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Disability Insurance, Part 2

This is the second of a two-part series on disability insurance. Part 1, published in August 2006, focused on products in the United States. Part 2 addresses product design, pricing, underwriting, and claims for disability insurance in Australia, France, Germany, the Netherlands, South Africa, and the United Kingdom.

What is Adequate Financial Underwriting for Disability Products in Australia?

Tony Baker, BMS, CA
Gen Re LifeHealth, Australia

Historically, the Australian disability marketplace's focus and strength have been medical and occupational underwriting.[1] Prudent financial underwriting has often been non-existent. It could even be said that, at times, underwriters took a commercial and ad hoc approach to financial underwriting. However, in the world today nothing is more true than the constant of continuous change, and in recent years a much greater focus has been placed on financial underwriting. John F. Kennedy once said:

> *"Change is the law of life. And those who look only to the past or present are certain to miss the future."*

As we moved into the new millennium, numerous international events and factors have contributed globally to a tightening of financial and management practices. Australia has not been immune to these changes. There are numerous direct effects visible in the local Australian economy where:

- survival rates of small businesses are diminishing more and more;
- small businesses are increasingly being integrated into larger businesses and multi-nationals;

- business structures have become more complex; and
- the business environment has become increasingly litigious and compliance driven—and therefore more onerous for all stakeholders.

When the effects of tightening financial and management practices are combined with the general trends of an aging population, people staying in the workforce longer, and the complexities of the X and Y generations (which make up a larger percentage of the workforce), adequate financial underwriting has become more important.

Over the last five to ten years, additional challenges have evolved when underwriting financial information in the Australian disability income market. These include:

- complicated business structures;
- a lack of transparency between income from personal exertion (insurable income) and other income;
- how to manage what is continuing income and its effect in determining insurable income;
- the treatment of unearned and investment income;
- product and application wordings that do not address specific business scenarios;
- an inadequate financial underwriting skill base across an established industry that is historically slow to adopt/make changes; and
- a lack of specific insurance-focused financial education for claims and underwriting professionals.

By virtue of these challenges, financial underwriting has often been viewed as the realm of accountants or other suitably qualified experts. This appears to be an entrenched attitude reinforced by a general fear of financials among most claims and underwriting professionals. This fear is a common characteristic of many them (both new and experienced) who participate in our COMET Integrated Financial Analysis Course, which we run in the Australia and New Zealand markets.[2]

This attitude or fear does not have to exist, however, and leads us to the focus of this article. By demystifying financial underwriting, underwriters and claims professionals, regardless of their knowledge and skill level, can move towards overcoming any fears or misconceptions about financial underwriting. Using education as the catalyst, we have been able to show many professionals that adequate financial underwriting is within their grasp, and not solely the realm of accountants.

The basis of this education is the teaching and application of some key principals overlaid with a simple holistic approach. This article focuses on the key principles and how to implement them on a practical level.

It is important to remember when reading this article that the core driver of the disability product (in the Australian market) is protection of the insured against the loss of earned income in the event of disability. The benefit level is a pre-established percentage of the earned income prior to the life insured's disablement. The percentage in the Australian market is generally set at a maximum of 75%.[3] This maximum is set to create an incentive for the life insured to return to work (or business).

Key Principles

With anything we learn we can choose either to rote learn it without understanding the principle and application, or we can master the key principles that will help lead us to the best answer in most situations. The basic principles set out below (whilst not exhaustive by any means) can be easily learned.

By mastering these key risk management principles and applying them on a consistent basis, even the most fearful and least confident claims and underwriting professionals should be able to consistently complete adequate financial underwriting on most disability cases.

Basic verifiable information is the same for all structures

In Australia (and New Zealand) we have a very high standard of financial information available to us for underwriting. This is due to the high levels of compliance and reporting legally required in these two markets. Whether the applicant is an employee, sole trader, or has a business structure that includes any combination of one or more companies, trusts, or partnerships, we are able to obtain:

- Personal Income Tax Return (PITR)
- Business Entity Tax Return (BETR)
- Notice of Assessment
- Profit and Loss Statement (PL)
- Balance Sheet (BS)

This information, in combination with the basic application, provides invaluable details that form the basis of most disability underwriting decisions.[4]

Ignore the 3 D's and go back to the source

The 3 D's that originate from either net profits or balance sheet items are:

- Distributions
- Dividends
- Drawings

By ignoring these 3 D's and tracking them back to the source we can accurately determine what type of income it is and, therefore, determine whether it is related to insurable income. Otherwise, if we were to include these items we may be double counting.

Management/Service/Administration fees = Another entity?

If a Management, Service and/or Administration fee is shown in a profit and loss statement, it is a good clue that there could be another business entity within the applicant's business structure. Hence, when any of these types of fees are showing the following questions should be asked.

- From which business entity was this service fee received or to which business entity was this service fee paid?
- If this was a business entity in which the life insured has an ownership interest (directly or otherwise), please provide details of the % ownership interest and copies of the BETR, PL and BS for the last two years."

A – B = C

Regardless of the business structure or type of business entity, the application of this simple formula provides a robust and transparent method to determine insurable income.

A	Revenue (includes sales or what makes up gross profit)
– B	Total Expenses
= C	Net Profit (A – B)

For the purpose of disability products in Australia, Revenue (A) only includes those items related to personal exertion, not items that are considered continuing income.

Continuing income should be excluded from revenue (A) and carefully considered

Continuing income is income that continues when the applicant is no longer working, i.e., it is not related to personal exertion. Continuing income may include:

- dividends or distributions;
- rent;
- interest;
- ongoing commissions, renewal or trailing commissions;
- spouse carrying on a business;
- multiple business operations;
- profit share continuation; and
- unearned and investment income.

This type of income becomes an issue when determining the right level of benefit. As already noted, part of the core driver of the disability product is to ensure that in the event of a claim there is an incentive for the insured to return to work (or business). Hence, to return to work, it is important that we exclude any continuing income from A in the A – B = C calculation.

Net assets and investment income should be carefully considered

Applicants with investment income and/or significant net asset positions should be carefully considered at underwriting. Significant net assets in the event of a claim could be sold or reorganised to create continuing income streams that could effect the applicant's incentive to return to work (or business). Investment income would have the same effect.

Simple Holistic Approach—Bringing It All Together

It's great to have all these key principles but we must be able to bring them all together to build a risk profile and make an assessment. The simple five-step approach set out below assists in doing just that.

Step 1: Review and Build a Risk Profile

Review the information provided and build a financial risk profile for the life insured which includes establishing:

- nature of the occupation and/or business;
- the applicant's business structure;
- ownership details within the business structure; and
- what additional information is required.

Step 2: Request Information—Ask Better Questions

Request any additional information required to complete the risk profile and the calculation of insurable income. This means asking better questions—which provides authority to claims or underwriting professionals so they can better determine the risk—rather than be influenced by what the advisor or client thinks they want them to hear. This also requires that claims or underwriting professionals be clear and specific when requesting information from advisors and clients.

Step 3: Review—Identify Red Flags

When reviewing information in Steps 1 and 2, the underwriter should identify any red flags and repeat Step 2 and/or complete the risk profile for the applicant.

Step 4: Calculation (A – B = C)

To assist underwriters we developed a simple calculator that takes underwriters through the A – B = C formula and any add backs that may be considered to calculate insurable income. The calculator also provides a transparent outline of how the sums insured were calculated, which is most useful for future reference, especially in the event of a claim. The Figure on page 4 is an excerpt of a completed calculation using our calculator.

Figure. Financial Analysis Proforma Worksheet Main Entity

Ref	127068	**Monthly Benefit Proposed**	$30,000
		Total Benefit Proposed (pa)	$360,000
Client Name	John Doe	**Entity**	Sole Trader

	Age	46 Most recent year...	**2005**	**2004**	**2003**
A	Income		486,689	368,971	398,564
-B	Expenses		219,365	256,449	249,651
=C	**Net Income**		267,324	112,522	148,913
	Ownership Interest		100%	100%	100%
	Life Insured's Share of Net Income		267,324	112,522	148,913
	Plus Add Backs (life insured's share thereof)				
+D	Depreciation		970	1,373	236
+E	Donations/Gifts		730	700	735
+F	Salary/Directors Fees				
+G	Superannuation				
+H	Income Split Salary				
+I	Income Split Super				
+J	Motor Vehicles	75% of actual expense	7,206	7,455	5,463
+K	Loss on Sale of an Asset				
+N					
+O					
	Total Add Backs		8,906	9,528	6,434
	Total Adjusted Net Income		**276,230**	**122,050**	**155,347**
	Plus Other Supplementary (Entity) Income				
2nd	Family Trust		103,619	86,364	100,136
3rd		0	0	0	0
4th		0	0	0	0
5th		0	0	0	0
6th		0	0	0	0
7th		0	0	0	0
8th		0	0	0	0
	Plus Salary/Wages etc from 3rd Party Employers				
s/w	University of Melbourne		242	8,057	
s/w	Melbourne Health		55,056	43,824	38,650
s/w	Eastern Health		15,931	61,356	42,564
s/w					
	Total Other Income		174,848	199,601	181,350
	Total Net Income		451,078	321,651	336,697

Net Income to apply for benefit - Average Y/N?	Y	369,809	Assets	2,650,000
Plus Unearned or Investment Income (when applicable)		61,000	Liabilities	1,430,000
Total Adjusted Net Income		430,809	Net Assets	1,220,000
			Unearned Income	61,000
Replacement Ratios				
250,000	**75%**	187,500	Investment Income	0
150,000	**50%**	75,000		
30,809	**25%**	7,702		
Total after Replacement Ratios		270,202		
Less Unearned or Investment Income		61,000		
TOTAL MAXIMUM BENEFIT		**$209,202**		
CALCULATED MONTHLY BENEFIT		**$17,434**		

Recommendation

Considering the significant increase in earnings in 2005, we have taken average earnings from the last three years giving an insurable income which is reasonable considerng the age of the life insured and his occupation. Due to significant Net Assets, an unearned income calculation has also applied. These factors contribute to our recomendation to limit IP cover to $17,500mb.

Step 5: Make a recommendation

On consideration of all the evidence and the larger picture, including the risk profile, the claims or underwriting professional should then make a recommendation and record the reasoning and methodology. This is the most important part of the total approach, observing the bigger picture and asking the question: *"Is it reasonable?; Does it make sense?"*

Summary

The good news is that adequate financial underwriting for disability products in the Australian marketplace does not require claims and underwriting professionals to be accountants. With education and training, adequate financial underwriting can be achieved through the simple application of these key principles:

- Basic Verifiable Information is the Same for all Business Structures.
- Ignore the 3 D's and Go Back to the Source.
- Management/Service/Administration Fees = Another Entity?
- A – B = C.
- Continuing Income Should Be Excluded from Revenue (A) and Carefully Considered.
- Net Assets and Investment Income Should Be Carefully Considered.

By applying these key principles to the simple five-step approach, claims and underwriting professionals can bring together all the information to build a better risk profile and assessment.

1. Review and Build a Risk Profile.
2. Request Information–Ask Better Questions.
3. Review—Identify Red Flags.
4. Calculation (A - B = C).
5. Make A Recommendation–Is it Reasonable, Does it Make Sense?

Whilst the key principles and this simple five-step approach provide a robust and transparent framework, adequate financial underwriting will not occur without continuing education of claims and underwriting professionals.

> *"Give a man a fish and you feed him for a day. Teach him how to fish and you feed him for life."*
>
> *– Kuan Tzu, Chinese Philosopher.*

Endnotes

[1] At a high level all references to Australia also apply to the New Zealand disability market.

[2] COMET Integrated Financial Analysis Course is a life insurance specific course focusing on basic financial analysis, offered to both our clients and the wider life insurance industry in Australia and New Zealand.

[3] 75% is the maximum replacement ratio, which decreases on a sliding scale as insurable income increases, as shown on the calculator excerpt.

[4] A Financial Questionnaire will also be obtained for higher levels of cover, e.g., greater than A$15,000 monthly benefit.

Tony Baker *is Senior Financial Underwriter for Gen Re LifeHealth, Australia. He is responsible for training and development in all aspects of financial underwriting in Australia and New Zealand.*

Profitability Environment for Occupational Disability Products in South Africa

Marcus Pillay, BBusSC, FIA
Gen Re LifeHealth, South Africa

Occupational disability products are widely sold in South Africa in both group business and individual life markets. In general, these lines have been profitable over the last three to five years. This article discusses the prospects for profitability given developments in product design, claims and the law.

Main Occupational Definitions

Definitions fall into the following main categories in approximate order from most to least generous from the insurer's point of view. In all cases, the claimant has to show disability resulting in an inability to perform:

- his/her own occupation; or
- his/her own or a similar occupation; or
- his/her own or a suited occupation; or
- his/her own or any reasonable alternative occupation; or
- in any occupation.

"Own occupation" definitions usually require only that the claimant is unable to perform his/her occupation, though not his/her job. "Own or similar occupation" and "own or suited occupation" were designed to include the requirement that the claimant be unable to perform alternative occupations. These definitions have largely been replaced by the fourth definition in newer product designs. In general, for lump sum disability and disability income, this "own or any reasonable alternative occupation" definition is considered best in that it includes alternative occupations, a requirement for reasonability, and should be appropriate for most occupations. However, it is acknowledged that these "reasonable alternative" type definitions are of little use in managing blue-collar claims. A complete disability income definition might be:

> *The life assured will be regarded as disabled if, in the opinion of the insurer, injury or disease renders the life assured totally incapable of engaging in:*
>
> - *his or her occupation, or*
> - *any reasonable alternative occupation taking into account his or her level of education, training, experience and ability.*

The "any occupation" definition is the most stringent and usually only applies to occupations with a high incidence of subjective claims, e.g., truck drivers. However, the wide scope of the definition should translate into significant cost savings to an employer, which may also increase the attractiveness of this definition. Definitions may also make reference to the possibility of re-training.

Product Designs

Group life

Disability income claims in the group life market usually have two requirements:

- In the first 24 months, the claimant has to show only an inability to perform his or her own occupation; and
- thereafter, the claimant has to show an inability to perform his or her own occupation as well as a reasonable alternative.

Lump sum disability is usually only offered on an "own or reasonable alternative occupation" basis, with the requirement that the disability be permanent. It is often the preferred disability benefit for blue-collar workers.

Individual life

Traditionally, this market has sold mostly lump sum disability products, although income benefits are now widely offered and sales of income benefits are increasing. Lump sum benefits currently are offered on both "own occupation" and "reasonable alternative occupation." Some offices offer an "own job" definition, referring to an inability to perform one's own job. These are usually offered for a restricted term or they have restricted eligibility, such as only professional lives or only lives in the top two (of four) risk categories.

