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Taxes and contributions in the financing of social insurance

Försäkringsmässighet: skatter och avgifter i socialförsäkringens finansiering

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Insurability - as judged by the proportions of taxes and contributions in the financing of different parts of the Swedish social insurance system[1]

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Presented at the 5th International Research Conference on Social Security in Warsaw on the 5th to 7th of March, 2007.

[1] This is a translation of an original report written in Swedish. Some adjustments have been made to meet the needs of the non-Swedish-speaking reader. The paper may in part still be difficult to penetrate for those not familiar with Swedish conditions. For further information do not hesitate to contact the authors.

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CONTENTS

1 Introduction

I Sweden, social insurance and unemployment insurance are central features both of the private finances of broad groups of individuals and of the economy as a whole. The way in which benefits are financed is of considerable importance for the legitimacy of the insurance system. The Social Insurance Agency has in various contexts emphasised the advantages of financing taking on a greater element of insurability. This report discusses insurability in the financing of social insurance.

1.1 Background

The aim of social insurance in Sweden is to provide financial security in illness, disability and old age and also for families with children. It is also designed to even out financial differences between households with and without children and to spread financial resources over the life cycle. Unemployment insurance aims at providing financial security in the event of unemployment. These benefits are important instruments in protecting individual citizens against specific risks and at the same time comprise a significant part of the national economy. In 2005 expenditure on social insurance, including unemployment insurance, amounted to just over 17 per cent of Swedish GNP. Net payments corresponded to around 26.5 per cent of private consumption.

Social insurance is financed through taxes, social security contributions, a general pension contribution and the return on funds invested. Contributions are the most important source of financing for social insurance, accounting for a substantial proportion of the total revenues of the public sector. In 2005 just over SEK 340 billion[3] was paid to the state in the form of employers' and self-employed contributions (see Table 2 in the appendix). If we include the general pension contribution, social security contributions in 2005 amounted to just over SEK 415 billion, which corresponds to about 28 per cent of public sector revenues in that year.[4]

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[3] In 2005, one Swedish krona on average amounted to approximately € 0.11.

[4] The financial flows in the financing of social insurance are described every year in the report *The Scope and Financing of Social Insurance in Sweden*, which is published in the series *Försäkringskassan Analyserar*.

An activity that is of such large economic importance and plays such a central role in the financial security of individuals needs to enjoy public confidence in order, among other things, to maintain the willingness to pay that makes possible this financing. *Stable insurance conditions* and *transparency* are two characteristics that both help to further this confidence. However, both these objectives are inadequately fulfilled by today's financing of social insurance in Sweden. The Social Insurance Agency[5] has on many occasions called attention to the fact that greater *insurability* in the financing of social insurance is desirable for this reason. This concept, which is often used in the debate concerning the financing of social insurance, can be defined according to several criteria. In this report a discussion takes place of the financing of social insurance based on insurability, which has also been emphasised, among other things, by the Social Insurance Commission.

The theoretical discussion is supplemented by a quantification of the criteria of insurability: how strong the link is at individual level between contributions and the size of the benefits.

1.2 Aim

The aim of this report is to discuss in principle and to illustrate in quantitative terms insurability in the financing of social insurance in Sweden.

1.3 Layout

In Chapter 2 there follows a theoretical discussion of the insurability in relation to the financing of social insurance, which is followed by a discussion in Chapter 3 of the calculations that have been made. The results of the calculations are presented in Chapter 4. Finally, there is a discussion of what the fact that a proportion of the social security contributions can be regarded as tax means for social insurance. The appendix to the report contains an account of the design and scope of social insurance in Sweden.

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[5] On 1 January 2005 the former National Insurance Social Insurance Board and the twenty-one social insurance offices were incorporated in the new state authority, the Social Insurance Agency (*Försäkringskassan*).

2 Principles underlying the financing of social insurance

The financing of social insurance should create opportunities for ***stable insurance conditions****, be as* ***transparent*** *as possible and employ contributions to finance insurances and taxes to finance benefits systems. Social insurance is compulsory and can therefore be designed to even out the risks between groups of insured persons to a greater extent than is possible with voluntary and, for the most part, private insurance. In order for a social insurance to be suitably financed by contributions, it should be "sufficiently insurable". In this chapter principles for the financing of social insurance are discussed, while in the following chapter a method of quantifying "insurability" is described.*

This chapter first describes the goals for the financing of social insurance highlighted by the Social Insurance Agency in its budget documentation submitted to the Government. These goals are then related to the term insurability, with the help of which it is possible to define a theoretical approach to how social insurance should be financed.

2.1 Social insurance and social security contributions – an explanation of terms

Social insurance in Swedish is defined in the Social Insurance Act (1999:799) as the social insurances and benefits systems administered by the Social Insurance Agency and the Premium Pension Authority. Unemployment insurance, which is administered by independent unemployment insurance funds, does not therefore formally amount to social insurance in the meaning of the act, despite the fact that it is largely financed by a social security contribution (the labour market contribution). As the focus of this report is on illustrating the link between social security contributions and all the benefits financed by them, we have chosen to discuss social insurance (as defined in the act) and unemployment insurance under the collective name of social insurance.

Benefits from pure systems of allowances, on the other hand, which are administered by the Social Insurance Agency, are not included in the term social insurance used in the report. They are mostly already financed today through taxation. The benefits that are financed by social security contributions are listed in the appendix.

In the meaning of the act, the term **social security contributions** comprises only employers' and self-employed contributions. In this report, however, all national contributions that finance social insurance benefits are collectively referred to as social security contributions, i.e. including general pension contribution and national old-age pension contribution. What all benefits financed by social security contributions have in common is that they rest on the principle of compensation for lost income. In the discussion below it is shown, however, that not all these benefits can be regarded as insurances.

2.2 Goals and principles for the financing of social insurance

The Social Insurance Agency has previously underlined two goals one should strive to achieve when designing the financing of social insurance. Financing should enable *stable insurance conditions* and also be as *transparent* as possible.

2.2.1 Stability

Contribution-financed social insurance is a long-term contract between the state and its citizens, based on statutory rights and obligations. If the insurance outcome is significantly lower than could reasonably be expected when the contributions were paid, there is a risk of confidence being undermined not only in the insurance in question, but also in social insurance as a whole. In order to gain people's confidence, the insurance conditions should be both clear and stable in the long term.

In contribution-financed social insurance there are basically two types of benefits: defined-contribution and defined-benefit benefits. The new Swedish old-age pension scheme, which has been created on the basis of a clearly expressed goal of achieving long-term stability, is alone in being a defined-contribution scheme. This means that it is financed through contributions whose level is fixed, while both individual pension capital and pension payments are adjusted in line with predetermined rules to the financial frameworks of the scheme.

With the exception of the old-age pension scheme, social insurance in Sweden is a defined-benefit form of insurance, i.e. the rules for the payment of benefits are basically fixed, while the contribution rates can be adjusted (normally once a year) in order to bring the contributions into line with variations in expenditure. It is desirable from the standpoint of legitimacy for the conditions of entitlement to a particular benefit to be basically the same from one year to another. This can perhaps be seen most clearly in the case of sickness cash benefit. Both sickness cash benefit and sickness compensation (previously known as disability pension) have a clear age profile, with a low risk among young persons which then increases with age. To ensure willingness to pay, it is necessary for it to appear likely that today's insurance conditions will apply broadly unchanged even in several decades' time.

In practice, however, the insurance conditions are adjusted relatively often, and not solely in order to improve the insurance cover. When Swedish public finances had to be put on a sound footing in the middle of the 1990s, measures designed to reduce expenditure were taken in several areas of social insurance. A number of these restrictive reforms have since been wholly or partly "restored" following the improvement in public finances. The rapidly increasing expenditure on social insurance between 1997 and 2003 also led to expenditure-reducing adjustments to the insurance conditions (lower levels of benefit, an extended period of sick pay).

In other words, while social insurance benefits, apart from the old-age pension scheme, are *in principle* defined-benefit benefits, they are *in practice* neither fully defined-benefit nor fully defined-contribution benefits. Both contributions and benefit conditions change relatively often. These reforms of the insurance conditions have, above all, been necessary out of budget considerations. With the exception of the old-age pension scheme, social insurance benefits in Sweden are financed from the national budget. Stable conditions in social insurance may thus come into conflict with the need for short-term cost-cutting measures necessitated by the fact that expenditure may not exceed the ceiling set by the Riksdag. Under this financing model, situations may arise in practice where either the national budget or those who are insured have to serve as a buffer in the insurance systems.

The new old-age pension scheme, on the other hand, may in *any given year* record a substantial negative or positive difference between revenues and payments without this being a problem, as the system is designed to be stable *in the long term*.[6] The reason why short-term "deficits" are not in conflict with the Government's requirements regarding budget discipline is that the old-age pension scheme is financially autonomous in relation to the national budget. This autonomy is based on the fact that approximately 70 per cent of basic old-age pension contributions,[7] general pension contributions and national old-age pension contributions go to the National Pension Insurance

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6 See the appendix for revenues and expenditure for the old-age pension scheme in 2000–2005.

7 Of the approximately 30 per cent remaining of the old-age pension contribution, about 19 per cent in 2005 went to the premium pension scheme via the National Debt Office, while the national budget received about 11 per cent.

(AP) Funds, which serve as a buffer during periods when incomings and outgoings do not match.

With today's financing, the rate for each contribution, apart from the old-age pension contributions, needs, in principle, to be adjusted annually. In practice, however, the individual contributions have been adjusted less often. The total amount of contributions levied has also been kept largely constant since the 1990s through adjustments to the contribution rate for *the general salary contribution*. This contribution is not linked to any social insurance benefit, but is treated in practice as a tax (see appendix).

This has reinforced the role of the social insurances as a buffer, which has meant essentially that the insurance conditions have needed to be changed often because of budgetary considerations. If sufficient stability is achieved instead in the financing of social insurances, there is no reason, in principle, for them to be included in the expenditure ceiling. The Social Insurance Agency has previously stated that the reformed old-age pension scheme should no longer need to be included in expenditures limited by the ceiling, although this is still the case.[8]

2.2.2 Transparency

Alongside those aspects of the financing of social insurance which contribute to unstable insurance conditions, the Social Insurance Agency's foremost view has been that the financing is somewhat unclear, which is not likely to encourage the public to have confidence in the insurance. The Agency has

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8 The Social Insurance Agency points out in its latest budget documentation submitted to the Government (2007–2009) that both the pension scheme and the system of expenditure ceilings would gain from the autonomous old-age pension scheme also being set apart from the expenditure ceilings. The rules of the pension scheme are aimed at, and have succeeded in, making the pension scheme self-regulating, while the purpose of the expenditure ceilings is to increase the ability of the Government to control the future course of expenditure. Accounting for the old-age pension scheme under the expenditure ceiling creates uncertainty about which rule and which principle take precedence.

also pointed out that the financing of the insurances from the national budget is a strong contributory cause of their lack of transparency.[9]

One additional factor contributing to this lack of transparency is that the rates of social security contributions are not adjusted annually in order to bring the contributions into line with the forecast benefit payments (see appendix). Since 2000 total social security contributions have exceeded the total payments of the benefits they are intended to finance. In the years to 2003 only the sickness insurance contribution systematically brought in lower revenues than the total amount of direct payments of the benefits associated with it. After the sickness insurance rate was increased in 2003, contributions exceeded the expenditure they are designed to finance by just over SEK 10 billion a year in 2003–2005. The contribution revenues have, in other words, been adjusted only partially to the increase in expenditure.

Greater autonomy of the financing of social insurance could make the link between its revenues and expenditure clearer in the mean term. One important question that remains, however, is *which* social insurances should be financed through contributions. The Social Insurance Agency has previously identified, in particular, sickness and work injury insurances. These have in common the fact that they are *insurance* in a theoretical sense. They both provide financial protection in the event of loss of income (due to illness or work injury), which is a risk that all those who are insured face, and their financing through contributions based on the income of the insured can be regarded as insurance premiums.

