

**Vehicles for Collective Provision of Pension Services:
Pension Plans For Small and Medium sized Enterprises**

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Executive Summary

This study is part of the Ontario Expert Commission on Pensions (OECPE) consultation on the occupational pension system in Ontario. The OECPE's primary focus is on defined benefit plans. The Commission aims to describe the various factors leading to the decline in pensions and to explore issues relevant to "the security, viability and sustainability of the pension system in Ontario."

This study examines how the size and organization of defined benefit pension plans affects their function and structure. The size of the employer often determines the size of a pension plan, but it doesn't have to. Therefore, this study pays special attention to the issue of "pooling" and describes the characteristics of a well-run employer defined benefit pension plan.

The data used, and the literature reviewed, focus on the US experience with multiemployer plans in the private sector and the public sector (government plans such as for state and municipal employees) and, to a lesser extent, the experience in the Netherlands and Sweden.

The study concludes that smaller employers can provide better pensions when they can attach their pension plans to a larger entity to take advantage of economies of scale in administration and in risk control that leads to greater bargaining power, and superior coordination of benefits and employment.

In fulfillment of the research mandate several voluntary employer-based defined benefit plan systems are described. Only in special circumstances – in union environments and in the government and not-for-profit sectors – do workers in small and medium sized firms and those workers who have low-incomes, obtain pension coverage under a second-pillar employer pension.

The study:

1. reviews the literature on ideal pension design with emphasis on the consensus and points of disagreement among scholars;

2. Reviews the literature on multiemployer structures, specifically the US experience with voluntary multiemployer plans in the private and public sectors and the Netherlands and Sweden. Small establishments who want to sponsor defined benefit pensions have been created in these jurisdictions.
3. Given the paucity of academic research in the area I report, briefly, on a multivariable regression analysis that examines how the size of a pension plan and the structure of the pension board affect the benefit formula (the pension generosity) and the funded status of the plan, using a sample of 163 US public sector pension plans. There are some effects: underfunded plans and larger plans have slightly larger benefits. Governance structure has no effect on benefit structure or unfunded status.
4. Academic work on optimal pension design and descriptions of international and domestic pooled pension funds outline the challenges faced by small establishments in providing efficient and effective pension systems. Small groups of employees have pension plans when large plans take part in administrative agreements with small groups.
5. Often these administrative agreements form hybrids between a defined contribution and defined benefit pension. The contribution to an account comes from work and the proceeds are distributed at retirement in the form of a mandatory annuity.

Organization of the study

After the introduction, the second part of the study defines the characteristics of high-quality pension systems followed by the challenges facing small and medium sized enterprises in forming efficient and well managed defined benefit pension systems. The fourth section directly addresses the issue of pension fund size. The fifth section contains descriptions of cases where multiemployer plans helped small employers provide defined benefit plans. The sixth section discusses opt-out designs in defined benefit plans. The conclusion and summary discusses how a province, nation, or group of smaller employers, have helped workers join defined benefit pension plans.

1. Introduction: Project Background

This paper addresses the issues faced by actual or potential pension plan sponsors who are small and medium sized enterprises (SMEs). The concern is that their relatively small size may significantly raise costs and the exposure to risks. Moreover regulatory burdens in establishing and administering pension plans are higher for small firms. The fourteenth research mandate also asks for an identification of the essential features and advantages of alternative and collective pension service delivery vehicles (e.g., features such as collective administrative and investment services, advantages of economies of scale, greater expertise, leverage and flexibility in matching assets and liabilities).

Specifically, this study addresses the question as to whether there are cases where large pension plans have “anchored” smaller pension plans, in order to offer the possibilities of economies of scale and to provide other expertise more easily found at larger funds. This study also addresses whether larger plans take on more investment risk and/or handle those risks better than smaller plans, which, presumably, would result in larger long- term investment returns.

2. Worker, Government, and Employers' Roles in National Pension Systems

No employer defined pension system operates outside of a state- sponsored retirement income security program and without the government contriving ways to induce people to take personal responsibility for planning how to afford their own old age.

Why are most national pension systems tri-partite: a combination of government, employer, and worker-based initiatives and programs? Most nations have three pillars, each of which provides a different core function and takes on different levels of risk.

Workers' Roles First, most nations embrace the principle that workers should plan their own retirement as part of their personal responsibility. However, most national retirement systems and policies use tax incentives to promote voluntary retirement savings; human horizons are often oriented towards the present so that consumption decisions and investment behavior are biased towards short term goals. Recently, national pension policies have been influenced by academic scholarship in behavioral finance, which has emphasized the difficulty workers have in making key financial decisions and processing vital financial information. Some findings of the behavioral finance literature are that “gentle,” non-mandatory, or “opt-out” designs in defined contribution plans will boost savings rates (Madrian and Shea 2001). In the United States, the Pension Protection Act (2006) encourages opt-in designs; but, one year later, there is evidence the features fall short of their goals – see section 6 below).

The irony is notable: every nation wants workers to take on personal responsibility for retirement savings; however, every nation must organize ways to subsidize and induce “personal responsibility.” Every nation maintains a tax system that gives favorable treatment for old-age pension savings in some form. This is not a focus of this study, but crucial in explaining the total expenditures for pensions and the balance between the personal, government and employer role in providing retirement income security. The irony is that what looks like the result of personal responsibility, a large retirement account, is often the result of large tax subsidies.

Government's Roles The second pillar in a comprehensive pension system is a mandatory or universal government pension system. A universal system that provides a minimal level of support is needed for humanitarian reasons and for practical community self-interest. Social psychology and 150 years of history with government social insurance plans in developed market economies reveal that most people will not accumulate enough assets, on a voluntary basis, to provide for an adequate old-age income. Though some countries have a higher tolerance than others for old-age poverty in their midst, all governments tend to identify the elderly poor as the “deserving poor” and, therefore, governments provide poverty relief. This stark fact explains why governments are involved in planning and inducing employers to share in the cost of -- and in the responsibility of creating -- institutions that secure retirement income security.

Governments want well-structured pension programs to encourage individuals and/ or employers to supplement a state-provided floor of retirement income security. Although the state wants employers and individuals to take on responsibility for retirement income security, the state is the only entity that can cajole or encourage people to save, and, to go further, to help employers and workers accumulate resources for retirement at the time and location where saving for retirement is the easiest – at work while a person is in her or his prime-earning years. To this end, the task for governments is to marshal innovations in the investment industry and other financial institutions.

Employer's Roles The employer portion of an integrated pension program (which, as defined above, is composed of voluntary savings, the state and an employment-based system) is especially important for two reasons. One, an employer system pillar takes advantage of the fact that people steadily receive a stream of income when they are working; this makes savings easier. Two, employers use pensions as recruitment and retention tools. Most types of pension plans, as well as forms of employee benefits such as vacation benefits in the United States, increase in value the longer the employee stays with the employer, in other words, the longer the job tenure. By providing retirement benefits in a form that is linked to seniority, an employer can reap the economic benefits from loyal workers who are motivated to invest in training. A defined benefit pension plan can be an important source of motivation for workers to stay trained in a particular field or industry. And this feature can be very important to small

and medium sized firms who need a ready and competent workforce, but can't afford to provide a steady, high-paying job, that would keep its workforce intact and attached to the employer.

