OPTIMUM AMOUNT OF AN INSURANCE SUM IN LIFE INSURANCE

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Personal insurances represent one of the sources of personal social security as a category of personal property. How to get a proper life insurance is a frequently asked question. When insuring material objects (car, house...), the problem is usually not in the amount of the taken insurance. With life insurances (abstract goods), problems as such occur. In this paper, we wish to present a model that, according to the financial situation and the anticipated future, makes it possible to calculate the optimum insurance sum in life insurance.

1. INTRODUCTION

Leading a family is probably the hardest of all jobs.[1] There is no education on how to lead a family. Each person is left to his own knowledge and experiences, his or her parental model, advices of acquaintances, relatives... on a financial (social) field as well.

In this concern for our personal social security, we cannot go by personal insurances. Personal life insurances are too often wrongly or improperly presented to the individuals, as well as to the wider social community. Besides that, they are often accompanied with a negative meaning, which is one of the more reasons and challenges to contribute even more to that field. Consumers

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[1] Crosby, P.B., Kakovost je zastonj, ČGP Delo, Gospodarski vestnik, Ljubljana, 1989, p. 23

often feel they are being led astray with insurances.[2] That most probably originates from the fact that insurances can not be tested before the purchase, but compensation is provided for if any damaging circumstances occur.

2. PROBLEM DESCRIPTION

Insurances present the basic element of personal social security; here, personal insurances appear (life insurance, term insurance, medical insurance, endowment insurance, ...).

In the social field, we can perceive a problem that the insured person most often knows:

1. With what insurance company the insurance was taken out.
2. What was the monthly premium, how much the insurance was paid for.
3. That he is insured in case of death and has an additional accident insurance.
4. The approximate insurance period.
5. Who insured him.
6. That once a year he receives a notification from the insurance company
7. That he pays for the insurance personally or through his company...

We have noticed that rare individuals are thinking about a recommended personal insurance sum. In the case of a material object, we instantly know what the insurance sum will be (not too much, not too little). In the case of personal insurance, the insurance sum is not so easily defined.

One of the most complete recommendations about insurance is: In which insurances does the money need to be "given" ? [3] The response is:

- disability insurance
- term insurance (depends on the situation)
- accident insurance
- medical insurance
- house equipment insurance policy
- property insurance (if needed)
- legal security insurance
- responsibility insurance.

[2] Ivanjko, Š., Zavarovanje kot prodaja nevidnega blaga, Dnevi slovenskega zavarovalništva 1996, Proceedings, Slovenski zavarovalni biro - Društvo ekonomistov Ljubljana, Bled - Ljubljana, May 1996, p. 36.

[3] Horn, S., Sicherheit und Wohlstand in Alter, Econ Ullstein List Verlag GmbH & Co. KG, Munchen, 2000, p.11.

Insurance field information was always partial until now because there was no other but the insurance companies that were the bearers of an information activity. The fact is that no one outside the insurance companies was engaged in the insurance branch, not even in the scientific field and even less in the field of the general rise of the insurance culture.[4]

If we upgrade the problems mentioned above with questions, then the insured person should answer to a few basic questions: What is his recommended insurance sum? Is it not unwise to purchase something he does not need? What is the adequate insurance period? Does he know the exact insurance conditions? Was he advised (on contract relations) by someone who is not connected to an insurance company? Is he acquainted with the related insurance offers? What can another insurance company offer? What risks is he covered for (from his insurance policy)? Is the insurance ever imposed on him? How much will he save during the insurance period? Can he quietly rearrange his insurance?

An insurance service can be, according to its orientation, classified as an act oriented especially in human resources and human sense.[5]

3. THE NEED TO CALCULATE THE OPTIMUM INSURANCE SUM

In life insurance offers, we usually trace the fact that the amount of the insurance sum and premium is determined with the understanding of the insured person and the insurer on the basis of data presented in an offer: age, insurance period and the chosen price list. The insured person has an unequal status in comparison to his contract partner, the insurance company[6], while taking out an insurance policy. Thus, there is a great need to improve the status of the insured person when taking out an insurance (financial) contract, with the help of the suggested model, for that is the only way to prevent the financial loss of the insured person.

It is often emphasized in the insurance theory that the basic goal and task in the insurance field, assures an unchangeable standard with the principle that

[4] Ivanjko, Š., Dobri poslovni običaji v zavarovalništvu, 6. dnevi Slovenskega zavarovalništva, Slovensko zavarovalno združenje & GIZ, Portorož - Ljubljana, June 1999, p.101.
[5] Končina, M., Izvajanje tržne strategije zavarovalnice - tržno pozicioniranje in oblikovanje tržnega spleta, Dnevi slovenskega zavarovalništva 1996, Proceedings, Slovenski zavarovalni biro - Društvo ekonomistov Ljubljana, Bled - Ljubljana, May 1996, p. 70.
[6] Flis, S., Zbrani spisi o zavarovanju - Vol. 1, Pegaz International, Ljubljana, 1995, p. 302.

more insurances provide a higher standard, and more insurances also mean more danger which jeopardizes the higher standard.[7] That is partially true, but the principle – more insurances provide higher standard – is not entirely in accordance with needs. A higher standard usually means a minor dependence on personal insurances.

