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# The Target Benefit Plan Spectrum: Implications for Plan Design and Regulation

By Barbara Sanders

In 2015, the Canadian Institute of Actuaries established the Task Force on Target Benefit Plans (the Task Force), which I chaired. The task force's report introduced the idea of the target benefit plan (TBP) spectrum and described some examples of plans at various points along it. The report also noted the near-exclusive focus that most stakeholders—especially pension policymakers, regulators and representatives of various employee and retiree groups—give to the defined benefit (DB) end of this spectrum.

This paper builds on the Canadian Institute of Actuaries task force's report, describing the impact that considering the full spectrum of target benefit plan designs could have on a number of issues of current interest, including helping stakeholders understand the fundamental nature of TBPs, creating a consistent regulatory framework for risk-sharing plans, and finding solutions to the DC decumulation challenge.

## Introduction

TBPs have emerged as an alternative to traditional DB and defined contribution (DC) plans in Canada during the past decade. The goal of these plans is to provide lifetime retirement income at some targeted level; however, this income is not guaranteed, and actual benefits may differ from the target. Contributions to the plan are either fixed or fluctuate within some predetermined range. Plan assets are commingled, and individual accounts are not maintained.

Most target benefit plan designs in Canada today can be characterized as DB-like in their benefit ambitions, attempting to produce a stable income stream for retirees, while maintaining the cost stability associated with DC arrangements. However, the broader target benefit plan family encompasses a much wider spectrum of potential designs, including some with significantly less stable income patterns. The Task Force described this spectrum in some detail in its report.<sup>1</sup>

The next three sections review the concept of the TBP spectrum, describe the benefits of viewing the entire spectrum instead of just a small subset of it, and discuss what this may mean for the future of pension design and regulation.

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<sup>1</sup> *Report of the Task Force on Target Benefit Plans*. June 2015. Canadian Institute of Actuaries. <http://www.cia-ica.ca/docs/default-source/2015/215043e.pdf>.

## Describing the Spectrum

To determine the position of a TBP along the spectrum, consider both the security of the retirement income stream (that is, the likelihood that actual benefits payable from the plan meet or exceed the target over time) and the stability of benefits (that is, how much they fluctuate from year to year).<sup>2</sup> The DB-like end of the spectrum is associated with high levels of security and stability; the DC-like end is associated with lower levels of one or both.

In theory, a relatively high level of security and stability is achievable by treating the target benefit as guaranteed, fixing contributions accordingly, and employing a liability-driven investment strategy. However, this is considered unaffordable in most practical situations today, especially if the target is indexed to inflation after retirement. In practice, plans tend to deviate from a strict liability-driven investment policy. This leads to asset risk, which is then combined with demographic and wage risks. The resulting loss of benefit stability and/or security can be mitigated by various contribution and benefit policies, which are described in the Task Force's report. By offsetting or smoothing out the impact of gains and losses, these contribution and benefit policies effectively determine how the total risk is allocated between plan members both within and across generations.

This is a critical point: In a TBP, stability and security can be improved via risk sharing between members<sup>3</sup> or between members and the sponsor, if desired. The overall risk profile of a TBP, and hence its position along the TBP spectrum, is thus determined by the combination of its investment policy and its policy for adjusting contributions and benefits.<sup>4</sup>

As the Task Force noted, existing TBP regulations have largely followed the DB paradigm, insisting on producing a very stable and predictable income stream in retirement. For example, under the New Brunswick Shared Risk Plan framework, the modeled probability of a reduction in accrued benefits must be less than 2.5 percent over a 20-year horizon. Under the Going Concern Plus regime in Alberta and British Columbia,

<sup>2</sup> Since target benefit plans are allowed to reduce the accrued benefits of active and/or retired members while a going concern, theoretically the benefits provided by the plan could go up and down in response to plan experience. By contrast, traditional defined benefit plans are only allowed to reduce future service accruals while a going concern.

<sup>3</sup> From an academic perspective, the most effective form of risk sharing between members is intergenerational: Under the assumptions of fixed contributions and a stationary population, the optimal plan design (that is, the one under which the expected utility of lifetime consumption is maximized) has future members entering into significant risk transactions with existing members (see, for example, Teulings, C.N. and C.G. De Vries. 2006. Generational Accounting, Solidarity and Pension Losses. *De Economist* 154, p. 63–83). However, without mandatory participation and the assurance of a stable workforce, intergenerational risk sharing is vulnerable and can damage, rather than improve, sustainability (see Teulings & De Vries, 2006, again, or Kocken, T. 2012. Pension Liability Measurement and Intergenerational Fairness: Two Case Studies. *Rotman International Journal of Pension Management* 5(1), p. 16–24, available at <http://www.icpmmnetwork.com/research-paper/pension-liability-measurement-and-intergenerational-fairness-two-case-studies>.)