Disability income benefits are usually offered on the basis of an inability to perform one's "own occupation." Some offices will restrict the eligibility for this cover to their best occupational classes or only to some occupations.[1]

It is generally accepted that disability definitions do not take into account the availability of employment, only whether such employment is possible. Due to the high unemployment rate in South Africa (officially at approximately 27%), this requirement is considered necessary. Insurers may also stipulate that the claimant should not be otherwise employed for remuneration.

Pricing Considerations

The definitions outlined above are aimed at ensuring that actual claims are in line with that expected in the pricing basis. The need to include alternative occupations ensures the marketability of the product. In addition, occupational disability claims for back problems, psychological conditions and stress are the most vulnerable to moral hazard, and in such instances the inclusion of alternative occupations should help to reduce the claims cost.

Disability claims experience is also influenced by the economic conditions in the country. Our belief is that the current economic expansion, one of the longest in South Africa's history, has resulted in good claims experience on disability products in an environment where consumer prices have increased by less than 6% annually in the last three years. However, the rate of growth in the gross domestic product (GDP) is expected to slow in the coming months as interest rates rise from their historically very low levels and consumer spending, which has been fueling growth, decreases.[2] This tightening of monetary policy may result in greater uncertainty about the current phase of the business cycle.

Favourable disability claims performance has resulted in pressure to reduce rates and improve benefits. Consequently, some benefits have been improved ahead of inflation, as follows:

- Individual life maximum disability covers have been increasing, with a lump sum cover of up to R10,000,000 in the case of capital (total) disability, and, in the case of disability income, 75% of pensionable income with a maximum of approximately R60,000 to R100,000 per month. These covers should be compared to a lump sum disability maximum of approximately R3,000,000 to R5,000,000 three years ago.
- Although group life lump sum covers have not increased as significantly and remain at approximately R1,500,000 to R2,000,000, group disability income currently has a maximum benefit of around R75,000 per month, up from about R52,000 three years ago.

These relatively high covers would in themselves tend to increase the propensity to claim.

Claims Practice and Legal Precedent

Unfortunately for actuaries and claims managers, determining whether an occupational disability claim is valid is a legal question, not an actuarial or medical one. Legally binding interpretations of disability definitions in South Africa are provided by the High Courts and Appellate Division, the Ombudsman for long term insurance, and the Pension Funds Adjudicator (PFA). While the medical condition of the claimant is important, legal practitioners rarely take the overall actuarial implications of claims decisions into account.

In determining the reasonability of alternative occupations, insurers are asked to provide specific occupations for which the claimant would be suitable. Given the complexity and specialisation of the modern economy, coming up with alternative occupations is no easy task. As yet there are few specialised vocational counsellors in South Africa, and it is up to the claims assessors to determine transferable skills and to suggest suitable alternative jobs.

A few judgments are relevant in discerning the current application of these disability definitions:

- In 2005 the Ombudsman for long-term insurance considered the case of a lifeguard who had been retired due to ill-health. To qualify for a capital disability benefit, he had to be "totally and permanently disabled from carrying out his own occupation or any other occupation that he could reasonably be expected to follow, taking into account his age, education, training, knowledge, status, ability or experience." The lifeguard's inability to perform his own occupation was not in dispute. His insurer maintained that he could perform a sedentary occupation, and suggestions were made in this regard. These were rejected on the basis that the lifeguard had limited training or experience for the alternatives mentioned, even for fairly obvious alternatives, such as working in a surf shop or providing swimming lessons to children. In this instance, the Ombudsman relied on the claimant's limited education and the fact that he had not worked in these environments previously. This is a narrower interpretation of the definition than would be expected.
- In Potgieter and Metal Engineering Industries, the PFA was required to interpret the phrase "in any capacity whatsoever" contained in the definition.[3] In this case, the pension fund felt that the claimant could be "deployed into an alternate, less demanding occupation." The fund conceded that there would be a drop in income of about 50%, as well as in vocational status. The Adjudicator interpreted "further employment in whatsoever capacity" (i.e., "any occupation") to mean "further employment in any capacity reasonably open to the member," in order to include in its assessment "the member's previous employment, training and capabilities." This reading brings the definition much closer to an "own or similar occupation" type definition. Possibly to avert equating these two definitions, the Adjudicator cautioned that this interpretation was *not* equivalent to an "own or similar

occupation" definition.[4] However, this does not preclude the possibility that the meaning of "any occupation" has been brought significantly closer to definitions which include the phrase "reasonable alternative occupation," which also usually make reference to levels of education, training and experience.

- In Munnik and Cape Joint Retirement Fund (1999), the PFA referred to a 1910 case to extract the meaning of "similar" contained in some, especially older, disability definitions. It concluded that a similar occupation is one which has the same essential elements as the occupation followed by the claimant. An unintended consequence of this may be to radically restrict the scope of the definition. If someone is unable to perform the essential requirements of the occupation, is it likely that he/she will be able to perform another occupation with the same essential requirements?

These decisions have put pressure on claims practitioners, as definitions become harder to apply. In practice this may have the effect of restricting interpretation of definitions to "own occupation" or "own or reasonable alternative occupation," since, as shown above, "any occupation" has an implied requirement for reasonability.

Implications for Profitability

The effect of these decisions may be to limit considerably the extent to which insurers can effectively enforce "reasonable alternative occupation" type definitions. A hypothetical example is that of a managerial position. If a manager is unable to perform the main tasks of his or her occupation, do reasonable alternatives exist? The examples previously discussed show that his or her previous experience and qualifications would be restrictively interpreted. Since these alternatives may entail a drop in income, how big a drop would be reasonable? The outcome depends on the specifics of each case. For example, it may seem that an alternative for a human resources manager might be that of an office manager, but if he or she had never worked as an office manager, this may not be considered reasonable by the Courts.

In South Africa in the past, loadings were added to products with "own or reasonable alternative occupation" definitions to arrive at rates for "own occupation" type products. These loadings were in the order of 20% to 30%, and eligibility for the product was restricted to professionals, i.e., doctors, accountants, etc. However, in recent times the loading has been reduced and the class of lives that qualifies for the "own occupation" definition has widened beyond simply highly trained professionals, e.g., to the top three of five occupational classes.

In practice, we have rates very similar to those for "own or reasonable alternative occupation" being offered for "own occupation," which may lead to inadequate rates for "own occupation." These rates have typically been developed during the recent period of favourable claims experience. At the same time, claims practice and legal precedent combine to narrow the interpretation of "reasonable alternative" occupations.

It appears, therefore, that the profitability of disability products would be vulnerable in the event that the business cycle turns, with possibly many more claims than anticipated. Good claims and risk management practices are essential in preserving the long-term profitability of the business.

Endnotes

1 Individual life policies use occupational classes to group occupations with similar characteristics. For example, the best occupational class may have only professionals, the second best would be skilled managerial, etc. Occupational classes are used in addition to risk classes, which usually use occupation and/or education and income to rate lives.

2 The South African Reserve Bank, the country's central bank, raised interbank lending rates by 50 basis points in June 2006 (and again by 50 points in August 2006, to 8%). This was the first increase in lending rates since September 2002, when these rates were at a peak of 13.5%.

3 Permanently disabled was defined to mean: "A member becoming permanently disabled or incapacitated and not being able to engage in further employment in whatsoever capacity in the [Metal and Engineering] Industries."

4 In an interim ruling the claim was dismissed on the weight of (conflicting) medical evidence, which showed that the claimant could perform some occupations.

Marcus Pillay *is Marketing Actuary for Gen Re LifeHealth, South Africa. He joined Gen Re in March 2005 and manages a portfolio of group and individual clients. Before joining Gen Re he worked at a large life insurer, performing capital adequacy calculations, and later, individual life product development, focussing on life annuities.*

Income Protection in Case of Disability—French Context and Tariff Methodology

Richard Lambert, DEA Math. Appliquées
Gen Re LifeHealth, Germany

Part 1—Three Pillars of French Income Protection

Part 1 of this article gives a broad outline of the three pillars of French income protection.

First Pillar—"Régime Général" of the French Social Security System

The French Social Security System (created in 1945) provides a compulsory disability cover for salaried employees and for the self-employed that is interdependent through generations and professions. The purpose of this cover is to compensate for loss of income resulting from a reduction in capacity to work and the inability to engage in gainful employment due to medical causes. It is financed two-thirds by the employer and one-third by the employee, if salaried, or totally by the self-employed. In the following discussion, accidents at work and diseases acquired while performing the normal duties of one's profession are excluded.

Short-Term Disability—Incapacité de Travail

Entitlement to a disability benefit is evaluated on an "own occupation" basis and requires approval from the family doctor. Social Security's medical advisors conduct random queries to confirm the disability status of the claimant. The benefit is paid after a deferred period of three days for salaried employees and after seven days for the self-employed (reduced to three days in case of hospitalization).

For salaried employees, the *monthly* benefit is equal to 50% of the average *last three months* gross salary limited to 50% of the "PMSS" (Plafond Mensuel de la Sécurité Sociale; in 2006, 1 PMSS = €2,589/month). The benefit is paid on a daily basis and limited to 360 days over one or several incapacities within each period of three consecutive years.

- For the self-employed the same rule applies to the *yearly* benefit by replacing *"last three months"* by "last three years" and "PMSS" by "PASS" (=12 PMSS) in the above-mentioned definition, and with a guaranteed minimum benefit since there is no minimum salary.
- For salaried employees, an additional protection paid by the employer ("Mensualisation" law, 1978) completes the above-mentioned benefit to a maximum of 90% of gross salary from the 1st to the 90th day of disability, which is reduced to 66% from the 91st to the 180th day of disability.
- For both the self-employed and salaried employees, the benefit is indexed every three months to the company's wages for salaried employees, and to PASS for the self-employed.

Long-Term Disability—Invalidité Permanente

Entitlement to a benefit is made by agreement between the Social Security's medical advisor and the claimant's family doctor after medical "consolidation" of disability at a permanent level or after three consecutive years in short-term disability. The parties should agree on the following levels by order:

- *Functional disability* ($0 \le Fn \le 1$)—Pure physiologic and mental scale *("Dammum emergens");* and
- *Occupational disability* ($0 \le Oc \le 1$)—Professional scale based on an "any suitable occupation" disability definition and taking into account the nature of the functional disability, but also the educational level of the claimant (Articles L341.1-3 and R341.2 of Social Security Code).

Finally, the resultant disability level $Rs = \sqrt[3]{Fn^2 \cdot Oc}$ determines the disability category and thus the yearly benefit equal to *x* percent of the average last 10 years' gross salary but limited to *x* percent of the PASS plus 5% per dependent child with a maximum of 10% more:

- 1st Category—Partial and Permanent Disability: $33\% \leq Rs < 66\%$ *and* $x = 30\%$
- 2nd Category—Total and Permanent Disability: $Rs \geq 66\%$ *and* $x = 50\%$
- 3rd Category—Total and Irreversible Loss of Autonomy: $Rs \geq 66\%$ plus the claimant requires assistance of a third person in order to perform the activities of daily living. $x = 70\%$.

The long-term disability (LTD) benefit, paid on a monthly basis, is PASS indexed and ends at age 60. It can be reviewed if the disability level *Rs* moves to another category (reductions are rare). After the age of 60, the pension system takes over.

In addition:

- The Social Security System requires that the claimant must have completed some minimum amount of time at work.
- Income taxes and limited social contributions are applicable to the benefit.
- The first pillar includes other protections, such as death, health, pension, accident at work, and diseases acquired while performing the normal duties of one's profession. These are regulated by other definitions.

Second Pillar—Group Income Protection on Top of the First Pillar for Salaried Employees

The second pillar consists of a Collective Agreement ("Convention Collective") between an employer and its salaried employees. It is negotiated by company or line of industry and regulated by the Labor Code (see also "Evin" Law 1989). In 2005, 128 Agreements were in force in France.

This compulsory cover, without medical underwriting, completes the first pillar to between 70% and 90% of gross salary with a limit of four or eight PASS. Disability definitions are generally in line with those of the first pillar.

Products of the market often propose:

- a short-term disability (STD) benefit generally replacing the "Mensualisation" law, i.e., from the 90th day of disability or later; and
- a LTD benefit equal to $Min\ (3 \cdot Rs / 2;\ 100\%)$ for $Rs \geq 33\%$ (no benefit for $Rs < 33\%$). The benefit is paid until age 60 or 65.

The tariff—either standardized for small companies or tailored by age, gender and occupation distributions for larger ones—is expressed in a flat rate for all wages and partially financed by the employer (between 50% and 70%).

Exclusions are minimal, mostly for suicide and self-inflicted injury, automobile accidents caused by alcohol or drug use, and injures incurred during riots, motor racing, gambling, or professional competition.

With €3,694 billion in group disability benefits paid in 2005, three groups of players are competing.

- *Provident Institutions* governed by the French Social Security Code—45.3%;
- *Insurance Companies* governed by the French Insurance Code—33.3% (including reinsurance of Mutual Societies and Provident institutions); and
- *Mutual Societies* governed by the French Mutuality Code—21.3%.

Mutual Societies and Provident Institutions profit from their historical position in the second pillar (sometimes directly designated in the Collective Agreement) when insurance companies propose innovative products and efficient policy administration.

In addition:

- The premium is tax-deductible from employee's income / employer's result, but the benefit is taxable.
- The cover is not transferable if the employee leaves the company.
- In order to complete the first pillar, most benefits of the second pillar generally include other protections such as death, health, pension cover, and premium waiver.

Third Pillar—Individual Income Protection for Salaried Employees and the Self-Employed

For salaried employees, the third pillar completes the second one or replaces it if the Collective Agreement fails to propose a group plan. Characteristics are:

- benefit definition and deferred period often in line with second pillar products;
- age at entry and occupational differentiated level premium with medical underwriting;
- lump sum instead of annuity sometimes proposed for LTD; and
- plan not financed by the employer.

For the self-employed, individual income protection with medical underwriting acts as a second pillar since there is no Collective Agreement. It is often sold in addition to death cover (see also "Madelin Law" 1994). Characteristics are:

- short deferred period differentiated by cause, e.g., for sickness, accident, and hospitalization, the deferral period would be 30/0/3 days;
- cover and benefit until age 65, sometimes with a reduction from age 60 to 65;
- age at entry and occupational differentiated tariff with three or four classes mostly corresponding to retail trading, the craft industry and academic self-employed (sometimes with physicians and nurses as subgroups); and
- standard insurance exclusions, such as for pre-existing conditions; in some cases, exclusions for back disease or hospitalization for a mental disorder.

