

## RISK ADJUSTMENT IN SOCIAL INSURANCE SYSTEMS

# Risk structure compensation in Germany's statutory health insurance

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**In 1996 insurees in Germany's statutory health insurance system were given a right to choose their sickness fund. To ensure that all funds had an equal starting position, a risk structure compensation scheme based on income and average expenditure by age and sex was introduced. From an analysis of expenditure and transfers, data on sickness fund membership and a published survey, the following effects can be identified: sickness funds merged, with a reduction in number from 1,221 to 420 between 1993 and 2000; the risk compensation scheme narrowed differences in contribution rates; insurees left the more expensive funds for cheaper ones; and increasing transfer sums indicate further risk segregation. Thus, the compensation mechanism will have to be retained permanently, although modifications are likely.**

**Keywords:** Germany, financing, organized, insurance, health, insurance pools

Statutory health insurance (SHI) in Germany is compulsory for employees whose gross income does not exceed a set level, formerly employed such as unemployed and retired persons, and certain other groups of the population (e.g. farmers, artists and students). Employees with an income above the threshold may be voluntary members if they have been a member previously. Currently, 88% of the population are covered by the SHI: 74% are mandatory members and their dependants while 14% are voluntary members and their dependants. A further 9% are covered by private health insurance, 2% by free governmental health care (i.e. police officers, soldiers as well as persons performing other community services) while only 0.1% are not insured.<sup>1</sup>

The SHI system consists of currently 420 statutory sickness funds with 72.3 million insured persons (51.1 million members plus their dependants; all data from 1.1.2000). Sickness funds are legally differentiated into seven groups: 17 general regional funds (*Allgemeine Ortskrankenkassen*, AOK); 12 substitute funds (*Ersatzkassen*) which are further subdivided into seven 'white-collar' (EAN) and five 'blue-collar' (EAR) funds; 337 company-based funds (*Betriebskrankenkassen*, BKK); 32 guild funds (*Innungskrankenkassen*, IKK); 20 farmers' funds (*Landwirtschaftliche Krankenkassen*, LKK); one miners' fund (*Bundesknappschaft*, BKN); and one sailors' fund (*See-Krankenkasse*, SEE).

All funds have a not-for-profit status and are based on the principle of self-government. Since 1993, the manage-

ment of most funds is made up of a professional full-time executive board – responsible for the day-to-day management of the fund – and an assembly of delegates elected equally by the insured and the employers.

Contributions are shared equally between the insured and their employers. In the case of retired and unemployed persons, the retirement and unemployment funds, respectively, take over the financing part of the employer. Contributions are income-based, not risk-dependant; spouses and children without income are covered without any surcharges.

Traditionally, the majority of insured persons had no choice of sickness fund. They were assigned to the responsible fund based on geographical and/or job characteristics. This mandatory distribution of fund members led to greatly varying contribution rates due to the different income and risk profiles. Only voluntary members had the right to choose among funds and to cancel their membership with two months notice. Other white-collar workers (and certain blue-collar workers) had a choice when becoming a member or when changing jobs. Since this group grew substantially over the years, around 50% of the population had a at least a partial choice in the early 1990s.

### THE INTRODUCTION OF OPEN ENROLMENT AND THE RISK STRUCTURE COMPENSATION SCHEME

The Health Care Structure Act, passed in December 1992, gave almost every mandatorily insured person the right to choose a sickness fund from 1996 and to change between funds on a yearly basis with three months notice from 1997. All AOKs and all substitute funds were legally opened to everybody and must contract with all applicants. The BKKs and the IKKs may choose to remain

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closed but if they are open they also have an obligation to contract with all applicants. Only the farmers' funds, the miners' fund and the sailors' fund still retain the system of assigned membership.

To provide all sickness funds with an equal starting position for competition, a risk structure compensation scheme designed to equalize differences in contribution rates due to varying income levels and expenditure due to age and sex was installed in two steps (1994 and 1995, the latter including retired insurees and thereby replacing the former sharing of actual expenses for the retired between funds).<sup>2,3</sup> The compensatory mechanism requires all sickness funds to provide or receive compensation for the differences both in their contributory incomes as well as in their averaged – so-called 'standardized' – expenditures.

The mechanism is a complicated procedure involving several steps which are regulated in detail through the Federal Ministry of Health,<sup>4</sup> while the actual calculations are done by the Federal Insurance Office. Average actual expenditure for benefits included in the uniform, comprehensive package is calculated for each sex in 1-year age brackets using actual expenditure data. Expenditure for services delivered in other countries and administrative costs of the funds are not included. A further caveat is that only actual expenditure by the funds themselves is taken into account, i.e. not the co-payments by the insurees. Thus, the German compensation mechanism is based on actual expenditure data, which implies that the calculation is done retrospectively and only estimated for the current year.

