International Situation of Disability Insurance

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The International Situation of Disability Insurance

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1 The historical development of disability insurance

The forerunners of disability insurance date back hundreds of years: for example, in the 14th century in Germany there were already private relief funds for mine workers in existence that paid benefits in the event of disablement. There were guild funds available in Germany and Austria from the 18th century onwards and relief organizations for members of the merchant classes as well as for miners. The relief funds for factory workers were the forerunners of the first national scheme, workmen's compensation insurance, which was later superseded by the complete, all-round protection, including disability cover, offered by today's German social security system. This was, by the way, in its early days the first social security scheme in the world. Similar organizations to the above relief funds, some of which still exist today, were the British friendly societies and the American fraternal orders founded by the members of a profession or trade or by national or religious groups. These were mutual associations on a private basis and, besides death benefits, provided for the payment of benefits in the event of disablement of any of their members.[1]

Whereas the foundations of modern life insurance date from the 18th century, private disability insurance as we understand it today did not develop until the end of the last century. This type of cover was first issued in 1884 by the British Medical Sickness Society – which is incidentally still in existence – for its members who all belonged to the medical profession, and again one year later by the Century Insurance Co. in Edinburgh, which was probably the very first private insurance to issue disability policies to persons of all occupational groups. In Germany the first disability covers were offered in the form of additional benefits under life policies in the 1870s.

It may well have been a fraternal order in Ohio that issued the first American disability policy for an individual. Finally, in 1915, the Massachusetts Accident Insurance Company started to offer a disability cover which was readily available to people of all occupations.

Just as disability insurance was introduced in many countries at a much later stage than life insurance, the insurers in many markets adopted a much more restrictive attitude in popularizing disability insurance than in encouraging the spread of life insurance. The reasons for this more restrictive attitude are all based on the fact that disability insurance involves a large number of complex risk factors and also that the disability policy, like the life insurance policy, has to be designed in general for the long term.[2]

The development and spread of disability insurance have varied greatly in different countries. This is due to a very great extent to differences in loss experience in this specific class of business. Whereas the development of

[1] Cf. [1], p. 3.
[2] The reasons are described in detail in [2].

private disability insurance in Germany was not marked by any very great losses, the US disability market suffered a serious crisis during the 1930s: as a result of stiff competition, the premiums had been reduced and medical and other requirements had been liberalized, as fewer cases of disablement occurred during the period of economic prosperity than had been expected. Then, when the depression years began and the number of disability cases increased, by far exceeding the mathematical estimations, the premiums and reserves proved inadequate. Many companies suffered enormous losses and one even had to declare bankruptcy. Most of the others withdrew from this class of business and those that did not offered only plans with one- or two-year benefits. Even disability riders to life policies were offered only in rare cases at relatively high premiums and subject to very cautious risk selection. Disability insurance in America did not begin to revive until after 1945. Since then, however, the development has time and again been characterized by poor results.

Apart from loss experience, there are of course other important reasons for the fluctuations in the development of disability insurance. These include primarily the expansion or reduction[3] of social insurance but also various aspects of taxation. In some countries annual disability benefits are subject to income tax, whereas in others disability insurance premiums are tax-privileged. Taxation laws can also affect the insurance companies directly: for a long time in Australia the active life reserves, which are established for the premium-paying, i.e. non-disabled, insureds had to be declared as profits for tax purposes.

On the whole, disability insurance has experienced an increased, or in some cases renewed, popularity in various markets in the recent past. One of the reasons for this is doubtless that – especially in the more highly developed countries – there is a considerable need for disability coverage and that, with growing prosperity and a higher standard of education among the population as a whole, the individual is becoming increasingly aware of this need.

[3] Cf. section on the Netherlands.

2 The current international situation in disability insurance in various markets

The forms of disability insurance vary greatly from country to country, as does the extent of its spread. Life insurance companies virtually everywhere offer additional benefits consisting of lump-sum payments in the event of accidental loss of sight or dismemberment. Stand-alone policies covering disability due to accident are offered by personal accident insurers. As common as additional accidental benefits is the additional benefit in conjunction with a life policy that consists of waiver of premiums for the main insurance cover in the event of disablement. The definition of disability in such cases may be narrow (inability of the insured to engage in any occupation whatsoever; e.g. in Africa and some countries in Asia) or liberal (inability of the insured to engage in his own occupation or in another occupation for which he is suited; e.g. in Belgium or Germany).

In Belgium, Germany, Austria, Switzerland, Italy, Mexico and Israel it is possible under a life insurance policy to obtain an annual disability benefit in addition to waiver of premium. The maximum amount of the annual benefit varies: it may be 10%, 12%, 18% or 24% of the main sum insured per annum. In Switzerland and more recently also in Germany it is possible to obtain an annual disability benefit above these amounts against payment of an extra premium.

The additional disability benefit that includes payment of an annual benefit can be taken out in Belgium and Switzerland, and since 1978 in Germany also, not only in conjunction with a whole life or endowment policy, for which large reserves are created, but also in conjunction with a term insurance policy. In most other countries those disability riders are offered only on the basis of a whole life or endowment policy with large reserves or, if they are permitted in conjunction with a term policy, then they consist only of waiver of premium.

Stand-alone disability policies providing for payment of an annual benefit that do not have to be concluded in conjunction with a life policy are available in Great Britain, Scandinavia, the Netherlands, Belgium, France, Switzerland, Germany, Canada and the USA, South Africa, Israel, Japan and Australia. Stand-alone short-term disability policies (with a short deferment period and benefits payable e.g. for up to 3 years only) are offered in some countries, e.g. Germany and Switzerland, not only by life insurers but also by health insurance companies (sickness daily allowance).

Additional benefits under life policies consisting of pre-payment of the life sum insured in the event of disablement are available in Belgium, France (with a very narrow definition of disability in nearly all cases), Spain, Italy, Greece, Mexico, South Africa, Israel and Australia. The disability sum is often paid in instalments, so as to allow as far as possible for recoveries.

Finally, in Canada and the USA, lump-sum payments are made in the event of disablement under special stand-alone disability policies (e.g. special covers that pay compensation for the disablement of a business partner). Allowance is made for the possibly high moral hazard by means of relatively high premium rates.

In several countries there seems to be a growing trend towards disability plans involving lump-sum payments. The main problem with this kind of benefit is that the moral hazard is very much greater than in the case of annual disability benefits. For if an insured is to receive a large sum of money on becoming disabled, this provides a much stronger motivation for him to become disabled than if he only has a claim to an annual benefit of, say, 12% of that sum. This of course applies particularly during the period shortly before the expiry of the policy, especially if the expiry date is near the retirement age. For this reason, the moral hazard is also very great in the case of a disability rider providing for the pre-payment of the sum insured in the event of disablement under policies in which the sum at risk for the main life insurance scarcely decreases during the policy period, e.g. term insurance policies. Here it can be expected that there is additional motivation for the insured to become disabled by the feeling of having paid money for years and having received nothing in return. In the case of some plans of this kind, attempts have therefore been made to minimize the moral hazard, for instance by introducing very narrow definitions of disability or by scaling down the disability benefits prior to expiry of the policy. Another very serious drawback in the case of lump-sum payments is that they cannot be demanded back again in the event of subsequent recovery.