One theoretical viewpoint is indeed that only those parts of social insurance that amount to insurance should be financed through contributions. Other benefits, which are basically allowances of various kinds, would then be financed by public taxes over the national budget. The financing of social in-

[9] "The Swedish insurance system is financed partly through employers' contributions, based on the entire payroll expense, and the rest through appropriations from the national budget. It is evident that these contributions function essentially as taxes. There is only a weak link between payments made from the system and contributions. For the individual, the weak link that exists is also in practice entirely anonymous. Contributions for different systems are added to one another and to a number of other items to give one large overall item. Moreover, even in the case of those parts that are related to an insurance, contributions are levied on those parts of the salary that lie outside those parts which qualify for benefits." *En ny socialförsäkring, rapport till ekonomikommissionen*, RFV 1993, p 153. See also *Avgifter och fonder inom socialförsäkring*, Protokoll RFV 2000-03-31.

surance would thus gain a lot in transparency if it followed the following principle:

Insurances are financed through contributions, while allowances are financed from taxation.

Such a division would contribute to greater clarity in the financing of social insurance. For one thing, the costs of the different parts of national social insurance would become clearer. In a situation where the sickness insurance contribution brings in annually just over SEK 10 billion more than what is paid out from this insurance, its costs may otherwise be overestimated by the person who is liable to pay contributions. In addition, social security contributions that are levied would have better prospects of being perceived as individual insurance premiums. If the social security contributions were today perceived as taxes, this clarification could also promote the '*arbetslinjen'* or *work strategy* (the principle whereby the authorities should primarily ensure that the unemployed receive new jobs, not various subsidies) through an increased supply of labour.

However, this division is not as simple as it might appear. A significant grey area exists in practice between *benefit* and *insurance* and between *tax* and *contribution*. In order to make the discussion in the following chapters clear, it is based on the term *insurability*.

2.3 *Insurability* as a principle in the financing of insurance

In this section the concept of insurability is discussed as a theoretical starting point for apportioning the financing of social insurance. Four criteria of insurability are compared to how social insurance is financed in Sweden. The argument to be developed further in the sections to come is the idea that there should be a clear positive link between the size of individual contributions and the benefit payable to the individual if an insurance event occurs.

All insurance, whether private or social, amounts to a system of spreading risk. This applies to some extent even to large parts of public sector activities, such as healthcare. In order to distinguish what is meant by insurance, the term *insurability* is used. However, this term has no fixed and uniform definition, but may be described as a sliding scale in which different systems of spreading risks are more or less insurable, although hardly any one of them fully satisfies all the criteria (see below). The principle behind the financing of social insurance can therefore be formulated as follows:

Only benefits with a high degree of insurability should be financed through contributions.

This report aims to provide material based, on four criteria of insurability, for further assessments of which social insurance benefits should be financed through contributions and which should be financed through taxes.

The first criterion of insurability is that an insurance should provide financial compensation in connection with *perils* that are associated with what are known as ***insurable risks***.[10] Important general conditions for a risk to be insurable are that:

- the amount of compensation shall be defined in advance and paid to a policyholder who, *without being able to influence the situation*, suffers a peril for which cover is provided in the insurance contract,
- it should be possible for the risk of a defined "insured peril" occurring to be assessed by both the insurer and the insured *based on the same amount of information*,
- the policyholder *is assumed to make an effort to avoid the insured peril* or at least is not able to cause it to happen without the insurer becoming aware of this.

The first criterion of insurability is worded here so that:

1. In order for an insurance to be insurable, the benefit in question must provide cover against an ***insurable risk*** (as defined above).

On top of this come three criteria which directly concern the financing of social insurance. In order for this financing to be insurable as well, it is necessary that:

2. ***contributions are used fully to finance disbursements*** at system level, at least over a long period, whereas surpluses or deficits can be evened out through buffer funds, for example,

3. there exists at the individual level a clearly ***positive link between the contribution made by the insured*** to the financing and ***the size of the***

[10] This line of argument is found, among other things, in *Socialförsäkringsboken 1999*, pp 41 ff, and in the first report of the Social Insurance Commission, *Vad är försäkring?*

benefit payment in the event of a peril occurring,

4. the insurance premium reflects the costs of the insurance through the ***expected outcome***, i.e. the *risk* that a claim needs to be made on the insurance and the *amount of compensation*, if relevant.

In Chapter 2 and in Chapter 3, there is a discussion of how the financing of social insurance in Sweden meets these criteria. In the case of criterion no. 1 a theoretical argument concerning the various social insurance benefits suffices. Criterion no. 2 is quantified each year in the Social Insurance Agency's budget documentation submitted to the Government. Chapter 4 then sets out quantitative estimates of insurability according to criterion no. 3 above. Criterion no. 4 could also be quantified for a more comprehensive assessment of the insurability of social insurance. While this is an interesting area for study, it does not fall within the scope of this report.

2.3.1 Cover against insurable risks

In Sweden, the great majority of benefits financed through social security contributions appear at first sight to satisfy the first criterion, namely that they should cover an insurable risk. An illness (temporary or permanent), a work injury, unemployment or the loss of a close relative are all examples of "insured perils" that can occur in the life of all insured persons, despite attempts by them to avoid them. The risk of one of them occurring can certainly be influenced by the insured; moreover, the Social Insurance Agency or unemployment insurance fund cannot know what the individual risk is as well as the insured persons themselves. However, this is true to a varying extent of all insurance. In social insurance, as in private insurance, one method of compensating for this is to give the insured financial incentives to avoid triggering a claim on the insurance, e.g. degrees of compensation below 100 per cent, waiting days etc. The starting point is also that these insurance perils are intrinsically not worth trying to bring about.

The old-age pension may for the most part be likened to saving that has been made compulsory by legislation. In order not to be obliged to support themselves by working after a certain age, individuals save part of their income during their working life. However, the old-age pension contains an insurance element, since the individual does not know how many years he or she can look forward to at the time of retirement. In this way the pension scheme is partly an insurance to cover the situation where the individual lives for longer than expected.

The parental insurance contribution finances benefits that do not provide cover against any insurable risk. Two benefits financed through this contribution, parental cash benefit and pregnancy cash benefit, are not insurable, the reason being that parenthood is not a risk that one can insure against, but is in virtually every case the result of a conscious choice. The Social Insurance Agency has therefore proposed the abolition of this contribution and the financing of these benefits instead through basic taxation.[11]

In the case of insured persons who are already parents, however, it is reasonable to regard the child's illnesses as an insurable risk. The Social Insurance Agency has therefore proposed that the temporary parental cash benefit for the care of sick children should continue to be contribution-based, from the sickness insurance contribution.[12] Many of those who contribute to parental insurance, however, are not parents or have grown-up children, and the question of payments being made to them does not arise. The extent to which an illness in a child should be considered to be an insurable risk is thus not obvious. The fact that the sickness insurance contribution finances temporary parental cash benefit may be perceived as an ambiguity in the rules. As this benefit is too small to be financed through a separate contribution the Social Insurance Agency altered its position in its latest budget documentation submitted to the Government, proposing that this benefit, too, should be financed through taxation.[13]

2.3.2 Contributions that are only used to finance benefits and administration

Criterion no. 2 for insurable financing – that the contribution should be used to finance the benefits in at least the medium term – has only applied to a limited extent in Sweden. The difference between contribution flows and the payments they are intended to finance is shown in Table 1.

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[11] *Avgifter och fonder i socialförsäkringen, Promemoria*, Dnr. 3118/00, the Social Insurance Agency's Budget Documentation 2007–2009.

[12] The Social Insurance Agency's Budget Documentation 2006–2008.

[13] The Social Insurance Agency's Budget Documentation 2007–2009.

Table 1. Contributions and benefit payments

SEK million	2000	2001	2002	2003	2004	2005
Old-age pension contributions*	*152,020*	*167,614*	*172,448*	*177,621*	*184,061*	*190,904*
Other social security contributions	*159,210*	*174,157*	*180,101*	*188,106*	*192,612*	*199,085*
The general salary contribution	*31,386*	*27,124*	*26,599*	*32,029*	*32,295*	*32,918*
Total contribution revenues	*342,616*	*368,895*	*379,148*	*397,756*	*408,968*	*422,907*
excluding the general salary contribution	*311,230*	*341,771*	*352,549*	*365,727*	*376,673*	*389,989*
Total disbursements**	*374,473*	*386,780*	*403,786*	*442,732*	*459,730*	*466,348*
of which, contribution-financed	*259,037*	*311,802*	*330,081*	*342,931*	*358,089*	*365,203*

* old-age pension contribution, basic old-age pension contributions and national old-age pension contributions, excluding those transferred to the PPM

** the whole of social insurance, excluding premium pension, but including unemployment benefit

The table shows that statements of the kind that "social insurance was over-financed or underfinanced in year X" need to be worded accurately if they are to give any usable information. The total contribution revenues in the period 2000–2005 corresponded to about 90 per cent of the total expenditure on the benefits administered by the Social Insurance Agency and on unemployment benefit. The SEK 20 billion or so a year in old-age pension contributions transferred to the PPM has been excluded here as the system is in a development phase, where it is natural for contributions to exceed pensions paid out.

A comparison of both the total rows in Table 1 could be of interest for a study of the effect of the social insurance sector on the national budget. As far as an understanding of the financing of social insurance is concerned, however, they do not tell us much. The the general salary contribution included here is not linked to any individual social insurance benefit and should therefore be taken out of the discussion. The same applies to those parts of social insurance that by law are financed through taxation.

The result when one looks only at social security contributions and the benefits they are intended to finance is a "surplus" of around SEK 25 billion a year since 2001 for those contributions that are linked to specific social insurance benefits. Included here, however, is the old-age pension scheme alongside the national budget. However, as this rests on a buffer fund (the

National Pension Insurance (AP) funds) and contains fixed rules for the distribution of contributions and disbursements over time, contribution surpluses or deficits in individual years do not themselves amount to evidence that the contribution has been fixed at the wrong level, but are a natural consequence of demographic and economic swings. The contributions for which it may be relevant to speak of a profit or a deficit are thus the social security contributions listed in Table 2.

Table 2. Surpluses and deficits for social security contributions

SEK million	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*
Sickness insurance contribution*						
Total revenues	*74,574*	*82,546*	*86,020*	*108,278*	*113,083*	*110,342*
Surplus(+)/deficit (–)	*–5,494*	*–6,428*	*–9,435*	*9,695*	*13,776*	*11,274*
Work injury contribution						
Total revenues	*4,839*	*5,676*	*4,795*	*7,665*	*7,246*	*7,266*
Surplus(+)/deficit (–)	*2,212*	*7,888*	*12,683*	*1096*	*537*	*656*
Survivor's pension contribution						
Contribution revenues	*14,790*	*16,109*	*16,743*	*17,115*	*17,577*	*18,164*
Surplus(+)/deficit (–)	*935*	*2,057*	*2,278*	*1,498*	*1,673*	*2,193*
Parental insurance contribution						
Contribution revenues	*19,141*	*20,849*	*21,634*	*22,143*	*22,738*	*23,504*
Surplus(+)/deficit (–)	*2,050*	*2,213*	*1,336*	*–136*	*–898*	*–1128*
Labour market contribution						
Contribution revenues	*45,866*	*48,977*	*50,909*	*32,905*	*31,968*	*39,809*
Surplus(+)/deficit (–)	*3,354*	*14,877*	*15,935*	*–7,195*	*–10,006*	*–6,629*
Total for these five contributions						
Contribution revenues	*159,210*	*174,157*	*180,101*	*188,106*	*192,612*	*199,085*
Surplus(+)/deficit (–)	*3,057*	*20,607*	*22,797*	*4,958*	*5,082*	*6,366*
Proportion of revenues (%)	*2%*	*12%*	*13%*	*3%*	*3%*	*3%*

* including special sickness insurance contribution from 2005

If we look only at the contributions which, apart from the old-age pension contributions, are linked to specific benefits, they have, as a rule, generated more revenues than disbursements. As these surpluses have not been transferred to any special fund, they have instead strengthened the national budget balance and have, in practice, been utilised in the same way as taxes. These "surpluses" are reported annually in the Social Insurance Agency's budget documentation submitted to the Government. The Social Insurance Agency also in this context gives recommendations about adjustments to contribution rates so as to reflect expenditure trends more closely.

In the calculations presented in Chapter 4, we have ignored the effect of this overfinancing, which may in itself, however, be considered to comprise a tax share of the social security contributions. The reason is that this "tax share" of the contributions is of a completely different kind than the one discussed in the next section and that it is difficult to add them together.

2.3.3 Positive link between contributions and benefits

According to criterion no. 3, a positive link should exist between the contribution paid by or on behalf of an individual and the size of the benefit that the individual can receive if a claim is made on the insurance. In a voluntary insurance there is normally a clear link between the contribution/premium and the insurance benefit.

