

RET 101 Model Solutions

March 2026

1. Learning Objectives:

1. The candidate will understand how to analyze different types of designs for retirement plans and retirement plan investments

Learning Outcomes:

- (1a) Describe the structure of the following plans:
 - Traditional defined benefit plans
 - Defined contribution and savings plans
 - Hybrid plans
 - Other alternative retirement plans such as executive retirement plans, shared risk plans, target benefit plans, etc.
- (1c) Discuss investment of retirement plan assets
 - Assess the different types and combinations of investment vehicles typically used for providing retirement benefits.
 - Distinguish the various strategies, approaches and techniques used to manage retirement fund assets

Sources:

RET101-109-25: Designing the Future of Target-Date Fund

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Compare and contrast a “to-retirement” glide path with a “through-retirement” (dynamic) glide path from the following perspectives:
 - (i) Plan participants
 - (ii) Plan sponsor

Commentary on Question:

Most candidates did not give strong answers to this question that would give them full credit. Many answers lacked the additional risk to a participant of a through-retirement glide path. A large number of candidates struggled to come up with the compare/contrast from the plan sponsor perspective.

1. Continued

A to-retirement glide path focuses on the accumulation phase, that is, the time that a participant earns contributions and interest until retirement. The allocation between bonds and stocks is changed as the member gets closer to retirement.

A through-retirement (dynamic) glide path focuses on both the accumulation and decumulation phase, and changes allocations more frequently and not in a straight-forward stocks to bonds allocation closer to retirement. The decumulation phase is when a member is being paid out their DC balance.

Plan participants:

For plan participants, a through-retirement dynamic glide path is better at managing investment risk, inflation risk, interest rate risk and longevity risk, than a to-retirement glide path. For example, the glide path focuses on growth early in the participant's career and then shifts to inflation risk protection during mid-career, then a more defensive approach closer to retirement and then protects from longevity risk in senior retirement (while still aiming for some growth because retired for a while). Ultimately, this leads to better retirement outcomes.

The to-retirement glide path is easier to understand and follow from the participant's perspective, but less meaningful given that the target date fund is typically professionally managed.

Plan sponsor:

The through-retirement (dynamic) glide path could lead to more expensive manager fees than the to-retirement glide path. While these are typically passed on to the participants, the sponsor is responsible for ensuring the fees are competitive.

Given that the dynamic glide path likely leads to better outcomes for participants, this could help with the sponsor's goals to ensure adequate retirement income for the members, as well as support workforce planning goals for the employer (ensuring employees don't delay retirement due to inadequate savings). The dynamic glide path is an attractive option to employees at a very low cost to the plan sponsor.

- (b) Explain how incorporating the following into target date fund design could improve outcomes for DC plan participants:
 - (i) Personalization
 - (ii) Segmentation

Commentary on Question:

Most candidates gave a good answer regarding Personalization, but many struggled with Segmentation, as there were many different views of what "Segmentation" meant.

1. Continued

- i) **Personalization:**
Personalization factors in the participants' unique features, such as their current income, their other sources of income / retirement income and their risk preferences. For example, a member who has a low income may need more inflation protection than a higher paid individual. In addition, a member who has more savings is likely to want to take on more risk for more reward. As such, the plan can be tailored to more closely fit individual circumstances which could lead to improved outcomes.

- ii) **Segmentation:**
Segmentation helps to tailor the investments to the specific period in a participant's career. A young employee that is just starting off can take on more risk, this is when they have the longest potential (long time horizon) for growth, whereas a participant nearing retirement needs to be protected from strong market downswings. This protects participants from the main risks inherent to certain periods in their career/retirement, which leads to better outcomes.

2. Learning Objectives:

1. The candidate will understand how to analyze different types of designs for retirement plans and retirement plan investments
3. The candidate will understand how to analyze the risks faced by sponsors of retirement plans.
4. The candidate will understand how to evaluate sponsors' goals for the retirement plan, evaluate alternative plan types and features, and recommend a plan design appropriate to address those goals.

