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Life cycle estate planning in the era of defined contribution plans

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Executive summary

Defined contribution (DC) plan participants face both investment and longevity risks over the life cycle. While "living too long" can reduce a participant's DC asset balances to zero, premature death or taking a deferred retirement can result in a large asset balance remaining at death. Building on recent research on the value of choice architecture in DC plans, this article provides a life-cycle estate-planning framework to assist DC plan participants. As a foundation, participants must understand asset-transfer mechanisms, and especially the relationship between non-probate succession (e.g., beneficiary designations) and residual transfer mechanisms (probate). With the growth of DC plan assets, living trusts are becoming an important estate-planning mechanism. Key life-cycle estate-planning insights are: (1) the utility provided by "nudges" to trigger appropriate updates to DC-plan related estate-planning documents; (2) when defaults and customized advice are appropriate; and (3) the reduction in estate-planning risk from annuitizing DC assets. The framework also highlights the key estate planning differences between employer-sponsored DC plans and IRAs.

Introduction

The growth of defined contribution (DC) retirement plans has brought new estate-planning challenges for participants. DC plans involve the accumulation of assets in the name of the participant, and then the requirement to begin liquidating those assets upon reaching age 70.5. DC plans require knowledge of asset-transfer mechanisms, such as the importance of making and updating beneficiary designations.

Participants often forego even naming a beneficiary for their defined contribution (DC) plan.[1] They may not even realize how the beneficiary designation works, or believe beneficiaries are unnecessary since they are unlikely to die. While younger participants' DC asset balances might be relatively modest, the failure to engage early in the life cycle has risks. For example, the inaction may persist, leading to inertia and status-quo bias.[2]

While estate-planning challenges vary throughout the life cycle, they tend to become more complicated for the cohort of participants in mid-life and those in or nearing retirement. One reason is the presence of children and/or parents who are in extreme old age. In the retirement phase, DC plan participants can face extreme inertia due to cognitive decline, or if changes significantly favor some beneficiaries/heirs at the expense of others.

Also, the fundamental challenges associated with clarity about participant income needs in retirement spill over into estate planning as they relate to the assessment about the amount of money left to satisfy gift or bequest motives. Multigenerational estate planning in a DC plan context thus adds complexity to the financial and emotional decisions associated with retirement (Yakoboski, 2011; Ciccotello, Pollock, and Yakoboski, 2011).

Uncertain life expectancy also complicates DC estate planning since liquidation of the plan assets cannot normally begin before age 59.5 (without tax penalty) and must begin by age 70.5. The distribution of life expectancy reflects the estate-planning-related challenges present in the "tails." The "left tail" of the distribution is dying "too soon." Dying before retirement without proper estate plans, for example, may put DC plans assets through costly administration and/or into the hands of those unprepared for the task of managing the funds. Similarly, delaying retirement past the "normal" age greatly increases the odds of passing away with assets (Bajtelsmit et al., 2013).

The "right tail" of the distribution means living "too long." Beyond the risk of outliving DC-plan assets, extreme longevity is attracting growing policy attention for several reasons. For example, if advancing age leads to cognitive decline, the ability to make sound financial- and estate-planning decisions during the disbursement phase may decline. Moreover, as the Securities and Exchange Commission (SEC) Office of the Investor Advocate has warned, the attractive target that a lump-sum DC plan balance presents increases the risks of elder fraud as participants age (Deane, 2018).

Given the novelty and magnitude of the challenges involved with estate planning in the era of DC plans, the goal here is to provide participants and plan sponsors with a life cycle estate-planning framework. The framework relies on choice architecture foundations developed by Thaler and Sunstein (2008), as well as related literature on DC plan choice architecture and engagement by Ciccotello (2013) and Ciccotello and Yakoboski (2014).

The development of an estate-planning-choice architecture promotes a better understanding of asset transfer mechanisms and the outcomes of failing to act. Choice architecture can thus help workers make better decisions and meet both their retirement income needs as well as any gift or bequest motives. The estate-planning life cycle is relevant for all DC plan participants, not just those in or near retirement. Providing a life cycle framework promotes a participant best practice of

[1] As an example, recent data from a university 403(b) plan showed that well over 1,000 participants had made no beneficiary designation.

[2] Inertia is common in personal financial matters. For example, Jones (2012) finds that inertia explains the tendency for over-withholding of income tax.

proactively reviewing estate-planning choices from an established baseline, making necessary updates more reasoned and timely.

The remaining sections proceed as follows: (1) asset-transfer foundations; (2) life cycle estate-planning stages; (3) nudges and customized advice in the estate-planning life cycle; (4) estate-planning considerations with IRAs; and (5) summary.

Asset-transfer foundations

Consider a household where an employed individual pays into Social Security. Strong default provisions protect a spouse of a covered worker in this social pension, with a joint-spouse survivorship annuity as the default payout. The worker (or couple) has income for life (or their joint lives), and the value of the pension at death (or upon the second death) is zero. Under Social Security, the worker (couple) faces neither investment nor longevity risk.