<sup>4</sup> In the Task Force's report, this combination is referred to as the benefits/funding/investment (BFI) policy. Pension regulations tend to distinguish between the parts of the policy that are invoked for surpluses versus deficits, referring to them by names like "funding excess utilization" and "funding deficit recovery" plans, respectively.

current service contributions must include a provision for adverse deviations, and benefit improvements cannot be made unless the plan has a sizeable risk buffer in place. As a result, TBPs—which must satisfy these regulatory requirements—end up near the DB end of the spectrum, employing complex risk-sharing mechanisms to increase benefit stability and security while trying to keep costs affordable.

Even though most TBPs currently fall close to the DB end, the Task Force deliberately included in its report other plans that are close to the DC end of the spectrum. These plans tend to be much simpler with minimal risk sharing between a more homogeneous group of members. They maintain the advantage of mortality risk pooling after retirement but leave most or all other risks (investment, inflation, etc.) with individuals, resulting in a lifetime income whose level may vary often.

A frequently cited example of such a plan is the Variable Payout Life Annuity (VPLA) option offered to retired members of the University of British Columbia (UBC) Faculty Pension Plan.<sup>5</sup> This is a single premium life annuity whose payouts are adjusted each year based on the mortality and investment experience of the group of annuitants, relative to an assumed investment return (AIR) and a specific mortality table. The UBC VPLA has two variants, one with a 7 percent AIR and another with a 4 percent AIR. Both variants are invested in the same underlying balanced fund. Based on current projections, the 7 percent option is expected to produce a decreasing income stream, and the 4 percent option is expected to produce an increasing income stream over time; however, actual benefits may increase or decrease year to year under either option. Since the UBC VPLA consists entirely of retired members (active employees participate in a traditional DC plan during the accumulation phase) and because it makes no effort to smooth out experience, the full impact of gains and losses is passed on to each pensioner every year, resulting in low levels of benefit stability. Benefit security, which is interpreted in this context to mean “likelihood of maintaining initial benefit,” depends on the AIR and is relatively low (less than 50 percent) for the 7 percent AIR option. Nonetheless, each year, new retirees choose to buy units in the VPLA, demonstrating that such arrangements do have value and use to individuals.

Other designs that fall between the DB and DC ends of the spectrum can also be constructed, corresponding to different levels of benefit stability and security. From a practical perspective, many Canadian negotiated-cost, multiemployer pension plans (which have many features in common with TBPs but which tend to fall short of the benefit security threshold associated with New Brunswick’s shared risk plans) can be considered to sit at such intermediate points on the TBP spectrum.<sup>6</sup>

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<sup>5</sup> The VPLA option is described on the UBC Faculty Pension Plan’s website (<http://faculty.pensions.ubc.ca/life-events/retiring/ubc-variable-payment-life-annuity/>). Recent coverage includes an article on Benefits Canada’s website (<http://www.benefitscanada.com/pensions/cap/a-look-at-ubcs-variable-payment-lifetime-annuity-option-88296>), a joint SOA/CIA webcast, as well as sessions at several industry conferences.

<sup>6</sup> Many of these multiemployer plans that are registered in British Columbia have converted to TBP status under the Going Concern Plus framework and will, as a result, be expected to migrate closer to the DB end of the spectrum over time.

## Why Expand the Definition?

Expanding the definition of TBPs to include the full spectrum was important to the Task Force for a number of reasons.

First, doing so allows stakeholders to ask how much flexibility in benefits is actually desirable. Under the DB paradigm, creating more security and stability is the ultimate goal. However, in a TBP framework, it is clear that security and stability come at a cost, whether in terms of higher contributions, lower expected benefits, or more complex risk-sharing arrangements with potentially larger intergenerational risk transfers.<sup>7</sup> Finding the optimal amount of benefit flexibility is far from straightforward and involves taking into account the specific circumstances of each case: whether benefits are being converted from a DB plan, the sponsor's financial prospects, the predecessor plan's financial position, whether members have other stable retirement income sources, and more. It involves striking a balance between the needs and desires of various stakeholders, including plan sponsors, active members and pensioners.

Second, thinking of the full spectrum allows stakeholders to see target benefit plans as DC plans with risk-sharing elements added in (the DC-plus view) instead of would-be DB plans with guarantees stripped out (the DB-light view). In shifting the perspective from DB-light to DC-plus, attention is drawn away from what TBPs lack (guarantees) and is directed toward the features they all have in common: a series of implicit or explicit risk transactions between members.

