PERSPECTIVES

TARGET DATE GLIDEPATH DESIGNED FOR RETIREMENT SECURITY

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Topics: [Defined Contribution]

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The retirement landscape is shifting, as the workforce grows older and increasingly relies on its defined contribution plans for retirement security. NISA's target date glidepath design seeks to manage risks that undermine the ultimate goal of retirement: **sustainable and stable income.** Our multi-asset and risk-controlled solutions can be employed in the design of your plan's default option to help participants engage and plan for greater retirement confidence.

Introduction

What do **defined contribution** participants want? When we began thinking about our glidepath framework, we started with that simple question. There is a wide and growing body of economic, demographic, and attitudinal research on this question, but it can all be distilled into two words: retirement security.

What do participants need to build and maintain retirement security? That is the question we built our glidepath framework around. And while multiple factors play a part, increasingly we think that your plan's default and glidepath construction are the key to achieving predictable and flexible income for participants in retirement.

While this may seem obvious and perhaps similar to the investment objective of your existing glidepath, the difference lies principally in how the risks are defined and managed. Many traditional glidepaths shift over the lifecycle from growth-seeking to capital-preserving assets with the predominant view of risk, defined as the volatility of account balance. This emphasis on account balance may have been appropriate then, but that singular accumulation objective may no longer apply to many plans. As the average age of participants has risen and the number of participants with a defined benefit plan has decreased, it's not a surprise that the more appropriate objective has become retirement income.

We approach glidepath design by putting the need for sustainable and stable retirement income front and center. The end result is a glidepath designed to

1. align with your plan's objectives;
2. address participant's needs to accumulate sufficient savings to retire and provide for needed spending throughout retirement; and
3. be a default option aimed at overcoming behavioral hurdles that hinder participants' ability to achieve the best retirement outcome.

In this paper, we will provide our research and methodology for how NISA can tailor a glidepath for your plan's goals and participants' needs for greater retirement security. In subsequent papers, we will consider the risks in retirement and ways to better meet participants' needs for the stability of income in retirement that they can't outlive. Additionally, we will explore the participant experience and how reframing outcomes in terms of retirement income can be simple and engaging to help participants get on and stay on track to greater financial wellness. We believe this holistic approach to glidepath, plan, and communication design can provide material improvements in retirement outcomes for participants—and move us one step closer to true retirement security.