In contrast, a participant in an employer-sponsored DC plan accumulates assets in an account he or she owns. At age 59.5, a participant may begin to take withdrawals without tax penalty. Upon reaching age 70.5, the participant must begin to take distributions. What happens to the assets if a participant dies before taking any distributions?[3] If married, the DC assets will pass to the spouse, whether the participant has named the spouse as a beneficiary or not.[4] If the participant is not married, the DC assets will pass to the primary beneficiary designated by the participant or the designated secondary (contingent) beneficiary if the primary beneficiary is deceased. In the event that an unmarried participant fails to name a beneficiary, the DC assets will pass through the probate process, as discussed in more detail later.[5]

Assets that pass by beneficiary designation irrespective of marital status are individual retirement accounts (IRAs) and life insurance. It is critical to realize that while a spouse has strong protections in employer-sponsored DC plans, they do **not** in an IRA or life insurance. In the latter cases, the vendor is contractually obligated to send the money to whomever the owner has named as beneficiary, even if it is an ex-spouse.

Outside of retirement plans, the residence is often the largest asset for most households. A deed naming both spouses and specifying a joint-tenancy with right of survivorship (JTWROS) means that the home passes directly to the survivor upon the death of the first spouse. A key estate-planning decision for the surviving spouse in this case is whether to have the deed be in his or her single name, change the deed to add names (typically a child or children), or transfer the house in a living trust.[6] The first strategy would involve the house going through probate at the death of the surviving spouse. The second and third strategies avoid probate, but each comes with its own set of costs and risks. For example, adding another person to the deed opens the house up to claims from that person's creditors. Establishing a living trust involves added costs for trust drafting and administration, as well as additional income tax complexity.

For most households, savings outside of retirement plans consists mainly of bank accounts, certificates of deposit, cash value life insurance, and/or securities held in ordinary brokerage accounts. Each of these assets requires estate-planning attention, either with regard to having a joint owner, a transfer on death provision, or a plan to have the assets transferred to a trust, or to pass through probate. However, none of these assets requires mandatory distributions upon reaching a certain age as DC plan assets do.

[3] For a thirty-year old participant, the odds of passing away by age 60 are about one in six. See https://www.ssa.gov/oact/STATS/table4c6.html

[4] The vast majority of employer-sponsored DC plans strongly protect spousal rights under either Federal or state law. The Retirement Equity Act (REA) of 1984 requires that a spouse waive his/her survival benefits in writing.

[5] Probate is a public process by which the assets of decedent are distributed either according to a valid Will ("testate") or by the state laws of "intestacy" if there is not a valid Will.

[6] A living trust is an asset transfer mechanism established while the "grantor" of the trust is alive. Other parties to the trust include the beneficiaries and the trustee, who manages the trust assets. The grantor and the trustee may be the same person, but this is not required. The trustee may be an individual or an institution, or in the case of co-trustees one or more of either.

Having provided an outline of the typical household assets, this section now outlines a framework for asset-transfer mechanisms. Figure 1 shows the four channels to pass assets and the typical types of assets that pass through each channel. The distinction between *non-probate* and *probate* channels is critical. On Figure 1, **start** from the left and ask if the assets pass through *any one of the three* non-probate channels. If the answer is no, then the probate channel will pass the asset. The probate channel is the *residuary mechanism* in the event that none of the non-probate channels work.

Figure 1 shows the types of assets that pass through each of the channels and how they pass. The first channel, *By Contract*, will be important for DC-plan assets, including employer-sponsored and individual plans such as IRAs, as well as for life insurance. The key point is that assets passing *By Contract* contain a **beneficiary** agreement between the owner of the asset and the asset vendor. The owner can (but is not required to) designate a primary beneficiary and a secondary (or contingent) beneficiary. Upon the owner's death, the vendor complies with the beneficiary contract and the primary beneficiary becomes the owner of the asset. If the primary beneficiary has predeceased, then the secondary beneficiary becomes the owner.

If a participant in an employer-sponsored DC plan is married and fails to name his/her spouse as a beneficiary, the spouse will receive the DC assets as a matter of law. The only exception is when the spouse waives survivorship rights in writing.

If an unmarried DC plan participant has not designated a beneficiary, the named individual beneficiaries have predeceased, or the trust designated as a beneficiary is not valid, then the *By Contract* channel does not operate. As neither of the other two non-probate channels are thus operative on the DC plan assets, they will pass through probate, the residuary channel. If the unmarried DC plan participant has named his or her estate as the beneficiary, the assets will also pass through the probate process.

The second non-probate channel is *By Law*. The *By Law* channel operates with respect to a spouse's survivorship interests, as discussed above. The *By Law* channel also operates on certain financial accounts. The most common is the joint (bank) or brokerage account that contains a right of survivorship.

The *By Law* channel also serves to transfer property through deeds and titles. Deeds are commonly associated with real property, such as a residence, while titles are associated with personal property, such as autos. A deed specifying a joint tenancy with right of survivorship (JTWROS) interest between spouses passes the real property to the survivor upon the death of one of the joint owners. A tenancy by the entireties operates in the same manner, but this type of ownership is limited to spouses. No specific type of relationship is required for JTWROS. If a deed does not specify survivorship or directly specifies a tenancy in common, then the interest of the deceased does not pass to the survivors via the deed. The proportion interest in the asset must pass through another channel. Normally, that channel is probate.

