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Pension Policy

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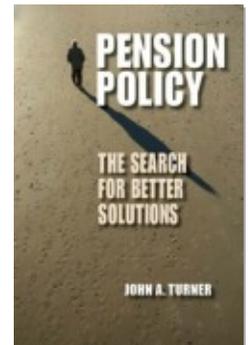
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Hybrid Plans

The Best of Both Worlds?

Hybrid pension plans combine features of both defined benefit and defined contribution plans. A factor motivating their development appears to be the desire by employers to shift the risk they bear in defined benefit plans to plan participants. In traditional defined benefit plans, the employer bears the investment risk and the risk relating to the longevity of participants. In hybrids, one or both of these risks is shifted to participants. Hybrid defined benefit plans preserve aspects of defined benefit plans for workers, such as collective management of investments, while reducing the risks that employers face, such as mortality risk.

This chapter discusses risk-sharing approaches through the use of hybrid pension plans. It first discusses the types of hybrid plans in existence. It then discusses possible types of hybrid plans that have been proposed.

TYPES OF HYBRID PLANS

The four main types of hybrid plans in the U.S. private sector are 1) cash balance plans, 2) pension equity plans, 3) floor offset plans, and 4) multiemployer plans. This section also discusses sequential hybrids, which are offered in the United Kingdom, and the huge ABP plan in the Netherlands. Features of the types of hybrid plans are summarized in Table 7.1.

The plans are described and their handling of risks analyzed based on the actual functioning of each type of plan. For example, while cash balance plans offer annuities, the usual practice is that workers take their benefits as lump sums. Thus, the analysis of the distribution of risk concerns the distribution of risk as the plans actually function, not as they possibly or ideally could function.

Table 7.1 Types of Hybrid Pension Plans

Plan name	Employee (EE) or employer (ER) contributes	Defined benefit or defined contribution accrual	Account balance or benefit formula	Risk borne by:			
				Investment risk	Interest rate risk for annuitization	Mortality	Post- retirement inflation
Defined benefit–based							
Cash balance plan	ER	DC	A	ER and EE	EE	EE	EE
Pension equity plan	ER	DB	A	ER	EE	EE	EE
ABP plan (Netherlands)	ER and EE	DB	B	ER and EE	ER	ER	EE
DB(k)	ER and EE	DC	A	ER	EE	EE	EE
Plain Old Pension Plan	ER	DB	B	ER and EE	ER	ER	EE
Life expectancy– indexed defined benefit plan	ER	DB	B	ER	ER	EE and ER	EE
Combination of defined benefit plan and defined contribution plan							
Floor offset plan	ER, with EE in some plans	Greater of DB or DC	Greater of A or B	ER and EE	ER	ER	EE
Sequential hybrid (UK)	ER and EE	DB and DC	A and B	ER and EE	ER and EE	ER and EE	EE

NOTE: A = account balance, B = benefit formula, DB = defined benefit plan, DC = defined contribution plan, EE = employee, ER = employer.

SOURCE: Author's compilation.

Cash balance plans. Cash balance plans appear to workers to be a defined contribution plan. About a quarter of active participants in U.S. defined benefit plans are in cash balance plans (USDOL 2008). These plans provide each worker with an account to which contributions and interest are credited. Cash balance plans are communicated to workers in terms of a balance in an individual account, they are readily portable at job change, and their benefits are based on earnings over the worker's entire period of participation in the plan. In a cash balance plan, each participant's account is periodically credited with a dollar amount by the sponsoring employer, usually based on a percentage of the individual's salary. Unlike a traditional defined benefit plan, a cash balance plan provides workers with hypothetical or notional individual accounts.

Cash balance plans are required to offer annuities because the Department of Labor regulates them as defined benefit plans. Typically, however, workers withdraw their benefits in the form of a lump sum payment, which, in the United States, is a defined contribution plan characteristic. Workers may bear some investment risk because the interest rate used to credit accounts may vary with rates of return in capital markets. Like traditional defined benefit plans, workers are automatically enrolled in cash balance plans.