This change of perspective has subtle but far-reaching implications. As stakeholders bring risk transactions to the foreground and look at which risks are shared—with whom, to what extent, how and why—their understanding of TBPs deepens. Looking at TBPs from a DC-plus perspective, stakeholders can assess the suitability of a particular design to a given set of circumstances by decomposing the risk-sharing deal into its constituent risk transactions and by asking whether these transactions make sense, instead of evaluating all TBPs against the same DB-inspired benchmark. The exercise of dissecting the deal forces any opaque cost and risk subsidies—that are routinely accepted in DB plans—to be identified, promoting transparency. As risk transactions gain focus, stakeholders begin to naturally scan for implicit and explicit forms of intergenerational risk sharing in order to assess their contribution—and potential threat—to long-term sustainability. Most important, shifting the perspective helps stakeholders recognize that the central task of TBP management is protecting and maintaining the risk-sharing deal (wherever it happens to fall on the spectrum) through a combination of communication, governance and risk-management efforts commensurate with the complexity of the deal itself.

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<sup>7</sup> As noted, when conditions shift, large and opaque intergenerational risk transfers can destabilize a plan. In this way, benefit risk is exchanged for discontinuity risk.

## Pie in the Sky: A Preposterously Optimistic View of Potential Implications for Plan Design and Regulation

What if all stakeholders stepped out of the old DB paradigm and adopted a DC-plus perspective on TBPs? I suspect stakeholders would begin to appreciate all TBPs along the spectrum for what they bring to the pension landscape and not try to force all of them toward the DB end. Without a doubt, TBPs at the DB end are important and a good idea when benefits are being converted from an existing DB arrangement, especially where the sponsor's covenant was strong. However, TBPs elsewhere on the spectrum make eminent sense, too, when there isn't a predecessor plan with strong third-party funding commitments, for example, when a negotiated cost multiemployer plan or an individual DC plan is converted to TBP status.

The latter example of a DC-to-TBP conversion is particularly important: As individual DC plans reach maturity, more and more members will look for reasonable decumulation options, including cost-effective insurance against longevity risk. Even the simplest TBPs can meet this goal. Depending on stakeholders' preferences, sponsors of individual DC plans may wish to establish DC-like TBPs similar to the UBC VPLA for their retirees, or they may put in place more complex arrangements that extend risk-sharing to active members as well.<sup>8</sup> A VPLA-type solution has the additional benefits of ease of understanding, transparency, individual choice (members have the option to join, instead of being forced into a risk-sharing deal they may not value or trust), and the ability to accommodate members with different risk appetites and retirement income needs (such as, through combinations of the 4 percent and 7 percent AIR options under the UBC plan).

Note: What were listed earlier as benefits of TBPs near the DC end of the spectrum (i.e., mortality risk pooling, simplicity, transparency and individual choice) are the same attributes that Dutch policymakers deemed desirable in their decade-long effort to redesign their occupational pension system. The Task Force's report summarizes the Dutch experience since the turn of the millennium in Appendix A, all the way from conditional indexation, through their exploration of the Defined Ambition idea (the Dutch version of TBPs), to the newly proposed Personal Pensions with Risk-sharing. One of the key takeaways is that if the attributes above are valued, then more complex and opaque arrangements near the DB end of the TBP spectrum (which are vulnerable to discontinuity risk on account of potential intergenerational conflicts) are not necessarily superior to arrangements near the DC end. It is regrettable that limitations imposed by the Income Tax Act and Regulations currently block the establishment of new VPLA-type arrangements.

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<sup>8</sup> Three-quarters of the members of the BC Government Employees' Union (BCGEU) are covered by large public sector DB plans (the Municipal Pension Plan, the College Pension Plan, and the Public Service Pension Plan). The remaining one-quarter of BCGEU members were covered by a DC plan which was recently converted to a target benefit plan. See the BCGEU's website for more information: <http://former.bgeu.ca/targetpension>.

Suppose for a moment that TBPs were allowed to exist at various points along the spectrum: at the DB end, the DC end and possibly in-between. The resulting regulatory challenge would be immense, at least when considered within the DB paradigm, since the usual tools and metrics regulators use to assess and monitor DB plans (and DB-like TBPs) are unsuitable for this broader set of designs. It may be tempting for regulators to ignore (or prohibit) the middle part of the spectrum so that only very DB-like (New Brunswick-style) and very DC-like (VPLA-style) variants were allowed. Such action would likely lead to a fragmented regulatory approach: DC-based regulations at the DC end (along the lines of the guidelines for capital accumulation plans created by the Canadian Association of Pension Supervisory Authorities, with minor modifications) and DB-based regulations at the DB end, without acknowledging that these plans are members of the same family of designs.

A more consistent approach could emerge from the DC-plus perspective described. If, under the DC-plus paradigm, the goal of TBP management is to protect and maintain the risk-sharing deal regardless of the form it takes (DB-like or DC-like), then TBP regulations ought to be focused on each plan's ability to do so. Table 1 summarizes the key questions that regulatory oversight should seek to answer. The principles-based regulations that emerge from this approach could work for any TBP. Supervisory effort would be commensurate with the complexity of the TBP and its position along the spectrum.

