

Recent Trend of the Shift from DB Plans to DC Plans in the Corporate Pension Plan Area

Nakada, Tadashi (Presenter)

Vice Chairman of The Advisory Council

Nikko Financial Intelligence, Inc.

8-1, Nihonbashi Kabuto-cho, Chuo-ku, 103-0026 Tokyo, Japan

Telephone: +81-3-5644-1648

Facsimile: +81-3-5644-1691

E-mail: nakada@nrc.nikko.co.jp

Arimori, Miki

Analyst

Pension Research, Institute of Social System Research

Nikko Financial Intelligence, Inc.

8-1, Nihonbashi Kabuto-cho, Chuo-ku, 103-0026 Tokyo, Japan

Telephone: +81-3-5644-1651

Facsimile: +81-3-5644-1691

E-mail: marimori@nrc.nikko.co.jp

Abstract

It is widely said, among people concerned with corporate pensions, including sponsors and pension actuaries, that there is a very strong world-wide trend from Defined Benefit (“DB” hereafter) plans to Defined Contribution (“DC” hereafter) plans. Is this view definitely true?

This paper verifies this view by the statistical data available. We would also like to discuss the current features and future development of DC plans;

1. What social and economic conditions stimulated the shift from DB to DC plans?
2. What types of corporation introduced DC plans more?
3. Why did corporations introduce or not introduce DC plans?
4. Which type of plan is better for employees, DB or DC plans?
5. Will DC plans increase more in the future?, and
6. Which points should be reformed in DC plans?

Keywords: Defined Benefit Pension Plans, Defined Contribution Pension Plans

1. Introduction

This paper verifies the recent trend of the shift from DB to DC plans. First, the paper verifies this trend using statistical data from Japan, U.S., and U.K. Second, the paper discusses the current features of the trend and future development of corporate pension plans. Finally, we make some concluding remarks.

2. Statistics from Japan, U.S. and U.K.

Strictly, the shift from DB to DC plans means the transfer of assets and liabilities in DB plans to DC plans. However, it is difficult to collect such data. In this paper, the shift from DB to DC plans is indicated by statistics which show a decrease in the number of DB plans and an increase in the number of DC plans.

(1) Japan

Table 1 shows the number of Pension Plans, Participants and Pension Assets in Selected Japanese Corporate Pension Plans. Both the number of DC plans and their participants have been gradually increasing; the number of DC plans reached more than 2,000 in September 2006 and the number of participants reached more than two million in December 2006. As of September 2007, the number of DC plans reached 2,472, with about 2.5 million participants. DC plans make up 15% of participants and 3% of pension assets. The majority of corporate pension plans are still DB-type plans in Japan.

Table 1 No. of Pension Plans, Participants and Pension Assets in Selected Japanese Corporate Pension Plans (As of November 1, 2007)

	No. of Plans	No. of Participants (Million people)	Pension Assets* (Trillion yen)
EPF	636	4.84	32.8
DBCPP (Fund Type)	617	4.30*	22.4
DBCPP (Agreement Type)	2,058		10.3
TQPP*	38,885	5.06	14.1
DCPP (Corporate Type)	2,472**	2.50**	2.8***

Notes:

EPF: Employee Pension Fund. DBCPP: Defined Benefit Corporate Pension Plans

TQPP: Tax-Qualified Pension Plans. DCPP: Defined Contribution Pension Plans

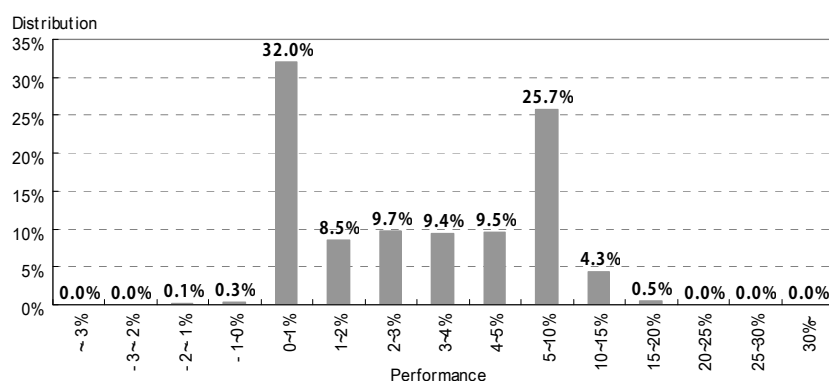
* As of March 31, 2007. ** As of September 30, 2007. *** Asset amount entrusted to Trust Bank.