There is little or no information available on the results of this type of cover. In recent years, only losses in Spanish group disability insurance providing lump-sum benefits have become known. It should therefore be emphasized that it is difficult, even where disability plans with annual benefits are concerned, to calculate a premium that is really commensurate with the risk. This applies particularly, however, in the case of lump-sum payments, where even less statistical material is available. Lump-sum payments in the event of disablement do not, moreover, fulfil the actual purpose of disability insurance, that is to provide compensation for loss of a regular income as a result of disablement.

3 Disability insurance in selected markets

In the following sections 3.1 to 3.7 we shall review the various forms of disability cover offered in the insurance markets of Belgium, France, Germany, Great Britain, the Netherlands, Switzerland and North America. Where changes of conditions, premium rates, etc. are currently[1] under discussion in some of these markets, they have been left out of consideration here if their development is not yet entirely clear. Regarding the choice of markets to which the following remarks apply, we should like to point out, firstly, that in dealing with the British insurance market the situation in numerous Commonwealth countries is also covered, as the British influence in the insurance business in these areas is still unmistakable. In the other markets, disability insurance has either gained an important position in the market or comprises various aspects that are interesting from the international viewpoint.

Additional disability benefits to life insurance and stand-alone disability policies will as far as possible be treated together. Separate comments will be given only where there are discrepancies between the two forms of cover.

3.1 Belgium

Belgian companies offer a large number of different kinds of disability cover. As additional benefits in conjunction with endowment, term or whole life policies ("ACRI") there are the following possibilities:

a) In the event of total disablement, waiver of premiums for the life insurance and an annual benefit of usually up to 40% of the life sum insured payable on death or at maturity

b) In addition to a), in the event of partial disablement, waiver of premiums is granted and an annual benefit corresponding to the degree of disablement

c) In the event of total disablement, pre-payment of either the life sum insured payable on death or the life sum insured payable at maturity, whichever is smaller, is granted and waiver of premiums for the remaining cover

The stand-alone disability policy is called "assurance revenu garanti" (RG), which pays an annual benefit in the case of total or partial, permanent or temporary disablement.

In both ACRI and RG insurance the pension is in principle proportional to the degree of disablement. The insured is usually entitled to receive some annual benefit in the event of 25% or greater disablement, the full benefit being payable if the degree of disablement is 67% or more.

[1] Position: January 1998.

The degree of disablement is calculated on the basis of a combination of the degree of economic disablement, i.e. the inability of the insured to engage in an occupation commensurate with his education, training and social position, and the degree of physiological disablement, i.e. the seriousness of his injury, disability or health impairment from a medical point of view. The most common types of physiological disability are listed in the “barème des invalides”, which shows the corresponding degrees of disablement; in all other cases the degree of disablement is determined on the basis of medical reports. The degree of disablement is often taken to be whichever degree of disablement – physiological or economic – is higher. However, if an insured is to receive the full benefit (total disablement), both the degree of physiological and the degree of economic disablement generally have to be 67% or more.

The minimum duration of disability for acquiring a benefit claim is 2 months for ACRI (premium reduction if extended to 1 year). In the application for RG insurance, the insured can choose deferment periods of 1 to 12 months, with short deferment periods of 1 to 2 months usually being requested. If disability occurs after the age of 60, the deferment period is generally 12 months, even if the period originally agreed upon in the policy was shorter.

The competitive situation has brought about disability premiums that differ very little from one company to the next. In ACRI, the premium rates have so far usually only been scaled according to age at maturity; apart from that, they are not dependent on age. The UPEA insurance association has established premium guidelines for individual business in the stand-alone disability insurance class. Consequently, the rate level is almost the same for all companies. The premiums also depend on age at entry, whereas the premiums for group business are uniform and based on age at maturity (60 or 65 years).

In group business, the cover is often restricted – in return for a reduction in premium – to disability caused by illness only, or the occupational accident risk may be excluded.

In ACRI at least, it is customary to create only global active life reserves during premium payment. ACRI and RG use annuity values as reserves for annual disability benefits in force in the initial years of disability, where the annuity values take into account the increased mortality rate and recovery of disabled persons. After the extent of the disability is clear (approx. 3 years after disablement, depending on the severity of the health impairment and the company), the disability reserves are based on annuity values usually calculated in accordance with the mortality tables used in life insurance, i.e. without consideration for recovery or the increased mortality rates of disabled persons.

In Belgium, no bonuses are paid on disability policies. If results are poor, the permission of the supervisory authorities may be obtained to increase the portfolio premiums for RG insurance.

Men in occupations involving a high risk of disability pay increased premium rates. Women in senior positions are increasingly being accepted at the basic rate (male rate).

The practices of the different insurers as regards the medical examinations required prior to the issue of a disability policy vary considerably. In some cases in ACRI, an examination is required only if this is stipulated for the life insurance cover taken out at the same time. In other cases, however, the rules are more stringent (separate limits for additional benefits). In the case of RG, individual insurance policies are granted without a medical examination only for low benefit amounts. In group insurance, the rules are very liberal: in the case of large and medium-sized groups, medical examinations are required only for annual benefits exceeding a large sum.

When an insured claims disablement, his attending physician is usually asked to give an estimate of the probable duration of the disability. At the end of this period, the insured is examined by the attending physician – and in isolated cases by the insurance company's own physician too – to determine whether he is still disabled. After that, there are frequent check-ups at first, but at greater intervals later on.

Disability insurance was not very widespread in Belgium for many years. However, in recent years it has enjoyed a considerable boom, particularly as regards RG policies for self-employed persons.

3.2 France

Coverage of the disability risk in France has taken a rather different development than in the neighbouring countries, since it was influenced from the very beginning by an existing social insurance system with benefits scaled according to the degree of disability.

Standard disability insurance with benefits covering the event of normal occupational disability is usually offered as a policy rider in life insurance. It was, and often still is, sold under a separate policy by an accident/health insurance company (incendie, accident, risques divers [IARD] – miscellaneous risks) associated with a life insurance company or a death benefit fund. An effort is usually made to ensure an appropriate ratio between the death benefit and the annual disability benefit. However, it can also happen that only the disability risk is insured.

Group insurance policies make up the majority of disability business in France. Group insurance for company employees supplements the social insurance benefits. For example, 50% of the salary below the social insurance ceiling is insured and 80% to 100% of the salary above.

In connection with collective policies, plans with interest and instalment payments for credit during the term of the loan also exist. In contrast to other group policies, the premium cannot be adjusted in this case.

In order to achieve a certain standardization of the tariffs and insurance terms and conditions, the French companies have set up a joint office, the “Bureau commun d’assurance collective” (BC). The BC has prepared model tariffs which, although not binding, are generally used as a basis – however, often with substantial rebates for competitive reasons. There are model tariffs for the following types of cover: short-term disability insurance (daily indemnity payable for 1 year) with or without inclusion of occupational accidents, long-term disability insurance (deferment period of 1 year), and health insurance.

