

Cost of and Charges for Administering Individual  
Pension Accounts in India: National and International  
Evidence



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## **8.1 Introduction**

Two detailed proposals for pension reform in India have proposed a system with a major role for individual pension accounts: OASIS Report Dave (2000) and World Bank report *India: The challenge of old age income security* (2001). Both reports have stressed the importance of administrative costs and charges in developing such a system for providing retirement incomes. This paper draws together evidence from the international experience and from data on Indian mutual funds. Its aim is to investigate policies that would limit administrative charges and the trade-offs involved in their implementation.

Administrative charges are of great importance to consumers. This paper will show that seemingly small levies can have a huge detrimental effect on the final value of pensions. Administrative charges are also of cen-

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tral interest to policy-makers, for whom adequacy of retirement incomes is an important goal. Whether one defines adequacy as a minimum, basic level of income or a minimum level of earnings replacement, charges on funded pensions will have an important effect. This is especially important when private pensions will provide a large part of current workers' retirement incomes.

The remainder of the paper is structured as follows. The next section looks at how administrative charges affect pension values. This is illustrated with a formal model of different measures of charges. Section 2 looks at empirical evidence from a range of countries with large private pension sectors. Section 3 presents data on mutual funds in India. Section 4 then looks at choices over the institutional structure of funded pensions that will affect costs of provision. Section 5 explores different policy options on administrative charges. Section 6 concludes.

## **8.2 Measuring Charges**

Measuring the 'price' of financial services is more difficult than other goods and services. Fees can take many different forms. Different kinds of charge interact and accumulate in complex ways, particularly with long-term products, such as pensions and life insurance. This often means that the price of financial services is not transparent.

Some fees are one-off, usually a fixed sum payable up-front, although some initial charges can be proportional to contributions in, say, the first year. Other one-off fees are payable at the end of the term: one example is the charge for exercising an open-market annuity option in a personal pension plan in the United Kingdom.

Others fees are ongoing. They can be a fixed fee per period, a percentage of contributions or a percentage of the assets in the fund. The variety of different levies means that it is impossible to measure costs at any point in time: the only meaningful calculation is over the lifetime of pension membership.

A similar analysis can be performed on the cost of administering a pension system. For example, James, Smalhout and Vittas (2001) divide these between start-up costs, fixed record-keeping and collection costs and variable costs of investment management.

### 8.2.1 A Formal Analysis of Administrative Charges

Summarising the different charges in a single number raises a host of complex issues, explored here using a simple model. This formal analysis is an important pre-requisite for choosing between different measures and understanding the implications.

Individual earnings are assumed to grow at a rate  $g$ . Earnings at a given period  $t$  in continuous time<sup>2</sup> can be written as a multiple of earnings in period 0, when the individual joins the pension fund

$$w_t = w_0 e^{gt} \quad (8.1)$$

Assume a pension contribution rate as a proportion of earnings of  $c$ . The first type of charge considered is one as a proportion of contributions,  $a_1$ . The net inflow into the pension fund at time  $t$  net of this charge is

$$c(1 - a_1)w_0 e^{gt} \quad (8.2)$$

These contributions earn an annual investment return,  $r$ . However, an annual management charge,  $a_2$ , is levied as a proportion of the fund's assets. So the net accumulation in the fund at the end of the term (time  $T$ ) from contributions made at time  $t$  is

$$c(1 - a_1)w_0 e^{gt} e^{(r-a_2)(T-t)} \quad (8.3)$$

Integrating (3) from time 0, when the member joins the pension plan, to time  $T$ , when accumulated funds are withdrawn, gives the total fund as

$$c(1 - a_1)w_0 e^{(r-a_2)T} \frac{e^{(g+a_2-r)T} - 1}{g + a_2 - r} \quad (8.4)$$

Any one-off charge, payable up-front ( $a_0$ ), would have earned an investment return up to pension withdrawal. The pension benefit therefore falls by

$$a_0 e^{(r-a_2)T} \quad (8.5)$$

<sup>2</sup>Bateman, Doyle and Piggott (1999) and Bateman, Kingston and Piggott (2001) present a similar model in discrete time.

A proportional exit charge,  $a_3$ , can be deducted from the final accumulation in (4). Allowing for all these charges gives the total net accumulation as

$$\left( c(1 - a_1)w_0e^{(r-a_2)T} \frac{e^{(g+a_2-r)T} - 1}{g + a_2 - r} - a_0e^{(r-a_2)T} \right) (1 - a_3) \quad (8.6)$$

Finally, to evaluate the impact of charges, it is useful to show the pension benefit that would accumulate in the absence of any levies (i.e., setting all the  $a$  terms to zero)

$$cw_0e^{rT} \frac{e^{(g-r)T} - 1}{g - r} \quad (8.7)$$

To summarise, the equations above give lifetime pension contributions plus the investment returns they earn less four different types of charges. These are: a fixed, up-front fee ( $a_0$ ); a levy on contributions ( $a_1$ ); an annual charge on the assets of the fund ( $a_2$ ); and an exit charge as a proportion of the accumulated balance ( $a_3$ ).

### 8.2.2 Alternative Measures of Charges

There are four main potential measures of charges:

- The **reduction in yield** shows the effect of charges on the rate of return, given a set of assumptions about the rate of return, the time profile of contributions and the term of the plan. Thus, if the gross return assumed were five percent a year and the reduction in yield 1.5 percent, then the net return would be 3.5 percent a year. In essence, equation (8.6) is calculated as it stands, and then solved for the value of  $a_2$  that gives the same total accumulation assuming that the up-front charge ( $a_0$ ), contribution-related fee ( $a_1$ ) and exit charge ( $a_3$ ) are all zero.
- The **reduction in premium** shows the charge as a proportion of contributions, again for a set of assumptions about investment returns etc. All of the other charges are in this case subsumed into  $a_1$  in equation (8.6), rather than  $a_2$  in the reduction-in-yield case.
- The third measure, called **MP1**, was developed within the Financial Services Authority James (2000). MP1 is the price of a managed portfolio that yields the market return, excluding charges, on £1.

- A final measure is the **charge ratio**. The formal definition is one minus the ratio of the accumulation net of charges to the accumulation without charges, i.e., one minus the ratio of equation (8.6) to equation (8.7).

These different measures are closely related. For example, the charge ratio is exactly the same as the charge measured as a proportion of contributions (the reduction in premium). To see this, write the accumulation, net of just a charge on contributions,  $a_1$

$$c(1 - a_1)w_0e^{rT} \frac{e^{(g-r)T} - 1}{g - r} \tag{8.8}$$

The charge ratio is one minus equation (8.8) divided by equation (8.7), which is simply  $a_1$ , the charge on contributions.

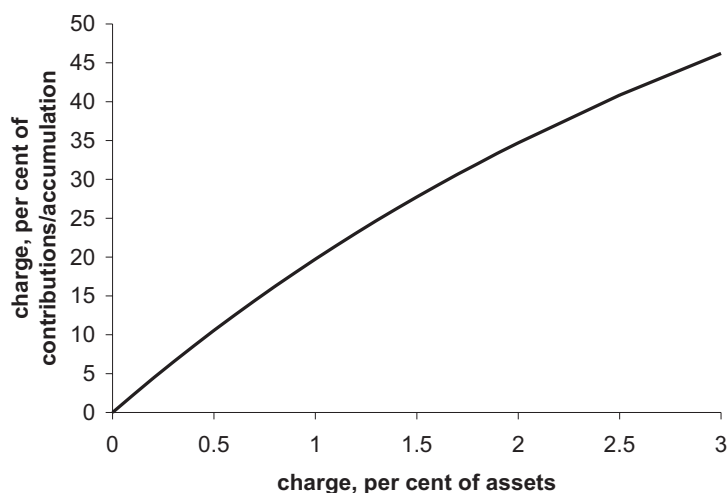
These measures are closely related but give very different results when assumptions change.

### 8.2.3 Empirical Comparisons

The different measures can be compared in practice by calculating equation (8.6) for a variety of charges. The baseline assumptions are that individual earnings grow by three percent a year and annual investment returns are five percent. The pension plan has a 40-year term.

Figure 8.1 compares the first two measures - reduction in yield and the charge ratio (or reduction in premium) - given a single charge as a percentage of assets. The horizontal axis varies this charge between zero and three percent. The vertical axis shows the effect this charge would have on the final pension value (the charge ratio). As discussed previously, a charge on contributions of this rate would have exactly the same effect on the final pension value. The Figure shows that quite low charges on assets build up over the long period of a pension investment to reduce the pension value substantially. A levy of one percent of assets, for example, adds up to nearly 20 percent of the final pension value (or, equivalently, is 20 percent of contributions).

The relationship between the two measures is non-linear, but the deviation from linearity is not large. The choice of either measure would not make much difference in comparing either individual plans or countries' systems

**Figure 8.1** The relation between asset charge and charge ratio

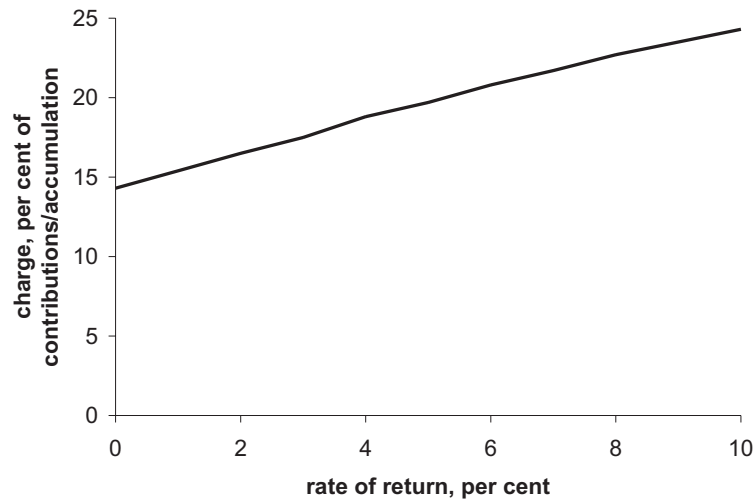
with different levels of charges for a given level of earnings growth and real returns. (The following sub-sections discuss these important conditions.) For example, the doubling in asset management charges from 0.5 to one percent a year increases the charge ratio by nearly 90 percent. Thus, the comparison of reduction in yield gives very similar results to the comparison of charge ratios.

#### **8.2.4 Robustness of Charge Measures to Changes in Assumptions: Rate of Return**

The different measures exhibit different degrees of sensitivity to changes in assumptions. The first comparison varies the rate of return where charges are simply one percent of assets. The reduction in yield measure is insensitive to changes: it is simply one percent for all investment returns.