Learning Outcomes:

- (1a) Describe the structure of the following plans:
 - Traditional defined benefit plans
 - Defined contribution and savings plans
 - Hybrid plans
 - Other alternative retirement plans such as executive retirement plans, shared risk plans, target benefit plans, etc.
- (1c) Discuss investment of retirement plan assets
 - Assess the different types and combinations of investment vehicles typically used for providing retirement benefits.
 - Distinguish the various strategies, approaches and techniques used to manage retirement fund assets
- (3b) Assess the sponsor risk from options offered, including:
 - Postponed retirement
 - Early retirement
 - Optional forms of payment factors
 - Embedded options
 - Portability options
 - Investment options
 - Decumulation features
- (4l) Identify and assess the sources of investment risk applicable to retirement fund assets
- (4n) Identify changes that could reduce sponsor risk

Sources:

- *Fundamentals of Private Pensions*, McGill et al., 9th Edition, 2010
- RET101-107-25 Introduction and Overview of Retirement Plan Investments
- RET101-108-25 CAPSA Guideline No. 6, Pension Plan Prudent Investment Practices

2. Continued

Commentary on Question:

The question tested candidates on their ability to use the cash flows provided to calculate the modified duration of the plan, how to construct a simplified portfolio (consisting of bonds of two durations) to match the duration of the plan and their understanding of the impact of certain plan changes on the plan's duration. The final part tested candidates on their understanding of the investment risks from the employer and employee points of view when making various program changes.

Solution:

- (a) Calculate the modified duration of the plan assuming mid-year timing of cash flows.

Show all work.

Commentary on Question:

There were candidates who did not know how to use the cash flows to calculate the Macaulay duration, but most were able to perform that first step. Many missed credit for the second step of converting to a modified duration.

Solution is provided in excel format.

- (b) Recommend a target portfolio allocation that minimizes Company XYZ's interest rate risk using only the following asset classes:

Asset Class	Duration
Corporate Bonds	11 years
Treasury Bonds	18 years

Show all work.

Commentary on Question:

Generally, students demonstrated understanding of how to construct a portfolio with a duration to match the modified duration.

Solution is provided in excel format.

2. Continued

- (c) Company XYZ has an 80% fixed income and 20% equity investment portfolio allocation.

Propose changes to the investment portfolio if Company XYZ were to consider the following plan changes:

- (i) Reopen pension plan to new entrants
- (ii) Freeze pension benefits and replace with a defined contribution plan

No calculations are required.

Commentary on Question:

Generally, the candidates were able to correctly discuss high level duration changes based on plan changes and propose changes to the investment portfolio that were directionally correct. Candidates receiving full credit did not need to discuss funding level considerations, although many candidates did so in their solutions.

Reopening the pension plan to new entrants would be expected to increase plan duration as new individuals enter the plan and begin to earn accruals. If the plan is reopened, I recommend increasing the allocation to 60% equities and 40% fixed income to help increase the risk and possible return expectation of the plan and help offset the new accruals that will begin to increase the plan's liability.

If the decision is made to freeze the pension, the plan's duration is expected to decrease over time. But immediately after the freeze of the plan, the duration of the underlying plan will not change. As a result, I would recommend maintaining the current allocation and implementing an adjustment in the allocation toward fixed income slowly over time (a glide path) as the plan will have a shorter time horizon to absorb larger investment losses that could occur in a riskier investment class.

- (d) Company XYZ decides to freeze the defined benefit pension plan and replace it with a defined contribution plan.

Explain the impact of this change on investment risk from the following perspectives:

- (i) Employer
- (ii) Employee

2. Continued

Commentary on Question:

Generally, candidates were able to discuss the risks borne by the employer and employees and the impact of freezing the plan. Most candidates remembered to include the employer's risk for the legacy plan.

Freezing the plan and replacing the benefit with a defined contribution plan for new accruals would reduce the overall investment risk profile of the employer. The new DC retirement benefit investment risk would be fully borne by the employees. However, the employer will still maintain the legacy defined benefit plan's investment risk so long as the plan is maintained.