With €2,868 billion of gross premium for the individual disability market in 2005, insurance companies are the major players in this segment, which is more profitable than the second pillar.

The illustrations below show the three pillars of French income protection for Salaried Employees and the Self-Employed.

Figure 1. Salaried employees

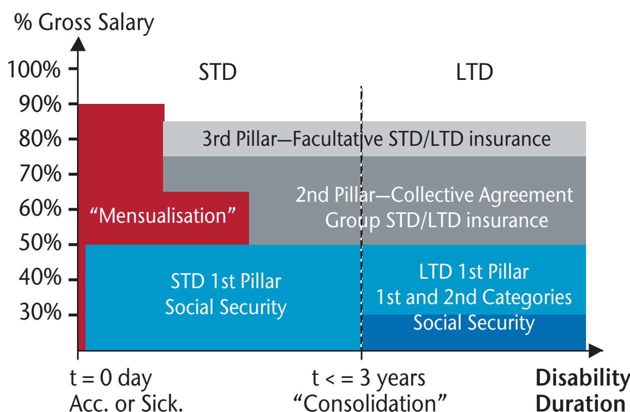
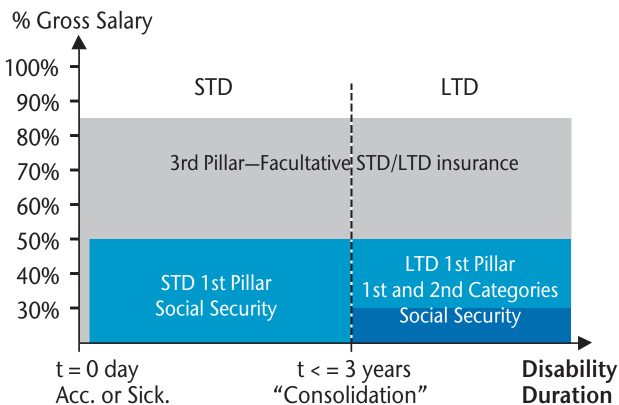


Figure 2. Self-employeed



Part 2—Actuarial Methodology Applied to STD Claims Experience

The second part of this article is devoted to actuarial methodology that can be used to model French STD incidence and reactivation rates when analyzing claims experience. The intent is to provide an operative mode appropriate for a tariff.

Assumptions

In the following it is assumed that STD disability net single premium can be expressed as the expected value of a time-continuous stochastic process. For a healthy (active) insured of age *x* at policy issue:

$$\bar{a}_x^{ai} = \int_0^{65-x} {}_u p_x^{aa} \cdot \mu_{x+u}^{ai} \cdot v^u \cdot \left[\int_u^{u+\lambda} {}_{t-u} p_{x+u}^{ii} \cdot v^{t-u} \cdot dt \right] \cdot du$$

where:

- *v* is the annual financial discount factor;
- ${}_u p_x^{aa}$ is the probability per unit of time that an active insured of age *x* (policy issue) will remain active at age *x* + *u*;
- μ_{x+u}^{ai} is the probability per unit of time that an active insured of age *x* (policy issue) will become STD disabled at age *x* + *u* (including deferred period); and
- ${}_{t-u} p_{x+u}^{ii}$ is the probability per unit of time that a STD disabled insured of age *x* + *u* will remain STD disabled at age *x* + *u* + *t*. The integral in brackets is the actuarial value (present expected value) at age *x* + *u* of a continuous annuity payable to a STD disabled insured until recovery, LTD or death, with a maximum of λ years.

Thus, the single premium estimation amounts to model μ_{x+u}^{ai} and ${}_{t-u} p_{x+u}^{ii}$. In the following section, an approach using Generalised Linear Models (GLMs) is given.

Stochastic Background

GLMs consist of a wide range of distributions in which the relationship *(link function)* between the random effect (expected value of the observations) and the systematic component (explanatory covariates) provides great advantages compared to simple distribution fitting (GLMs have more degrees of freedom) or to a classical linear regression (GLMs are not restricted to using only the Normal distribution).

Formally, the distribution of the *dependent* variables $(Y_i)_{i=1}^n$, independent, identically distributed (iid) and representing the observation to be predicted in each tariff cell $i(i = 1,...,n)$, belongs to the two parameters exponential family defined by the density function:

$$f(y_i, \theta, \phi) = \exp\left\{ \frac{y_i \cdot \theta - b(\theta)}{a(\phi)} - c(y_i, \phi) \right\}$$

where $a(\phi)$, $b(\theta)$ and $c(y,\phi)$ are functions of the canonical parameter θ and the dispersion parameter ϕ.

In addition, exponential family allows expressing the variance as a function of the expected value:

$$\mu = E(Y) = b'(\theta) = g^{-1}(X\beta) \text{ and }$$
$$Var(Y) = b''(\theta) \cdot a(\phi)$$

where:

- *X* is the Model Design (see below)
- $\beta = {}^t(\beta_0, \beta_1, \ldots, \beta_k)$ is the *k* + *1*- vector of the model parameters to be estimated; and
- *g* is a function *linking* the expected value $\mu = E(Y)$ to the linear predictor $X\beta$.

The purpose of modeling is to find β and ϕ, which maximize the Likelihood function:

$$L(y_1, y_2, ..., y_n, \theta, \phi) \overset{Y_i iid}{=} \prod_{i=1}^{n} f(y_i, \theta, \phi)$$

The Reweighted Least Square algorithm applied to the Log-Likelihood permits identification of the best estimates of β. This algorithm must be iteratively combined with the maximum likelihood equation with respect to any additional parameter representing ϕ (in the following α or σ).

In some cases, before modeling the process must "offset" the exposure (e.g., incidence rate model) and/or operate a transformation of the dependent variable (e.g., reactivation rate model).

Let's see an example of each model.

STD Incidence Rate: μ_{x+u}^{ai}

If the number of STD claims $(Y_i)_{i=1}^{n}$ observed in the tariff cell *i(i = 1,...,n)* is supposed to follow a Negative Binomial distribution with log-link function, then the Log-Likelihood is:

$$Ln\{L^{STD}(y, X, \beta, \alpha)\} = \sum_{i=1}^{n} \Big[y_i \cdot \ln\{\alpha \cdot e^{X_i \cdot \beta}\} - (y_i + \alpha^{-1}) \cdot \ln\{1 + \alpha \cdot e^{X_i \cdot \beta}\} + C_i \Big]$$

with C_i independent from β.

STD Reactivation Rate: ${}_{t-u}p_{x+u}^{ii}$

If the reactivation time in days of STD claims $(T_i)_{i=1}^{n+m}$ observed in the tariff cell *i(i = 1,...,n)* is supposed to have a hazard rate $h^{STD}(t_i)$ following a Log-Logistic distribution with logit-link function:

$$h^{STD}(t_i) = \frac{1}{\sigma} \cdot t_i^{\frac{1}{\sigma}-1} \cdot \frac{e^{\frac{-X_i \cdot \beta}{\sigma}}}{1 + t_i^{\frac{1}{\sigma}} \cdot e^{\frac{-X_i \cdot \beta}{\sigma}}}$$

Then the Log-Likelihood is:

$$Ln\{L^{STD}(t, X, \beta, \sigma)\} = \sum_{i=1}^{n+m} w_i \cdot f^{STD}(t_i) + (1 - w_i) \cdot S^{STD}(t_i)$$

where:

- $f^{STD}(t_i)$ is the "STD reactivation" probability density on date *t*. It holds for the *n* "not censored" observations:

$$f^{STD}(t_i) = h^{STD}(t_i) \cdot \int_{-\infty}^{t_i} h(u) \cdot du\,;$$

- $S^{STD}(t_i)$ is the probability density of remaining STD disabled on date *t*. It holds for the *m* "right censored" observations. This function is also known as the "STD cumulative distribution":

$$S^{STD}(t_i) = 1 - F^{ITT}(t_i);$$

- w_i is the uncensored indicator of the observation *i,* which takes the value 0 if the observation is "right censored" and 1 if it is not. An observation is called "not censored" if STD terminates *within* the observation window and "right censored" if STD carries on *after the end* of the observation window.

Model Design and Link Function

The model design is expressed through a rectangular matrix $X = [X_i]_{i=1}^{n}$ called *Design Matrix,* where each selected covariate added to the model and each of its possible transformations (polynomial, log, crossed and nested effects, etc.) is a column of the *Design Matrix* making the linear regression form *X*β an integral part of the model. For example:

$$\text{Age} + (\text{Age})^2 + \text{Gender(Und. Year)} + \sum_{j=1}^{4} 1_{\{\text{Occup. Class } j\}}$$

Two invertible forms of the *Design Matrix* are possible: "Over-Parameterized" or "Sigma-Restricted." Then the *link function g* ensures the implementation of the regression in the model establishing a direct relation between the explanatory covariates and the expected value of the dependent variable.

Model Testing

Several methods allow checking the goodness of fit provided by the model as well as the adequacy of the covariates and of the residual distribution (= observed – predicted). See the graphs on page 13:

- Plots of predicted versus observed values (straight line "y=x" = good fit) or predicted versus residuals (symmetrical spread = good fit);
- Plots of the normal probability distribution versus scaled deviance residuals distribution (straight line "y=x" = good fit);
- Plots of Leverages, which identify tariff cells distant from the center of the observations (no Leverage outliers = good fit).
- Likelihood-Ratio tests 1 and 3: Contribution to the model of each covariate (1) taken individually and (3) by removing it from the full model (all covariates);
- Model robustness—Tests if the model holds (= robust) on subsamples.

Figure 3. Predicted versus observed values

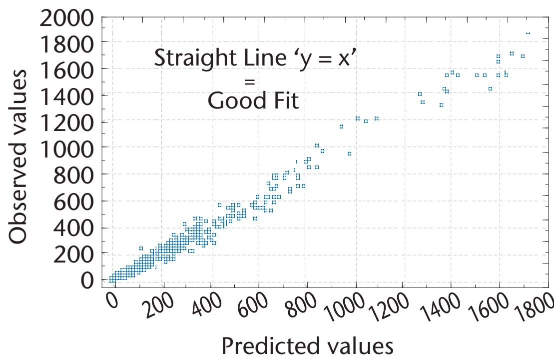


Figure 5. Predicted values versus residuals

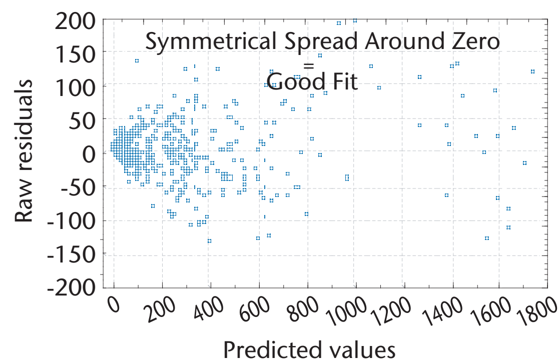


Figure 4. Normality of scaled deviance residuals

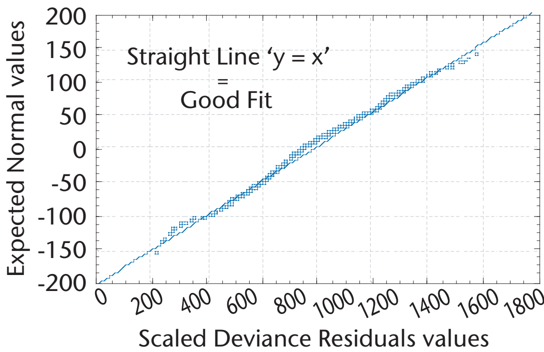
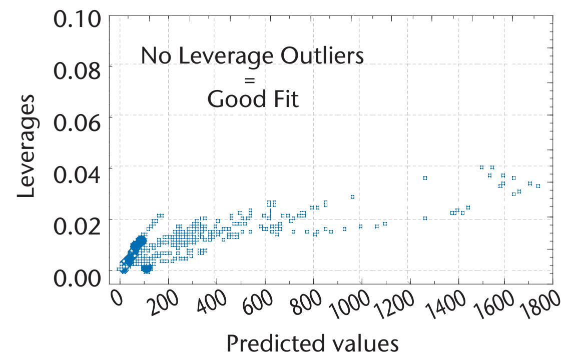


Figure 6. Predicted values by leverages



Operative Mode

In practice, for modeling μ_{x+u}^{ai} and ${}_{t-u}p_{x+u}^{ii}$ the production and claims data have to be formatted in order to provide daily risk exposure, claim censoring indicators and time dependent covariates. Then a distribution and a link function appropriate for the nature of the observations must be chosen. Statistical packages provide algorithms for model fitting and testing. And finally, before implementation in the premium model, results must be adjusted by the experience of underwriters and claim managers since some effects cannot be predicted (e.g., social context, anti-discrimination and taxation laws, and sometimes exclusions).

Bibliography

- Code des assurances, Code de la Mutualité, Code de la Sécurité Sociale, Code du Travail.
- http://www.ameli.fr, www.canam.fr, www.organic.fr, www.cancava.fr and www.cnavpl.fr, www.ffsa.fr.
- La protection sociale dans l'entreprise. Argus de l'Assurance, 2006.
- Guide de l'Assurance de Groupe. BCAC, 2002.
- La prévoyance en entreprise. Cahier Pratique de l'Argus de l'Assurance, 2001.
- GLM. McCullagh & Nelder, 2nd Edition, 1989.
- GLM and extension. Hardin and Hilbe, 2001.
- Survival analysis: Techniques for censored and truncated data. Klein and Moeschberger, 2003.

Richard Lambert *is Account Manager for Gen Re LifeHealth, Germany. He is market representative for Belgium and Luxembourg and responsible for product development, monitoring and referral in France.*

Recent Developments in the German Disability Market

Thomas Gehling, Dipl.-Math, Actuary (DAV)
Marcus Leven, Dipl.-Math, Actuary (DAV)
Gen Re LifeHealth, Germany

The German product landscape for disability risks is characterized by comprehensive protection together with long-term premium guarantees.

Products

Table 1 shows the main form of disability cover sold in the German market. It offers protection for the most recent occupation exercised by the insured (own occupation cover).

Table 1. Common definition of own occupation disability used in Germany

(1) An insured person is deemed disabled if, due to a medically documented illness, injury or loss of strength, he has lost at least 50% of the ability to exercise his occupation for a projected period of at least six months and does not exercise any other occupation commensurate with his previous social position.

(2) If, due to a medically documented illness, injury or loss of strength, the insured person has lost at least 50% of the ability to exercise his occupation for a continuous period of six months and does not exercise any other occupation commensurate with his previous social position, the continuation of this condition is deemed a disability.