Social security contributions are also levied on incomes by law but give rise to individually linked entitlements to insurance benefits for those who are "liable for contributions", though not with full proportionality. A social security contribution may be regarded as consisting of two components, a benefit-influencing charge (insurance premium) and a non-benefit-influencing charge, which, for the individual on whose income it is levied, has properties that make it similar to income tax. The actual distribution between these two components affects the assessment of the degree of insurability of the insurance in question.

Income tax is understood here to mean an amount that is deducted by law from an individual's income in order to finance an activity which does not necessarily have any direct connection with the individual taxpayer.

In Swedish law there is no link between contributions and entitlements; in practice, however, the bases of contributions and the revenues that underlie social insurance benefits closely correspond to one another, even though, for example, the possibility of dormant sickness-qualifying income (SGI) limits this correspondence.

Today all social insurance benefits to be financed through contributions have in common the fact that they provide compensation according to the *lost income principle*, which is close to the criterion of insurability to be studied here. The link between contributions and potential benefit payments, however, is limited in several ways.

Social insurance benefits often have a minimum guaranteed level of compensation (independent of the individual income) as well as a maximum income qualifying for benefit, a "ceiling" which limits the maximum size of the benefit without a corresponding limit in the earnings-related contribution. This creates a redistribution between groups *with differing income levels*, irrespective of the levels of risk discussed in the following section.[14] In this study the link between the individual income and the expected benefit payments is discussed without taking account of differences in risks or the connection between the income and these risks.

In Chapter 3 there follows an attempt to estimate the limitations in the link between contributions and potential benefit payments, i.e. what part of the contributions function as tax. There is no given level for how strong this link must be in order for insurability to be regarded as sufficient to justify contribution financing. The calculations set out in the following chapter can only be seen as a basis for further discussion.

2.3.4 The premium reflects the expected outcome

According to criterion no. 4 for insurability, the contribution payments (the premium) should correspond to the expected disbursements.

All the insureds are assumed to have a certain positive likelihood (risk) of suffering an insured peril. This likelihood varies from individual to individual, although in practice it can only be assessed and managed for groups of individuals: *risk groups*. The expected benefit payments within a risk group can be calculated by taking account both of the risk of insured perils occur-

[14] In several fields of insurance there is also a *link between the level of income and the risk*. In low-salary groups, for example, the risk of being off work sick or of becoming unemployed is higher than in a higher income layer. This reinforces the redistribution from high-paid to low-paid individuals that follows from the fact that the latter pay lower premiums. In the old-age pension scheme, however, the risk profile is the opposite. The "risk" of living longer, all things being equal, is higher for high income earners than for low income earners, for which reason the latter are to some extent treated less favourably by the system.

ring within the risk group and of the size of the disbursements that follow. If, for the sake of simplicity, we ignore here the size of the benefit in an insurance outcome (= criterion 3), criterion 4 means that the contribution will vary according to the risk of an insured peril occurring. Two levels can be distinguished.

If all the insureds form a common risk group, it is the average risk at system level which is involved. Criterion no. 4 then becomes identical to criterion no. 3, namely that a contribution should be fixed so as to fully correspond to the benefit payments. If groups that have different risk profiles are treated separately, the significant of the criterion is that the contributions are *risk-differentiated*, so that account is taken of the risk profile of each group. In private, voluntary insurances risk-differentiated premiums often occur, e.g. in line with gender and age.

Social insurance covers everyone who has an income from employment or a profit from business activity, *regardless of the level of risk*. Moreover, the contribution rates (premiums) for social insurance are not differentiated in respect of differences in the risk levels of the insureds. This entails a levelling out of economic risks between insured persons *with differing levels of risks* (irrespective of their income). Social insurance is compulsory and differs from private, voluntary insurance mainly in that the former is *redistributive across risk groups*, while the latter is rather to a greater extent *risk-group differentiated*.

An important difference between compulsory and voluntary insurance is that the former makes possible deliberate redistributions to an extent which is difficult to achieve if the contributions are voluntary and the insured persons are well-informed and inclined to maximise their own benefit. The compulsory element of social insurance may in many cases be a necessary condition for high-risk groups to receive insurance cover.

A social insurance may thus combine cover for a given risk with other political ambitions, such as providing the entire population with insurance cover. Another such ambition expressed in the reform of the Swedish old-age pension scheme is that women should not need to pay higher overall contributions than men during their working life in order to receive the same monthly pension. The fact that this ambition entails a redistribution of resources from men to women has been regarded as politically defensible; moreover, it does not pose an obstacle to the old-age pension scheme being judged to be insurable. At the level of the individual, however, private insurances often satisfy this fourth criterion to a greater extent than social insurances.

An assessment of insurability in the financing of social insurance in Sweden could be based, among other things, on estimates of this criterion. Calculations of what proportion of contributions are paid out in the form of benefits to groups with different levels of risk could provide a greater understanding of the redistribution mechanisms of social insurance, which are not always necessarily the ones that are intended. Redistribution effects limit insurability to some extent, though without eliminating it. What is important in this context, however, is that the risk-group levelling nature of social insurance is precisely one of its distinguishing features and should not, in the view of the Social Insurance Agency, serve as a basis for assessing the best way in which to finance it. There is an essential difference between a contribution which finances an insurance that applies to everyone, irrespective of the risk of the contribution, and one, for example, that is levied on incomes that are not covered by the insurance financed.

3 Calculating the tax content of social security contributions

A detailed analysis of what proportion of social security contributions affect the size of future benefit payments would require access to a comprehensive economic model with a high predictive value, including in some cases over long time perspectives. At present nothing of this kind has, however, been developed to suit Swedish circumstances. The analysis in this report is instead based on a relatively simple analysis of the rules of the insurances in combination with data on incomings and outgoings over a period of twelve months as well as data on the income distribution of the population.

The theoretical difference between taxes and contributions can be seen in the link which exists between a contribution and the size of the benefits received by an individual on whose income the contribution is levied. If there is no link at all at individual level between contribution and benefit entitlements, the contribution must be regarded entirely as a tax, otherwise it must be regarded as an insurance premium. How the tax share of the social security contributions can be estimated for those benefits that are financed through social security contributions is discussed in more detail below.

3.1 Model calculations of incomings and outgoings over several periods

One way of calculating the tax content of social security contributions that follows directly from the above definition is to compare the present value of the extra benefit payments that are associated with a marginal increase in income and the increased contributions resulting from this. If we do this for the entire working population, we obtain a measure of insurability (or the tax content) for the social security contributions.

Assume, for example, that paid hours worked by employees during the year increase by the same percentage for everyone, so that the incomes that make up the contribution base increase altogether by SEK 1 billion. At the contribution rates for 2006,[15] employers' contributions would go up by SEK 322.8 million. This increase in income results in an upwards adjustment to the sickness-qualifying income and the pensionable income, which means that future payments of pensions, sickness cash benefit, activity and sickness compensation and other benefits will rise. Providing that we are aware of how large the marginal increases will be and what time profile they have for each and every

[15] The rate for the employer's contribution in 2006 is 32.28 per cent.

one of the types of benefit, they can be expressed in terms of their present value and added together. Given a present value of SEK 125 million, say, the benefit part of the employers' contributions at the margin would be 12.5 percentage points and the remaining part would correspond to a tax rate of 19.78 percentage points.[16]

A calculation of this kind assumes, in practice, the availability of an extremely well-developed model capable of calculating links between demographic trends, employment, income determination, social security contributions and benefits over a number of periods. The model must allow calculations to be made of future benefit payments for the entire population. No such model, however, has been fully developed. The results of the present value calculations also invariably depend largely on the discount rate used.

3.2 Calculations of incomings and outgoings over 12 months

To enable an estimate to be made of the link between social security contributions and benefits at individual level, calculations have been made which are based solely on incoming and outgoing payments over a period of 12 months and on the rules of the social insurance benefits. The starting point has been that social security contributions should be regarded as a contribution insofar as it has not been possible to show that they are taxes.

It has been possible to identify three cases where the social security contribution can be regarded as a tax, i.e. when the contribution

1. is levied on part of the income above the current ***ceiling***
2. is levied on part of the income below the current ***floor***
3. finances a benefit ***being phased out***, for which no or only limited *new* entitlements can be earned.

Based on this definition, we can say that certain parts of the social security contributions amount to taxes rather than contributions.

[16] No account is taken here of the possibility of reducing social security contributions.

3.2.1 Contributions above the income ceiling and below the income floor

All social security contributions are levied in part on an income layer which is not covered by the relevant insurances. This applies, for example, to individuals with incomes above the *income ceilings*. When employers' contributions are levied, not on individual incomes but on the employer's payroll expense, this is a reason for having the contributions levied on all income layers, i.e. in order to simplify administration. The result, however, is that part of the employers' contributions are levied on incomes which do not give rise to corresponding entitlements to benefit payments.

The design of social insurance benefits, most of which contain a guaranteed minimum payment, also means that, in practice, there is a minimum income (or *floor*) qualifying for benefit. Contributions based on incomes below this floor result, in the case of certain types of insurance, in no benefit at all being paid, while in other cases the result is that the insured person receives a guaranteed minimum amount, i.e. the size of the benefit is not affected.

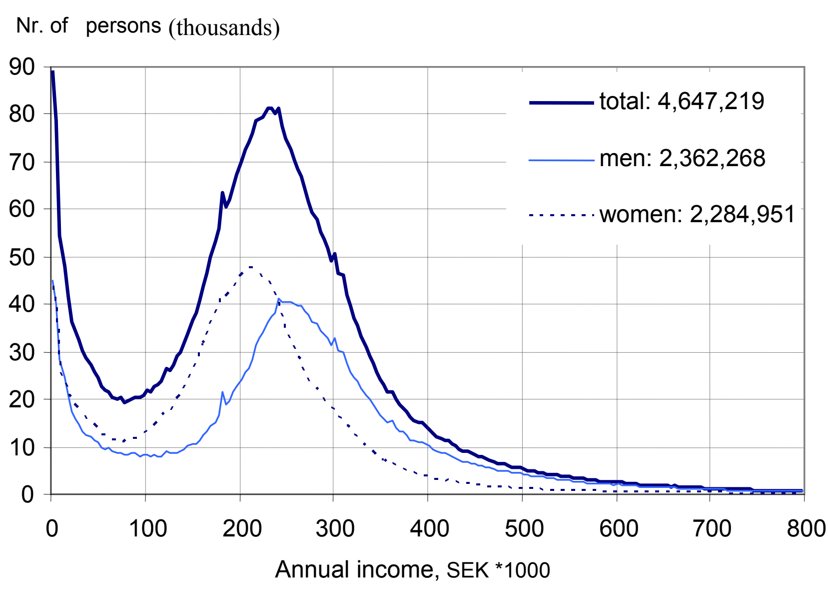
In the case of individuals whose total income is below the floor, each contribution is to be regarded as tax, since it does not confer any entitlements over and above what they would otherwise have received. In the calculations of the tax share *at the margin* (see below), it is the individual's total income which comes into play. For incomes below the floor (which do not end up above it in the event of a marginal increase in income), the contribution is to be regarded as tax, while the tax share is zero for contributions on incomes which lies between the floor and the ceiling, both before and after a marginal increase.

In individuals, too, with incomes above the floors of the insurances, however, that part of the incomes that lies below the floor is regarded as amounting to tax through an "inverted" marginal perspective. The starting point is that the entitlement to a benefit would decrease if the income and the contributions fell, but only as far as to the floor. Additional reductions would not affect benefit entitlement, for which reason contributions levied on these parts of income are here regarded as having properties which resemble those of tax. This perspective is the one that has been selected for the calculations of the *average* tax share of the contributions (see below).

In order to estimate what proportion of social security contributions lie above the income ceiling and below the income floor for a given benefit, the level of each one of these floors and ceilings must be calculated. This has been done on the basis of the benefit rules for 2006. The levels of the ceilings and floors are then matched, following an adjustment in the price level, to details at individual level of pensionable incomes in the 2004 income year.[17] For each individual, the income from employment, income from business activities and transfer incomes (sickness cash benefit, parental cash benefit, unemployment benefit etc.) are put together.