As a rule, annual benefits are paid for both total and partial disability. The degree of disability is a combination of the degree of economic disability (mainly the percentage of loss of income) and the degree of physical disability (rate based on the nature of the injury or on the medical report). The annual benefit is paid in full in the case of two-thirds or greater disability, partially in the case of one to two-third disability, depending on the degree, and not at all if the disability is less than one-third.

A characteristic element of disability insurance in France is the separation of short and long-term disability. The sickness daily allowance (indemnité journalière) is paid for a period of 1 to a maximum of 3 years. This is followed by long-term disability insurance, which provides for payment of an annual benefit after the end of the deferment period. Thus, the actual disability benefit commences only after payment of the sickness daily allowance has ceased, i.e. 12 months following disablement, if the insured is still disabled at that time.

The premiums for both individual and group insurance depend on the nature of the occupation of the insured person or group (manual workers, salaried employees, senior executives; degree of exposure to occupational accidents). In the case of group policies, the age is taken into consideration as an average for the group as a whole – not individually for each member – and the premium is adjusted accordingly. Thus, the premium rates of the BC are based on an average age of 45 years and are decreased/increased for lower/higher average group ages. The premium rate is interpolated if the average ages fall in between. A similar principle applies to the breakdown of the sexes within the group, as premiums may not be charged separately in individual insurance.

In individual insurance – which usually represents a kind of open group insurance (insurance for specific groups of people with optional membership) – the premiums depend on the age reached by the insured. They increase when the insured switches from one age group to another.

The very common additional benefit IAD (invalidité absolue et définitive), included automatically under life insurance policies, is free of charge in the case of the narrow definition of disability (person in need of nursing care). If a more liberal definition is applied (100% disability without the need for a “tierce personne”, or at least 67% strict “any occupation” disability), an extra premium is charged, which is included in the life tariff.

No bonuses are distributed in individual insurance, while they are considerable (up to 80%) in group insurance. In this context, the bonuses on all the benefits that may be offered under a group contract – disability, PA rider, medical expenses – are added together.

The premium rates for disability insurance in France are usually quite low in comparison with those of other countries. However, the possibility of premium adjustment also exists. Rising claims rates in regular group insurance and also in open groups have also become more common. Some of the reasons behind this are certainly the competition-induced cuts in the premium rates, possibly the overly liberal assessment of benefits, and also belated or insufficient reserves. Annual benefits which sometimes amount to 100% of the income also contribute to the high claims frequency. Due in part to new legal requirements, some companies are currently implementing rehabilitation measures and strengthening their reserves.

3.3 Germany

Under German insurance supervisory law, long-term disability covers are assigned to life insurance. Health insurers usually only provide protection against short-term disability (“incapacity to work”) with deferment periods that may be as short as 4 days, depending on the company and the plan concerned. Accident insurers usually restrict their cover to disability resulting from accidents.

Apart from a few minor differences, the disability plans offered by German life insurance companies were, until recently, mostly standard in form since, prior to deregulation in 1994, all products in life and health insurance and some of those in accident insurance were subject to insurance supervision, which meant that the conditions and business plan had to be officially approved by the supervisory authorities. However, since deregulation there has been a marked trend towards greater diversity of conditions and exclusions among the individual companies. The supervisory authorities now merely require companies to submit a so-called “Mitteilungsblatt” (notification sheet), which provides details of the actuarial bases used.

In Germany, disability insurance actually refers to “occupational disability insurance”, as the definition of disability depends not only on medical criteria but also on various economic aspects connected with the insured’s occupation as well as his education, training and situation in life. Occupational disability is usually defined as follows:

Total occupational disability is the probable permanent disability of the insured as a result of illness, bodily injury or debility (for which medical evidence must be provided) to engage in his own occupation or in any occupation for which he is suited by reason of his education, training and experience and which is in conformity with his situation in life.

Partial disability is the partial fulfilment of the above conditions on a probable permanent basis.

The vast majority of companies pay full benefits if the degree of disability is 50% or over and no benefits at all for degrees of disability below this figure. A few companies pay partial benefits for degrees of disability ranging from 25% to 75%, nothing for less than 25% and full benefits for over 75%. Occupational disability insurances and riders offered today include the coverage of long-term care. Long-term care cases are put on an equal footing with total occupational disability cases as regards the level of benefits. Entitlement to benefits usually comes into effect at the end of the month in which occupational disability occurs. If notification of disability is made more than 3 months after the occurrence of occupational disability, the entitlement to benefits comes into effect at the beginning of the month in which notification is made. In cases where the permanence of the disability is not clear from the start, the insured will usually only be granted an entitlement to benefits when at least 6 months have elapsed since he has been able to pursue his own occupation or another activity commensurate with his education and training and which is in conformity with his situation in life. Increasingly, tariffs are being offered which provide for an extension of this 6-month period in return for a reduction in the premium.

Prior to 1974/75 disability insurance was only offered in the form of riders. However, it subsequently became possible to obtain stand-alone disability policies. The benefits under a disability rider normally consist of a waiver of premium for the main life cover. The insured can, however, also apply for an annual benefit that may be as much as 24% of the life sum insured. Higher premiums are required for benefits above this figure. The period of cover and period of benefit payment for the rider are usually the same as those of the main insurance, provided that these do not continue after the age of 65. In these cases, the disability rider cover expires at the age of 65, which also applies to stand-alone policies. Some companies offer special plans, where the duration of benefits for a possible disability annuity exceeds the duration of cover and the disability risk is only covered up to the age of 35. Should disability occur prior to this age in such cases, the disability benefit is paid for a longer period, possibly up to the age of 65, or up to death or recovery.

The premiums for the rider and stand-alone disability plans offered today are calculated using disability incidence rates based on statistics covering the entire German market (cf. 6). The recovery and mortality rates of disabled persons are also based on statistics. The values published in 1990 were brought in line with the latest statistical findings in 1997. These figures indicated an increased incidence of disability among younger insureds (whereas the incidence among older insureds fell) and a certain need to charge higher net premiums for stand-alone disability cover than for disability riders. In German disability insurance the premiums are usually calculated with sufficient safety margins.

Owing to these relatively cautious bases for calculation, the premium rates in Germany tend to be higher than those charged in other countries. However, over 90% of the profits are returned to the insureds in the form of dividends or bonuses. Because of the special nature of the disability risk, most of the dividends, especially under stand-alone policies, are paid on expiry of the insurance. The insured receives dividends even for periods of disability.

As explained above, the higher premiums for stand-alone disability covers result from the higher net premiums and cost rates, which are significantly higher for stand-alone policies than for riders.

The conditions for a stand-alone policy also contain a clause which allows companies to increase the premium rates for existing insurances in the case of poor risk experience for companies as a whole, subject to examination by an independent trustee.

A medical examination upon application is required above a certain level of annual benefit requested.[2] Below this amount the insured’s declaration of good health included in the proposal or a report from the insured’s GP will suffice.

In Germany, about 20% of life insurance policies include an occupational disability rider. This figure is significantly higher at some companies (approx. 40%) and for self-employed persons such as people running their own businesses, doctors and lawyers. Stand-alone policies are less widespread than riders.