In order to understand why an employer of even a small or medium sized firm would voluntarily sponsor a pension plan, economists' theories about why firms pay what they do may be helpful. The "efficiency wage" literature provides the best insight.

The efficiency wage theory is supported by evidence that some firms, mostly large ones, aim to pay a little more than their competitors in order to raise the costs to an employee of being caught shirking and being fired. A worker, who is afraid to lose a job, the theory reasons, because they can't get one just as good, works hard. The idea is that a job that is irreplaceable is a job worth keeping. This fear helps reduce supervision costs while keeping productivity high. Thus a wage that seems "too" high is actually "efficient," thus giving the theory its name¹. A firm – perhaps a smaller one -- who doesn't pay an efficiency wage has a "discipline" and turnover problem and must find ways to motivate employee loyalty. A defined benefit pension plan is seen as part of a solution to this problem.

A defined benefit pension plan that rewards loyalty to a skill or set of employees in an industry or occupation is valuable to small firms that cannot provide stable jobs for a well-trained workforce. An industry-wide or occupation-wide defined benefit plan can keep the trained work force available in the labor market. This point is easily seen in the case of construction trades, the movie and TV business, the theater, mining, and other industries where the work is done on a project-by-project basis and contractors don't know where their next project will be. Even though the work may be sporadic the workers' multiemployer pension plans are fully portable between contractors, developers, and projects. For example, electricians are encouraged to remain electricians even after a local construction market weakens because they know they have accumulated pension credits in the industry.

¹ The efficiency wage is described simply in Akerlof and Yellen (1986) and Shapiro and Stiglitz (1984) and how psychology and motivation might affect human resource decisions is explored in Lazear (1991).

In sum, employers under some circumstances, the state and workers all have an interest in pensions. The state will shape the system through its regulations, tax policies, and the terms of its own system for its employees. Below is a checklist of the features of an efficient pension system. Key to an efficient tripartite system is to not leave out large numbers of employees. But, in almost all nations with a voluntary employer system, small and medium sized firms are often on the sidelines. This is the case in Ontario as we shall see below; small and medium sized firms are less likely to have pension coverage.

3. Essential Features of a National Pension System

This study focuses on the second pillar, employer-based pension systems, that serves as one of three pillars of a national pension system; employer-based systems meet economic and social goals have certain characteristics. Such systems must help provide adequate retirement income for all workers; they should be backed-up by funding practices that are well understood by everyone, especially the employer. The regulatory standards often attempt to balance the employers' need for funding flexibility when economic conditions change. Employer-based pension systems are essentially ways to pay people, and have the requirement to function as sensible personnel management devices. But funded pensions are also types of financial institutions and must be held up to the standards of a well-run investment and financial management firm. Many people do not have adequate retirement savings because they do not have access to financial institutions. Therefore, it makes sense that as many employers and employees as possible have access to well-run pension plans.

Below are the characteristics of a good pension system based on my experience, the history of employer pensions and current work, particularly that of Professors Gordon Clark and Keith Ambachtsheer (see references in the bibliography).

Workers and retirees appreciate their pensions First, pensions will not retain or attract workers who are desirable to the employer unless the pensions are understood and valued. Small firms may or may not have an advantage in communicating compensation policies, including pensions, compared to large firms. Large firms have more resources to provide financial education for their employees; small firms may have

better lines of communication. One finding (Ghilarducci 2002, Budd 2004) is that union members tend to have a greater understanding of the details of their pension system. One reason is that union members have two sources of information, from the union representative and from human resources. There is more discussion of unions in below.

Employees may not appreciate the value of pensions, especially defined benefit plans, and this is a serious barrier to retirement planning. The barrier to appreciation seems to be a lack of knowledge. A human resource firm asked participants what kind of pension plan a worker was covered by (Gustman and Steinmeir 2004); the percentage of employees who correctly identified the type of pension they actually had was significantly lower if the worker was covered by a defined benefit plan than a defined contribution plan. Workers are more likely to accurately identify their defined benefit plan as they age. In contrast, there were practically no differences in awareness by age of employee if the worker was covered by a defined contribution plan. The difference in cognition stems from the ease of understanding an account balance compared to the difficulty of understanding the value of accumulating service credits, whose value is contingent upon a number of assumptions and possible scenarios about pay, future service, and the firm's financial health.

Pensions are workplace tools Second, pensions are based in the employment relationship; therefore employers must be able to experience or otherwise perceive some extrinsic, profit-related value in sponsoring a pension plan. (See the discussion of efficiency wages above). Certainly small employers appreciate the loyalty of their staff; however, regardless of loyalty, the costs of a defined benefit pension plan clearly outweigh these benefits. Small firms tell surveyors that the cost of administering and funding the plans are difficult for them given their uncertain revenue (Hustead 1998, ERISA Advisory Council (2001)).

Employers want stable and predictable costs Third, according to many surveys -- including Purcell and Graney (2002), Greenwald and Associates (2001), ERISA Advisory Council (2001) and DeSimone (2001) -- employers want pension costs to be reasonable and stable and this puts smaller firms at a disadvantage because they face more instability in all costs than do larger firms. The fluctuating costs of a typical single-employer based defined benefit plan are too uncertain for small firms. In a small group,

the events of any one person can affect the plan. An actuarial loss or gain, which is caused by a wrong prediction about a factor that affects the annual cost of funding a pension plan – for instance, investment earnings, or staff turnover, or rates of death – can have large effects on a small firm that can't pool the risk.

Stakeholder interests must be considered Fourth, the other stakeholders in a pension plan besides management and employees, must be comfortable with the pension expense and the structure of benefits. In the private sector, the stakeholders are corporate shareholders; in the public sector the stakeholders are the taxpayers and future generations. The pension plan must be administered with clear recognition of any conflict of interests between all stakeholders and a pension plan must have a structure in place that can manage that conflict. This is one reason why governance matters: who is on the board of trustees, regulations regarding reporting, permissible investments and independence from the employer sponsor.

Consider the following conflict of interests: if investment returns are greater than expected who shares the benefits? The employer can take all the gains and reduce contributions; the workers can take all the gains and raise benefits; or future shareholders and/or taxpayers can take the gains and accumulate greater reserves so that benefits can be raised or contributions lowered in the future. If an employer cannot manage these and other conflicts in its sponsored pension plan, then at least one party will not be wedded to the system and it will not thrive. We shall see that a multiemployer structure helps mitigate these conflicts of interests – firms may take asset gains as a reason to lower contributions rather than to increase benefits. A firm that belongs to a multiemployer plan has no ability, nor great interest in, making that tradeoff.

Another reason defined benefit plans, when sponsored by only one employer may be too risky for the employer is that these plans can wreak havoc on the firm's reputation and affect their value in financial markets. Single employers in Ontario face increasing competitive pressure (see Clark, Monk, and Monk OECF Mandate #3). One consequence is the pressure on publicly-traded firms to satisfy investors' insistence that these firms maintain high credit ratings and high and rising stock values. The financial condition of a firm's single defined benefit plan – specifically the balance between assets and liabilities

– affects the financial market’s evaluation of the firms’ profitability. A firm will suffer lower credit ratings and lower stock values if low interest rates inflate the firm’s defined benefit pension plan liabilities and cause the plan assets to fall short of the liabilities. This means the asset-liability ratio can fluctuate widely independent of any decision the firm might make. A firm that contributes to a multiemployer plan would not face the same market valuation risk. The financial markets would view its participation in the multiemployer fund as a defined contribution obligation.