(3) If the insured person stops working and subsequently applies for disability benefits, the application of paragraphs 1 and 2 is subject to the provision that the insured person is unable to exercise an occupation which is commensurate with his training and experience and is congruous with his present social position.

The more general version, under which the insured is qualified as disabled if he is unable to do any work which is commensurate with his training and experience given his previously established position (own or similar occupation cover), is being offered less frequently. However, this version continues to be a factor if the insured leaves the workforce: the insurance protection remains in place but the more general claims trigger applies. The actual benefit level is based on the insured annuity regardless of the policyholder's specific income situation immediately prior to the onset of disability. A change of occupations need not be reported to the insurer.

Here is an example of the extent to which the terms of insurance can be advantageous to the customer. There are products that pay benefits even if the insured, though unable to exercise his most recent occupation, takes a similar job. This circumstance enables the policyholder to draw a double income.

Product terms such as these reflect the latest culmination of competition for the most consumer-friendly terms and conditions. This competition has been fueled by analysis firms that focus on the rating of insurance terms and that develop software for the performance of detailed market comparisons. Their ratings have significantly increased market transparency for agents and consumers. The pressure on insurance companies to include policy terms with the highest ratings in their range of products is rising accordingly.

To be sure, not all customers benefit from this development. The increased premium differentiation, which at almost all companies has led to a greater range of premiums among the various occupational groups, has made insurance protection more expensive for customers whose occupations carry a high risk of disability. This has created the unsatisfactory situation in which people who have the greatest need for disability protection cannot afford adequate coverage. Moreover, this development is occurring at a time when social

security systems are being scaled back in Germany as elsewhere. Accordingly, there have been increasing calls for lower-priced covers that provide a benefit "below" the normal level of disability insurance.

Solving this problem requires creative solutions, evident in a variety of new approaches.

Extended disability covers

Both any occupation and own occupation insurance have been available in the German market for some time. Instead of being insured for a particular occupation, policyholders can be required to accept any type of employment offered on the general labour market. Although these products feature a definition of disability that is very similar to the one used in social security programmes, they have not sold particularly well.

Newer versions on the German market employ a graded combination of the two definitions. Under these terms, for example, a more liberal definition of disability applies during the first three years (own occupation disability) than for the subsequent period (any occupation disability). Claims are reviewed after three years and benefits are discontinued in less severe cases. Under this model, permanent benefits are paid only to claimants who are unable for health reasons to accept any type of employment. In addition, the limited benefits in less severe cases can facilitate retraining, which can be further encouraged by offering assistance benefits.

Another version provides only a 50% annuity after three years in less severe cases of disability. Such products, which are already common in other countries, are gradually emerging in the German market.

Essential ability cover

Since own occupation and any occupation covers do not meet the needs of all policyholders, some companies are offering essential ability covers of a type long known in Anglo-Saxon countries. Essential ability insurance provides coverage for the loss of specified abilities that are normally divided into two categories. Benefits consist of an annuity payment. Category A encompasses basic abilities and the loss of one of these abilities triggers a claim. Category B abilities are more complex and the loss of any one of them is not that severe in itself. Accordingly, the policyholder is only eligible for an annuity if three of these abilities are lost. A precondition for payment of an annuity benefit is the prognosis of permanent loss of the abilities.

The cause of the loss is irrelevant. Hence, both illnesses and accidents are covered. Table 2 shows a possible breakdown of the two categories of essential abilities that was devised by Gen Re and differs slightly from the usual products. The inclusion of dementia as a benefit trigger is worthy of mention.

Table 2. Essential ability cover

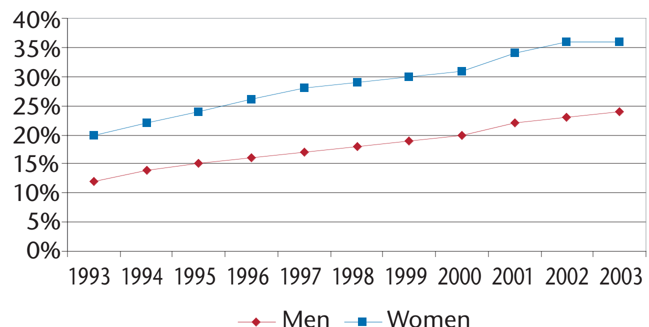
Complete disability (Category A)	Severe impairments (Category B)
Loss of sight	Impaired ability to walk
Loss of hearing	Impaired ability to climb stairs
Loss of the power of speech	Impaired arm movement
Loss of the ability to eat	Impaired ability to lift and carry
Loss of orientation, the ability to establish social contact, and the ability to engage in social communication (dementia)	
Loss of the ability to live independently (need for long term care)	
Complete loss of leg function	

Essential ability covers are particularly suited for people who, because of their specific situation, would have access to no or only very limited disability coverage at high prices. The target group also includes the self-employed who may desire reasonably priced covers offering adequate annuity payments in the event of a claim.

Approaches to mental illness

Insurers face special challenges when settling claims involving mental illness. The perception is growing in the German market that mental illness cases represent an increasing share of all claims. Data published by the German office of statutory pension insurance are often cited in support of this theory (Figure 1).

Figure 1. Percentage of mental illness cases among all new disability claims



Source: Statistics published by the German office of statutory pension insurance (Deutsche Rentenversicherung)

On closer analysis, however, it can be seen that, given a nearly identical number of insured workers, the number of new disability pensions granted due to mental illness has remained virtually constant in *absolute* terms, while new cases of disability have declined by around 35% overall.

Consequently, the percentage—and thus the importance—of mental illness cases among all new disability cases in statutory pension insurance has risen, although this does not represent a significant increase in the risk of any occupation disability due to mental illness.

More relevant to product design is the difficult question of insureds' motives for applying for benefits due to mental illness. Product support measures intended to reasonably limit the moral hazard are of particular importance in this regard.

However, the own occupation and any occupation disability products currently offered give insurers relatively little room to maneuver. Benefit limitation in order to establish a reasonable relationship between the insured annuity and the policyholder's current occupational income can only be achieved at the beginning of the policy period or in the context of benefit increase options during the term of insurance. Additional steps, such as implementing benefit reductions in the event of excess coverage, are not planned at present.

The exclusion of mental illness under disability covers is not recommended due to the complicated interrelationship between mental and physical illnesses and the associated problem of distinguishing between the two. Current versions of products containing such exclusions have received a rather cautious reception in the market.

Legal Framework

A revision of the nearly 100-year-old German Insurance Contract Act will become effective 1 January 2008. A commission comprising representatives of various interest groups was created in 2000 and submitted a proposal in 2004. A modified version of this proposal is currently working its way through parliament.

In addition to extensive revisions of regulations for life insurance in general, the draft contains several provisions that will affect disability insurance in particular. These include changes in the regulations governing non-disclosure issues and the evaluation of risk-relevant factors, as well as the first-time addition of legal guidelines for own occupation disability insurance.

The planned changes offer insurers an opportunity to revise their underwriting principles and implement a closer claims monitoring system to enable the early identification of any increases in claims. Moreover, the extent to which the new provisions will require adjustment of product design should be examined.

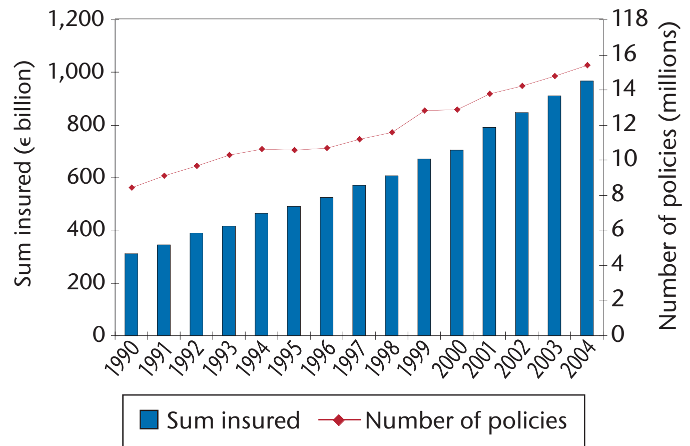
Future Product Versions

Historically, own occupation disability insurance has been structured along the lines of the social security system in Germany. This definition of coverage has often proven to be complex and insufficiently transparent in practice. Moreover, accompanying measures are not commonly used to limit the moral hazard. Benefits intended to provide rehabilitation assistance in the form of reintegration support are not yet finding widespread use.

As a result, some insurers are considering modifying the current coverage definition with a simpler one without abandoning the goal of providing protection for medical disability. The expansion of assistance benefits would help both the insurer and the insured deal with own occupation disability in a positive fashion. A system of incentives, such as the ability to credit new occupational income and a careful financial assessment both during underwriting and in the event of a claim, could round off this type of approach.

Own occupation disability insurance has seen strong growth in Germany in recent years (Figure 2). The elimination in 2001 of statutory disability insurance for the younger generation has created a further opportunity to increase new business. Differentiated product approaches enable insurance companies to offer solutions that are tailored to the needs of their customers and are adapted to new market conditions.

Figure 2. Development of the German disability portfolio



Source: Statistics published by the Association of German Insurers (GDV)

Thomas Gehling *is a member of the Product Underwriting & Consulting team at Gen Re LifeHealth, Germany. His focus is on German disability products and mortality products worldwide.*

Marcus Leven *is a member of the Product Underwriting & Consulting team at Gen Re LifeHealth, Germany. He is responsible for disability and unemployment products in Germany.*

New Product Designs in the UK Disability Market

Johann DuToit, M.Sc, FIA
Lynn Baillie
Gen Re LifeHealth, UK

Being unable to work is a major risk for anyone with a family to support or a mortgage to pay off. In a self-reported survey in 2000, 11% of people under age 45 and 27% of those over age 45 felt that they had a long-standing illness that limited their daily activities.[1]

Despite the undisputed need for some form of disability protection, sales of Income Protection (IP) products in the UK have been declining. In 2000, 185,000 new IP sales were made, while in 2005 the number had fallen to 130,000. Compared to other protection products, IP is also losing ground. In 2005, it was outsold by life assurance by 11 to 1, and by critical illness by 5 to 1.[2]

Features of the Current IP Product

The current IP product typically indemnifies the policyholder for loss of income up to 55% to 60% of gross earnings for the first £50,000 and a lower proportion thereafter. Since 1996, IP benefits in the UK have been exempt from tax; hence, claimants receive approximately 80% to 90% of pre-disability earnings net of tax.

An unpopular feature of IP that has recently attracted attention from the UK insurance regulator is the reduction of benefits at the point of claim. Insurers argue that the claimant needs an incentive to return to work and cannot, therefore, be better off (after tax) when in receipt of benefits. Thus, providers reserve the right to offset continuing income from employers and income from other disability products, but this is inconsistent with pricing that is based on the fully insured benefit. Similarly, where a policyholder's salary reduces, the insured benefit is automatically lower. However, the premium remains unaffected unless the policyholder lapses and re-enters.

Office premium rates are usually guaranteed for the term of the contract (usually up to retirement age). The product is fully underwritten on three fronts: financial, occupational, and medical (typically at stricter levels than for life cover).

Occupations are grouped into five reasonably homogeneous classes. Each occupation is also mapped to an appropriate definition of disability. Table 1 gives a description of the occupations grouped in each class and typical definitions of disability.

Table 1. Occupation classes in the UK*

Occupation class	1	2	3	4	5
Description	Professional, managerial or clerical	Skilled occupations, minimal manual	Skilled occupations, mostly manual	Semi-skilled, mostly manual	Housepersons
Definition of disability	Own occupation†	Own or Suited occupation‡	Own or Suited occupation	Suited occupation/ Activities of Daily Work§	Activities of Daily Work

* In the eyes of the UK regulator, the "Any occupation" definition is interpreted as "Any suited (similar) occupation."

† Own Occupation definition of disability: "The life insured must be totally unable, due to illness or accident, to carry out the material and substantial duties of his usual occupation and is not following any other occupation for profit or reward."

‡ Suited (similar) Occupation definition of disability: "The life insured must be totally unable, due to illness or accident, to follow any occupation for which he may be reasonably suited by training, education or experience and is not following any other occupation for profit or reward."

§ Activities of Daily Work (ADW) definition of disability: "The life insured must normally and routinely be unable, because of illness or accidental injury, to perform two of the following five tests without the help of another person, but with the use of appropriate assistive or corrective aids or appliances: walking, bending, communicating, reading, writing."

So why are IP sales so low? A few reasons are:

- A lump sum benefit (e.g., on life cover) is perceived as a "jackpot" and is preferred to an annuity benefit.
- The public is not aware of the prevalence of long-term disability. Employees are ten times more likely to be off work for a prolonged period due to illness than to contract a critical illness.
- Employees believe their company disability benefits are more generous than they actually are. There is also a perception that the government will provide long-term disability care.
- Customers and sales intermediaries do not like the fact that benefits can be reduced by the provider at the claim stage.
- Applicants often give glamorous occupation titles that place them into a better occupation class than is appropriate. When underwriting changes the occupation class and hence increases the premium, the sale is usually lost.
- Sales intermediaries are reluctant to recommend a product that requires a lot of work for less commission compared to other life insurance products.

The product in its current form clearly has a few undesirable features and needs to be redesigned. To date, the industry has not been able to come up with a joint solution. Product innovation will have to come from individual providers and reinsurers.

Product Ideas

As a major IP provider in the UK, Gen Re has developed blueprints for three new product ideas to offer our clients.

Product Idea 1: Industry grouped occupation classes

Occupation is a good rating factor from a risk measure point of view, but it has proved to be a poor rating factor from a recording/grouping perspective. A rating factor that would be easier to record is "occupation industry."

At the underwriting stage there may be questions about whether an applicant is indeed a "foreman," a "labourer" or an "engineer," but it should be clear whether or not he works in the "construction industry." The underwriting process is therefore simplified, while the risk of giving an applicant a generous occupation class based on a glamorous office title is reduced.

This product also draws on the principles of motor insurance. Having realised that six insurance groups were inadequate to group motor risks homogeneously, motor insurers moved to using 19 groups to segment their market. Correspondingly, five occupation classes are not enough to risk-segment the wide spectrum of occupations. Moving to more occupation classes would allow more appropriate definitions of disability to be developed for each class, and better risk segmentation should be reflected in a more competitive price.

Table 2 shows how the "occupation industry" question could be asked on an application form.