Sources: Pension Fund Association. Rating and Investment Information Inc., *The Fact-finding of Nikkei Corporate Pension 2007*, Newsletter on Pensions & Investment (in Japanese).

According to “The Second Report of the Fact-finding of Defined Contribution Pension Plans” published by Pension Fund Association in December 2007 and other surveys, there are the following features in Japanese DC plans.

1. Three quarters of DC plans have been established with pension assets transferred from DB plans (Kuwahara 2006). As mentioned later, while DC plans have spread mainly in small and middle size enterprises (SMEs) in US and UK, in Japan DC plans have been introduced in large corporations which previously had DB plans.
2. 37.6% of corporations provide DC plans only and 62.4% have a combination of DC and DB plans. Whilst many SMEs introduced DC plans only, large corporations are likely to use both DB and DC plans.
3. Both “investment education” when DC plans are introduced and “ongoing investment education” are enforced by group training, and publications on a temporary basis.
4. Investment behavior is polarized. Some participants do not invest in risky assets at all and get almost no return. On the other hand, those who invest in risky assets get 5 to 10% return (see Figure 1).

Figure 1: Distribution of Individual Investment Performance in DC Plans (As of March 2007)



Note: The asset allocation based on total asset amounts of the data is as follows;
 Guaranteed principal investment products including short assets 44.7%,
 Domestic stocks 30.8%,
 Domestic bonds 9.9%,
 Foreign stocks 8.2%,
 Foreign stocks 5.7%, and
 Others 0.8%.

Source: Nikko Pension Consulting Co., Ltd.

According to some surveys¹, reasons to adopt DC plans are as follows;

- To avoid the burden of pension finance (e.g. to reduce liabilities in respect of retirement benefits, to avoid investment risk, etc.),

¹ For example, according to the survey by the Senior Plan Development Organization in 2003, major reasons for corporations to introduce DC plans are ‘Reduction of retirement benefit liability (77.3%)’ and ‘Avoidance of investment risks (68.2%)’. Major reasons for corporations not to introduce DC plans are ‘Heavy burden of investment education to employees (47.1%)’, ‘Final responsibility for investment risk is on the employee (43.1%)’ and ‘High cost of plan administration (42.2%)’.

Recent Trend of the Shift from DB Plans to DC Plans in the Corporate Pension Plan Area

- To introduce/strengthen performance-based pay, and
- To secure portability.

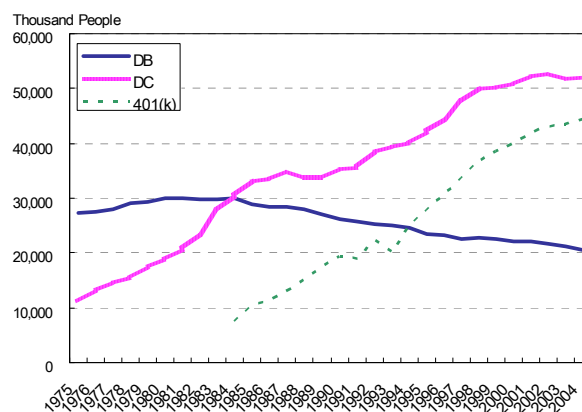
On the other hand, reasons not to adopt DC plans are;

- Heavy cost of investment education for DC participants,
- To avoid transferring investment risk to DC participants, and
- High management and investment costs.

(2) U.S.

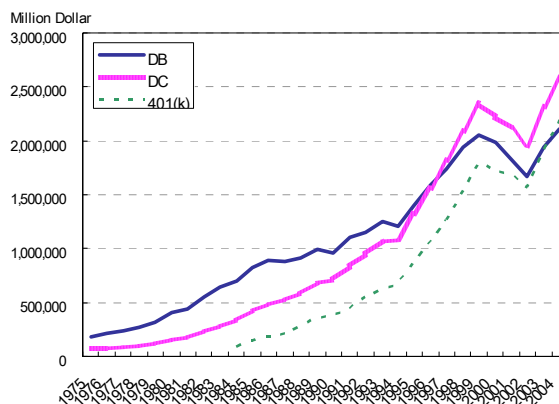
The 401(k) provision, a type of DC plan in the U.S., was created in 1978 as part of that year's Tax Revenue Act. Congress amended the Internal Revenue Code to add section 401(k); hence these plans became known as 401(k) plans. However this provision had gone unnoticed for two years until Mr. Ted Benna, a Pennsylvania benefits consultant, devised a new interpretation that cash or deferred bonus plans qualified for tax deferral. Usually, it was assumed that contributions to such plans could be made only after income tax had been deducted, but Benna suggested that the provision did not preclude pretax salary-reduction programs. Benna's interpretation was realized in 1980. DC plans, including 401(k) plans, spread as major corporate pension plans in the U.S. during the 1980s and 1990s. The number of DC participants outstripped the number of DB participants in 1984 and DC pension assets outstripped DB pension assets in 1997 (see Figure 2 and 3).