The reduction in premium or charge ratio, in contrast, is sensitive to the rate of return. Figure 8.2 holds all other variables constant (including the actual charge of one percent of assets). This measure of fees increases by about one percentage point for each one-point increase in the rate-of-return assumption.

**Figure 8.2** Charge ratio under different rate of return assumptions (charge of one per cent of assets)



Is it desirable that the measure of charges should vary with the rate of return? Figure 8.3 illustrates the issue. It shows the value of the pension before charges and net of charges (again assumed to be one per cent of assets) for different rates of return. The grey area in between is the absolute value of the charges. Total fees paid increase more rapidly than the gross accumulated pension: the grey area gets wider as the rate of return increases. This favours a charge measure, such as the charge ratio or reduction in premium, which varies with the rate of return.

However, the increased rate of return obviously increases both gross and net pension. An increase from the baseline assumption of five percent rate investment returns to six percent would raise the gross pension by 26 percent and the net pension by 24 1/2 percent. The extra pension from the higher return is more than the whole of the charge ratio. Yet, the charge ratio increases by one percentage point as the rate of return increases by one point. And a higher charge ratio, of course, implies that the pension member is worse off, when in fact they are substantially better off. This is a significant disadvantage of the charge ratio (or reduction in premium) as a measure of the price of financial services.

**Figure 8.3** Gross and net pension under different rate of return assumptions (charge of one percent of assets)



### 8.2.5 Robustness of Charge Measures to Changes in Assumptions: Earnings

The second economic assumption is the path of individual earnings. This is important because contributions are assumed to be a constant fraction of pay, so the age-earnings profile determines the relative weight of contributions early and late in the working life. This feeds through to the overall charge burden. Contribution-based charges are 'front-loaded'; that is, they are relatively heavy in early years. Asset-based charges are 'back-loaded', because the accumulated fund is much larger closer to retirement.

Studies of the impact of administrative charges have usually (implicitly or explicitly) based their computations on an estimate of average, economy-wide earnings growth. However, a typical worker's pay profile is unlikely to coincide with economy-wide earnings growth. Professional workers, for example, tend to have steeply rising earnings, especially when young, while manual workers' pay is relatively flat across the lifecycle.<sup>3</sup> A measure of economy-wide earnings growth averages across a range of cohorts of different sizes. So there is no reason why the mean of any given cohort's

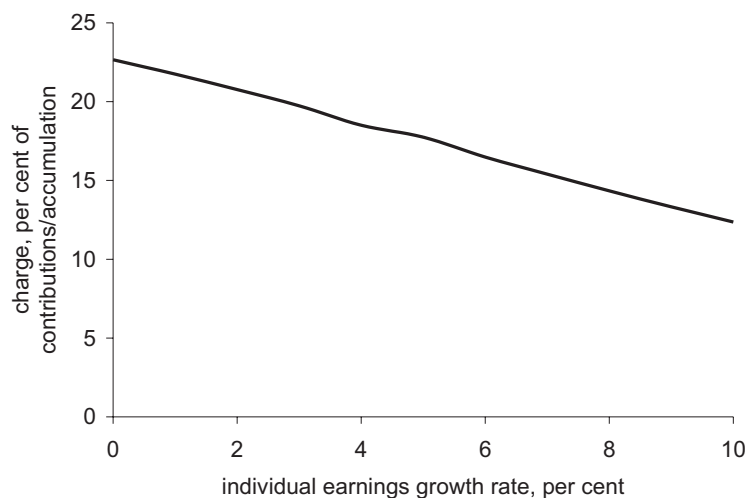
<sup>3</sup>Disney & Whitehouse (1991) and Meghir & Whitehouse (1996)

lifecycle pay should coincide with aggregate changes in wages across the same period.

Age-earnings profiles vary between countries as well as between occupational groups. For example, cross-section data show a sharp decline in earnings at older ages in Australia, Canada and the United Kingdom. In France, Germany and Italy, older workers' pay tends to be paid the same as or more than that of prime age workers.<sup>4</sup>

Figure 8.4 shows how the charge ratio measure varies with the assumed rate of earnings growth. Each one-point increase in earnings growth reduces the charge ratio by around one percentage point (when fees are one per cent of assets). With two-per-cent pay increases, the charge ratio is 20 percent. But the ratio is only 16 percent with earnings increases of six percent a year. This higher growth rate is more typical of workers in white-collar jobs.

**Figure 8.4** Charge ratio under different earnings growth assumptions (charge of one per cent of assets)



<sup>4</sup>See OECD (1998b) and Disney & Whitehouse (1999) section 8.2.2 for detailed data.

### 8.2.6 Robustness of Reduction in Yield Measure with Contribution-based Levies

Asset based charges are a common form of charge for many financial products. But the managers of mandatory funded pensions in Latin America tend to levy fees on contributions. With asset-based charges, the reduction in yield is, by definition, unaffected by model assumptions, such as rate of return and individual earnings growth. The charge ratio or reduction in premium is, in contrast, sensitive to changes in these variables.

With contribution based levies, the reverse is true. Since the charge ratio is equal to the levy as a proportion of contributions, this is by definition constant as other variables are changed. The reduction in yield, however, is not. Figure 8.5 begins by looking at the effect on this charge measure of varying the rate of return, assuming that the levy is ten percent of contributions. (Compare this chart with Figure 8.2.) A higher rate of return reduces the reduction in yield measure, although total charges paid remain the same. The absolute magnitude of the effect of a one-point change in the return is broadly similar to the impact on the charge ratio when levies are based on assets, although the effect is in the opposite direction.

**Figure 8.5** Reduction in yield under different rate of return assumptions (charge of 10 percent of contributions)

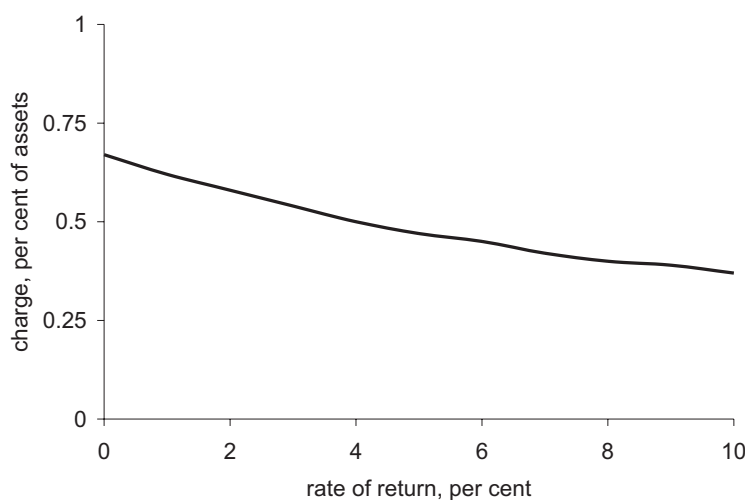
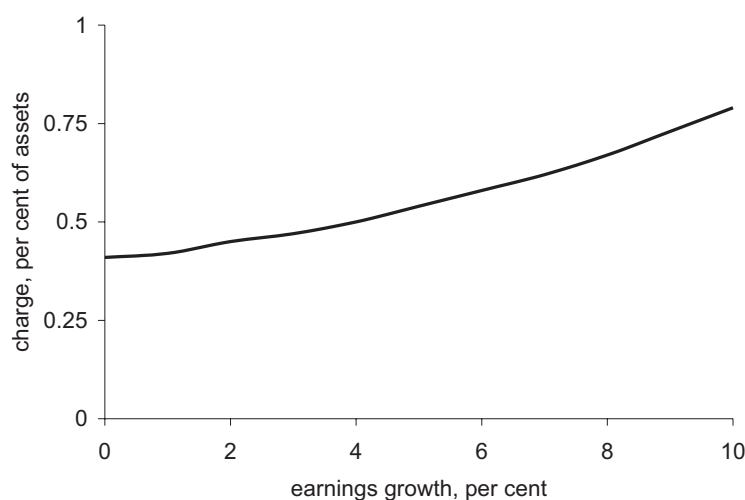


Figure 8.6 shows a similar result for variations in the assumption of individual earnings growth. Again, the magnitude of the change in the measure is similar but the direction is different from the effect on the charge ratio of different earnings growth assumptions with an asset-based levy.

**Figure 8.6** Reduction in yield under different earnings growth assumptions (charge of 10 percent of contributions)



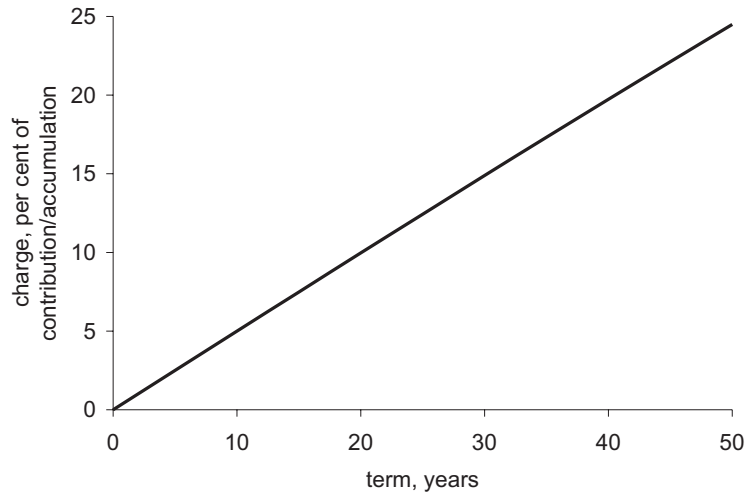
### 8.2.7 Charge Measures and Duration of the Pension Policy

The analysis so far has assumed a full 40 years of contributions to the pension plan. Yet, many people do not have such a consistent contribution profile. Figures 8.7 and 8.8 look at the impact on charges of a shorter period of contributions, assuming that the individual withdraws the benefit when contributions cease. This can be thought of as the cost of taking out a pension for someone already in the labour market (or, perhaps, someone who will retire early). As before, the reduction in premium measure is unaffected if charges (in practice) are levied on contributions and the reduction in yield is insensitive to the policy term if charges are asset-based.

