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The Great Pension Debate: Finding Common Ground

Many classic defined-benefit and classic defined-contribution pension plans have not achieved their goals. Policies encouraging larger collective, pooled pension plans governed by independent management boards are very much needed to better serve Canadians.

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The Study In Brief

In the never-ending debate about finding an optimal pension model, many proponents start the discussion at extreme ends of the pension model paradigm.

At one extreme is a traditional, fully guaranteed defined-benefit (DB) pension plan. In this plan, all of the risks are born by the plan sponsor given that plans are fully funded. While such plans are growing rare today that is the starting point for many in this debate.

At the other extreme is a traditional defined-contribution (DC) plan. In this plan, all of the risks are borne by the worker participant. This, again, is a starting point for many in the pension model debate.

Many classic DB and classic DC pension plans have not achieved their goals. This paper argues they should be replaced by pension plans that facilitate sharing of risks among all willing stakeholders, whether the plan is characterized as DB or DC.

This paper proposes, as a starting point for all pension-plan model discussions, a "Common Ground." If one is of a pro-DB persuasion, then the Common Ground model would be a Pooled Target Benefit DB pension plan. If one is of the pro-DC persuasion, then the starting point will be a large Collective DC plan. These plans have a lot in common and, since they can provide equivalent benefits for the same contributions, they should be viewed as being actuarially equivalent. Thus, by finding the common ground in the Great Pension Debate, we have also identified models for pensions that can provide all Canadian workers with significant retirement income security.

With that accomplished, the question becomes whether one wants a bit more of a DB flavour and why or whether one wants a bit more of a DC flavour and why. This should make arriving at a consensus plan model much easier for all.

We conclude that policies encouraging larger collective, pooled pension plans governed by independent management boards are very much needed to better serve Canadians. Such solutions are common in the public sector but need to be encouraged in the private sector.

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Many private-sector employers have backed away from sponsoring traditional workplace defined-benefit (DB) Pension Plans.

There are many reasons for this including: changes to the tax rules in 1990 to give DC plans an apparent tax advantage; the overlay of punishing solvency funding rules;[1,2] the fights over who owns the pension surplus in the 1980s 1990s; and the shift in accrual accounting rules for DB to a strict mark-to-market basis. All of these were exacerbated by a continual 30-plus-year decline in interest rates at a time of increased longevity.

In response, such private-sector employers have followed one of three paths. They have (i) substituted formal defined-contribution (DC) plans for their now defunct DB plans; (ii) set up administrative systems that allow their workers to participate in Individual Savings Schemes through payroll deductions, sometimes with incentive employer contributions, and with lower costs than available to an individual in the retail market for investment management (e.g., Group RRSPs); or (iii) they have just left the provision of retirement income to the individual worker with no sponsorship of any kind.

At the other extreme end of the pension model spectrum, traditional DC plans have their own risk management issues. First, individual life expectancy is rising. Thus, more money is needed to provide the same monthly benefit over a longer life. Second, members run the risk of volatile and lower-than-expected rates of investment returns, and high retail fees, meaning that less money may be accumulated in one's capital accumulation account unless contributions are increased. Third, retail insured annuity premiums are relatively high, meaning a traditional payout strategy used by many individuals to manage risks in retirement may not be viable for all.

In the workplace, it is now clear that for most private-sector employers the days of viewing a traditional DB pension as a good human resource investment are gone. At the same time, the financial crisis of 2008/9 has shown clearly the frailty of saving for retirement as an individual in a self-directed DC world.

In attempting to establish agreement on the best way to provide retirement income security, parties to the debate often start at the opposite ends of the actual pension model spectrum. At one end, a party supporting a classic DB solution starts by asking for a retirement income security system where the worker carries no risk. All benefits (even cost-of-living adjustments) are guaranteed. If there are problems with the funding of the plan, it is up to the plan sponsor to make extra contributions to make the plan whole. As has been stated, few of these classic DB plans still exist in the private sector (but admittedly a few public-sector pension plans come close, notably at the federal level). Thus, the paper argues that this is an ill-advised starting position if one hopes to reach a meaningful agreement.

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1 Contribution room under DC Plans was increased substantially in 1990 and any unused contributions in a tax year became eligible to be rolled forward to a new tax year for the first time.

2 Solvency rules introduced in the late 1980s required accelerated deficit funding over five years for "insolvent" plans and required all pension plans to be funded based upon immediate plan wind-up even when no likelihood of wind-up existed.

