrawal Program, and FIA with GMWB. In each case ALEXIncome beats or ties the other annuity chasses at the same level of significance.

Additionally, we have analyzed the capital requirements, returns, and scalability of each structure for the carrier.

Implementation

The prototype can be attached to any Target Date Fund glide path or Managed Account with a simple adjustment to the TDF glide path. We have assembled the necessary component parts (Integrator, Calculation agent, UX prototype) and have the relationships with carriers who will provide the annuity. This can be done with little to no increase in fees for the participant depending on the plan size and number of participants.

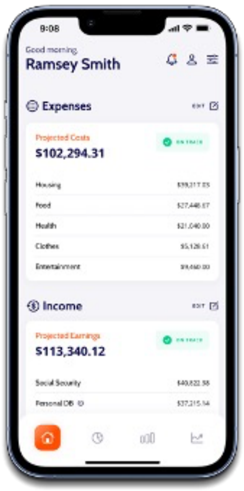
Flexibility

The ALEXIncome prototype is based on the idea that the participant automatically rolls into Guaranteed Income at age 65. This need not be the case. The participant has the flexibility to take full annuitization, a lump sum or partial lump sum of the annuity, and the ability to delay annuitization for some or all of the annuity (and continue to accumulate). The participant could take a lump sum and purchase a QLAC at age 65 or a higher yielding SPIA in the marketplace (unlikely but possible as ALEXIncome will provide income at then market rates). The decision for the participant can incorporate the presence of other assets outside of 401K and incorporate the optimal initiation of Social Security benefits (can the participant afford to delay initial benefits?). These decisions could be made with the help of an advisor or robo-advisor. This can all be added into the User Experience.

User Experience

Finally, the ALEXIncome prototype allows for the easy projection of future 401K balances and projected incomes which we have mapped into a friendly 401K mobile (if desired) UX. The simple nature of the ALEXIncome design allows for the easy calculation of income in retirement from to-date contributions at the current crediting rate and the guaranteed minimum crediting rate as well as income in retirement with continued contributions to age 65 again at the current crediting rate and the minimum. This can be combined with projected Social Security income (brought in via an API) and projected income from the rest of the TDF assets in retirement to present a comprehensive picture in an accessible form:

ALEXIncome UX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Good morning
Ramsey Smith
Expenses
Projected Costs
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Housing
Food
Health
Clothes
Entertainment
Income
Projected Earnings
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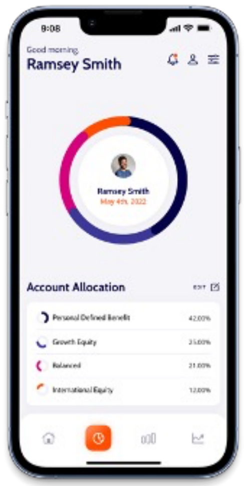
Social Security
Personal DB


9:08
Good morning
Ramsey Smith
Ramsey Smith
Account Allocation
Personal Defined Benefit
Growth Equity
Balanced
International Equity


9:08
Good morning
Ramsey Smith
Annual Retirement Income
Current Credit Rate
Social Security
Personal Defined Benefit
Equities Liquidation


9:08
Good morning
Ramsey Smith
Projected Income Attainment
Equity Liquidation
Personal Defined Benefit
Social Security
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