The pension plan is an efficient financial service provider Fifth, if there is not a cheaper way to fund and pay for the promised pension benefit then the system is efficient. Defined benefit pensions generally are more efficient – they provide larger and more secure benefits for the same expense – than defined contribution pension plans or than saving for retirement through a mutual fund.

In Canada and the US, over a nine-year period (1996-2004), defined benefit pension funds earned a higher return on their equity investments than mutual funds. The difference was large and meaningful. Canadian DB pension funds earned a 3.8% higher annual rate of return. This magnitude of a difference has large implications for accumulated assets. Someone investing \$10,000 annual for 40 years would accumulate \$777,000, if no annual fees were deducted. If annual fees were 3%, the accumulation would shrink to \$400,000 (Ambachtsheer and Bauer 2007: 12). Similarly, US defined benefit funds earned 2.66% more investing their equity portion, compared to US mutual funds. The gap in performance persists even after various adjustments. The authors consider, of all the possible reasons for the measured differences in returns between defined benefit plans and mutual funds, that the asymmetry of power and knowledge between buyers and sellers is the most plausible. They argue that the marketplace is such that uninformed buyers in the mutual fund market pay higher fees than do the professionals who run the defined benefit systems. Furthermore, they point out that behavioral economics research shows, “people to be generally unsophisticated, inconsistent, hesitant, and even irrational regarding financial matters, which creates the opportunity for the for-profit financial services industry to proactively step in and sell their products and services at too-high prices” (Ambachtsheer and Bauer 2007: 11). Defined benefit plans earn more money for workers because workers are unable to

withdraw their accumulations nor time the market i.e. sell when equity values fall and buy when they are high.

Other research has shown that larger defined benefit plans have lower investment fees than small funds and smaller set-up costs (Andrews and Mitchell 1981, Ghilarducci and Terry 1999; Husted 1998,). There is very little other research done.

The pension plan is a responsible actor in financial markets Sixth, pension funds own a considerable amount of shareholder proxies and are obligated to vote them, just as any responsible owners would pay attention to how their firms are managed. Small firms have a disadvantage here because attention to corporate management takes time and resources.

In sum, the characteristics of good pension plans are:

- 1) Workers and retirees appreciate their pensions.
- 2) Employers appreciate the pensions as effective personnel devices.
- 3) Employer's pension costs are reasonable and stable.
- 4) The stakeholders and public is comfortable with the pension expense.
- 5) The pension plan is an efficient financial service provider.
- 6) The pension plan acknowledges its role in financial markets.

Many of these features cannot be achieved by one firm sponsoring a pension plan. Meeting all these characteristics in a pension system is difficult without coordination and collective action. However, we cannot appreciate the necessity of agglomeration without appreciating the penalties of size.

4. Does Size Matter for Pension Fund Governance?

Pension Gap between Employees in Large and Small firms In the US and Canada, over 70% of employees in the largest firms have employer pensions while the rates of pension coverage for employees of small and medium sized firms is much smaller.

Low-income workers and those workers in small and medium sized firms are most at risk of not having a pension plan. In the US, just one quarter of full-time

employees of very small businesses (those with 25 or fewer employees) participated in a retirement plan at work and less than half of full-time employees in small firms (those with 25 to 99 employees) participated in a retirement plan. The coverage rate was over 70% for full time workers in larger firms². In Ontario, the pattern is the same. Only 1 out of 20 firms with less than 20 employees sponsor pension plans, whereas 59% of firms with over 1000 employees sponsor pension plans (see Table 1). Also, low-income workers in Ontario are much less likely to have a pension plan according to Infrometrica (2008): Only 8% of people who earn under \$10 per hour are covered by a pension plan; whereas, 70% of employees earning a salary or wage equivalent to over \$30 per hour are covered by a pension.

Table 1 Employer Pensions and Ontario Jobs: 1999 – 2005

		Number of Jobs	Per Cent of Jobs with Employer Pensions
Total		6,889,000	33%
Public/Private Sector	Private	5,794,000	26%
	Public	1,095,000	68%
Firm Size	Less than 20	2,085,000	5%
	20 to 99	1,015,000	25%
	100 to 499	786,000	44%
	500 to 999	350,000	53%
	1000 and over	2,041,000	59%
Source: Calculations by Infrometrica Limited based on the Statistics Canada, Survey of Labour Income Dynamics			

In the US, low-income employees in small firms almost always have defined benefit coverage only through a union-negotiated multiemployer plan (Ghilarducci and Lee 2005.)

The not-for-profit sector shows the same pattern. A 2002 benefits survey (cited in Webber 2003) found that the percentage of organizations that offer retirement benefits rises in proportion to the group's size. About 71 percent of not-for-profit organizations

² In addition, higher income workers have higher employer pension coverage rates. Fewer than 30% of full-time workers in the lowest income quartile participated in an employer retirement plan (Purcell 2006).

with fewer than 100 staff members offered defined-contribution plans, while 80 percent of not-for-profit groups with 500 or more employees offered similar plans the Nonprofit Coordinating Committee of New York found that retirement plans were offered by 63 percent of groups with 10 or fewer employees but by 98 percent of organizations with more than 100 employees (Webber 2003).

In 2000, the Association of Canadian Pension Management, the Pension Investment Association of Canada and the Office of the Superintendent of Financial Institutions issued a report on governance and a self-assessment survey on pension plan governance and recommended ways to improve pension governance. The report was criticized for not adequately addressing differences in plan design and size (Howe, 2000). Unfortunately few academic studies exist that can help sort out best practices for small to medium sized plans. This chapter outlines the issues.

In the financial world big is best. The bigger the fund, the better the deal in buying financial advice, in negotiating investment fees, in processing information, and cutting pension checks. This means that every contribution to the pension fund goes farther and the pensions can be bigger in larger funds for less cost. Mitchell and Andrews (1981) and Ghilarducci and Terry (1999) found that larger funds have much lower administrative costs (once the percentage of the participants who are retired is controlled for). There are large differences in administration costs per participant between funds that primarily take in contributions and invest the funds and those that must spend a great deal of effort cutting monthly pension checks and keeping track of beneficiaries.

On the request of the author, a consulting firm which does not want its identity revealed, surveyed the investment fees paid for by their pension fund clients for a certain kind of equity investment, a “style-neutral, large cap fund.” (This kind of equity fund emphasizes neither high growth nor stable value stocks and is composed of equities from large firms – with revenues over \$500 million). The consulting firm is large and the client base is representative of the US population of pension funds. The findings reflect that in academic studies of administrative costs of pension funds (Mitchell and Andrews, 1981; Ghilarducci and Terry, 1998). The reason that the confidential survey was needed is that investment fees posted and offered to all firms do not indicate the true level of fees paid because pension plans negotiate their fees in confidence and the actual fees are not

revealed to the public. The pension consulting firm found that the fees were dramatically lower for larger funds. And, the differences are astounding. The largest funds – 1,000 times larger -- pay half the fees on a share basis (see Table 2).