Figure 8.7 shows the charge-ratio or reduction-in-premium measure for a range of durations of pension membership, assuming that the charge in practice is one percent of assets. The reduction in yield measure is, of

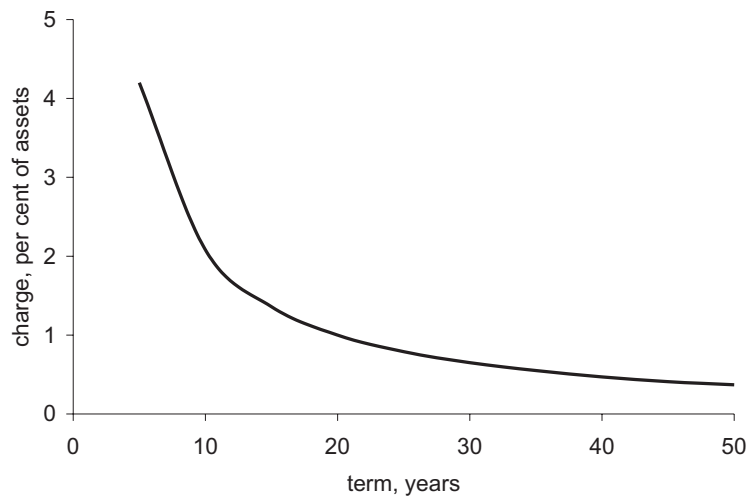
**Figure 8.7** Pension policy duration and the charge ratio (charge of one percent of assets)

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**Figure 8.8** Pension policy duration and the reduction in yield (charge of 10 percent of contributions)

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course, constant, while the charge ratio increases linearly with the length of investments by 0.5 percentage points for each extra year. This is because a one-year policy is charged just once, while the first year's contributions for a two-year policy are in effect charged twice. For short-term policies, much of the pension benefit derives solely from the contributions, while investment returns have a relatively small effect. When a pension is held for a long period, most of the accumulated value comes from the investment returns rather than the nominal value of contributions.

The relationship between net and gross pension for different policy periods and the charge ratio is very similar to the relationship with the rate of return illustrated in Figures 8.2 and 8.3. A pension held for a long period is larger because of the impact of compound interest. Thus, the charge ratio increases, but by much less than the increase in the net pension. This is an undesirable feature, because pensions are supposed to be long-term investments. By showing that shorter-term pensions are 'cheaper', this is not only counter-intuitive but also, if used by consumers or their advisors, could be misleading.

Figure 8.8 shows the opposite case to Figure 8.7. It shows the effect on the reduction in yield of differing policy terms when the charge in practice is ten percent of contributions. The relationship is now in the opposite direction, with longer-term policies appearing to be cheaper. It is also non-linear. This is simply the inverse of the effect explaining the pattern in Figure 8.7. Contribution-based charges are spread over many more years as duration lengthens, reducing their impact when measured against assets. This might also be construed as a misleading picture of pension costs. The absolute value of charges paid increases with a longer term and, in this simulation, the charge as a percentage of contribution is constant while the reduction in yield shows a decline.

### **8.2.8 Gaps in Contribution Profiles**

The previous section showed the effect of a shorter period of contributions than the 40-year baseline assumption, but still one that terminated with the withdrawal of funds. People's contribution profiles in practice are likely to be a good deal more complicated, with gaps arising from periods of unemployment, working in the informal sector of the economy, caring for relatives etc.

During a gap in contributions, charges on the assets in the fund continue to be levied, but contribution-based fees are obviously zero. For simplicity, assume that the worker contributes for an initial period (0... $N$ ) and then stops contributing, but the funds remain invested as before to time  $T$  (when the pension is withdrawn).

At the point when contributions are stopped, the accumulated fund, net of contribution and asset based levies ( $a_1$  and  $a_2$  respectively) is given by equation (8.4), substituting  $N$  for  $T$

$$c(1 - a_1)w_0e^{(r-a_2)N} \frac{e^{(g+a_2-r)N} - 1}{g + a_2 - r} \quad (8.9)$$

After  $N$ , when contributions are stopped, the fund continues to grow by the rate of return, net of charges, giving the total accumulation as

$$c(1 - a_1)w_0e^{(r-a_2)T} \frac{e^{(g+a_2-r)N} - 1}{g + a_2 - r} \quad (8.10)$$

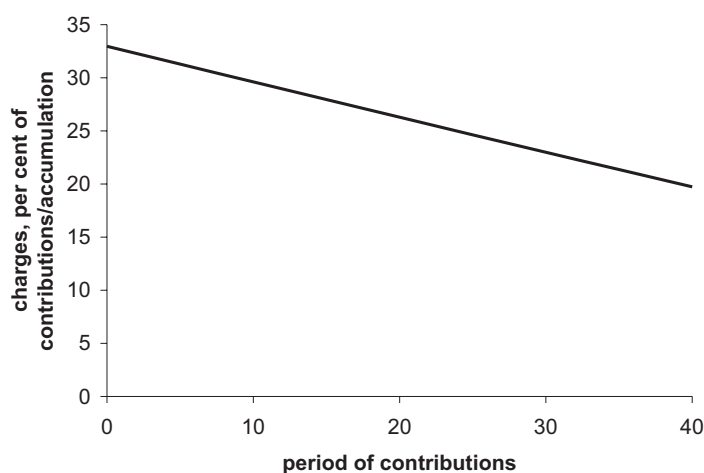
Figure 8.9 shows how contribution gaps affect charges as a percentage of contributions or the total pension fund accumulation. At 40 years, the result is the same as for a full lifetime contribution: the charge ratio is around 20 percent. At the midpoint of the curve, the worker is assumed to contribute for 20 years, and then leave the fund for another 20 years. With the rate of return invested by the fund reduced by the assets-based charge over this period, the charge ratio is now 26 percent.

In these cases, the reduction in yield measure is no longer simply equal to the asset-based charge. With 20 years of contributions and 20 years without, the reduction in yield is around 1.4 percent. The effect on this measure of varying the period without contributions is very similar to the impact on the charge ratio.

### 8.2.9 Conclusion: Which is the Appropriate Measure of Charges?

No measure of charges can summarise simply and accurately the many different kinds of fees that are levied on financial products. Our concern should therefore be to minimise the loss of precision in this process of simplification.

**Figure 8.9** Gaps in pension contributions and the charge ratio (charge of one percent of assets)



All measures deliver sensible answers much of the time. An increase in a levy of any possible type increases the measure and, in general, the measured increase is proportionate.

The sensitivity of both charge ratio and reduction in yield to assumptions about the rate of return and individual earnings growth means that *any* single measure is misleading. A first preference must be for both measures, along with an analysis of the sensitivity of the results to the underlying economic assumptions.

If a single measure of charges is required, the analysis above shows that the most appropriate choice depends on the type of levies used in practice and their relative importance. If, for example, most of the cost of a typical policy is due to levies on assets, then the reduction in yield measure gives the most robust results. Similarly, if charges on contributions (or exit charges) are a more important burden on the pension fund, then the reduction in premium will be more robust.

When comparing funds or systems which rely on different types of charge, reliance on a single measure can be misleading, and the best approach is to use both the charge ratio and the charge as a proportion of assets.

### 8.3 International Comparison of Charge Levels

This section presents estimates of charges in thirteen different countries with mandatory funded pension plans.<sup>5</sup> The results look at the ‘accumulation phase’, when contributions and investment returns are accruing in pension accounts. Charges during the ‘withdrawal phase’ - for purchasing an annuity etc. - are not covered.

The most familiar example of a mandatory funded pension plan internationally is probably Chile, which replaced its defined benefit, public pay-as-you-go scheme with individual retirement-savings accounts in 1981. Much of Latin America now has mandatory funded pension programmes, although these differ substantially in structure, size and scope. There have also been many pension-reform initiatives in the former socialist countries. Hungary and Poland introduced new schemes in 1998 and 1999.

Among the OECD countries, Australia, Sweden and the United Kingdom have introduced new systems of mandatory individual pension accounts.

#### 8.3.1 OECD countries

##### 8.3.1.1 Australia

Australia established its ‘superannuation guarantee’ in 1992. Employers are now required to contribute nine percent of employees’ pay (except for the lowest-income workers). The mandate encompasses a wide range of different funds, although most workers are members of either ‘industry funds’ or ‘master trusts’. Both are collective schemes and the employer is responsible both for paying the contributions and for choosing the funds. There are over 100 industry funds and 350 master trusts.<sup>6</sup>

Charges for superannuation funds are typically a combination of a fund-management fee as a percentage of assets plus flat-rate administrative fees per account and/or a charge as a percentage of contributions. Neither the structure nor the level of charges is regulated. Table 8.1 shows typical charges for these two types of plan.

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<sup>5</sup>Most countries’ schemes are not strictly mandatory, in the sense that all workers must participate in the defined contribution scheme. But most require employees to make some pension provision, often with a choice between continued participation in a public pay-as-you-go scheme or diverting some of their contribution to an individual pension account

<sup>6</sup>See Authority (1998*db*)

The last two rows of Table 8.1 show how these fees translate into the standard measures of charges. The difference between the two types of plan is quite stark. Investment in an industry fund reduces the return by 0.37 to 0.77 percent a year, compared with 0.96 to 1.81 percent a year for master trusts.

**Table 8.1** Pension charges in Australia by fund type

|                             | Industry fund<br>(collective plan) | Master trust<br>(individual plan)                           |
|-----------------------------|------------------------------------|---|
| Flat-rate                   | A\$48 per annum                    | A\$42-A\$71 per annum                                       |
| Proportion of contributions | -                                  | up to 4.5%  |
| Proportion of assets        | 0.3%-0.7%                          | up to 0.95% (administration)<br>0.4%-1.1% (fund management) |
| Reduction in yield          | 0.37%-0.77%                        | 0.96%-1.81%   |
| Charge ratio                | 8.1%-16.1%                         | 19.6-33.4%  |

Source: Bateman et al. (2001)

Note: assumes 9 percent contribution rate, real return of 5 percent a year and earnings growth of 1 percent a year. Industry funds are not required to disclose asset-management fees (usually paid to a subcontractor): anecdotal evidence suggests 0.4-0.5 percent is typical. Data are for 1999

The large difference in charges between the two types of scheme - by a factor of three or more - could have many potential explanations. Bateman et al. (n.d.) propose ‘a combination of differences in governance, historical ethos, institutional practices and industry structure’. Industry funds were established as part of a national industrial-relations agreement. Trades unions pushed for a low-cost form of pension provision. These funds have a mutual structure, with trustees drawn from participating employers and employees. They have essentially a captive membership, so there is little need for marketing and no need for a sales network.

Master trusts, in contrast, are offered by traditional (generally profit-making) financial-services companies. Although the board that runs the schemes includes some independent trustees, the latter have no direct relationship with the plan’s members. There is substantial marketing and a broad sales and distribution network. Service levels, including communication, information and choice of portfolio, tend to be better than in the industry-fund sector.