Figure2: No. of Participants in US Corporate Pension Plans



Source: U.S. Department of Labor Employee Benefits Security Administration, *Private Pension Plan Bulletin Historical Tables*, March 2007.

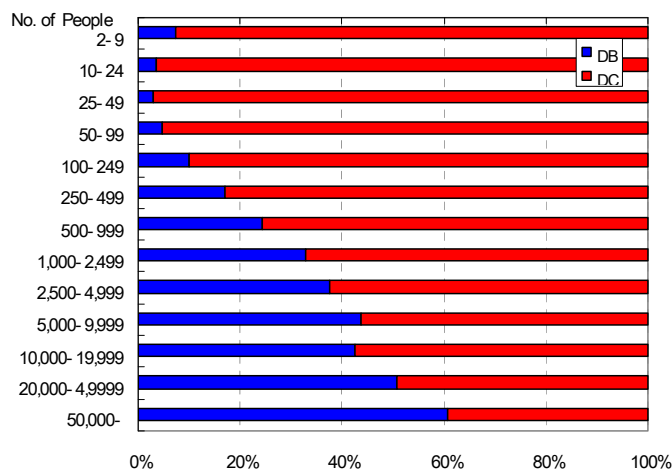
Figure 3: Asset Amounts of US Corporate Pension Plans



Source: U.S. Department of Labor Employee Benefits Security Administration, *Private Pension Plan Bulletin Historical Tables*, March 2007.

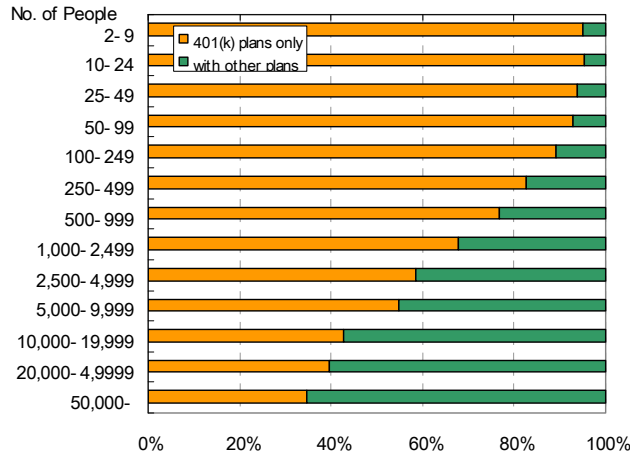
Figure 4 shows that DB plans are common in large corporations and DC plans are more common in SMEs in the U.S. According to Figure 5, in the U.S. many SMEs only have a 401(k) plan, whilst large corporations which introduce 401(k) often provide other types of corporate pensions as well. Figure 6 indicates the distribution of participants by industries in 1993 and 2004. The share of DC plans increased in almost all industries except for “wholesale trade” and “finance, insurance & real estate”. There seems no significant change in the distribution by industries.

Figure 4: The Distribution of DB and DC plans by Number of Participants (U.S. in 2004)



