

Pension Policy

The Search for Better Solutions

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Introduction to Pension Policy

The U.S. pension system needs fixing. While some of its problems are longstanding, the system overall is in decline. Projections of the future are not certainties, and some analysts differ, but it appears likely that the financial security of current workers when they retire will be less than that of current retirees. For workers relying on 401(k) plans (which were named after the Internal Revenue Code section that enabled them), dramatic declines in the financial markets around the world in 2008 turned retirement security formerly provided to long-tenure workers by defined benefit plans into a system of retirement roulette. Workers in 401(k) plans are gambling that they will not be retiring in a period of dramatic stock market declines, such as experienced in 2008.

By international standards, the U.S. pension system performs poorly. When measured in a comparable fashion, the U.S. poverty rate for people age 65 and older is more than twice as high as in other high-income countries (Pension Rights Center 2007). The move toward 401(k) plans has reduced the extent to which the pension system provides annuities and survivors benefits, reducing retirement income security. People who work for employers that offer 401(k) plans often do not participate, and when they do they tend to make poor financial decisions. Employers are abandoning defined benefit plans for workers while maintaining generous pensions for executives. People in defined benefit plans who are laid off suffer portability losses, while their employers' plans receive corresponding actuarial bonuses. Long-lived retirees in defined benefit plans have the real value of their benefits decimated by inflation, while long-lived retirees in defined contribution plans risk running out of money because of not having annuitized their account balances.

The pension system is supposed to provide secure and adequate retirement income. In both respects, the U.S. system needs better solutions. With the decline in defined benefit plans and the increasing reliance on 401(k) plans, future retirees will have less secure and less adequate retirement income than current retirees. While that outcome would not occur if all workers covered by 401(k) plans contributed to their plans consistently and made wise investment decisions, research

shows that many people do not contribute consistently and some do a poor job of managing their 401(k) plans.

Pension policy is complex. It involves issues relating to taxation, labor economics, finance and behavioral finance, law, actuarial science, business administration, and accounting. Drawing on these disciplines, but taking an economist's perspective, this book discusses pension policy for U.S. private sector employer-provided pension plans. In analyzing pension policy, it addresses two questions: 1) What is the pension policy problem? and 2) What are the possible solutions? The book's focus is the search for better solutions for pension policy.

The United States has a federal system of government, where states play an important role in the development of policies in some areas. The 50 states provide the opportunity for social experimentation on policy innovations at a smaller level than the national level. That possibility for experimentation, however, is not available in the pension system because federal law preempts state law on pension issues. For this reason, international experience is particularly important in studying innovations in pension policy. Thus, this book presents lessons for U.S. policy from the experience of other countries.

AN INTRODUCTION TO PENSIONS

The two main types of pension plans are defined benefit plans and defined contribution plans. Hybrid plans combine features of both. Defined benefit plans base benefits on a benefit formula that usually involves the worker's years of service and earnings. Examples of types of defined benefit plans include final salary plans, where the benefit is based on the average of the last few years of earnings, and career average plans, where the benefit is based on average earnings over the worker's career.

Defined contribution plans are retirement savings plans where the worker accumulates assets in an individual account. The most prominent U.S. example is 401(k) plans, where the worker generally must contribute to participate, and where the employer may contribute based on the worker's contribution. When this book refers to U.S. defined contribution plans, it generally is referring to 401(k) plans, since they have

become nearly synonymous with defined contribution plans because of their prevalence. In 2005, there were \$2.4 trillion in 401(k) plans and \$0.4 trillion in non-401(k) defined contribution plans (USDOL 2008).¹

When the landmark pension legislation, the Employee Retirement Income Security Act of 1974 (ERISA), was passed, pension coverage was primarily provided by defined benefit plans. In part because of the effects of that act and of subsequent legislation, pension participation has shifted away from defined benefit plans and toward defined contribution plans. According to the U.S. Department of Labor (USDOL), since 1984 more workers have been active participants in defined contribution plans than have been in defined benefit plans. By the early 2000s, considerably more than twice as many workers were active participants in defined contribution plans as were in defined benefit plans (USDOL 2008). The shift from defined benefit to defined contribution plans has meant the shift of investment risk from employers to employees, but it has reduced risks for job-changing or laid-off employees.