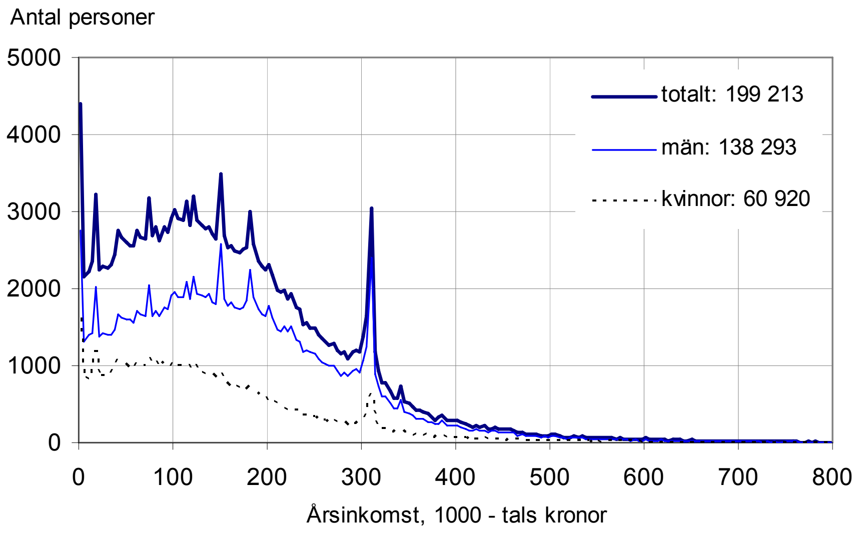
The income data in the calculations cover a total of just over 4.8 million individuals born in 1938 and later with an income from employment or self-employment. On the other hand, data for just under 549,000 persons (236,000 men and 313,000 women) have been excluded from the calculations, the reason being that their income consists exclusively of transfers. The incomes of the group are therefore not included in the material for other social security contributions than national old-age pension contributions and general pension contribution. Half of this group are persons aged between 40 and 64, with an average annual income of around SEK 124,000. Other age groups have lower average annual incomes.

Figure 2a. Incomes in 2004, including transfers, for *employees* born in 1938 and later (max SEK 800,000)



Of the remainder, by far the majority (just over 4.6 million) derived their main income from employment ("employed"), while the rest (just over 199,000) derived the main part of their income from business activities ("self-employed"). Data on pensionable income at individual level, including transfers, have been used.[18] The group "employed", with annual incomes of less than SEK 80,000 are represented in Figure 2a by the first part of the curve with a negative slope. This group consists of just over 698,000 persons, of whom 77 per cent are below the age of 29, 19 per cent are aged 30–64 and 4 per cent are aged 65 or 66. For the group as a whole, 4 per cent of the income comes from transfers. The closer to SEK 80,000 the annual incomes come for these low-income earners, the larger is the share of transfers. All in all, we can say that the majority of persons with incomes in this range are young persons who have yet to establish themselves in the labour market.

Figure 2b. Incomes in 2004, including transfers, for *self-employed persons* born in 1938 and later (max SEK 800,000)



Source: The Social Insurance Agency's register of pensionable income

[18] We make the assumption that the pensionable income is a good approximation to the sickness-qualifying income (SGI), on which sickness cash benefit and unemployment benefit, among other benefits, are based.

Figure 2b shows the income distribution of self-employed persons in 2004. One difference that can be seen between employed and self-employed persons is that the (tax-assessed) incomes of the latter are on the whole much lower. Incomes of around SEK 150,000 in 2004 were most common among the self-employed, while incomes among employed persons were around SEK 230,000. A bigger part of the self-employed contributions thus lies below the floors of the insurances than among the employed population, while a lesser part lies above the ceilings.

The reason why the income layer SEK 308,000 – 312,000 stands out so clearly among persons whose main income is derived from business activities is presumably that this income, after a deduction for the basic allowance in the tax legislation, corresponds closely to both the lower cut-off point for the payment of national taxes (SEK 291,800) and the income ceilings for sickness and parental insurance (SEK 294,750) and that there may therefore be a reason for self-employed persons to pay themselves this level of salary/income, while the profit in terms of private finances of higher declared incomes then falls and can be seen as less advantageous than, for example, reinvesting profit in the company. It is notable that no similar phenomenon can be seen in the income layer SEK 340,000 – 344,000, which corresponds to the income ceiling in the old-age pension scheme.

In the calculations a summary is made of the proportion of all incomes above the ceiling and below the floor for each benefit, with employed and self-employed persons accounted for separately.

3.2.2 Benefits being phased out

Two benefits that are financed through social security contributions, namely supplementary pension (formerly ATP with a supplement for national basic pension) and widow's pension, are being phased out. After 2018 no additional entitlements to supplementary pension (and thus, formally speaking, widow's pension as well) can be earned. However, both pension benefits will be paid under the present rules until the middle of the century. During the phasing-out period annual contributions will exceed the value of entitlements earned during the year.

At present only a very small number of individuals can earn additional entitlements to widow's pension. In 2005 some 80 per cent of the revenues from the survivor's pension contribution were used to finance widow's pensions, and as the survivor's pension contribution cannot be linked in this section to new entitlements, we have chosen in the empirical section[19] to refer to this contribution as tax.

New supplementary pension entitlements, on the other hand, can still be earned by gainfully employed persons born before 1954. It is also possible on an annual basis to calculate the difference between contributions that relate to supplementary pension, i.e. contributions that do not confer entitlement to income pension, and the value of the new (supplementary) pension points that have been earned. This difference is presented below as a tax share of the contributions relating to the supplementary pension, in line with the definition of taxation employed in this study. Some comments on this should be added.

A full dividend on accrued pension points in the supplementary pension scheme requires income from employment above a certain minimum level for at least 30 years. The level of compensation is defined by pension points that have been calculated according to the 15 best income years. These rules can result in a large dividend for contributions that have been paid in for a limited number of years, but generally only a small or no dividend on contributions that are paid at the end of one's working life. A great many of those born before 1954 have their 15 best earnings years behind them. Pension contributions from these persons do not then give rise to new entitlements in the older pension scheme. The contributions could be regarded as payment "in arrears" for previously acquired pension rights, although since these entitlements do not depend on such contributions, the latter function, in practice, as tax.

The fact that the national supplementary pension (ATP) could be earned for a limited number of years, while at the same time the system was (and still is) dependent for its financing on contributions throughout one's working life, has had the consequence that the link between contributions and disbursed benefits became relatively weak in this system. Some individuals have paid in more in contributions than what they will receive by way of pension, and for them part of the contributions are similar to taxes. In the case of others, the situation is the opposite, i.e. they can be said to receive a subsidy from the scheme. From 2018 all old-age pension contributions between the ceiling and the floor will carry a pension right in regard to income pension and premium pension, which means that the supplementary pension in this sense will have been phased out. That the contributions will also be required after then in order to finance supplementary pensions follows from the fact that the reformed Swedish pension scheme is a redistributive system, which does not, however, in itself curtail insurability.

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[19] See also under the headings "Pension contributions" and "Survivor's pension contribution" in section 5.

3.3 National old-age pension contributions

The national old-age pension contributions which are based on benefit payments (sickness cash benefit, unemployment benefit etc.) are financed through the same social security contributions as the benefits themselves. The contributions are adjusted so that they are only levied on incomes between income floors and income ceilings. The part of the national old-age pension contributions used to finance the difference between paid contributions and earned entitlements to supplementary pension (*a benefit being phased out*) should, however, be regarded as a tax. This tax share of the national old-age pension contributions functions, in practice, as a tax share of the social security contributions designed to finance them.

3.4 Average and marginal tax shares

We can look at insurability in the link between social security contributions and the benefits they are designed to finance from at least two perspectives – by considering that part of the total contributions that can be compared to tax and by measuring the same proportion of the additional contribution payment that follows from a marginal increase in the contribution base. The average proportion brings knowledge from a system perspective of what proportion of the social insurances are financed through tax, while the marginal proportion can tell us something about what effect the social security contributions have on the individual's economic incentives. In this report calculations have been made from both perspectives.

The tax share of marginally increased paid contributions has been calculated by adjusting upwards all individual incomes (excluding transfers) by one per cent (1%). These individually increased incomes are then matched in the same way as the basic alternative to ceilings and floors and those parts of the incomes that lie above the ceilings (below the floors) are accumulated. For each ceiling (and floor), the difference is then calculated between accumulated incomes above the ceilings (below the floors) following the increase in income, and accumulated incomes above the ceiling (below the floor) for the basic alternative. These differences are then divided by the total income difference between the two income alternatives. The ratios are interpreted as marginal tax shares of the contributions (for details, see the box "how we have calculated").

4 Results – how much contribution, how much tax?

The calculations show that around 35 per cent of the total social security contributions and around 47 per cent of the extra contributions in the event of a marginal increase in income have properties which resemble those of tax. At the margin this tax share is explained primarily by the fact that large groups have an income above the ceilings for the different types of insurance. Other reasons are that certain contributions finance, among other things, benefits that are being phased out, where no or few new entitlements can be earned and that certain individuals have such low incomes that contributions, even in the event of a marginal increase in income, end up below the floors.

This chapter sets out procedures and results for the calculations that have been made in order to estimate the tax portion of social security contributions. The results are presented for one contribution at a time.

The proportions of both incomes and individuals that lie below each floor or above each ceiling are summarised in Table 3. The sections below show how the levels of the ceilings and floors have been calculated.

Table 3. Proportion of individuals and incomes in each range among all those with income from employment in 2004

	Level in SEK per year (2004 prices)	Average proportion (%) below the floor/above the ceiling of Individuals	incomes	Marginal proportion (%) of incomes
*Floor for sickness cash benefit**	9,432	4.0	0.1	–0.04
*Floor for old-age pension**	16,624	6.0	0.2	–0.2
Floor for parental cash benefit	81,298	15.7	31.5	2
Floor for children's pension	95,959	16.8	36.4	2.4
Floor for unemployment fund	102,952	18.3	39.2	2.9
Floor for sickness/activity compensation	147,375	25.0	54.2	5.8
Ceiling in unemployment fund, days 1–100	234,860	45.9	22.4	72.6
Ceiling in sickness and parental cash benefits	294,750	24.8	13.5	48.3
Ceiling in old-age pension	341,361	14.9	9.7	34.2
*New ceiling in daily allowances***	393,000	9.4	7.0	25.0

Source: The Social Insurance Agency's register of pensionable income (PGI)

* Only incomes of individuals whose total income is below the floor

** The proposed sickness and parental insurances for July 2006

4.1 The sickness insurance contribution

The sickness insurance contribution was levied at a rate of 10.15 per cent in 2005 and 8.64 per cent in 2006. The contribution finances sickness cash benefit, earnings-related sickness and activity compensation, and a number of smaller benefits. Like other social security contributions, apart from that for old-age pension, sickness insurance contributions also finance the national old-age pension contributions corresponding to the pension right to which the respective transfers give rise.

In order to be entitled to *sickness cash benefit*, the insured's qualifying income must amount to at least 24 per cent of the price base amount. In 2004 this was equivalent to SEK 9,434, which is the floor that has been used in the calculations of sickness cash benefit and other daily allowances included in it. If the qualifying income exceeds this lower threshold, on the other hand, the benefit is paid from the first krona. Sickness insurance contributions based on lower incomes than this provide no benefit at all and, from the perspective of the individual concerned, resemble taxes. For higher incomes, however, no floor effect arises.

With a marginal increase in annual income, from just below 24 per cent of the price base amount to just above it, the effect of the disappearance of the floor effect exceeds the extra contribution payment and the overall effect is a negative tax share. This effect is not apparent, however, from the result of the sickness insurance contribution, since it also finances the benefits sickness and activity compensation, with another (higher) floor than the sickness cash benefit.

Sickness and activity compensation have a minimum guaranteed payment, which means that the floor here is significantly higher. Full sickness compensation is calculated as 64 per cent of the *assumed* income. The level for guarantee compensation is 2.4 price base amounts. The income below which marginal income changes do not affect the level of entitlement to sickness compensation is therefore calculated to be SEK 147,375.[20] This calculation is a simplified one since the assumed income is not based only on the income for one year.

For the calculations of the floor effect for the entire sickness insurance contribution, use is made of the floor for sickness cash benefit for part of the contribution corresponding to daily allowances as a proportion of the total expenditure and the floor for sickness and activity compensation for the rest of the contributions paid.

The ***ceiling*** in sickness insurance is 7.5 price base amounts, corresponding to an annual income of SEK 294,750 in 2004. Compensation in the form of rehabilitation cash benefit, allowance for care of close relatives and pregnancy cash benefit corresponds to sickness cash benefit.