Employees transitioned into a DC plan are forced to take on the investment risk for their future retirement savings. They become solely responsible for selecting from the menu of investment options and managing their savings not only until retirement, but throughout their retirement. The investment risk for the legacy DB plan is still left with the plan sponsor so there is no impact to employees as a result of the plan freeze from an investment risk perspective.

3. Learning Objectives:

2. The candidate will understand how to analyze the risks faced by retirees and the participants of retirement plans.
3. The candidate will understand how to analyze the risks faced by sponsors of retirement plans.

Learning Outcomes:

- (2b) Describe and contrast the risks faced by participants of various sponsored plans, such as:
- Retirement plans sponsored by public sector employers
 - Single employer sponsored retirement plans
 - Retirement plans involving more than one employer, and
 - Social insurance plans
- (3a) Identify how plan features, temporary or permanent, can adversely affect the plan sponsor

Sources:

RET101-111-25: Risk Management and Public Plan Retirement Systems – Appendices A to C only.

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Describe three plan features that are more prevalent in public sector plans compared to private sector plans.

Commentary on Question:

Candidates generally performed well on this part (a), describing three plan design features that are prevalent in public sector plans and comparing that feature's prevalence in private sector pension plans. Some candidates interpreted 'plan features' more broadly, describing general characteristics of the plans that are more prevalent in public sector plans vs. private sector plans. Several candidates adequately described three prevalent plan features in public sector plans but failed to compare the prevalence of those features in private sector plans.

Credit was awarded for describing other plan design features not mentioned below to the extent the feature and description were appropriate.

3. Continued

Automatic post-retirement benefit increases (COLAs). Public plans frequently offer a guaranteed cost-of-living adjustment (COLA) to protect retiree purchasing power from inflation. These are usually automatic and can be compounded annually. Private sector defined benefit plans rarely include such features, and benefit increases to combat inflation are generally ad hoc, if they occur at all.

Employee contributions. Public sector defined benefit plans frequently include mandatory employee contributions, typically a fixed percentage of salary. These contributions help fund the plan and create shared responsibility for the plan's sustainability. In contrast, private sector defined benefit plans rarely require employee contributions, with funding typically the sole responsibility of the employer.

Subsidized early retirement. Public plans often include provisions that allow members to retire before the normal retirement age with minimal or no reduction in benefits. These subsidized early retirement features are especially common for public safety workers and reflect workforce management goals. Private sector defined benefit plans often impose actuarially reduced benefits for early retirement, offering fewer or no subsidies.

- (b) Describe the risks associated with public sector plans from the following perspectives:
- (i) Government
 - (ii) Plan participants
 - (iii) Taxpayers

Commentary on Question:

Candidates generally struggled to provide a comprehensive response in this part (b). Many candidates focused narrowly on actuarial risks (e.g., longevity, investment, inflation) and failed to describe the many governance risks inherent in the management of public sector plans. Candidates generally described the risks borne by government entities and taxpayers more completely. Candidates struggled to fully describe the risks borne by Plan participants.

Credit was awarded for describing other risks from the various perspectives as appropriate.

3. Continued

Government / Plan Sponsor

Budget volatility. Governments face the risk that required pension contributions will spike during economic downturns when revenues are low, making budgets difficult to balance.

Lack of control over benefits. Legislative bodies may have granted generous benefit formulas in the past without fully appreciating the long-term cost implications. Once granted, these benefits may be constitutionally or legally protected.

Political risk. Elected officials may prioritize short-term gains from skipping contributions or granting benefit increase at the expense of long-term sustainability, given they are unlikely to still be in office when those bills come due.

Members / Participants

Benefit security. Members rely heavily on the promised benefits, especially in systems not coordinated with Social Security. Their financial well-being in retirement is at risk if funding is inadequate or governance fails.

Moral hazard exposure. Members may support enhancements or oppose cost-sharing changes without full awareness of the long-term risks or funding realities – especially if risk disclosures are lacking.

Plan rigidity. Members may be locked into systems with limited portability, creating personal financial risk if the plan becomes fiscally unstable or is modified for future entrants only.