The 401(k) plan is usually participant-directed. That means that participants decide their investment, at least for the plan's assets that derive from the participant's own contributions. In 401(k) plans, employee choice plays a large role. Participation is typically voluntary. Employees who choose to participate also can choose, within limits, what percentage of salary to contribute. They choose investments from the options offered by the plan.

A more recent development in U.S. pensions is a hybrid plan called a cash balance plan. These plans are hybrids because they combine features of both defined benefit and defined contribution plans. To employees they have many features of defined contribution plans, while to employers they are funded like defined benefit plans. In 1995, 3 percent of defined benefit participants were in cash balance plans (Elliott and Moore 2000). A decade later, cash balance plans accounted for a quarter of defined benefit plan participants (USDOL 2008).

Legislation has created several new types of plans. The Pension Protection Act of 2006 introduced a new type of hybrid plan, one combining defined benefit and 401(k) features—the DB(k) plan. The legislation enabling that plan will take effect in 2010. Earlier legislation had created the Roth IRA and the Roth 401(k). With the two Roth plans, contributions are not tax-deductible, but benefits received at retirement are tax-free.

Other countries have also had major changes in pensions. In recent years, the United Kingdom, Ireland, Germany, Norway, and New Zealand have added employer mandates for pension provision, making employer mandates a major trend. The Netherlands and Iceland have introduced hybrid pension plans. Germany and Japan have introduced new types of defined contribution plans.

At the same time that these changes were occurring in the real world, economists have advanced the economic analysis of pensions. With the development of behavioral economics, we better understand the problems people encounter interacting with the pension system, particularly with 401(k) plans. The development of individual account plans has led to a more sophisticated analysis of those plans and to a new emphasis on understanding annuities.

BASIC ISSUES IN PENSION POLICY

To introduce pension policy, this section discusses nine issues that affect pension financing. Countries use a wide range of approaches in addressing the basic financing issues discussed in this chapter. The issues discussed here represent fundamental questions about retirement income financing that must be addressed in designing new pension systems or changing established ones.

Issue 1: Should the Private Pension System Be Voluntary or Mandatory?

A number of countries, including Australia, Switzerland, Sweden, Finland, France, Chile, Mexico, and the Netherlands, require most employees to be covered by a pension plan, either by law or by collective bargaining agreements. While U.S. employers have long provided pensions voluntarily, they also have a long tradition of staunchly opposing mandates. Nonetheless, the topic of extending coverage by mandate is perennial in the policy debate because of the failure of other approaches to cover more than half of the private sector workforce.

To encourage, rather than to mandate, workers to participate in pensions, the federal and state governments provide tax incentives,

employers provide matching contributions to 401(k) plans, and, increasingly, employers that offer 401(k) plans are automatically enrolling new employees. The government has added the Saver's Credit to increase the incentive to participate for low-income workers. The Saver's Credit provides a tax credit to low-income workers with tax liability who participate in a pension plan.

Other countries have gone further, establishing a range of mandates with increasingly greater degrees of compulsion—mandates that employers provide plans (but that workers don't need to participate), mandates that employers offer matching contributions, mandates for automatic enrollment of employees with opt-out, and mandates that employees participate. In recent years, the United Kingdom, Ireland, Germany, Norway, and New Zealand have added employer mandates for pension provision, but with voluntary employee participation.

Mandates can differ in the way they treat employers and employees. In Australia, the mandate requires both that employers offer a plan and that employees participate. By contrast, the United Kingdom mandates that employers offer a plan, but participation by employees is voluntary. U.S. pension law does not require employers to offer a plan, but if they do, they must cover most full-time employees.

Mandates also differ in the extent to which they cover the workforce. Mandates on employers need to recognize that most employers are small employers employing a few people. Many are not even businesses, but are homeowners employing someone to take care of their children or clean their house. Mandates may exclude small employers who employ, for example, fewer than 10 employees, employees working in households, young employees, low-wage employees, and employees working fewer than a minimum number of hours or with short tenure. In countries where pension plans are voluntarily provided by employers, the government may set minimum standards as to which workers (or what percentage of the workforce of the employer sponsoring a plan) are included in the plan.