Table 2

Investments Fees by Size of Pension Fund

Size of pension fund	Investment fees for a large cap equity fund (size).
\$10 million	60 basis points
\$1 billion	42 basis points
\$10 billion	35 basis points

(Source: Confidential data from an actuarial and investment consulting firm).

Small employers are not able to take advantage of the large economies of scale in providing pension financial services. Smaller firms face significantly high administrative costs, because of both their smaller size and unstable and under-capitalized finances. Also, larger funds have bigger clout in the corporate world; the bigger the fund the more effective it can be as a shareholder activist on behalf of its beneficiaries. There is an extensive literature on the effects of shareholder activism on rates of return of the pension fund and most of it finds a positive return. A recent review of this literature is found in Schwab and Thomas (1998) and Becht, Franks, Mayer, and Rossi (2006). All these factors imply that larger pension funds can take on larger risks because they can manage risks better.

There are 5 types of risks a pension fund must consider in setting up risk controls: financial risk, investment risk, longevity risk, inflation risk, malfeasance and fraud risk. An individual faces much larger exposure to these risks than any institution and a smaller establishment takes on more risk than a larger institution.

An individual investor, whether an individual or institution, faces, first, the financial market risk that asset values will fall and stay at low valuations for substantial periods of time. The second is investment risk, where investments are chosen that do not return as well as a benchmark portfolio and fail to maximize income and minimize risks.

The third is longevity risk where the average lifespan of a group of pensioners, being paid annuities, may be greater than the assumed longevity rates. Large pension plans are able to spread longevity risk over a number of individuals, and crucially, have a greater chance of diversifying across occupations, income group and other factors that determine longevity. The fourth is inflation risk where the value of an annuity is eroded over time since most annuities are not indexed to inflation. The last risk is the risk of malfeasance – incompetent management, incompetent trustees and fraud that would mostly be perpetrated if a conflict of interest exists. Many of these risks are mitigated when a pension plan is large enough to control for all these risks.

Large funds have an advantage in achieving lower administrative costs by spreading large fixed costs over a large number of transactions, including investing funds and issuing benefit checks, as well as in controlling for risks. It is also logical to expect that larger pension funds can attract better talent by paying higher salaries and these well-paid professionals can obtain higher returns in the investment portfolio. The idea is that superior talent may result in better funding ratios, controlling for benefit generosity.

All the discussion above results in the expectation that larger pension funds would be much better than smaller funds. Yet, finding proof that large plans are better and that pension plan outcomes differ by size is difficult because there are few research studies comparing the efficiency of large plans with the efficiency of smaller ones that are alike except in their size. The results of original research I did tested the hypothesis that the size of a pension plan makes the plan more generous and better funded. There is some, but admittedly small, support for the hypothesis that big is better. There is strong evidence that larger plans can enjoy economies of scale, but evidence that these economies of scale results in larger benefits and better funding status is less evident.

One other way that I attempted to locate differences in outcomes by size of plan is to compare how the average pension plan compares with the largest plans. To answer the question about whether large pension funds can better handle financial market volatility than smaller funds I compared the funding status of large and small funds in California, a state with a large number and wide variety of pension funds. In 1998, at the beginning of the stock market boom, the average ratio of assets as a percentage of liabilities of California pension funds was quite high, over 128%. But the funding ratio of the largest

California plan, CalPERS, was only 110%. After the values of equities declined significantly in 2001, the CalPERS funding ratio fell to 87.3% from 110%. And the average fell further to 85.9%. The math suggests that the smaller funds experienced more volatility, which gives some support that bigger is “better.”

In sum, these findings suggest that people who work in small and medium sized firms are more at risk of not having an employer pension plan or, if they do, face high costs.

5. Defined Benefit Plans in Multiemployer Settings

Some small firms have minimized the risks and costs of providing a pension plan by consolidating their contributions towards their employees’ pension fund into a larger entity. Besides saving money, consolidation makes sense because of the “logic of collective action.” The “logic of collective action” refers to a situation where a firm acting alone in its own best interest would actually hurt the firm. Only by taking a collective action would firms better their situation. One such situation is a firm offering a pension plan to meet workers’ needs but finding itself at a severe disadvantage when its competitors do not also provide pension plans. The firm and its competitors would be better off if they all provided a pension plan because it induces employee commitment to an industry or geographical area. But if a small firm provides a pension on its own while its competitors don’t, then that firm faces higher costs and lower profits. But, if all small employers in the same industry pooled contributions to provide DB plans then no one firm is at a disadvantage. The following section first reviews the US experience with multiemployer plans in the private sector, not-for-profit sector and, finally, the government public sector (states and municipalities); the remainder of the section reviews occupational pension plan design in the Netherlands and the UK

US

There are three examples in America of large and stable pension funds that consist of the employees of small to medium sized firms. The three categories are: (1) union occupational industry plans, examples of which are pension plans for truck drivers, miners, construction workers; (2) an industry plan for college professors and researchers

called TIAA – CREF (Plans in the not-for-profit sector are mentioned); and, (3) the public employee pension plans of state, local and county employees. Following is a discussion of all three categories.

Union Multiemployer Plans While there are many reasons for these low rates of pension coverage among small firms, the high cost of pension plan administration is cited as a primary cause of low rates of plan sponsorship among small firms. At the same time, in the US, some low-income workers and employees do manage to obtain pensions through union-negotiated multiemployer plans. These plans are independent entities that exist only to provide pension benefits. The trustees – equally divided between labor and management – hire professionals to manage the fund administration, investment of plan assets, collection of contributions, and payment of benefits.

Though the funds are independent, they would not exist without the coordinating efforts of the union. The union is an organization that can facilitate pension and other employee benefits provision. Economist John Budd (2004) finds that unions provide an impetus for many on-the-job insurance and other forms of non-wage compensation. He finds that employee organizations that can bargain for and enforce long term contracts – e.g. unions – act as facilitators for employee benefits. Therefore union membership is an important determinant of pension coverage for all workers; the effect is especially strong for those with low-incomes and those who work for smaller firms. For example, Ghilarducci and Lee (2005) find that while just 33.8% of low-income men are covered by a pension, 70.7% of low-income male union members have a pension at work. They attribute the large union pension premium among low-income workers and employees of small firms to such firms' reliance on multiemployer pension plans.

It is important to pause and reflect on how unions work and whether in the absence of unions, workers could get pension coverage. Unions help overcome the collective action problem that employers (especially small ones) may not be able to individually sponsor plans, but also may be reluctant to join with competitors to establish a joint plan (Ghilarducci 2002). Unions, as representatives, can tell the firm what workers want a defined benefit plan but a single worker could not because a DB plan only makes

sense for a group. (The worker is in the same situation as an individual wanting a public good. A citizen can ask its government to improve the sidewalk outside their house, but would have little success in asking for a bridge to be built across a river.)

If a union represents many different employees in a single sector or industry it is uniquely positioned to encourage collective behavior among firms. This is important when considering how to get a group of economically affiliated firms to come together and make small sacrifices in terms of contributions to a workers' pension plan and control over these contributions to help out the industry.