Taxpayers

Funding burden. Taxpayers ultimately pay for the system. If investments underperform or funding is inadequate, they may face increased taxes or reduced public services to cover pension costs.

Information asymmetry. Most taxpayers lack the expertise or information to assess pension system health. This makes them vulnerable to political decisions that hide or defer pension costs.

Intergenerational risk. Today's taxpayers may benefit from underfunding the pension plan to pay for other priorities while future taxpayers will bear the burden of the contributions needed to correct for previous underfunding.

- (c) Describe the issues that public plans face in developing contribution policies.

Commentary on Question:

Candidates generally were able to describe the issues that public plans face, but many struggled to describe how these issues made developing the contribution or funding policy more difficult.

Credit was awarded for additional issues properly justified beyond what is described below.

3. Continued

Lack of enforceability of contributions. Unlike private plans governed by ERISA, public plans may lack legal mechanisms to compel timely and adequate contributions (from an actuarial perspective). Legislative bodies can defer or underfund contributions with no immediate penalties.

Budget pressures and competing priorities. Many public employers operate within balanced budget constraints and must fund pensions alongside other pressing public needs (e.g., education, public safety).

Volatility from investment risk. Market downturns can cause sharp increases in required contributions, which can make long-term contribution policy setting challenging.

Plan maturity and cash flow needs. As plans mature, cash flow demands grow and contributions must cover both new accruals and significant benefit payouts.

- (d) Describe how public sector pension plans are able to handle long-term risks better than private sector pension plans.

Commentary on Question:

Candidates generally identified one or more structural advantages of public sector pension plans which allow them to better handle long-term risks.

Candidates often failed to adequately compare these structural advantages to the structural environment of private sector plans.

Public sector pension plans have multiple structural advantages over private sector pension plans:

Perpetual existence of government sponsors. Governments don't go out of business like private companies.

Longer investment and funding horizons. Since public employers are permanent entities with ongoing revenue from taxation, they can operate with a longer investment and funding horizon, which protects them from market or contribution volatility over time.

Stronger legal protections for promised benefits. In many jurisdictions, pension benefits for public sector employees are constitutionally protected, meaning they cannot be reduced once vested. Legal certainty creates greater long-term stability in the pension benefit promises to allow for long-term planning.

3. Continued

Public sector bias towards defined benefit plans. The public sector bias towards defined benefit plans sustains some of the long-term structural advantages of those plans, namely pooled investments and pooling of risks such as longevity risk and inflation risk.

4. Learning Objectives:

1. The candidate will understand how to analyze different types of designs for retirement plans and retirement plan investments

Learning Outcomes:

- (1a) Describe the structure of the following plans:
 - Traditional defined benefit plans
- (1b) Given a plan type, explain the relevance and range of plan features including the following:
 - Plan eligibility requirements

Sources:

Allen Ch 2, (p 35, 40)

Allen Ch 14

Commentary on Question:

Candidates who did well on this part clearly described four challenges that addressed both attraction and retention. Many candidates listed challenges without describing their impact to either attraction or retention or without describing the perspective of the employer, as requested in the question.

Solution:

- (a) Describe four benefit related challenges employers face in attracting and retaining mid-career executives.

Attraction Challenges

Mid-career executives often have significant pension or retirement benefits tied to service and pay levels at their current employer. Employers seeking to attract mid-career executives need to consider the impact of benefits being frozen at departure pay levels for new executives they recruit. Employers wanting to attract mid-career executives are faced with challenges such as, even though benefits at the new employer accrue at future, higher pay, the combined retirement benefit from two employers can be materially lower than if the executive had remained with the original employer for a full career.

Employers may find it challenging to ensure that their programs can address a shortened career by recruiting executives with a shorter timeframe to retirement who would expect that any gaps in service, income levels and retirement adequacy are addressed.

Executives are frequently subject to “golden handcuffs” such as deferred compensation or supplemental retirement plans that may be forfeited if they leave before retirement or vesting.

In addition, non-compete agreements can restrict the ability for executives to join competing organizations. Together, these arrangements make it more difficult for prospective employers to attract mid-career executives.