At the other end, it is not uncommon for the party (usually the employer/plan sponsor) supporting a DC solution to start by proposing a system where all the risks rest with the individual worker and, once the plan sponsor makes the required contribution, his or her funding responsibility ends. This is also an ill-advised starting position if one hopes for any meaningful agreement.

In seeking common ground, international experience with other possible pension models should inform the debate. Collective pension models exist around the world that allow risk sharing, experience pooling and collective plan governance (See UK 2018). Proven collective solutions exist to provide effective risk sharing and experience pooling (see, for example, UK 2014) but there are still forces in Canada (e.g., pension regulation and tax rules) that make it difficult, but not impossible, to implement these collective solutions. As well, there are conflicting interests at work, with unions typically opposing anything other than DB solutions, and the financial services industry supportive of non-DB solutions for obvious reasons.

The extreme classic models are less efficient and effective at managing pension risks than some other models now available or that are emerging, at least in theory. Is there a way to start our debate while standing on common ground? Not middle ground, but common ground. The answer is "yes" as outlined a little later.

Traditional Pension Scheme Models: Neither Are Optimal

Our extreme starting points can be viewed as the classic defined-benefit plan and classic defined-contribution plan. Each model has its own advantages and disadvantages in how it manages pension risks.

i) The Classic DB Plan Model

A defined-benefit (DB) plan is a pension plan under which an employee receives a set monthly amount upon retirement, guaranteed for life or the joint lives of the member and her or his spouse. This benefit may also include a cost-of-living increase each year during retirement. The monthly benefit is normally determined based on a formula that includes the participant's years of service, age at retirement (if retiring early) and, often, the highest average salary over a specified number of years.

In a classic DB plan, almost all of the pension risks are carried by the plan sponsor, which is typically an individual company or a government. Risks associated with sponsoring a pension plan are:

1. Investment risk.
2. Expense risk.
3. Inflation risk (if the benefit is indexed).
4. Interest rate risk (if the payout is annuitized).
5. Longevity risk (if the payout is not annuitized).

While the plan sponsor "carries" these risks, the resultant costs may ultimately be borne by shareholders of the company or even consumers if goods produced by the company go up in price (assuming the company is not operating in a competitive market). Workers will argue that all of the resultant costs are ultimately borne by the workers through their total compensation packet. This paper will not take a position on this point.

In the early days of pension plans, workplace DB pension sponsors were able to offer significant benefits but at relatively low cost. This was true because vesting periods were long, indexation of benefits was rare, workers were young, and pension funding requirements allowed for the use of discount rates that reflected the full equity risk premium plus a number of averaging mechanisms in determining the funded status of the DB plan.

A number of factors have since intervened. With the advent of successive pension benefits acts in the 1960s and 1970s, vesting periods were shortened. With the high inflation rates of the late 1970s and early 1980s, more workers bargained for inflation protection.

Since 1999, there have been two market meltdowns leading to much higher actual pension contribution levels and higher volatility of results. This has been exacerbated by ever increasing life expectancy and a low interest rate environment.

Add to that the fact that accounting bodies have adopted rules that require DB pension plan financial results to be reported on the plan sponsor's corporate balance sheets using valuation methods that closely reproduce the short-term market volatility of underlying investments. Solvency funding requirements exacerbated these difficulties.

These factors, and the continuing maturation of pension systems (the ratio of retirees to contributors), have raised the funding needed for pensions, resulting in higher contribution rates (certainly it has raised the contributions required to be made today rather than down-the-road). Perhaps as important, these developments have increased the short-term volatility of those contribution rates significantly. Short-term market realities have exacerbated this volatility. Thus, many private-sector plan sponsors have decided that they can no longer afford the vagaries of the full DB promise.

Further, a worker in a private-sector single-employer DB plan lives with the risk of the insolvency of the plan sponsor at a time when the liabilities of the plan are not fully funded (e.g., Nortel and Sears). Once in bankruptcy, the pension plan and its members have very limited rights to attach to any remaining assets of the plan sponsor.

Finally, traditional DB plans do not serve workers who move from company to company during their career well. For example, under a pension plan that bases benefit payments on final average earnings, a member leaving one employer will receive termination benefits based on the member's then current earnings, not based on earnings at retirement. A member staying will receive benefits based on earnings at retirement. This makes the classical DB plan model somewhat unfair in environments where many employees change jobs from time to time; certainly the current reality of many private-sector employees in Canada.