One new development worth mentioning are the new strategies used by German companies to provide less expensive disability cover, for example by financing premium reductions from surpluses while maintaining policy conditions unchanged. Other methods of reducing prices include the above-mentioned system of deferment periods from 12 to 24 months before the benefit is paid following accidents or illness. In addition, more stringent conditions for benefit payment have been

[2] This amount is fixed by companies individually. As a rule it is 12% of the maximum sum insured in life insurance without medical examination.

imposed, where the full benefit is only paid in the event of strict any occupation disability, i.e. the insured's inability to pursue any occupation for remuneration or profit. With strict any occupation disability some companies also offer advance lump-sum payment of the life insurance, whereas previously they have usually only offered an annuity. Disability plans are increasingly taking account of the coverage requirements and risk circumstances of individual occupational groups. For example, some companies restrict reference to "any occupation" in the above-mentioned definition of disability to specific occupational groups or to young/middle-aged. Following the liberalization of tariffs, some companies are now also dispensing with certain standard exclusions, such as private flying.

3.4 Great Britain

Disability coverage is a class of insurance with a long history in Britain. The main emphasis here, as in the North American market and in the Netherlands, is on the stand-alone disability policy, which is known generally as permanent health insurance (PHI). Although in recent years there has been a trend towards calling products "income replacement" or "income protection" policies. Additional benefits under life insurance policies are relatively rare; except for offering waiver of premiums.

The wording of the definition of disability in PHI policies often differs greatly from one company to the next. However, the majority of companies effectively have a definition of disability which is based on the inability to follow one's own occupation:

"Disability for the purpose of this policy means that the insured is totally unable by reason of sickness or accident to follow his normal occupation and is not following any other occupation."

The phrase "... and is not following any other occupation" is worthy of note, since it tends to reduce the risk that is normally associated with disability definitions based on the insured's own occupation. An insured may be incapable of engaging in his or her own occupation and is therefore entitled to receive a benefit; however, he may take up another kind of activity with the result that his new working income together with his annual disability benefit is as high or possibly even higher than his previous working income. In such a case it is most unlikely that the insured will take the initiative towards rehabilitation. Some British companies therefore prefer to be able to reduce the annual disability benefit if the insured takes up any other kind of work by an amount equivalent to the insured's actual loss of income. This is, however, only done on condition that the insured is still fully disabled in the sense intended by the policy definition of disability. Some companies retain the right to have their own physician examine the insured after a period of, say, 24 months with a view to deciding whether the insured is capable of taking up some suitable kind of work other than his or her original occupation and whether the annual benefitis should be correspondingly reduced. Other companies provide for payment of a partial annual benefit in the event of partial disability following a certain period of total disablement.

Deferment periods usually vary from 4 weeks to 52 weeks. A handful of companies offer plans with no deferment period, and several offer a 104-week deferred period. Sales of deferred 13 and 26 weeks are the most popular.

The maximum age at expiry of the policy is 65 for both men and women. As far as the age at entry is concerned, companies require that the policy period is not less than 5 years. Policies with a limited benefit period have recently been launched, aimed at blue-collar workers, who cannot usually afford the full PHI policy.

For the calculation of disability premiums, most British companies now use the Method of Decrement Tables (inception rate/disabled life annuity approach). The rates are based either on published UK industry tables or American tables.

Current practice with regard to the establishment of reserves is not standard. Some companies use the inception-annuity approach, others still use the Friendly Society Approach (based on the Manchester Unity Table). The Friendly Society Approach measures weeks of sickness per year, allowance being automatically made for cases of recovery, deaths of disabled persons and even renewed disablements. There are many theoretical objections to the Friendly Society Approach, but it remains favoured by some long-established writers of PHI business.

Dividends or bonuses are not usually payable on disability policies.

When assessing disability proposals, attention is paid to a sound relationship between the annual disability benefit and the working income. This is achieved by limiting the benefits paid at the claim stage to, say, 50% of gross income or 60% less single persons' state benefit. However, as the annual disability benefit owned by the insured person under individual policies is paid tax-free and the insured could also be in receipt of state benefits, a sound relationship can be difficult to achieve in practice.

The maximum benefit accepted by each company varies greatly. It is also quite usual for large companies to require a medical examination only if the insured annual benefit is over £1,000 per month.

British companies generally attach great importance to the family doctor's reports. Such reports are often valued more highly than the results of a medical examination at the date of application since they provide a good picture of the overall development of the proposer's health.

There are usually four occupation categories (although some companies have five or six). The extra premiums for increased occupational hazards usually depend on the deferred period. Historically, they were quite low compared to other countries. This has changed in recent years. The occupational loading varies substantially by company and possibly by age and deferred period. Females are generally charged 50% more than males. Non-smoker discounts are also available.

Group PHI

In the UK in 1997 approximately 55% of all PHI in force was in the form of group policies purchased by employers who provide continuing income for employees who are sick long term.

Frequently styled as group long-term disability or group income continuance, this form of the contract was first written in the UK in 1960, with periods of strong growth in the early 1970s, as government pay policies forced employers who wished to increase benefits to provide indirect employee benefits rather than increases in pay. After a flat period for growth in the early 1990s, the market is now growing again. The benefit is similar to that in individual PHI, that is a payment of an income for a disability, temporary or permanent, which lasts beyond a pre-defined period until the earlier of recovery, death or normal retirement. The differences lie in the medical evidence which is required for each life, the methods of administration and the taxation basis. In the UK a free-cover approach is common where individual medical underwriting is waived for groups who are together for a purpose other than obtaining insurance (generally speaking as employees of a common employer), whose benefits are pre-defined and whose eligibility is also fixed. To protect the insurer’s fund from antiselection, an insurer must be confident that the membership of the scheme has characteristics which allows some prediction of the level of claims which will be incurred and that there is no flexibility regarding when a member can join or the level of cover which is provided. The active positive selection of the members in an employee scheme being fit enough to get and keep a job is in the insurer’s favour.

The group PHI arrangement is generally part of an overall employee benefit package but it is not directly linked to the pensions scheme. The employer’s promise to employees to provide ongoing income is a contractual obligation which is part of the contract of employment. The employer then backs up the promise under a separate contract by insuring his liability to provide that income with an insurer. It is important to understand that there is no direct contractual connection between the employee and the insurer.

Group PHI in the modern era in the UK can be looked at in three distinct periods. From 1960 to 1975 this new form of contract seemed profitable but there were no reliable statistics or previous experience for comparison. The market was small, comprising largely higher socio-economic groups who had private occupational pension schemes. Towards the end of this period there was neither strong growth nor broking of schemes, and under competitive pressure policy conditions were liberalized.

In the period 1975 to 1985 more insurers joined the market and more competition ensued. Within schemes the cover was extended to the average or lower-paid categories and there was a shift from any occupation disability to own occupation. For many employees not only was their income insured but benefits were enhanced to ensure continuing contributions to pension arrangements. Traditional exclusions tended to be dropped and the medical-evidence-free cover limits increased in this period. Despite these liberalizations the business apparently still seemed profitable.

