

COMPETITION AMONG SOCIAL HEALTH INSURERS: A CASE STUDY FOR THE NETHERLANDS, BELGIUM AND GERMANY

Marco Varkevisser

OCFEB, Erasmus University Rotterdam (The Netherlands)

Stéphanie A. van der Geest

OCFEB, Erasmus University Rotterdam (The Netherlands)

ABSTRACT

The idea that competition generally enhances efficiency is hardly under discussion anymore. The market for health insurance is, however, no ordinary market as asymmetrical information can lead to adverse selection and cream skimming. Adequate risk-adjustment removes the incentives for cream skimming and balances the negative consequences of adverse selection. In an attempt to enhance efficiency, the Dutch government in 1992 introduced price competition between social health insurers in combination with risk-adjusted capitation payments. Our estimation results indicate that this has not resulted in altering market shares. Also in Belgium and Germany social health insurers are faced with incentives to operate more efficiently. These countries encounter similar difficulties. Because equity considerations are high valued features of the Dutch health insurance system, competition is difficult to implement. We recommend that the current capitation formula should be refined and that the insurers should be given more room for selective contracting of health care providers.

Cost containment is an important issue in health policy. Almost every country faces the problem of how to provide a high quality of health care at an affordable cost. This paper focuses on the introduction of price competition among Dutch social health insurers. Experiences with similar policy measures in Belgium and Germany are also discussed. The market for health insurance is no ordinary market. As a consequence, free market competition is a mixed blessing. The

An earlier version of this paper was presented at the 6th Annual International Symposium and Workshop 2000 of the International Society for Research in Healthcare Financial Management (Baltimore, Maryland, USA).

We would like to thank Leon Bettendorf, Elbert Dijkgraaf, René Goudriaan, David Osborne, Patrick van der Schans and two anonymous reviewers for their useful comments on earlier versions of this paper. Also we would like to thank the Health Care Insurance Board (CVZ).

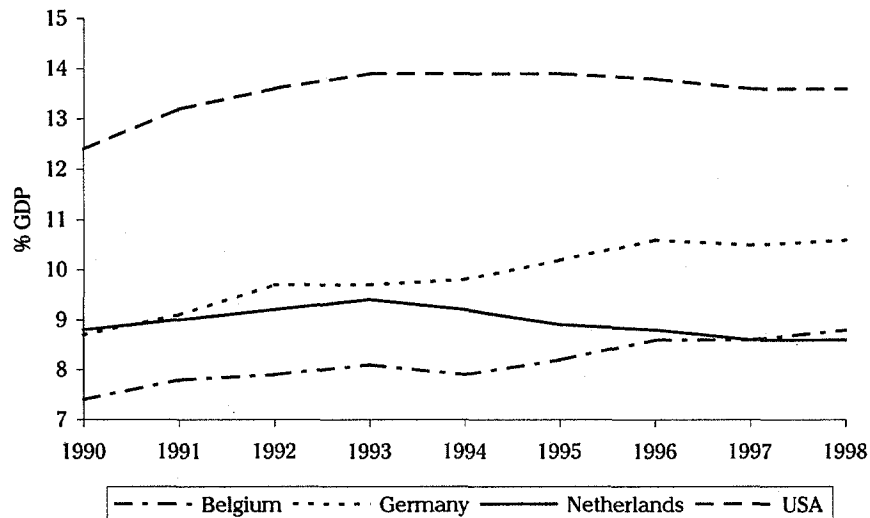
Address for correspondence: Marco Varkevisser, Research Centre for Economic Policy (OCFEB), Erasmus University Rotterdam, PO Box 1738, 3000 DR Rotterdam, The Netherlands, varkevisser@ocfeb.nl.

existence of asymmetrical information can lead to adverse selection and cream skimming. Because health policy in the Netherlands is dominated by equity considerations, the introduction of competition was accompanied by the introduction of risk-adjusted capitation payments. For the moment, Dutch policy measures have not developed as expected. In Belgium and Germany, social health insurers now also face incentives to operate more efficiently, while access to health insurance is preserved by means of risk-adjustment. These countries are encountering similar difficulties to those in the Netherlands.

THEORETICAL CONSIDERATIONS CONCERNING COMPETITION AMONG HEALTH INSURERS

Economists disagree about a lot of things, but the idea that competition generally enhances efficiency is hardly under discussion anymore. Until recently, however, competition in health care was not a commonly promoted position in most countries. This changed when it became clear that central planning failed to control costs. However, when comparing the spending record of more regulated systems to the United States, it seems that free market competition is not optimal, either (see Figure 1). Such a comparison indicates that some of the assumptions of economics do not hold in the health care market (Folland *et al.* 1997).

FIGURE 1
TOTAL NATIONAL HEALTH EXPENDITURE



(Source: Organization for Economic Cooperation and Development (OECD), 2000.)

Is competition among health insurers desirable? At first glance, the answer to this question seems yes. Generally speaking, in the absence of competition firms can take full advantage of their market power. Freedom of choice between competing firms

allows customers to shop around and search for the best buy. While doing so, efficiency is promoted, product characteristics shift and new products are introduced to meet changing consumer demands. Yet, the market for health insurance is no ordinary market as the identity of the buyer can dramatically affect costs (Cutler & Zeckhauser 1999).