Table 2. Sample application question to determine occupation industry

Tick	Please indicate in which industry you work in:	Definition of disability
❑	Finance and corporate professional (e.g., lawyer, accountant)	A
❑	Clerical, administrative and secretarial	D
❑	Education (including universities)	D
❑	Health service—specialist qualifications (doctors, dentists, consultants)	D
❑	Health service—other qualifications (nurses, therapists, other)	D
❑	HGV and professional drivers	C
❑	Construction industry (including plumbers, electricians)	C
❑	Manufacturing industry	C
❑	Armed Forces	Decline

Possible definitions of disability for each "occupation industry" would be as described in Table 3.

Variants E and F are designed to encourage rehabilitation and return to work.

Table 3. Possible definitions of disability for each "occupation industry"

Category	Definition of disability
A	Own occupation
B	Suited occupation
C	Activities of Daily Work (ADW)
D	Own occupation for 24 months and ADW thereafter
E	Own occupation, 100% of benefit for first 12 months and 50% thereafter
F	Own occupation, 100% of benefit for first 12 months and 50% thereafter; 100% of benefit is paid if ADW are failed at any time

Product Idea 2—Occupation classes based on "work tasks"

This product draws on ideas from other international disability products. The risk is assessed based on the main tasks that an applicant performs at work. Table 4 shows potential questions that could be asked on an application form.

Table 4. Potential questions that could be asked on an application form

Task	Tick the box that represents the percentage of work time spent on each task				
	0%	25%	50%	75%	100%
Computer/desk based					
Driving					
Building/construction					
Standing					
Use heavy machinery					
Lift/carry objects over 10 kg					

The tasks are mapped into occupation classes. At the claim stage, the ability to work is assessed against the tasks. A claim is accepted if the claimant is unable to do, say three hours of work per day.

The main benefit of this product is that the rating factors (i.e., tasks performed) are also risk factors. In contrast, occupation is only a proxy for the risk factors. Another advantage is that the product has a built-in severity measure in the form of the ability to work for more than three hours per day. However, judging the amount of time per day that a claimant can work is subjective.

Product Idea 3: A single occupation class product

In the UK there is a popular disability product sold alongside mortgages that requires no underwriting. It is reviewable at any time and provides benefits up to a maximum of two years. The downside is it leaves applicants without any cover when they need it the most, i.e., long-term disability. The product has been outselling IP, but has lately come under regulatory scrutiny.

The product has a pre-existing exclusion clause, with immediate acceptance guaranteed at application stage. Pre-existing medical conditions and related impairments are excluded during the first two years of cover. Thereafter, a disability is covered providing the insured has not suffered from, received treatment, or seen a doctor or consultant about the pre-existing condition and any related impairment in the 24 months before the disability occurred. Definitions are as follows:

Pre-existing medical condition. Any disease, illness or injury for which you have received medication, advice or treatment, or you have experienced symptoms; whether the condition has been diagnosed or not in the five years before the start of your cover.

Related condition. Any condition, symptom, disease, illness or injury, which is medically considered to be associated with another condition, symptom, disease, illness or injury.

Since there is no underwriting for this product, it is crucial that the exclusion wordings are watertight. There is also a heavy responsibility on the claims manager to identify pre-existing conditions at the point of claim.

The nature of the product is that it will be sold mainly to riskier occupations. A risk-mitigating factor would be to sell the product alongside a mortgage application where the applicant has already been financially underwritten.

Conclusion

The success of IP in the future depends heavily on making it a simple and understandable commodity product at a reasonable price. A commodity product requires a simplified underwriting process. Where the underwriting process is simplified or even omitted, other risk controls have to be built in to keep the price competitive.

In all product designs, ways must be found to ensure that the claimant receives the full benefit that he paid for. As noted earlier, the UK insurance regulator is concerned that reduction of benefits at the time of claim is not in the best interest of customers.

At Gen Re we feel that IP has an important role to play in the protection market. The product clearly needs innovation and we would like to be part of the solution.

Endnotes

[1] General Household Survey 2000. Table 7.8 "All aged 16 and over." "<http://www.statistics.gov.uk/lib2000/resources/fileAttachments/GHS2000.pdf>.

[2] ABI 2005 New Business Volumes. <www.abi.org.uk>.

Johann DuToit *is Product Research Actuary for Gen Re LifeHealth, UK.*

Lynn Baillie *is Senior Underwriter for Gen Re LifeHealth, UK. She is responsible for underwriting services to the UK.*

Disability Insurance in the Netherlands

Sabine Fahrig
Bernhard Wolters
Gen Re LifeHealth, Germany

In the Netherlands, disability insurance for workers and employees mainly consists of a basic compulsory state cover and a supplementary voluntary corporate cover. Until recently, self-employed people also benefited from a rudimentary public program. This, however, was abolished in mid-2004. For this segment private insurers have for many years been offering individual disability covers.

During the last 15 years, the sale of individual and group disability policies has very much been driven by changes in the public disability program. It is only this year that the Dutch government implemented measures that are considered to be a major reform of the state disability regime.

In this article, we will trace the major adjustments that the Dutch disability regime has seen since it was introduced in 1967. Along the way we will encounter what we believe are typical problems in disability insurance and we will see whether the parties involved have been able to properly address these challenges. Readers familiar with the details of the Dutch disability regime will notice that some items were omitted for the sake of brevity and simplicity.

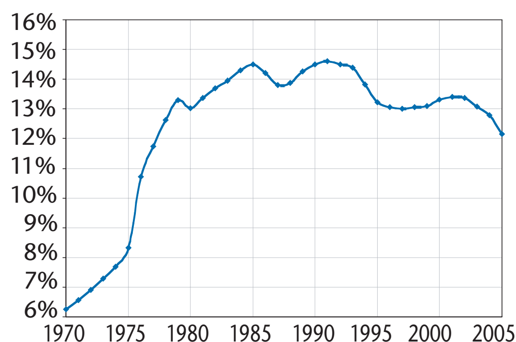
Historical Perspective

The state disability regime (WAO) was introduced in 1967. State disability cover existed before that time but its legal base was scattered across a number of separate laws, which made effective administration increasingly difficult.

Not only did the new regime streamline the existing laws, but it also introduced a level of state benefits that were considered to be quite generous when compared with the old regime. As a result, the proportion of disability pensioners among the working population increased sharply within a short period of time.

Figure 1 illustrates the steady rise of the proportion of disability pensioners from the early 1970s to the mid-1980s. Especially during the economic downturn following the oil crisis in 1973, employers and employees realized how easily they could use the state disability system as an exit route to avoid official unemployment, where benefits were less attractive.

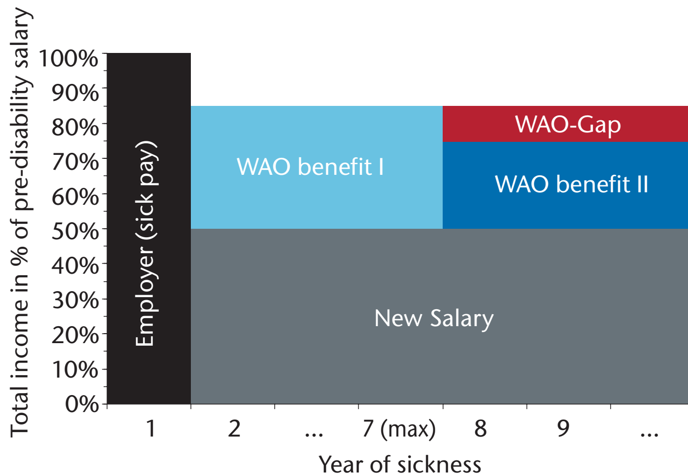
Figure 1. Total disability pensioners in the Netherlands as a percentage of the working population, 1970 to 2005



Source: CBS Statline, Centraal Bureau voor de Statistiek, Voorburg/Heerlen 2006, www.cbs.nl

When the government began to take measures in the mid-1980s to turn the tide, a record 15% of the working population received disability benefits. One of the first measures was to reduce the salary replacement ratio from 80% to 70%. As indicated in Figure 1, this led to merely a temporary decline in the proportion of disability pensioners. The screws were then further tightened in 1993 when the definition of disability was sharpened (from "own or suited" to "any") and the benefit structure changed. According to the new benefit formula, 70% of former salary was paid during an age-dependent initial period of not more than six years, after which the disability benefit dropped to a significantly lower amount, creating the so-called WAO-gap. In 1996 the employers' liability to continue paying salary during sick leave was extended from six weeks to one year. All these measures, however, were too weak to prevent the inflow of new disability claimants from rising again during the second half of the 1990s. Figure 2 illustrates the benefit structure before the latest round of reform measures was introduced.

Figure 2. Income status of a partially disabled (50%) person under the old WAO scheme, working for 100% of remaining capacity (pre-disability salary less than social security ceiling)



Source: Calculation by Gen Re

A disability annuity was payable after one year of continuous sick leave. During this first year of sickness, the employer was legally obliged to pay the salary; the employer could, however, reinsure the risk with a private insurance company. At the end of the first year of sickness, a final claims assessment took place in order to determine the degree of permanent disability. The amount of the disability annuity was scaled according to the degree of disability. The maximum disability annuity was equal to 70% of the social security ceiling (currently roughly €44,000). After an initial age-dependent period of up to six years, the disability annuity was reduced to a significantly lower amount, which resulted in the WAO-gap. If the employee was partially disabled and did not find a job for his remaining work capacity, he could for this part claim an unemployment benefit, which was, however, only payable for a limited number of years.

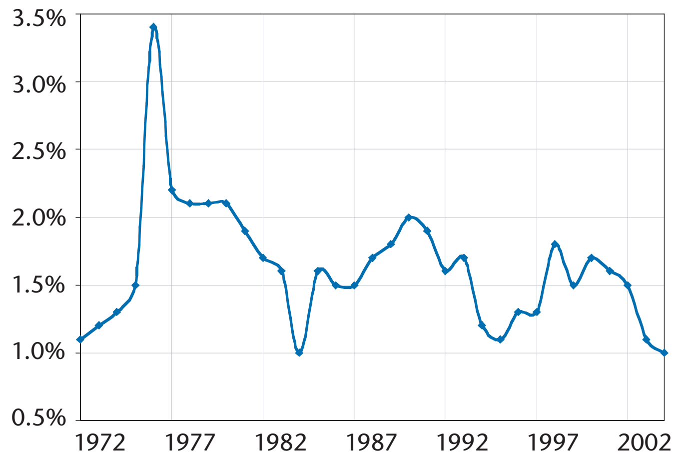
The state system provided room for three kinds of private supplementary products:

1. WAO-gap insurance;
2. WAO-surplus insurance to fill the gap between the social security ceiling and the actual salary for high income earners; and
3. a full-fledged disability insurance (AOV) product for self-employed people to fill the income gap in case of disability.

Evaluation of Reform Efforts up to the Latest Round of Reforms

Figure 3 shows that reform measures of the past failed to produce the desired long-term effects. We can see how the inflow rates follow a cyclical pattern.

Figure 3. New disability pensioners in the Netherlands as a percentage of the working population, 1972 to 2002



Source: Kroniek van de sociale verzekeringen 2005, Uitvoering Werknemersverzekeringen Amsterdam 2005, www.uwv.nl

In our view, the reason why reforms failed in the past is essentially two-fold:

Combination of attractive benefit levels and generous claims assessment procedures

When the WAO was introduced in 1967, the benefits were significantly increased. For the next 18 years until 1985, the replacement ratio stood at 80% of former salary up to the social security ceiling. The benefit level was subsequently reduced to 70%. Disability benefits are not means-tested, and they are paid until the age of 65. This makes them much more attractive than any other social security benefit, notably unemployment benefits. It was therefore no wonder that the WAO was increasingly used as an alternative source of income.

At the same time, claims assessment procedures were very "customer-friendly." This was mainly for two reasons:

- The interests of the people involved in the claims process and the budgetary interests of the government were not aligned in that for the former there were no incentives to fight dubious claims.
- The public claims management system revealed a number of severe shortcomings, most of all the lack of strict occupational underwriting. Part-timers, for instance, were frequently declared permanently and totally disabled because they had to be referred again to part-time jobs that, given their remaining work capacity, were often not available in the legally required quantity. If the claims authorities had not been bound by the part-time restriction, these claimants could have been asked to take full-time jobs, which were indeed available in sufficient numbers.

Compensation of cuts in public benefits by supplementary private benefits

More often than not, the government was faced with the dilemma that the benefit cuts it introduced to discourage abuse of the public disability program were quickly provided by new supplementary corporate benefits launched by the

private insurance industry. A very telling example is the WAO-gap, designed to make disability benefits less attractive. As a result, however, private insurers developed a supplementary benefit—WAO-gap insurance—to compensate for the shortfall in public benefits. Indeed, a vast majority of Dutch companies subsequently took out WAO-gap covers for their employees.

Current Reform Measures

As it became clear at the beginning of the new millennium that the disability regime was increasingly getting out of control, the following restrictive measures were introduced:

- stricter gate-keeping by obliging both employers and employees to follow well-defined rehabilitation procedures (2002);
- extension of the period during which employers were obliged to pay salary in case of sick leave from one year to two years (2004);
- stricter claims management procedures (2004); and
- changes in the structure of benefits, especially partial disability benefits (2006).

The current reform aims to provide strong incentives to restore as much work capacity as possible during the sickness period, use the remaining work capacity to the full extent once partial disability has been established, and make access to total disability benefits subject to stricter conditions than before.

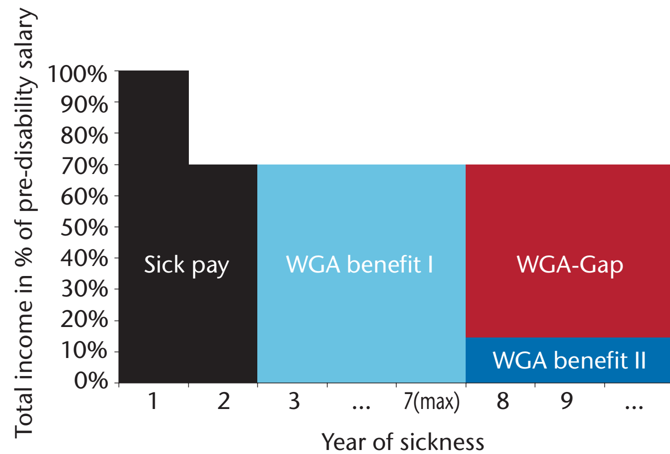
Since under the current reform total disability benefits will be limited to severe cases with only a minimum chance of recovery, the WAO-gap has been abolished. Claimants who have been declared totally and permanently disabled will in the future receive 75% of their last salary (up to the social security ceiling) until the age of 65.