The United States and nearly all other countries have a mandatory, state-operated pension—social security. Some people argue that instead of mandating pensions, why not simply increase the generosity of social security. Social security, however, is not funded, while private pensions are.

Although mandates are capable of greatly increasing pension coverage, they do so at the cost of loss of individual choice. The United States has not mandated pensions, but it has moved toward greater degrees of encouragement.

Issue 2: If Private Pensions Are Voluntary, to What Extent Should the Government Encourage Them?

All countries with well-developed voluntary pension systems encourage pensions by providing preferential tax treatment. In Canada and the United States, pension plans receive tax preferences that allow money to accumulate tax-free. Countries, such as New Zealand, that have not provided tax preferences for pensions, but have treated them like other forms of savings, have had few employers provide pensions.

A progressive personal income tax provides greater tax incentive and greater tax subsidy to higher-income persons than to lower-income persons. This incentive is upside down. High-income persons are already more likely to save for retirement than are low-income persons. An alternative approach would be to provide everyone a limited tax credit for pension savings, which would provide the same marginal incentive to workers at different income levels. The tax treatment of pensions is considered in greater detail in Chapter 5.

Issue 3: Who Is Best Able to Bear the Inherent Financial and Demographic Risks in Pension Plans?

Pension plans can involve five types of actors: employees, labor unions, employers and employers' organizations, financial service providers, and government. Risks could be borne by any of these actors. The primary decision as to who bears risks is made when policymakers or the pension provider decides whether to offer defined benefit, defined contribution, or hybrid plans. With defined benefit plans, typically the provider bears the financial market risk, as well as the demographic risk that the participants will live longer on average than expected. However, in cases of bankruptcy of the sponsoring firm, the financial risk can be borne by workers. Countries where defined benefit plans predominate include Germany, Japan, Canada, Ireland, and the Netherlands. With defined contribution plans, the participant bears the financial market

risk. If the plan does not provide annuitized benefits, the participant also bears the demographic risk that he or she will live longer than expected. Countries where defined contribution plans predominate include Australia and Sweden. The United States and the United Kingdom, and to a lesser degree Canada and Ireland, have seen a trend toward defined contribution plans.

With hybrid plans, the financial and demographic risks can be borne in different ways. For example, with cash balance plans, the participant may bear some financial market risk (as such risk affects the crediting rate provided by the plan) and may bear life expectancy when not annuitizing their account balance. Risk-bearing in pension plans is considered in more detail in Chapter 6, and hybrid plans are considered in Chapter 7.

Issue 4: Should the Government Mandate Insurance or Guarantees for Pension Benefits?

The government requires that benefits in some plans be guaranteed in Finland, Germany, Japan, Switzerland, the province of Ontario in Canada, the United Kingdom, and the United States. In Japan, Germany, the United Kingdom and the United States, mandatory pension benefit insurance for defined benefit plans is provided. This insurance covers the risk that the sponsoring firms will declare bankruptcy without having fully funded their pension plans. Chile, Argentina, Mexico, and Switzerland provide some form of insurance or guarantee of account balances in defined contribution plans. Pension insurance programs and guarantees are discussed in Chapter 6.

Issue 5: Who Should Pay for Pension Plans?

Ultimately, according to economic theory, regardless of whether the employer or employee makes the contribution, the employees bear the cost, either through reduced wages relative to what they would be without a pension plan or through direct contributions. This process is clearly visible in the trade-offs labor unions make in collective bargaining, but this tenet of economic theory is greeted with skepticism among noneconomists.

The question remains as to who should finance the pension plan. Should the funding come from employers, employees, or both? In the United States, funding for private sector defined benefit plans comes almost entirely from employers. In Canada, the United Kingdom, and most other countries with substantial numbers of defined benefit plans, employees contribute to those plans and receive a tax deduction for doing so. In some defined benefit plans in Canada, the employees' contribution rate has been increased as a response to the greater benefit costs resulting from longer life expectancy. In the United States, private sector employees do not receive a tax deduction for contributions to defined benefit plans, but they do receive a tax deduction for contributions to 401(k) plans.