Although a cash balance plan portrays benefits to employees in the form of an individual account, the account balance does not depend on the performance of plan assets. Contributions and investment earnings are not allocated to individual accounts; instead, contributions are made to a common trust fund for all participants, and benefits are paid directly from the fund.

From the perspective of employers, cash balance plans have many features of defined benefit plans (Turner 2003a). Pension law treats them as defined benefit plans because they specify a monthly benefit at retirement. They are funded by employers as defined benefit plans, with a single, collectively managed fund. Also like traditional defined benefit plans, cash balance plan benefits are insured by the Pension Benefit Guaranty Corporation (PBGC).

The cash balance pension formula determines benefits as a function of wages, pay credit rates, and interest credit rates. Contributions credited to the employee's account by the employer (pay credit) are generally quoted as a given percentage of the employee's pay. Interest

credits equal to the product of the employee's credited account balance times an interest credit rate are also accrued in the account. An interest credit rate is either a fixed rate or a variable rate tied to an index, such as the 30-year Treasury bond rate, or the rate on one-year Treasury bills reset every six months.

In a cash balance plan, the employer bears the investment risk of the underlying assets in which the plan is invested. Employees, however, may bear some investment risk because of fluctuations in the rate of return on the asset that determines the crediting rate. Employees bear interest rate risk if they choose to convert their account balances to annuities. They bear longevity risk if they do not convert to annuities, which is the usual practice. Reasons why employees do not choose annuities are discussed in Chapter 10.

Pension equity plan (PEP). A pension equity plan (PEP), called by the more descriptive name of final salary lump sum plan in the United Kingdom, allows for the accrual each year of a certain percentage of final average pay. That percentage can rise with tenure so as to reward long-tenure workers. At retirement, the total percentages accrued over the employee's entire career are summed, and then that percentage is applied to the final average pay to determine the final account balance. The benefit payable is then determined from that balance (McGill et al. 1996). PEPs are classified under pension law as defined benefit plans and are insured by the PBGC.

In a PEP, the employer bears the investment risk on the assets in which the plan is invested. The employee bears no investment risk. As in cash balance plans, employees bear interest rate risk if they choose to convert their account balances to annuities, and they bear longevity risk up to the point of retirement if they annuitize, and beyond retirement if they do not annuitize.

This type of plan is similar to a cash balance plan in that workers have individual accounts that are credited each year. While cash balance plans have accrual patterns similar to defined contribution plans, PEPs have accrual patterns similar to defined benefit plans.

Floor offset plans. Floor offset plans, also called floor plans, and called underpin plans in the United Kingdom, combine two separate

plans: a defined benefit plan and a defined contribution plan. The defined benefit plan provides a guaranteed minimum benefit and is insured in the United States by the PBGC. Thus, employees do not bear the downside risk of financial market investment, but to the extent that the defined contribution plan accumulations produce a larger benefit than that payable from a defined benefit plan, employees can gain from that upside potential. To limit the financial market risk to the employer, the plan may limit the investment options from which the employee may choose in the defined contribution plan. The defined contribution plan must be converted into an annuity, but the participant generally must bear the longevity and interest rate risk of the conversion.

Multiemployer plans. Multiemployer plans are collectively bargained plans that cover more than one employer, and in most cases they cover a number of employers. Multiemployer plans are defined benefit plans from the perspective of workers, with benefit formulas that determine the value of benefits. From the perspective of employers, they operate like defined contribution plans, at least for the period of a bargaining cycle. Over a bargaining cycle, which is typically two or three years, the contributions of the sponsoring employers are fixed. In these plans, however, the future benefit accruals of workers are more likely to be affected by the level of plan funding than is the case in single employer plans.

Sequential hybrids. A sequential hybrid is two distinct plans, rather than a single plan with hybrid features. With a sequential hybrid, provided by some employers in the United Kingdom, typically the employer offers a new employee membership in a defined contribution plan at hire. After a fixed period that the employee remains with the employer, such as five years, the employer enrolls the employee in a defined benefit plan. This type of arrangement provides the positive features of defined contribution plans for short-tenure employees and the positive features of defined benefit plans for long-tenure employees (Wesbroom and Reay 2005).