The third non-probate channel is *By Living Trust*. A living trust is an instrument established by an individual while still alive to manage assets on behalf of beneficiaries. The other party to the trust is the trustee, who performs the asset management role. The trustee can be an individual (including the grantor, if alive) or institution (such as a bank), or joint between individuals and/or institution (co-trustees). Trusts are very customizable arrangements and have the added benefit of being private, unlike the probate process.

As DC-plan assets have grown, trusts have become a more important tool to manage any assets remaining after the plan participant owner has passed away. As mentioned above, a participant may name a trust as a beneficiary. Upon her death, the assets would pass *By Contract* to the named living trust. The trust specifies the beneficiaries, the trustee, and provisions for the disposition of the asset.

When a participant names a trust as a beneficiary, two of the non-probate channels operate. The *By Contract* channel passes the assets to a trust, and the *By Trust* channel transfers the assets per the trust provisions.

When naming a trust as a beneficiary on a DC plan, careful drafting is necessary for the trust to preserve income tax benefits for its designated beneficiaries.

A properly drafted "retirement trust" must be valid under state law and be irrevocable at the death of the grantor. It is also important to preserve income tax benefits by designing the trust to "look through" to the individual beneficiaries.[7] This is necessary to preserve the favorable income tax benefits associated with having individual beneficiaries, who need only take minimum required distributions over their life expectancy. Younger beneficiaries are then able to spread the distributions out over a long period. Having multiple beneficiaries in the trust adds complexity to ensure that the life expectancy of the oldest beneficiary does not apply to the younger beneficiaries.

The final channel is *By Probate*. This channel operates on any asset not passing by any of the other three channels. The *By Probate* channel is unlike the other three channels. It is a public process done through a state court. Probate can be very slow and costly. Disposition of assets can take over a year and consume five percent or more of the probate estate. Some states have provisions for the accelerated administration of smaller estates, but even these dispositions can take a number of months. Probate can also be very contentious if the deceased has not been clear about his or her wishes, or if the process triggers disputed claims from creditors of the deceased.

Within the *By Probate* process, the key distinction is whether the deceased had a valid Will or not. The former is called *testate*, and the latter *intestate*. In the former case, a testator wishes to determine the disposition of the assets. For example, a Will can establish a trust inside for the purpose of managing assets and making distributions to heirs. This is a testamentary trust, as opposed to the living trust discussed above. A DC plan participant can name a testamentary trust as a beneficiary in her plan, assuming they have a valid Will that contains that trust. In this case, the DC assets pass through the *By Probate* channel. Using a Will to pass DC assets is generally the least income-tax-favorable approach, as the disbursement of the assets must typically occur within five years.

In the case where there is no valid Will, the state will use its laws of intestacy to determine who receives the assets. Intestacy laws differ across states, but are arguably a good faith attempt by states to distribute assets when the deceased has provided no guidance for the process. Intestacy laws favor spouses when the deceased is married. If a single person has children, those children have priority. For single decedents with no children, the order of distribution priority is usually parents first, and siblings second, followed by other family members, such as grandparents.

So how do DC-plan assets end up passing through probate? The answer is that an unmarried plan participant did not make a beneficiary designation, or the named beneficiaries had predeceased, or that participant had named an invalid or non-existent trust as a beneficiary, or that participant actually named his or her estate or a testamentary trust as the beneficiary.

An unmarried participant may believe that his or her Will or the testamentary trust within it determines the provision of the DC-plan assets. That would be the case in the absence of any beneficiary designations. Suppose the participant updates her Will to reflect her new wishes for DC-proceeds but fails to update the beneficiaries to reflect these same wishes. In this case, the beneficiary designations take precedence and the Will updates are irrelevant.

Employer-sponsored DC plans have strong protection for spouses, so there is a default cure for the failure to name the spouse as a beneficiary. Getting divorced and remarried, however, can lead to some challenging estate-planning decisions regarding the current and former spouse and children.

To summarize disposition of DC assets upon death of participant, return to Figure 1 and proceed from left to right. First, a valid beneficiary designation will pass the

[7] A retirement trust design should ensure that the Internal Revenue Service can "look through" the trust (as the direct owner once the participant has died) to the individual trust beneficiaries.

DC assets *By Contract*. If a participant is married, and fails to name his/her spouse as beneficiary, the DC assets will pass *By Law* to the spouse. If a participant names a valid living trust as a beneficiary, the DC plan assets will pass *By Living Trust*. If none of the three Non-Probate Estate channels are operative, then the DC assets pass through the Probate Estate either according to a valid Will or via intestacy laws of the decedent's state of residency.

Life cycle estate-planning stages

This section takes a representative DC-plan participant through the life cycle of estate planning. The framework builds on the classic foundations of Ando and Modigliani's (1963) life-cycle model, which portrays the conversion of human capital into financial capital (accumulation and consolidation phases) and the subsequent conversion of financial capital into income that replaces human capital in the retirement (disbursement) phase. Figure 2 provides a graphical depiction of the life cycle, with the accumulation, consolidation, and disbursement phases labeled. In the estate-planning context, the consolidation period reflects a complex time in mid-life with increased likelihood of permanent shocks to human capital, significant changes in health, as well as shocks in multigenerational family issues (e.g., caring for children, as well as aging parents). The term "consolidation" refers to the need to organize and clarify both financial and estate-planning goals during this time.