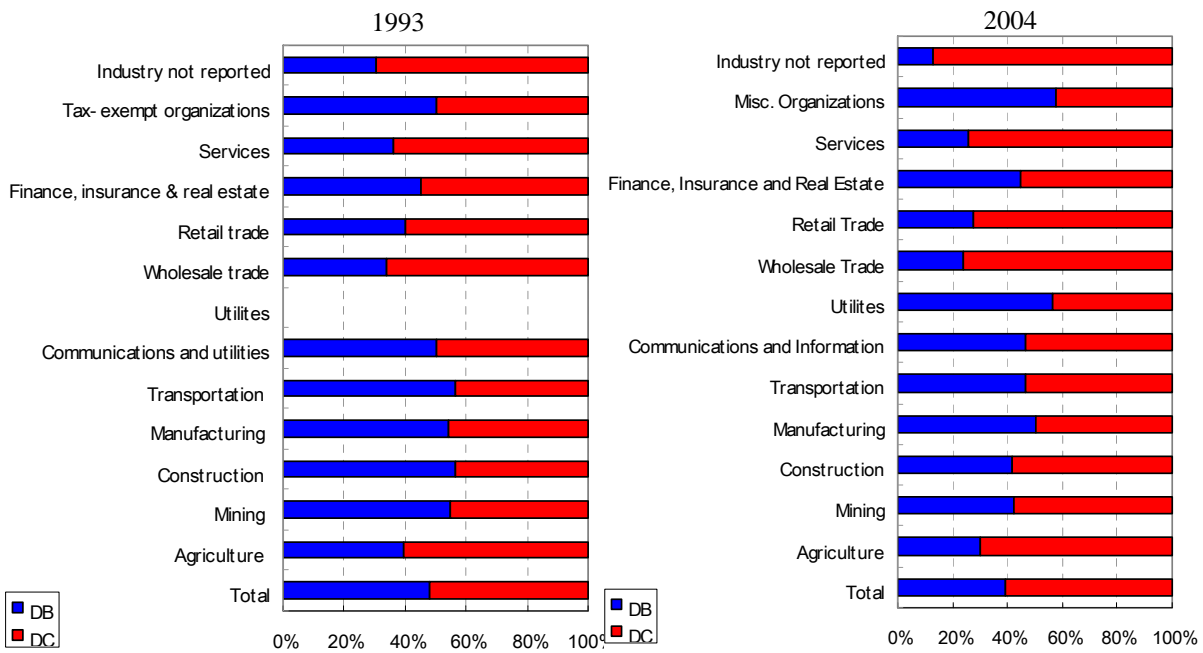
Source: U.S. Department of Labor Employee Benefits Security Administration, *Private Pension Plan Bulletin Historical Tables*, March 2007.

Figure 5: The Situation of Introducing 401(k) Plans by Number of Participants (U.S. in 2004)



Source: U.S. Department of Labor Employee Benefits Security Administration, *Private Pension Plan Bulletin Historical Tables*, March 2007.

Figure 6: Distribution of Participants by industry (U.S. in 1993 and 2004)



Source: U.S. Department of Labor Employee Benefits Security Administration, *Private Pension Plan Bulletin: Abstract of 1993 and 2004 Form 5500 Annual Reports*.

Reasons to adopt DC plans in U.S. are as follows;

- Strict operating regulations for DB plans, and
- Pension Benefit Guaranty Corporation (PBGC) premium burden.

As mentioned above, DC plans have outstripped DB plans and dominate U.S. corporate pension plans. However, in recent years, the tendency to introduce DC plans and to entrust individual participants to choose everything, seems to have changed (Usuki (2007)). The philosophy of DC plans is that each participant makes the investment decisions by themselves, depending on their attributes (age, household composition, income, asset amount, etc.) and risk tolerance. Therefore investment education is considered very important. Recent surveys show that DC participants do not necessarily make their investment decisions rationally. Financial products of default funds, by which DC plan assets are managed automatically in case participants do not choose their investment options, are likely to shift from government bonds or deposits to lifecycle funds or target-year funds, which portfolio changes automatically according to participants' age, etc. Moreover managed funds are common as default funds. Usuki (2007) suggests that the improvement in financial literacy of DC participants as a result of investment education is limited at least in the short term, and financial institutes should develop and provide products tailored to the above situations.

In U.S., the Pension Protection Act of 2006 permits "automatic enrolment systems" for 401(k) plans, which enrol employees automatically who do not positively opt to join 401(k) plans. The act also allows DC plan sponsors to provide "investment advice" to their DC participants. According to the survey by Hewitt Associates (2007), the way in which plan sponsors provide 401(k) plans is changing. Hewitt Associates (2007) show that while the number of automatic enrollment systems of 401(k) plans is increasing, plan sponsors consider that it is insufficient to provide just a 401(k) plan alone and that they need to provide better pension plans. 401(k) plans with automatic enrollment systems made up 19% in 2005 and 34% in 2007 respectively; 77% of those plans provided target-year funds, target-maturity funds or balance funds as default funds. Moreover 83% of those plans contribute more than 3% for employees who do not elect a contribution rate for 401(k) plans (so call "default contribution rate"), and 30% of them increase the contribution rate as members age. This survey also explains that priorities for 401(k) participants have changed from simply joining to getting high quality benefits, and plan sponsors support this trend so as to generate enough retirement income.