4. Continued

Retention Challenges

Although golden handcuffs can help retain executives by discouraging voluntary departure, they can present as a challenge for employers if they also result in disengagement if executives feel trapped. Conversely, “golden handshake” arrangements, such as enhanced early retirement benefits, may incentivize executives to leave earlier than the employer desires, creating retention and succession challenges.

- (b) Recommend an executive retirement plan design that would achieve the following objectives assuming executives currently participate in Company ABC’s defined benefit pension plan:
- (i) Attract mid-career hires
 - (ii) Retain executives

Justify your recommendations.

Commentary on Question:

Candidates received full credit for clearly recommending a retirement plan design that addressed all plan provisions and justified how the provisions addressed both attraction and retention. Many candidates were not specific in their recommendation and provided contradicting plan features that didn’t address both attraction and retention.

To attract and retain executives who already participate in Company ABC’s defined benefit (DB) pension plan, I recommend establishing a **Supplemental Executive Retirement Plan (SERP)** that mirrors the base DB plan in structure but provides **enhanced benefits in excess of qualified plan limits**. A DB-type SERP is well suited to achieve both attraction and retention objectives because it can be customized to recognize executive compensation patterns, service history, and desired behavior.

Overall Design Recommendation

(i) Attract Mid-Career Executive Hires

To attract mid-career hires, the SERP should address benefit replacement shortfalls that arise when executives change employers mid-career.

- Provide **short service eligibility**, such as eligibility after one year of employment.
- Consider 3-year **vesting** instead of 5 for attraction but keeping a required minimum for retention.

4. Continued

- Define pay to include **base salary plus bonuses and other incentive pay**, (including pay above the statutory maximum) which are often a material portion of executive compensation but may not be fully recognized under the qualified DB plan.
- Use a **shorter compensation averaging period** (e.g., highest 3 consecutive years instead of 5) to better reflect current earning levels for mid-career hires.
- Recognize **prior service with a former employer** for benefit calculation purposes
- Increase the accrual rate above the base plan (e.g., greater than 1% of average earnings) to 2% and remove service caps (such as a 20-year limit) for SERP purposes.

(ii) Retain Executives

To support retention, the SERP should include design elements that reward long service and discourage early departure.

- Use **delayed or conditional vesting** for part of the SERP benefit (e.g., vesting only at retirement or after reaching a specified age such as 60 or 62). This creates “golden handcuffs” that encourage executives to remain with the organization through key career stages.
- Increase **early retirement age** (e.g., 60) and provide **subsidized early retirement factors** (better than full actuarial reduction) to provide flexibility with retirement patterns and support orderly retirement and succession planning.

5. Learning Objectives:

2. The candidate will understand how to analyze the risks faced by retirees and the participants of retirement plans.
3. The candidate will understand how to analyze the risks faced by sponsors of retirement plans.
4. The candidate will understand how to evaluate sponsors' goals for the retirement plan, evaluate alternative plan types and features, and recommend a plan design appropriate to address those goals.

Learning Outcomes:

- (2b) Describe and contrast the risks faced by participants of various sponsored plans, such as:
- Retirement plans sponsored by public sector employers
 - Single employer sponsored retirement plans
 - Retirement plans involving more than one employer, and
 - Social insurance plans
- (3a) Identify how plan features, temporary or permanent, can adversely affect the plan sponsor
- (3b) Assess the sponsor risk from options offered, including:
- Postponed retirement
 - Early retirement
 - Optional forms of payment factors
 - Embedded options
 - Portability options
 - Investment options
 - Decumulation features
- (4n) Identify changes that could reduce sponsor risk

Sources:

RET101-104-25: The Hybrid Handbook: Not All Hybrids are Created Equal

Commentary on Question:

Commentary listed underneath question component.

5. Continued

Solution:

- (a) Describe how the risks faced by the following will change as a result of the plan merger:
- (i) Company ABC
 - (ii) Plan participants

Commentary on Question:

Part (a) tested the candidates' knowledge of risks faced by various stakeholders and how changes in plan features can positively or adversely affect those risks. Candidates generally performed well on this question, though responses indicated that some candidates may have misinterpreted the scenario in the question (such as which plans would apply to current retirees). Other answers and risk considerations than those shown below may have been considered acceptable.