TABLE 1

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**Regulatory Focus Areas for Target Benefit Plans**

1. Risk management	What are the risk exposures of the plan? What measures are in place to manage those risks? Are those measures sufficient and appropriate in relation to plan stakeholders' goals and risk tolerances?
2. Disclosure and communication	Are the benefits and their associated risks disclosed clearly and in a timely manner to stakeholders?
3. Financial health	Can the pension fund live up to the benefits communicated to members, both in the short and long term?
4. Governance	Are plan management and oversight adequately organized?

This table is an adaptation of the areas of supervision discussed in a 2012 presentation made by Dirk Broeders, who was senior strategy analyst at De Nederlandsche Bank (the Dutch pension regulator and central bank) at the time. The table was also included in the Task Force's report. For more information, see Broeders, Dirk. 2012. Strong Pension Supervision. Presentation made at Discussion Forum organized by the International Centre for Pension Management, October 2012, London, <http://icpmnetwork.com/event/icpm-discussion-forum-october-2012-london/>.

## A More Modest and Practical View

How likely is it that TBP regulations will evolve according to this view in Canada? If existing regulations are any indication of what the future holds for Ontario, Quebec and the federal jurisdiction, then the answer is not very likely. One reason is that once a regulatory regime opens the door to the possibility of past service conversions from DB

plans to TBPs, the discussion immediately shifts to the DB end of the spectrum: No one wants to get this part wrong, so this is where all effort is spent. An equally important obstacle is the lack of capacity of most Canadian pension regulators to maintain a principles-based system that requires a customized response to each plan. And yet, I believe some elements of this approach can still be implemented.

Treating VPLA-like arrangements as TBP variants and establishing regulations for them that are philosophically consistent with those applicable at the DB end of the spectrum is perhaps still achievable. It is critical to get it right at this end of the spectrum as well, especially given the potential for a sudden proliferation of such plans in the future in response to the looming decumulation challenge.<sup>9</sup>

I also hope that policymakers and regulators will embrace and promote a culture of risk management for TBPs, like New Brunswick has, and recognize the critical contribution that stochastic projections can and should make to the set-up and maintenance of risk-sharing deals. It is encouraging to see that a designated group of the Actuarial Standards Board is now developing standards for the calibration of stochastic models used in pension plan funding, which would also apply to TBPs. Once such standards are in place, policymakers may be less hesitant to prescribe the use of stochastic models for TBPs at any part of the spectrum, enabling regulators to assess plans' risk-management efforts and financial health (No. 1 and No. 3, respectively) according to the framework discussed.

## Conclusions

This is an exciting time for target benefit plans in Canada. Interest in risk-sharing designs continues to grow, and more jurisdictions are expected to set out regulations for such plans in the coming years. As the pension landscape evolves, it is time to stop applying the traditional DB paradigm to target benefit plans. Stakeholders, including actuaries, need to shift to a DC-plus view, considering the entire spectrum of TBP designs and focusing on what ties them together rather than trying to measure how far they are from the DB end. There is much to be gained from such a change in perspective, both in terms of an enhanced conceptual understanding of risk-sharing plans and a deeper appreciation of how TBPs all along the spectrum can help solve the challenges facing our occupational pension system.

*Barbara Sanders, FSA, FCLA, is associate professor at Simon Fraser University.*

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<sup>9</sup> There is a growing lobby effort underway to enable the creation of new plans of this type by lifting the corresponding restrictions in the Income Tax Act and Regulations. I assume this effort will be successful.





Comments on

## “The Target Benefit Plan Spectrum: Implications for Plan Design and Regulation”

By Keith Ambachtsheer

Barbara Sanders has written a thoughtful, timely article that argues that the time has come for pension plan designers and regulators to take target benefit plans (TBPs) seriously. These plans are the logical in-between outcome in a world where both pure defined benefit (DB) and defined contribution (DC) plans have become increasingly problematical. At one end, the hard guarantees embedded in pure DB have become too expensive for most employers to carry. At the other end, it is becoming increasingly clear in pure DC plans that leaving plan members to design and execute their own accumulation and decumulation strategies often lead to outcomes that produce too little pension at too high a cost. On top of that, DC plans leave plan members on their own to deal with the risk of outliving their money.

### Overcoming Legislative and Regulatory Biases

Regulators are now busy catching up with this movement away from pure DB and DC plans. Sanders observes that regulators thus far have carried a DB bias into rewriting pension regulations to accommodate the shift to TBPs. This is the natural result of the fact that recent shifts have been largely from pure DB to various forms of TBPs. However, this needs to change. Likely, future shifts will increasingly be from pure DC starting points.