Multiemployer plans, as the name suggests, are plans, which cover employees of more than one employer. These plans have traditionally been especially important in industries where firm turnover is high but worker turnover in the occupation and industry is not. For example, in the construction industry and entertainment industry, craftworkers and performers and stage workers often move from project to project – they work for many different employers; but they stay in the same industry and do the same work. As long as a worker works for an employer who participates in the multiemployer plan, the worker is covered by the same pension plan and can accumulate a meaningful benefit. There is the added advantage in personnel management because a worker who has seniority in an occupation finds they have many benefits. Loyalty to a skill and profession “pays-off” for a worker because he or she can accumulate service credits, which will yield a larger benefit, in a defined benefit pension plan that spans many employers.

Like single-employer DB plans, multiemployer DB plans must offer annuity distribution forms and qualified joint-and-survivor annuities to married participants. In addition to the portable nature of benefits, multiemployer plans have other advantages as well – economies of scale, more predictable funding for employers, and balanced governance structures which foster solvency. Thus, they tend to show higher rates of return than other retirement savings plans.

In 2006, 10 million Americans participated in such plans (out of a 150 million large workforce). The entertainment and construction industries account for 30% of multiemployer workers, the trucking industry accounts for 14%. Grocery workers account for a little under another 13%. The remaining third of participants in

multiemployer plans are spread across various manufacturing and service industries (Almedia 2007, PBGC 2006: 91)

Almedia (ibid) gives the US Airways case as an example of the strength and flexibility of the multiemployer model in providing benefits even when an employer's finances are weak and unstable. In 2004, US Airways filed for bankruptcy for a second time in a 2- year period. The company-sponsored pension plans, covering mechanics, flight attendants, and management employees – were terminated. However, the fleet service agents kept their pension plan because it is a multiemployer plan and the company's only obligation to the plan was its regular, negotiated contribution. Almedia makes the point that the multiemployer plan was the only way the company could continue to offer these particular workers a secure, DB pension at a reasonable cost after all the layoffs and pay- cuts caused by “back-to-back bankruptcies.” Both sides won.

The Government Accountability Office - the agency that audits US government agencies and laws and regulations - reported (2004) on the status of US multiemployer pensions in the private sector. The report identified a number of causes of the decline in the number of participants (since 1985) covered by these multiemployer plans. The most important cause is the overall decline in union representation and collective bargaining which caused the average age of the members in these plans to grow and to disadvantage the contributing employers because their competitors do not pay pension contributions. The report noted that multiemployer plans have valuable and positive design features; the primary one being that only with a multiemployer plan can a firm provide a defined benefit plan without the worst aspects of a defined benefit plan – fluctuating and uncertain contributions. If policy makers hope to expand multiemployer pension plan coverage, steps to restore collective bargaining widely in the US economy will have to be taken; alternatively, other organizations need to get members of an industry to cooperate and provide pooled pension plans.

The question for researchers is whether there are other entities that can do what unions do in facilitating pensions among firms in the same industry, or among firms that are otherwise economically aligned.

The next three models of multiemployer plans were achieved by workers without a union – university teachers, not-for-profit enterprises and government employment.

The MEPPS meet the standards for good pension design stated above. They are: Workers, retirees, and employers appreciate the pension plans, employer's pension costs are reasonable and stable, the stakeholders and public is comfortable with the pension expense, the pension plan is an efficient financial service provider, and the pension plan acknowledges its role in financial markets.

Industry pension plans for university teachers College professors in the US, at the turn of the last century, were often children of the wealthy or who attracted the benefactions of wealthy individuals. As higher education grew, the lack of a pension system interfered with the ability to hire talented academics and retire the older ones.

Andrew Carnegie founded a pension system for academics in 1918. The Teachers Insurance and Annuity Association (TIAA) started with a \$1 million grant from the Carnegie Foundation for the Advancement of Teaching to enable college professors who hadn't contributed to a pension or annuity contract to collect a pension. Carnegie paid a lump sum to help pay for the "past-service liability" of elderly professors. This established a financial vehicle to which younger professors and their employers could contribute and build up credits that would pay for an eventual annuity. At the time, TIAA was established as a life insurance company under New York's tough life insurance regulations in order to provide life insurance and pensions for college and university employees. The fund was famously conservatively invested, so it survived the 1929 stock market crash and the Great Depression when many pension funds failed. The higher education sector expanded far faster than the population in the United States (boosted by the G.I. Bill after World War II), which helped expand this financial service institution. In 1952, TIAA established the College Retirement Equities Fund (CREF), which is a variable annuity product which invests in equities.

In 2007, TIAA-CREF has contracts with over 15,000 employers in the non-profit and educational sectors to maintain employer-sponsored retirement savings plans. These plans are similar to 401(k) plans in the private sector, and are called 403(b) tax-sheltered annuity plans in the educational sectors. TIAA-CREF is one of the largest financial intermediaries in the world. The firm also sells all kinds of retirement plan and investment management products to the public. On June 28, 2007, the California State

Teachers' Retirement System [CalSTRS] selected TIAA-CREF as the sole investment provider for its supplemental retirement savings programs. CalSTRS is the second largest public pension plan and the largest retirement fund for NON university teachers in the nation.

TIAA-CREF offers two types of plans: a traditional employer pension plan, which for the vast majority of the participating institutions, is a money purchase plan³ that provides an income for life, which is important to professors who typically live longer on average. The second type is a supplemental savings vehicle, which is usually a 403(b), where employees can save for retirement. TIAA-CREF had recently changed its longstanding recommendation that employers and employees contribute a combined rate of 10 percent of payroll. They recommend a higher contribution rate because people are living longer. The larger institutions that compete for faculty generally contribute about 10 percent a year and require faculty to contribute at least 5%. TIAA-CREF allows participants to choose a full, half, or two-thirds of the benefit to the survivor or a single-life annuity for those people who do not have a dependent. An employer can choose to offer two other options: systematic payments and a lump sum, though a lump sum withdrawal is taxed heavily and TIAA CREF discourages lump sums.

A chief feature of TIAA-CREF's costs is that they are the lowest in the financial service industry, because TIAA guarantees returns – 3% -- only on the TIAA accumulations and not the equities funds, CREF.

For employees who are continuing to contribute to their TIAA-CREF contracts, average balances are as follows in 2007: for 20 years of service, the average is \$281,234; for 30 years of service it is \$696,205; for 35 years of service, the account balances are

³ A money purchase pension plan is a type of 401(k) plan or "defined contribution plan." The actual pension benefit depends on the level of mandatory plan contributions and investment returns. Contributions to a money purchase pension plan are set as a percentage of pay. They are designed to help employees to save money for retirement. Contributions to money purchase pension plans are tax-deductible for the employer and the plans help attract and retain quality employees. The difference between a money purchase and a 401(k) plan is that the investments are not directed by the employee, the employer MUST contribute, and the employer pays the administrative fees. Much of this definition was obtained from http://www.edwardjones.com/cgi/getHTML.cgi?page=/USA/products/ira/business/money_purchase.html

\$1,042,930.58. After 35 years of service, the accumulations can replace most pre-retirement income. These large averages reflect the high-to-middle class incomes of the participants and the high level of employer contributions, over 10%. Only about 25 percent of participants contribute additionally to the voluntary retirement savings variable annuity and just under half of the total investment of TIAA-CREF is in the traditional fund. Remarkably, only one institution among the many thousands of participating employers in the TIAA – CREF plan allows cash pre-retirement withdrawals; most 401(k) plans allow lump sum withdrawals for special “hardship” reasons – buying a new house, a health problem, funding a child’s education expense, etc. And in this one situation, the results were not desirable. TIAA - CREF reports that this left many people in that institution that allowed lump sums with very little in retirement (Interview with Sue Dilandro, 2007). It is important to note that TIAA-CREF was conceived of as a multiemployer plan to solve an industry-wide problem. The success of TIAA – CREF stems from its structure as a multiemployer plan and is distinguished by its providing personalized financial advice to its members. TIAA-CREF is governed by a board of directors elected by the membership.