The results of the calculations are summarised in Table 6. Of the total incomes in 2004, around 32 per cent were below the weighted floor in sickness insurance, while around 14 per cent were above the ceiling. Just under 0.1 per cent of incomes were below the floor for the daily cash benefits (sickness cash benefit etc.), while 54 per cent were below the floor for sickness and activity compensation.

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[20] 2.4 * Price base amount 2004 / 0.64 = 147,375

Table 4. Tax share of the sickness insurance contribution

SEK m (column 1) or per cent	*Incoming payments*	*Above ceiling 7.5 PBA (10 PBAs)*	*Below floor*	*National old-age pension contribution*	*Phase-out of benefits*	*Proportion in total* (with a new ceiling)*
On average	109,253	13.5 (10.8)	31.8	0.7	–	45.7 (43.1)
Employer's contribution	106,661	13.7 (11.0)	31.6	0.7	–	45.7 (43.0)
Self-employed contribution	2,592	8.6 (6.8)	38.9	0.7	–	47.9 (46.1)
At the margin		48.3 (38.7)	3.4	0.0	–	51.7 (42.0)
Employer's contribution		48.8 (39.0)	3.1	0.0	–	51.9 (42.1)
Self-employed contribution		34.5 (26.5)	12.9	0.0	–	47.4 (39.4)

* This proportion is less than the sum of the various effects since an adjustment has been made to avoid duplicate calculations.

If we look at the tax share of a marginal increase in income and thus in the contribution, the picture is entirely different. The proportion which ends up below the floor is negative, since the effect of individuals just below the floor coming up above it outweighs the effect of the rise in incomes below the floor. At the same time about 48 per cent of the extra incomes end up above the ceiling.

The increase implemented in July 2006 in the ceiling in the daily cash benefits involved a reduction of about 10 percentage points in the proportion of the sickness insurance contribution which at the margin resembles tax. For the daily cash benefits, the increase means that about half of the tax share disappears.

How we have calculated

The starting point is information about the pensionable incomes of 4,846,432 inhabitants in 2004, of whom 4,647,219 are "employed" and 199,213 "self-employed". The details of the employed persons are given here. They had a total income of SEK 1,095 bn.

** 150 / 1,095 bn = **13.7** per cent of the incomes lie above the ceiling.*

** 0.9 / 1,095 bn = 0.08 per cent are incomes of individuals whose total income is below the floor for daily allowances.*

** 590 / 1,095 bn = 54 per cent lie below the floor for sickness and activity compensation.*

** Weighted with each benefit's share of total expenditure in 2005 lies **31.6** per cent below the floor in the insurance.*

** SEK 106,661 bn was paid in 2005 as employees' contributions for sickness insurance.*

** 12,341 / 106,661 = 11.6 per cent amounted to expenditure for national old-age pension (SÅP).*

** 0.116 * 6.4 (= tax share of SÅP) = **0.74** per cent tax for the sickness insurance contribution.*

** 13.7 + 31.6 + (1 – 0.137 – 0.316) * 0.74 = **45.7** per cent for the total tax share.*

** When the total income (minus transfers) is adjusted upwards by one per cent, the extra total income is SEK 10.1 bn.*

** 4.9 / 10.1 = **48.8** per cent end up above the ceiling.*

** The net effect is that –0.004 / 10.1 = –0.04 per cent end up below the floor for daily cash benefits and 0.53 / 10.1 = 5.3 per cent for sickness/activity compensation*

** In total, this is equivalent to **3.1** per cent below the floor.*

** When only income from employment is adjusted upwards, the direct effect is zero on the national old-age pension contribution*

** 48.8 + 3.1 = **51.9** for the total marginal tax share.*

Altogether, the calculations show that just over half an additional paid contribution can be regarded as tax.[21] The lower incomes of the self-employed mean that their overall tax share is somewhat higher than that of employed persons in the calculation of the average (where the proportion below the floor is most important) and somewhat lower in the marginal calculation (where the ceiling effect is most important). These differences should persist even following the proposed increase in the income ceiling.

4.2 The work injury contribution

Work injury contributions have been made since 2003 at a rate of 0.68 per cent. They finance benefits under the Work Injury Insurance Act and similar older benefits.

The ***ceiling*** in work injury insurance corresponds to that in sickness insurance.

The ***floor*** in work injury insurance corresponds to that in the sickness cash benefit, i.e. 24 per cent of the price base amount (SEK 9,434 in 2004). This floor differs from others in that there is no minimum sickness cash benefit for individuals with incomes below the floor, while the qualifying income counts from the first krona for persons with incomes above the floor.

[21] It may be pointed out here that we have chosen to adjust the incomes of all individuals upwards by one per cent. This means that the proportion of the total incomes that lies above the ceiling increases more quickly than if the incomes of all individuals had been increased by the same nominal amount. The trend selected here, however, should probably be regarded as more reasonable.

Table 5. Tax share of work injury insurance

SEK m (column 1) Or per cent	*Incoming payments*	*Above ceiling*	*Below floor*	*National old-age pension contrib.*	*Phase-out of benefits*	*Proportion in total**
On average	7,284	13.5	0.1	0.3	0.0	13.9
Employer's contribution	7,065	13.7	0.1	0.3	0.0	14.0
Self-employed contribution	219	8.6	0.1	0.3	0.0	8.9
At the margin		48.3	–0.04	0.0	0.0	48.3
Employer's contribution		48.8	–0.04	0.0	0.0	48.7
Self-employed contribution		34.5	–0.03	0.0	0.0	34.5

* This proportion is less than the sum of the various effects since an adjustment has been made to avoid duplicate calculations.

The results for the ***ceiling*** in the insurance correspond to those in sickness insurance.

The low ***floor*** is of negligible significance in the calculations of the average and, through its special design, gives a negative tax item in the marginal calculations.[22]

4.3 The labour market contribution

Labour market contributions were made in 2004 at a rate of 3.7 per cent of the base and since 2005 have been made at a rate of 4.45 per cent. The contribution finances expenditure on unemployment benefit, activity support and a number of smaller benefits.

The ***ceiling*** in the insurance follows from the highest nominal daily allowance, which is SEK 730 in 2006.[23] A daily allowance in this insurance is pay-

[22] See note 26

able for 260 days a year and the degree of compensation between ceiling and floor is 80 per cent of the income. The ceiling is therefore set at SEK 234,860.[24]

The ***floor*** is calculated in the same way on the basis of the lowest compensation (SEK 320) at SEK 100,295.

Table 6. Tax share of the labour market contribution

SEK m (column 1) or per cent	*Incoming payments*	*Above ceiling*	*Below floor*	*National old-age pension contrib.*	*Phase-out of benefits*	*Proportion in total**
On average	39,841	22.4	39.2	0.5	0.0	61.8
Employer's contribution	39,791	22.6	38.9	0.5	0.0	61.7
Self-employed contribution	50	15.1	51.2	0.5	0.0	66.4
At the margin		72.6	2.9	0.0	0.0	75.5
Employer's contribution		73.2	2.7	0.0	0.0	75.9
Self-employed contribution		50.2	10.5	0.0	0.0	60.7

* This proportion is less than the sum of the various effects since an adjustment has been made to avoid duplicate calculations.

As the ceiling is lower and the floor higher for this insurance than for other insurances, only about 38 per cent of total incomes lie in the range between the two. In addition, just under one per cent of the contribution is used to finance the phasing out of the supplementary pension via the national old-age pension contribution. At a marginal increase of the contribution payments,

[23] This is the maximum payment in the first 100 days of a period of unemployment. After this period the maximum payment is SEK 680 a day. However, we have only made use of the higher amount and our estimates therefore somewhat underestimate the total ceiling effect on the labour market contribution.

[24] The ceiling is calculated as 730 * 260 / 0.8 * PBA2004 / PBA2006 = SEK 234,860.

just over 72 per cent of the incomes lie above the ceiling in the insurance and should therefore be regarded as tax. Only one-quarter of the contribution payments at the margin affect the size for employed persons of the payable benefits. For the self-employed, this figure is around 40 per cent.

4.4 The survivor's pension contribution

Survivor's pension contributions are levied at a rate of 1.7 per cent of the contribution base. Just over 90 per cent of the revenues from them are used to finance widow's pension benefit. As this benefit as a whole is being phased out, the ***floor*** for the survivor's pension contribution is calculated according to the rules for children's pension,[25] the basic level of which (survivor's support for children) is 40 per cent of the price base amount. For children below the age of 12, children's pension amounts to 35 per cent of the annual income pension the child's deceased parents would have received on the basis of the actual pension capital and an assumed pension capital calculated from the time of death up to the age of 64. Pension right is earned at the rate of 18.5 per cent of the pensionable income. We assume that the earning period (actual and assumed) is 40 years and that the divisor is 15.81.[26] The floor for children's pension is then SEK 95,959.[27]

As both children's pension and adjustment pension are based on the income pension of the deceased, the maximum pensionable income (the ***ceiling)*** is the same as in the old-age pension scheme.

Widow's pension, which corresponds to just over 90 per cent of total expenditure, is a ***benefit being phased out***. The rules for this pension mean that contributions levied on incomes of women do not qualify for pension. In the case of men's incomes, the opportunity to earn new entitlements depend on whether the wife was born in 1929 or before, in 1930–1944 or in 1945 and later. For the first group, where the wife was at least 75 in 2004, the number of husbands not yet accruing supplementary pension is assumed to be negligible. For the second group, i.e. women born between 1930 and 1944, their spouses can indeed theoretically still earn supplementary pension entitlements, although in most cases they have already earned their 15 best years and their entitlements do not, in practice, increase. For women born in 1945 and later, no new entitlements can be earned as only what the spouse has earned up to and including 1989 serves as a basis for widow's pension. On

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[25] We ignore here the smaller benefit adjustment pension.

[26] Which is the established divisor calculated for the means of the old-age pension system at the age of 65 for persons born in 1941.

[27] $(40 / 35) * (15.81 / (40 * 0.185)) * PBA2004 = 95{,}959$

the whole, therefore, *no* new entitlements can be earned, for which reason that part of contributions which finances widow’s pension in these calculations should be regarded as tax.

Table 7. Tax share of the survivor’s pension contribution

SEK m (column 1) Or per cent	*Incoming payments*	*Above ceiling*	*Below floor*	*National old-age pension contrib..*	*Phase-out of benefits*	*Proportion in total**
On average	18,210	9.7	36.2	0.0	80.3	89.3
Employer’s contribution	17,661	9.8	35.9	0.0	80.3	89.3
Self-employed contribution	549	5.9	47.7	0.0	80.3	90.9
At the margin		34.2	2.5	0.0	80.3	87.5
Employer’s contribution		34.5	2.3	0.0	80.3	87.6
Self-employed contribution		21.4	8.7	0.0	80.3	86.2

* This proportion is less than the sum of the various effects since an adjustment has been made to avoid duplicate calculations.

For this contribution, the dominant effect is the phasing out of the widow’s pension. Assuming that no new entitlements to widow’s pension are earned simplifies matters, but is probably not very far from the truth. The contribution therefore is predominantly used to finance benefits for which the entitlements were mainly earned up to the end of the 1980s, without giving rise to corresponding future benefit payments. Altogether, almost 90 per cent of paid survivor’s pension contributions may be considered to amount to tax under the definition employed here.

The contributions studied so far all finance benefits that cover insurable risks. They are also all financed via the national budget, with the risks of lack of stability for the insurance conditions that this entails. The calculations of what proportion of the contributions affect the size of potential benefit payments are intended in this context to provide a further basis for assessing how the benefits should be financed.

All the calculations, however, have also been made for the old-age pension scheme and parental insurance to enable something to be said about the tax share of the total social security contributions and also to enable a discussion to take place here of the effect of the levels of the various earning ceilings.

4.5 Old-age pension contribution

Old-age pension contributions are levied at a rate of 10.21 per cent of the contribution base and are transferred mainly to the National Pension Funds and the premium pension scheme.[28] From these are financed the benefits supplementary pension (previously ATP with a supplement for national basic pension), income pension and premium pension.

The ***ceiling*** for pension points in the new pension scheme is 8.07 times the income base amount (SEK 341,361 in 2004). A contribution levied on higher incomes than this should therefore be regarded as tax.