As an example, she points to the Variable Payout Life Annuity (VPLA) option for retirees in the University of British Columbia Pension Plan. While this vehicle pools longevity risk, its payouts are adjusted based on actual versus expected investment and mortality experience and has successfully operated since 1967. However, current Canadian tax and regulations do not permit employers to establish new VPLA-type arrangements. Tax law and regulations also stand in the way of retirees purchasing their own deferred annuities. In a recent article that the C.D. Howe Institute published, Bonnie-Jeanne MacDonald proposed the creation of LIFE (Living Income for the Elderly), a deferred annuity option that could be bought at age 65, with payouts starting at age 85.<sup>1</sup> Once again, MacDonald notes that current tax law stands in the way of this becoming a viable way for people approaching retirement to cost-effectively purchase longevity insurance.

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<sup>1</sup> MacDonald, Bonnie-Jeanne. 2018. *Headed for the Poorhouse: How to Ensure Seniors Don't Run out of Cash Before They Run Out of Time*. C.D. Howe Institute.

## A Vision

How does Sanders propose to move Canadian pensions-related tax law and regulations in the right direction? Her answer is that legislators and regulators need to move to a wider view of the 21st century pensions forest rather than their current approach of dealing with changes tree by tree.<sup>2</sup> Ultimately, pension design and regulation should be based on transparent trade-offs between certainty versus cost, simplicity versus complexity, and upholding the principle of intergenerational fairness. The same message holds for the people in the pension governance and management trenches: Sustainable pension designs have solid approaches to allocating the risks embedded in the design. Further, that design must be clearly understood and effectively managed through time. In short, TBPs are here to stay. Let's get on with ensuring they serve their intended purpose.

*Keith Ambachtsheer is director emeritus of the International Centre for Pension Management and a faculty member of the Rotman School of Management, University of Toronto. He is also the cofounder of KPA Advisory Services.*

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<sup>2</sup> There is a growing coalition of Canadian retiree associations and pension industry organizations engaging federal and provincial tax and regulatory authorities on these matters.

Comments on

## **“The Target Benefit Plan Spectrum: Implications for Plan Design and Regulation”**

By Dirk Broeders

Society, consumers and labor markets are changing and so should pensions. Pension redesign typically is synonymous with pension plan redesign. Barbara Sanders bravely classifies the various plans out there in the defined benefit (DB)-defined contribution (DC) spectrum, known as target benefit plans (TBPs). The TBP discussion is challenging. It is difficult to come up with a single plan configuration that is optimal for the heterogeneous consumers in such a plan. The DB/TBP/DC debate, therefore, is unlikely to end anytime soon. In this review, I therefore offer an alternative framework for pension plan redesign. This framework is also convenient for assessing the effectiveness of different TBP structures in delivering adequate pensions to consumers.

Key to this approach is to consider the various functions a pension plan performs for consumers. The most important ones are saving, investing, decumulation and risk sharing. All these functions combined on a single pension platform target a post-retirement income stream to optimally smooth consumption over the life cycle. The platform should do this both cost-efficiently and tailored to consumers' needs. By the latter, I mean that it should take into account consumers' differences in age, income, wealth, labor mobility, risk aversion and life style.

### **Key Pension Functions**

Let's look at the four functions in more detail. Each function has its own, unique objective.

The first function is saving. The objective of saving is capital accumulation. The savings decision entails the part of income that is set aside for retirement. Policymakers should carefully consider a default pension saving obligation. Without this, it is a known fact that consumers save too late, too little. However, an active opt-out decision can be part of this.

The second function is investing. The investment decision differs from the savings decision. The objective of investing is capital growth. The target pension benefit, investment beliefs and risk aversion determine the optimal balance between return and risk in financial markets. A key driver in this decision is also human capital, or the present value and the riskiness of the wages that the consumer will earn in the future. The pension platform can easily offer consumers guarantees through its investment policy. It could even create an internal market where consumers buy and sell guarantees

at fair prices.<sup>1</sup> The benefits of guarantees are excellently described in *Frontiers in Pension Finance*.<sup>2</sup> If the cost of these guarantees is high, it will be evident to consumers that the risk is also high.

The third function concerns decumulation. The objective is to optimally draw down on the accumulated pension assets over the remaining life expectancy after retirement. The assumed investment return (AIR) and remaining life expectancy play a key role in this decision. Sanders rightfully points to the risks of assuming a high AIR—an element in the system that should be regulated.

The fourth function is risk sharing. The objective is to minimize the impact of biometric risks on pension benefits. Sharing idiosyncratic longevity risk is an efficient way of assuring consumers of an income, even if they become centenarians. For this to work, consumers need to forego on their bequest motive.

## Clear Property Rights

An important precondition to optimally use these four functions is to define clear property rights for the consumers based on the value of the underlying assets on their pension account. Douglass North received the Nobel Prize in economics in 1993 for showing how important property rights have been for the Western economy's strong growth. Property rights give consumers protection against rent-seeking. Rent-seeking, or political interest, is economic agents' attempt to gain financial benefits through politics rather than through production. Many rules and institutions in society, therefore, have the purpose to protect property rights: patents, copyrights, share certificates, the land register and the administration of justice, to name a few examples. The better property rights are defined, the smaller the chance of rent-seeking behavior. In this context, Sanders rightfully points to the instability of opaque intergenerational risk-sharing mechanisms for managing guarantees.