Adverse Selection

At premium rates reflecting average risks, insurance is an attractive offer only to those with higher risks. Very few people with lower than average risks will take out an insurance policy. For them, the required rate is unattractive. This phenomenon is called adverse selection in insurance economics (Douma & Schreuder 1991). The expected outcome of this scenario is that insurers will end up with a set of clients in which the higher risks are over-represented. Therefore, insurers will be forced to raise their premium rates. At these higher rates, insurance now becomes unattractive even to those with average risks. Eventually, adverse selection could become a self-reinforcing mechanism, which would make it impossible to offer health insurance on the market. But even when health insurance markets do develop in the presence of adverse selection, economic inefficiencies can result (Folland *et al.* 1997). If the low-risk enrollees are grouped with the high-risk enrollees and everyone is charged the same premium, the lower risks tend to get overinsured and the higher risks tend to get underinsured. This can be prevented when premiums for insurance policies are based on the specific risk characteristics of each individual. However, this practice is widely believed to be unfair when people with certain unfavorable risk characteristics that they cannot influence are charged more. Therefore, risk sharing by means of compulsory insurance and uniform premiums are used to eliminate the problems of adverse selection. By doing this, one must pay attention to the problem of moral hazard. This refers to actions which parties in a transaction may take after they have agreed to execute the transaction (Douma & Schreuder 1991). If these actions are unobservable to the other party in the transaction, and if they may harm this other party's interest, then these hidden actions may prevent the successful completion of the transaction. In the case of health insurance, moral hazard refers to a situation in which the insured may start to behave with less caution, because he or she has insurance. Or, put another way, the insured individual may use more services due to less costs to the individual (Folland *et al.* 1997).

Cream Skimming

On the supply side of the market, insurers want to select so-called preferred risks. In economic literature, this is called cream skimming (Van de Ven & Van Vliet 1992). When everyone is charged the same premium and insurers are able to identify several subgroups with different expected health care costs, it is profitable for insurers to distort their offerings. In such a situation, health insurers face incentives to identify and attract the lower risk people and deter the higher risk people from enrolling. The adverse effects of cream skimming are threefold (Van de Ven & Van Vliet 1992). First, for higher risk people the access to health care is hindered. Second, it is possible that

efficient insurers might be driven out of the market by inefficient insurers who are successful in cream skimming. Third, the costs of cream skimming can result in social welfare losses. In addition to these three effects, Cutler & Zeckhauser (1999) mention that it is even possible that the quality of health care can be influenced by cream skimming. Improvements in the quality of health care are unattractive to insurers when they expect to attract higher risk people.

Risk-Adjusted Capitation Payments to Health Insurers

Competition among health insurers can cause serious problems. Accessibility can decline as a result of adverse selection and cream skimming. High-risk groups may only be able to insure themselves at very high premium rates. In some cases premiums can even be unaffordable so that people will be uninsured. The main question about health insurance design is how to achieve the benefits of competition while containing the cost of adverse selection and cream skimming (Cutler & Zeckhauser 1999).

Risk-adjustment between health insurers provides a solution for this problem. Risk-adjustment means that those with higher risks receive a cross-subsidy from insurers with lower risks (OECD 1994). Adequate risk-adjustment removes the incentives for cream skimming and balances the negative consequences of adverse selection. The most common possibility would be for the government to impose risk-adjusted capitation payments to health insurers (see Table 1). These payments should account for systematic variations in health care costs between different risk groups. By guaranteeing a fair distribution of funds, risk selection can be prevented. Risk-adjustment should lead to a situation in which the costs to insurers of selecting and attracting favorable risk groups outweigh the potential benefits (Schut 1995).

TABLE 1
HOW DOES RISK ADJUSTMENT WORK?

	<i>Systematic variation in health care costs</i>	<i>Uniform and fixed Premium (= equity)</i>	<i>Risk-adjustment payment</i>	<i>Potential benefit of risk selection</i>
Low risk	X	$X + \frac{1}{2}C$	$-\frac{1}{2}C$	0
High risk	$X + C$	$X + \frac{1}{2}C$	$+\frac{1}{2}C$	0
Total	$2X + C$	$2X + C$	0	0

Determination of an adequate health care budget is nevertheless a major problem. In other words, what risk factors should be included in the capitation payment formula? Common factors such as age, sex and urbanization explain only a minor fraction of annual health care cost variability (Van de Ven & Van Vliet 1992). More information on possible risk factors has to be collected because "...without an adequate risk-adjusted capitation system there will be no effective pressure from demand, in which case workable competition in health care will turn out to be an

illusion" (Schut 1995:80). While searching for an adequate capitation method it is possible to avoid some undesired side effects of competition by enforcing insurers to accept all applicants. This, however, does not remove the incentives for cream skimming. Health insurers will still look for alternative ways to attract the better risks. For example, health insurers can attract better risks through their marketing and promotion activities or through selective contracting of health providers according to their locations and reputations in particular specialties.

Even if adverse selection and cream skimming can successfully be avoided through risk-adjustment, competition among health insurers will not automatically lead to efficiency gains. Introduction of the correct financial incentives alone is not sufficient. Because health insurers provide service benefits, they have to arrange contracts with health providers. Therefore it is important for health insurers to be able to contract health providers selectively. Only then they can enhance efficiency. When the provision of health care is strongly regulated—for example by means of fixed fees and centrally planned capacity—health insurers will not be able to influence their health care expenditures sufficiently and contain costs, even if they face strong financial incentives to do so.

THE DUTCH HEALTH INSURANCE SYSTEM

The Dutch health insurance system consists of three parts (Ministry of Health, Welfare and Sports 2000a). The first part covers serious long-term sicknesses or disorders that cannot easily be covered by private health insurance. This includes specialized facilities for the mentally and physically disabled, psychiatric care and home care. Insurance for this kind of risk is statutory and provided by the so-called Exceptional Medical Expenses Act (AWBZ). Everyone is legally obliged to contribute to the AWBZ. These income-related contributions are part of the income tax system. The central government takes primary responsibility for this part of the insurance system, using budgetary controls, as well as strict planning of health care providers and regulation of premiums, co-payment schedules and coverage.