TIAA-CREF is focused on keeping fees low for its mostly not-for-profit customers. TIAA-CREF does not charge employers for creating its plans, but covers its subsequent costs by charging an annual fee that is usually less than half a percent of the assets held in each participant's account. The TIAA- CREF model was replicated somewhat in other jurisdictions. Most of the jurisdictions were other not-for- profit organizations, described below, and also the not-for-profit organization of people who work for for-profit organizations for example, car dealerships.

American Charities Other multiple employer plans that are not affiliated with unions include The National Automobile Dealers Association (NADA) Plan (www.nadart.org) The NADA plan was established in 1957 and is run by the National Automobile Dealers and Associates Retirement Trust, a separate nonprofit entity that offers retirement planning services and vehicles -- a 401(k), profit-sharing plans as well as traditional defined benefit plans. Over 3,000 dealers with 142,000 participants participate. The Nonprofit Coordinating Committee of New York and regional United

Way organizations offer administrative services for the pension plans of smaller members of their organizations. Chicago's United Way administers a defined benefit plan in which 13 separate charities, including Lutheran Social Services and the Illinois Society for the Prevention of Blindness, participate. The National Organizers Alliance represents employees of social-justice organizations and set up a coalition to implement a retirement program in 1992. The plan accepted its first contribution in 1997 and has over 81 groups enrolled. Employers pay a \$300 one-time start-up fee, a \$25 fee per employee each year and employers must contribute a minimum of 5 percent of their employees' gross salaries to the accounts. The pension costs are partially subsidized through the alliance's annual fund raising (Weber 2003).

Public Employee Plans Almost all public employee systems in the United States are multiemployer plans in the sense that the many separate work forces, in the public sector, use the state system as a financial intermediary to collect the contributions of workers and employers, manage the investment and pay out benefits.

The pension systems in California illustrate how public employee pensions are multiemployer plans that, as a matter of course, allow small employers to take advantage of superior investment returns. The largest pension system in the world is the California Public Employees Retirement Fund (CalPERS). It is larger than TIAA-CREF and is very different because it is a defined benefit plan. CalPERS covers over half of the California public sector work force.

California state and local government employs over 2.2 million workers – about 15% of California's labor force. Almost all public sector workers in California have pensions, whereas just under 50% of private sector workers in California have no pension. The same pension gap exists in Canada. In 2006, only 39% of Canada's private sector workforce had a registered retirement account, whereas over 86% of public sector workers had pensions. Canadian small businesses account for over 50% of all private sector employment. The organization representing Canadian small business (Canadian Federation of Independent Businesses) asks if the pension gap can be mitigated. Bringing pension coverage rates up in the private sector to levels that match the public sector makes the most sense. An intriguing question may be whether the public sector, designed

to serve the interests of the public, can help close the gap in pension coverage. I will describe an example of how the public sector is faced with the political problem of the gap between public and private sector pension provision in California. California public sector employees are employed by thousands of entities in the forms of towns, cities, counties, school districts, university systems, and various kinds of special districts such as water districts. However, there are not thousands of pension systems; there are (only!) 89 pension systems in the state. For example, CalPERS manages many of these systems, but most of their members are in 4 plans: CalPERS for 1.5 million workers and 1,545 employers; CalPERS for Judges, over 3,300 people and 59 employers; CalPERS for legislators, 309 people and, of course, 1 employer; and volunteer firefighters. CalSTERS covers about 75,000 teachers and 1,400 employers. The college and university teachers in California are among the few that are not in TIAA-CREF. There are 55 locally-administered plans (most were formed before CalPERS) (GAO, 2007). These systems were implemented in different time periods and have different benefit structures. Most were implemented before they were subject to labor-management bargaining. The hundreds of employers in CalPERS and CalSTERS are required to be in those plans by state law. The pension plans were implemented for similar reasons, that municipalities wanted to attract and retain qualified employees, but their formation and administration is decentralized. Doubtless, there would be many more individualized plans, if the legislature did not mandate that groups of employees join the centralized systems.

The gap between public and private sector workers in terms of pension coverage is a growing political question for a number of reasons. In 1998 Grover Nordquist, a consultant to the Republican Party, argued that essentially public sector workers with defined benefit plans are aligned with the Democratic Party because they are not owners of individual equities through individual defined contribution plans. If they were, they would pay more attention to Wall Street's tax policy agendas and align themselves with the "propertied classes." The Republican Party's agenda includes shrinking government services and the pay and benefits of public employees. Starting in the late 1990s, the US public retirement system community has been challenged by "privatization" proponents - those who want to convert DB plans to DC plans. On a statewide basis, only two key jurisdictions went to DC plans, Michigan state employees in 1996 and all public

employees in Alaska in 2006. Meanwhile, in Nebraska and West Virginia, the defined contribution plans were replaced with hybrid DB plans (these plans pay an annuity and charge the employer a fixed rate, but the benefits are based on a career average rather than final pay which helps stabilize costs). These states switched to a defined benefit plan because of the failure of DC plans to yield cost-effective benefits.

The comprehensive report on defined benefit plans in the public sector by the US Government Accountability Office (the nation's auditor) concludes that public sector plans were on course, towards being fully funded. Though this is not the scope of this study, the promised benefits are adequate and often better than in the private sector – which indicates that they are well run and are attractive systems to mimic or conjoin (Brainard and Anderson, 2004).

There are considerable detractors from the view that large public plans are well governed. Romano (1993) and Nofsinger (1998) argued that the politicians on trustee boards of public pension plans pursue political agendas when investing the funds, rather than seek to maximize risk-adjusted rates of return. Critics of public pension plans point to investments that sacrifice risk-adjusted return to divest stocks to demonstrate a social purpose or to pursue investments to yield economic development goals, so-called economically targeted investments (ETI). Munnell and Sunden (1999) reviewed public sector investment behavior and economically targeted investments (ETIs) and found that public sector plans invest a greater share of their assets in corporate equities (68 percent) than do private plans (64 percent including shares held indirectly through mutual funds). Second, they found that economically targeted investments account for a small, 2.5 percent of total state and local holdings, with no apparent sacrifice of risk adjusted financial returns. They also concluded that social and corporate governance activism is not widespread (and when it existed the goals were financial and not political), and the only significant divestiture movement was from South Africa before 1994. Those that argue public plans are run well also point to the success the federal employees' pension plan, the Thrift Savings Plan (TSP). The TSP invests in stock index funds pursued any investment activity or proxy voting to achieve social or political goals (Munnell and Balduzzi 1998). In sum, the agency problems that might exist when many public employees give up local control of their pension fund to a large entity governed by

principals, trustees that have many varied interests, does not seem to result in the funds being met for any other purpose than maximizing risk adjusted rates of return. The Boston College scholars attribute the lack of agency problems to the transparency of the process as well as the professionalism of the administrators.