Property rights are also essential to any pension plan design, including the TBP configurations. Here are five reasons why.

1. **It greatly reduces the complexity of a pension system.** The numeraire of the system is the wealth on consumers' personal pension account. It creates the basis for consumers to do optimal financial planning, and the decision to transfer pension wealth when changing jobs becomes more straightforward.

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<sup>1</sup> See Binsbergen, J. van, D. Broeders, R. Koijsen, and M. de Jong. 2014. Collective pension schemes and individual choice. *Journal of Pension Economics and Finance* 13(2), 210–225.

<sup>2</sup> Bodie, Zvi. 2008. Pension Guarantees, Capital Adequacy and International Risk Sharing. In *Frontiers in Pension Finance*, 243–254. Dirk Broeders, Sylvester Eijffinger, Aerd Houben, eds., Cheltenham UK: Edward Elgar.

2. **It allows for flexibility.** The pension platform will be able to optimize the four functions for consumers with different characteristics in achieving their post-retirement income target.
3. **Managing the shortfall risk of not achieving this income target becomes direct.** Consumers will have to save more for retirement and lower their lifetime consumption level, work longer before retiring, or take more investment risk. The latter requires consumers to be ready for the consequences if the risk appears.
4. **It offers protection against rent-seeking.** Changes in, for example, the pension scheme, the investment policy, the AIR or pension regulation do not affect consumers' property rights. Only the value of the underlying assets will influence the property rights value. Full attention can be given to dynamically managing the assets on consumers' behalf.
5. **There is full representation and thus no governance gap.** The pension fund board only represents the current pension platform consumers. The board does not have to take into account the interests of the employer or consumers who will join the pension platform in the future. This reduces agency costs. The platform is also not exposed to discontinuity risk. If a sponsor company shrinks or disappears, it has no consequences for the pension platform and its consumers. Also, no pension guarantee system is required to absorb sponsor risk.

## Substance Over Form

Setting and managing a retirement replacement income goal are key design criteria for any pension system. Sanders' paper is a very thorough and welcome contribution to organizing and understanding the world of pension plans in between the archetypical DB and DC plans. Understanding the full DB/TBP/DC spectrum may be enhanced even further by unraveling the various functions a pension plan performs and by defining clear property rights for the consumers. In the end, it is about substance over form or about what the pension platform can do for its consumers.

*Dirk Broeders, Ph.D., is professor of pension finance and regulation at Maastricht University.*



Comments on

## **“The Target Benefit Plan Spectrum: Implications for Plan Design and Regulation”**

By Robert L. Brown

I have been a supporter and promoter of target benefit plans (TBPs) for more than a decade. I like TBPs a lot and think they are the solution for the unfortunate spin into individual account defined contribution (IA DC) accumulation plans. And this is extremely important now, because the baby boom generation is entering its decumulation phase. In this regard, a TBP has huge advantages over IA DC plans. Some things, like health care, need to be managed collectively. The provision of retirement income security also requires a collective approach.

In Barbara Sanders’ paper on TBPs, she correctly defines the full spectrum of possible TBP models from those at the defined benefit (DB) end of the spectrum to those at the DC end. She also correctly points out that, to date, most TBP designs and regulation have assumed a TBP at the defined benefit end of the spectrum. This leads to a higher level of security and stability, but it also results in either higher contribution rates or lower benefits.

If we could allow ourselves to move more closely to the DC end of the spectrum, we could get either lower contribution rates or higher benefits by accepting a lower level of security and stability. Sanders points out that in the University of British Columbia Faculty Pension Plan, those retiring can effectively choose their level of “risk” versus “security” and seem to be happy with this acceptance of less stability.

One matter that seems to be forever lost in the pension plan design and regulation debate in Canada is that all Canadians start with a significant, fully guaranteed (or about as guaranteed as possible) pension in the form of Old Age Security and the Canada/Quebec Pension Plans. For someone consistently earning the average industrial wage, the total benefits provide about a 39 percent replacement ratio and CPP Tier 2 will raise that ratio. So, why are we so overwhelmed by the thought that benefits above that level may be slightly at risk?

Kudos to Sanders for forcing us to rethink what may be a natural bias for defined benefit plan actuaries. Let’s face it: large collective defined-contribution-type TBPs are so superior to individual account DC plans that they should not be obviated without a second or even a third thought.

*Robert L. Brown, FSA, ACAS, FCIA, HONFIA, is a retired professor of actuarial science.*





Comments on

## **“The Target Benefit Plan Spectrum: Implications for Plan Design and Regulation”**

By Greg Heise

It is my pleasure to have the opportunity to review and comment on Barbara Sanders’ paper focusing on the plan design and regulation implications of the spectrum of target benefit plans (TBPs).