For partial disability, the benefit system has been entirely changed. During an initial period of up to five years, the length of which depends on the number of past working years, the claimant will receive:

- in the case of unemployment, 70% of his last salary up to the social security ceiling;
- in the case of using the remaining work capacity, 70% of the difference between his last earnings before disability occurred and the new salary. This provides a meaningful incentive to work as much as possible because every unit of additional income resulting from more partial work would result in a 30% increase in total earnings (including benefits from the public program).

After this initial period, the size of the benefit will depend on how far the claimant is using his remaining work capacity. If he works for 50% or more of his capacity, he will receive a benefit equivalent to 70% of the difference between his last salary, and the theoretical income he could have earned using 100% of his remaining capacity. If he works for less or becomes unemployed, he will only get a rudimentary benefit, which is a fraction of the legal minimum wage. Here again we see a strong incentive to work as much as possible. Figure 4 illustrates the benefit structure in case of partial disability. One major difference from the old system is that after an initial period of up to five years, the inability / unwillingness to use the remaining work capacity to a reasonable extent will be severely punished by reducing the disability benefit to merely a negligible amount.

Figure 4. Income status of a partially disabled (50%) person under the new scheme, not working (pre-disability salary less than social security ceiling)



Source: Calculation by Gen Re

The new benefit structure is accompanied by stricter gate-keeping and claims assessment. In 2002 measures were introduced in which responsibility for effective rehabilitation efforts was transferred from state authorities to the employer and the employee. Both have to follow specific rehabilitation procedures. In case of violation, the employer can be forced to pay salary beyond the legally required period and the employee will not receive any benefits. In an attempt to shift more of the financial impact of disability to the employers, in 2004 the period during which employers had to pay salary in case of sick leave was extended from one to two years.

Claims management procedures had gradually become stricter since introduction of the WAO; in 2004 they were tightened again. From 1967 until 1993 an insured employee was considered to be totally or partially disabled if he was unable as a result of sickness or injury to earn as much income as a healthy employee with similar education and work experience. This was equivalent to an “own or suited” definition of disability. In 1993 this was changed to an “any” definition of disability, whereby claimants could be referred to a wider range of generally acceptable jobs. Until 1987, claimants who were only partially disabled but unable to find a job for their remaining work capacity received the full disability benefit. In the years thereafter, they received an unemployment benefit if they were unable to find a job. The unemployment benefit was only payable for a limited number of years. After it expired they had to rely on state subsidy, which was means-tested.

In October 2004 the following measures were introduced:

- Access to disability benefits related to psychological problems became subject to stricter conditions. For cases where the claimant was said to be disabled, second opinions became compulsory (treating physicians often decide in favor of their patients).

- Part-timers could also be referred to full-time jobs.
- The lack of basic work skills that can be acquired within a short period of time, such as language and use of computers, no longer constituted a sufficient reason for receiving disability benefits.
- To refer a claimant to other jobs, claims authorities had to find three functions, where each function represented at least three jobs. Before this change they had to come up with three functions and 30 jobs.

Evaluation of Current Reform Measures

How does the current reform fare in view of the above-mentioned shortcomings of previous efforts?

Level of state benefit

Under the old regime, a 40-year-old person with a disability of 50% and a salary of €40,000 received a partial disability benefit of €14,000 for one year and roughly €10,000 thereafter (WAO-gap). Under the new regime, someone who, under the same circumstances, is using his remaining work capacity for 100% would get €14,000 without any subsequent reduction. A person who does not work at all would get €28,000 for two years and approximately €6,000 thereafter.

This means that a partially disabled person who does not work (or want to work) would suffer a marked reduction of his disability pension income. Using a discount rate of 3% over a benefit period of 25 years, this would be equivalent to approximately a 30% decrease compared to the old regime. On the other hand, those who use their remaining working capacity would see their total public benefits rise by 30%.

Claims assessment

The new procedures are designed to reject those who are not truly "unable to work." They also leave less room for interpretation by people involved in the claims process. However, it remains to be seen whether these measures will in practice provide a suitable framework for more stringent claims decisions.

Private supplementary benefits

The reform triggered a discussion about whether private insurers should be allowed to fill gaps that the government deliberately created to contain the number of claims. This, however, has not led to any legislative action and insurers are free to provide whatever supplementary cover they judge to be appropriate. At this early stage of the new public disability program, it is not clear what the landscape of supplementary private products will eventually look like. In particular, it remains to be seen whether the majority of insurers will be prepared to insure the unemployment risk inherent in the partial disability benefit. Gen Re, in any case, has been in close contact with clients on the development and pricing of adequate supplementary products.

Conclusion

It is still too early to tell whether the latest reform component, i.e., the major restructuring of partial disability benefits, will have a lasting impact on the number of claims. What one can observe, though, is a significant and continuous decrease in the number of new disability pensioners since 2002 (see Figure 3), the year when the reform discussion gained momentum and the first measures were introduced (notably, legislation to implement stricter gate-keeping). This has led some people to question the need for this latest reform step, which involved a heavy administrative burden for public institutions and the private insurance industry. There is indeed more evidence that the first three steps of the reform package could already be sufficient to achieve the desired results. When stricter claims management was introduced in October 2004 this was not only applied to new cases but also to existing claims. Disability pensioners within certain age boundaries have been systematically subjected to medical and occupational reassessments ever since. Early results are very encouraging and suggest that stringent claims management may indeed be a key factor to keep the number of future claims at a low level.

Sabine Fahrig *is a senior product underwriter in the Corporate Underwriting Services unit for Gen Re LifeHealth, Germany. She has been responsible for disability insurance for many years.*

Bernhard Wolters *is a senior account manager in the Regional Unit Europe for Gen Re LifeHealth, Germany. He has been responsible for the Dutch market for many years and has also worked with other European countries.*

Best Practice in UK Claims Management

Tony Culhane
Gen Re LifeHealth, UK

Over the years there have been changes in the trends of causes of incapacity. Changes in the workplace, including downsizing, mergers and the introduction of new technologies, have given rise to an increased number of subjective claims, such as stress and depression. Increasingly, it is also being realized that incapacity for work is not just a matter of a health condition or impairment. Instead, interactions between the health condition, the individual's attitude, and his/her environment can all play a part (biopsychosocial factors).

With this in mind, Gen Re LifeHealth in the UK has completed an extensive project with the objective of developing a "best practice disability claims management model" to enable clients to achieve the highest standards of claims management.

Early Intervention

It is generally accepted that as people stay off work sick or injured, a "non-working" self-image and lifestyle can take over. Often this is associated with the onset of mental health and/or financial problems and becoming acclimatized to the benefit system.

It is essential that insurers have an effective claims management strategy that is very proactive in the early stages of a claim. Early intervention provides an opportunity for the assessor to manage the claimant's expectations, creating a very real expectation of a return to work, with possible rehabilitation and interventions being mentioned as soon as the insurer is notified of the claim. The sooner people are offered appropriate support and assistance, the greater their chances of avoiding a downward spiral and of retaining their existing employment or getting into other work. It is impossible to introduce rehabilitation at the end of an adversarial process. The claimant must be brought "onside" from the beginning.

Vocational Rehabilitation (VR)

The Department of Work and Pensions (DWP) recently published its new "Framework for Vocational Rehabilitation." This is an area in which an increasing number of UK insurers are becoming interested. By making an investment in an individual and offering timely support in returning to work, claim durations can be shortened and reserves saved.

Unfortunately, the National Health Service (NHS) focuses on fitness to live rather than fitness to work. This form of medical rehabilitation is not sufficient to ensure that claimants are properly equipped to return to work. If the medical situation is not treated simultaneously with the vocational, claimants can go "off the boil." During the illness or the injury, their minds are not on work, but it is essential to keep them thinking about it, engaged in it and involved in it, so that when they are physically able to pick it up, they do.

VR can be defined as "The process whereby those with a health related condition can be enabled to access, maintain or return to employment or other useful occupation." It is essentially a biopsychosocial process; the condition, work and family are probably all relevant to the disability and may also act as obstacles to recovery and barriers to return to work. VR is a holistic process, identifying and removing these barriers. The interventions are wide ranging, varying from providing support with medical treatment to paying a childminder, modifications to the workplace (e.g., new chair), or assisting with taxi fares.

Currently, there is no coordinated structure for VR in the UK. This is a key area for insurers to get involved in so as to bridge the gap. Insurers can use their staff or contracted experts to assist with case management. In particular the services of occupational therapists or psychiatric nurses can be utilized through the development of a back-to-work plan. Alternatively, insurers may provide the services of a vocational expert to carry out an assessment to help identify a new career and provide additional support.

It must be stressed that claimants who participate in this process must be carefully screened.

VR should be considered only when the client has expressed a motivation to return to work. Realistic goals should be set along with time limitations. Without limitations, the potential for abuse rises dramatically. The general practitioner (GP) and any other relevant parties should be closely involved in any rehabilitation process.

Claims Management Approach

Initial screening

Claimants usually telephone to request a claim form. This is an ideal opportunity for the claims department to begin the assessment, manage the claimant's expectations and build a rapport. It is essential that claims notifications go to an experienced claims assessor and not a call centre.

The main focus of screening is to determine whether there is a potential claim. If so, an immediate strategy for early intervention should be put in place by determining how the claim form will be completed.

Claim form visiting

Following the initial screening, the claims assessment process should be built around a proportionality of response based on risk. Insurers should have a strategic plan for early intervention, starting with the completion of the claim form. It is essential that clearly documented guidelines are in place, determining the manner in which the claim form will be handled, either by phone, by post, claims inspector or nurse visit.

The guidelines should be based around the nature of the incapacity, deferred period, period off work and potential liability. Insurers may, for example, choose to focus on all subjective psychiatric and musculoskeletal claims with a nurse visit, which can significantly help in managing a claimant's expectations. The visiting nurse has the opportunity to assess the biopsychosocial barriers that may prevent a return to work. In particular, the nurse can review whether the present treatment that a claimant is receiving for the incapacity is adequate and explore intervention opportunities for vocational rehabilitation. If a nurse visit is arranged, a back-to-work plan should be developed when appropriate and provided in addition to the claim form and visit report.

Alternatively, insurers may choose to have a claims inspector make the initial visit. This can have similar benefits to a nurse visit in that the inspector has the opportunity to observe the claimant's environment and body language, and to a degree look for rehabilitation opportunities. Inspectors are particularly strong at dealing with the complex financial aspects of claims, especially with the self-employed. A further benefit of visiting is that it can really speed up the initial assessment process, preventing long delays that could occur while waiting for medical consent forms or financial evidence.

Case management

There are different types or levels of case management, including face-to-face or telephone contact by a specialist nurse or claims assessor. Case managers have a key role in identifying appropriate and effective help, liaising with various providers and facilitating interventions from relevant parties.

Once a back-to-work plan is established or interventions to facilitate vocational rehabilitation are identified, a case manager should be used to move the claim forward. Preferably this should be the same nurse or assessor who established the particular rehabilitation strategy in order to ensure continuity and maintain the claimant's trust.

Too often, insurers wait for the treating doctor to release the patient to return to work and this never materializes. Case managers should proactively be used to promote positive outcomes. If an external nurse has visited a claimant and drawn up a plan of action, it is vital that there be a dialogue between the assessor and the nurse regarding the degree of case management required and by whom. For example, for some claimants it will be necessary to provide a lot of "hand holding" and they may need additional visits and telephone calls. For others, a few supportive telephone calls may be all that is required. Needless to say, the more an external resource is used the greater the cost. It is important that an external case manager and the claims assessor agree upon a definitive hand-over point back to the insurer.

Strategic planning

Traditionally, claims professionals have implemented their skills and techniques in a haphazard fashion. Augmenting this process by introducing a Claim Management Plan (CMP) helps assessors in validating their assessments and also assists in setting a pre-determined outcome. This concept has been adopted from our Australian colleagues who have had great success with CMPs.

CMPs ensure that the action being taken is not performed simply as a reflex, but that it has a purpose that is part of a broader strategy. Implementing a CMP involves a reasoning process that includes:

- estimating the duration of the claim;
- identifying objectives and interventions;
- defining goals;
- developing and implementing actionable items;
- creating time frames; and
- evaluating and revising the plan.

The core goal is to facilitate recovery of the claimant to occupational functioning.

All claims should have a documented CMP drawn up at the initial assessment stage and then finalised at admittance stage. The CMP should be used to drive the strategic management of the claim forward; it sets a framework for how the claim should be assessed and acts a roadmap. A clearly defined CMP promotes outcome-based thinking, planning and accountability. It serves as both a compass

and a timetable, and delivers effective, focused and consistent claim management.

Having a documented CMP prevents assessors from developing a new strategy every time a claim is handled. The CMP should outline the review plan, including expected intervention tools to be used, and it should be reviewed and updated each time there is a change to the claim.

However, a CMP should not replace traditional claim summary sheets; instead a CMP should be used to supplement the claim summary. In most cases a referral to a relevant specialist chief medical officer (CMO) should be encouraged at the start of the claim when determining the CMP, particularly for guidance in estimating the duration of the claim.

Case ownership

Ideally assessors should take sole control and responsibility for each claim they assess. This involves an individual assessor personally managing a claim and handling all external communication throughout its duration, where possible. This provides more effective claims management and consistency of message. The assessor can develop a claims strategy and ensure that it is consistently followed, thereby developing a rapport and a partnership with the claimant aimed at ensuring a return to work. This approach gives insurers the opportunity to provide a seamless service to their customers at claim stage.

Case ownership can also be extremely time saving, particularly for complex claims, as different assessors do not have to waste their time acquainting themselves with a file. Whilst case ownership has many benefits, it is important to ensure that assessors regularly discuss and review cases with their CMOs or colleagues. This ensures that a claim is going in the right direction, that nothing has been missed and that all avenues have been explored.

Proactive and effective use of the telephone

Although we all use the telephone on a daily basis, this is the most valuable and effective claims tool that is often overlooked by assessors. Proactive and skilled use of the telephone can provide the vehicle for effective case management and ownership. Most significantly, it enables the assessor to develop a successful and co-operative partnership with the claimant.

The use of the telephone should not be limited to the initial stages of the claim. Telephone contact is helpful at any stage of the claim and should be utilized whenever appropriate. It is much faster than a letter and a single phone call can eliminate the need for numerous written communications. In particular, rather than assessors simply going through the traditional "paper review" process of issuing forms to claimants and doctors, a telephone call can often be far more effective and efficient.

A direct conversation, as opposed to waiting for another written report, is money well spent. This also provides an opportunity for the assessor to get the GP or treating specialist "onside" and encourages them to play an important role in the claimant's potential return to work.