A final potential explanation is an ‘agency’ problem. The government mandates employers to make a nine percent contribution gross of charges.

Charges are not borne by the employer but by the employees' pension accounts. Employers may not have their employees' best interests at heart and have little incentive to shop around to get the best deal. They might just want to comply with the mandate at minimum cost to themselves.

### 8.3.1.2 Poland

Poland allows both contribution and asset-based fees, but not flat-rate charges. The asset-based charge is limited to 0.05 percent per month (0.61 percent of assets *per annum* at a five-per-cent return); almost all funds levy the maximum. There is no ceiling on the levy on contributions, but providers are not allowed to discriminate (for example, by level of contribution) except on the length of participation in the fund. The aim of this last provision is to minimise the excessive 'churning' characteristic of many Latin American systems. The typical levy is seven-to-nine percent of contributions initially, usually falling to five percent after two year's participation. Table 8.2 summarises the impact of these charges on the standard measures using the baseline assumptions. The majority of the overall charge comes from the levy on assets (around 70 percent after a full lifecycle of contributions).

**Table 8.2** Pension charges in Poland

| Asset-based fee | Contribution-based fee | Charge ratio | Reduction in yield |
|-----------------|------------------------|--------------|--------------------|
| 0.61            | 9                      | 20.5         | 1.05               |
| 0.61            | 7                      | 18.8         | 0.95               |
| 0.61            | 7 then 5               | 17.1         | 0.85               |

Source: Chlon, Góra and Rutkowski (1999)

Note: Data for typical fund in 1999. Assumes 40 year contribution period, 5 percent real return and 3 percent real individual earnings growth

Some 11 million Poles have now chosen one of 21 licensed pension funds. Chlon (2000) reports the results of two surveys asking people why they chose the particular pension fund they did. In the first study, charges were the ninth most important issue out of 14, behind the size of the pension fund, the experience of its shareholders, information provision and service. Just four percent mentioned fees to the second survey, behind 11 other factors. Polish consumers appear rarely to choose between competing pension funds on price.

### 8.3.1.3 Sweden

The issue of charges is particularly important in Sweden because the contribution rate to pension funds -  $2\frac{1}{2}$  percent of earnings - is lower than in any other country with mandatory funded pensions. Rather than establishing separate pension funds, the new régime builds on the existing infrastructure of collective investment institutions. All mutual funds can participate, subject to levying fees set by the public pension agency. There is a complicated formula to determine charges, which depends on the price charged for voluntary savings in the mutual fund, the value of mandatory contributions attracted and the total value of mandatory pension assets managed. For example, with a one-per-cent charge on assets in the voluntary sector, the funds in the smallest class of assets of mandatory members can charge 0.85 percent at the margin, while the largest funds can charge just 0.15 percent. The net result is that the most popular funds will be able to charge less than 0.2 percent at the margin and 0.2-0.3 percent on average, somewhat less than the lowest fees in the voluntary sector. On top, 0.2 percent of assets or so can be levied to cover trading commissions etc. The public pension agency will also charge for contribution collection and record keeping. The agency will spread the fixed costs of establishing the new system over a 15-year period. The charge for these services will be around 0.3 percent of assets. So the total fee for investment in a large fund will be about 0.75 percent, about half the average in the mutual-fund market.

The reasoning behind this complexity is as follows. First, the ceiling should be low enough to discourage excessive marketing. Secondly, the ceiling should allow firms to recover their marginal costs, but provide (at most) a small subsidy to their fixed costs. Thirdly, the régime should not rule out particular portfolios. Emerging markets, smaller companies funds etc. imply higher asset-management costs. By relating the ceiling to the fund's charge in the voluntary sector, the government does not rule out these more expensive investments. But they are subject to some price limitation that, at the same time, does not allow leeway for cheaper funds (e.g., those investing domestically in large-capitalisation equities) to charge excessive prices. Finally, the variation with fund size is designed to ensure that any benefits from economies of scale accrue to members rather than providers. Funds that do not attract much of the flow of mandatory contributions will be cushioned. This reduces the risk for funds deciding whether to enter the new market or not.

The low level of these mandatory fees will leave little if any room for marketing expenditures. The public pension agency will collect contributions and keep records of them. Indeed, the agency will aggregate individuals' contributions and make a single transfer to each fund. The funds will not keep records of individual contributions and will not even know who their contributors are. This is designed to reduce marketing opportunities still further.

Sweden also has a system of occupational pension schemes. The four main programmes together cover 90 percent of employees. Recent reforms have shifted the benefits in the scheme for blue-collar workers in the private sector from a defined benefit formula to a defined contribution scheme. Employers contribute two percent of employees' salaries up to a ceiling to the new SAF-LO scheme, which accounts for 35 percent of total occupational pension coverage. The smaller ITP scheme for white-collar workers is more complex. Since 1999, it has been a combination of defined benefit and defined contribution elements. This division of mandatory pension contributions into three different programmes - the public, pay-as-you-go pension scheme, individual accounts and occupational plans - is unlikely to result in efficient administration.

#### **8.3.1.4 United Kingdom**

The United Kingdom has a variety of pension options. Employees can comply with the mandate for a second pension beyond the flat-rate basic state pension in many different ways. These include a personal pension (provided on an individual or a group basis), a defined benefit occupational scheme, a defined contribution occupational plan, the state earnings-related pension scheme, known by its acronym, Serps or a 'stakeholder' pension. This new plan is described in more detail below.

Analysis of personal-pension charges is complicated by the bewildering array of different types of levy.<sup>7</sup>

- **Policy, plan or administration fees** are a regular flat-rate charge, usually payable monthly or annually. A typical levy is £30 a year, usually uprated in line with average economy-wide earnings or prices;

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<sup>7</sup>Data from Walford (1998)

- **Bid-offer spreads** act as an entry and/or exit charge from the fund. Units in the pension fund are sold at a higher price than the fund will pay to buy them back. This usually adds up to a charge of five percent or so, and acts as a levy on contributions;
- **Unit allocations** work in a similar way. The provider credits the personal pension account with only a proportion of the units bought. Unallocated units are usually up to 10 percent, and often depend on the number of years spent in the scheme. Again, this operates as a levy on contributions. Often the allocation rate depends on a range of variables, such as the size and frequency of contributions (with discounts for larger and less frequent payments) and the term to retirement (higher charges for shorter terms);
- **Fund-management charges**, as a percentage of assets, are the most familiar kind of levy. The range of typical charges is 0.5-1.0 percent;
- **Initial charges** and **capital levies** are one-off, up-front charges payable in the first one or two years. They tend either to be a fixed fee (£60, for example) or a percentage of contributions (five percent).

The middle column of Table 8.3 shows the ‘average’ charging structure used by the Government Actuary to advise on the adjustment to the social security contribution rebate to compensate for average fees paid. These levies translates into a charge ratio (reduction in premium) of around 25 percent and an equivalent charge as a proportion of assets of 1.3 percent (the reduction in yield).

**Table 8.3** Personal pension charges in the United Kingdom

| Levy               | Government Actuary | Money Management |
|--------------------|--------------------|------------------|
| Flat-rate          | £30 a year         | £12 a year       |
| On contributions   | 8%                 | 6%               |
| On assets          | 0.9%               | 0.9%             |
| Charge ratio       | 25                 | 23               |
| Reduction in yield | 1.3                | 1.2              |

Source: United Kingdom (1999b), Walford (1998). See also Chapman (1998)

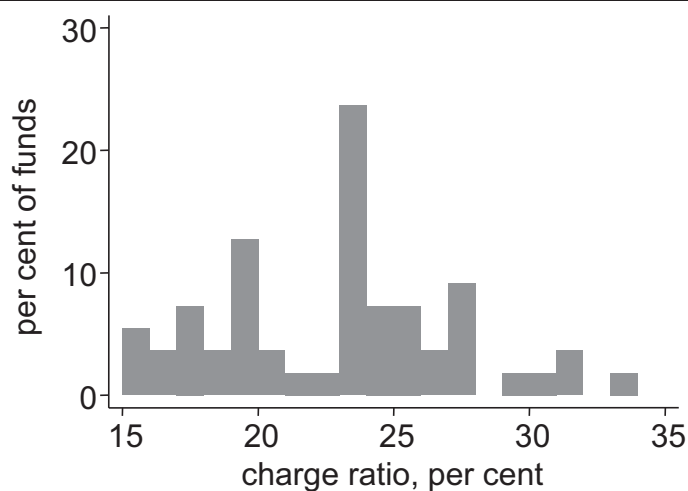
Analysis of detailed charging data - the final column of Table 8.3 - reveals lower charges than the Government Actuary’s figures. The charge ratio, for example, is two percentage points lower, equivalent to a reduction in yield of 1.2 percent. Furthermore, nine companies offer ‘level-

commission' plans, with a charge ratio 1.4 percentage points lower on average than full commission schemes. Commission-free plans, available from seven firms, have a charge ratio over 8 percentage points lower on average. The overall (unweighted) mean charge ratio including all these plan types is 22 percent, which is three percentage points lower than the Government Actuary's assumptions.

The average charge disguises a very broad distribution. More than two out of five funds levy no fixed fee while more than one in ten levies in excess of £30 a year. The most common levy on contributions is five percent, but a few funds make no charge while some extract more than 10 percent. Charges on assets are typically either 0.75 or one per cent a year, but the range is 0.36 to 1.5 percent.

This translates into a very broad range of charge ratios, as illustrated in Figure 8.10. The lowest charge ratio is 15 percent, the highest 33 percent, with a mean of 23 percent. This translates into a reduction in yield of between 0.72 and 1.87 percent, averaging 1.2 percent.

**Figure 8.10** Distribution of pension charge ratios in the United Kingdom



Source: author's calculations based on Walford (1998)

Note: excludes level-commission and commission-free plans, which have lower average charges: see text

There is no systematic relationship between charges and the size of the pension fund manager (measured either by assets under management, by contribution income or by number of policies). The weighted average charge ratio is just 0.13 percentage points below the unweighted mean. The only difference of any magnitude is between mutual and proprietary managers. (Around a third of pension firms were mutually owned at the time of the survey, though many of these have either ‘demutualised’ or been taken over by shareholder-owned firms since.) Mutual providers’ charges average 21.6 percent, compared with 23.7 percent for proprietary firms. (This difference is significant at 8.6 percent.)

There is evidence of a decline in charges since the early 1990s. Since a peak in 1992, the average levy has fallen by one sixth, from  $28\frac{1}{2}$  to 24 percent of pension accumulation. Analysis of individual firms’ charges over time shows that this is due to cuts in some of the very highest charges. For example, the lowest quartile of the charge ratio has fallen by only one percentage point, while the upper quartile has declined by more than five points.