While the term “target benefit plan” is fairly new, the concepts and practical elements of these plans’ designs have existed for decades in Canada and the U.S. under the guise of multiemployer negotiated cost pension plans. These plans were often lumped in with defined benefit (DB) plans historically, much to not only their detriment from an operational standpoint but also to their membership. As the article confirms, plans that aim to provide a targeted pension amount versus a promised pension amount are very different and require different communications with membership as well as regulatory oversight tailored to their characteristics.

My experience with multiemployer negotiated cost plans is significant, and my comments herein come from that perspective. What is quite interesting is that I have found in practice that some of these plans have differed historically in their approach and would be at different points along the target benefit plan spectrum that Sanders has described, some closer to the defined contribution end but with most closer to the DB end (presumably as a result of the regulation under which they operated).

I intend to focus my comments on a few points that Sanders made:

1. British Columbia’s and Alberta’s approach to target benefit plan regulation currently follows a DB paradigm.
2. Intergenerational risk transfers.
3. Battling preconceived notions of what TBPs are.

### **British Columbia’s and Alberta’s Approach to Target Benefit Plan Regulation**

Up until new rules were released in the past three to four years, TBPs focused a great deal of energy trying to maintain existing benefit levels, primarily because of the stress imposed by solvency funding, an inappropriate test for these types of plans. I concur with Sanders that the new regulatory approach to TBPs in Western Canada is effectively very similar to the DB paradigm. As a society, we tend to be a result of our experiences. Our experiences—at least the most publicized, negative ones—have been a

small number of high-profile DB plan failures, and the government's view is likely that we have to protect against these types of failures in the future.

The hopeful result was that with solvency now behind us, sponsors could revisit their policies and decide how best to move forward, designing a plan that best-suited their membership's needs. The reality is that these new rules instead create a significant buffer for risk, which will likely only end up benefiting the last generation participating in the particular plan. Legislation has effectively taken away the ability to have a plan design closer to the defined contribution end of the spectrum. While the new buffers in place are far more appropriate than the buffer that solvency legislation created, they are not conducive to all target benefit plan designs.

That said, whether these plans truly end up being DB-like will depend on whether the provisions for adverse deviation that legislation laid out are sufficient. For the most part, no one can presume to know the answer to this question. Only time will tell as to whether the buildup of large provisions for adverse deviation today will translate into a huge wealth transfer to a later generation.

## **Intergenerational Risk Transfers**

I have heard Sanders speak on the topic of intergenerational risk, and I find it hugely beneficial to hear an academic view of this topic, given the lack of attention it is given around the board room tables of target benefit plan sponsors. There needs to be a significant amount of work done in this area to further educate sponsors on this topic and have them set out in writing what their beliefs are. Frankly, it is a sponsor's beliefs on risk transfers that will very much guide the foundations of plan design and benefit, funding and investment policy. Unfortunately, this is never where the conversation begins; intergenerational risk ends up being a topic that is discussed, at best, but not given much attention in policy documents.

## **TBPs in the Press**

I applaud Sanders' points concerning speaking about TBPs in the context of defined contribution-plus. That said, I think we all realize that this will take time, potentially a long time. For my part, I have been quite concerned about the lack of clarity in the media regarding target benefit plan topics. On one hand, the recognition of these plan types is a huge boon for future Canadian retirees, because the possibility is now there for improved designs and options for occupational pension plans. Further, the existing plans that were being "mistreated" as DB plans, namely multiemployer negotiated cost plans, now have a place, albeit imperfect, to slot themselves in under legislation. However, despite these positives, the negative press regarding TBPs is not doing the future of the Canadian retirement system any favors.

Of particular concern are the Canadian Labour Congress' anti-target benefit plan comments, without qualifying those comments to only apply to situations where conversion from a DB plan is being considered. The Canadian Labour Congress also represents thousands of members in plans that are already effectively TBPs, and having their membership hear their anti-target benefit plan rhetoric is serving to confuse Canadians about the efficacy of their own retirement programs.

## **Conclusion**

There is little, if anything, in Sanders article that I disagree with; it is a valuable contribution toward the discourse needed on TBPs and their evolution in today's post-defined-benefit society. What is clear is that additional work is needed, in particular advocacy, with various governments across Canada concerning what these plans' regulation should be founded on.

*Greg Heise, FSA, FCA, FCLA, is a partner at George & Bell Consulting Inc.*



## Author's Response to Comments

By Barbara Sanders

I would like to thank the four discussants for their valuable comments. They inspired me to take my ideas about target benefit plans (TBPs) a step further. I offer a few additional thoughts in the hope that they will add value to the discussion.