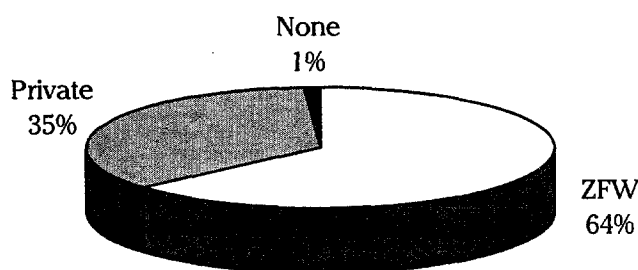
The second part consists of two public plans and a large number of private plans covering basic medical services, including hospital care, pharmaceuticals and care provided by general practitioners and dentists. The first public plan is the Health Insurance Act (ZFW). Insurance under this act is statutory for everyone who meets the criteria spelled out in the legislation. It is this part of the Dutch health insurance system on which we focus this paper. The other public plan in the second part is called the Medical Insurance Access Act (WTZ). In 1986 the government decided to abolish the voluntary and elderly people's ZFW insurance plans. As a result of this several categories of people who had previously been covered by these forms of insurance had to buy private health care insurance. In order to guarantee access to this type of insurance, the private health care insurers were obliged to incorporate a special insurance (the WTZ standard insurance) in their portfolios. There are a number of statutory rules that apply to this insurance in relation to acceptance of insured people, the magnitude of the risk to be insured and the contribution to be charged for it. Those who do not meet the criteria for joining ZFW insurance or the WTZ scheme can seek

insurance on the private market. In the private market, premiums, co-payment schedules and coverage are not regulated by the government.

Additional medical services—not covered by ZFW insurance and basic private insurance—can be insured privately. In this third part of the health insurance system premiums and co-payments rates are not regulated and are therefore allowed to differ across insurers and risk classes.

Traditionally, health policy in the Netherlands is dominated by equity concerns. This is reflected in the health insurance system. First, the Dutch government uses the health insurance system to redistribute income in a different number of ways (Westerhout 1999). For example, the two largest public insurance plans (AWBZ and ZFW) are almost entirely financed by income-related premiums and taxes. Second, social insurance premiums are not allowed to differ between risk classes. Only within the private market do premiums depend on risk factors. But in the private market for health insurance, the government has introduced separate plans with mandatory cross-subsidization in order to safeguard access for certain high-risk groups of insured who do not meet the criteria for social insurance. Therefore, every Dutch citizen is able to buy health insurance. The result is that—although insurance is not mandatory for more than one-third of the population—approximately only one percent of the Dutch population is uninsured (see Figure 2).

FIGURE 2
TYPE OF HEALTH INSURANCE IN THE NETHERLANDS
1999, % POPULATION

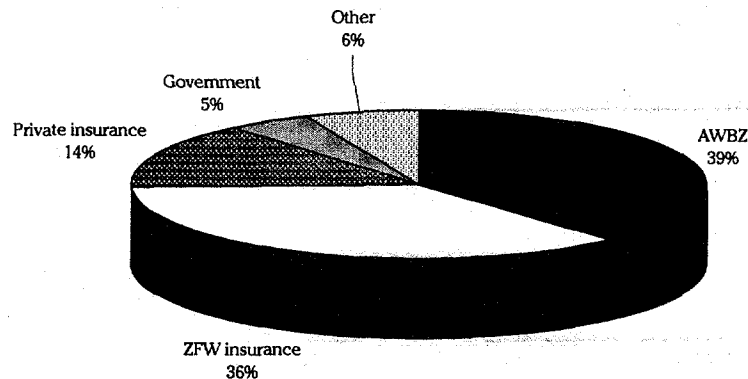


(Source: Central Bureau of Statistics (CBS), 2000)

SICKNESS FUNDS

More than 60 percent of the Dutch population is subject to compulsory ZFW insurance, administered by independent private non-profit organizations called sickness funds (*ziekenfondsen*). As a consequence, these insurers play an important role in financing Dutch health care expenditure (see Figure 3).

FIGURE 3
FINANCING DUTCH HEALTH CARE EXPENDITURE IN 2001
% TOTAL



(Source: Ministry of Health, Welfare and Sports, 2000b)

Premiums

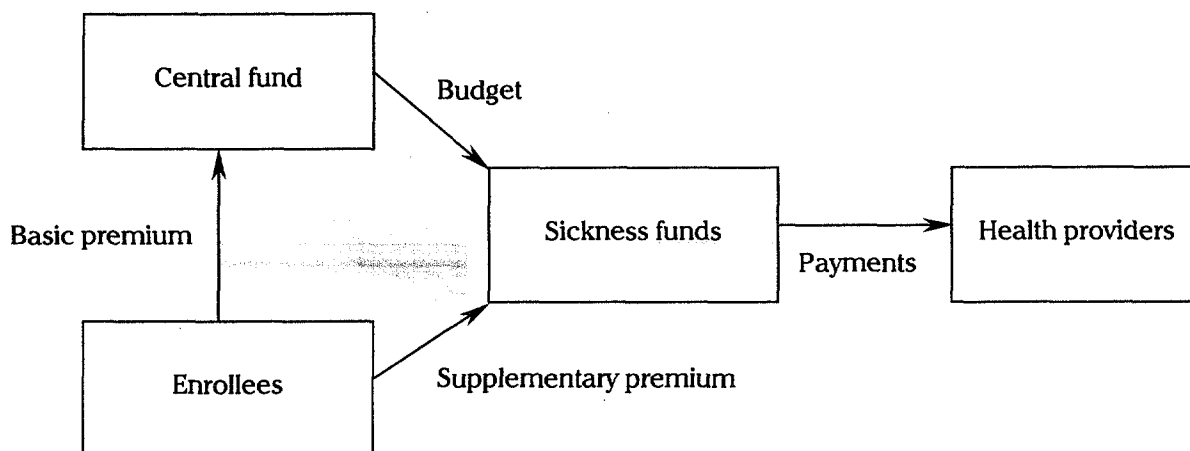
The ZFW insured pay an income-related contribution (basic premium) and a flat rate fee (supplementary premium). This basic premium rate is uniform and fixed by the government. Basic premiums are collected by a central fund that gives the individual funds a yearly budget. The total budget of this central fund for the year 2001 is provided by the basic premium revenues (72 percent), government contributions (25 percent) and payments from private insurers (3 percent). Because most elderly are ZFW insured (leading to relative high health care expenditures when compared to private health insurers), these latter payments compensate the sickness funds.¹