The classic DB plan model is no longer a common solution in the private sector in Canada. Only 9.5 percent of private-sector workers have access to such a plan and the DB plans that do remain in the private sector provide lower target benefits with fewer guarantees. In the public sector, many classical DB plans have adopted some of the "common ground" elements that this paper supports.

ii) The Classic DC Plan Model

At the other end of the pension-risk management spectrum is the classic DC model, which also includes other capital accumulation plans, such as group RRSPs for the purposes of this *Commentary*. As its name indicates, DC plans provide certainty of contribution levels for both the employer and employees.

Under a classic DC plan, the worker carries all of the pension risks listed in the previous section. Clearly, most individual workers are not capable of managing these risks alone. While many of the risks can be mitigated to a certain extent, the paper argues that most cannot be avoided in totality.

First, there are the investment management risks, which fall on the individual worker. This burden is heaviest for members of a self-directed DC plan or group RRSP accounts invested in retail products. Workers who do it all by themselves are particularly exposed to the risk of making bad investment timing decisions – for example, selling when the market is down out of panic – or making bad portfolio decisions and exposing themselves to excessive volatility. Excessive exposure to volatility at or near retirement can cause standards of living

in retirement (income replacement rate) to drop dramatically below the expected level, causing serious hardship (Burtless 2009, Antolin, 2009).

Programs exist to mitigate the investment risk. The employer/sponsor may hire an institutional DC plan manager to manage the plan and the investments on a group basis on behalf of the employees. Many recent institutional DC plans sponsored by private-sector employers provide default, but not mandatory, investment options that are target date, target risk or even target benefit funds.

These recent innovations seem to be moving toward a collective solution (but still without all of the benefits that would be found in a full-fledge collective solution as suggested below). Investment management fees charged by institutional DC plan managers are also generally competitive with DB pension plans, depending on the scale of the plan. The average investment management cost of a workplace retirement savings plan with more than 1,000 plan members, managed institutionally on a group basis, is about 40 basis points; with 250-999 members, management costs average 70 bps; and most group plans with as few as 50 members would have fees of about 1 percent.[3]

Most of the vast number of employees in smaller workplaces, however, do not have this chance and still rely on retail investment management, through mutual funds and the help of an investment advisor. Practically, however, this strategy often only shifts the investment risk over to an expense risk. Investors must have the acumen to select from a wide array of products whose management fees, called the management expense ratio (MER), range from low (for example, Exchange Traded Funds or Index Funds) to high (for example, equity mutual funds where the MER can range between 2 and 3 percent.) In today's expected low-return environment, high MERs can easily eat as much as half of the expected real return, or more. Savvy investors with larger portfolios can navigate this risk, which the broad investing public can find daunting.

A second major risk for a DC plan participant is longevity. If the worker does not buy an annuity, effectively, they must self-annuitize. That is, they must determine a program of income withdrawal that is optimal for them. Depending on their desire to leave a bequest (which is ignored here), they will want to take out the maximum income possible without creating the threat of outliving their assets. That is a lot to ask. Who knows one's life expectancy? And covering your life expectancy is not enough. Products such as stand-alone longevity insurance would greatly help in this regard (Ezra 2018). It is difficult for DC plan members to get good independent advice on how to manage withdrawals in retirement.

So, if workers want to be sure that they will not outlive their assets, they make conservative withdrawals. That means they live at a lower standard of living than is necessary. If they take more aggressive withdrawals, then they increase the probability of outliving their assets and thus becoming dependent on friends and family, or on government programs for their continued consumption. This should also be a concern to taxpayers and future generations who will pay those welfare benefits.

The worker can mitigate the longevity risk by buying a life annuity upon retirement. However, this again raises the expense risks as new capital requirements under Solvency II may raise the cost of annuities significantly.[4] Further, many workers cannot get a true market-value annuity in today's marketplace. That is because insurers assume that if a worker voluntarily applies to purchase an annuity

3 Industry statistics obtained from a reviewer of a previous draft.

4 Under Solvency II life insurers are required to set aside additional capital to back stop unanticipated longevity and exposure to other risks creating additional expense for annuity providers.

then that worker must be in good health and the annuity is priced accordingly. In a recent paper for the Canadian Public Pension Leadership Council (CPPLC), Brown (2018) found that the annuity factor used by Ontario's Colleges of Applied Arts and Technology (CAAT) pension plan for an age-65 male guaranteed five years with no indexing was 12.45, while the corresponding annuity factor for a retail annuity was 15.54. [5] Annuities can be a cost-effective method for protecting benefits, especially if purchased on a group basis, but not necessarily for all individuals if they are purchasing products on the retail market.