Risks to Company ABC

- Inflation risk increases: the active participants from Plan B will be moving to a benefit formula that is indexed with inflation, increasing the overall exposure the company has to future inflation
- Contribution risk increases: Plan B had historically required employee contributions (5%), and Plan A does not. After the shift toward Plan A's benefit structure, the company will now bear 100% of the normal cost for future accruals and contribution requirements will not be offset by individual participant contributions.
- Investment risk increases assuming the allocation from Plan A is used for the merged plan. The asset allocation for Plan A is more heavily weighted toward equities, which introduces a larger amount of risk for the combined plan assets.

Risks to Plan Participants

- Inflation risk decreases for Plan B participants: the introduction of an indexed benefit helps protect the participant's future benefit in retirement, and reduces their personal inflation risk.
- Income adequacy risk decreases for Plan B participants: Assuming the % of pay provided per year of service is the same, a final average pay design will provide a larger benefit than a career average design (since only the higher pay levels closer to retirement are used in the average). Additionally, participants from Plan B will no longer be required to pay 5% toward their benefit, freeing up that money to save elsewhere and increase their individual financial situation.

5. Continued

- **Benefit security risk changes:** Participants with legacy Plan B benefits were protected by a higher funded plan with a conservative investment allocation. The shift to merging the plan utilizes the excess assets from Plan B to fund benefits from Plan A, versus maintaining a cushion of excess assets for Plan B to the extent investment return is not favorable, providing for less security for participants. Participants with benefits under Plan A will have a reduction in their risk because their underfunded plan will benefit from the excess assets from Plan B, increasing the overall funding of the plan and increasing benefit security.

- (b) Describe two risk management strategies to address the intergenerational equity.

Commentary on Question:

Part (b) tested candidates' knowledge of risk management strategies. Candidates generally performed poorly on this question by discussing general risk management strategies. Other answers than those shown below may have been considered acceptable.

Use of smoothing or contribution corridors: Ensures that fluctuating equity returns do not disproportionately impact a single cohort as a result of larger volatility in asset returns.

Adopting risk-sharing benefit features (e.g., adjustable accrual rates): Aligns benefit generosity with long-term plan performance and enables the plan sponsor to reduce the benefit earned for participants versus passing the cost of funding benefits to a future generation.

- (c) Explain what Company ABC should consider when evaluating their asset allocation post merger.

Commentary on Question:

Part (c) tested the candidates knowledge of how significant events can affect a plan sponsor's asset strategy. Candidates generally performed well on this question by discussing considerations specific to the scenario in the question. Other answers than those shown below may have been considered acceptable.

Liability profile: Plan A has inflation-indexed liabilities; the asset allocation should consider this and possibly utilize investments that provide inflation protection or match inflation sensitivity.

5. Continued

Maturity of the population: When Plan B is merged into Plan A, the weighting of the population toward inactive participants is much higher than when looking at Plan A before the merger. This likely will result in the Company taking a different approach to the overall investment strategy, possibly focusing on derisking the overall investments.

6. Learning Objectives:

2. The candidate will understand how to analyze the risks faced by retirees and the participants of retirement plans.

Learning Outcomes:

- (2b) Describe and contrast the risks faced by participants of various sponsored plans, such as:
 - Retirement plans sponsored by public sector employers
 - Single employer sponsored retirement plans
 - Retirement plans involving more than one employer, and
 - Social insurance plans
- (2d) Describe ways in which retirement plan design can manage the range of risks faced by plan participants and retirees

Sources:

Allen: Retirement Plans: 401(k)s, IRAs and Other Deferred Compensation Approaches (Ch 11, 14 & 17)

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) List the risks faced by plan participants in a defined contribution (DC) plan.

Commentary on Question:

Candidates generally performed well on part (a). Candidates who did not receive full credit were not able to identify unique underlying risks, for example listing various examples of behavioral risks (taking loans from the plan, not saving early enough in their career, etc.).