Figure 2 reflects annuitization of some portion of the DC-plan asset balance at the beginning of the retirement phase. The decision about whether, when, and how much of the asset balance to annuitize will vary across the participant population based on a number of factors. About 68 percent of all 403(b) plans have in-plan annuities compared to six percent of 401(k) plans. In the absence of in-plan annuities, the participant must roll over plan assets to an IRA in order to annuitize.[8]

Assume that our representative participant enters the DC-plan life cycle as a single person with no children, and then proceeds through marriage, having children, and then the loss of spouse. These four participant life stages (single-no children (S-NC); married-no children (M-NC); married-children (M-C); and single-children (S-C) span two key dimensions in DC-plan estate planning, namely marital status and offspring. The framework progresses through the estate-planning life cycle in this order, but the ordering certainly varies across the population of DC-plan participants. Participants can enter DC plans in any of the four life stages, and move through the stages in either direction. The group of divorced and remarried participants also may have idiosyncratic issues.

Figure 3 provides a life-cycle event table with associated estate-planning events, default choices, and customized advice triggers. Based on the life-cycle progression outlined in the previous paragraph, the initial stage is the entry into a DC plan by a new (and often somewhat young) S-NC participant. Figure 3 shows the actions and defaults for this event. The nudges are to fill out the beneficiary form and use the standard defaults that parallel most state intestacy statutes for when a single person dies with no offspring – namely, parent(s) and siblings as primary and secondary beneficiaries, respectively. Similarly, upon the marriage of the participant and the move to M-NC status, an update to spouse as primary beneficiary and parents/siblings as secondary is the default.

As mentioned above, in an employer-sponsored DC plan a spouse typically has a 100% interest in death benefits based on Federal or state law. Nevertheless, nudging younger participants into actively making beneficiary designations is a valuable exercise in building *engagement* with the DC plan. The act leads the younger participant to consider what would happen to the saving in the event of his or her death.

[8] The article will discuss the estate planning benefits of annuitizing assets as well as the estate-planning differences between employer-sponsored DC plans and IRAs in the coming sections.

Creating this proactive mindset is a valuable nudge given the common occurrence of a young beneficiary rolling over DC plan assets to an IRA upon job change. In an IRA, the beneficiary designation determines who receives the assets upon owner's death, regardless of whether the IRA owner is married. Thus, the legal default in an employer-sponsored plan does not operate. Failing to name a spouse as an IRA beneficiary can thus have significant consequences, such as having the IRA assets pass through probate (in the case of no named beneficiary) or pass to someone other than the spouse (in the case where someone other than the spouse is the named beneficiary).

The third stage in the life cycle is the birth of a child and the move to M-C. In this stage, the key nudge is to write or update a Will to include guardianship provisions for the child in the event of the death of both parents. The default beneficiary change is to make the chosen guardian(s) the secondary beneficiary after the participant's spouse. The default logic is that the couple is young, the DC-plan balance is relatively modest, and the funds in it would naturally go toward those whom the couple trust to have the guardianship of their young child. This would often be parents or siblings, in line with the earlier stage defaults.

The Will is the document that specifies wishes for guardian of children. Sadly, approximately 50% of adults in the United States have no Will. Younger adults may not feel an urgency. As participants move into the M-C phase, they often become quite busy managing children and jobs. Estate-planning documents are often not a priority. Inertia then rules the day until a shock to the subjective assessment of their mortality occurs. Palmer, Bhargava, and Hong (2006) show that one of the strongest factors associated with an individual's decision to write a will in *late middle age* is the death or severe illness of a family member or close friend. With the move to the M-C stage of the life cycle, a strong nudge is necessary to get parents to act.

The first three stages illustrate how DC-estate-planning-nudge patterns are similar to that studied by Ciccotello and Yakoboski (2014) in the context of auto-enrollment and asset allocation. For younger participants, nudges and defaults can work well and can promote engagement. As participant age increases, however, heterogeneity and complexity also increase, and defaults become less effective.

The pivot from default to customized advice begins in the fourth life-cycle estate-planning stage. In this stage, children reach the age of "voice." When children reach the age of 12-14, they begin to have a voice about who would care for them in the event both parents died. In most states, judges will consider inputs from a child reaching age 12-14 regarding custody. This pivot point is especially important when parents have neglected to clarify guardianship wishes in their Will. Since nearly 50% of all adults have no Will, this occurrence is all too common.

By this point, the DC plan asset value could have also increased significantly. Together, the increasing value of DC plan assets and the growing independence of children add complexity to estate planning. Often, there is no clear default solution. The options reflect the relative concerns for control over the assets and the desire for simpler, lower-cost administration.