Finally, it is very difficult to get an annuity that provides true inflation protection. One can buy variable annuities whose payouts move with market values, but market values do not correlate well with inflation. Or, one can buy an annuity where the annual payout increases according to a set (constant) inflation factor, but this is not true inflation protection.

Identifying Common Ground

If we accept that neither a classic DB nor a classic DC plan is optimal for the future, can we find an innovative pension plan model that might maximize the advantages of these two sides of the spectrum?

A lot has been written recently on the convergence of DB and DC formulas into hybrids with names such as "defined ambition" internationally, or "target benefit/shared risk" nationally (in particular, see Ambaschtsheer 2016). These new designs can provide both cost certainty to employers and targeted pensions to employees, taking advantage of longevity and investment risk pooling. The collective solution that we will describe and propose fits into this literature.

A recent example is the New Brunswick shared-risk pension legislation (Steele et al. 2014). And as Bauslaugh (2014) explains, variations of target-benefit plans – although not branded as such – have been found in Canada for decades.

Some existing shared risk or collective DC pension plan systems already encourage larger, more efficient plans. Examples include the Saskatchewan Pension Plan, the very large public pension plan in the Netherlands and the TIAA system for university employees in the US. These plans have a relatively small expense burden for each member. Likewise, large multi-employer DB plans often allow pooling of experience and enable affordable, representative governance that benefit all stakeholders.

The paper will therefore not start our search at the edges of our pension plan "space" (classic DB and classic DC) but rather will look for common ground somewhere in the middle involving characteristics of both DB and DC plans. We first examine existing types of pension plans that could point us in the right direction.

Are Traditional Multi-Employer Pension Plans DB or DC?

A traditional multiemployer pension plan in Canada (MEPP) is an employee benefit plan maintained under one or more collective bargaining agreements to which more than one employer contributes. These collective bargaining agreements typically involve one or more local unions that are part of the same national or international labor union and more than one employer. The plan sponsor is either a joint board of trustees consisting of equal representation from labor and management or a board of trustees established by the sponsoring union; these trustees are responsible for the overall

5 Since the annuity factor is used to calculate the present value of future obligations, a higher factor increases how much money must be set aside today to pay the benefits promised tomorrow.

operation and administration of the plan. The board of trustees is generally the "named fiduciary" and allocates or delegates the administrative functions to persons or entities with expertise regarding the particular function.

Pooled risk: MEPPs provide benefit security for participants and beneficiaries through pooling of risk and economies of scale for employees in a unionized workforce covered by the plan. They also provide portability of certain benefits and eligibility for those employees who move from employer to employer within the industry covered by the plan. As a result, multiemployer plans often enable coverage accruals to be transferred from employer to employer or job to job so as to avoid interruptions in coverage that would apply without this portability.

MEPPs also help employers provide coverage on a more economical basis due to the pooling of risk and economies of scale.

Multiple union membership: MEPPs are often found in industries and geographic areas where several employers are covered by collective bargaining agreements with one or more participating local unions. Covered members could work for several of those employers during their career. Examples of these industries include construction, arts and entertainment, retail stores, transportation, service (including lodging and health care workers), mining and communication.

Ontario regulates MEPPs as DB plans, as do many other jurisdictions. However, they are funded by fixed, collectively bargained contributions (Shilton 2007 p.2). Typically, the benefit formula for a MEPP is the total number of hours worked in the industry for participating employers multiplied by a flat rate; although some MEPPs use a percentage-of-contributions rule to determine benefits. Contribution levels are negotiated at the collective bargaining table and are fixed for the life of the particular collective agreement.

Funding shortfalls possible: With defined benefits funded by fixed contributions, funding shortfalls are always a possibility, and accordingly such plans normally permit the trustees to amend the plan to reduce benefits unless not permitted to do so under regulation: not just future benefits but also *accrued* benefits. MEPPs established under collective or trust agreements are almost always exempt from the prohibition against reducing accrued benefits. Thus, the benefits can be thought of as 'target benefits' to which one can attach an expectation but not a guarantee. Further, in Ontario, MEPPs plan sponsors and participating employers carry no terminal liability risk as they do in the US under federal pension legislation (i.e., ERISA). If the new "composite" plans proposed in the US come to fruition, they would have no terminal liability ("*Give Retirement Options to Workers (GROW) Act*").[6] That is, the plan sponsors and participating employers are not required to provide benefits beyond those that can be provided through existing plan assets should the plan be terminated.

Because benefits are not guaranteed, but can be reduced, MEPPs do not contribute to the Ontario Pension Benefits Guarantee Fund (PBGF) thereby avoiding the cost of this insurance.