In the third period, 1985 to date, the picture changes considerably. In 1985/1986 profits turned to heavy losses, as insurers realized that assumptions in reserving for claim terminations were very optimistic. Insurers who had expanded aggressively recorded heavy losses and there was a widespread review of rates, reserving bases, underwriting and claims control policies. Conclusions about what went wrong in this period are as follows:

- In the early 1980s there was a general employment shake-out which was particularly notable in the manufacturing sector. As there were no jobs to return to, there were virtually no recoveries on marginal claimants.

- The replacement ratios, which had been fairly carelessly set in schemes, emerged as a negative factor.

- Insurers had largely exercised poor claims control, and the techniques were unable to counter an increased incidence of claims which had an economic overlay.

- Many insured employers began to use their group PHI benefit as an alternative to redundancy.

There was a realization at this point that the group PHI risk is strongly influenced by economic conditions and can be severely affected by periods of increased unemployment.

Looking at the group PHI market today, we can see a recent upturn in business which coincides with strong economic growth and low unemployment in the UK. However, there is another crisis in profitability, as significant restructuring in commercial and financial sectors has led to an extreme worsening of experience for schemes from those sectors.

There is quite clearly a concentration of business in force with the top specialist insurers. At the end of 1996 the top ten insurers had 92% of all group PHI business in force and clear divisions in profitability were emerging between expert and non-expert insurers. The future for group PHI will see more product diversity than in the past. Because it is an expensive employee benefit, typically between 1% and 2% of the payroll, many employers are looking to integrate disability benefits with their provisions for early retirement under their pension scheme. Some employers who do not have either the budget or the motivation to provide full long-term benefits to normal retirement date will partially provide them and invite their employees to top up with individual policies.

Recent experience

The experience in the British disability sector is currently generally unfavourable. Many companies have experienced losses on their disability business and some companies have withdrawn from the market. The reason for the worsening experience has been the increasing claims inceptions for the longer deferred period business and, to a greater extent, deteriorating claim termination rates.

This is generally seen as the result of inadequate claims control as well as benefit levels which are too high, when state benefits are taken into account. Since this may mean that the insured receives a higher income during disability than in health, there is little motivation for claimants to resume their former occupation. Insurers in the sector generally are beginning to recognize that to participate profitably, special skills are needed in claims control, underwriting and ongoing analysis of the adequacy of premiums and reserves. If any of these control cycle elements are deficient, there is a high probability that losses will ensue.

3.5 The Netherlands

The Netherlands is a very competitive market in which disability insurance has been widespread for a long time. Disability cover is available both in the form of additional benefits riders and (since the 1950s) as stand-alone disability insurance. Stand-alone disability insurance may, by law, only be sold by non-life insurers.

Up to the end of 1993, many non-life companies ceded their disability business to a pool. During the period when this pool was in full effect, i.e. roughly up to the middle/end of the 1980s, the tariffs and the disability terms and conditions were largely the same across the entire market – with the exception of a few specialized companies.

Since the acceptance of new business was suspended by the pool (mostly as a result of stricter European directives on the formation of cartels, but also due to the fact that almost all of the market leaders had already left the pool one-by-one during the 1980s), most of the former members now operate independently. Only a few of them still utilize the services of the pool (underwriting and claims handling, reinsurance administration). As a result, the range of disability plans has become increasingly diverse over the past few years as regards deferment periods, benefit scales, occupational categories and premium rates. This also applies to the disability rider plans which were previously uniform across the market and only provided for waiver of premium for the main insurance. Today, cash disability benefits are increasingly also being insured.

In order to correctly understand the structure of Dutch disability covers, it is important to know how the disability risk is treated in the social insurance system. While the short-term disability of employees (duration of up to one year) was previously covered by a separate "branch" of social insurance and has now been privatized, i.e. is now the responsibility of the employers, the long-term disability benefits of social insurance are not payable until after a deferment period of 1 year.

The social insurance benefits for the entire Dutch population under the age of 65 in the case of long-term disability are higher for salaried employees. Essentially, private disability covers include two plan categories: the so-called "Rubriek A" for short-term disability. The so-called "Rubriek B", with a deferment period of 1 year, can be used to increase the annual benefits of social insurance on a private basis up to the annual disability benefit level required or desired by the insured.

The Netherlands used to have a comparatively high percentage of totally or partially disabled persons. In the past, this situation has been the cause of serious financial problems in the relatively dense social network. At the beginning of the 1990s, it proved necessary to make drastic cuts in social insurance benefits: disabled employees now only receive the full social insurance benefit for a maximum of 5 years (unless they are at least 58 years old at the time the claim arises). The benefit is reduced thereafter, depending on the age and number of premium years.

The resulting difference between the previous income from employment and the reduced benefit up to the start of the old-age pension must be covered privately. The Dutch insurers offer the so-called WAO-gat and WAO-aanvulling plans for this purpose, where "gat" is the Dutch word for "gap" and aanvulling means "fill". These WAO-gat plans caused a real boom in new business on the insurance market in 1993/4.

The target groups for private disability insurance are therefore primarily the self-employed and high-earning employees. Employees with moderate salaries are also targeted, provided their employers have taken the “privatization” option for their social insurance benefits and the social insurance cover is incomplete.

The structure of the disability plans is – as mentioned above – very diverse. The most important characteristics are:

– Benefit scales: partial benefits as of 25% disability, full benefits as of 80% (although different scales are in use).

– Premiums graduated according to age at entry and maturity, the premium rates for additional benefit insurance increasingly depending on the age at entry.

– In stand-alone disability insurance, plans at a natural, i.e. one-year, risk premium which depends on the respective age reached are also offered.

– Premium adjustment is possible for existing business.

– AAW/WAO benefits are generally increased to 80% of the average income in the last 3 years of employment.

– In the Netherlands, no bonuses are paid on disability insurance, with the exception of the WAO-gat insurance described above.

The results in the Dutch disability insurance sector have been subject to substantial fluctuations over the last 40 years. Several loss years caused the rates to increase considerably during this period. However, the medium-term result situation in Dutch disability business can be viewed fairly optimistically, not least owing to the latest premium increases in the early 1990s and the stricter granting of benefits in the social insurance system, which usually also results in a private insurance claim.

3.6 North America

Disability insurance has a long tradition in North America, reaching back to the end of the last century[3]. The most prevalent form of cover was originally a rider to a life policy, but it is now more commonly offered as a separate policy which provides monthly disability benefits. Other types of disability benefits generally consist merely of a waiver of premiums for the life insurance coverage to which they are attached, often only in relatively narrowly defined cases of disablement. Disability plans providing for lump-sum benefits are not common, except in the case of disability buy-out policies purchased by business partners.

[3] Cf. section 1.

The definitions of “disability” in individual disability insurance were at first very narrow, as were the conditions for acceptance. In the 1920s and early 1930s, however, a general liberalization of definitions set in, which contributed to the large losses experienced by disability insurers during the depression years. Some companies gave up issuing disability insurance altogether, while one company even had to declare bankruptcy. The attitude of insurance companies towards disability insurance, except for group policies, remained reserved until the end of the Second World War.