What are the options at this stage? First, the spouse remains in the primary beneficiary position. The challenge is making the secondary beneficiary selection. If the participant and spouse both pass away (from an accident, for example), the primary beneficiary to the account is now gone. Continuing with the child's guardians as the secondary beneficiaries can be appropriate until assets grow to a certain point. As assets grow, however, the need for skilled asset management also grows. Naming a living trust as the secondary beneficiary can facilitate both professional management and customized distributions. For example, the trust can specify the use of assets for funding education and other expenses for the child. Guardians would be responsible of using assets as specified.

Once children reach age 21 (adulthood in every state) in stage five of Figure 3, they can be named as

beneficiaries.[9] Naming adult children as secondary beneficiaries (or primary beneficiaries upon the death of a spouse) is a simple and low-administrative cost strategy. It avoids probate and the costs of establishing and administering a living trust. This is also an income-tax-efficient strategy, as the child beneficiaries must make minimum required distributions over their life expectancy. With a longer life expectancy of a younger person, the tax deferral under current law can extend for many decades. Participants should be aware, of recent policy trends, however, such as the SECURE Act, which could limit the ability for some non-spouse beneficiaries to stretch out distributions.[10]

Naming young adult children as beneficiaries, however, has the challenges associated with control over the assets. As a direct beneficiary, a child can do whatever she or he wants with the proceeds. If a DC-plan asset balance is large, the risks associated with control increase. Beyond spendthrift risks, the child may not have the aptitude and ability to manage the funds until they are older, or may never have the aptitude and ability. Children can also have differing or special needs that require a customized estate plan.

Naming a living trust to hold the DC-plan assets can allow the tax benefits to accrue while providing the grantor (the DC-plan participant) the ability to dictate the timing and use of proceeds. A qualified trustee can administer and account as well as provide investment expertise. As mentioned earlier, great care in drafting the trust is necessary to preserve the favorable tax treatment. While customized control is an upside of trusts, costs are a downside. A trust can often cost thousands of dollars to establish, plus the ongoing costs of administration over time. Trusts will also be less tax efficient than direct beneficiaries, especially in the event that distributions remain inside the trust and are subject to trusts' higher marginal tax rates. Trusts also require careful communication with the DC-plan vendor to ensure the beneficiary documentation is complete.

Nudges and customized advice in the estate-planning life cycle

Accumulation phase

This section builds on Sunstein and Thaler (2008), who examine the power of nudges and defaults on behavior. In that spirit, Figure 4 shows a set of statements and questions for inclusion in an annual benefits renewal document. One of the goals of these nudges is to increase the participation by participants in the earlier stages of the estate-planning life cycle.

Consistent with Ciccotello and Yakoboski's (2014) work on building younger participant ("Gen Y") engagement in DC plans, the statements describe a specific set of consequences for *failing t*o act or update beneficiary designations or Wills. While the nudges are appropriate for participants of all ages, the design targets Gen Y specifically. Bombarded with social-media communications, Gen Y participants filter extensively and tend toward the default assumption that no communication is critical.

Figure 4 relies on a sequence of nudges. First, a participant must go through benefits selection when starting a job as well as during annual renewal each year. It is a hassle but most participants know it would be a much larger hassle later to ignore renewal. Second, the text is short and clearly lays out the *consequences* of ignoring beneficiary designations. A young, single participant can avoid expensive and time-consuming probate by simply listing his or her parent(s) and any siblings as primary and secondary beneficiaries, respectively. Parents would be the default recipients under the intestacy provisions in most states anyway. Third, the electronic link to the beneficiary form is *adjacent* to the consequences statement. It does not require the participant to leave and go anywhere else. Filling out the form or updating takes very little time and requires no additional communications.

[9] Naming children younger than 18-21 (depending on the state) as beneficiaries will also bring the requirement for a court-appointed guardian over the DC plan assets.

[10] On May 23, 2019, the House of Representatives voted 417-3 in favor of the Setting Every Community Up for Retirement (SECURE) Act. Among other changes, the SECURE Act could require non-spouse beneficiaries take distributions over periods that are much shorter than their life expectancy.

The other key nudge for younger participants is more challenging. Having a child demands writing a Will. The nudge is blunt: A Will is the only document where a parent can specify a guardian for their child. However, drafting a Will requires follow-up that is not as simple as hitting an adjacent link to make a beneficiary designation. If the sponsor provides legal services as a part of benefits, perhaps a link to a short list of referred estate-planning attorneys can be a useful nudge. The other issue is to harmonize guardians and DC-plan beneficiaries. While the choice of guardian is not amenable to a default rule, participants often choose family, either their parents or siblings. As such, the guardian and DC beneficiary choice alignment may not reflect a beneficiary change from the period before children.

Consolidation phase

The Consolidation Phase marks the emergence of multigenerational issues, increased shocks to human capital and health, and larger DC asset balances. With the rise of DC plans as a retirement funding vehicle, it is growingly likely that a DC-plan participant will face the ramifications of being both a recipient of assets (e.g., from parents) as well as an owner of a DC plan facing estate-planning decisions. Alternatively, financially supporting aging parents may strain participants in the Consolidation Phase.