With respect to the actuarial valuation of such plans, the plan actuary is required to:

- demonstrate the continued sufficiency of the contributions required by the collective agreement to provide for the benefits set out in the plan without reduction of the benefits set out in the plan; or
- if the required contributions are not sufficient to provide the current target benefits under the plan, propose options so that the required contributions will be sufficient to provide the revised benefits under the plan.

6 Under previous legislation the Pension Benefits Guarantee Corporation ("PBGC") provided the assets necessary to provide any benefits on plan termination that were unable to be provided through the terminating pension plan's assets. The PBGC was funded through contributions made by covered pension plans.

If the actuary finds an "insufficiency" and proposes options, the actuary is required to inform the plan's administrator. The onus then falls on the plan administrator to advise the regulator of what action will be taken to meet the funding requirements within the *Pension Benefits Act* (PBA).

Finally, under the PBA, the minimum content requirements for the annual statement to members must include a statement that the pension benefits are not guaranteed and a statement that if, on wind up of the plan, the assets of the plan are not sufficient to meet the liabilities of the plan, pension benefits may be reduced.

Thus, all MEPPs participants are in pension plans that have an expectation of defined benefits for the worker but are clearly DC plans for the employer(s).

Are the Canada/Quebec Pension Plans DB or DC Plans?

The Canada Pension Plan is the main plank in Canada's Social Security platform. The Quebec Pension Plan is almost the same but not identical (e.g., it has a higher contribution rate). Also, starting in 2019, the C/QPP is being gradually expanded with the addition of an additional "Tier II" component.

The Base "Tier I" C/QPP

Workers contribute 4.95 percent of wages (5.40 percent for the QPP) between $3,500 and the (approximate) Average Industrial Wage, or $57,400 in 2019. These contributions are matched by employers. The self-employed pay the total 9.9 percent (10.8 percent for the QPP). The QPP has a higher contribution rate mainly because of lower fertility and immigration rates and lower growth in wages.

The C/QPP benefit is defined as 25 percent of a member's career average earnings indexed using a wage index up to the average last five years of the proxy for the Average Wage. One needs 39 years of contributions at earnings of at least 100 percent of the Average Wage to get a full benefit equal to $13,855 per annum as of 2019 (indexed to the CPI) at age 65.

Evolving terms: Ask anyone who knows something about the C/QPP whether they are DB or DC plans and the answer will be "DB." But, in the history of these plans, the benefit structure has been changed many times (even to accrued benefits).

One of the biggest changes to the C/QPP was made in 1997. At that time, future benefit cash flows were amended to decrease costs by 9.3 percent. Also, contributions were increased from 6 percent in 1997 to 9.9 percent in 2003. This 9.9 percent was meant to be a steady state contribution rate and five CPP actuarial valuations have confirmed that this rate is sufficient over a 75-year time horizon.

Finally, an Automatic Balancing Mechanism was introduced for the CPP. If the actuarial report of the CPP shows that the minimum contribution rate required for 75-year sustainability exceeds the current contribution rate (i.e., 9.9 percent) and if the federal finance minister, after consultation with the provincial finance ministers (the CPP is a joint federal-provincial plan) is not able to make a recommendation that will achieve stability then the following changes will occur:

- the contribution rate will increase 50 percent of the increase needed to achieve stability.
- benefits will be frozen for three years, the time until the next actuary's report, by treating the cost-of-living adjustment factor as 1.00 so that no increase in benefits is prescribed.

The question remains: are the C/QPP DB or DC plans? The authors conclude that almost the entire Canadian labour force is participating in a pension plan where both the contribution rates and the benefit levels are well defined but neither is guaranteed. Thus, the C/QPPs have both target benefits and target contributions. In both cases, the participants can be said to have a substantial expectation as to their values but not a guarantee.

The New Enhanced "Tier II" C/QPP

As of 2019, the C/QPP is being gradually enhanced. Employee contributions to the Tier II will increase gradually from 2019 to 2023 to reach 1 percent of the Average Wage, matched by the employer (for a total of 2 percent). Starting in 2024, a second range of earnings covered by the plan, 14 percent above the Average Wage, will be introduced and employees will pay contributions of 4 percent of earnings in that new expanded range, matched by the employers for a total of 8 percent.

At maturity, the Tier II will replace 8.3 percent of work earnings up the Average Wage, and 33.3 percent from the Average Wage to the new ceiling. The Tier II pension, however, is based on how much and how long a worker has contributed to it. Therefore, it will take contributions for at least 40 years to attain these replacement rates and full benefits from Tier II will not be paid until 2063.