The lack of tax deductibility of employee contributions to U.S. private sector defined benefit plans is an anomaly. It is not the case for employees in U.S. state and local government plans, and it is not the case for defined benefit plans in all other countries with significant numbers of those plans. The question of who should pay for pensions is considered in Chapter 8, including whether employee contributions to U.S. private sector defined benefit plans should be tax deductible.

Issue 6: To What Extent Should Pension Portfolios Be Regulated?

In the United Kingdom and the United States, defined benefit pension portfolios are governed by the mandate that the portfolios be prudently invested. Investments are not judged in isolation but within the context of their role in the pension portfolio. In the United Kingdom, no more than 5 percent of the defined benefit plans assets can be invested in the securities of the sponsoring employer. In the United States, the limit is 10 percent.

Problems with the investment of pension plans occur in the defined contribution sector. For example, employees of Enron lost millions of dollars when that company collapsed, because many employees were heavily invested in their employer's stock, counter to basic ideas of risk diversification.

Issue 7: What Types of Organizations Should Be Allowed to Sponsor Pension Plans?

In most countries with private pension systems, employers are allowed and encouraged to provide private pension plans. In many countries, multiemployer, industry, or union organizations are allowed to sponsor or cosponsor pension plans. These countries include the Netherlands, Japan, Canada, Germany, and the United States. Proposals for raising U.S. pension coverage have included some that would extend the role of multiemployer plans to efficiently provide pensions through economies of scale for employees who work for small employers.

Issue 8: What Types of Institutions Should Be Allowed to Manage Pension Funds?

In defined contribution plans, the employer has traditionally chosen the investments, but in 401(k) plans, generally the employer chooses the range of funds from which the employee can choose, and the employee makes the ultimate choice, at least with respect to the employee's contributions. Some defined benefit plans are jointly trustee, with a committee of both employers and employees making the financial decisions. In many countries, including Canada and the United States, multiemployer groups jointly manage plans with labor unions.

In most countries, including the United States, Canada, and the United Kingdom, employers are allowed to manage pension plans. In Japan, however, pension plans must be managed by financial institutions external to the sponsoring company. In Japan, employers play little role, only serving as a collection agent for pension contributions, which are transmitted to a pension fund management company.

Other than employers and unions, a variety of financial institutions can manage pension funds. Pension fund management can be provided by life insurance companies, mutual funds, banks, or companies specially constituted to manage pension funds. The organizations can be profit-making entities or nonprofit entities. In Chile, only special institutions established specifically to manage pension funds are allowed to do so. In most countries, including Japan, Canada, the United Kingdom, and the United States, insurance companies and investment managers are allowed to manage pension funds. In Germany, banks play a major

role in managing pension funds, while their role in the United States is limited to offering Individual Retirement Accounts (IRAs).

Pension fund management can be centralized in one or a few entities, or it can be decentralized. Within that framework, investment management can be done on an individual or a collective basis.

Issue 9: What Role Should Defined Benefit Plans, Defined Contribution Plans, and Hybrid Plans Play?

The role of defined benefit plans has declined in a number of countries, including the United States and the United Kingdom. Some commentators have argued that defined benefit plans are dinosaurs—they will eventually become extinct because of changes in the labor market environment. Workers are more mobile, and consequently they tend to favor defined contribution plans. However, the decline has been much more limited in Canada, Japan, and the Netherlands. Canada has a long-established policy of maintaining a level playing field as it relates to allowable contributions to defined contribution and defined benefit plans, which may have played a role in the limited decline of defined benefit plans.

A U.S. government policy, perhaps unintended, is the government's apparent encouragement of defined contribution plans over defined benefit plans. As an example of the stricter regulation of defined benefit plans than defined contribution plans, pension law requires defined benefit plans to provide annuities as the default option, requiring spousal consent if a different option is chosen. By contrast, 401(k) plans face no such requirements. The looser regulation of 401(k) plans may be an historical artifact resulting from the origins of 401(k) plans as secondary plans provided by employers that offered defined benefit plans.