In contrast to the basic premium, supplementary (non-income related) premiums are set by the individual funds as a fixed amount of money per person. This flat rate fee is based on the number of adults covered, but is not allowed to differ between income and risk classes. All enrollees pay this supplementary premium directly to their own insurer. Because supplementary premiums are allowed to differ between the sickness funds, price competition can arise (this will be discussed later). For the moment substantial co-payments do not exist in ZFW insurance. Because health providers receive their fees by means of third party payments, there is no direct financial

¹ Based on the so-called Joint Funding of Older People Insured by the Health Insurance Funds Act (MOOZ).

relationship between people with ZFW insurance and their health care providers. Figure 4 presents an overview of this financial system.

FIGURE 4
SICKNESS FUNDS AND ZFW INSURANCE



Benefit Package

Just like the basic premium, the benefit package is set by the government and is not allowed to differ between individual sickness funds. As mentioned earlier, ZFW insurance, in principle, covers routine non-catastrophic care. The exact composition of the benefit package differs from year to year. Continuing political discussions between those who favor a broad package and those who want to restrict the coverage are the main reason for these fluctuations. Cost containment and equity issues also play an important role.

Call for Change

Modernization of ZFW insurance is the subject of discussion in the Netherlands for several reasons. First, this is due to the increasing costs of this public insurance scheme. In the future, the aging of the Dutch population is expected to result in additional increases of public medical expenditure. Another reason that reforms in ZFW insurance are needed is that patients increasingly desire medical care that is designed to meet their individual needs and demands. In other words, they claim more freedom of choice. This call for change has resulted in the introduction of competition among sickness funds along with the introduction of a risk-adjusted capitation system.

COMPETITION AMONG DUTCH SICKNESS FUNDS

In 1992 legal barriers preventing competition among Dutch sickness funds were dismantled. First, the legally protected regional boundaries of the funds were

eliminated. Prior to 1992, people eligible for ZFW insurance could not choose the fund they wanted. In most cases they were automatically assigned to the regional fund. Each fund was obliged to operate within its legally defined territory. This implied that they were only able to contract health care providers established in their assigned region. Now all funds can operate nationwide and ZFW insured are free to choose any fund they want. Second, room for price competition among the sickness funds was created. Funds must now charge a flat rate premium, which they can use as a competitive instrument. Third, entrance to the market for ZFW insurance is allowed. Private health insurers are permitted to establish sickness funds as separate legal entities. A separated legal entity is required because sickness funds and private insurers operate on separate markets. For people with private health insurance are prohibited from buying insurance from a sickness fund.

Freedom of choice allows people with ZFW insurance to choose the fund that is best for them. They can switch from one fund to another once a year. To avoid the unwanted side effects of competition among sickness funds, the funds must accept all people who are eligible for ZFW insurance. *Ex post*, choice is balanced by risk-adjustment provisions. In practice however, freedom of choice is hampered for at least two reasons. First, in most cases, sickness funds have the most attractive contracts with health providers established in their own region. Second, the obligation for the funds to accept all people who apply for ZFW insurance does not count for supplementary insurance contracts. As this type of insurance is increasingly important for people (especially for those with chronic illnesses), freedom of choice is increasingly restricted (Schut 2001).

Risk-Adjustment Provisions

As mentioned before, income-related premiums are collected by a central fund that allocates a budget to each individual fund. Prior to 1991, sickness funds were *ex post* fully reimbursed for their total health care expenditure. Sickness funds now receive a yearly budget that should cover their expenses, although not completely. Any shortfalls must be covered by the supplementary premium that they bill and receive directly from their members. The introduction of competition and prospective budgeting made it necessary to apply risk-adjusted capitation payments. When budgets are based on adequate risk characteristics, the incentives for cream skinning are removed. In practice however, some imperfections in the budget formula will always exist.

Annually, the Ministry of Health, Welfare and Sports determines the maximum allowed total ZFW-expenditure. After this, the Ministry determines the required level of the supplementary premium that the funds at least must charge to balance their budget. By subtracting the expected revenue of this required supplementary premium from the maximum allowed total ZFW expenditure, the government knows the national budget that it has to allocate to the different sickness funds. The income-related premium is then set at such a level that the revenues cover this budget. For the level of the income-related premium the Ministry is advised by the Health Care Insurance Board (CVZ).

The total budget sickness funds receive, consists of four different parts (Staatscourant 1999). The funds receive a budget for (1) fixed hospital costs, (2) variable hospital costs, (3) costs of medical specialists and (4) outpatient care (including pharmaceuticals and medical devices). These prospective budgets are based on a combination of risk factors and historical costs. The risk factors currently used are age, sex, urbanization and socio-economic status. Since the funds cannot be held fully responsible for all costs, sickness funds are compensated by the following provisions:

- The budget formula is complemented by a system of excess loss compensation. Concerning variable hospital costs and outpatient care, the sickness funds are compensated for almost all expenditures above the amount of €4,537 for an individual insured².
- A part of each fund's budget is allocated on the basis of historical cost.
- Sickness funds are compensated for the fact that they are unable to influence all costs they incur. They are (partly) reimbursed for expenditures outside their control. Most important in this context are hospital services and services of medical specialists.