The new stakeholder pension schemes aim to fix many of the problems of personal pensions. In particular, there are four main strategies to control the level of costs and charges.

First, all employers who do not offer an occupational pension plan or a group personal pension have to identify a stakeholder pension scheme and facilitate access to it. Since there are fewer employers than employees, this should reduce marketing expenses. In addition, employers should have greater bargaining power than individual employees, allowing them to secure a better deal. (Assuming, of course, that they have their employees’ interests at heart.) Collective provision might also reduce the cost of supplying information and advice.

Secondly, some aspects of the regulatory régime have been simplified. The most important change is the streamlining of the taxation rules, which should reduce compliance costs substantially.

Thirdly, stakeholder pension providers will be restricted to just one type of charge - a percentage of fund assets - rather than the multiplicity used now. This facilitates comparison of charges between different providers. It also

eliminate costs, such as fixed management charges, that bear particularly heavy on low contributions.

A related government initiative is the consumer-education remit enshrined in the legislation establishing the new unified regulator, the Financial Services Authority (FSA). This, along with league tables of providers' costs etc., should increase the transparency of charges and empower consumers to shop around for lower-cost providers.

However, the government does not appear to believe that transparency of charges (compared with the Byzantine schedules of personal pensions) will alone be enough to facilitate competitive pressure to reduce administrative costs. It has also introduced a ceiling on charges of one percent of fund assets. This is equivalent to a charge ratio (on the standard assumptions) of 19.7 percent. It compares with an average of 1.2 percent of assets and a charge ratio of 23 percent for someone who remains in a personal pension throughout their career. Of course, the main benefit from stakeholder schemes will accrue to people who stop and start contributing at different points in their career. The reduction in charges will be larger than the saving for a full-career pension contributor.

The charge limit could also feed through to lower costs. The government argues: 'The reassurance provided by minimum standards will reduce the need for detailed financial advice when people join schemes'. Since the one-per-cent ceiling is rather lower than the median personal-pension charge, it will also tend to reduce the very high variance in charges observed now.

### **8.3.2 Latin America**

Excluding Bolivia, which is discussed separately below, there are three basic structures of charges in Latin American countries.

1. First, pension funds in four countries - Colombia, El Salvador, Peru and Uruguay - levy a charge only on contributions.
2. Secondly, in Argentina and Chile, funds levy a mix of a fixed administrative fee and a charge on contributions. In Argentina, five funds do not levy a fixed fee, while the other eight levy an average of \$3.85 a month. In Chile, all but one of the funds have a fixed charge, averaging just \$1 a month. Finally, Mexico's charges are the

most complex in Latin America. Three funds levy a fee just on contributions. Nine firms make charges both on contributions and on the value of assets in the fund and one company levies a fee only on the investment returns. Eight firms also offer discounts to long-term members of their funds.

There are two complications with comparing charges between these seven Latin American countries. First, in four countries - Chile, Colombia, El Salvador and Peru - charges are levied on top of the mandatory contribution. In Chile, for example, the compulsory contribution is 10 percent of pay. With the average charge level on top, the total contribution is 11.6 percent. Elsewhere, the charge is taken out of the gross contribution. In Argentina, for example, the compulsory contribution is also 10 percent of earnings, but a charge averaging 2.3 percent is deducted from this, giving a net inflow to pension funds of 7.7 percent of pay.

Secondly, all of these systems also include mandatory private disability insurance. The insurance premia are collected as part of the charge, even though pension managers usually pass this straight on to separate insurance companies. The disability premium has been deducted from charges.

Table 8.4 shows the results. There is considerable variation in the mean level of charges, ranging from a charge ratio of 13.5 percent in Colombia to 26 percent in Mexico. These are equivalent to reductions in yield of 0.65 and 1.4 percent respectively.

There are also large differences between countries in the variability of charges. The relatively small number of funds in Peru, El Salvador and Uruguay levy very similar fees. In Mexico and Argentina, in contrast, there is much greater variation. In the former, for example, three funds charge the equivalent of 19 percent of contributions while four funds levy 30 percent or more.

The columns showing the weighted mean charge provide some evidence on the relationship between fund size and the level of charges. One might expect a negative correlation between these two variables. First, if fees reflect costs and there are economies of scale in managing pension funds, then larger funds would levy lower charges. Secondly, if consumers shop around for lower charges, then cheaper funds would attract more members.

**Table 8.4** Pension charges in Latin America

|             | Number of funds | Unweighted mean charge |              | Weighted mean charge |            | Range of charges |         |
|-------------|-----------------|------------------------|--------------|----------------------|------------|------------------|---------|
|             |                 | Reduction in yield     | Charge ratio | By assets            | By members | Lowest           | Highest |
|             |                 |                        |              |                      |            |                  |         |
| Colombia    | 8               | 0.65                   | 13.5         | 14.0                 | 14.1       | 11.9             | 16.7    |
| Uruguay     | 6               | 0.72                   | 14.7         | 14.4                 | 14.6       | 13.2             | 15.8    |
| El Salvador | 5               | 0.85                   | 17.1         | 17.0                 | 17.0       | 16.1             | 18.4    |
| Chile       | 8               | 0.88                   | 17.7         | 16.2                 | 16.1       | 14.5             | 20.4    |
| Peru        | 5               | 0.96                   | 19.1         | 19.0                 | 19.1       | 18.6             | 20.0    |
| Argentina   | 13              | 1.20                   | 23.1         | 24.4                 | 24.6       | 17.4             | 27.9    |
| Mexico      | 13              | 1.39                   | 26.0         | 24.5                 | 26.2       | 19.3             | 35.4    |

Source: author's calculations based on de Administradoras de Fondos de Pensiones (2000). Data for December 1999

If there were a negative relationship between charges and fund size, then the weighted mean charge would be below the unweighted mean. This is rarely the case in practice. In Argentina, for example, the weighted mean charge ratio is 1 to 1.5 percentage points higher than the unweighted average. There is a *positive* rather than a negative correlation between charges and fund size: the correlation coefficients are 0.54 and 0.62 (weighted by value of assets and number of members respectively). Note that this does not rule out a negative relationship in practice because the measure of charges is based on an example worker. High earners will be attracted to funds with relatively high fixed charges and low variable charges. If this 'streaming' of workers into different funds operates in practice, actual charges will be lower than measured. Unfortunately, the micro data necessary to examine this effect are not available.

In Chile, the reverse relationship to Argentina holds, with a weighted mean charge ratio 1.5 percentage points lower than its unweighted value. The correlation coefficients are -0.95 and -0.82 respectively. This suggests that larger funds are cheaper. Among the other countries, Colombia exhibits a fairly strong positive relationship between charges and fund size, with similar correlation coefficients to Argentina. In El Salvador, Peru and Uruguay, there is a weak negative relationship. In Mexico, the results are more complex. There is no relationship between the charge level and the number of members in a fund, but there is a positive correlation between charges and the value of assets under management. There are two potential explanations for this pattern. First, there are economies of scale with respect to

assets under managed and not to the number of members. But this is unlikely given that many administrative costs are fixed. Secondly, members with larger funds are more responsive to price. Both of these explanations are, of course, speculative.

A related study, mainly of Argentina (FIEL, 1999), looked at the relationship between charges and the inflow and outflow of members in particular pension funds. The authors regressed (using 1994-97 data) the numbers moving into a fund, the numbers moving out and the net overall flow on charges, loyalty bonuses awarded by the funds and relative fund performance. There appeared to be no effect of charges on flows of new members into funds in either direction, but higher charges are associated with a larger loss of existing members. The relationship with marketing, sales and advertising expenditure was the other way round. Higher promotional spending seemed to result in higher inflows, but had no significant effect on outflows. Considering these two effects together, the authors conclude that it pays more to increase spending on advertising etc., even if this means higher charges. This is because the elasticity of net flows of members relative to marketing spending is approximately twice as large as the elasticity relative to charges. However, the paper also finds that the competitive effect of charges has grown over time.

#### **8.3.2.1 Charges Over Time**

The results in Table 8.4 rely on the very strong assumption that charges remain unchanged throughout the lifetime of the pension contract. But the schemes differ in their maturity: El Salvador's was introduced in 1998, Mexico's in 1997, Uruguay's in 1996, Argentina and Colombia's in 1994 and Peru's in 1993. Chile's funded pension system has been operating the longest: since 1981. This offers an opportunity to look at the development of charges as the pension system matures. Table 8.5 shows how the structure evolved in the late 1980s and early 1990s.

Three different types of charges were permitted initially: a monthly lump-sum payment, an additional payment as a percentage of salary and an annual levy of a percentage of the outstanding balance in the fund. In 1988, the last of these charges was prohibited.

The most striking feature of the charging structure in Chile is the declining importance of the fixed monthly payment. Since 1988, this has fallen by

**Table 8.5** Pension charges in Chile

|      | Fixed charge<br>(US\$ per year) | Variable charge<br>(percent of earnings) | Annual charge<br>(percent of fund) | Charge ratio<br>(percent) |
|------|---------------------------------|--|------------------------------------|---------------------------|
| 1987 | 10                              | 3.4                                      | 0.33                               | 30.3                      |
| 1988 | 11                              | 3.6                                      | -                                  | 26.4                      |
| 1989 | 8                               | 3.3                                      | -                                  | 24.8                      |
| 1990 | 6                               | 3.0                                      | -                                  | 23.1                      |
| 1992 | 4                               | 2.9                                      | -                                  | 22.5                      |

Source: author's calculations based on Valdes-Prieto (1994)

two-thirds, while the average overall charge has fallen by a quarter. The short-term response to the prohibition of asset-based fees was a rise in the other charges. But within two years, the pension fund managers themselves had absorbed the loss of revenues, and both fixed and contribution-based levies were below their 1987 level.

This suggests caution is required in comparing charges between countries. All measures of charges are based on the strong assumption that their value does not vary over time, which the Chilean experience refutes.

### 8.3.2.2 Bolivia

Bolivia's system is very different from the other Latin American countries. The government chose to auction the rights to manage two pension funds internationally. Of the 73 companies expressing an initial interest, twelve applied. These were whittled down to short list of nine. Regulations and guarantees were then specified, which resulted in only three applicants at the final stage. The government picked two firms based mainly on their asset-management fee.<sup>8</sup>

The successful bidders have a five-year guarantee of their duopoly, and a guarantee of initial market share. People will be assigned at random to the two funds, and will be only permitted to transfer from 2000, three years after the new régime was introduced. New firms can enter the market after 2002.