Discouragement of defined benefit plans also may be an unintended consequence of policies that are designed to strengthen defined benefit plans but that also increase their costs. It may result in part from government policies designed to reduce the tax expenditure associated with defined benefit pensions by giving them tax preferences. It may be due to government policies that provide options to 401(k) plans, such as deductibility of employee contributions, that are not provided to defined benefit plans.

Both defined benefit plans and defined contribution plans impose risks on workers. In U.S. defined benefit plans, if a worker is laid off at age 50, his future pension benefit will be based on his wages at age 50. There will be no adjustment for inflation that occurs from that point up to the age when he will be eligible to receive benefits, which could be age 65. British workers are protected against this risk by mandatory price indexation of deferred vested benefits. Reforms may be warranted to provide further protection for workers who are laid off. This could be viewed as costly to employers, or it could be viewed as preventing employers from receiving an actuarial bonus, and thus an incentive, in defined benefit pension plans when they lay off workers.

In general, however, workers are better off when covered by both defined benefit plans and defined contribution plans. The two types of plans together, with their different patterns of risk-bearing, provide risk diversification. Hybrid plans blend the risk characteristics of defined benefit plans, generally imposing more risks on employees than traditional defined benefit plans but fewer risks than 401(k) plans. Hybrid plans are discussed further in Chapter 7.

AN OVERVIEW OF THE BOOK

This book focuses on current pension policy issues. It takes into account the major changes in the prevalence of pension plans of different types, in pension law, and in the economic analysis of pensions. The book approaches pension policy from different perspectives. One perspective is the international perspective, with a focus on lessons from international experience for U.S. pension policymakers. While attention is paid to the economic analysis of pensions, the book focuses on advancing our understanding of pension policy. The book's goal is to improve pension policy, and ultimately the lives of retirees, in the United States and elsewhere.

While the book covers a broad range of topics, pension plans and pension policy are both complex, and the coverage is not complete. Nonetheless, readers seeking an overall introduction to pension policy may read the book from cover to cover; other readers may find it more

profitable to read particular chapters for a survey of policy issues of particular interest.

Policy issues addressed include the following four questions:

- 1) How can pension coverage be increased?
- 2) What can be done to save defined benefit plans?
- 3) How can annuitization be increased in defined contribution plans?
- 4) How should pension policy adjust to continuing increases in life expectancy?

“Mandates: Pathways to Expanding Private Sector Provision” (Chapter 2) analyzes issues relating to making private pensions mandatory, including by privatizing social security with individual accounts. It expands on the brief discussion of mandates in this chapter. A number of countries have mandated individual account plans that are managed by pension fund providers. Countries use mandatory individual accounts primarily in Latin America and Central and Eastern Europe, but Hong Kong and Sweden are other notable examples.

Some policy experts have discussed proposals mandating that employers withhold from payroll employee contributions, with automatic enrollment but worker opt-out, as an alternative to individual accounts being mandated through social security. While social security provides a uniform structure of benefits and contributions across the workforce, mandatory private pensions allow greater flexibility and diversity in the types of arrangements.

Administrative feasibility, meaning functionality at reasonable cost, is a key issue with mandates involving small employers. Many small employers do not have automated payroll systems, but instead write payroll checks by hand or pay in cash. For those employers, withholding pension contributions and transmitting them to a pension fund provider is administratively more costly than it is for large employers with automated payroll systems who can make electronic transfers of funds. For this reason, some employer mandates exempt employers below a certain size, such as 10 full-time employees. Administrative issues relating to employer mandates are discussed in Chapter 2.

“Extending Pension Coverage” (Chapter 3) analyzes a wide range of issues relating to pension coverage. It discusses measures of pen-

sion coverage in defined contribution plans. The standard measure of coverage overstates the percentage of workers accruing benefits based on their current work. A measure of pension coverage that requires that the worker actually be accruing pension benefits, rather than that the worker just have a 401(k) account, yields lower coverage than do traditional measures (Turner, Muller, and Verma 2003). The chapter also discusses the sensitivity of pension coverage to changes in income tax rates (Reagan and Turner 2000).