Table 2 presents an overview of the Dutch risk-adjusted capitation system reflecting the situation as of January 1, 2000. In comparison with earlier years the financial risks for sickness funds are enlarged, but not very impressive yet.

EMPIRICAL ANALYSIS

For this paper, the market for ZFW insurance was analyzed. First, the concentration ratio was examined. After that, the development of the supplementary premiums in the period 1993–1999 was reviewed. Whether the introduction of price competition has affected market shares was then determined.

Market Concentration

The smaller the number of firms, the more concentrated a market is. Although there is no deterministic link between the level of concentration and competition intensity, the argument that a higher level of concentration leads to a less competitive market is widely accepted (George *et al.* 1991). In order to say something meaningful about the number of firms and their market shares, many different statistical measures are available. The concentration ratio is the most widely used indicator. It simply gives the sum of the shares of the largest firms and is an easily computable and interpretable indicator of how competitive an industry is.

² This is the symbol of the euro (for the year 2000: €1.00 = \$0.9236).

TABLE 2
THE CURRENT DUTCH RISK-ADJUSTED CAPITATION SYSTEM

	PROSPECTIVE BUDGET ALLOCATION		RETROSPECTIVE ADJUSTMENTS
	<i>Part of budget based on historical costs</i>	<i>Part of budget based on risk factors</i>	<i>Part of shortfall reimbursed</i>
1. Fixed hospital costs	100%	0%	95%
2. Variable hospital costs ^a	30%	70%	25%
3. Costs of medical specialists	0%	100%	95%
4. Outpatient care ^a	30%	70%	0%

^a Excess loss compensation compensates the funds when these expenditures exceed the amount of €4,537 for an individual insured.

Source: Ministry of Health, Welfare and Sports (2000c) and Staatscourant (1999).

Despite the growing number of sickness funds since 1993, the market is now more concentrated (see Figure 5). This higher degree of concentration is the result of mergers between existing sickness funds. Although concentration has increased the last couple of years, it looks like the market is competitive (see Table 3). No sickness fund has such a large share of the market that it can be called a dominant fund. Additionally, the removal of legal entry barriers has resulted in the entrance of new sickness funds.

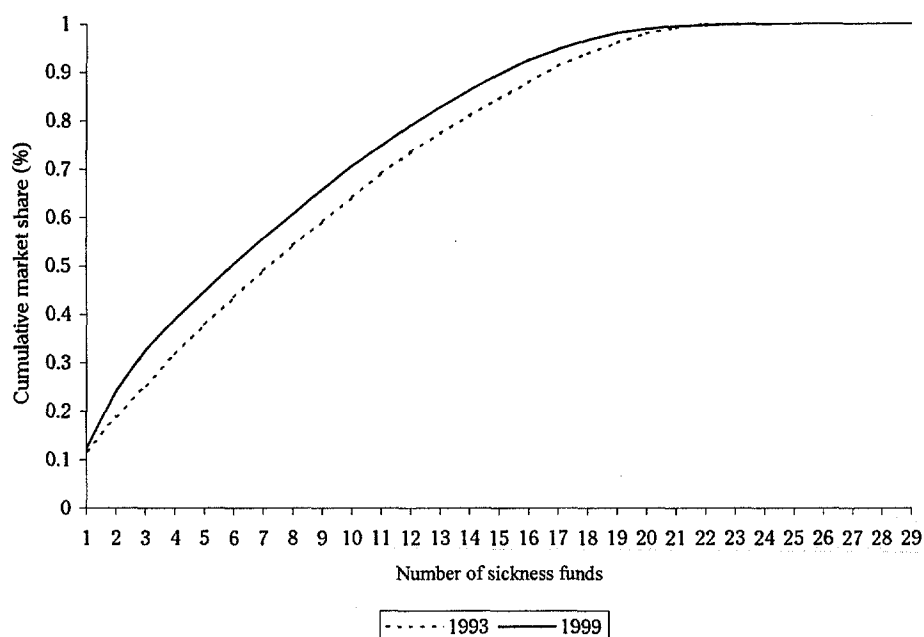
The historical background of the market for ZFW insurance provides a reason to be cautious while interpreting the concentration indices. These ratios measure the market concentration on a *national* level. However, until recently the sickness funds operated on a *regional* level. As a consequence, the figures can be misleading. On historical grounds each fund is located in a region in which they often have more than 60 percent market share. Mergers between neighboring sickness funds strengthened this regional market power even further (Schut 1995). Even though it seems that there is enough room for competition, it is possible that remaining regional structures will prevent this from happening. Additionally, most individual separately budgeted sickness funds in practice operate as members of the same holding company. So the figures in Table 3 underestimate actual market power. Recent calculations made by Van den Brink (2001), suggest that 71 percent of all ZFW enrollees is insured at one of the five biggest holding companies.

Supplementary Premiums

Since the introduction of price competition in 1992, supplementary premiums have been allowed to vary among the different sickness funds. From 1993 until 1995 however, all funds (except one) charged the same premium. This situation came to an end in 1996. From that year on the variability of the premiums became greater every

year (see Table 4). In spite of this development, premium differences as a percentage of total premium payments (including the basic premium) are still small. When a member of the most expensive fund switches to the cheapest one, this person saves only less than 3 percent of its total premium payments (based on a taxable income of €20,000).

FIGURE 5
CONCENTRATION RATIO DUTCH SICKNESS FUNDS



Source: Authors' calculations based on figures from CVZ.