Following is a brief discussion of the Netherlands pension system that delivers its voluntary employer pension pillar mostly through a multiemployer defined benefit plan structure, though it also has some single employer pension systems.

The Netherlands

Almost all Dutch workers are covered by a supplementary employer-sponsored pension system that delivers retirement income and is based on the earnings and service in one's work life. Not all Dutch pension plans are part of a multiemployer plan; but the "multiemployer" model serves as the guideposts for what single employer plans must provide. The Dutch went through a major reform of their pension systems in 2006 that focused on shoring up their financial health of their defined benefit plans. Since the investment regulations were moving the funds away from a reliance on (relatively) risky equities, and the contribution rates were viewed as being too high, the Dutch changed the benefit formula.

The Dutch maintained their DB plans in the face of mounting expense by switching from the more generous final-pay plans to "average-wage" plans. Indeed, most of the attention to the Netherlands's pension model has been on how this nation reacted much differently to the growing expense of defined benefit plans than did employers in the US, UK and Canada.⁴

⁴ The reform of small Dutch pension plans after financial downturns of the 2001, Colin Pugh writes, can be characterized as a compromise. The new form of pension plan in almost all company, industry and occupational plans is a hybrid structure. In the post war period, pension funds adjusted the contribution rates to fund the growing liability of the guaranteed benefits. Contributions were cut when the funding ratios were high and vice versa. The employer bore (and reaped) all the financial and demographic risks. This was deemed not feasible so final-pay plans were switched to average-wage plans to cut benefits.

Academic economists Ponds and Reil (2007) emphasize that the Dutch preserved stable and secure pension plans, while the US and UK did not, because of cultural and political differences between the Dutch's and Anglo-American attitudes about collective risk. I do not focus on these fascinating aspects of the Dutch system and the reform, but rather focus on what is being concluded about the efficiency of the structures.

Ponds and Reil (2007) argue that single employer DB plans are more costly to administer than if these plans consolidated in a multiemployer structure. They argue that collective risk sharing in a multiemployer model is advantageous and predict that the Dutch plans will evolve towards multimember plans, or multiemployer plans, though this group is now the minority. The Dutch employer pension plans are divided mainly into two groups - industry plans (15% of all plans) and company plans (85% of all plans). (A small group of workers are in a third type pension fund, occupational pension fund, which is organized for a specific group of professionals). All firms in an industry must participate in an industry pension plan – which is organized for a specific branch of industry like, for example, construction –unless a company establishes a pension fund that offers a better plan than the pension plan of the industry fund. All workers must participate in company pension funds and industry pension funds according to binding collective labor agreements.

Unlike in California, the smaller company plans weathered the 2001 jolts in the financial markets, because the larger funds were more likely invested in riskier assets. In this respect it looks like the Dutch small plans had an advantage in the down market, but of course without taking risk, funds will not be likely be earning high rates of return. This is the reason small funds will want to be pooled.

Pond and Reil are part of the side of the debate that argues for consolidation of the over 800 pension plans in the Netherlands. This welcomes the consolidation a larger industry plans that would lower administrative costs. The other side of the debate argues for diversity because consolidation would suppress the needs of small- to medium sized pension schemes (Van der Westen, 2007). This issue is not well described in the literature, and more research is needed. It seems that the debate rests on cost savings.

The Dutch reforms maintained their DB system by cutting benefits. It seems that the Dutch system meets the six-point standard for a good pension system. First the

reforms suggest that workers and retirees appreciate their DB pensions. Second, employers maintain them voluntarily as effective personnel devices although there is no research available in English in the area of the pension plans' effect on turnover of the Dutch workforce. Third, the contribution rates were kept in check by the reforms so the employer's pension costs must be viewed as reasonable and are now more stable (Van Riel B., Hemerijck A., and Visser J. 2003). Fourth, the reforms happened in a political and cultural environment in which there appeared to be little opposition from the taxpayers or corporate shareholders. There is a debate about the best way to deliver efficient pension services referenced above. The most active area is the growth in the Dutch pension funds use of shareholder activist which means that the Dutch plans are defining their role as financial institutions (deJong, Mertens, Roosenboom 2006)

Sweden

Sweden changed its state pension plan in 1998 from a DB plan to a hybrid DC and DB plan in response to growing liabilities in the government-guaranteed portion that was deemed unsustainable. The reform lowered the replacement rate provided by the government system. In order to encourage people to save more for their retirement and to have more pensions funded in advance, the legislature established a second, employer-based, pillar of funded benefits (Sunden 2005). Every worker must contribute 2.5% of their pay into an account.

The experience with the funded portion has not been encouraging. In order to give individuals a great deal of say over how their funds would be invested the legislature allowed private investment firms to compete for the funds. There were, at one time, over 600 funds Swedish workers chose between and most people followed the leader; in other words, they moved their funds into vehicles that reported the highest returns. Unfortunately, very few investment managers can produce superior returns year after year and the two-thirds of workers who chose their own investment funds earned less than the third of workers whose contributions were put into a government- run "default" fund. The government fund earned a higher – net of fee – rate of return than the other private funds (Sunden 2005). The mandatory contributions ensure that all workers will

have a supplement to their small state funded pension. Since the contributions are not based on an employers' decision or subject to the employers' input or governance, they are not similar to the multiemployer plans discussed. Yet, small Swedish firms are not exempt from having their employees contribute and therefore, Sweden achieves universal pension coverage through a mandate. Sweden also created a hybrid plan because even though the returns on the mandatory defined pension contribution are not guaranteed, the funds cannot be withdrawn before retirement and the funds must be distributed in the form of an annuity – a variable or fixed annuity. These features – no pre-retirement withdrawal and annuity pay outs – are the key effective features of a defined benefit plan.

UK

The British system was faced with the similar experience that all nations face with a voluntary employer pension pillar; that is, that in a voluntary system there are low rates of pension coverage among two kinds of workers: those in small and medium sized establishments and those with low-incomes. In 2006, the UK government changed the pension system so that employers must contribute 3% of their workers pay to a government fund. The worker then has a not-for-profit financial institution to keep safe their retirement savings. However, the contributions are not mandatory. The workers can opt to take the contributions in the form of pay. The problem is that still making the second tier voluntary, even though it is an opt-out system designed to boost coverage, may still result in less than adequate retirement income.

6. The Logic and Limits to Opt – out Designs for Defined Contribution Plans

The US pension reform embraced a similar path. US economists Brigitte Madrian and Daniel Sheas' 2001 article transcended the speculation that automatic enrollment was the best way to boost 401(k) participation compared to incentives that relied on people making active positive decisions to increase their savings and lifetime income. Madrian and Shea (2001) argued that people just don't act that way. By using extensive data on employees in a large company, they supported their claims that people are motivated by self interest to be sure, but most are most interested in not being bothered. Inertia, rather

than a relentless pursuit for maximum life-time earnings, was the best description of human behavior. With this insight, the authors argued that firms put aside elaborate and less effective ways to boost 401(k) voluntary participation – higher matches (and, by implication, ever larger tax deductions). Firms should enroll workers in a voluntary 401(k), but that the free choice would be preserved, the voluntary nature of the 401(k) would remain intact, by having people being able to choose NOT participate, rather than the other way around. Sheer laziness would prevent some employees from leaving behind the 401(k) account and forgoing the employer's contribution. In the news stories describing the impact of encouraging companies to use opt-out rather than opt-in provisions, a company official's quote describes the conclusion of the research: "when employees have to proactively fill out a form to opt out of the plan, we are using people's laziness against them" (Lank, 2007).