Pension coverage patterns differ if examined within the context of a family rather than an individual. Because fewer women are married than in the past, the rising pension coverage rate for women as workers is partially offset by declining pension coverage of women as spouses of men with coverage (Even and Turner 1999).

Only about half of all workers participate in any type of pension plan at a given point in time. Some workers do not contribute to a 401(k) plan even though their employer offers a matching contribution. The chapter discusses the role of inertia versus economic incentives as an explanation for why workers turn down pension coverage (Turner and Verma 2007). At least five reasons may explain nonparticipation by workers eligible to participate in a 401(k) plan. Besides the traditional economic reason of lack of economic incentives, four other reasons apply to workers who do not fit the classic definition of being well-informed and rational: 1) high discount rates causing them to place little value on future benefits, 2) lack of information, 3) lack of willpower to follow through on a decision, and 4) failure to make a decision because of passivity, ambivalence, and other similar behavioral factors. The last two reasons are often grouped together as inertia. Understanding the different reasons may aid in developing effective policies that would help workers achieve good pension outcomes.

“Labor Market Policy: Portability and Retirement” (Chapter 4) considers how pension plans—in this case particularly defined benefit plans—affect people who change jobs or are laid off. A worker laid off in his 50s will generally see the investments in his defined contribution plan continue to increase in value. However, his defined benefit plan will continuously decline in value because the nominal wages used to calculate his benefits will be eroded by inflation occurring between the point of layoff and the point of eligibility for benefits, which could be as late as age 65.

Many workers favor phased retirement as a way to gradually transition into retirement rather than a cliff-style retirement of going from full-time work to zero work (Latulippe and Turner 2000). Early retirement in certain physically demanding occupations is facilitated by pensions. Discussions of retirement age policy often focus on people with physically demanding jobs where postponed retirement would be difficult (Turner and Guenther 2005).

While it is often assumed that defined contribution plans do not affect retirement decisions, empirical evidence suggests that workers postpone retirement during economic downturns because of the associated decline in their account balances, possibly destabilizing labor markets by increasing supply at the same time that demand is reduced (Ghilarducci and Turner 2007).

“Tax Policy: Influencing Coverage and the Structure of Pensions” (Chapter 5) discusses the tax treatment of the tax basis in contributory pension plans. Tax basis will increasingly be an important issue for baby boomer retirees because it arises in IRAs and 401(k) plans when workers make nondeductible contributions. The tax basis is not indexed for inflation. Thus, its real value erodes over a worker’s career because of inflation. Roth 401(k) plans provide eligible workers a choice as to the tax treatment of their pension contributions, in that they have taxable contributions but tax-free benefits. These plans thus do not have the problem of inflation eroding the tax basis or of the worker needing to provide years of contribution records to prove the tax status of withdrawals.

The tax code contains a number of penalties and requirements associated with fixed ages as they relate to pension plans. An example is the age of 70 ½, which is the age at which pension distributions must occur if the participant is no longer employed with the sponsoring employer. Employees who withdraw 401(k) plan money from their plans before age 59 ½ and are still working for the sponsoring employer must pay a 10 percent penalty, as well as paying income taxes. This chapter discusses the role of fixed ages in pension tax law and whether these ages should be raised or indexed as life expectancy increases.

“Managing Pension Risk” (Chapter 6) investigates a broad range of risks facing pension participants and plan sponsors. For workers having long careers with a single employer, defined benefit plans promise retirement benefits with substantially less risk than the retirement bene-

fits promised by 401(k) plans. Defined benefit plans, however, can be risky for workers who change jobs or are laid off.