After that time, disability insurance experienced something of a boom. Despite worsening results in the 1980s, companies continued to compete vigorously.[4] In particular, great efforts were made to insure the top occupational classes, especially the medical and legal professions. Competition was felt less in the pricing than in the very liberal features being offered. Non-cancellable[5] policies offering lifetime own occupation benefits, generous pre- and post-disability indexing features, and very limited financial underwriting became the norm.

The results of this competition have been particularly felt in the 1990s. Changes in the workplace in the early 1990s affected mostly white-collar professions, representing a large portion of the individual disability market. Financial results have continued to deteriorate, producing losses for the whole industry in the range of US$ 500m. The heavy losses incurred by the industry have been related to the poor general economic situation in Canada, the prevalence of managed care in the US, a more accepting public attitude toward disability, the widespread problem of overinsurance coupled with very liberal policy provisions that have drastically reduced the incentive to return to work and the increase in self-reported claims. In particular, stress-related claims, repetitive motion claims, chronic fatigue syndrome and a range of other previously unknown causes have become a significant portion of total reported claims. One repercussion of the deterioration in financial results has been a major withdrawal of carriers from the market. One survey suggests that more than 30 insurance companies have withdrawn from the individual disability market in the 1990s in the United States. In Canada, four companies have stopped writing non-cancellable business or have been acquired by larger companies, leaving only seven insurance companies offering non-cancellable individual disability products at the end of 1997.

[4] Cf. [4].
[5] See definition on page 25 f.

Many of the companies who withdrew from the disability market entered into sponsorship agreements under which they would sell the products of the top two or three companies still active in the individual disability market. In addition, there has been a significant shift from non-cancellable[6] policy forms to guaranteed renewable[6] forms in the United States. In Canada, starting in 1995, there has been an emergence of new optionally renewable products targeting blue collar occupations as well as new business ventures.

Product features

There are three principal individual disability products offered in the United States and Canada. These are personal monthly income, business overhead expense, and business buy-out. Personal monthly income products replace a portion of the income lost by an individual as a result of his or her disability. These are generally available in a range of benefit periods including one year, two years, five years, to age 65 and lifetime. Deferment periods vary from zero days to 730 days, with thirty and ninety day deferment periods being the most common. Because of recent heavy losses attributed to lifetime benefits and shorter deferment periods (30 days or less), many companies have removed these product variations from their product portfolio.

Business monthly expense products are offered to cover monthly overhead expenses that continue even during the disability of the owner of the business (business overhead expense insurance) or to cover business costs or lost opportunities during the disability of a "key" employee (key person disability insurance). In both cases, the company is the beneficiary of the insurance payments. Monthly payments are generally made for a period no longer than 24 months.

Disability buy-out products provide a lump-sum (or instalment) benefit after a lengthy deferment period of 12 to 24 months, to fund the purchase of a disabled partner's business interest by other members of the partnership.

Definitions of disability

In both the United States and Canada, a wide variety of product features and benefits are offered. The most distinguishing factor is the definition of disability. Products available in the market include the following definitions:

[6] See definition on page 25 f.

Own occupation: The insured is disabled if, as a result of an accident or an illness, he or she is unable to perform the material and substantial duties of his or her own specific occupation and provided that he or she is not engaged in some other employment. Some policies dispense with the requirement that the insured may not be engaged in other gainful occupation to qualify for benefits; this is often referred to as "true own occupation" definition.

Any occupation: The insured is disabled if, as a result of an accident or an illness, he or she is unable to perform the duties of any occupation for which he or she is reasonably qualified by reason of his or her training, education or experience.

Own occupation followed by any occupation: The insured is deemed to be disabled if, as a result of accident or illness, he or she is unable to perform the material and substantial duties of his or her own specific occupation during the first two, or five years of disability and, thereafter, only if he or she is disabled under an "any occupation" definition.

Loss of earnings: The insured is disabled if, as a result of accident or illness, he or she suffers a substantial loss of income. Benefits are paid only to cover the proportion of lost earnings.

Partial disability: Most types of policy forms allow for partial payments for partial disabilities. A partial disability is one that prevents insureds from working full-time in their regular occupation as a result of an illness or an injury, or, if they are working full-time, prevents them from performing all of the duties of their own occupation. Generally, there must be evidence of a loss of income as a result of the partial disability.

Partial disability payments may either be a fixed percentage of the total disability payments or represent a share equal to the portion of income lost as a result of the disability; the latter is referred to as a residual disability benefit payment.

Partial disability payments may be payable for 12 months, 24 months or, in the case of the top occupational classes, may extend to age 65.

Premiums and reserves

The vast majority of policies sold in North America are non-participating, i.e. dividends are not usually granted. In the case of non-cancellable policies, premiums and benefits are fully guaranteed and may not be changed by the insurer. In the case of guaranteed renewable plans, which generally have lower premiums, the continuation of the coverage is guaranteed; however, premiums may be modified at the option of the insurer provided that the modification is applied consistently to all risks within the same risk category. In the United States, specific minimum loss ratio requirements have to be met before premium increases are approved. Under optional renewable, or cancellable plans, neither the premium nor the renewability is guaranteed; this form of policy is not common in the United States, except for group business, but is developing in Canada.

Premiums and reserves are usually calculated on the basis of the 1985 CIDA Table, which has replaced the 1964 CDT Table as the standard industry experience table. Extensive modifications of this table are currently used for pricing and reserving purposes. The table is widely regarded as being unrepresentative of current disability experience, particularly in the light of the rapid changes in the market and the increased frequency of stress-related claims. An important aspect of pricing in the US market is the need to maintain loss ratios prescribed by the various State insurance authorities. Generally, depending on the State, non-cancellable contracts must have a loss ratio of 50% or more between claims paid and premiums received over the life of a contract. Guaranteed renewable contracts are required to have a minimum 55% loss ratio. There are no such requirements in Canada, the legislators leaving the laws of the market to dictate appropriate premium levels while they monitor and regulate reserving standards.

Occupations are typically divided into five, sometimes six, insurable categories. Most companies have extensive occupational guides in which the various individual occupations are listed with indications of degrees of participation in manual work and other risk factors. Plans involving benefits payable to age 65 and the most liberal definitions of disability are typically offered only to individuals in the best, i.e. least risky, occupations.

Underwriting

The experience in both the US and Canadian disability sectors has recently been unfavourable. Such poor financial results have led to significant changes in underwriting practices as well as in contractual features. Of particular importance is the fact that companies now generally require formal documentation of income, in the form of personal and business income tax returns, at the time the policy is underwritten. From a medical point of view, handling of any mental or nervous illness history has been tightened. Even the mildest history of counselling will prompt specific underwriting action, ranging from the use of an exclusion endorsement to rejection of the application, depending on the severity of the history and the time elapsed since treatment was received.

When assessing applications for disability insurance, attention is paid to whether the amount of disability income applied for bears a reasonable relation to the employment earnings of the applicant. Insurers generally publish issue and participation limits showing the amount of monthly benefit they will issue for each level of employment earnings, allowing for income taxes and any applicable social insurance or group disability benefits.