The ABP plan. In the Netherlands, the ABP plan, which is the largest pension plan in Europe in terms of assets, is for Dutch government

employees (de Jong and Turner 2001). This plan bases benefits on a benefit formula, as is done in defined benefit plans. However, the plan is financed by contributions by employees and employers, and the contribution rate varies annually based on the investment performance of the pension fund. The calculation of the contribution rates uses a procedure that smoothes the fluctuations in the rates so that the annual variation is small.

Dutch collective defined contribution plans. In the early 2000s, Dutch employers started using a new hybrid plan called a collective defined contribution plan. This type of plan shifts both investment risk and longevity risk to plan participants. A collective defined contribution plan has a benefit formula similar to a defined benefit plan. However, in these plans all the investment risk is shifted to employees as a group. In a traditional defined contribution plan, by contrast, the investment risks are borne by employees individually, and for that reason can be particularly problematic for older workers.

In a collective defined contribution plan, employees accrue benefits based on a career average benefit formula. The level of benefits accrued in a year depends on the salary the worker earns that year. These plans provide benefits in the form of a price-indexed annuity. Employers contribute a fixed percentage of wages to these plans and have no additional liability if the investments of the plans perform poorly.

If a collective defined contribution plan suffers investment losses and becomes underfunded, the plan's governing body, which includes representatives of both employers and employees, decides how the adjustment is to be made. It can be made by an increase in contributions of employees (but not employers) or a reduction in benefit indexing and in the accrual of benefits. If the plan's investments perform well and the plan becomes overfunded, the workers rather than the employer benefit. Some Dutch companies have added the feature that if the plan becomes overfunded, they can reduce their contribution, but such plans do not qualify as a collective defined contribution plan.

These plans appeal to employers because the employer bears less risk than with a traditional defined benefit plan. They can be appealing to employees because the employee bears less risk than with a traditional defined contribution plan.

Hybrid Plan Proposals

Several types of hybrid plans have been proposed by pension analysts.

DB(k). DB(k) plans are defined benefit plans with 401(k) features (American Academy of Actuaries 2001). This type of plan was enabled by the Pension Protection Act of 2006, but the effective date for its implementation is 2010. This plan option will be available to employers with 500 or fewer participants. This type of pension plan would look like a combined defined benefit plan and 401(k) plan to workers. The defined benefit component is either a benefit formula of 1 percent of final average pay for up to 20 years of service, or a cash balance formula that increases with the participant's age. The 401(k) component would include an automatic enrollment feature (using 4 percent as the automatic enrollment contribution rate), and would provide for a fully vested employer matching contribution of 50 percent on the first 4 percent contributed by workers. Each worker would have an account, to which would be credited the worker's contributions and the matching contributions of employers. The account would be credited with a rate of return that would be determined in advance, or it would pay investment returns based on bond rates.

DB(k) plans differ from cash balance plans in that the contributions credited to the worker's account are not determined in advance by a formula in the plan document but are determined by the amount that the employee decides to contribute. Also, employees would have a choice among accounts in which to place their contributions.

Employees would bear interest rate risk if they chose to convert their account balances to annuities. They bear longevity risk if they do not convert to annuities.

Plain Old Pension Plan. The Plain Old Pension Plan (POPP) is a variation on the traditional defined benefit plan (Conversation on Coverage 2007). It would provide a modest guaranteed benefit accrual that employers could boost for a year and then reduce back to the basic benefit in future years. In these plans, the employer bears the financial market risk, but that risk is shifted back to the employee to the extent

that employers reduce the level of benefit accrual when financial markets are performing poorly. The employer bears the interest rate and longevity risk.

Life-indexed DB plan. Life expectancy risk can be divided into two parts: the idiosyncratic risk that workers face concerning the uncertainty of their individual life expectancy, and the systematic risk that annuity providers face concerning the life expectancy of a birth cohort. Workers are concerned about the idiosyncratic risk, while pension providers are concerned about the systematic risk. With large numbers of participants, the idiosyncratic risks of workers are diminished in aggregate for the plan provider through the pooling of risks.