Sponsors of defined benefit plans face longevity risk relating to the longevity of their retirees. Both the cohort and idiosyncratic (individual) risks of increased life expectancy are borne by sponsors of defined benefit plans but are borne by individual participants in 401(k) plans. Cohort life expectancy risk is the risk that on average people in a cohort will live longer than expected. Idiosyncratic life expectancy risk is the risk that a particular individual will live longer than expected. While the idiosyncratic risks can easily be diversified away through risk pooling for a large number of people, pooling does not reduce the cohort risk. Cohort life expectancy risk can be borne by individuals at low cost, while it is expensive for plan sponsors. The opposite pattern holds for risk-bearing of idiosyncratic risk, which is expensive for individuals but not for plan sponsors because they can diversify it away.

The chapter also discusses the UK Pension Protection Fund (PPF), which is based on an attempt to learn from the U.S. experience with the Pension Benefit Guaranty Corporation (PBGC). After more than 30 years, the PBGC continues to face serious problems, including a large deficit.

“Hybrid Plans: The Best of Both Worlds?” (Chapter 7) focuses on the ways that pension plans can be structured to share risks between workers and employers. Hybrid defined benefit plans may be desirable as a way of preserving the positive aspects for workers of defined benefit plans while reducing the risks that employers face, such as investment risk and longevity risk.

While hybrid plans have features of both defined benefit and defined contribution plans, some are more like defined benefit plans in that they define benefits with a benefit formula; however, they do contain some defined contribution features. Hybrid plans that are essentially defined benefit plans with defined contribution features shift some of the risk traditionally borne by employers to workers. Hybrid pension plans that are basically defined contribution plans because the benefit is tied to the rate of return on an account balance usually add a rate of return guarantee (Turner and Rajnes 2003).

Cash balance plans are the best-known U.S. hybrid plans (Turner 2003a), but employers have also offered other types, such as pension equity plans. The new DB(k) plan can be offered starting in 2010.

The Netherlands has recently adopted hybrid plans with defined benefit plan benefit formulas, but in which the workers bear the investment and demographic risks through variable contribution rates that they pay. Iceland has mandatory plans that are hybrids, and the United Kingdom has some types of hybrid plans. The ABP plan in the Netherlands, which is a hybrid plan, is the largest plan in the world in terms of assets. These plans all shift cohort life expectancy risk to participants. In addition, a number of types of hybrid plans have been proposed, such as life expectancy-indexed defined benefit plans (Chapter 10 and Muir and Turner 2007). The chapter discusses reasons for the growing role of cash balance plans in the U.S. pension system (Lichtenstein and Turner 2005).

“Financing Pensions for Adequacy and Security” (Chapter 8) includes a discussion of the financial decisions made by participants in defined contribution plans. This chapter incorporates insights from behavioral finance concerning the errors participants make in managing their pension investments. Gender differences in pension investments are discussed (Hinz, McCarthy, and Turner 1997).

An assumption underlying the U.S. system of voluntary employee participation in defined contribution plans is that individuals make good financial decisions. A major weakness of this approach is that many individuals make poor financial decisions, especially when long planning horizons are involved, resulting in retirement income that is insufficient to maintain their preretirement living standards. Behavioral finance has documented these choices and how they result in outcomes that are unfavorable to workers in the long run. Behavioral finance theorists have used their insight into the roles that inertia and procrastination play in worker behavior to propose defaults that preserve worker choice while arguably achieving better long-run outcomes for many workers.

Once a worker has decided to participate in a 401(k) plan, the factor most affecting the amount of assets accumulated at retirement is how much the participant and employer contribute to the plan. Financial education can be used to influence the decisions participants make (McCarthy and Turner 2000). Defaults in defined contribution plans can have large effects on worker participation, but the degree to which these effects persist over long periods of time and the degree to which they work in different types of financial markets have not been investi-

gated (Turner 2006). One default that has been proposed is a gradually increasing contribution rate.

The level and disclosure of fees in 401(k) plans is a multibillion dollar issue. Pension participants in 401(k) plans annually pay billions of dollars in fees. With defined benefit plans, the plans' expenses are borne by the sponsoring employer, but with defined contribution plans, most of the expenses are borne by the participants. Participants with substantial account balances can easily pay hundreds or even thousands of dollars in fees every year.