This process has kept charges low: five percent of contributions and 0.23 percent of assets. This translates into a charge ratio of 9.8 percent and a reduction in yield of 0.46 percent.

<sup>8</sup>See Gersdorff (1997) for a discussion

In part, this results from the structure of the market. With just 300,000 pension members, contributing under \$100 million a year, having only two managers allows them to take advantage of (limited) economies of scale. The initial guarantee of market share allows the companies to spread their set-up costs over a period and the absence of member choice limits the need for marketing. However, the successful firms were also given \$1.7 billion of privatisation proceeds to manage, equivalent to 15 or more years of contributions to the mandatory pension system.<sup>9</sup> There is likely to be a significant cross-subsidy from the fee paid to manage these assets to the charges on pension accounts.

### 8.3.3 Kazakhstan

Kazakhstan took the most ambitious approach to pension reform of the countries assessed here. All new retirement income rights for all workers will accrue in individual pension accounts. The contribution rate to the new system is ten percent, with a 15 percent payroll tax used to finance existing pay-as-you-go pension liabilities. This tax will be phased out as pay-as-you-go liabilities decline.<sup>10</sup>

People can choose from one of eleven private pension companies and a state pension manager, which also operates as the default for workers who make no nomination. These companies contract out investment to an asset management company, of which there are just three: ABN-Amro, the Dutch investment bank, Zhetisu and Narodny Bank, the largest Kazakh bank.<sup>11</sup>

Regulations require that fees cannot exceed one percent of contributions plus ten percent of the investment returns of the fund. The latter levy, for a given rate of return, works like a charge on assets (the charge is 0.5 percent of assets with a five-per-cent real return).

Of the total charge, the asset-management company receives 0.15 percent of contributions and five percent of investment income. The rest goes to the

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<sup>9</sup>These assets will finance the 'Bonosol/Bolivida' programme, which will pay a flat-rate benefit to all Bolivians over 65 separately from the funded scheme

<sup>10</sup>Data are from Andrews (2000)

<sup>11</sup>Another fund had its license suspended following an inspection by the supervisory authority

pension manager, who is responsible for collecting contributions, record keeping and marketing the fund to potential members.

These charges are low compared with most other countries: a charge ratio of 11.45 and a reduction in yield of 0.55 percent at the baseline assumptions. There has been an intense debate between the government, pension funds and others about the level of the limits on fees. The funds indicate that they need 100,000-150,000 members to break even, and only one (Narodny Bank) has so far reached that level.

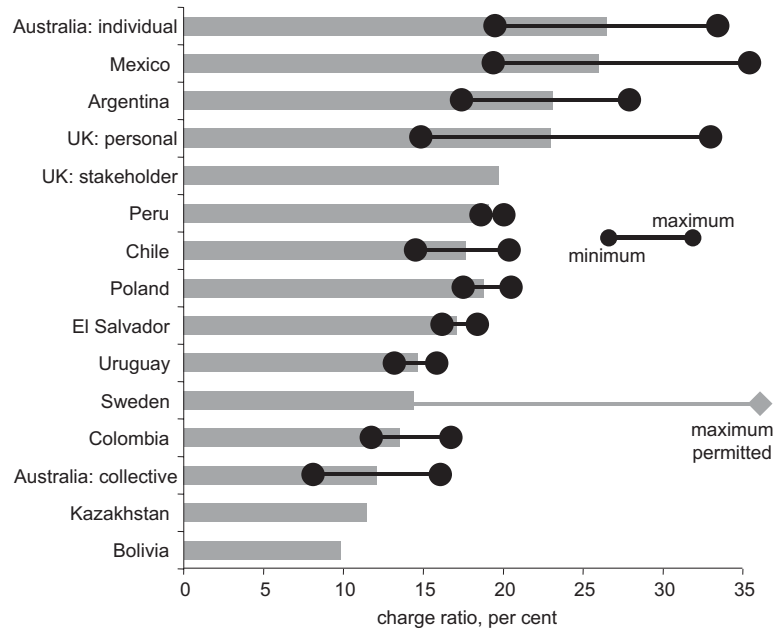
### 8.3.4 Summary

Figure 8.11 summarises the empirical analysis of charges in different countries. In most cases, the grey bars show the mean charge while the black dots show the range of charges. In Sweden, however, the grey bar shows the minimum of the range of permitted charges, which depends *inter alia* on the size of the fund. Most people are expected to pay charges close to this minimum level. The grey diamond shows the theoretical maximum charge. The data for stakeholder pensions in the United Kingdom are the maximum: some providers have already announced lower charges than this level. In addition, the main beneficial effect of stakeholder schemes on the burden of charges relative to personal pensions - flexibility in stopping, starting and varying contributions - is not captured in this picture.

The mean burden of charges in different countries varies over a substantial range. It is also interesting to note that the countries with the highest average level of charges - Australia (master trusts), Mexico, Argentina and the United Kingdom - also exhibit the greatest variability by a significant margin.

The results in the chart are somewhat sensitive to changes in assumptions. The charge ratio measure does not vary with the rate of return if fees are levied on contributions. But pension managers in all the countries outside Latin America - Australia, Kazakhstan, Poland, Sweden, and the United Kingdom - and in some in Latin America levy some or all of their charges on assets. The charge ratio measure in these cases is higher with a higher rate of return. However, the distribution of charging levels in Figure 8.11 is broad enough to ensure that re-rankings with varying assumed returns are limited to two places.

**Figure 8.11** Charge ratio in funded pension schemes in thirteen countries



Source: see discussion in previous sections

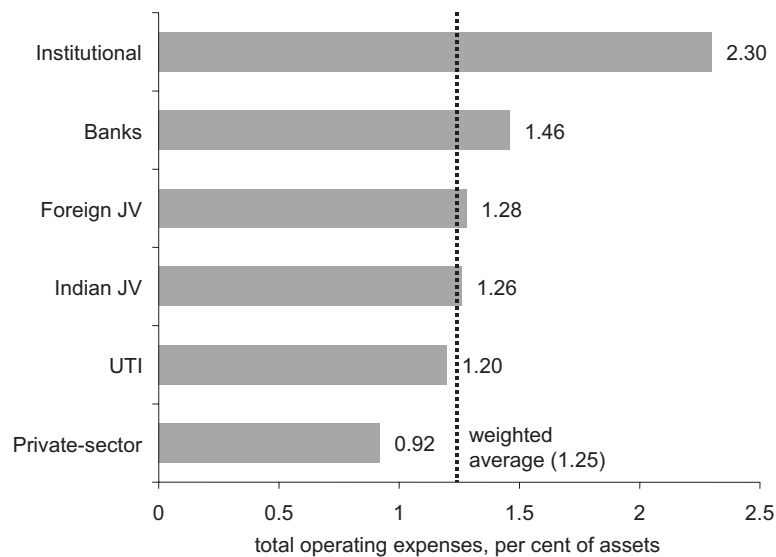
### 8.4 Data on Indian Mutual Funds

Mutual funds perform many of the same functions as individual pension accounts: collecting contributions, investing them, record-keeping etc. Therefore data on mutual funds offer some indication of how a system of individual pension accounts might be administered (during the accumulation stage).

The data on Indian mutual funds have been drawn from the AMFI database. It is important to stress again that these data are on costs, not, as other countries' data in this paper, on the charges paid by consumers. The costs included in the total cover marketing, operations, stamp duties, registry, management, custody and audit fees and depreciation. Provisions and losses on sales of investments are not included here as costs (since they are properly accounted for as part of the return of the fund).

Figure 8.12 shows the latest results (for 2000). The results are divided between UTI and five different groups of other mutual-fund managers: those sponsored by banks and other institutions, joint venture managers (Indian and foreign dominated) and Indian private-sector funds. The results show a convergence of costs between UTI and joint venture funds, with bank-sponsored funds with slightly higher costs and institutional funds much higher. Private-sector funds have much lower costs.

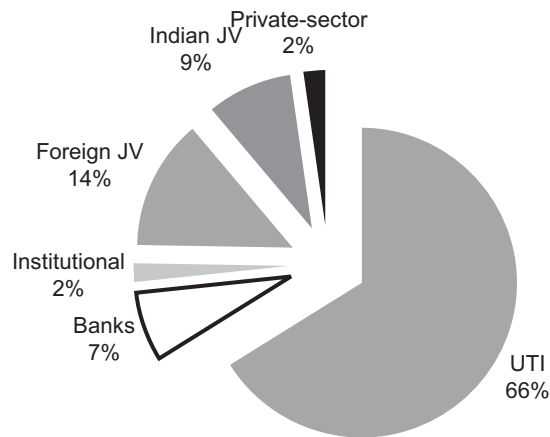
**Figure 8.12** Operating expenses of Indian mutual funds by type of fund percent of assets, 2000



Source: AMFI database

The chart also shows the mean charge, weighted by the value of assets under management. The distribution of assets between the different managers is shown in Figure 8.13. Given that the market was liberalised only in 1993, it is unsurprising that UTI retains some two-thirds of the total market, with joint-venture firms being the next largest players. This means that the weighted mean cost is very close to the UTI figure. Nonetheless, the joint-venture firms' share of the market has been growing rapidly, from two percent in 1996 to 22 percent in 2000.

**Figure 8.13** Distribution assets among different types of fund manager, 2000



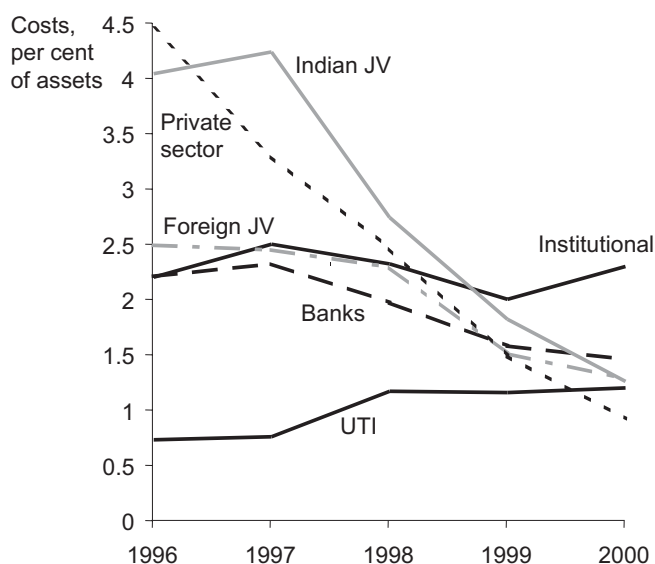
Source: AMFI database

The time-series analysis of mutual-fund costs, shown in Figure 8.14, is also instructive. UTI operating expenses have been increasing over the five-year period shown. In contrast, there have been declines in the costs of most other types of mutual fund. This probably reflects the start-up costs of these relatively new entrants to the fund-management industry. Their assets have been growing rapidly, meaning that the ratio of (relatively fixed) expenses to assets has been falling.