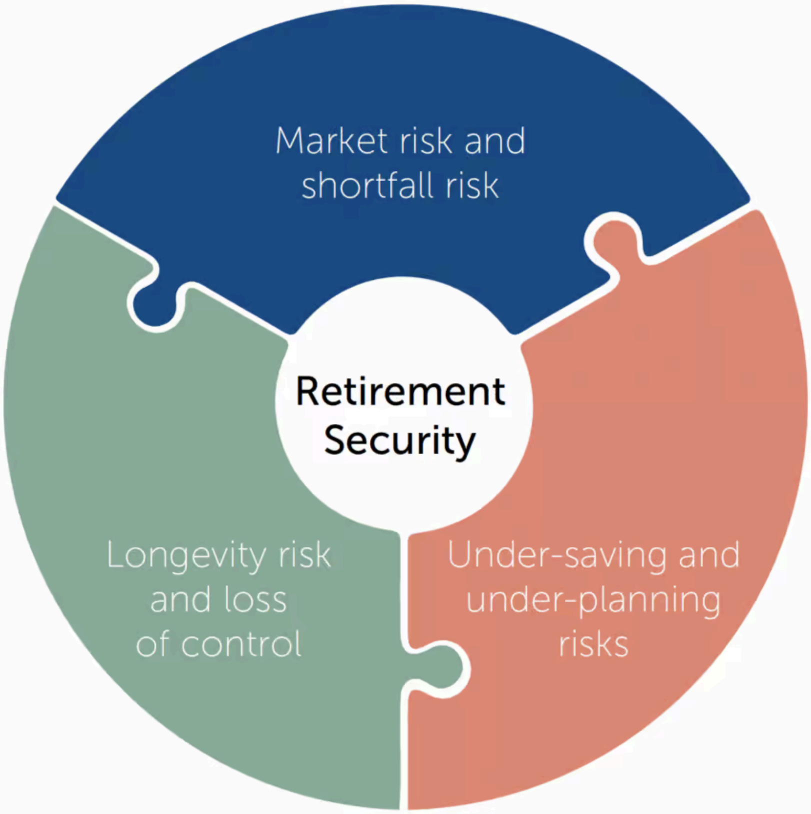
Many Risks to Retirement Security

To understand what risks a glidepath should manage, we like to work backwards from the desired outcome: a secure retirement. In our eyes, retirement security involves stable yet flexible income during an individual's retirement so that someone can meet their needs for predictable spending, have access to retirement savings for unexpected needs, and not risk outliving their assets. This goal is affected by the risks of under-saving and under-planning well before retirement. We think retirement income is the centerpiece of any program designed to provide retirement security.

> **To understand how to address the risks that participants face, we worked backwards from their desired outcome: a secure retirement.**

With this broader objective in mind, the traditional investment risk of market volatility becomes only one of many threats that participants face over their working lives and in retirement. We believe that the risks that can undermine retirement security fall into three interconnected categories. The first, market and shortfall risk, represents the threat that adverse market movements could negatively affect retirement account balances or erode the power of today's dollars to deliver future income. The second category we can call longevity risk and loss of control, under which falls the risk of participants outliving their assets and, alternatively, losing flexibility with and autonomy over their assets because they have purchased an annuity. The third bucket is the risk of under-saving and under-planning, which can occur because participants can't easily translate savings into income and can't take action with the confidence of "save more today to spend more tomorrow."

Exhibit I: Solving the Retirement Security Puzzle



Designing a glidepath around only market risk leaves a lot of unmanaged risks on the table. Rather than focusing on this single risk to the exclusion of all of the others, we believe a glidepath should have a more holistic design around the broader risks to retirement security.

Glidepath Construction in a Multi-Risk World

Not surprisingly, the risks that can threaten retirement security are often competing and changing throughout the lifecycle. As we see in Exhibit II, what may be a safe approach to one risk can be a risky approach to another. And some of these can work at cross-purposes — for example, short duration fixed income can be considered a way to reduce market/account balance risk, yet also *increases* income risk, by which we mean the ability to maintain desired purchasing power in retirement.

Exhibit II: Selected Risk Matrix

Risks	*Safer* relative to given risk	*Riskier* relative to given risks
Market / account balance risk	Short duration fixed income	Stocks
Inflation risk	Real assets, TIPS	Nominal cash flow securities
Shortfall risk	Savings rate	Increased equity allocation
Income risk	Long duration fixed income	Short duration fixed income / stocks
Longevity risk	Longevity hedged	Stocks / withdrawal rules / non-lifetime-guaranteed investments

If we want a glidepath design that delivers true retirement security for participants, it needs to balance the full range of risks over the lifecycle. This multi-risk perspective is the foundation of NISA's glidepat design approach.