Just like the base C/QPP, the Tier II contains automatic adjustment mechanisms to contributions and benefits in the event of insufficiencies. It is explicitly designed as a targeted plan in which benefits must be funded exclusively with past member contributions and individual benefit levels adjusted in relation with how much was individually contributed.

Are Jointly Sponsored Pension Plans the Solution?

In Canada, some of the largest pension plans are now jointly sponsored pension plans (JSPP), the largest, in terms of members, being OMERS (Ontario Municipal Employees Retirement System) with 230,000 active members. Other large JSPPs are the Ontario Teachers' Pension Plan (OTPP), the Ontario Colleges of Applied Arts and Technology (CAAT) Plan and the Health Care of Ontario Pension Plan (HOOPP).

Key differences: A JSPP has many of the elements of a traditional MEPP but with a few important differences. The most important difference being that a JSPP may be sponsored by a single employer. JSPPs also have separate regulations from MEPPs in most jurisdictions, which can affect the plan's funding rules and insolvency rules. Many JSPPs also are able to retain separate plan rules for benefits accrued prior to the plan becoming a JSPP. For example, many JSPPs do not allow the so-called 'prior benefits' (benefits accrued prior to the plan becoming jointly sponsored) to be reduced except upon a plan wind up.

Unlike MEPPs, JSPPs are not just provided to unionized workforces. Many provide benefits based on years of service and highest average earnings close to retirement.

Similar to MEPPs, a JSPP must be jointly sponsored by the employer(s) and employees and the typical JSPP Board has representation for both sides. Also like MEPPs, JSPPs tend to be very large and provide opportunity to benefit from efficiencies associated with size and the pooling of assets and benefits for their members. Overall, JSPPs work especially well when the members have common interests and have similar working lifetimes. A homogenous member group is often the key to their success.

In many ways, a JSPP meets all of the requirements the paper would impose on an ideal pension plan for both today and for tomorrow. However, there are two major reasons why the current JSPP model needs to be adjusted if it is to be more commonly adopted in the marketplace, especially in the private sector.

The first is that it would be very difficult to find many employee groups in the private sector (or more groups in the public sector) that are sufficiently homogenous. This matters, because the benefits formula used for a typical JSPP inherently assumes that 'one size fits all' and that a single benefit formula will meet all of the members needs in much the same fashion. For example, the Ontario Teachers' Plan works very well, in part, because all of its members are teachers and have similar needs and expectations. For its part, OMERS has groups of employees that are relatively homogenous but

that homogeneity does not cross over between employee groups (ie., first responders versus other employees), which adds to the administrative and governance burden.

The second is that JSPPs are not completely efficient because they do not separate the needs of their pensioners from their working members. For example, if a JSPP separated the assets supporting its pensioners from the assets supporting its working members, there would have to be a rethink of their underlying investment policies and procedures leading to more refined investment strategies.

The separation of pensioners from working members would result in more efficient investment strategies, more efficient administration and would remove the potential subsidization of one generation by another. Governance would be made easier since the inherent conflicts between the needs of pensioners and active employees would be reduced.

While cross-generational subsidization may be generally accepted in current public-sector JSPPs, we suspect that a private-sector audience will be much more concerned about intergenerational equity.

Searching for Common Ground: The Collective Solution

In describing a new pension paradigm, this paper suggests that the common ground involves two possible plans that are equivalent – one DB, the other DC.

DB with a DC Flavour: The "DB" plan could be described as a Pooled Target Benefit Pension Plan (PTBPP). The "pooled" characteristic of this family of plans results from plan assets being heavily commingled with assets from other plans with the intent of reaping the benefits of size. Plan assets can be managed by the private sector but they would not be controlled by the plan sponsor. This should avoid some of the investment issues now inherent in the MEPP model in Canada. Further, total management expenses should be competitive with other large pension systems. Under any PTBPP, taxpayers should not subsidize any administration costs or be exposed to any plan risks.

For the plan sponsor, this new PTBPP is a DC plan since the only requirement for the plan sponsor is to pay the required defined contributions. For existing DB sponsors, this will release them from a huge amount of responsibility inherent in a classic DB plan.

The initial target benefit would be based on some agreed-upon earnings replacement objective. The required contribution rate would be set accordingly, assuming, for example, 40 years of contributions and using slightly conservative actuarial assumptions, e.g., a financial economics attitude toward the equity-risk premium. The particulars for a participant would, of course, depend on the age and other characteristics of the participant at entry.