TABLE 3
THE MARKET FOR ZFW INSURANCE

	1993	1994	1995	1996	1997	1998	1999
Total number of funds	25	25	26	27	29	29	29
New entrants	0	0	2	1	2	2	0
Market share largest fund	11.8%	11.7%	11.8%	11.8%	12.1%	12.3%	12.4%
C3-ratio ^a	25.4%	25.3%	29.9%	30.0%	30.2%	32.5%	32.5%
C5-ratio ^b	37.8%	37.7%	42.1%	42.0%	41.9%	44.7%	44.7%

a. Sum of the shares of the three largest sickness funds.

b. Sum of the shares of the five largest sickness funds.

Source: Authors' calculations based on figures from CVZ.

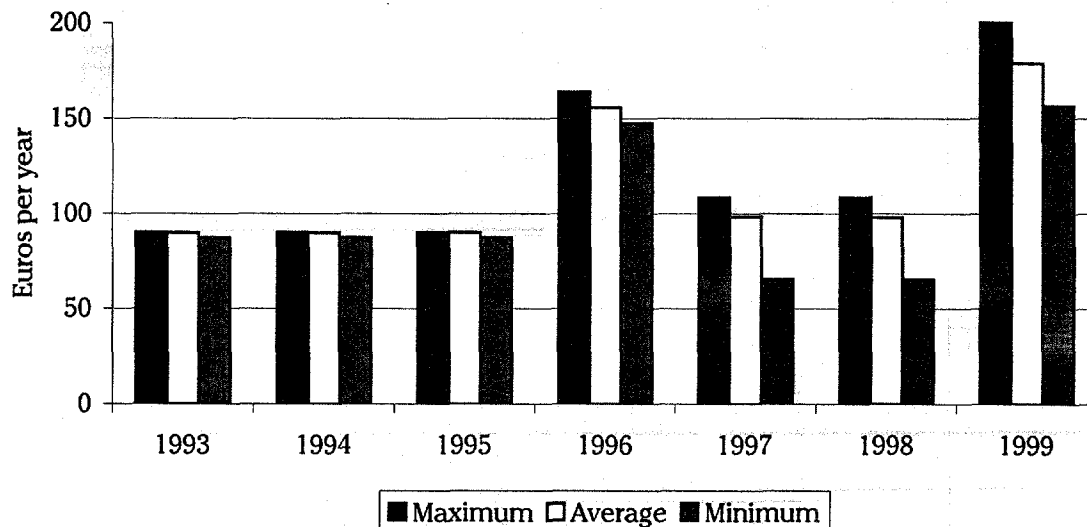
Table 4
SUPPLEMENTARY PREMIUMS (€ PER YEAR)^a

	1993	1994	1995	1996	1997	1998	1999
Highest premium	89.85	89.85	89.85	163.91	108.36	108.36	200.12
Lowest premium	87.13	87.13	87.13	147.57	65.34	65.34	156.55
Difference	2.72	2.72	2.72	16.34	43.02	43.02	43.56
Unweighted average	89.63	89.63	89.74	155.70	98.20	97.88	178.96
Standard deviation	0.75	0.75	0.53	3.74	7.78	8.36	12.61

^a Due to differences in benefit package and co-payments the absolute level of the premiums can differentiate considerably between the years.
Source: Authors' calculations based on figures from CVZ.

Figure 6 shows the gap between the highest and the lowest premium in the market.

FIGURE 6
SUPPLEMENTARY PREMIUMS



Source: Authors' calculations based on figures from CVZ.

Relationship Between Market Share and Supplementary Premium?

In case of effective price competition, a clear relationship is expected between supplementary premium and market share. Relatively cheap sickness funds enlarge their market share at the expense of relatively expensive funds. We assessed the impact of price competition by estimating an equation relating market share (M) and supplementary premium (P). The variable P acts as a proxy for each fund's

competitiveness, as supplementary premiums are divided by the sample mean for each year. When P is larger than one the sickness fund in question is relatively expensive, when P is smaller than one it is relatively cheap. To test the hypothesis that market shares are influenced by supplementary premiums, we used panel data for 23 sickness funds over the period 1996–1999, covering more than 80 percent of the market. Because omitted variables may lead to changes in the cross-section intercepts the least-squares pooling procedure was not used. Instead, dummy variables were introduced to allow the intercept term to vary over cross-section units. This fixed-effects model can be written as:

$$M_{it} = \alpha + \beta P_{it} + \gamma_2 W_{2t} + \dots + \gamma_{23} W_{23t} + \varepsilon_{it} \quad (1)$$

where W_{it} has the value one for the i^{th} sickness fund ($i = 2, \dots, 23$) and zero otherwise. The estimation results are presented in Table 5.

TABLE 5
ESTIMATION RESULTS^a

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Probability</i>
P_{it}	-0.0034	0.0025	-1.38	0.17
$R^2 = 0.9993^b$				

a. The estimated fixed-effects are not presented here, but are available on request.

b. Any variation in M_{it} is almost completely explained by the fixed effects.

Based on these results, the hypothesis that market shares are influenced by supplementary premiums was rejected at a five percent significance level. In other words, for the given time period, market shares were not affected by fluctuations in supplementary premiums. The introduction of price competition among Dutch sickness funds in 1992 has not resulted in altering market shares. A possible explanation is that differences in supplementary premiums are currently small when expressed as a percentage of total premium payments. Other reasons may be the hampered freedom of choice and the presence of habit formation (people do not easily switch to another relatively unknown insurer). Our estimation results are in line with the findings of Hassink (1998) and Schut (2001). Only Kalshoven (1999) concludes that price competition among Dutch sickness funds has effect on the number of insured.