In spite of the large amounts of money involved, participants rarely know how much they are paying in fees, and thus are not able to make informed decisions between alternative options (Turner and Korczyk 2004). They are purchasing services without knowing the price. While transparency is a desirable attribute concerning fees, 401(k) fees are opaque. The topic is also important because of the size of the effect of apparently small fees on account balances. A fee of 1 percent can reduce the account balance of a 401(k) plan by 12 percent over a period of 20 years (Muller and Turner 2008).

While some researchers and organizations have focused on extending coverage or strengthening 401(k) plans, the policy community for the most part appears to have given up on saving defined benefit plans. However, policies might strengthen defined benefit plans and slow or reverse their decline. A strong retirement income system would ideally contain both defined benefit and defined contribution plans because both types provided together do a better job of helping workers deal with various risks than either do when provided alone.

"Pension Benefit Policy: The Search for Lost Pensions and Other Issues" (Chapter 9) notes that benefits can be provided to participants in defined contribution plans in five ways: 1) as annuities, 2) as lump sums, 3) as phased withdrawals, 4) as installment payments, and 5) as a series of ad hoc payments. Three issues concerning benefit receipt are as follows:

- 1) What happens to workers' accounts when they change jobs before retirement?
- 2) Are workers' accounts annuitized, taken as a lump sum, taken as a phased withdrawal, or taken in installments at retirement?
- 3) Are survivor benefits provided?

Pension law requires defined benefit plans to provide survivor benefits as an option. It does not require 401(k) plans that do not provide annuities as an option—which are most 401(k) plans—to provide survivor benefits.² Because of the complex issues associated with annuities, Chapter 10 is devoted to them. This chapter discusses the effect of the move toward defined contribution plans on the income inequality of pension beneficiaries.

Lost pensions are a problem for some job-changers. This problem is the focus of efforts by pension assistance programs and a program run by the PBGC, but it has received little attention from economists. The United Kingdom and Australia have gone far beyond the United States in developing policy to deal with this problem (Blake and Turner 2002). Pensions may be lost in the sense that job-leavers subsequently cannot find their former employer to claim benefits. That problem is especially likely to occur when the sponsoring firm has changed location or name, perhaps as a result of having been bought out.

“The Decline in Annuitization and How to Reverse It” (Chapter 10) is an important issue because annuities provided by pensions are decreasing. They are decreasing because of the decline in traditional defined benefit plans—historically a key source of low-cost guaranteed lifetime income—and the shift to cash balance plans. Cash balance plans are required to provide annuities, but perhaps because the benefit is expressed in terms of an account balance, workers typically take their benefits as lump sums. Annuities can be particularly valuable for women because women tend to outlive the men in their lives, and their risk of poverty at the end of life is greater than for men.

Annuities could potentially play an important role in 401(k) plans. While it has been expected that workers would increasingly annuitize their 401(k) plans with the decline in defined benefit plans, that has not occurred. Annuities have been analyzed extensively in the context of Social Security reform, and in the context of individually purchased annuities, but little attention has been paid to them in the context of the unisex requirement in the 401(k) plan setting. With unisex annuities, sometimes single men can receive higher benefits outside the pension plan than inside it. Thus, an unintended consequence of the unisex rulings by the Supreme Court may have been that the resulting adverse selection has caused most 401(k) plan sponsors not to offer annuities. Recently, some plan sponsors have begun offering annuities outside the

plan through third-party providers. These annuities take into account the different mortality risks of men and women.

The concluding chapter, “Finding Better Solutions,” (Chapter 11) discusses the main policy proposals for both 401(k) plans and defined benefit plans. In addition, with the goal of maintaining a role for defined benefit plans in the retirement income system, it proposes a new type of hybrid pension plan—the life-indexed DB plan—that preserves key aspects of defined benefit plans while shifting some risk and cost to workers.

Notes

1. Authors differ in the exact terminology they use to refer to different types of plans. In this paper, “pension plans” refers to both defined benefit and defined contribution plans. Because 401(k) plans so dominate the defined contribution plans in the United States, generally 401(k) plans are discussed.
2. Money purchase plans are required to provide annuities with joint and survivor benefits.