In Consolidation, estate planning *complexity* increases and there is a pivot from estate-planning defaults to customized advice, as seen in Figure 3. One danger of relying on defaults is that it conditions the participant to be passive. In estate planning, passivity is increasingly risky as a participant ages. Often a trigger to act is the result of dealing with issues that arise from a parent's lack of estate planning, or the death or severe disability of a family member or friend who is in middle age (Palmer, Bhargava, and Hong (2006). From a policy standpoint, having a nudge toward customized estate-planning advice is thus valuable as it focuses the participant on the need to customize her/his plan before the severe shock to health becomes their own.

Customized estate-planning advice often begins with an effort to organize (consolidate) accounts in order to get a complete picture of a participant's financial situation. During a time in life that is "characterized by a complex interplay of multiple roles" (Lachman, 2004), simplification is often necessary.[11] In the DC context, for example, "rolling over" plans from prior employers, or smaller balance plans, into the current employer's plan (or an IRA) is a useful first step. Due to the differences in employer plan rules, possible changes in annuity contracts, and other idiosyncratic DC plan issues, seeking advice is prudent.

In Consolidation, a key estate-planning decision involves how to treat children of "voice" along with adult children. The decision tree in Figure 5 illustrates the choices surrounding children as secondary beneficiaries that arises when children gain a voice about custody. Figure 5 illustrates the tension between control and simplicity. Naming guardians (often parents or siblings) as beneficiaries simplifies administration, but growing DC-asset balances places stress on asset management skill and the need for providing clarity about proceed use. Moreover, as children reach the age of voice (12-14) about custody, there may be a severing of the link between named beneficiaries and caregivers. Thus, a living trust may be an appropriate approach.

A child over 21 capable (with advice) of managing DC-plan assets tips the operative path toward naming that child as a beneficiary (secondary, if married). Other approaches, such as naming a trust as beneficiary, derive from a desire for management of the assets and/or control over the timing of receipt by beneficiaries.

Disbursal phase

Similar to the Consolidation Phase, customized advice dominates defaults in the choice architecture during the Distribution Phase (Ciccotello and Yakoboski, 2014). After retirement, some of the complexity from Consolidation may have abated, as the participants' parents may now be deceased and children may have successfully launched. But multigenerational issues

[11] Also see Infurna (2019) for a discussion of mid-life issues.

from children and grandchildren often remain, as do the growing odds of health problems. In addition, the need to re-evaluate residences often arises.

As to the DC plan, the primary challenge is for the participant to assess income needs in the face of uncertain longevity and investment risk. Since DC plans have minimum required distributions that increase with age, setting aside a specific sum for a gift or bequest using DC assets is problematic.

To illustrate the challenge, Figure 1 divides the accumulated DC-plan assets into two sections in the Disbursal Phase. The top section is the DC sum to annuitize, targeting to replace a sufficient percentage of preretirement when combined with Social Security and any other lifetime income streams.[12] The second section is a buffer, which is the amount in assets left to buffer shocks to consumption needs, additional annuitizing, and/or gifts or bequests for beneficiaries or heirs. This framework for annuitizing in a life-cycle model with uncertain lifetimes traces back to the foundational research of Yaari (1965).

Converting DC assets to lifetime payout streams greatly simplifies estate planning by removing longevity risk and reducing elder fraud risk. Annuity payouts provide participants with guaranteed income for their lifetime, which may permit them to make gifts to family members or charity while they are alive. In contrast, non-retirement plan assets may be more appropriate for lump-sum bequests as they are free from requirements to liquidate the balance over time.

As mentioned earlier, recent policy trends would tighten the income-tax-related benefits from passing large amounts of DC assets to non-spouse beneficiaries. If these changes become law as proposed, non-spouse beneficiaries could have to liquidate all the assets in the DC account over a shorter period (e.g., ten years) as opposed to their life expectancy. This policy adds complications for those with large DC-plan balances, as forced liquidations may move children beneficiaries into higher tax brackets. Recent research on the value of diversifying DC plan assets into pretax and Roth contributions will become even more important if these tax changes become law.[13]

Estate-planning considerations with IRAs

Chen and Munnell (2017) find that IRAs hold nearly half of all private retirement assets. Nearly 90 percent of the new assets coming into IRAs are rollovers from employer-sponsored plans. The decision to roll over an employer plan to an IRA involves a number of factors including investment options, costs, and access to advice. From an estate-planning perspective, rolling over an employer-sponsored DC plan to an IRA adds flexibility but demands added attention.

An IRA owner can name anyone they want as a beneficiary, and there is no default protection for spouses as there is in employer-sponsored DC plans. An IRA owner needs to be especially careful with beneficiary designations. In particular, recognizing that the IRA passes *By Contract*, and that beneficiary choices will trump Will provisions is critical.

Summary

The combined complexity of asset transfer law, control and tax issues, retirement income needs, and gift/bequest motives is daunting for many participants in DC plans. In the spirit of Sunstein and Thaler (2008), this article develops a DC-plan-estate-planning choice architecture that includes nudges to estate-planning defaults as well as to customized advice.

The focus is on how these estate-planning nudges work over the participant life cycle. For younger participants in the Accumulation Phase, default nudges can work well due to the lower complexity of their financial situation.