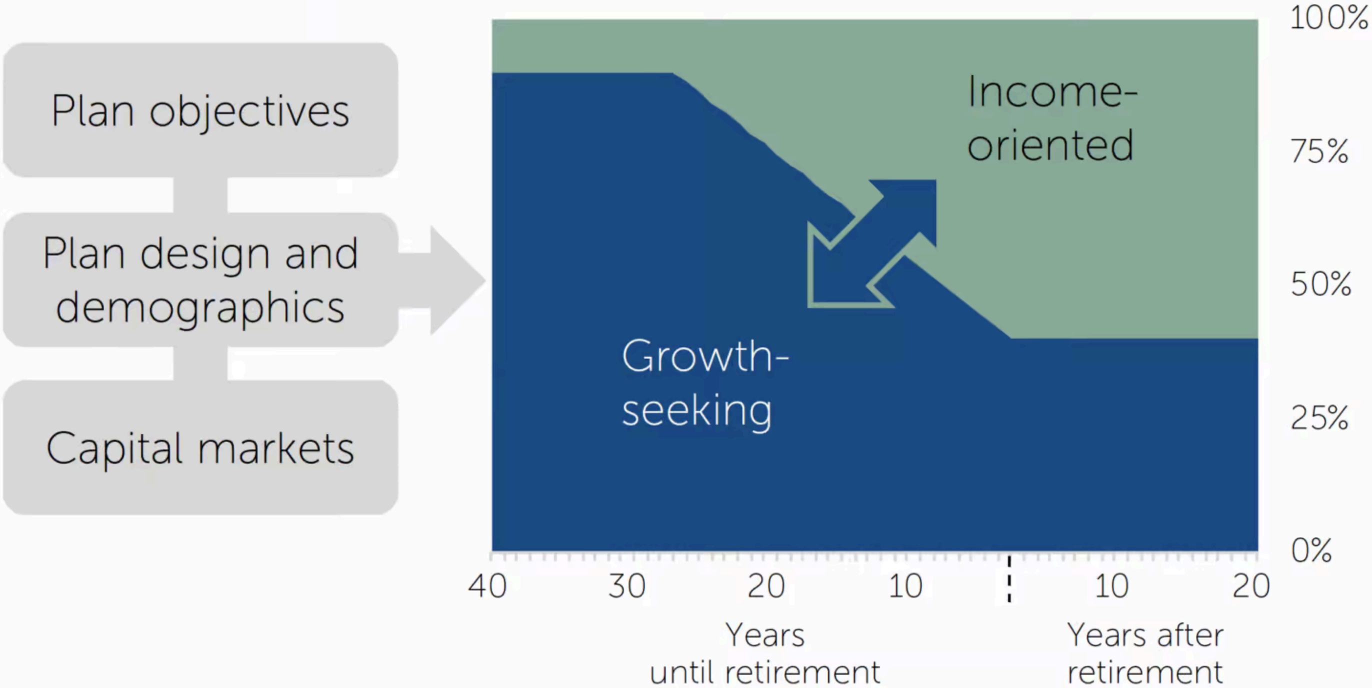
At a high level, our glidepath will look familiar because—like others—it's based on the principles of human capital theory. Human capital represents one's ability to earn income over time, such that for the front end of a working career, human capital could be considered similar to a long duration bond. As participants age and their human capital is converted to financial capital, a larger portion of wealth becomes invested in lower risk assets to compensate for the reduced allocation to human capital.

> **Perhaps the biggest risk to participants' retirement security comes from not managing risks.**

We approach glidepath design as an ongoing tradeoff between growth-seeking assets largely focused on managing the return and volatility of retirement savings and income- oriented assets focused on ensuring the certainty and sustainability of income in retirement. Increasingly, and in keeping with a broader definition of retirement security risks, this can be viewed as a trade-off between savings rate and investment risk—the more you save, the less risk you have to take. A plan's unique objectives and participant demographics largely drive the composition and allocation of each component.

Exhibit III: Glidepath Fundamentals

Allocation, %



Source: NISA.

A critical question is what makes up the income-oriented portion of a glidepath allocation. Short duration bonds play this role when capital preservation is the goal. However, when retirement income becomes part of the objective, honing in on what defines "risky" is central to how the glidepath shifts over time and addresses the risks that threaten retirement security. The composition of income-oriented assets is one way we can address multiple risks, by finding the appropriate balance between assets that can manage retirement income risk, inflation risk, and account balance risk.

While core and other short duration bonds are typically considered a safer bet for dampening short-term account volatility, they are not safe as the foundation for essential spending needs over the 20 to 30 years of life in retirement. We have explored this concept in our earlier papers like *Refocusing on Retirement Income Risk.*[1] The key point is that there is an unavoidable tradeoff between bonds that have lower volatility in account balance terms versus bonds that are less volatile in future income terms. Relying on short duration bonds may be a good way to preserve today's account balance, but they can expose participants to massive swings in future retirement income as interest rates change. A better orientation for the fixed income, we believe, is matching the duration to the participants' life expectancy.