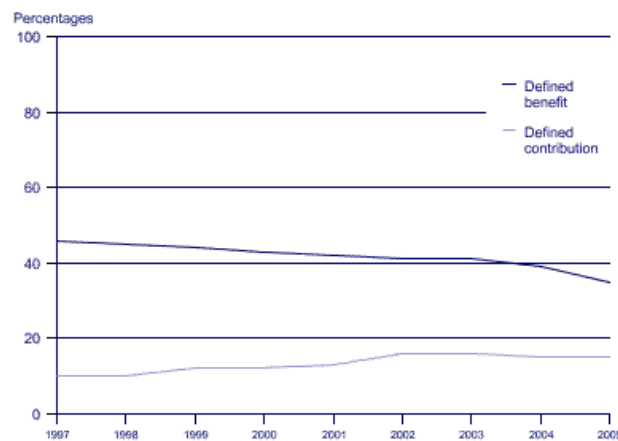
(3) U.K.

In U.K., the mainstream of corporate pension plans in the private sector had been final salary DB plans until the 1970s, and gradually shifted to DC plans in 1980s and 1990s. After 2000, especially the past few years, the number of closed, frozen or winded up DB plans has increased, and the shift from DB to DC plans has also increased rapidly.

Recent Trend of the Shift from DB Plans to DC Plans in the Corporate Pension Plan Area

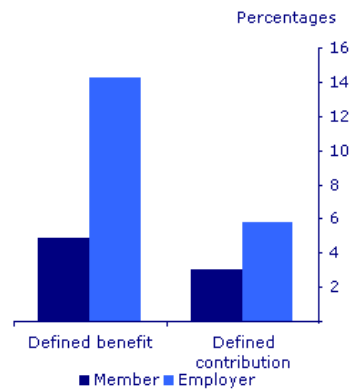
According to National Statistics in the U.K., the estimated number of open occupational pension schemes in the UK was 37,540 in 2006. This was 60 % of the number open in 2000. From 1997 to 2005, the proportion of employees who were members of DB plans decreased from 46% to 35%, while membership of DC plans increased from 10% to 15% (see Figure 7). Figure 8 shows the average contribution rates to DB and DC plans in the U.K in 2006. The average contribution rates for open final salary schemes (DB plans) are 4.9% for participants and 14.2% for employers. On the other hand, the average rates for open money purchase schemes (DC plans) are 3.0% and 5.8%, respectively. The average total contribution rate for DC plans is less than half that for DB plans. National Statistics also reported that from 2004 to 2006 the total contribution rates of DB plans increased from 16.8% to 19.2%, while there was little change for DC plans.

Figure 7: Employee Membership of Occupational Pension Plans in U.K.



Source: National Statistics Online, <http://www.statistics.gov.uk/cgi/nugget.asp?id=1277>.

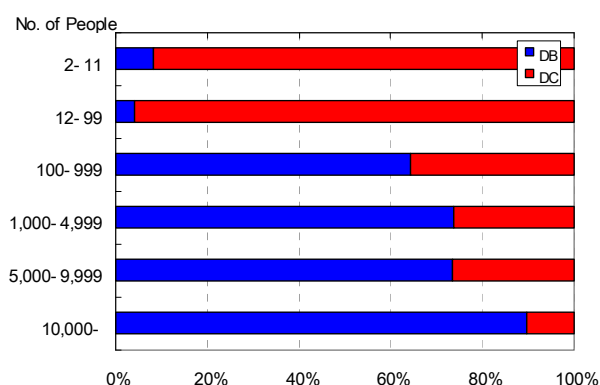
Figure 8: Contribution Rates of Open Private Sector DB and DC Plans (in U.K., 2006)



Source: National Statistics Online, <http://www.statistics.gov.uk/cgi/nugget.asp?id=1837>.