[12] The Replacement Ratio Study, a collaborative effort between Aon Consulting and Georgia State University, indicates that roughly 80 percent of preretirement income is necessary to keep the retiree in the same standard of living post retirement. See https://www.aon.com/about-aon/intellectual-capital/attachments/human-capital-consulting/RRStudy070308.pdf

[13] See the Samuelson Award winning paper Brown, Ceterburg, and O'Doherty (2017) for an excellent example.

The goal is to build estate-planning engagement in younger participants that will serve them well as their lives become more complex (Ciccotello and Yakoboski, 2014). The key example is to fill out a beneficiary designation form, and review it each year for appropriate updating.

As participants enter mid-life, and issues with children and aging parents combine with shocks to health and human capital, estate-planning complexity increases and default nudges lose effectiveness. In this Consolidation Phase of the estate planning life cycle, customized advice is often necessary. One of the key decisions involves the tradeoff between control of assets by beneficiaries and simplicity of administration. The article offers a decision tree that tips toward using a living trust as a beneficiary when concerns for control over assets dominate the desire for lower-cost administration.

When participants enter the Disbursal phase of the life cycle, complexity turns to the assessment of retirement income needs and any gift/bequest motives. Customized advice remains the dominant mechanism, with the realization that annuitizing at least part of the accumulated asset balance will reduce not only investment and longevity risk, but also the risk of elder fraud.

A practical goal of the article is to assist participants in and sponsors of DC retirement plans by offering nudges that can be embedded in annual benefits renewal packages. Flipping the default from inaction to a proactive annual review of beneficiary designations builds engagement and awareness of asset transfer mechanisms that form a baseline for making future decisions. This will be valuable as complexity increases over the life cycle. In particular, if the participant chooses to roll over the employer-sponsored plan assets to an IRA, she or he will leave the strong survivor protections for spouses behind and enter a much more customizable estate-planning domain that also requires more attention and sophistication.

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Figure 1. Asset transfer mechanisms

Non-Probate Estate			Probate Estate
By Contract	**By Law**	**By Trust**	**By Probate**
Examples: – 401k/403b – IRA – Life Insurance	Examples: – Spousal Interest in 401k/403b – Residence – Auto – Joint Account	Examples: – Real and Personal Property – 401k/403b – IRA	Examples: – Real and Personal Property – Financial Assets
			VIA – Will (Testate) – No Will (Intestate)
TO: Beneficiaries	TO: Survivor	TO: Beneficiaries	TO: Heirs/Legatees

Figure 2. Life cycle model of DC estate planning

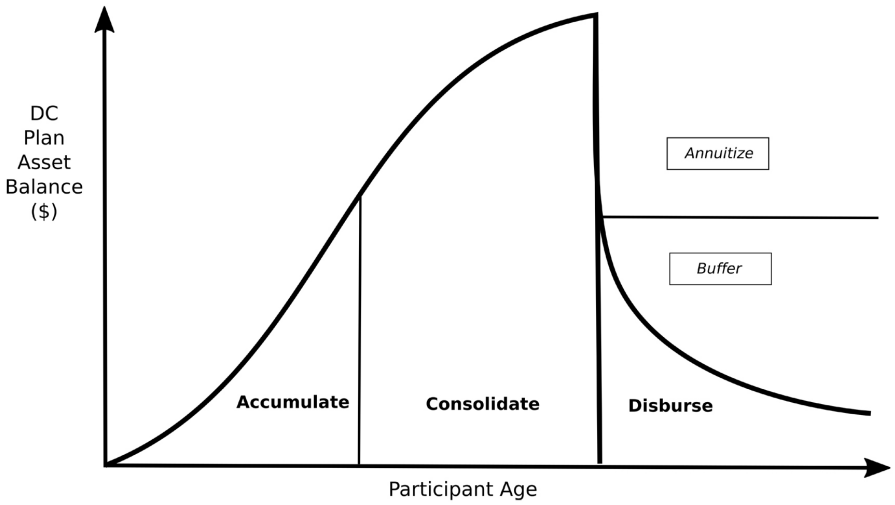


Figure 3. Key events in DC life cycle estate planning

Event	Stage	Actions	Default/Customized Advice*
Enter DC Plan	S-NC	Fill out Beneficiary form	Primary Beneficiary: Parents
			Secondary Beneficiary: Siblings
Marriage	M-NC	Update Beneficiary form in DC plan and any IRAs	Primary Beneficiary: Spouse
			Secondary Beneficiary: Parents
Birth of Child	M-C	Update Beneficiary form in DC plan and any IRAs	Primary Beneficiary: Spouse
		Write/Update Will	Secondary Beneficiary: Guardians
Child ages and account balance reaches critical mass	M-C	Update Beneficiary form	Primary Beneficiary: Spouse
		Update Will	Secondary Beneficiary: Advice on use of living trust
Child Attains	M-C	Update Beneficiary form	Primary B: Spouse
Age 21		Update Will	Secondary B: Advice on use of living trust
Change in Marital Status	S-C	Update Beneficiary form	Primary B: Advice*
		Update Will	Secondary B: Advice*
Retirement	Any	Update Beneficiary form	Primary B: Advice*
		Update Will	Secondary B: Advice*

Figure 4. Annual benefits renewal estate planning nudge questions

If you pass away and have not named a primary and secondary beneficiary, your plan assets are subject to time-consuming and costly administration in probate. Probate can last well over a year and cost thousands of dollars. And, you have **no say** in who gets the money.