- Investment Risk – The participant bears the risk that investment returns are poor or volatile.
- Longevity Risk – The risk that retirement savings are insufficient and are outlived.
- Inflation Risk – The purchasing power of accumulated balances may be eroded over time.
- Contribution Risk – Contributions by the employee or employer may be inadequate.
- Behavioral Risk – Participants may make poor decisions, such as participating in the plan too late

6. Continued

- (b) Propose plan design features that mitigate three of the risks identified in part (a).

Commentary on Question:

Candidates generally performed well on part (a) and were able to describe how the various risks could be mitigated through various plan design features. Credit was provided to candidates for identifying features beyond those below to the extent appropriate.

Several defined contribution (DC) plan design features can be used to mitigate risks faced by participants.

1. Investment Risk – Target-Date Funds (TDFs)
Offering target-date funds as the qualified default investment alternative helps mitigate both investment and behavioral risks. TDFs automatically diversify assets and adjust the asset allocation to become more conservative as participants approach retirement, reducing reliance on participant investment decisions and limiting exposure to excessive risk later in the career.
 2. Contribution Risk – Automatic Enrollment and Automatic Escalation
Automatic enrollment increases participation rates, while automatic escalation gradually increases employee contribution rates over time. These features help mitigate the risk that participants fail to save enough due to inertia or lack of engagement, thereby improving retirement readiness.
 3. Longevity – In-Plan Annuity or Partial Annuitization Option
Providing access to in-plan annuities or allowing participants to annuitize a portion of their account balance at retirement helps mitigate longevity risk by providing lifetime income. Partial annuitization also reduces timing risk by limiting exposure to adverse market conditions at a single retirement date.
- (c) Compare and contrast a collective DC (CDC) plan to a traditional DC plan from the following perspectives:
- (i) Plan sponsor
 - (ii) Plan participant

6. Continued

Commentary on Question:

Candidates generally were able to come up with some similarities and differences between the two types of DC plans. Some candidates struggled to provide support to display how the plan sponsor and plan participant perspectives were unique across the two plans (versus just describing how the two plans worked). Specifically, many candidates struggled with identifying who really bore the underlying investment risk under a CDC plan.

A collective defined contribution (CDC) plan differs from a traditional defined contribution (DC) plan in how risks are shared and how benefits are delivered. The differences can be compared from the perspectives of both the plan sponsor and the plan participant.

(i) Plan Sponsor Perspective

CDC Plan

An advantage of a CDC plan for the sponsor is that **contributions are fixed and predictable**, similar to a traditional DC plan, which reduces balance-sheet risk compared to defined benefit plans. In addition, investment and longevity risks are **pooled at the plan level**, which can lead to more efficient outcomes and potentially better retirement adequacy for participants.

A disadvantage is that CDC plans involve **greater governance and communication complexity**. Sponsors remain responsible for plan design, funding policy, and benefit adjustment mechanisms, and may face reputational risk if benefit levels are reduced.

Traditional DC Plan

A traditional DC plan also offers **predictable and controllable costs**, since the sponsor's obligation is generally limited to making contributions. These plans are relatively **simple to administer** and well understood.

However, the sponsor bears the downside that **employee retirement outcomes are highly variable**, which may affect workforce management, employee satisfaction, and retirement timing, even though the sponsor does not formally bear investment or longevity risk.

(ii) Plan Participant Perspective

CDC Plan

For participants, a key advantage of a CDC plan is **risk pooling**, particularly for longevity and investment risks. This pooling can lead to **more stable and potentially higher retirement income** than an individual DC account. CDC plans are often designed to target income replacement rather than account balances.

6. Continued

A disadvantage is that participants generally have **less individual control** over investment choices, and benefits are **not guaranteed**—they may be adjusted up or down depending on funding levels and investment experience.

Traditional DC Plan

Traditional DC plans provide participants with **full control over investment decisions** and account balances, offering transparency and portability.

The major disadvantage is that participants **bear all key risks**, including investment, longevity, inflation, and timing risk. As a result, retirement income can be highly uncertain and depends heavily on individual financial decisions and market conditions.