Plan participants will receive regular updates on their expected retirement benefits. With this information, members can better place their pension benefits in the context of their overall retirement plan, and determine what, if any, need exists for supplementary personal savings. These updates will also remind participants that benefits are not guaranteed.

DC with a DB Flavour: The "DC" plan occupying this common ground could be called a Collective DC or a Commingled DC plan. For the plan sponsor, who now becomes a participating employer, the only requirement will be to make defined contributions. Administrative, governance and fiduciary responsibilities are shifted to the board of trustees. Again, the plan would have to be big – at least $1billion. The plan should be big enough to carry the longevity risk within the plan. That is, any individual participant would receive lifetime income from the plan without individual longevity risk. In a large plan that would be achieved with ease.

So, what is the difference between a Pooled Target Benefit DB Pension Plan and a Collective or Commingled DC Plan? Actuarially, they are equivalent in that the same aggregate contributions provide the same targeted benefits. There are nuanced differences in the sense that one could highlight the DB features of the Pooled Target Benefit DB Plan and one could highlight the DC features of the Collective DC plan.

In a Pooled Target Benefit DB Plan commingling of assets occurs before retirement and continues unchanged after retirement. There can be cross-subsidization from one member to another prior to retirement. In a Collective DC Plan, member accounts are invested together but are allocated separately prior to retirement. After retirement they are managed together: a pension, is a pension, is a pension.

The two approaches result in the same collective management of the plan both before and during retirement. In the Pooled Target Benefit DB Pension Plan, there can be some support of the pensioners by the active members, or vice versa, that is agreed upon when the plan is established. In a Collective DC Plan, there is normally a separation of the active member and pensioner interests. But, in fact, they are actuarially equivalent in that the same aggregate contributions will result in the same aggregate benefits.

It is our hope that regulation and tax laws will allow small and medium-sized employers to join in such collective schemes. Such collective plans could help address workplace pension coverage issues by providing a cost-efficient vehicle for small and medium-sized enterprises to embrace. Examples that now exist are the sale of pension services by the CAAT pension plan in Ontario, the new plan option offered by OPTrust, and Blue Pier™.

There are differences in sharing risks in that the Collective DC Plan pools risks only after retirement and shares services to obtain economies of scale prior to retirement. The Pooled Target Benefit DB Pension Plan allows for additional sharing between members prior to retirement, between member groups and even potentially intergenerationally.

One should not expect any of these plans to exist with low employer/employee contributions (e.g., < 5 percent of pay). In fact, it would be more likely to anticipate employer plus employee contributions in the 10 percent to 20 percent of pay range. Thus, for sponsors who, today, have pure, classical DC plans, this may mean a significant uptick in the contribution rate to achieve meaningful target benefits.

Antolin (2009) indicates that a contribution rate of 5 percent would provide a replacement ratio of 25.3 percent, while a contribution rate of 10 percent would double that to 50.7 percent. Equivalently, a 1 percent increase in the contribution rate would raise the replacement rate 5 percentage points, *ceteris paribus*. (This assumes 40 years of contributions and a fixed portfolio of 40 percent domestic government bonds and 60 percent domestic equities.)

An independent Management Board of pension and governance experts would make major decisions as to the governance of the fund and liaise with the investment manager(s). They will also decide on any adjustment of benefits. The Board must be independent of plan sponsors, service providers, government and investment managers.

For some plan sponsors, this might be viewed as a small loss in that they no longer have the right to unilaterally control the investment of the funds. For the plan participant, this should be viewed as an improvement over a traditional employer-sponsored pension plan where participants often have little to no say in the management of the fund.

This approach to pensions will result in huge improvements for the small- and medium-size firms' employees now mostly participating in self-directed capital accumulation plans and relying on retail investment management. No longer will the plan participant have the responsibility for the investment of funds. This will be done by the

arm's-length independent investment manager(s) reporting to the Board.

Such plans should also enhance the retirement income security of workers who are presently in Single-Employer Pension Plans but who change jobs often (i.e., portability). Because one is accruing a DC account, moving from one employer to another should not have as serious an impact as it can today in a DB plan. Further, because workers change jobs more often than they change careers, it is quite conceivable that even with a job change, the worker may still be in the same commingled pension fund.

Clearly, the investment risk is now that of a large commingled asset portfolio (at least $1 billion). The total expense ratio for these plans should be in the lower-end of the range experienced by large pension plans which is 0.34 percent to 1.07 percent (Fraser Institute 2016) and some institutional DC arrangements.