Beyond 91 basic age categories per sex, there are 31 additional categories for each sex for persons between 35 and 65 with early retirement benefits due to disability (with all younger ones included in the 35 year group). These four basic groups are further supplemented by groups with higher and lower/no sick pay benefits (which are included on the expenditure side), so that there are a total of 12 groups with 732 individual categories.

The sum of these average expenditures for all members of a sickness fund determines that fund's 'contribution need'. The sum of all funds' contribution needs divided by the sum of all contributory incomes determines the compensation scheme's rate, which is then used to compare actual contributions with 'contribution need' to calculate the compensated sum either paid to those funds receiving compensation from the scheme, or the sum required from those funds making payments into the scheme. By doing so, the risk compensation mechanism also equalizes for different income levels between the members of the funds as well as difference in the number of dependants (since they are included on the expenditure side while they are zero in calculations of actual contributions).

Until 1998, two separate compensation mechanisms were in place, one for the Western and one for the Eastern part of Germany, i.e. no money was transferred from West to East through this mechanism. Since expenditure rose faster than contributory income in the East, contribution

rates had to be increased and sickness funds started to borrow money (which is actually illegal) to avoid even higher rates. To compensate for these deficits, the two risk compensation schemes were linked by a limited West–East transfer beginning in 1999 (while calculations are still done separately).

#### IMPACT OF OPEN ENROLMENT AND RISK STRUCTURE COMPENSATION

The impact of both the free choice and the risk structure compensation scheme on the structure of the sickness funds, the actual movement of members between funds, and the development of the contribution rates and transfer-sums between funds can be summarized as follows.

- Even before the start of free choice for insurees, sickness funds began to merge.

The total number of sickness funds decreased from 1,221 in 1993 to 960 in 1995, 554 in 1997, 453 in 1999 and 420 in 2000.

- The risk compensation scheme has narrowed contribution rates among funds.

This trend is especially observable in the West but recently also in the East. While in 1994, more than 30% of all members in the West paid a contribution rate differing by more than one percentage point from the average, this number dropped to 8% in 1999.<sup>5</sup> Without a risk structure compensation mechanism, differences in contribution rates – under open enrolment – would have increased, leading into a vicious circle for the more expensive funds.

- Increasingly, members leave one fund and join another.<sup>5,6</sup>

While no data on actual moves are available, net losses/gains in membership may be taken as an indicator. The AOKs, for instance, lost 479,000 members in 1997, 400,000 in 1998 and 292,000 in 1999, while the BKKs gained 335,000, 516,000 and 971,000 members respectively. These net losses/gains are correlated to the contribution rates of the funds, i.e. funds with contribution rates higher than average lose members while those with rates lower than average gain members (*table 1*). These figures under-estimate actual movements since they show only net changes for associations of funds.

- The importance of the contribution rate is further highlighted by a survey.

For persons who have moved from one fund to another, lower contributions were the prime motive (58%), while for persons considering a move, both the contribution rate and better benefits are equally important. Persons not considering a move regard better benefits as more important. Persons joining a sickness fund for the first time had mostly 'other' reasons to choose a particular fund – presumably advice from their family, friends or their employer.<sup>7</sup>

- The movement of members between funds did not equalize the different risk structures (which would result in diminishing transfer sums).

On the contrary, the first opportunities to change between funds segregated membership further, with the

healthier, younger, better-earning persons moving more often and towards cheaper funds, which, in turn, increased the size of transfer sums (table 2).

**DISCUSSION**

Giving insurees choice among competing sickness funds is considered a success in Germany. It raised accountability of the funds and stimulated their development from payers to more active purchasers. There is also agreement that choice for the insured must be accompanied by an obligation for funds to contract with all applicants and with some kind of risk structure compensation mechanism.

Both sides of the mechanism, i.e. compensation for differences in contributory income and differences in expenditure, are important. In 1995, contribution rates of the AOK would have been 1.61% higher without the income redistribution and 0.53% higher without the expenditure redistribution. For the white-collar funds the

respective figures were -1.05% and -0.50%, while in the case of the IKK the two effects partly compensated each other at +0.59% and -1.35%.<sup>8</sup> However, the level of detail on the expenditure side is disputed. Some analysts favour a more detailed mechanism including morbidity,<sup>3</sup> and possibly regional, indicators as well as exemptions from cost-sharing, while others have demanded a termination of the mechanism in the future based on the understanding that the mechanism was only a temporary mechanism to facilitate competition. The potential importance of further factors is powerfully demonstrated by the size of the differences between 'normal' persons and those with early retirement due to disability - a ratio of up to 1:12 (in the case of 35-year-old men).