Have your life circumstances changed in the past year? If any of the following have occurred, please review your beneficiary designations to determine if they are up-to-date: change in marital status, change in immediate family status (birth, death, children now of age 12 or greater), significant health change; change in work status; death of a beneficiary.

Please use this link to access your current retirement plan beneficiary choices.

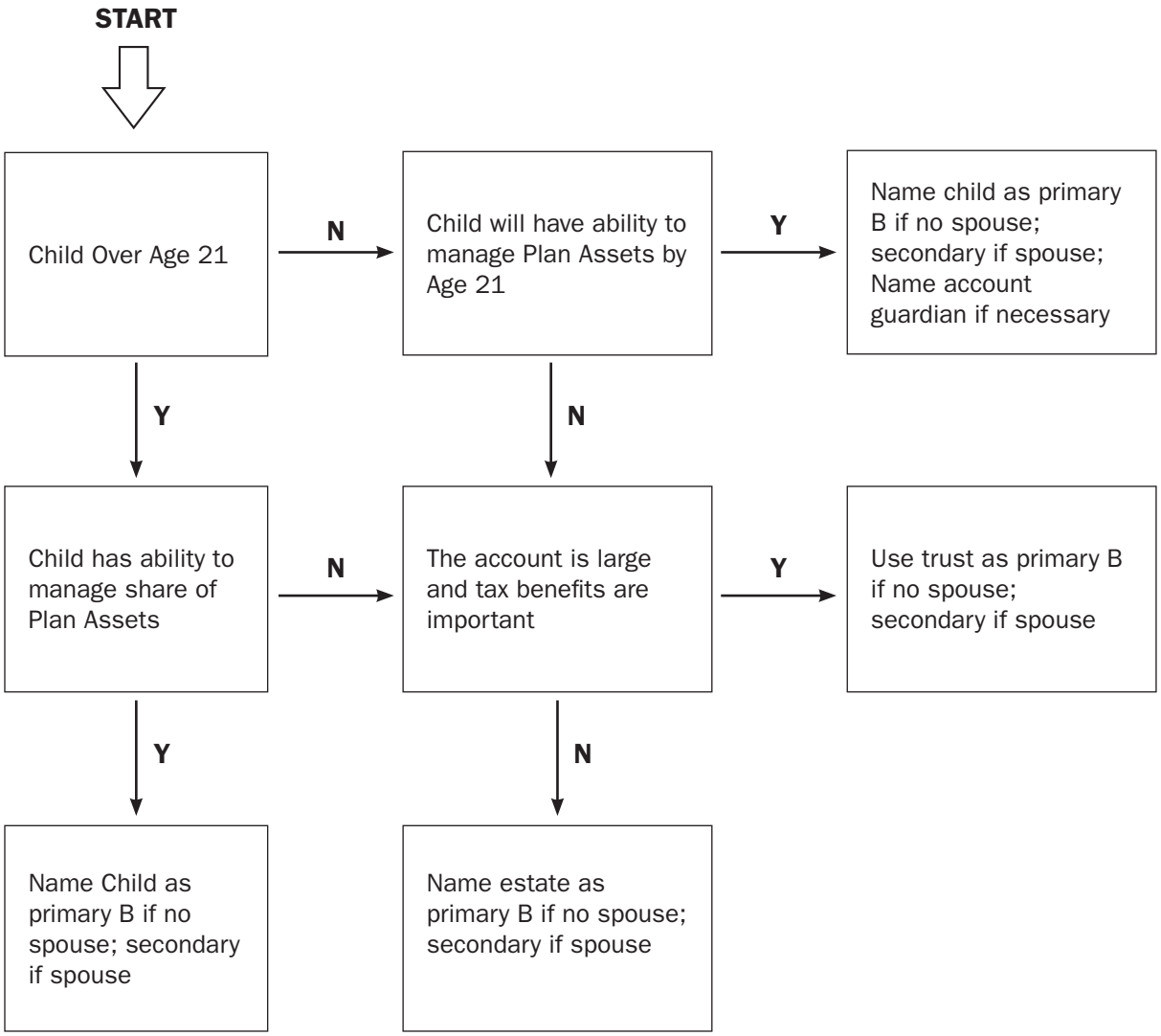
Please use this link to access a summary table with beneficiary guidelines and suggestions for when to seek customized advice.

You should make analogous beneficiary updates in any IRAs that you own.

If you have dependent children and do not have a Will with guardians specified, a Court will decide whom gets custody of your child(ren) upon your Death (and the death of your spouse, if you have one). If you have a Will with **outdated** child custody provisions, those **outdated** provisions will be your wishes in Court.

Please seek the advice necessary to draft or update your Will with custody provisions for your children.

Figure 5. Consolidation phase decision tree



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Conrad Ciccotello is the Director/Professor of the Reiman School of Finance at the University of Denver. His primary research interests are in law and finance, financial intermediation, and financial services. He has over 60 publications, including articles in the *Journal of Financial Economics*, *Management Science*, the *Journal of Financial and Quantitative Analysis*, and the *Journal of Law and Economics*.

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