As a result, the number of participants of corporate pension plans in the UK private sector is continuously decreasing (6.2 million people in 1995, 5.7 million people in 2000, and 4.8 million people in 2005). The Pensions Commission², an independent advisory committee established by the British Government, warned that many people would not get an adequate retirement income, unless they held many assets other than their pension or continued to work for a long time. Figure 9 shows that many large companies mainly have DB plans in the U.K. Two-thirds of dissolved corporate pension plans in 2005 were DC plans, but, by number of participants, 80% were DB plans. 55% of DC participants said that they had been provided with DC plans instead of DB plans.

Figure 9: The Distribution of DB and DC plans by Number of Participants (U.K. in 2005)



Source: The Government Actuary's Department, *Occupational Pension Schemes 2005*, June 2006.

In the U.K., the main reasons to adopt DC plans are as follows;

- To respond to increasing life expectancy;
- To avoid increasing DB plans' costs owing to long term deterioration of investment conditions;
- and
- Stricter accounting disclosures for DB plans.

(4) World Wide

As mention above, the shift from DB to DC plans occurred in Japan, U.S. and U.K. Has the shift occurred in other countries? According to a report from Mercer on international and leading companies (2007), DB plans are more popular than DC plans (DB>DC) in 15 countries, and DC plans are more widespread than DB plans in 29 countries (DC>DB, see Table 2). It seems that DC plans slightly dominated. However, there seems a regional bias in DC>DB countries such as former Eastern Bloc (Czech Republic, Hungary), South America (Chile, Argentina, Brazil), etc. Moreover

² The Pensions Commission was set up in 2002 to review the UK private pension system and long term savings. The Commission published final reports in 2006.

there are three countries in which hybrid plans are the mainstream pension plans. Therefore we could say both DB and DC plans are evenly popular in the world. In other words, it is too early to identify whether DB or DC plans dominate internationally.

Table 2: Dominated Corporate Pension Plans in Selected Countries (47 countries)

	No. of Countries	Countries
DB plans (DB>DC)	15	Israel, Norway, Belgium, Japan, Germany, Philippine, Korea, Netherlands, Canada, Mexico, Taiwan, Finland, Portugal, Venezuela, Vietnam
DC plans (DC>DB)	29	Ireland, U.S., Demark, South Africa, Hong Kong, Brazil, Luxemburg, Malaysia, Czech Republic, Greece, Spain, Thailand, India, New Zealand, Turkey, Slovakia, Hungary, France, China, Russia, Argentina, Poland, Italy, Austria, Chili, Australia, Colombia, Singapore
Hybrid plans	3	Sweden, U.K., Swaziland

Source: Mercer Human Resource Consulting (2007), *Defined contribution, hybrid plans prevail among world's leading employers*, Mercer finds, November 2007.

According to our analysis of three countries, Japan, U.S. and U.K., the situation of recent corporate pension plans is as follows;

- In all three countries, the number of DB plans is decreasing and the number of DC plans is increasing. This trend is also seen around the world, though with a regional bias. As a whole, both DB and DC plans are evenly popular,
- In the U.S. and U.K., DC plans are likely to be introduced in SMEs. On the other hand many large corporations still have DB plans or a combination of DB and DC plans,
- The main reasons for the shift from DB plans to DC plans are to avoid increasing DB plans' cost as a result of worse investment conditions and greater longevity, and to respond to more stringent accounting standards,
- The shift from DB to DC plans is not necessarily welcomed; DB plans are revalued in the U.S., and the Pensions Commission warns of inadequacy of retirement income in the U.K., and
- Problems of DC plans, such as difficulty of investment education or poor investment performance, have been increasingly recognized and DC plans face a turning point.

3. Feature of the Shift from DB to DC plans

According to the above statistics and surveys, we find some features about the shift from DB to DC plans.

(1) What social and economic conditions stimulated the shift from DB to DC plans?

According to the three countries' experiences, there are four social and economic conditions to stimulate the shift from DB to DC plans; contracting-out system in UK, under-funding, DB plan

regulations, and stock market volatility.

a) Contracting-out system

In the U.K., the contracting-out system was introduced for DC plans in 1988, and the number of DC plans increased in the late 1980s. From this experience, introducing contracting-out system for DC plans could have accelerated the shift. From 2012 the U.K. government is planning to introduce a ‘Personal Accounts’ system in which all employees in the U.K. will be automatically enrolled to generate retirement income. This semi-compulsory DC plan will also become a key point to spread DC plans.