It's also worth asking what counts as "lower risk" in terms of the other risks that can affect retirement outcomes. Inflation risk, for example, is something that can be addressed holistically by considering the inflation properties of growth assets and, if warranted, designing the income-oriented assets with inflation linked instruments. Likewise, we can lessen other risks by making deliberate choices about what assets to include and what emphasis to place on them.

NISA's Glidepath Composition and Asset Allocation

Let's explore in more detail how we approach glidepath composition decisions. We take a fairly standard approach to constructing an optimal growth-seeking portfolio based on an efficient frontier informed by our capital market assumptions. Combining theory with practice, we use forward-looking assumptions for how these asset classes will perform in the future while testing for reasonableness and prudence against the historical data and relationships.

> **We approach the glidepath as an allocation between assets designed to grow savings and assets designed to provide the potential stability of income in retirement.**

We rely on a few core tenets for our multi-asset return assumption framework. For one, we believe that yield curves contain useful information about the probable path and time profile of expected fixed income returns, and should inform forward-looking estimates of returns. Another aspect is that equity valuation (e.g. P/E ratios) and other asset valuation techniques matter. Changes in valuation measures can be indications of changing levels of demand for compensation for risk. We also rely on option markets to provide market-based forward-looking estimates of risk. We find these sources invaluable when calibrating risk measures.

Behavioral factors and spending patterns are also something we consider in our glidepath design process. As a number of retirement spending studies have shown, participant spending in retirement is less neat than it would seem at first glance.[2] Broadly speaking, a retiree's budget can be viewed as a basket of goods and services on a continuum from essential spending for basic living needs to the more discretionary spending on non-necessities. While some essential expenses are more predictable and smooth in their consumption (think food and housing), others are more uneven and harder to anticipate (for example, healthcare). Discretionary spending which is often driven by lifestyle choices has less of a need for certainty and may include categories such as transportation, leisure, and charitable giving. The post-retirement blend of assets must provide both the steady stream of income to meet fixed expenses while offering the flexible upside to satisfy discretionary ones when possible.

With all that in the mix, we break down assets into two key categories: income-oriented and growth-seeking.[3] Income-oriented asset classes provide highly predictable cash flows (i.e. subject to little default risk) and gravitate toward fixed income focused around life expectancy over the bulk of a participant's lifecycle. US Treasuries and investment grade corporate bonds comprise this bucket. We include TIPS (Treasury Inflation Protected Securities)—the ultimate tool for addressing inflation risk—in this category as well.