First, let me join Robert Brown as a strong supporter of collectivism in retirement income provision. The “power of the collective,” as Brown put it, is clearly valuable to those seeking to avoid catastrophic economic losses due to unforeseeable events, which in the context of retirement may include severe negative returns, runaway inflation or simply the gift of a very long life. One of the great features of TBPs is that they allow us to deploy collectivism strategically—only for the right risks and in the right amount. What is “right” varies from plan to plan and defines where a TBP lands on the spectrum. Coming from the defined benefit (DB) paradigm, it may seem odd that the right protection from the members’ perspective could be anything less than complete stability and security, but we must acknowledge that members (and their employers) have limited resources, which often fall short of the cost of providing an adequate benefit with certainty. The right level of protection is then one that effectively balances cost and risk.

Leaving some risk with members is not a bad thing: As Brown points out, Canadian workers already have access to very secure, inflation-indexed pensions through the Old Age Security program and the Canada/Quebec Pension Plans (C/QPP). With the coming C/QPP enhancements, this secure income base will increase. For many workers, these benefits will be sufficient to provide for the essentials of life. Any additional retirement wealth can then support retirees’ desired lifestyle choices beyond the essentials or, once their desired lifestyle is achieved, can provide for bequests.<sup>1</sup> While it is important that guaranteed income cover the essentials, it may be reasonable to leave some of the wealth beyond this level to be subject to some risk. Since the dividing lines between the essential, lifestyle and bequest zones vary from individual to individual, the level of risk that individuals are willing to take with their retirement income also varies. This is one of the reasons the University of British Columbia Variable Payout Life Annuity option works so well: It allows each retiring member to customize (within some constraints) the type and extent of protection the individual receives. Unfortunately, Canadian TBPs at other points on the spectrum cannot easily accommodate individual choices and risk preferences; however, as Dirk Broeders notes, this does not have to be the case.

Second, I would like to follow up on Greg Heise’s lament over the lack of attention given to intergenerational risk transfers in the context of TBPs. I think the low level of consideration given to this issue in most TBPs is unfortunate, at best, and imprudent or reckless, at worst. As the Task Force on Target Benefit Plans (the Task Force) noted,

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<sup>1</sup> The concepts of the “essentials zone,” “lifestyle zone” and “bequest zone” are described in the popular 2009 book *The Retirement Plan Solution: The Reinvention of Defined Contribution* by Don Ezra, Bob Collie and Matt Smith.

intergenerational risk transfers are a critical element of the operation of many TBPs. The Task Force's report made it clear that these transfers, when handled well, can contribute to a plan's success; however, if handled poorly, they can also destroy it. The key is transparency. Stakeholders need to clearly define the limits of the intergenerational solidarity that is expected in the plan and identify where members' individual responsibility begins. Only then can they understand the true nature of the risk-sharing deal they enter. Unfortunately, even when TBP stakeholders discuss these issues today, they may only address them qualitatively. As a result, many of the cost and risk transactions remain opaque, even to the plan actuaries.

An entirely new level of transparency could be achieved if, as Broeders suggests, we were to clearly define property rights within TBPs—that is, specify who is entitled to what. Conceptualizing such a setup is not difficult: Start from a personal pension account (individual defined contribution) and add explicit risk-sharing transactions between members, as needed, buying or selling protection against specific risks. If society believed that certain types of risk sharing should exist as a default (for example, that a certain proportion of income should always be protected from longevity risk), these can be added as minimum requirements.

In his discussion, Broeders describes the five advantages of clearly defining property rights. Flexibility is one—this addresses my comment about accommodating individual choice in TBPs all along the spectrum. Another advantage I would like to draw attention to (No. 4 on Broeder's list) is the ability to protect the plan from political maneuvering: Having clearly defined property rights limits agents' ability to invisibly shift value or risk from one set of participants to another. This can be a particular concern when valuation assumptions are changed in current TBPs.

I imagine that the concept of clearly defining property rights in TBPs may seem counterintuitive to some, especially those who are used to working with opaque DB arrangements. After all how can individual accounts be reconciled with collectivism? The truth is that these concepts are not either/or. They can be layered on top of each other in a flexible and transparent way—we just need to look beyond the structures we are familiar with. The Pension Guarantee Exchange idea described by Broeders and his colleagues in the *Journal of Pension Economics and Finance*<sup>2</sup> is but one possibility.

In closing, I agree fully with Keith Ambachtsheer's comment that our concept of TBPs, indeed our concept of occupational pensions suitable for the 21st century, needs to evolve further. Yes, benefit flexibility can add resiliency to a collective plan, but having flexible benefits without transparency can destabilize the plan over time. True innovation will come when we can move away from opaqueness while we maintain the benefits of risk sharing.

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<sup>2</sup> See Binsbergen, J. van, D. Broeders, R. Koijen, and M. de Jong. 2014. Collective pension schemes and individual choice. *Journal of Pension Economics and Finance* 13(2), 210–225.