SIMILAR EXPERIENCES IN BELGIUM AND GERMANY

The Netherlands are not the only country facing problems regarding the introduction of competition and risk-adjustment in the public health insurance system. Belgium and Germany are encountering similar difficulties. The health insurance

system in Belgium and Germany is comparable with the Dutch health insurance system. In both countries, a large part of the population has compulsory insurance within the social insurance system, which is administered by non-profit sickness funds. Furthermore, equity and universal access to medical care are prominent values. In this section, we will discuss the Belgian and German experiences with the introduction or enhancement of competition among social health insurers.

Belgium

Belgium has a compulsory national health insurance plan covering major health risks (including inpatient and long-term care) for the entire population and minor risks (including outpatient care) for nearly 90 percent of the population. The Belgian compulsory scheme includes both health insurance coverage and income support in the event of illness and is administered by five private non-profit organizations called mutual aid funds (*mutualiteiten*) and one public fund. The latter is for those who refuse to join a sickness fund or who neglect to do so. The five mutual aid funds comprise a total of about hundred local insurers—the sickness funds—differing in size from a minimum of about 400 enrollees to a maximum of about 450,000. In addition to compulsory health insurance, the sickness funds offer supplementary insurance to cover services not provided under the system of social health insurance and voluntary insurance. Due to the almost nation-wide coverage of the social health insurance scheme, few opportunities are left for private health insurance companies. Therefore, in terms of market volume, private health insurance is small in Belgium (Van Kemenade 1997).

The financial system of the Belgian compulsory health insurance strongly resembles the Dutch system. The various sickness funds receive a yearly budget from a central fund. This central fund is financed by income-related premiums and government contributions. The income-related premium rate is set by the government and is not allowed to differ among the funds. In addition, the compulsory insured also have to pay a extremely small flat rate premium of about €2.48 a year to their sickness fund (Schokkaert & Van de Voorde 2000). Furthermore, Belgium has an extended system of co-payments with rates generally differing from 25 to 30 percent.

In contrast to earlier years, the global budget of social health insurance is now determined before actual expenditure is known. The budget each sickness fund receives from the central fund is a weighted combination of risk-adjusted capitation provisions and the expected actual expenditures for the year in question (Kesenne & Diels 1996). As a consequence, this budget can be seen as a cash loan. The risk-adjusted payments are intended to avoid cream skimming as much as possible. In contrast with countries like the Netherlands and Germany, the Belgian government ruled out the option of using simple risk adjustment plans. In 1994 a long list of possible risk factors was specified. Besides factors like age, sex and family structure, this list also includes for example income, morbidity-related characteristics and regional factors such as indicators of urbanization. However, it must be mentioned that the current capitation formula still explains only a small fraction of the variation of medical expenditures.

When calculating the funds' yearly budgets the greatest weight is given to actual expenses. Currently 30 percent of the budget is based on prospective risk-adjusted capitation payments. After the year 2002, this will be increased to a maximum of 40 percent. Although the budget of each sickness fund is largely based on its actual expenditures, it is important to note that the reimbursement of all funds together can not exceed the national budgetary objective. Therefore, its share in the total health expenditures of all funds collectively determines the exact reimbursement of actual expenditures for each fund. Once the actual expenditure is known, this final reimbursement can be balanced with the previously paid cash loans. To contain costs and increase efficiency, the Belgian government has put the funds at a financial risk. Each sickness fund is currently responsible for 25 percent of its possible shortfall. The other 75 percent is borne by inter-mutual solidarity: deficits of some funds are covered out of the surpluses of other sickness funds.

Despite the recent reform of 1993, Schokkaert and Van de Voorde (2000) argue that Belgium has not really taken the step towards stronger competition. Competition is very limited, because the offered benefit package, contribution rates and fee schedule on which reimbursement to patients is based are all determined by law and the impact of any variation in supplementary premiums is nil. Furthermore, it is mentioned that the market for compulsory health insurance is not only strongly concentrated, but also closed and non-contestable (Nonneman & Doorslaer 1994). Competition among Belgian sickness funds is therefore restricted to the quality of service delivery—such as the speed of settling claims—and supplementary insurance. The lack of competition is also expressed in the fact that selective contracting with providers is still not allowed in Belgium. Currently, sickness funds negotiate as a cartel with health care providers. As a result, individual sickness funds do not have the adequate instruments to influence their own expenditures and contain costs.

Germany

In Germany about 88 percent of the population is enrolled in Statutory Health Insurance (GKV). Approximately 14 percent of these enrollees are voluntary members who are also entitled to change over to private health insurance. Enrollment in GKV insurance is compulsory for employees who earn a gross income below a certain threshold and for some special groups (like retirees, farmers and students). The German statutory scheme is administered by non-profit sickness funds (*Krankenkassen*). The majority of the funds' revenues originates from income-related premiums, which the insured pay directly to their sickness funds. Since each individual sickness fund must cover its expenses with its own payroll contributions, premiums among sickness funds can differentiate. Premiums however, must be set within a framework—that is between a minimum and maximum rate—which is determined by the federal government. In accordance with the wide-accepted principle of equity, the sickness fund premium for any given fund is the same for all members regardless of their personal characteristics. The sickness funds are required by law to offer a minimum benefit package and the insured have to pay co-payments for certain health care services, such as pharmaceuticals, dentures and hospital stays. Unlike private

insurance companies, sickness funds are not allowed to provide supplementary insurance.

As in the Netherlands and Belgium, the German government also faces serious pressure to contain costs and increase the efficiency of their health insurance system. The Health Care Structure Act (1992) encompassed the reinforcement of competition. Some competition among sickness funds already existed, but freedom of choice was limited. This led to serious distortions as higher risks and lower incomes were over represented in certain funds. As a consequence, a substantial gap between the highest and lowest payroll contribution rates existed and this undermined the principle of equity. For that reason, the German government decided to reform the health insurance system in the early nineties. Under the new legislation almost every enrollee—including the compulsory insured—has the opportunity to switch from one sickness fund to another once a year. The most remarkable result of the intensified competition among sickness funds in Germany is a strong reduction in the number of sickness funds, from 1,221 in 1993 to 453 in 1999 (Brown & Amelung 1999).