Comparing these cost data with the charge data from other countries (presented in section 3) raises a number of complex issues. Put simply, charges can not be equated with costs, even though they are obviously related. In steady state, one would expect charges to be higher than costs, to allow for the cost of capital and profit margins of pension fund providers. In immature systems, new entrants may be running at a loss because of start-up costs.

With these caveats in mind, it is apparent that Indian mutual funds' costs are high relative to pension-fund charges in other countries. The average expense ratio of 1.25 percent of assets is equivalent to 24 percent of con-

**Figure 8.14** Operating expenses of Indian mutual funds by type of fund per cent of assets, 1996-2000



Source: AMFI database

tributions or benefits over a career-long regular investment. A more direct comparison would be with mutual funds in the United States. James, Smalhout and Vittas (1998) find an average expense ratio of 0.93 percent. However, for passively managed funds, this falls to just 0.31 percent. These comparisons therefore suggest that Indian mutual funds are a little more expensive than funds elsewhere.

## 8.5 Costs and the Structure of Funded Pension Systems

The countries examined in section 2 mainly have systems of individual pension accounts. These régimes are decentralised, with a number of competing fund managers and worker choice between the different funds. There are, however, other options for organising funded pension systems that have implications for administrative costs.

### 8.5.1 Alternative Institutional Arrangements for Funded Pension Systems

One alternative is to move to some kind of collective provision. Proponents point to the low charges in Australia's industry funds as an example of the cost savings that are possible. (However, master trusts are also collective schemes, but have much higher charges.) The United States' 401(k) plan has a similar structure. These schemes, which have spread very rapidly over the past two decades (but they are not mandatory). The new stakeholder plans in the United Kingdom try to control costs in a similar way, by requiring employers to nominate a scheme rather than having employees choose.

Some analysts Heller (1998) and Orszag & Stiglitz (1999) have gone further than this model of collective but decentralised provision and have proposed public management of pension fund assets. Their rationale is in large part to reduce administrative costs. Others are sceptical of this solution, because public management of pension funds has, in practice, delivered poor returns. James (1998) concludes: 'publicly managed pension reserves fare poorly and in many cases lost money because public managers were required to invest in government securities or loans to failing state enterprises at low nominal interest rates that became negative real rates during inflationary periods'. This argument is confirmed by the detailed analysis of 22 countries' public pension funds in Iglesias & Palacios (2000). They find an average real return on publicly managed funds of eight percentage points less than the growth in *per capita* income, compared with six percent more for privately managed funds. This they attribute to the investment policies of public funds, the lack of competence of their managers and their inability to resist political pressures and corruption.

Heller (1998) ignores the problems inherent in having governments as fund managers entirely in his argument for a public, partially pre-funded defined benefit plan. Orszag & Stiglitz (1999) do address the issue. They are sanguine about the prospects for public management.

First, they argue: 'If capital markets were perfect, then it would simply not be possible for funds to be badly invested...as long as the portfolio is sufficiently diversified'. Returns on different assets in this world of perfect markets are merely commensurate with their risk, and so risk-adjusted

returns are the same for all investments. Empirical studies, however, find evidence of excess returns on equities over less risky assets (such as bonds and deposits), even adjusting for the difference in risk.<sup>12</sup>

Capital markets, then, are not perfect and Orszag & Stiglitz (1999) concede that ‘the assumption of perfect capital markets is not entirely convincing, especially in many developing countries.’

Secondly, they argue that ‘how the government invests its trust funds is irrelevant’ if ‘individuals can “undo” the public fund portfolio by adjusting their own portfolio’. Again, this is well established in theory,<sup>13</sup> but in practice most workers, even in rich countries, have few assets and are unable to borrow enough to reverse the effects of public financial policy.<sup>14</sup>

### 8.5.2 Economies of Scale: Some Evidence

Proponents of public management of pension funds base their arguments mainly on grounds of costs. For example, Murthi et al. (1999) favour a ‘centralised’ approach that ‘would aggressively take account of potential economies of scale through centralised provision’.

Here is a sample of different studies’ conclusions about economies of scale in financial markets:<sup>15</sup>

- The evidence above showed no significant relationship in Latin America or the United Kingdom between *charges* and the size of funds, though that, of course, does not preclude a relationship between *costs* and fund size

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<sup>12</sup>The classic paper is Mehra & Prescott (1985). The literature attempting to explain the ‘equity premium puzzle’ is large. Constantinides et al. (1998), for example, suggest that liquidity constraints prevent younger workers from investing as much as they should in equities. Other relevant papers include Blanchard (1993) and Kotcherlakota (1996) and Jagannathan & Kotcherlakota (1996).

<sup>13</sup>Stiglitz (1983), *On the relevance or irrelevance of public financial policy* (1998)

<sup>14</sup>For example, Banks & Tanner (1999) report median financial wealth in the United Kingdom of just £750. This argument also removes a substantial part of the case for funding if workers can simply borrow and unwind the forced savings element. Orszag and Stiglitz ignore this implication

<sup>15</sup>Indro et al. (1999) provide some interesting evidence that there are diseconomies of scale in active management of funds in the United States. Funds perform more poorly once they reach a certain size

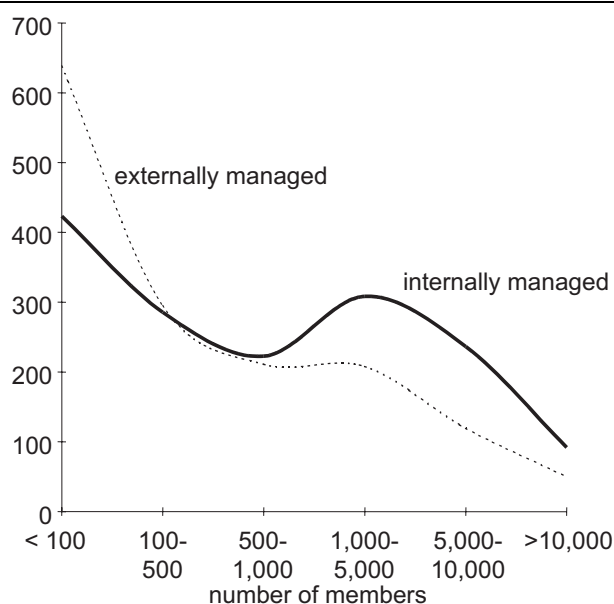
- Turner & Beller (1989) study of pension funds in the United States found economies of scale until funds reach \$75 million in assets; thereafter, administrative costs as a proportion of assets remain constant
- James, Vittas and Smalhout (1999) look at mutual funds in the United States. Their regression analysis suggests that the fall in costs comes to a halt between \$20 billion and \$40 billion of assets under management. Collins & Mack (1997), in contrast, find a rather lower minimum efficient size
- Dermine and Roller (1992) suggest a minimum efficient size in the French mutual fund market of \$0.5 billion
- OSI, the management consultants, concluded that 0.5 million members would be sufficient to achieve available scale economies in the provision of stakeholder pensions in the United Kingdom Timmins (1999). With  $10\frac{1}{2}$  million personal pensions in the United Kingdom, even a minimum efficient size of 0.5 million members leaves room for a dozen or so providers.
- The Australian Prudential Regulatory Authority (1998*b*) finds evidence of economies of scale in the administration of the superannuation guarantee.<sup>16</sup> Figure 8.15 shows that this effect is stronger for funds using external rather than in-house investment managers. External administration costs about  $1\frac{1}{2}$  times per member for the smallest funds, but is markedly cheaper for funds with more than 1,000 members. This is surprising, because external managers can achieve economies of scale even by pooling together several small firms' funds. Perhaps this result reflects greater competition among external managers for larger accounts.

The evidence on economies of scale is therefore inconclusive if not conflicting. Given its significance for the optimum structure of the funded pension industry, this is an important area for future research.

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<sup>16</sup>See also Bateman et al. (2001)

**Figure 8.15** Annual administrative expenses per member by external or internal management, Australia, 1996-97



Source: Authority (1998b), Figure 8.3

### 8.5.3 Constraining Portfolios

Public management and many types of collective provision share the characteristic that they restrict individual portfolio choice. In Bolivia, for example, people are currently allocated to a fund, and when choice is introduced, it will initially only be between the two present funds. Sweden restricts choice indirectly, by encouraging people to move to cheaper funds in its complex system of cross-subsidies.

The new stakeholder schemes in the United Kingdom also restrict member choice of investments. This is because the government's charge ceiling encourages providers to reduce costs. The government has said: 'We expect some schemes to offer individual members no separate choice in the way their money is invested...In general, we do not expect members will want to make complex investment choices'.<sup>17</sup>

<sup>17</sup>United Kingdom (1999a)

In defined contribution schemes, it is prudent for people to shift from a riskier (but higher return), equity-dominated portfolio when young to less risky investments when they near retirement. (Similar arguments apply if they choose to draw down their fund rather than convert to an annuity during retirement.) Such a strategy is both standard investment advice and shown to be optimal by a range of economic studies.<sup>18</sup> However, this sensible shift in investments with age would not be possible with a 'one-size-fits-all' investment fund.

Individuals might well wish to avoid complex investment choices, but they can be expected to make simple choices from a short menu of investment options with different risk-return properties (e.g. equity or bond-dominated or balanced funds). This would enable people to reduce the volatility of the value of their pension fund as they neared retirement.

The main counter-argument is one of cost and complexity. Dividing individual pension contributions between different funds and transferring investments between funds on members' request adds to the administrative burden. Providing information on different investment options and educating people about their investment choices would also be costly. There is also the risk that workers make the 'wrong' choices, investing either too riskily or too prudently (dubbed 'reckless conservatism').

Experience with defined contribution plans offered by employers in the United States, mainly 401(k)s, is useful evidence. In 1978, only 16 percent of plans offered members a choice of investments, but now 94 percent have more than one fund, and 58 percent have five or more.<sup>19</sup> Surveys of members' investment choices in defined contribution plans in the United States show little sign of recklessness, of the prudent or imprudent sort.<sup>20</sup> They take advantage of the flexibility schemes offered to adjust portfolios to suit individual circumstances, most importantly, how close they are to retirement.