A hybrid plan option that would shift the systematic life expectancy risk to workers but would protect them from the idiosyncratic risk is the life-indexed DB (LI-DB) plan (Muir and Turner 2007). With this type of plan, the benefit formula in a traditional defined benefit plan would be modified so that for each new retirement cohort, the generosity of the plan would be slightly reduced to offset the effect of the long-term trend of increased life expectancy on the present value of future benefits. This plan has the advantage for employers that they do not have to deal with the uncertainty of future improvements in life expectancy.

ANALYSIS OF RISK-BEARING IN HYBRID PLANS

This section groups the hybrid plans considered according to how they deal with financial market risk, longevity risk, and interest rate risk.

Financial Market Risk

Financial market risk is shifted to workers in a number of the hybrid plans. Workers can bear financial market risk either through variations in their future benefit levels or variations in their contributions in defined benefit plans that require worker contributions. Plans in which the risk is borne through variation in future benefit levels can affect benefit levels at least three ways: 1) through the effect on the worker's no-

tional account balance in plans that mimic defined contribution plans, 2) through benefit level in plans that retain the traditional defined benefit formula as the method for determining future benefits, or 3) through actual defined contribution account balances in plans that combine a defined contribution plan with a defined benefit plan.

Effect on a notional account balance. In cash balance plans, workers bear financial market risk through variations in future benefits to the extent that the crediting rate on their accounts varies with financial markets. In DB(k) plans, workers would bear financial market risk through variability in future benefits due to variations in the crediting rate on their account balance.

Effect on an actual defined contribution plan account balance. In floor offset plans, workers bear financial market risk through future benefit variability to the extent that they receive their benefits from the defined contribution part of the plan. In sequential plans, workers also bear financial market risk on the defined contribution part of their pension arrangement.

Effect on the value of traditionally calculated defined benefit plan benefits. In the Plain Old Pension Plan, the accrual of benefits varies depending on the investment performance of the plan.

Effect on contributions to a defined benefit plan. In the ABP plan, workers bear financial market risk through the level of their contributions.

Life Expectancy Risk

Life expectancy risk that relates to the life expectancy of the individual can be transferred to workers by paying benefits as a lump sum, rather than as an annuity. Life expectancy risk that relates to changes in the life expectancy of an age cohort can be transferred to workers by life expectancy indexing of benefits at retirement.

Individual life expectancy risk. Individual life expectancy risk is transferred to workers by paying lump sum benefits in cash balance

plans, in DB(k) plans, and in the defined contribution part of floor offset and sequential plans.

Cohort life expectancy risk. Cohort life expectancy risk is transferred to workers in life-expectancy-indexed defined benefit plans.

Interest Rate Risk

Interest rate risk arises when workers desiring annuitized benefits must convert lump sum benefits. This risk occurs in the same plans that shift individual life expectancy risk to workers by generally paying lump sum benefits: cash balance plans, DB(k) plans, and the defined contribution part of floor offset and sequential plans.

CONCLUSION

Pension risks can be shared by workers, employers, and insurance companies in many ways. In a traditional defined benefit plan, the investment risk, the interest rate risk associated with annuitization, and the risk related to workers' longevity are all borne by employers. In a traditional defined contribution plan, these risks are all borne by workers. This chapter discusses hybrid defined benefit plans where the investment risk, interest rate risk, or longevity risk is shifted to workers.

Defined benefit plans have declined considerably in terms of the percentage of the workforce covered by them in the United States and the United Kingdom, and less dramatically in Canada. Hybrid plans are of particular interest because they may provide an option that is more attractive to employers than traditional defined benefit plans, while preserving for workers some of the risk protections of traditional defined benefit plans.

This chapter analyzes hybrid employer-provided defined benefit plans currently in existence: cash balance plans, pension equity plans, floor offset plans, the Dutch ABP plan, and sequential plans in the United Kingdom. It also analyzes types of hybrid plans that have been proposed.

One of the proposals for hybrid plans is the life-indexed defined benefit plan. This plan, similar to notional defined contribution plans, would adjust the benefit received at the point of retirement for improvements in life expectancy. That adjustment would result in a small downward correction in benefits for each successive birth cohort. This plan shifts cohort life expectancy risk to workers through the downward adjustment of benefits. However, it shields them from individual life expectancy risk because it provides benefits as an annuity.