To avoid adverse selection and cream skimming in a competitive market the German federal government established a risk compensation pool. In this way, differences among the sickness funds caused by factors outside their control had to be removed by means of risk-adjusted capitation payments. As a result the competitive position of the sickness funds was being equalized as much as possible (Greiner & Graf von der Schulenburg 1997). The current risk-adjustment parameters are age, sex, income and family structure. The subsidies to funds with an unfavorable risk-structure are paid prospectively, without regard to actual costs and the ex-post financial situation of the fund. An important consequence of this risk adjustment is that the premium differences between funds decline. For example, the premium of a relatively rich sickness fund with a lower-risk clientele will rise in order to generate the extra resources needed to subsidize funds with a relatively poorer, higher-risk clientele.

The German Health Reform was intended to provide sickness funds with incentives to reduce costs and increase service quality, while preserving accessibility. However, the new statute has not had the effects policymakers hoped for. A few reasons for this can be mentioned (Files & Murray 1995; Brown & Amelung 1999). First, competition is still limited. Benefits are determined by the federal government and selective contracting of health care providers is prohibited. Second, some argue that the risk-adjusted capitation scheme has removed much of the premium differences that made some funds more competitive than other. Third, the current four risk-adjusted parameters—age, sex, income and family structure—are too crude to avoid cream skimming. Although sickness funds are compelled to accept everyone who wants to enroll, they might use better data as a marketing instrument for favorable risk selection. Another concern is that only high-income employees are allowed to buy health insurance on the private market. Funds are worried that the premium differences by which the lower risks subsidize the higher ones may drive the former into private insurance plans. This can eventually reduce the funding base of the equity principle.

Three Countries Facing Similar Problems

To improve efficiency Belgium, Germany and the Netherlands have introduced competition among social health insurers accompanied by the introduction of risk-adjusted capitation payments in the early nineties (see Table 6). However, since equity considerations play an important role in social health insurance competition is limited. In all three countries benefit package is not allowed to differ and premium differences are small (the Netherlands) or even nil (Belgium). Germany has the best opportunities for price competition, since in that country social health insurers can set their total premium independently. Although it is said that risk-adjustment reduces the possibilities to use premiums as a competitive tool, the number of Germans who leave one fund and join another is increasing. Most of these people mention lower contributions as the prime motive (European Observatory on Health Care Systems 2000).

TABLE 6
COMPETITION AMONG SOCIAL HEALTH INSURERS

	<i>Belgium</i>	<i>Germany</i>	<i>The Netherlands</i>
Competition on:			
• benefit package?	no	no	no
• income-related premium?	no	yes	no
• flat rate fee?	no	--	yes
• supplementary insurance?	yes	no	yes
Risk-adjustment:			
• prospective capitation payments?	yes	yes	yes
• retrospective adjustments?	yes	no	yes
Selective contracting allowed?	no	No	yes ^a

^a But hampered in practice because of fixed fees and central planning.

In Germany the financial responsibility for sickness funds seems larger than in Belgium and the Netherlands. Where in the latter two countries prospectively allocated budgets are retrospectively adjusted, the German sickness funds are only *ex ante* compensated for their risk-structure by a risk compensation pool. Thus, the German funds have to balance their expenses completely with their premium revenues and the compensation payments they receive. However, because selective contracting is not allowed in Germany the funds are not able to influence all the costs they incur in order to enhance efficiency. The same is true for Belgium, but the financial risks for the Belgian sickness funds are much more limited. Only in the Netherlands is selective contracting allowed. However, this is hampered in practice because of fixed fees and central planning. Additionally, the existence of asymmetric information contributes to a dominant position of health providers. This requires sickness funds with market shares to be close to regional monopolies, which limits the room for competition even more.

It can be concluded that all three countries face the same challenge for the future: how to create the right competitive environment for sickness funds with adequate financial incentives? Until now, it can be said that neither Belgium, Germany nor the Netherlands have found the ultimate solution to this problem.

CONCLUSION

Current mainstream economic theory argues that competition is generally favorable. Freedom of choice improves efficiency and supply is tailored to the specific needs and demands of the customers. The market for health insurance seems to be an exception to this rule. The specific characteristics of this market make it difficult to create the right competitive environment. Introduction of competition among Dutch social health insurers has not been effective. Experiences in Belgium and Germany point in the same direction. Why has competition among sickness funds in the Netherlands not been the success the Dutch government hoped for?

The answer to this question is that price competition between health insurers can not be very fierce when much attention is paid to equity considerations. Competition among health insurers is difficult to implement when equity considerations are highly valued features. Free market competition can lead to adverse selection and cream skimming. To avoid these problems risk-adjusted capitation payments are used, but these automatically reduce the gap between the highest and lowest premiums in the market. In the Netherlands premium differences are currently small, especially when expressed in terms of total premium payments. The estimation results in this paper indicate that, as a consequence, during the period 1996–1998 no significant relationship existed between premiums and market shares. It seems that expensive and possibly more inefficient insurers did not lose customers to their competitors. Therefore, it may be better to concentrate on other ways to enhance efficiency in the market for health care.

Although it will be impossible to create a capitation formula that can fully predict differences in individual health care expenditures, the current budget method needs to be refined. Prospective budgeting with the use of a better capitation formula can create stronger financial incentives for the sickness funds to operate efficiently. It is also necessary to relax the central planning and regulation of health care services in the Netherlands, in order to give the sickness funds more room for selective contracting of health providers. Only then is cost containment within reach.

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