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<sup>18</sup>See, *inter alia*, Jagannathan & Kotcherlakota (1996) and Samuelson (1998a), Samuelson (1989b) and King & Dicks-Mireaux (1982)

<sup>19</sup>Regulations protect plans and sponsoring employers from fiduciary responsibilities if members have a sufficiently broad choice of investments with different risk and return characteristics

<sup>20</sup>See, for example, VanDerhei et al. (1999)

Australia is also moving in the direction of greater member direction of investments. Over half of superannuation guarantee members had some kind of investment choice by 1996–97.<sup>21</sup>

## **8.6 Issues in Designing Charge Structures**

The previous section looked at policy choices in the institutional design of a funded pension system that affect administrative costs. This section looks at the issues in the design of the structure of the administrative charges faced by members.

### **8.6.1 Transparency**

Measuring the impact of administrative charges for pension funds is very complex, as shown in section 1. It is therefore essential, at the minimum, that governments and/or regulators set out a standard presentation of charges to ensure that consumers can compare different providers.

In the United Kingdom, for example, regulators tightened the so-called ‘disclosure’ requirements in the mid-1990s, so that charges have to be presented in a standardised way. They must illustrate, for example, the cost of stopping contributions prematurely.<sup>22</sup> There is a standard investment-return assumption, but the impact of charges has to be calculated for the individual customer’s characteristics, such as age and expected retirement age. However, because these data are a part of the final quotation, obtaining comparable information from a number of providers is time consuming. League tables of charges can only cover a limited number of example individuals. Given the huge variety of charging structures in the United Kingdom, fees depend critically on individual characteristics and so published examples may not be relevant.

### **8.6.2 Restricting Charge Structures**

Transparency is difficult to achieve when providers are able to operate complex fee structures. A common solution is therefore to limit the types of charges that can be levied. For example, if only one type of fee is allowed, then there is a single ‘price’ for taking out a pension that consumers can

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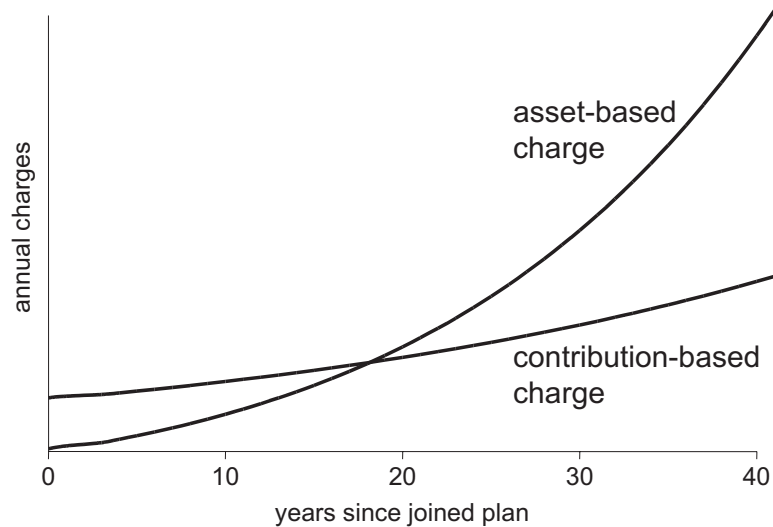
<sup>21</sup>See Authority (1998a)

<sup>22</sup>See United Kingdom (1995) and United Kingdom (1992)

readily compare. It also removes many of the complexities arising from the variation of charges with consumer characteristics, the level of earnings or the amount of contributions. There are two basic options for a single, proportional charge (or 'price' of pensions): a levy on assets or one on contributions. There are four important features of these two types of potential charges that affect the choice between them.

First, a contribution-based charge is 'front-loaded': fees are heavier in earlier years than an asset-based charge, as illustrated in Figure 8.16. The higher early revenue flow to providers allows funds to recover their up-front costs of entering the pension market more quickly than under an asset-based levy. Quicker cost recovery might boost competition by encouraging more entrants when the system is established.

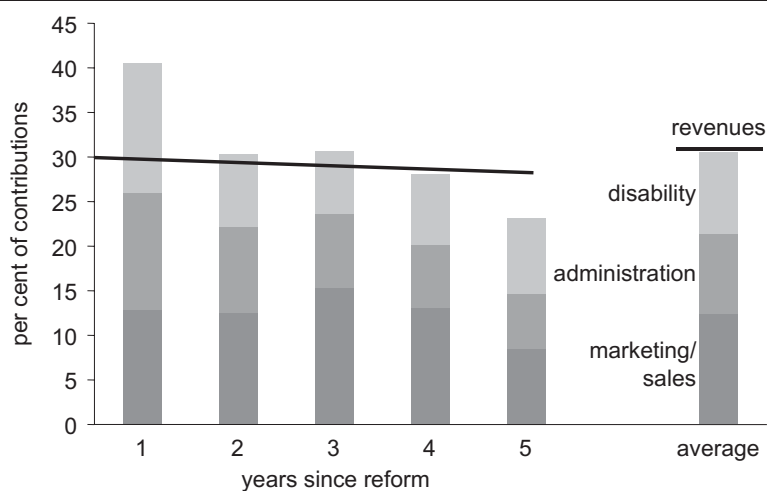
**Figure 8.16** Time profile of payments of different types of charge



Empirical evidence demonstrates that even contribution-based charges require a number of years of losses before companies can recover their set-up costs. Figure 8.17 looks at the experience during the first five years of the new Argentine system. Overall, costs have fallen sharply over time. This was due to initial over-estimates in the cost of disability insurance by 40 percent. Nevertheless, over five years, administrative costs have fallen by half and sales and marketing expenses by a third. System costs fell below

revenues for the first time in the fifth year of the new régime. It is unsurprising that administrative charges have yet to decline. Now that the funds are profitable at the operating level, we might expect price competition to emerge in the next few years as fund managers will have recovered the cost of their initial capital. The pattern in Hungary was more marked than Argentina. Fund charges have averaged about 8 percent of contributions in the first year of the new system, while costs have averaged 24 percent.

**Figure 8.17** Costs and revenues in the Argentine funded pension system, 1994-99



Source: SAFJP

Returning to the comparison of contribution- and asset-based charges, a second issue is the different incidence of levies. In the presence of fixed costs per member, an asset-based charge redistributes from people with large funds to people with small funds. So older workers, who will tend to have larger funds, will cross-subsidise younger, for example. Contribution-based levies redistribute from people with large contributions to people with small contributions.

Indeed, revenues would be zero for people who suspended contributions. People might lose their job or withdraw from the labour market because of caring responsibilities. Providers would receive no revenues from these people, but would still bear the cost of administering their fund. Asset-

based fees ensure a revenue flow even from inactive accounts, but they bear more heavily on people who withdraw from work early.

Finally, there is the issue of fund managers' incentives. A charge on fund value encourages managers to maximise assets, both by attracting funds from other providers and, more importantly, by maximising investment returns. Contribution-based levies, in contrast, have no direct link between revenues and investment returns.

The choice between the two is finely balanced, and countries have taken different routes. Many governments in Latin America have opted primarily for contribution-based levies. The United Kingdom chose asset-based fees for the new stakeholder pensions. The government's main arguments were funds' incentive to maximise investment returns and the fact that people who suspend contributions do not impose an excessive burden on other scheme members. Note that this last argument is more significant in the United Kingdom than elsewhere: multiple options for mandatory pensions mean that many people switch funds, leaving inactive accounts.

### 8.6.3 Restricting Charge Levels

Restricting charge levels is a rare approach: only Kazakhstan, Poland, Sweden and the United Kingdom (with its new stakeholder schemes) have restricted the level of fees. The obvious risk with this approach is that the government sets the 'wrong' ceiling on charges: either too high or too low.<sup>23</sup>

Too low and providers might be unable to cover their costs. This will substantially reduce the number of entrants to the pension market, restricting individual choice of provider and competition between different providers. It may even be low enough to result in failure of a pension fund manager, thereby undermining public confidence in the system.

There is also evidence that charge ceilings can become *de facto* charge minima as well. In Poland, for example, virtually all funds charge the 0.61-per-cent-per-annum maximum on assets. This implies that price competition,

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<sup>23</sup>This may not be too much of a problem in well-developed capital markets, because the government can observe the costs and charges of providers of very similar financial products. Governments of emerging economies, however, often have little to go on domestically although international evidence, of the sort presented in this paper, can be useful.

beyond reaching the regulatory standard, might be limited, at least in the short term.<sup>24</sup>

Providers might also be forced to offer a very limited choice of investments to keep costs low, further reducing individual choice of portfolio. Nevertheless, consumers might be willing to pay more, for example, for better information or service. But the ceiling prevents firms from offering these broader choices.

Most market economies had eliminated the majority of price regulation by the end of the 1980s, and even regulation of prices in transition economies is now rare. Should pensions be treated any differently?

Most of the arguments for regulating pension charges in fact suggest less Draconian solutions. Lack of transparency can be addressed by:

- a simple, easily comparable charging structure;
- strict regulation on the disclosure of charges to potential consumers;
- supply of comparative information from an official source; and
- a programme to promote consumer understanding of financial services.

The last is particularly important. Charges expressed as a percentage of assets appear, even to experts, to be very small numbers. For example, section 1 showed that a fee of 1.5 percent of assets over the life of a pension plan would reduce the final pension value by 23 percent. The charge ratio demonstrates more clearly the effect of administrative fees on the final value of pension plans.

## **8.7 Conclusions**

The cost of administering pensions has a major impact on the net returns to retirement saving. Even a seemingly innocuous administrative charge of one percent of assets reduces the pension benefit by 20 percent.<sup>25</sup>

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<sup>24</sup>In the longer-term, price competition might become more intense as balances in accounts increase. Firms are likely to compete more aggressively for these larger pools of assets

<sup>25</sup>On reasonable assumptions about investment returns etc

There have been two proposals for the development of funded pensions in India (OASIS, 2000 and *India: The challenge of old age income security* (2001)). Both have proposed a route of individual accounts. Both have also, quite rightly, stressed the importance of flexibility (in terms of timing and amount of contributions) and access (in terms of places at which contributions can be made). Nonetheless, account must be taken of the trade-off between flexibility, access and administrative costs. It would seem sensible to constrain portfolio choice to a limited menu to minimise costs while retaining some opportunity for individuals to choose different risk-return combinations.

Clear disclosure of charges is naturally very important. In addition, there is a strong case for regulating charge structures to ensure that the level of fees is easy to compare between different providers. This single 'price' for pension might be a charge on assets or a charge on contributions: the choice is fairly balanced. The case for a limit on charge levels is much less strong, and the danger of making the wrong choice of ceiling is great.