b) Under-funding

As a result of a period of relatively poor investment performance and a number of other factors, the number of under-funded DB plans increased around 2000 in all three countries. Some DB plan sponsors who wanted to reduce DB plan burdens or cut pension costs decided to shift their pension plans to DC plans. While DB pension assets for both past and future service can be transferred to DC plans in Japan, DC plans are introduced only for new participants or future service in the U.S. and U.K.

c) DB plan regulations

Recently DB plan regulations have become stricter than before: increased funding requirements, changing retirement benefit accounting standard to mark-to-market, increasing premiums for the pension guarantee fund, etc. New accounting standard require disclosure of an under-funded situation of corporate retirement benefit plans. Therefore it costs more than before to maintain DB plans. Combined with long-term recession (in Japan) or under-funding problem (in three countries), DB plans faced a difficult time to keep going after 2000.

d) Stock Market

In the U.S., the number of DC plans increased in the 1990s and after 2002. In the 1990s the U.S. stock market increased rapidly, reflecting the boom in the U.S. economy. After 2002, after the so-called ‘perfect storm’, the rate of investment return recovered. High performance in the stock market is one of the conditions to encourage the spread of DC plans.

(2) What types of corporations introduced DC plans more?

As mentioned above, SMEs are more likely to introduce DC plans. On the other hand, large corporations also adopt DC plans combined with DB plans. It is said that in the U.S. in the 1990s new industries adopted DC plans, but we cannot find this tendency in the statistics (see Figure 6).

(3) Why did corporations introduce or not introduce DC plans?

The main reason to adopt DC plans is to avoid the increase in DB plan costs resulting from long-term deterioration of investment conditions and stricter DB plan regulations. The shift from DB to DC plans is one of the options to reduce liabilities in respect of retirement benefits and transfer investment risk from employers to employees. Positive reasons for adopting DC plans are to introduce/strengthen performance-based pay or to secure portability. In Japan, employment policy is changing from Japanese style management (lifetime or long-term employment, seniority-based payment system) to American style (short-term employment, performance-based pay system). On the other hand, reasons not to adopt DC plans are the heavy burden of investment education needed for DC participants and the high costs of plan administration. Moreover employers do not want to burden employees with investment risk.

(4) Which type of plan is better for employees, DB or DC plans?

DB plans are suitable for corporations or industries whose employment system is seniority-based and lifetime employment. DB plans are effective in persuading employees to stay in office for a long time. On the other hand, DC plans are suitable for corporations or industries whose employees often switch their job, because DC plans' participants can transfer their pension account on changing job (so called 'Portability'). DC plans are also suitable for employees who want to manage pension assets on their own.

(5) Will DC plans increase more in the future?

We mentioned this topic in Chapter 4.

(6) Which points should be reformed in DC plans?

In Japan, DC plans were introduced in October 2001, and both the number of DC plans and the number of participants are increasing step by step. However, current Japanese DC plans should be reformed to make them more convenient and useful to Japanese people. The following legal frameworks are important from Japanese experience; investment education, maximum contribution amount, and individual contribution.

a) Investment education

There are two reasons why investment education is important. One reason is that investment behavior is polarized in Japan (see Figure 1). Those who choose only a guaranteed principal investment product, get a return of close to 0% under the low interest rate environment in Japan, as

well as less than 2.26% of the needed expected return.³ Investment education is a good opportunity for them to reconsider their investment portfolio. The other reason is that investment education is one of the key reasons why employers decide to introduce DC plans or not. To reduce employers' burden of investment education, the government should consider providing guidelines. Moreover the way of introducing investment advisory services to DC participants should be discussed.

b) Maximum contribution amounts

Maximum contribution amounts (MCAs) should be set high enough so that DC participants can generate enough retirement income. In Japan the “Corporate Pension Committee” which verifies and discusses corporate pension plans, suggests considering an increase in MCAs. On the other hand, young participants are not likely to reach upper limits of MCAs in Japan, and how to increase DC contribution amounts of young participants is another problem.

c) Individual contributions

In 401(k) plans, participants contribute to 401(k) plans at first and employers match contributions for participants. However, in Japanese DC plans, only employers can contribute to DC plans. The Corporate Pension Committee proposed the introduction of individual contributions so as to generate more retirement income from DC plans.

4. Future of Corporate Pension Plans; Lessons from “Oxford Defined Benefit Plans Survey”

Lastly, we discuss the future of DB and DC plans based on “the Oxford Defined Benefit Pension Survey” (“Oxford Survey” hereafter). The purpose of the Oxford Survey was to understand how pension experts think about corporate pension plans in their own countries. The Oxford Survey was carried out by Professor Gordon Clark’s team in U.S., U.K., Japan, Canada, Europe, etc. using the same questionnaires.