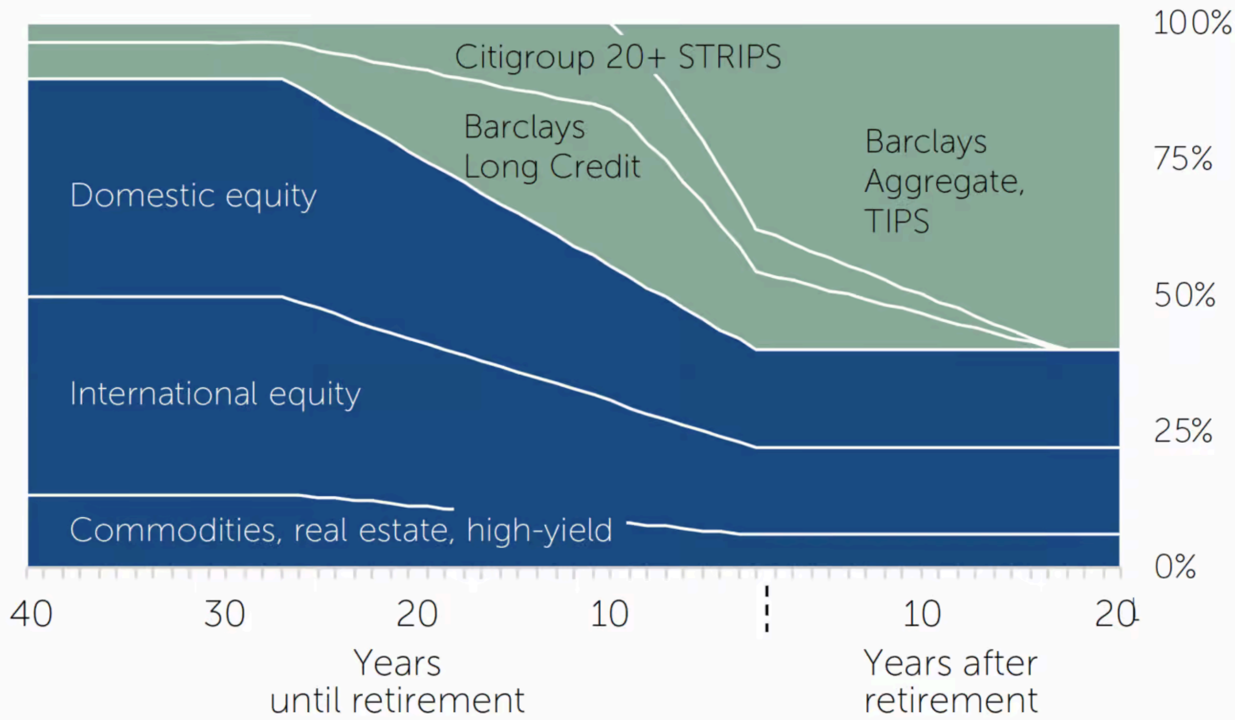
Growth seeking assets, on the other hand, are best thought of as the assets that provide the highest rate of return potential for a given level of risk after implementation costs. Efficient market theory suggests that the hypothetical "market portfolio" is a reasonable starting point for this allocation. Our philosophy is to stop including additional asset classes when the complexity and cost of implementing them exceeds the contribution to portfolio efficiency. The growth seeking universe includes equities (domestic large and small cap and international developed and emerging), high yield fixed income, commodities, and REITs.

> **It is often assumed that people spend in retirement like they did while working, adjusted for inflation. But retirement spending studies have shown that it is more complicated than this simple rule of thumb.**

The composition of the asset allocation shifts over time based on the need for certainty of income in retirement. See Exhibit IV for an illustrative example of such a glidepath.

Exhibit IV: An Illustrative Glidepath Designed for Retirement Security

Allocation, %



Source: NISA analysis.

Note how the constituents within each broader category change over the participant's lifecycle, trading an emphasis on growth-seeking assets for a greater allocation to the income-oriented bucket. Importantly, though, a sizeable allocation to growth-seeking assets may remain at and through retirement.

Conclusion

NISA's glidepath framework is designed around the goal of sustainable and stable retirement income. By taking a risk controlled and multi-asset approach to glidepath construction, we can build a glidepath intended to meet your plan's objectives and participants' need to secure retirement confidence and satisfy necessary spending throughout retirement.

While much has changed since ERISA was enacted more than 40 years ago, "Retirement Income Security" remains at its center. As the retirement landscape shifts away from the defined benefit era, the needs and interests of participants, sponsors, and policymakers have all aligned around this same objective of retirement income. We believe our approach to glidepath design gives sponsors a framework in which their investment default can evolve to help employees achieve the goal of retirement: **sustainable and stable income.**

In future papers we will dive deeper into the risks, provide views on the changing regulatory landscape, and show you how income-focused communications can be simple and engaging. Please look for our next paper in this series that will explore the design of the income-oriented allocation, which aims to provide stable retirement income, and investigate ways to potentially mitigate or eliminate the risk of outliving retirement savings.

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1. *Other papers, including* Long Live Longevity Annuities, The Beauty of the Bundle, *and* Regulators Pave the Road to Retirement Income *have touched on this idea as well.*

2. *See the Employee Benefit Research Institute's study, "Change in Household Spending After Retirement: Results from a Longitudinal Sample," for a good look at how heterogeneous retiree spending patterns can be.* *Results from a Longitudinal Sample," for a good look at how heterogeneous retiree spending patterns can be.*

3. *If you like, replace growth-seeking with "risky," and income-oriented with "less risky."*

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