Tony Culhane *is Disability Claims Consultant for Gen Re LifeHealth, UK. He provides support for the delivery of claims services and the management of individual claims across all product types.*

Claims Management Techniques Revisited

Jutta Eich, Solicitor
Gen Re LifeHealth, Germany

The increasing importance of disability insurance or related benefits worldwide is obvious. In many countries, social security systems are either non-existent or cutting back on benefits. Insurers are keen to enlarge their share of the disability market and to make their products more attractive to the public. At the same time they worry about how to keep claims ratios within the expected range. Information is key for solid claims assessment. Non-disclosure issues seem more and more relevant. Insurers are also devoting more resources to prevention and rehabilitation to limit the duration of claims. This results in different approaches to claims management, especially in European markets.

Products with Assistance

In the non-life and health business, assistance is a well-known feature. Remember your own travel insurance when going abroad? In the event of trouble, the insurer promises to get you back, even from the Himalayas, and will provide any services needed if you are ill and away from home.

For disability insurance, enhanced service adds a new flavour to a very traditional product. Now it's not all about getting the premium and declining the claim, as customers view it. It is the transformation of an insurer from an anonymous company into a caring advisor in difficult times.

Typically, such a product would include:

- 24-hour Hotline–Medical, paramedical and occupational specialists give advice to claimants on medical and occupational issues, psychologists provide advice for mental health problems, and even long-term care facilities can be recommended, if needed.
- Pre-claim Visit Service–A rehabilitation specialist or occupational physician would visit the claimant, help complete the claim form, collect the necessary information (including medical and financial documents), and provide the company with useful information regarding the environment, family situation and prognosis.
- Reintegration service to help the claimant return to the workplace or a similar occupation.
- Special services for self-employed claimants, such as help with reorganizing workflow so the company can adapt to the new health situation.

These features would usually be included in the policy wording itself or offered as an addendum to the disability contract. Hotline and pre-claims visits are offered to all policyholders, while special services are delivered at the discretion of the insurer.

Expectations are high. Insurers hope that claims ratios can be reduced by working more closely with claimants, getting more information on "soft factors" that affect claim duration, and helping more claimants return to work in a reasonable period of time.

Products with assistance are not that common today and have only just started in some European markets. Germany has taken the lead. Gen Re LifeHealth has designed and priced these products carefully and is the market leader for this development. The increase in premiums for these disability products is surprisingly modest. It is our strong belief that such products will be standard in the near future.

Case Management—Practice and Experience

Case management for disability claims has a longer history than products with assistance, but is also still in its infancy. Various initiatives exist in Europe, especially in Austria, the UK, Germany and Switzerland. This is also all about getting closer to the claimant, obtaining better information, reducing the claim duration, and encouraging earlier return to work.

Most common

Visiting the claimant is by far the most common feature used for case management today. Insurers like the quality of information they get compared to what is obtained from traditional claims questionnaires. Companies that lack resources or are reluctant to use an external service often turn to tele-assessment. Overall, the personal contact is believed to be much more efficient in the claims decision process than a mere paper file.

Visits are also used for negotiation in situations where the claims decision is difficult, a lawsuit is looming on the horizon, or the outcome of the claim is questionable. In most cases discussions are "supported" by a check, and cash is often a very welcome solution for difficult claims.

Surveillance services are sometimes used in claims management, especially in markets where working while disabled is not allowed. It should be used only if there are indications of fraudulent behaviour. It is important to note that the insurer might not succeed in court even with the most convincing video evidence.

Onsite visits to analyze the workplace, especially for self-employed claimants, is another popular approach. These visits are usually made by occupational experts or occupational physicians to get a full medical and occupational understanding of all aspects of the case. This comprehensive report helps to find a solution that is valuable to both the claimant and the insurer.

Less common

Unfortunately, medical therapy cannot be recommended as frequently as it is needed. Claimants normally are not obliged to follow any medical advice given by the insurer, so it is difficult to advise them regarding different types of therapy, irrespective how successful it might be. In most cases recommendations are restricted to physiotherapy, with limited success overall. We have, however, been quite successful in referring claimants to special programs for chronic back pain or other back-related impairments.

Active support to find a new workplace or get reintegrated into the old job is a very new facet of case management today. One reason is because there are a limited number of jobs open to impaired people, especially in the today's economic environment. The main reason is that disability claimants had their therapies, rehabilitation, and workplace modification long before they finally accepted that they were disabled. Early intervention is key to successfully reintegrate claimants into the workplace. With the support of service hotlines (as described above) offered to policyholders and claimants, we believe that insurers may identify disability claims much earlier than before.

Results

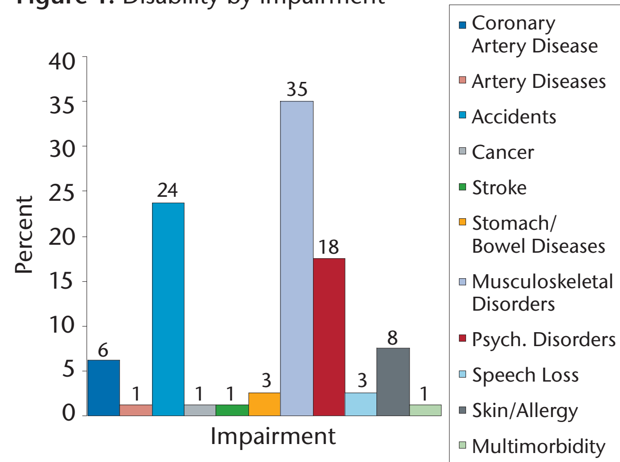
Gen Re has managed more than 500 disability claims in Germany alone. While the number of cases is still limited, we have gained a better understanding of what works and what doesn't.

What are the main success factors? We studied 80 randomly-selected claims that were referred to us in 2001 and 2002.

Disability by impairment

About 75% of the referred cases were related to musculoskeletal impairments (35%), accidents (24%) and psychological problems (18%). This is a typical disability claims portfolio as these are the main reasons for claiming benefits in Germany. The sickness period varied mostly between six and 12 months (28%) and to up to 36 months (23%). Only 20% of referrals were "fresh" cases; all other claimants already received benefits and were in the review mode.

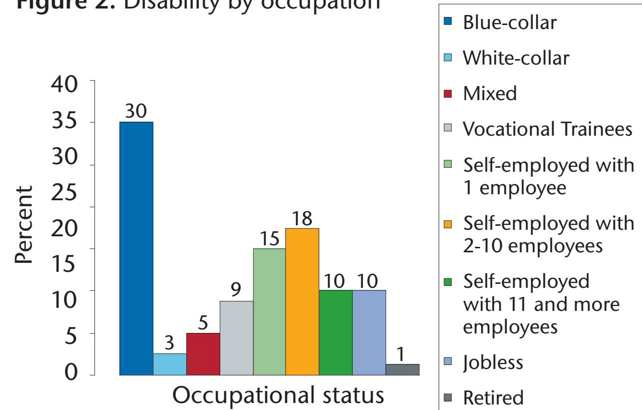
Figure 1. Disability by impairment



Disability by occupation

Thirty percent of the claimants were blue collar employees, 43% were self-employed, and 10% were unemployed.

Figure 2. Disability by occupation



Outcome of the rehabilitation process

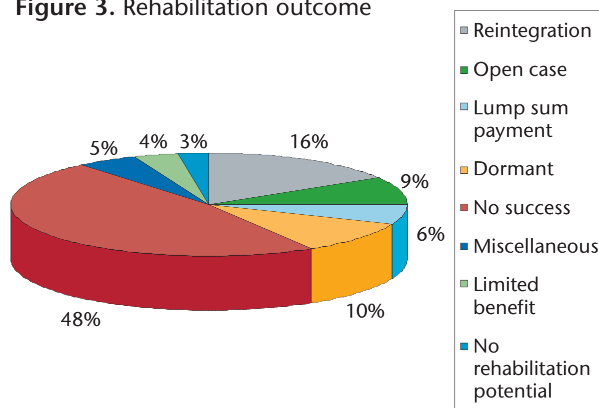
We defined the outcome as positive if the claim was terminated for any of the following reasons:

- returned to previous job;
- vocational training and accepted a different job;
- accepted a lump sum benefit and policy was terminated;
- accepted a benefit for a limited period of time; or
- accepted the insurer's decision to decline the claim.

Twenty-six percent of cases had a positive outcome as defined previously. This may appear to be a small percentage but we believe this result is rather promising because these were mainly active claims, some of which were of fairly long durations. Another 9% of the cases were still open due to the fact that claimants were receiving further therapy or retraining, and some of these could still have a favorable outcome. And even the 10% of cases that were "dormant" (no significant progress toward recovery) still have a chance to return to the workforce again.

Fifty-six percent of cases could not be followed-up further because there was no rehabilitation potential or claimants were not motivated enough. This is not a surprise—and confirmed earlier results we analysed back in 2000—as there was no obligation to participate in any kind of rehabilitation activity. However, this is valuable information for insurers since it may put them into a better position to negotiate claims.

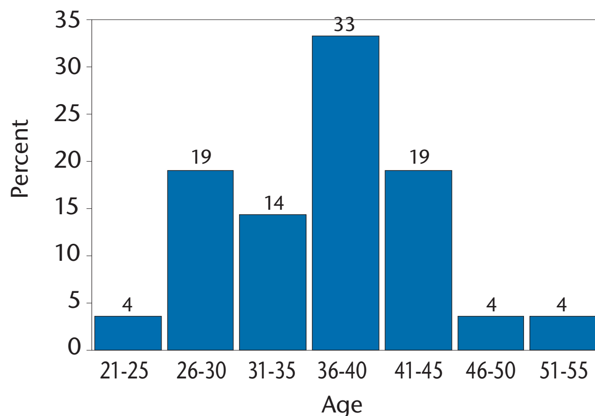
Figure 3. Rehabilitation outcome



Outcome by age

Rehabilitation is not as successful at older ages, but chances are still good that claims in middle-aged people can be settled.

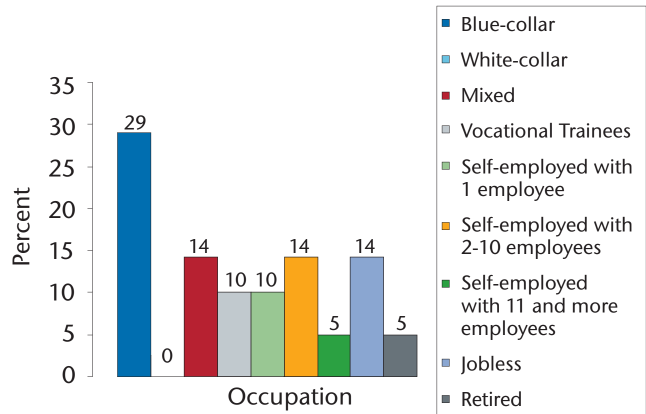
Figure 4. Rehabilitation outcome by age



Outcome by occupation

Interestingly enough, blue-collar workers were more likely than others to have a positive claim outcome. Rehabilitation was also successful with the self-employed; this group is usually keen to regain independence, especially if there are enough staff to reorganize the company to continue to work.

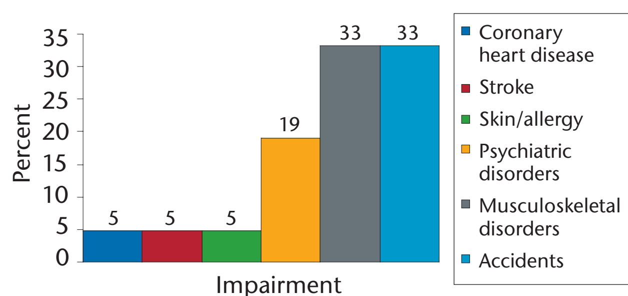
Figure 5. Rehabilitation outcome by occupation



Outcome by impairment

People who are disabled in an accident normally want to get back to work as soon as possible, and case management is usually very successful in this group. However, musculoskeletal impairments, which tend to become chronic, have a lot of potential for active support. We were happy to find that even very complicated claims due to psychological disorders had a greater recovery rate than we would have found in the past.

Figure 6. Rehabilitation outcome by impairment



Outcome by benefit

Our study found that a positive claim outcome was less likely if a large benefit amount had already been paid. However, additional analysis is needed because these numbers contain both high monthly benefits and long claims durations. Since active case management works best with either short (up to six months) or long (36 months and more) claim durations, there may be an opportunity to review large claims to see if the chances for case management have improved. Obviously, longer periods of disability may force claimants to reevaluate their situation and make them more open to external advice.

Motivation

Motivation is key, both for the claimant (to become more active) and the case manager (to encourage the claimant to continue to improve). Difficult claims require time and persistent effort to avoid losing patience half-way through the process. It is, therefore, essential to fully understand how case management works, what to expect, and when results may be seen. In some cases, up to two years may be needed to successfully close a claim.

Costs

Case management of an average claim costs €1,500–2,500. This would include a visit, a report, recommendations, and coaching the claimant to return to work. Full occupational reintegration or even a comprehensive rehabilitation plan may involve higher costs, but would rarely exceed €6,000–8,000. In view of the potential savings—the present value of the average claim could total €150,000 or more—this investment seems to be more than reasonable.

Fraud Prevention

Insurers are increasingly concerned about the rising risk of earlier claims due to non-disclosure. The non-disclosure ratio in newly taken-up disability policies in Germany is a shockingly high 30% to 50% of policies. Insurers report that in many cases a loading or exclusion would have been applied, and a staggering 15% of the policies investigated would have been declined immediately. The new German Insurance Contract Act (effective 1 January 2008) doesn't make things easier because it will allow benefit payments if the claimant was only negligent. The meaning of "negligent" worriers insurers: It is assumed that negligent will be defined by courts that in the past have been very customer-friendly.

Redesign of the application form

Many insurers are seeking ways to encourage applicants to be more honest when applying for disability insurance. The most common approach is redesign of the application form. This will include an explicit warning about the ramifications of non-disclosure, as well as a longer list of health questions in "plain" (nontechnical) German. How customers and agents will buy into this new approach remains to be seen.

Tele-underwriting and tele-assessment

More insurers are also looking into the benefits of tele-underwriting and tele-assessment. This method of data acquisition and assessment—used successfully in the U.S. for a number of years and more recently in the UK—is now being considered in the German market.

Companies feel that they may obtain better information via telephone interviews, not only at the time of application but also when the claim is made. Experience from the U.S. and the UK shows that their expectations may be met. There is still a long way to go before true tele-interviewing becomes a common feature in the German environment. Tricky obstacles, such as data protection, call centre techniques, and well-trained professionals to do the job, have to be tackled before things can get started.