There is also a ***floor*** for accruing pension points as annual incomes less than 42.3 per cent of the price base amount (SEK 16,624 in 2004) do not give any pension capital. If the pensionable income exceeds this lower threshold, the benefit is paid from the first krona. Old-age pension contributions based on lower incomes than this give no benefit at all and, from the perspective of the individual concerned, resemble taxes. For higher incomes, however, no floor effect arises.[29]

In practice, the calculation made here underestimates the proportion of the old-age pension contribution that does not result in increased pension rights as it is levied on low incomes. The reason is that the benefits guarantee pension and housing supplement for pensioners (BTP) supplement the earnings-related old-age pension for individuals with a low pension. In this way some minimum pension is guaranteed below which different levels of earnings-related pension give the same total pension. However, it has been judged impossible to calculate this floor satisfactorily solely on the basis of earnings over one year. The reason is that guarantee pension and also to a large extent

[28] For a more detailed description of social security contributions, see the appendix.

[29] With a marginal increase in annual income, from just under 42.3 per cent of the price base amount to just over it, the effect of the disappearance of the floor effect exceeds the extra contribution paid and the overall effect is a negative tax share.

BTP are based on the pensionable income, which is itself based on the income throughout one's life.

Supplementary pension is a ***benefit being phased out*** since it is gradually being replaced by the new income pension and premium pension. Among those gainfully employed who were born in 1953 and earlier and who therefore accrue pension points for supplementary pension, there is an increasingly large proportion every year who have their 15 best earning years behind them and who therefore do not increase their future supplementary pension. At the same time supplementary pension accounts for the greater part of the pension disbursements for several years ahead. The difference between paid contributions for supplementary pension for those who are gainfully employed and the value of the additional pension rights to which this gives rise was SEK 13.1 billion in 2004.[30] This is equivalent to 6.4 of the total basic old-pension contribution, national old-age pension contributions and general pension contribution.[31] The proportion of a marginally increased contribution that is used to finance the phasing out of the supplementary pension is probably at least as high. This effect decreases, however, from one year to another and will disappear completely from 2017, when everyone who is able to earn supplementary pension has reached the age of 65.

The results of the calculations are shown in Table 8.

[30] The Social Insurance Agency, *Pensionssystemets årsredovisning 2005* (spring 2006).

[31] See the previous argument in Chapter 4 about whether this 13.1 billion should be regarded as part of regular financing of the ATP system intended from the outset or whether the amounts can be regarded as a form of tax.

Table 8. Tax share of old-age pension contribution

SEK m (column 1) or per cent	*Incoming payments*	*Above ceiling*	*Below floor*	*National old-age pension contrib.*	*Phase-out of benefit*	*Proportion in total**
On average	109,585	9.7	0.2	–	6.4	15.6
Employer's contribution	106,070	9.8	0.2	–	6.4	15.7
Self-employed contribution	3,515	5.9	0.3	–	6.4	12.2
At the margin		34.2	-0.2	–	6.4	38.2
Employer's contribution		34.5	-0.2	–	6.4	38.6
Self-employed contribution		21.4	-0.9	–	6.4	25.6

* This proportion is less than the sum of the various effects since an adjustment has been made to avoid duplicate calculations.

Of total incomes in 2004, around 0.2 per cent lay below the floor for the old-age pension scheme, while just under one-tenth lay above the ceiling. When we look at the tax share of a marginal increase in the contribution, the picture changes entirely. The proportion of the extra contribution payments that lie below the floor becomes negative since the effect of individuals just below the floor coming up to it outweighs the effect of a rise in the incomes below the floor. At the same time about 35 per cent of the extra incomes end up above the ceiling. Only 15 per cent of the population born in 1938 and later had incomes above the ceiling in the old-age pension scheme in 2004. As a group, however, the incomes of these individuals corresponded to about 35 per cent of the combined incomes for all individuals of this age.

How we have calculated

The starting point is information about the pensionable incomes of 4,846,432 inhabitants in 2004, of whom 4,647,219 are "employed" and 199,213 "self-employed". The details of the employed persons are given here. They had a total income of SEK 1,095 bn.

** 107 / 1,095 bn =* ***9.8*** *per cent of the incomes lie above the ceiling.*

** 2.0 / 1,095 bn =* ***0.2*** *per cent lie below the floor.*

** 13.1 / 203.8 =* ***6.4*** *per cent, used to finance the phasing out of the supplementary pension.*[32]

** 9.8 + 0.2 + (1 – 0.098 – 0.02) * 6.4 =* ***15.7*** *per cent for the total tax share.*

** When the total income (minus transfers) is adjusted upwards by one per cent, the extra total income is SEK 10.1 bn.*

** 3.47 / 10.1 =* ***34.5*** *per cent end up above the ceiling.*

** The net effect is that –0.018 / 10.1 =* ***–0.2*** *per cent end up below the floor.*

** The proportion used at the margin to finance the phasing out of supplementary pension is fixed at 6.4 per cent.*

** 34.5 – 0.2 + (1 – 0.345 + 0.002) * 6.4 =* ***38.6*** *for total marginal tax share.*

It is difficult to say what proportion of an extra contribution payment would be used to finance supplementary pension without new rights being earned. The proportion has been set here at the same level as in the calculation of the average.

Altogether, the calculations show that about 40 per cent of an extra contribution payment at the margin can be regarded as tax.

4.6 General pension contribution and national old-age pension contribution

General pension contributions are levied at a rate of 7 per cent on individual salaries up to the ceiling in the old-age pension scheme. National old-age pension contributions are paid into the National Pension (AP) Funds by the state and are levied on taxable transfers, among other things. For the latter, the contribution rate is 10.21 per cent.[33] These contributions are not paid in on income layers above the ceiling or below the floor in the old-age pension scheme. Both contributions are, however, used to finance the phasing out of the supplementary pension.

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[32] The difference between what is paid in for supplementary pension and what new entitlements are earned through the total of basic old-age pension contribution, general pension contribution and national old-age pension contribution.

[33] 18.5 per cent for contributions for sickness and activity compensation.

Table 9. Tax share of general pension contribution and national old-age pension contribution

SEK m (column 1) Or per cent	*Incoming payments*		*Above ceiling*	*Below floor*	*National old-age pension contrib.*	*Phase-out of benefits*	*Proportion in total**
	National pension contrib.	*National old-age pension contrib.*					
On average	74,762	19,487	0.0	0.0	0.0	6.4	6.4
At the margin			0.0	0.0	0.0	6.4	6.4

For both national pension and national old-age pension contributions, the tax share is just over 6 per cent. Contributions which finance benefits on which national old-age pension contributions are levied therefore have an extra tax effect. The contribution to the total tax shares for other social security contributions from the national old-age pension contributions can vary, depending on which benefits each contribution finances, as shown in the results in the respective tables.

4.7 The parental insurance contribution

Parental insurance contributions are levied at a rate of 2.2 per cent of the contribution base. Just over 80 per cent of the revenues from the contributions are used to finance parental cash benefit on the birth of a child and just under 20 per cent to finance temporary parental cash benefit. If we leave out of consideration the fact that parenthood is not an insurable risk and regard the parental insurance contribution as one of a number of social security contributions, the tax shares can be calculated on the following assumptions:[34]

The ceiling in parental insurance corresponds to that in sickness cash benefit, i.e. an annual income of SEK 294,750 in 2004.

The ***floor*** in parental insurance has been divided into two parts. For that part of the parental insurance contribution which finances temporary parental cash benefit, the floor is the same as for sickness cash benefit, i.e. 24 per cent of

[34] No account is taken here of the fact that almost one-fifth of every age cohort remain childless and so cannot receive parental cash benefit. Temporary parental cash benefit for the care sick children, however, is payable to those who refrain from working for this purpose, irrespective of the extent of their connection with the child.

the price base amount (SEK 9,432 in 2004). The remaining approximately 80 per cent of the parental insurance contribution finances parental cash benefit on the birth of a child, and here the floor is higher. In March 2006 the minimum level was SEK 180 a day, which means that the floor in this section has been taken to be SEK 81,298 at 2004's price level.[35]

Table 10. Tax share of parental insurance contributions

SEK m (column 1) Or per cent	*Incoming payments*	*Above ceiling 7.5 PBA (10 PBA)*	*Below floor*	*National old-age pension contrib.*	*Phase-out of benefits*	*Proportion in total* (with new ceiling)*
On average	23,561	13.7 (7.0)	26.0	0.6	–	40.1 (33.5)
Employer's contribution	22,856	13.9 (7.1)	25.8	0.6	–	40.1 (33.3)
Self-employed contribution	705	9.4 (4.2)	34.8	0.6	–	44.6 (39.4)
At the margin		48.3 (25.0)	1.7	0.0	–	51.0 (26.6)
Employer's contribution		48.8 (25.3)	1.5	0.0	–	50.3 (26.8)
Self-employed contribution		34.5 (15.2)	5.3	0.0	–	39.8 (20.6)

* This proportion is less than the sum of the various effects since an adjustment has been made to avoid duplicate calculations.

For the parental insurance contribution, the ceiling effect accounts for that part of the tax share at the margin that overshadows everything else. In the event of an increase of the ceiling to 10 price base amounts, therefore, this calculated tax share would fall to around half.

[35] (180 * 360 / 0.8) * PBA2004 / PBA2006 = 81,298

4.8 Tax share of employers' and self-employed contributions in total

The overall tax share is shown in the following table.

Table 11. Tax share of employers' and self-employed contributions*

SEK m (column 1) Or per cent	*Incoming payments*	*Above ceiling*	*Below floor*	*National old-age pension contrib.*	*Phase-out of benefits*	*Proportion in total***
On average	340,677	11.3	18.5	0.3	6.4	34.6
Employer's contribution	332,048	11.5	18.6	0.3	6.3	34.7
Self-employed contribution	8,629	6.0	18.0	0.3	7.7	30.1
At the margin		41.3	1.6	0.0	6.4	46.5
Employer's contribution		41.7	1.5	0.0	6.3	46.8
Self-employed contribution		24.4	4.6	0.0	7.7	34.4

* Excluding general pension contribution.

** This proportion is less than the sum of the various effects since an adjustment has been made to avoid duplicate calculations.

Employers' contributions are levied at the rate of 32.28 per cent and self-employed contributions at 30.71 per cent of the respective contribution base, of which 4.4 percentage points is made of the general salary contribution. The tax shares in Tables 4–11 relate to employers' and self-employed contributions *excluding* the general salary contribution (and general pension contribution), i.e. at the contribution rates 27.88 and 26.31 per cent respectively.

The average tax content of these "net contributions" can be put at around 35 per cent. The tax content of the increased contributions levied in the event of a marginal increase of the contribution base is higher, around 47 per cent.[36]

[36] A "marginal rate" of 50 per cent has also been used as a rule of thumb by the Ministry of Finance, including in connection with adjustments to the special employer's contribution following the tax reform of the 1990s.

5 Summary and discussion

5.1 Social insurance, redistribution and insurability

In Sweden, social insurance provides basic financial support for the majority of citizens and is also a significant part of the national economy. Creating and maintaining the confidence of the public in social insurance is an important task for both political decision-makers and for the administration of social insurance. The Social Insurance Agency has pointed out in various contexts that this task is made easier by having **transparent** financing of insurance and **stable insurance conditions**. The Swedish Government has also emphasised in its terms of reference to the Social Insurance Commission (Dir 2004:129) that financing is one of the areas to be looked into. In one of the Commission's latest reports,[37] a discussion takes place of whether sickness insurance would benefit from greater financial autonomy, whether its balance should be kept below the expenditure ceiling and how surpluses and deficits affect those who are insured.

One basic question is the extent to which social insurance redistributes resources between different groups. Part of the idea underlying social insurance is that it should be **redistributive across risk groups**. This is achieved through the insurance being compulsory and having uniform and risk-independent rules governing how contributions are made from the incomes of the insured. The intended effect is that resources are redistributed from groups at high risk of suffering events whose consequences the insurance is designed to protect against to groups at low risk. As the risk of falling ill, becoming unemployed or suffering a work-related injury is higher for low-income earners than for high-income earners, the redistribution between risk groups for these insurances also involves some measure of income equalisation.

This income-levelling effect is strengthened by the fact that the benefits are limited by earnings-related floors and ceilings, while social security contributions are made from the whole of the income. Determining a desirable degree of income levelling in the various parts of social insurance requires a political standpoint based on information about the extent of the redistributive effects of the insurance. These effects may be compared to the often used, though

[37] *Socialförsäkring på egna ben, Samtal om socialförsäkringen Nr 8*, Social Insurance Commission

somewhat vague, concept of **insurability**. The degree to which the financing of social insurance is insurable is assessed in this report by estimating the **tax content** of social security contributions.