Asset values will go up and down but should not have a full or immediate impact on the benefit schedule. (This is now true for Canadian MEPPs.) However, reductions in benefit promises are possible.

No longer will the individual worker/participant be expected to have the ability to manage one's assets, nor to manage the longevity risk. This would mitigated by sharing the risk in a large collective.

One risk that has not been mentioned so far is the inflation risk. It is the proposition of this paper that the contribution required to fund the Pooled Target Benefit DB Pension Plan would be determined using slightly conservative actuarial assumptions (e.g., taking a financial economics view of the equity risk premium). If rates of return exceed those assumed in the actuarial projections, this would create room for benefit improvements. A similar approach could be used to establish initial contribution rates for a Collective DC Plan.

One benefit improvement would be to upgrade the earnings profile of the participant pre-retirement so as to move the plan from one replicating a Career Average plan to one more closely paralleling a Final Average plan. A second improvement, that would take place post-retirement, would be to use any 'excess' earnings to 'index' benefits to inflation. Clearly, there is no guarantee that true CPI-indexed benefits will necessarily result. However, this plan would move indexation from a hope to an expectation. (This is very similar to how the national pension system in the Netherlands works.) This 'targeted' nature of the cost of living allowance is now becoming the norm in most public-service pension plans in Canada.

Further questions will have to be addressed.

- Do we want a plan that provides support to those with higher lifetime earnings increases at the expense of others (e.g., a final average earnings upgrade)?
- Do we want a plan that allows or supports intergenerational subsidies?
- Do we want a plan that uses some "active member excess earnings" to support pensioner increases or should the pensioners be managed separately?
- Should the plan be sponsored by an employer or employers or is a jointly sponsored model preferred? How will contributions and benefits be set?
- How should the plan be governed? Who controls any future benefit changes or reductions? Who controls future contribution changes?
- How should the plan's approaches to these questions evolve over time should plan experience be sufficiently different than expected?

Finally, the following reforms to the current regulatory environment would support the new pension paradigm.

- Regulatory support for pooling, not insuring, member risks after retirement in a collective DC Plan.
- Regulatory frameworks for jointly sponsored plans that are consistent across jurisdictions.
- Regulatory frameworks for trusteed pension plans that do not require government or union sponsorship.

- Regulatory frameworks that allow and promote private sector access to the very solutions already available in the public sector.
- Regulatory frameworks and support that provide access to the efficiencies of collective pension plans and that recognize the unique needs of small private-sector employers and self-employed individuals.

Conclusion

Some societal risks require a collective delivery system to mitigate the given risks. An example is the provision of retirement income security.

With traditional DB plans growing increasingly rare for a raft of reasons, and DC plans ill-serving working Canadians, finding a common ground approach that mitigates the shortcomings of both is needed. This paper has explained in detail a new pension paradigm that lies between the Classic DB and Classic DC. It can be called a Pooled Target DB Pension Plan or it can be called a Collective or Commingled DC plan. That does not matter since these two plans are actuarially equivalent. An example of the former is the UBC Faculty Pension Plan and of the latter is the Saskatchewan Pension Plan. The two plans we have proposed lie on that common ground and attempt to minimize the risks that now exist in traditional DB or traditional DC plans, while retaining the advantages of both traditional delivery mechanisms.

The questions we need to focus on relate to how plan experience will be shared between member groups within a pension plan. Risks may be shared between members and member groups but that then raises the question, how do we share? Rules for sharing must be established and documented so that all are protected. Contributions may differ between member groups for entire careers or just temporarily. What provisions need to be established to ensure everyone is treated fairly and well? Not equally, but fairly and well.

It is the hope of the authors that, going forward, pension debates will start at this common ground. That is, the participants in the discussion will start with proposing either a Pooled Target Benefit DB plan or a large Collective DC plan. Then the discussion would focus on whether one wants a bit more of a DB flavour and why or whether one wants a bit more of a DC flavour and why. This should make arriving at an agreeable plan option much easier for all.

It is vital that regulation and tax laws allow small and medium-sized employers to join in such collective schemes to extend their benefits to the majority of working Canadians.

The paper concludes that policies encouraging larger collective, pooled pension plans governed by independent management boards are the way forward.[7] In Canada, such solutions are becoming common in the public sector but need to be encouraged in the private sector.

7 It should be noted that the March 2019 budget proposed regulatory changes that will support large collective DC Pension Plans by introducing new variable annuities and deferred annuity options among other improvements.

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