Claims management

Not surprisingly, another impact of the industry's losses has been an increased focus on claims management practices. Most large disability insurers have significantly improved their claims handling practices. Case management practices have been borrowed from the workers' compensation schemes and from the group long-term disability market. Companies are stressing early intervention and integration of the disability benefit with other sources of income during disability. In addition, insurers are using a much wider range of independent specialists, including rehabilitation experts, psychologists, orthopaedic surgeons, forensic accountants and field claims representatives. Also, larger companies have found it beneficial to set up units dedicated to the investigation of fraudulent claims. Early results from these units have been extremely favourable.

The future

Because of the heavy losses sustained in North America, the individual disability industry is focusing on restoring profitability through sounder practices. We have seen more elaborate medical and financial underwriting and claims practices evolve and they are now becoming the norm. The pace of product development has accelerated, accompanied generally by premium increases as well as the replacement of many prior provisions considered very generous with more sensible provisions based on need. Insurers are trying to move away from the liberal "own occupations" definitions of disability towards new, more protective definitions. An interesting recent development is the emergence of a rider that can be added to an individual disability policy, which provides for an additional benefit if the insured has suffered a loss of independence and cannot accomplish a number of specific activities of daily living. These products provide relatively inexpensive cover and are also being considered as a stand-alone product for providing some form of disability coverage to persons otherwise uninsurable due to their occupation or health history. This protection of a more catastrophic nature has been introduced with some success in the United States and is now appearing in the Canadian market as well. It is still in a regulatory grey area and in its early development but it holds lots of promise for the future.

3.7 Switzerland

In Switzerland disability cover is available both as an additional benefit under life policies and as stand-alone insurance cover. Additional benefits consisting of a waiver of premium are usually offered together with the main insurance. An additional annual disability benefit can be included under nearly all life insurance plans and may be equivalent to up to 30% per annum of the life sum insured. For higher percentages, an increased premium must be paid.

Disability is usually defined as “own or similar occupation” disability in Switzerland. The definition is as follows, at least under new policies, with small differences from company to company:

“Disability is the inability of the insured due to illness or accident to engage in his/her own occupation or in any other occupation that he/she may reasonably be expected to undertake in view of his/her knowledge, experience and abilities and with due regard for his/her situation in life, even if the necessary knowledge has to be acquired by retraining, such inability being certified by means of objective medical evidence.”

The degree of disability is determined on the basis of the earnings lost. For this purpose, the working income, which the insured received prior to disablement is compared to that which the insured receives after disablement or could receive in a balanced job market. The difference, expressed as a percentage of the former working income, is the degree of disability.

In the case of fluctuating incomes (e.g. employees on a commission basis, self-employed), the average income subject to social insurance contributions in the two full calendar years preceding the disablement is taken as a basis.

Partial benefits are granted for a degree of disability of 25% or more and the full annual benefit in the case of total disability, i.e. 66 2/3% or 75%, depending on the company. A premium reduction can be obtained by having disability resulting from accident excluded from the cover.

In the case of disability insurance with lump-sum payment, which is to be found virtually under group contracts only, the definition of disability is somewhat narrower since it stipulates a state of health that is no longer expected to improve substantially as a result of continued medical treatment.

The deferment periods for individual annual disability benefits are usually 3 to 6 months, in group insurance they vary between 2 and 24 months, sometimes even 36 months. The long deferment periods of 24 to 36 months should be understood in the light of the fact that hospital daily benefit plans with adequate payment periods may be taken out. The deferment period for lump-sum payments is usually 6 months.

The company premiums are based on reference tariffs, EKM 95 (for males) and EKF 95 (for females) being applicable for individual plans. In group insurance, GKM/GKF 95 applies.

As compared to the situation prior to the 95 tables coming into effect (premiums only depending on the age at maturity, disability reserves derived from the annuity values of life insurance), now the principle of precise actuarial calculation of premiums and reserves predominates, but also that of deregulation. Various companies therefore plan to dispense with guaranteed premiums.

Disability policies, both individual and group, pay dividends.

Great importance is attached to risk assessment. In addition to assessment of the medical data, which may include a medical examination if the annual disability benefit exceeds a certain annual amount, it is usual, at least in the case of large benefit amounts, for companies to gather detailed information on the occupational activity and financial situation of the applicant. Care is taken to ensure that the total disability income of the insured does not exceed 80% of his/her normal working income.

3.8 Comparative tables

In the following we have summarized the various manifestations of disability insurance in the markets described above in the form of comparative tables.

The terms used under the heading “Definition of disability” require explanation:

– “Any occupation” refers to the inability of the insured for reasons of ill health to engage in any occupation whatsoever.

– “Own or similar occupation” refers to the inability of the insured for reasons of ill health to engage in his/her own occupation or any other occupation for which he/she is suited. The suitability of an alternative occupation depends in various markets on different criteria (usually education, training and experience, but sometimes also social status).

– “Own occupation” refers to the inability of the insured for reasons of ill health to engage in his/her own particular occupation.

Disability insurance in various markets

Table 1

	Belgium	France	Germany
Stand-alone disability insurance			
Sold in the context of	Life, health/accident insurance	Life, health and accident insurance	Life insurance
Type of benefits	Annual benefit	Annual benefit	Annual benefit
Definition of disability	Own or similar occupation	Own or similar occupation	Usually own or similar occupation
Partial benefits payable from	25% disability	33% disability	Sometimes 25%, sometimes 33% disability
Full benefits payable from	67% disability	67% disability	Sometimes 75% or 67%, or 50% disability (in this case with lesser disability no benefits)
Deferment period	From 1 month, depending on the plan	In individual insurance from 2 weeks, in group insurance generally from 1 month	Depending on the severity of impairment (see 3.2)
Possibility of premium adjustment by insurer during policy period	Subject to consent of supervisory authority	Both in company group insurance and individual insurance (open group insurance). Guaranteed premium in credit group insurance.	Under certain conditions, subject to examination by an independent trustee
Additional disability benefits			
Differences compared with stand-alone insurance	Various riders, some with pre-payment of life sum insured	No difference in principle	Much more important in volume, premiums much lower
Special comments	If annual benefit: annual amount up to 40% of life sum insured	Rider with annual benefit often administered by indemnity	Waiver of premiums and annual benefit generally up to 24% of life sum insured, higher premium for higher percentages