Currently, this discussion of terminating or lessening the mechanism is no longer at the forefront of debate; possibly proponents of a termination have learned from Swiss experience and evaluation<sup>9</sup> with the conclusion that a termination of the Swiss mechanism after 10 years, as

**Table 1** Type of financial income, financial re-distribution, degree of member choice and movement between sickness fund groups in Germany (W = western part, E = eastern part)

	Financial income of funds	Contribution rate 1998	RSC <sup>a</sup> participation	RSC <sup>a</sup> recipient or payer [DM/member/year (1998)] <sup>c</sup>	Open enrolment	Gaining or losing members
AOK	Contributions	Above average	Yes	Recipient: 870 (W)/ 1,040 (E)	Yes, legally	Losing
EAN	Contributions	W: above average, E: average	Yes	Payer: -730 (W)/ -1,100 (E)	Yes, legally	W: losing, E: gaining
EAR	Contributions	Below average	Yes	Payer: -1,530 (W)/ -1,810 (E)	Yes, legally	Gaining
BKK	Contributions	Below average	Yes	Payer: -530 (W)/ -670 (E)	Partly, by decision of fund	Gaining
IKK	Contributions	Below average	Yes	Payer: -410 (W)/ -1,300 (E)	Partly, by decision of fund	Gaining
BKN	Contributions	Above average	Yes	Recipient: 3,060 (W)/ 1,420 (E)	No	-
SEE	Contributions	Below average	Yes	Payer: -20 (W)/ -1,650 (E)	No	-
LKK	Contributions and tax subsidies	NA <sup>b</sup>	No	-	No	-

a: RSC: risk structure compensation

b: NA: not applicable

c: Own calculations based on data provided by the Federal Ministry of Health, rounded to nearest 10 DM.

**Table 2** Transfer sums in risk structure compensation (RSC) scheme - absolute figures and relative to total expenditure for the western and eastern parts of Germany 1995-1998

	West		East		Germany	
	RSC/expend. <sup>a</sup> (billion DM)	RSC as % of expenditure	RSC/expend. <sup>a</sup> (billion DM)	RSC as % of expenditure	RSC/expend. <sup>a</sup> (billion DM)	RSC as % of expenditure
1995	13.49/190.29	7.1%	4.61/38.53	12.0%	18.05/228.82	7.9%
1996	14.22/196.39	7.2%	4.90/40.03	12.2%	19.12/236.42	8.1%
1 January 1997: First opportunity to change between funds						
1997	15.07/192.13	7.8%	5.15/39.22	13.1%	20.22/231.35	8.7%
1 January 1998: Second opportunity to change between funds						
1998	16.07/195.07	8.2%	5.47/39.06	14.0%	21.54/234.13	9.2%

a: Expend.: total expenditure of sickness funds without administration; own calculations based on data provided by the Federal Ministry of Health.

planned, is not feasible. These Swiss conclusions are supported by the German data which imply that a risk compensation mechanism will be needed permanently. However, one may also hypothesize that changing funds will become even more popular in the future and will also involve portions of the population which constitute 'bad' risks. This may stop or even reverse the increase in transfer sums between funds.

Another aspect of the German risk compensation mechanism deserves attention: its retrospective calculation. While this definitely makes cream-skimming more difficult – since the actual contribution need for a person is not known prospectively – it also poses considerable challenges for fund managers since actual sums transferred may be different from those originally calculated. This poses a threat for those funds which have to spend up to 40% of their income on risk compensation. On the other hand, transfer sums as large as those are a clear indicator for the solidarity within the German statutory health insurance.

#### ADDENDUM

In March, 2001, the Minister for Health proposed the following changes to improve the current system. From 2002, the opportunity to change funds once a year will be changed in favour of a continuous right to do so; in return, a minimum duration of 18 months of membership after a change will be introduced. In addition, the sickness funds are asked to charge a contribution rate of at least 12.5%. To stimulate the introduction of disease management programmes for a selected number of chronic diseases and dependent on a number of conditions, sickness funds only have to cover 30% of necessary expenditure and get 70% out of a joint pool. From 2003, 60% of expenditure above 40,000 DM per member and year will be covered by all funds jointly as well. These measures will be phased out when the RSC becomes morbidity-based. Crucially dependent on criteria and methods still to be developed, this fundamental change is planned at the latest for 2007.

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