5.2 The total payments each year exceed the payments of the benefits

Every year social security contributions in Sweden generate larger incomings than outgoings for the benefits they are required to finance by law. As these "surpluses" are not transferred to any special fund, they instead strengthen the national budget balance and are utilised in practice in the same way as taxes. These surpluses are reported annually in the Social Insurance Agency's budget documentation to the Government. The Social Insurance Agency in this context also makes recommendations about adjustments to contribution rates so as to achieve better correspondence with expenditure trends. In the calculations presented in this report, no account is taken of the effect of this overall overfinancing, although this in itself may be regarded as a tax share of the social security contributions. The reasons are that this "tax share" of the contributions is of an entirely different kind than that calculated here and that it is difficult to add the two together.

5.3 An individual perspective on taxes and contributions

This report mainly discusses the insurability of the social insurances from an **individual perspective**. What has been measured is the strength of the link that exists between contributions and the size of the benefit payments that may follow. **A contribution which in itself has no positive link to the size of potential benefit payments is defined here as a tax**. This view of taxation is based on a theoretical approach to social security contributions, according to which they are made precisely in order to finance insurable benefits.

In Sweden the link between contributions and benefits is limited in several ways. Low-income earners may have incomes below a **floor** for a social insurance, but still make contributions, in some cases without earning any new entitlements to insurance benefits. In other cases special guarantee rules come into play, so that the benefit is paid with no link to the social security contribution paid. Conversely, high-income earners may have incomes that end up above an **income ceiling** in a social insurance. Social security contributions are levied on the whole of the income from employment, while the new entitlements earned are limited upwards by the income ceiling. Social security contributions that are based on incomes below the floor or above the income ceiling correspond to the definition of taxation used here. The same applies to those contributions that are used to finance **benefits being phased out**, where no new entitlements are earned. The larger the proportion of the incomes of insured persons that lies below the floor and above the ceiling and is used to finance benefits being phased out, the less insurable the social insurance in question can be considered to be from an individual perspective.

5.4 Social security contributions – tax or contribution?

If all gainfully employed individuals have their income adjusted upwards by one per cent, the tax share is calculated to amount to about 47 per cent of the additional employers' and self-employed contributions arising from the increased income[38]. Here, however, the distribution between what is due to ceilings and floors is different than in the calculation of the average. About 41 per cent of the extra payments come from incomes above the respective income ceilings and so do not give rise to any new entitlements. Even though incomes below the respective floors account for a large portion of the total incoming payments, there are few individuals who have such low total incomes, which means that only just under 2 per cent of the extra payments end up below the floors.

Just over 6 per cent of social security contributions are used to finance social insurance benefits being phased out, where new entitlement are not earned to the same extent as contributions are paid.

National pension and national old-age pension contributions are only paid on incomes between ceiling and floor, which is why the tax content is zero for these parts. Both these contributions help to finance the difference between contributions and earned entitlements to the supplementary pension (formerly ATP) that is being phased out, the tax portions for that reason amounting to just over 6 per cent.

The ceiling effect is thus of limited importance for the total contribution payments, although it is of great importance in the event of a marginal increase in income, since a significant proportion of the gainfully employed population have incomes above the ceilings. In 2004 46 per cent of the earning population born in 1938 and later had incomes above the ceiling in unemployment insurance and 15 per cent in the old-age pension scheme. Among individuals more than half of whose income was derived from business activities, the percentages are somewhat lower.

[38] The calculations are based on the 2004 income distribution, which is the latest available. The rules underlying calculations of ceiling and floor for the insurance, however, are those current in 2006. The aim is to obtain the most up-to-date estimate possible.

The increase implemented in July 2006 in the income ceiling for the daily allowances in sickness and parental insurances gave a reduced tax share. If a tax share is calculated for the parental insurance contribution, the increased ceiling means that at the margin it decreases from around half to around a quarter of the contribution paid. In sickness insurance, where sickness compensation and activity compensation, both of which carry heavy weight, are not affected by the amended rule, the increased ceiling meant that the tax portion fell by around 10 percentage points of the contribution paid[39].

5.5 Is a high tax share problematical?

As mentioned in the introduction, the question of the extent to which social insurance should have a redistributive function between different income groups is a political one. However, it is reasonable to assume that "too high" a tax share can lead to decreased confidence in social insurance if it does not serve as insurance for large groups.

The high proportion of contributions which at the margin should be regarded as tax theoretically limits the individual's incentives to work. Where this is also a real problem, the rules governing social security contributions should be revised. The old-age pension scheme differs from other social insurance in this as well as in other respects. Even for individuals with incomes above the income ceiling, extra years in employment give rise to a dividend in the form of increased income pension. On the other hand, this insurance does not give rise to an incentive to increase the *annual income* above the income ceiling.

Ceasing to levy contributions above the ceilings in the insurances would generally be one way of reducing the "marginal tax" and reinforcing the incentives to work. Raising the ceilings, as recently implemented for the daily cash benefits in sickness and parental insurances, is another thing. Both alternatives in the short term are costly for state finances. In the longer term stronger economic incentives to work could theoretically encourage the supply of labour, thereby leading to larger contribution and tax bases, which may compensate for the increased expenditure. In insurances, however, where the risk of needing to make a claim is relatively low among high-income earners (e.g. sickness insurance), the costs even in the short term would probably be limited.

What has been defined here as tax due to floors in the insurances is explained by the ambition to have a minimum guaranteed level of compensation. This

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[39] In January 2007 the Swedish government lowered the income ceiling in sickness insurance back to its previous level.

is a natural part of social insurance and is presumably perceived by most people as a justified redistribution within it. *Where* the minimum guaranteed level in social insurance should lie is a political question that needs to be resolved by balancing the ambitions to have an adequate minimum level of compensation and to uphold the *work strategy*.

The tax, too, which in Sweden follows from the fact that certain **benefits are being phased** out is in itself difficult to avoid. They are transitional rules from earlier legal framework and cannot reasonably be abolished. However, these benefits could be financed through basic taxation, which would bring greater transparency in the division between what is financed through taxes and what amounts to contributions. This could be easily done for the benefit widow's pension. The Social Insurance Agency also proposed in its latest budget documentation submitted to the Government that the survivor's pension contribution should be abolished. It is more difficult, however, to achieve a division of this kind for supplementary pension since the revenues and expenditure of the National Insurance (AP) Funds are part of the major Swedish pension reform, which is not easy to remove. This effect, however, will rapidly fall away for supplementary pension as the years go by, disappearing entirely in 2018.

5.6 Limitations in the calculation approach

Estimating the tax share of social security contributions is not an exact science. The choice of perspective – short/long term, the individual insured/society as a whole – is of significance for the basis and the results of the calculations. The ambition in this study has been to try and find a method of estimating, on the basis of incoming and outgoing payments over a period of twelve months, how much of the contributions received do not affect the size of any future benefit payments. The calculations are based on the 2006 social insurance rules, while use has been made at individual level of the 2004 income statistics. Given the relatively standard basis of calculation to which this leads, the ensuing calculations have, nevertheless, been carried out as accurately as possible. The assumptions may, if necessary, be defined more accurately and the analysis made more refined, e.g. in relation to gender, income groups and risk groups.

5.7 Social security contributions should be treated as contributions

The calculations presented above of the tax share of the social security contributions provide a basis for determining the insurability of different social insurances. This can also be determined, for example, according to the type of risk that is covered by an insurance. The Social Insurance Agency has in various contexts emphasised the advantages of only utilising social security contributions as a source of financing for benefits which can be considered to be sufficiently insurable. Benefits that do not satisfy this requirement should, like general allowances (e.g. child allowance in Sweden), be financed instead through basic taxation.

The Social Insurance Agency has proposed[40] that the parental insurance contribution should be abolished and be replaced instead by financing through taxation. Becoming a parent is normally a conscious choice in industrialized countries and not an insurable risk, unlike the need to take time off work to look after a sick child after one has become a parent.

Other measures to improve the transparency of financing social security in Sweden would be to record paid social security contributions in the salary specification and to change the name of the general salary contribution.

For those parts of social insurance that have been judged to be sufficiently insurable to justify their financing by contributions, there remains the question of how one can achieve long-term stability of the insurance conditions. The report discusses whether the insurance conditions underlying, for example, sickness cash benefit, earnings-related sickness and activity compensation, and work injury insurance could be made less dependent on budgetary considerations by making sickness insurance and work injury contributions more financially autonomous from the national budget. It is natural here to point to the Swedish old-age pension scheme as a model. One important difference, however, is that the development of the age pyramid over time is easier to predict than that of ill health.

Special funds for sickness insurance, work injury insurance and partial pension existed formally up until 1998–1999. The sickness insurance fund, however, was only of material importance until 1982, when its surplus was invested in an interest-free account at the National Debt Office. In 1998 the formal abolition of this fund took place.

The introduction of funds could bring greater autonomy in the financing of the social insurances and enable not only stable insurance conditions, but also more stable contribution rates in the longer term. If the contribution is set at a level where the disbursements are more than adequately covered in years of low utilisation of the insurance, surpluses in the funds arise that can cover some of the expenditure during years of higher utilisation. In this way the contributions can be set at a level which covers the anticipated expenditure in

[40] In the application for the 2006 budget year, budgetunderlaget Del 1 (2006-02-15)

the medium term, which should make it possible to adjust the contribution rates less often and/or make them less comprehensive.

The creation of sufficiently large funds, however, is very expensive, and it can thus only be justified in limited areas, where long-term stability is of particular importance.

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7 Appendix – Social security contributions: purpose, scope, use

This appendix gives a summary financial overview of the social security contributions levied. For a more comprehensive review, reference should be made to the Social Insurance Agency's budget documentation.

7.1 General remarks

Social security contributions in the legal sense are understood to mean employers' and employed contributions paid to the state under the provisions of the Social Security Contributions Act (2000:980), their purpose being to finance social insurance. Payments of employers' contributions are made by those who have provided remuneration for work to their employees etc. The contribution base is calculated on the total of salaries, fees and benefits. Self-employed contributions are paid by self-employed persons with their own firm or partnership, the contribution base being the net income of the company (the surplus from business activity). In this analysis we shall also include in the term social security contributions *general pension contribution*, which is paid by everyone who is gainfully employed (Act 1994:1744), and *national old-age pension contribution* (Act 1998:676). There is also a tax called *the general salary contribution* (Act 1994:1920). This works like other employers' and self-employed contributions and is important for the effects of social security contributions on the total tax levied (see below).

Table 7.1 Contribution rates for employers' and self-employed contributions

Contribution rates in %	2000	2001	2002	2003	2004	2005	2006
Old-age pension *	10.21	10.21	10.21	10.21	10.21	10.21	10.21
Survivor's pension *	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Sickness insurance							
- Employer's contribution	8.5	8.8	8.8	11.08	11.08	10.15	8.64
- Self-employed contribution	9.23	9.53	9.53	11.81	11.81	11.12	9.61
Parental insurance *	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Work injury *	1.38	1.38	1.38	0.68	0.68	0.68	0.68
Labour market							
- Employer's contribution	5.84	5.84	5.84	3.7	3.7	4.45	4.45
- Self-employed contribution	3.3	3.3	3.3	1.16	1.16	1.91	1.91
The general salary contribution *	3.09	2.69	2.69	3.25	3.13	3.07	4.4
Total employers' contrib.	32.92	32.82	32.82	32.82	32.7	32.46	32.28
Total self-employed contrib.	31.11	31.01	31.01	31.01	30.89	30.89	30.71

* Employers' and self-employed contributions are levied at the same rate

Since 2000 the structure of the social security contributions has remained essentially the same. The contribution rates for the seven social security contributions levied since then are shown in Table 1. The rates for employers and the self-employed differ for sickness insurance contribution and labour market contribution.

The contribution revenues for 2005 are shown in Table 2, which includes revenues from both the general pension contribution, which is paid by all those who are gainfully employed,[41] and the national old-age pension contribution, which is levied, among other things, on transfer incomes (sickness and parental cash benefits, unemployment benefit etc.).[42]

[41] Based on the contribution rate 7 per cent.

[42] Based on the contribution rates 10.21 per cent on transfers and 18.5 per cent otherwise, e.g. entitlements for childcare years.