This insight figured heavily in the passage of the US Pension Protection Act of 2006 that made it more comfortable for companies to automatically enroll their employees in a neutral, plain vanilla, investment portfolio without taking fiduciary responsibilities and liabilities (Walls and Knight 2007.) Surveys of firms' intent show that the many firms say they may opt to adopt opt-out (100% participation may not be for every firm ever). The investment firm, Fidelity, concluded from one of its surveys that 44 percent of 400 plan sponsors that did not offer automatic enrolment programs are considering adding an automatic deferral increase feature (Life Insurance International 2008).

The 2006 Pension Protection Act embraced the opt-out feature with the goal of increasing savings. The hope of the legislation was that opting-out would be enough of a deterrent to the human trait of wanting immediate gratification. Evidence released a year after the implementation of the PPA suggests that the human trait for instant gratification is alive and well. According to a survey of 5,490 plans by Plansponsor Magazine automatic 401(k) plan enrollment isn't helping workers save adequately for retirement, because many people are excluded and if people do save it is insufficient. Also, on average, the contribution rate decreases under automatic enrollment as participants stay in the plans and with their employer. Among employers using automatic enrollment, the

median default contribution rate is 3% of salary. Most workers need to save at least 10% of salary to save adequately for retirement (Laise 2008).

7. Summary and Conclusion

This study discussed different kinds of multiemployer plans in several nations that allowed small and medium sized firms to join existing, or create, stable multiemployer pension plans, short of mandating coverage. What follows sorts the information by summarizing the options for providing pensions for small and medium sized firms, how multiemployer pensions can attract employers, and, finally, how multiemployer, voluntary, defined benefit plans can be improved.

Options for Providing Pensions for Small and Medium sized Firms Small and medium sized employers can pool the administration, education, and investment functions of a pension plan in a multiemployer arrangement. This can be done in a number of ways. One way is by mandating that the public sector pension funds allow small or medium sized firms to buy annuity contracts from the systems; this is what TIAA-CREF does for institutions of higher education. The potential problem is that the merging would work best if the two work groups were similar and were mobile between the private and the public sector work force. An example would be lawyers or teachers who could move between public and private employers and keep their pension credits. Multiemployer plans work best if the firms are aligned as members of the same industry or who employ members of the same occupation.

Further research could explore the contracts TIAA- CREF signs with their member institutions and how the not-for profit agencies and the unions consolidate plans. There are set up costs; even if it is only the costs of an actuary to evaluate the incoming liability of the new work group. TIAA-CREF aims to keep the start up costs very low.

Multiemployer Pension Features That Attract Employers Most multiemployer pension plans discussed above provide benefits that look like traditional defined benefits, including annuities and survivor benefits. The multiemployer plan can also provide partial lump sums if it is a cash balance plan, or if there is what is called a “Deferred Retirement Pension option” (DROP). In a DROP plan, workers can declare a retirement

date some years or months into the future. The person works until those dates while collecting a pension at the same time. The pension is not distributed as cash, but deposited into an account and distributed as a lump sum at retirement. DROP features are described because they are a very attractive feature of a pension plan and may attract voluntary participation of smaller entities that are looking to join up to a larger plan.

The fact that multiemployer plans are hybrids between DB and DC plans makes them an attractive vehicle for small and medium sized firms who want to provide pension plans. Multiemployer plans combine the attractive features of both defined contributions and defined benefit plans. Multiemployer plans are viewed and treated as defined contribution plans by the employer while workers experience them as defined benefit plans.

Multiemployer, Voluntary, Defined Benefit Plans Can Be Improved In the public sector, fairly small plans have joined larger multiemployer plans to take advantage of economies of scale, superior and better paid staff. In the face of funding difficulties, plans should be able to reduce future benefit accruals, as did the Netherlands and Sweden, which reduced the expense of defined benefit plans by converting the formulas from final average pay plans to career average plans. That means that the final pension amount is calculated based on the average earnings over a person's lifetime not on the last few years of work when earnings are typically much higher than the average over a career. (This provision was contained in the United States recent regulation of employer defined benefit plans, the Pension Protection Act of 2006.)

Pension fund accounting should help keep reserves rather like using very conservative actuarial assumptions.

Governance can be improved though the multiemployer arrangement which usually has representation from various constituencies and which is a positive feature of this structure. I attempted to account for them in the study of public pension plans and their governance arrangements in Section 4 on the link between the size of pension plans and their outcomes. Keith Ambachtsheer (2006: 120) presents a way to judge the quality of pension fund governance. Among the criteria are questions like these: Do boards understand the context in which their pension fund operates? Does the board understand

how much the pension fund and plan means to the employer(s) sponsors? Do members of the board understand how to do strategic planning? Do members of the board have ways to evaluate each other? The answers to these questions are usually dismal, according to Ambachtsheer's study because boards do not systematically choose trustees with these criteria in the forefront.

This study identifies the characteristics of efficient and effective voluntary employer-based pension systems and documents some of the problems small and medium sized firms face in finding ways to help their employees accumulate retirement assets in an efficient way. It makes good sense for a small firm, or for workers without a pension plan, to wonder when they hear about the fantastic returns, of, say, CalPERS: "Can't I just invest my money with CalPERS?" The study described circumstances in which larger entities have allowed smaller units to join it with the aim of suggesting ways government policy can facilitate more multiemployer plans.

Canadian pension expert Keith Ambachtsheer and his co-author Rob Bauer, emphatically make the case (2007), concluding that every worker deserves access to an efficient pension delivery system. They favor the route the British have taken, that all UK workers are to be enrolled (unless they opt out, so it is still a voluntary system) into a retirement prefunded account that requires 7% contribution shared between the employer and worker. Key to the program is that these retirement accounts are managed by the government on a not-for-profit basis. A key assumption in the calculations about how large a replacement rate the 7% contribution can achieve is that the fees are low (.3% of assets) and the financial rates of return to these funds are stable due to the prudent investments of the professionals who invest these assets in pooled funds. Also these plans are not defined benefit plans and may need adjustments to adopt those features.

Ambachtsheer and Bauer (2007) urge the Canadian government to reform the Canadian system (though the Canadian pension system is more complex than the British case, because it is regulated at both federal and provincial levels) so that small and medium sized employers can enroll their employees into a larger well-managed pension fund. This study helped create a checklist of desirable features and outlines how other multiemployer models work in other contexts.

The study also emphasized the potential favorable features of a newly devised, multiemployer defined benefit pension plan. Such a plan should allow employees to make extra contributions to the fund so they can take advantage of the efficient investment performance. The plans should distribute pensions as annuities, have controls for administrative and investment fees, aim to stabilize employers' contributions, and have controls for good governance.

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