Gen Re has installed working parties with its cedants to move forward into this promising approach. If successful, greater emphasis on telephone interviews will change the traditional ways of disability claims assessment and increase direct contact with claimants, leading to more open dialogue and cooperation.

Jutta Eich *is Senior Vice President, Life Health International Client Services, at Gen Re LifeHealth, Germany. She is responsible for underwriting and claims management and related services, including Gen Re's Rehabilitation Service Ltd.*

If you need advice on case management matters for disability insurance, you can make use of our global network. Please contact Drew King, JHA, Portland, Maine, for the U.S. (dking@genre.com); Jane Dorter for Australia (jdorter@genre.com); Claire Henshall for South Africa (chensha@genre.com); Jim Harris, Health Claims Bureau, for the UK; and Jutta Eich, Gen Re Rehabilitation Service, for international support (eich@genre.com).

Inside Gen Re LifeHealth

Mark Your Calendar

International Congress of Insurance Medicine

The 22nd International Congress of Insurance Medicine (ICLAM) will be held 6-9 May 2007 in Berlin, Germany. Insurance medical directors, underwriters, actuaries and product developers will enjoy a comprehensive program related to all medical issues of modern underwriting. Renowned speakers from around the world will share their thoughts with the participants. Gen Re LifeHealth is proud to be a major sponsor of this important event. Conference languages will be English and German. More information can be found at the website: www.iclam2007.de.

Client Seminars

> **Gen Re LifeHealth (China)** organized the fifth Management Course in Xi'an from 16 to 24 September 2006. Twenty-four participants from Chinese-speaking markets within the region, including China, Hong Kong, Singapore and Taiwan, attended the course. Mr. Eckart Flöther, an experienced trainer on management studies from Germany, shared with participants the essential knowledge and techniques in management through lectures and case studies. The Gen Re LifeHealth Management Course was first introduced to China in 2001 and has been well received by the participants since then. The course has expanded to include other Chinese-speaking markets since 2004.

> **Gen Re LifeHealth (Beirut)** organized a full-day event in Dubai for the Gulf insurance market. The seminar, held on 13 September 2006 under the theme "A Perspective on Risk Management, Profitability and Product Innovation," tackled important hot topics such as risk management and product innovations. Participants were from the UAE, Kuwait, Bahrain and Qatar. Mazen Abouchakra, Gen Re LifeHealth regional director, welcomed the audience and introduced the risk management processes, challenges and issues our industry is currently facing. He provided real examples of annual risk report schematizing aggregate risks facing the international unit of Gen Re LifeHealth globally. Sascha Adler, Gen Re LifeHealth account executive and coordinator, then tackled the applications of risk management on group life underwriting and pricing. He discussed the credibility theory surrounding the employee benefits insurance world. This was followed by a simulation conducted by Ralph Price, Gen Re LifeHealth regional chief actuary, who raised the question of whether we can make profit in a competing market. He highlighted components surrounding profitability in competitive markets, and later in the day provided a widely-acclaimed presentation on life and medical product designs and innovations. Guests also attended a workshop, facilitated by Ibrahim Salame, a Gen Re LifeHealth account executive, which consisted of a detailed case study on product risk management applications. The attendees enthusiastically participated and presented their findings.

Attendees at the Gen Re seminar in Dubai.

> **Gen Re LifeHealth (China)** hosted a seminar entitled "Dread disease and HIV: A South African perspective" in Hong Kong on 24 July, Shanghai on 27 July, and Beijing on 28 July. Approximately 100 people were in attendance. Louis Rossouw, actuarial risk analyst (South Africa), discussed the latest product developments in South Africa and gave some real world examples. He also provided a broad overview of HIV/AIDS and its global prevalence. The seminars were well received by attendees and shed light on current product development in South Africa, mainland China and Hong Kong.

Client Seminars *(continued)*

- **Gen Re LifeHealth (Germany)** hosted a seminar on 4 September to discuss the possible impact of the revised German Insurance Contract Act on underwriting and claims management. The revision of the nearly 100-year-old German Insurance Contract Act will be effective 1 January 2008. In addition to extensive revisions of regulations for life insurance in general, the current draft contains several provisions that will affect the legal consequences of non-disclosure and the evaluation of risk-relevant factors, as well as the first-time addition of legal guidelines for own occupation disability insurance. The seminar investigated suitable responses to the new regulatory environment.
- **Gen Re LifeHealth (Germany)** organized a panel discussion for executives of the German life industry to discuss the revised German Insurance Contract Act. The 26 September meeting was lead by a journalist who specializes in insurance matters. Participants on the panel included a leading member of the German actuarial society, the German ombudsman for life insurance, and a member of the expert committee that advised the German Department of Justice on behalf of the Insurance Contract Act.
- **Gen Re LifeHealth (Japan)** organized a client seminar in Tokyo from 21-25 August 2006 for Japanese and Korean insurance companies. Dr. Fajah Peshi, regional medical director (Singapore), discussed module A1 of COMET which includes: Pitfalls in the interpretation of diagnostic data; Understanding the resting electrocardiogram; Risk factors for coronary artery disease; and Hypertension, diabetes mellitus and the selection of life risk. The case study session was especially well received by attendees.

Dr. Peshi addresses attendees at the Tokyo seminar.

Ricardo Nava addresses attendees at the seminar in Puerto Rico.

- **Gen Re LifeHealth (Mexico)** held a client seminar in San Juan, Puerto Rico on 19 July. Twenty-one people from five companies attended the meeting. Gen Re LifeHealth speakers included Carmelo Galante, regional director, life/health Latin America (Mexico)—"Underwriting of group life coverage" and "Dread disease coverage"; Ricardo Nava, ASA, regional chief actuary, life/health Latin America (Mexico)—"Tarification of group life coverage and reinsurance" and "Introduction to reinsurance"; and José Antonio Aguilar, manager of the Mexico office, life/health Latin America—"Bancassurance." Gen Re personnel also met with clients in Puerto Rico to discuss new critical illness products and sales via a bancassurance channel.
- **Gen Re LifeHealth (Spain)** organized a panel discussion in Madrid on 4 October for doctors and medical advisers to discuss new trends in medicine and diagnostic methods that may have an impact on insurance medicine. Dr. Pedro Ortiz, from SOS Assistance España, made a presentation on telemedicine; Dr. Miguel Angel García Fernández, Head of Non-Invasive Cardiology in Hospital Gregorio Marañón, gave a speech on "Cardiac Image: New technologies and trends." Dr. Fernando Oñoro, chief medical officer (Spain), brought to discussion case studies and new issues regarding clinical medicine vs. insurance medicine and its impact on day-to-day work. The meeting was hosted by Ana Páez and Gloria Palma, life underwriters, who will distribute notes on the meeting content to all participants.
- **Gen Re LifeHealth (North America)** JHA, a subsidiary of General Re Life Corporation, hosted numerous seminars and training programs. Over 45 clients from around the country attended the Group Disability Risk Forum in Portland, Maine on August 9-11. Daren Hotham, ALHC, senior disability underwriter, Kevin Riley, senior vice president, LTD risk and account management, and Stacy Varney, vice president, marketing and business development, delivered four two-hour continuing education approved training programs to OneAmerica's key producers in Pittsburgh, Kansas City, Indianapolis, and Charlotte in August. Drew King, president, spoke at Lincoln Financial Group's Benefit Partner's Sales Academy on September 28, 2006. Marcy Updike, director, market research, discussed claim satisfaction research at the Gen Re LifeHealth (South Africa) Claim Conference in Cape Town on August 18, 2006, and later met with Gen Re clients to discuss other topics.

Inside Gen Re LifeHealth

Industry Meetings

Gen Re LifeHealth (North America)

DI & LTC Insurers' Forum (September 6-8, 2006, Orlando, Florida)

Andy Perkins

> Andy Perkins, FSA, senior vice president, individual health actuary, made a presentation entitled "Catapult or teeter-totter: Balancing sales with profitability." Barry Eagle, vice president, marketing, moderated a panel that featured Mary Ann Wilkinson, vice president, health administration, in a discussion of claim procedures entitled "Are there any silver bullets out there?"

Critical Illness Insurance Conference (September 25-27, 2006, Phoenix, Arizona)

Barry Eagle

> Barry Eagle, vice president, marketing, summarized the Survey of the Critical Illness Insurance Market in the United States. This survey, conducted by the National Association of Critical Illness Insurers and Gen Re LifeHealth, is the only in-depth study of the U.S CI market. Barry also participated in a panel discussion of risk challenges of the CI product.

Society of Actuaries (October 15-18, 2006, Chicago, Illinois)

> Edward Hui, FSA, second vice president, life actuary (North America), discussed actuarial issues concerning older age mortality.

International Claim Association (October 15-18, 2006, Seattle, Washington)

Drew King

> Drew King, president, JHA, made a presentation entitled "Disability insurance: Demographics, demand, and distribution." Patricia Bailer, director, individual disability claims and account management (JHA), discussed "Use of the Internet for claim management practices."

International DI Society (October 22-24, 2006, Las Vegas, Nevada)

> Drew King, president, JHA was the opening speaker at the 2nd annual International DI Society conference where he covered the current market opportunities and key lessons learned from past experience.

Society of Insurance Research (October 22-25, 2006, Charleston, South Carolina)

Krzysztof Grzylinski

> Marcy Updike, director, market research (JHA), moderated the sessions "Longevity is changing everything" and "Life & health: What's next?"

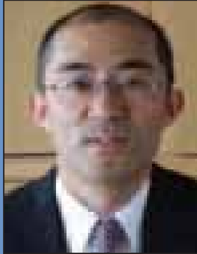
Gen Re LifeHealth (International)

Annual Polish Austrian Insurance Conference (September 26, 2006, Warsaw, Poland)

> Krzysztof Grzylinski, managing director of Gen Re in Warsaw, made a presentation entitled "Voluntary Health Insurance Market in Poland in 2006" on the conference organized by Polish Insurance Chamber (PIU) and Austrian Insurance Association (VVO).

Inside Gen Re LifeHealth

Our Professionals


Naoki Chida

- Andy Baillargeon, FSA, was promoted to vice president, chief group disability actuary (JHA).
- Naoki Chida, MD, PhD, joined Gen Re LifeHealth (Japan) in August 2006 as a medical officer. He has nine years' experience in medical research and updating underwriting manuals.

Our Publications

Mid-Year Market Survey

Similar to the *Group Disability Market Survey,* this **JHA (North America)** survey tracks sales and earned premium results for both Group Short and Long Term Disability for the first half of the year. Participants are able to gauge how their business is performing for the first half of the year compared to the market.

Group Disability Rate & Risk Management Survey

This survey by **JHA (North America)** evaluates virtually all aspects of the disability risk management business for Group STD and LTD. The rate study provides participants with an apples-to-apples comparison of their rates versus the market. The risk management section covers underwriting, claims, distribution and products.

Group Life Rate & Risk Management Survey

This **Gen Re LifeHealth (North America)** survey is similar to the *Group Disability Rate & Risk Management Survey.* The first section of this study focuses on rates for Group Life and Voluntary Life. The risk management section of the study reviews the underwriting, pricing, claim management, concentration management, and sales and marketing practices for both group life and voluntary life.

To change an address, or add or remove a person from the *Risk Insights* mailing list, please e-mail ijoudrey@genre.com.

For additional information, please contact the authors at the following address:

Lynn Ballie
Tony Culhane
Johann DuToit
Gen Re LifeHealth
Corn Exchange
55 Mark Lane
London EC3R 7NE
United Kingdom
e-mail: lballie@genre.com
e-mail: tculhane@genre.com
e-mail: jdutoit@genre.com

Tony Baker
General Reinsurance Life Australia Ltd
Angel Place
Level 24
123 Pitt Street
Sydney NSW 2000
Australia
e-mail: tbaker@genre.com

Marcus Pillay
Gen Re LifeHealth
3rd Floor, Block A
West Quay Office Block, West Quay Road
V&A Waterfront
Cape Town 8001, South Africa
e-mail: mpillay@genre.com

Jutta Eich
Sabine Fahrig
Thomas Gehling
Richard Lambert
Marcus Leven
Bernhard Wolters
Gen Re LifeHealth
Theodor-Heuss-Ring 11
50668 Cologne
Germany
e-mail: eich@genre.com
e-mail: sfahrig@genre.com
e-mail: tgehling@genre.com
e-mail: rlamber@genre.com
e-mail: mleven@genre.com
e-mail: wolters@genre.com

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Long Term Care Insurance

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Mortality Trends (September 1999)

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Gen Re Directory

Financial Centre
695 East Main Street
Stamford, CT 06901, USA
Tel. +1 203 352 3000

Theodor-Heuss-Ring 11
50668 Cologne, Germany
Tel. +49 221 9738 0

www.genre.com

U.S./Canada

Atlanta
Tel. +1 404 237 2555

Boston
Tel. +1 617 728 3800

Charlotte
Tel. +1 704 556 0910

Chicago
Tel. +1 312 207 5300

Columbus
Tel. +1 614 221 7111

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Tel. +1 214 691 3000

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Tel. +1 215 988 7100

San Francisco
Tel. +1 415 781 1700

Seattle
Tel. +1 206 682 7386

St. Paul
Tel. +1 651 293 0075

Toronto
Tel. +1 416 869 0490

Latin America

Buenos Aires
Tel. +54 11 4114 7000

Mexico City
Tel. +52 55 9171 9200

Europe/Middle East

Beirut
Tel. +961 1 999 888

Copenhagen
Tel. +45 33 33 7878

Dublin
Tel. +353 1 673 8500

London
Tel. +44 (0) 20 7426 6000

Madrid
Tel. +34 91 308 3712

Manchester
Tel. +44 (0) 161 831 7555

Milan
Tel. +39 02 762 1181

Moscow
Tel. +7 495 589 1189

Paris
Tel. +33 1 5367 7676

Riga
Tel. +371 783 0107

Vienna
Tel. +43 1 536 860

Warsaw
Tel. +48 22 313 1490

Africa

Cape Town
Tel. +27 21 412 7700

Johannesburg
Tel. +27 11 684 0300

**Australia/
New Zealand**

Auckland
Tel. +64 9 309 3638

Melbourne
Tel. +61 3 9628 4000

Sydney
Tel. +61 2 8236 6100

Asia

Beijing
Tel. +86 10 6517 1255

Hong Kong
Tel. +852 2598 2388

Seoul
Tel. +82 2 750 8500

Shanghai
Tel. +86 21 6100 6300

Singapore
Tel. +65 6438 7990

Taipei
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