Table 7.2 Revenues from social security contributions 2005

SEK m	Employer's contribution	Self-employed contribution[43]	Total
Survivor's pension	17,661	549	18,210
Sickness insurance	106,661	2,592	109,253
Old-age pension	106,070	3,277	109,347
Parental insurance	22,856	705	23,561
Work injury insurance	7,065	219	7,284
Labour market contribution	39,791	50	39,841
The general salary contribution	31,944	999	32,943
Total	**332,048**	**8,391**	**340,439**
General pension contribution	–	–	**74,762**
National old-age pension contribution	–	–	**30,091**
Total			**445,292**

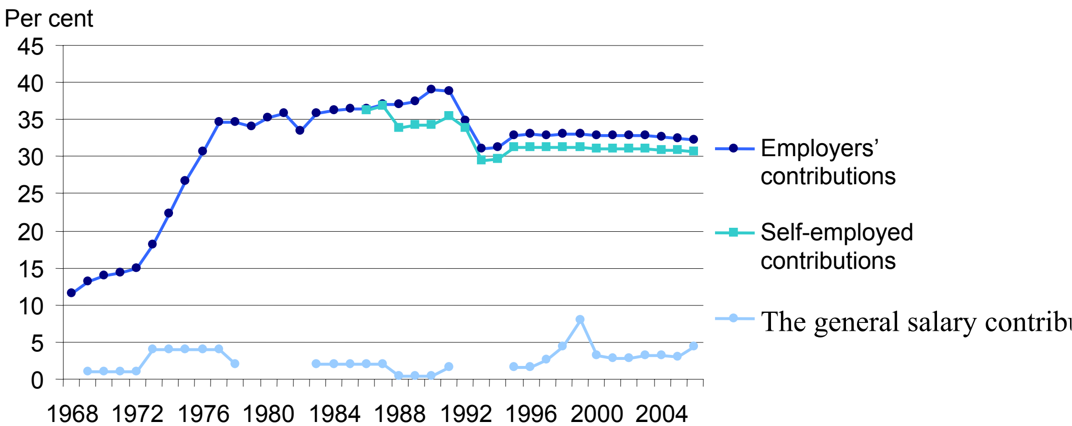
In addition to the social security contributions and salary taxes in Table 2, it should also be mentioned that *special employer's contribution* is levied on salaries paid to employees or on income from active business activity in relation to persons who have reached the age of 65 at the beginning of the year. Special employer's contribution is also levied on passive business activity as well as on costs for premiums for collectively agreed occupational pensions and transfers to profit-sharing foundations. Since 1998 it has been paid at a rate of 24.26 per cent, bringing the exchequer SEK 27.9 billion in 2005.

Some possibilities exist for reducing social security contributions. The self-employed contribution for sickness insurance can be reduced if the self-employed person opts for waiting days. A general deduction for social security contributions may be made which is designed to favour small companies. A further reduction in contribution rates may also take place if the business is carried on in certain regional special-development areas. The individual share that an individual social security contribution has of the total paid contributions does not therefore correspond exactly to its share of the total contribution rate.

[43] Self-employed contributions in 2005 have been calculated.

From a somewhat longer time perspective (since 1968), the trend for employers' and self-employed contributions has been as shown in Figure 1.

Figure 7.1. Combined contribution rates (%) for social security contributions 1970–2006



Since 1995 there has been a noticeable stabilisation in the overall level of employers' and self-employed contributions. The the general salary contribution, levied off and on since the 1960s, was reintroduced in 1995 and has been set so that the total level of social security contributions has for the most part been unchanged or has only been marginally modified from year to year. In this way adjustments to other contribution rates, which on the whole have been set so as to follow the cost trend for each benefit, have not had any effect on the total contributions levied. This means that the contributions levied are stable and also that the financial link between contributions and the benefits they are designed to finance is weakened.

7.2 Pension contributions

The financing of the new Swedish pension scheme is relatively complex. Revenues come from three different contributions, from the return on financial assets and from taxes.

Guarantee pension for old-age pension is financed entirely from the national budget.

Table 7.3 Revenues and expenditure of the National Pension Insurance (AP) Funds

	2003	2004	2005
Expenditure			
Pensions etc.	155,410	163,162	169,128
Special adjustment[1]		1,600	
Administration expenses	2,359	2,737	2,032
Total expenditure	157,769	167,499	171,160
Incomes			
Contributions	165,107	171,600	179,552
Interest etc. (net)	82,059	65,162	114,598
Total revenues	247,166	236,762	294,150
Surplus/deficit	+89,397	+69,263	+122,990
"Fond 31/12"	576,937	646,200	769,190
Fund strength[2]	3.7	3.9	4.5

1 In 2004 the AP funds were debited with SEK 1,600 m as a retroactive adjustment in relation to the national budget for the period 1999–2002.

2 Fund capital divided by expenses.

Following the pension reform, earnings-related old-age pension has three components: income pension, supplementary pension and premium pension. The first two of these are financed through the AP funds, while the third is financed through a special system administered by the Premium Pension Authority. As well as from the return on financial assets, the revenues of both the AP funds and the premium pension funds come from the following contributions:

The old-age pension contribution, a social security contribution which is paid by employers and self-employed persons at a rate of 10.21 per cent. It is divided into three parts and is transferred to the AP fund, to the premium pension scheme via the National Debt Office and to the national budget. The proportion that goes to each recipient is adjusted annually. The proportion of the old-age pension contribution that is considered to correspond to income above the ceiling is transferred instead to the national budget. This amounted to 10.7 per cent in 2006.

General pension contribution, which is paid directly by all those who are gainfully employed at a rate of 7.0 per cent. It is transferred to the AP fund and finances the same benefits as that part of the old-age pension contribution transferred there. Unlike the old-age pension contribution, it is only levied on incomes up to the income ceiling.

National old-age pension contributions, which have been paid in since 1999 by the state and are levied on, inter alia, transfers such as sickness cash benefit and parental cash benefit. For these, the contribution rate is 10.21 per cent. For *pensionable amounts*, such as pension entitlements for childcare years and studies, and also for sickness and activity compensation, the rate is 18.5 per cent. Since 1999 all social security contributions which finance daily allowances have also financed national old-age pension contributions for these.

7.3 The sickness insurance contribution

The sickness insurance contribution finances sickness cash benefit, rehabilitation cash benefits, allowance for care of close relatives, pregnancy cash benefit and also, since 2003, the earnings-related part of sickness and activity compensation. It also finances the cost of administering these benefits as well as national old-age pension contributions for the daily allowances and part of the old-age pension contributions for sickness and activity compensation. The revenues and expenditure of sickness insurance are shown in the table below.

There is no rule that the sickness insurance contribution should finance these benefits in their entirety. If the contributions are not sufficient, state grants may be provided for some of the costs.

Table 7.4 Sickness insurance: revenues and expenditure

	2001	2002	2003	2004	2005
Revenues:					
Sickness insurance contribution	*82,546*	*86,020*	*108,278*	*113,083*	*108,961*
Special sickness insurance contrib.				*–*	*1,380*
State funds by law[1]	*7,563*	*6,485*	*12,653*	*13,309*	*13,969*
Total revenues	*90,109*	*92,505*	*120,931*	*126,392*	*124,310*
Expenditure:					
Sickness and rehabilitation cash benefits	*39,364*	*43,795*	*43,704*	*39,321*	*35,230*
Activity and sickness compensation	*40,966*	*44,658*	*50,060*	*54,136*	*56,792*
	336	*375*	*381*	*398*	*397*
Allowance for care of close relatives	*56*	*62*	*65*	*69*	*72*
	5	*10*	*14*	*16*	*22*
National old-age pension contributions	*12,624*	*9,834*	*13,288*	*14,808*	*16,621*
Administration	*3,004*	*3,206*	*3,724*	*3,868*	*3,903*
Total expenditure	*96,355*	*101,940*	*111,236*	*112,616*	*113,037*
Total contribution-financed according to rules	*88,792*	*95,455*	*98,583*	*99,307*	*99,068*
Surplus[3]	*–*	*–*	*9,695*	*13,776*	*11,273*
Contribution coverage	*93%*	*90%*	*110%*	*114%*	*110%*

1 Including the special sickness insurance contribution from 2005.

2 Not contribution-financed expenses.

3 No actual deficits can occur as the law does not prescribe that the contribution should cover the entire expenditure.

7.4 The work injury contribution

The work injury contribution finances payments under the Work Injury Insurance Act and corresponding earlier legislation as well as the administration expenses for these benefits. National old-age pension contributions for work injury annuities etc. are also financed through this contribution.

Work injury insurance previously recorded substantial deficits, which were reduced in the second half of the 1990s by cost-cutting rule changes which limited the scope of the insurance. The surpluses were used to pay back the earlier debt, which was repaid in full in 2000. In 2002 the surplus was SEK 6 billion. Since 2003 it has been reduced by the lower work injury contribution. The revenues and expenditure of work injury compensation are shown in the table below.

Table 7.5 Work injury insurance: revenues and expenditure

	2001	2002	2003	2004	2005
Revenues:					
Work injury insurance contribution	*13,077*	*13,620*	*7,665*	*7,246*	*7,266*
State funds	*224*	*195*	*196*	*180*	*133*
Total revenues	*13,301*	*13,815*	*7,861*	*7,426*	*7,399*
Expenditure:					
Compensation for insured persons	*5,757*	*5,882*	*5,984*	*6,051*	*5,957*
National old-age pension contribution	*1,489*	*1,391*	*386*	*435*	*390*
Administration	*376*	*369*	*394*	*403*	*396*
Total expenditure	*7,622*	*7,642*	*6,765*	*6,889*	*6,743*
including contribution-financed	*7,398*	*7,447*	*6,569*	*6,709*	*6,610*
Surplus during the year	*5,679*	*6,173*	*1,096*	*537*	*656*
Contribution coverage	*177%*	*183%*	*117%*	*108%*	*110%*

7.5 The labour market contribution

The labour market contribution finances unemployment benefit, activity support under certain conditions, costs according to the Wage Guarantee Act and costs for supervising payments from the unemployment benefit funds. The contribution also finances national old-age pension contributions for similar benefits.

Table 7.6 Labour market insurance: revenues and expenditure

SEK million	2001	2002	2003	*2004*	2005
Unemployment insurance	32,752	33,878	37,408	42,200	42,593
Activity support	1,276	1,710	1,517	1,395	888
Costs according to the Wage Guarantee Act	3,538	3,185	3,189	2,937	4,281
Contribution revenues	48,977	50,909	32,905	31,968	39,809
Contribution coverage	*130%*	*131%*	*78%*	*69%*	*83%*

7.6 The survivor's pension contribution

Since 2003 the survivor's pension contribution has financed children's pension as well as earnings-related widow's pension and adjustment pension, among others. The administration costs of these benefits are also financed through this contribution. Guarantee pension for widow's pension and adjustment pension and also survivor's support for children are not contribution-based, but are instead financed via the national budget.

Table 7.7 Survivor's pension: revenues and expenditure

	2001	2002	2003	2004	2005
Revenues:					
Survivor's pension contribution	*16,109*	*16,743*	*17,115*	*17,577*	*18,164*
State funds	*13*	*26*	*1,114*	*1,228*	*1,052*
Total revenues	*16,122*	*16,769*	*18,229*	*18,805*	*19,216*
Expenditure:					
Survivor's pensions	*14,007*	*14,421*	*16,656*	*16,987*	*16,903*
Administration	*58*	*70*	*74*	*146*	*119*
Total expenditure	*14,065*	*14,491*	*16,730*	*17,132*	*17,022*
incl. contribution-financed	*14,052*	*14,465*	*15,617*	*15,904*	*15,971*
Surplus during the year	*2,057*	*2,278*	*1,498*	*1,673*	*2,193*
Contribution coverage	*115%*	*116%*	*110%*	*111%*	*114%*

The survivor's pension contribution was introduced in 1999, thereby taking over financing from the basic pension contribution and the ATP contribution. It even financed in 2002 the benefits widow's pension, adjustment pension, extended adjustment pension, special survivor's pension and children's pension, and national basic pension and pension supplement as well as ATP. From 2003 only earnings-related survivor's pension is financed through this contribution, while guarantee pension and survivor's support for children are financed via the national budget. The contribution also finances administration expenses for similar benefits. The contribution rate is 1.7 per cent.

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