Table 3: Main results from Oxford Survey (in Japan and U.S.)

	Japan	U.S.
Employer will pay a less significant role in pension provision in 20 years	Disagree	Agree
Mobility and portability are more important than a generous DB plan for young employees	Disagree	Agree
Increased market competition stemming from deregulation and globalization has weakened the competitive position of corporate plan sponsors with large pension liabilities	Agree	Agree

³ When a corporation which provided some retirement benefit system or corporate pension plan in the past introduces a DC pension plan, the employer usually shows the rate of investment return as the expected interest rate to maintain the benefit level.

There is significant resistance to restructuring the DB pension system	Agree	Agree
DB plans effects for future generations of workers expected to manage the burden of pension liabilities	Agree	Agree

Source: *Japan more committed to its pension promise*, Pensions & Investments, November 26, 2007.

The Oxford Survey reveals a real image of DB plans whose management is very difficult in a world of strengthening regulations, changing accounting rules, and intensifying competition between corporations. However, as mentioned above, this situation does not lead directly to a shift to DC plans directly. DB plans were vulnerable to fluctuations of interest rates before, but now that the interest rate risk of DB plans can be avoided by mark-to-market evaluation of liability or Liability Driven Investment (LDI), etc., and such shortcomings are already being overcome.

In Japan as well as elsewhere in the world, both DB and DC plans seem likely to continue in the future. It will depend on the expansion of those plans in the future which has the larger share, or which plans become predominant.

5. Concluding Remarks

This paper discusses the recent trend of a shift from DB to DC plans in Japan, U.S. and U.K. We verify the shift by statistics available for Japan, U.S. and U.K. On the other hand, according to the Oxford Survey, many pension experts think that DB plans will continue in the future. Problems of DC plans, such as the difficulty of investment education or poor investment performance, are becoming recognized. The shift from DB plans to DC plans is not necessarily welcomed, and DB plans are likely to be revalued. Considering inflation risk, longevity risk, etc., it is desirable that mainstream retirement benefit plans should be DB-type pension plans. While DC plans are reformed so as to be easier to use, we reconsider how to maintain DB plans for the future.

Reference

- [1] Clark, Gordon L. and Monk, Ashby H. B. (2007a), *Japan more committed to its pension promise*, Pensions & Investments, November 26, 2007.
- [2] _____(2007b), *Conceptualizing the defined benefit pension promise: implications from a survey of expert opinion*.
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1004743
- [3] Hewitt Associates (2007), *Hewitt Study Shows Employers Continuing to Automate 401(k) Plans*, October 2007.
- [4] Kuwahara, Hiroshi (2006), *The Spread of Defined Contribution and Defined Benefit Pension Plans in SMEs: The reality and Challenges for the future*, Pension Actuaries (in Japanese).
- [5] Mercer Human Resource Consulting (2007), *Defined contribution, hybrid plans prevail among world's leading employers, Mercer finds*, November 2007.
- [6] Nakada, Tadashi (2008), *Future of Defined Benefit Type Corporate Pension Plans: Lessons from US, UK and Japan*, Monthly Journal of Corporate Pension (in Japanese), January 2008.
- [7] Nakada, Tadashi and Arimori, Miki (2007), *Current Situation of Defined Contribution Pension Plans in Japan 2001- 2007*, Presented at The 14th East Asia Actuarial Conference, Scientific Sessions in Tokyo in October 2007.
http://www.actuaries.jp/eaac14th/pdf/session/08P_ArimoriMiki&NakadaTadashi.pdf
- [8] Pension Fund Association (2007), *The First Report of the Fact-finding of Defined Contribution Pension Plans in FY 2006* (in Japanese).
- [9] Pension Fund Association (2007), *The Second Report of the Fact-finding of Defined Contribution Pension Plans in FY 2007* (in Japanese).
- [10] Rating and Investment Information Inc. (2007), *The Fact-finding of Nikkei Corporate Pension 2007*, Newsletter on Pensions & Investment (in Japanese), November 2007.
- [11] Usuki, Masaharu (2007), *Behavior of Individual Investors; Lessons from 401(k) plans in U.S.*, Quarterly Personal Finance (in Japanese), Summer 2007.