Disability insurance in various markets

Table 2

	Great Britain	Netherlands	North America	Switzerland
Stand-alone disability insurance				
Sold in the context of	Life and health insurance	Health and accident insurance	Life and health insurance	Life and health insurance
Type of benefits	Annual benefit	Annual benefit	Annual benefit, only occasionally lump-sum	In individuell insurance only annual benefit
Definition of disability	In the first 2 years of claim usually own occupation, sometimes switches to own or similar occupation thereafter	Own or similar occupation	In 1st few years of disability own occupation, afterwards own or similar occupation	Own or similar occupation
Partial benefits payable from	Usually only temporarily following total disablement	Usually 25%	Mostly only temporarily following total disablement	25%
Full benefits payable from	No fixed percentage, benefits according to definition	80%	No fixed percentage, benefits according to ldefinition	67% od 75% depending on the company
Deferment period	Depending on the plan in a few cases without deferment period	From 2 weeks, depending on the plan	From 2 weeks, depending on the plan	From 2 month, depending on the plan
Possibility of premium adjustment by insurer during policy period	Only under specific policies: guaranteed and renewable	Subject to consent of government authority	Only under specific policies: guaranteed and optional renewable	Sometimes (depending on company
Additional disability benefits				
Differences compared with stand-alone insurance	Deferment period usually 6 months	Depending on the company deferment period as from 3 months	Stricter definition of disability, deferment period mostly 6 months	Deferment period mostly 3 months
Special comments	Waiver of premiums for life insurance and pension contributions	Waiver of premiums for life insurance frequently included	Waiver of premiums for life insurance only	Waiver of premiums for life insurance and annual cash benefit sometimes more than 30% of sum insured

4 Disability insurance premiums

4.1 Comparison of premiums in selected markets

Following the general review of the various forms and the situation of disability insurance in a number of markets, it is interesting to compare the premium rates. For this purpose we have put together in tables 3 and 4 various premiums charged by companies in the markets discussed in section 3 that are based on comparable definitions of disability, similar occupational groups and the same age at maturity. Blanks have been left in the tables where the markets concerned do not have the relevant type of cover or at least do not offer it in a fully comparable form.

Table 3 refers to markets in which benefits are paid in the event of total disability only, table 4 to those in which benefits are also paid for partial disability. That is why the premiums in table 3 are considerably lower than those in table 4. A study made on the basis of statistic from the Dutch market has shown that the inclusion of coverage for partial disability of 25% or over makes it necessary to increase the net premium rate by approximately 50%.

One notable feature is that in the case of additional disability benefits in Belgium and the Netherlands (formerly also in Switzerland), for historical reasons the premiums are dependent only on the age at maturity and not on the age at entry. Since the annuity value of an annual disability benefit usually decreases as the age at the time of disablement increases, the product of the disability frequency and the annuity value, which determines the amount of the net premium, remains roughly constant if the disability frequencies do not rise very much with increasing age.

4.2 Reasons for the differences in premium rates

The rather large differences in premium rates from country to country are due to the following factors: As far as the gross premiums are concerned, it is important to know that the cost loadings added to the net rates differ considerably from one country to the next. The system of commissions plays an important part here. New business commissions that are fairly high and/or are not dependent on the length of the policy period result, in the case of short-term policies, in quite substantial loadings and are, among other things, responsible for the big differences in the rates according to age. In addition to new business commissions, however, factors are applied in the premium calculation in some of the markets concerned for the following costs: annual administrative costs, collection costs, costs of benefit payment. Another reason for the differences in premium rates is the fact that in some countries, such as Germany and Switzerland, disability policies pay dividends. The provision of dividends allows an initially more conservative premium calculation, since the insureds receive back a significant portion of the premiums that prove to have been excessive. In this way it is possible to allow for safety margins

Disability policies with “own or similar occupation” definition, annual benefit in case of total disability only

Table 3

Age at maturity 65 years, deferment period 6 months

Annual gross premiums for individual policies for males with white collar occupations per 1,000 annual benefit

Age at entry	Belgium	Great Britain	North America
Additional disability benefits			
25	21.67[1]	30.00[2]	–
35	21.67	30.00	–
45	21.67	30.00	–
55	21.67	30.00	–
Stand-alone disability insurance			
25	–	23.05[3]	35.04[3]
35	–	29.75	42.56
45	–	44.04	61.20
55	–	67.92	78.59

[1] Shorter deferment period.
[2] Premiums of one company.
[3] Premiums of one company, incl. policy fee.

Position 1998

Disability policies with “own or similar occupation” definition, annual benefit also in case of partial disability

Table 4

Age at maturity 65 years, deferment period 6 months

Annual gross premiums for individual policies for males with white collar occupations per 1,000 annual benefit

Age at entry	Belgium	Germany[1]	France[2]	Netherlands	Switzerland[1]
Additional disability benefits					
25	32.50[3]	46.19	14.08	81.00[4]	–[5]
35	32.50	66.45	18.03	81.00	–
45	32.50	102.95	32.14	81.00	–
55	32.50	155.69	59.78	81.00	–
Stand-alone disability insurance					
25	25.94	53.80	14.08	73.50	83.01[6]
35	34.44	76.01	18.03	106.24	98.79
45	48.88	116.42	22.14	122.61	117.16
55	63.38	175.08	59.78	134.90	120.37

[1] Conditions of insurance provide for payment of dividends to insured.
[2] Premiums of one company; premium at attained age.
[3] Shorter deferment period.
[4] Premium of one company for waiver of premium.
[5] Lower premiums than for stand-alone insurance, varying from company to company.
[6] Reference tariff, not binding.

Position 1998

in the premium calculation which may seem essential if the disability frequencies and other actuarial bases for premium calculation have had to be taken from insurance portfolios that are not entirely comparable.

Even in the case of the net premiums on which the gross premums are based, there are differences in that German disability policies – in contrast to those in Great Britain and North America – provide for benefit payment as from the end of the month following the accident or commencement of the disease in cases where there is definite permanent disability with no hope of later recovery. In addition, the disability frequencies and terminations of disability (due to death or recovery) assessed on the basis of different insurance portfolios often vary greatly. Whereas the differences in mortality rates are less significant, the differences in disability frequencies, for instance, may be enormous owing to varying definitions of disability, deferment periods and occupations. Different countries may use their own statistical material or in some cases foreign statistics that sometimes date back a considerable time. Another major reason for discrepancies lies in the different methods of calculating the net premiums; these will be described briefly in the following section.

4.3 Methods of premium calculation

In disability insurance the various actuarial bases for premium calculation are applied in different ways.[1] According to the method generally used in Germany, for instance, the annuity values, premiums and reserves are established on the basis of the disability probabilities and the mortality rates for active lives and the mortality and recovery rates of disabled persons. The conservative choice of actuarial bases is the reason why German disability premiums are rather high.[2]

In North America, the problem of allowing for recovery and for selection in mortality rates for disabled people has led to the introduction of a different method of calculation which is based on the figures of the so-called Continuance Table. This double-scaled table shows the probability of an active person becoming disabled at age x and of continuing to be disabled after a period t, which is taken as starting from the date of disablement. Since the variable t is scaled by week for the first 3 months of disability and by month for the rest of the first year, it is easy to allow for the influence of different deferment periods. However, even this method falis to take into account the effects of repeated disablement. It is therefore customary in North America to set up for disabled persons not only the disabled life reserve but also the active life reserve for the same age.

[1] A detailed examination of the different bases for calculation and methods applied would be beyond the scope of this brochure. Reference is made, for example, to [5].
[2] Cf. [6].

The premium rating method most commonly used in the UK is now the Method of Decrement Tables (inception rate/disabled life annuity approach). A few offices still use the Friendly Society Approach, which is based on the Manchester Unity Table with central rates of sickness at age x represented by the function Z_x. Premium rates are derived by applying the Z_x function to the projected exposure to risk at each age in order to calculate expected claims.

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