A lot of people take life insurance as a sort of prestige that can only be affordable to rich people. Only one thing is correct - rich people pay for it more easily. However, it is also true that they do not need it in high insurance sums. The basic characteristic of social risks is that they are individually hard to determine, but familiar and, more or less, mastered socially[8]. On the contrary, we think that individual social risks can be completely determined and mastered.

The insurance sum is most influenced by the following factors: income of the insured person, living status of the insured person, people that are dependant upon the income of the insured person, already created capital of the insured person, credit and his other responsibilities. It is irrational to be too little or over-insured.

Marketing in the insurance field starts with the understanding of the contents and specialities of the insurance service. The insurance services are, as well as any other service, abstract goods that cannot be stored. For the insurance service, in particular, it often stands a fact that it is rationally and emotionally hardly acceptable for the buyer. In the market sense, the insurance is a promise and a process, therefore, some sort of a "product" which is not yet made by the time that it is sold.[9] That is a typical insurance opinion and does not take into account the objective circumstances of the insured person. Insurance is recommended as highly necessary, but the rest of it looks quite foggy and blurred with indistinctness.

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[7] Ivanjko, Š., Zavarovanje kot prodaja nevidnega blaga, Dnevi slovenskega zavarovalništva 1996, Proceedings, Slovenski zavarovalni biro - Društvo ekonomistov Ljubljana, Bled - Ljubljana, May 1996, p. 34.

[8] Kidrič, D., Socialno zavarovanje od obveznosti do prostovoljnosti, Dnevi slovenskega zavarovalništva 1995, Proceedings, Slovenski zavarovalni biro - Društvo ekonomistov Ljubljana, Bled - Ljubljana, May 1995, p. 21.

[9] Končina, M., Izvajanje tržne strategije zavarovalnice-tržno pozicioniranje in oblikovanje tržnega spleta, Dnevi slovenskega zavarovalništva 1996, Proceedings, Slovenski zavarovalni biro - Društvo ekonomistov Ljubljana, Bled - Ljubljana, May 1996, p. 65.

It is often stated that selling insurance services (promises) is like selling invisible goods. In contrast to a purchase of the majority of other goods or services, where buyer can compare what he is paying for to that what he receives for the paid amount, we sell the promise, assurance of the paid out compensation or annual income, when and if the insurance conditions[10] occur, while selling the insurance itself.

We support and think the following view on an insurance is correct: When buying life insurance, we decide upon our needs. It is about the problems that could occur in case of a person's death.[11]

Let us complete that it is not only in case of death but afterwards as well. The same stands in case of disability.

4. RECOMMENDATIONS FOR LIFE INSURANCE

The general recommendation for the purchase of the optimum amount of the insurance sum in term insurances is bound to an income protection. It is recommended only to those who would, in the case of their own death, leave the role of the social leader to their closest. It is recommended:[12]

For families without children:
Insurance sum= 2x Annual net income

For families with small children:
Insurance sum= 4x Annual net income

For families with older children:
Insurance sum= 3x Annual net income,

where:
Annual net income = 13x Monthly net income

Multiplier 13 and not 12, like the number of the months in a year, is a result of additional income, subsidy, allowance for travelling expenses, etc.

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[10] Gorišek, J., (1996): Trženje zaupanja v zavarovalne pogodbe, garancijski skladi in približevanje Slovenije Evropski uniji, Dnevi slovenskega zavarovalništva 1996, Proceedings, Slovenski zavarovalni biro - Društvo ekonomistov Ljubljana, Bled - Ljubljana, May 1996, p. 8.
[11] Hartman, R., Zavarovalništvo, http://svarog.org/ekonomija/index.php3, 2000
[12] Meyer, H.D., Ratgeber Versicherung, Wilhelm Heyne Verlag, Munchen, 1990, p.81.

4.1. Additional recommendations

We can take into consideration general recommendations for the optimum insurance sum that takes into account only the monthly net income. Otherwise, we can make a thorough research of an individual or family security which we think is best.

It is reasonable to make adjustments (as time is passing) for the calculation of the recommended insurance sums, that is to increase or decrease the insurance sum, if our monthly net income is decreasing or increasing. It is also necessary to take into consideration invested liquid capital and credit obligations. The former decreases the need for insurance and the latter increases the need for insurance.

Besides that, let us warn you of the other factors that influence the amount of the insurance sum: rent, children's education, open building investment, imposed insurances, situation and standard of parents, relatives, additional outcome, additional income, expenses in cases of damaging events, expected income, bonuses, awards..., sickness or health, additional insurances, inheritance...

4.2. The essence of life insurance

The essence of an insurance sum in life insurance, that is in case of death, is given with the following example. We originate from a hypothetical example where a financial life situation is taken into account.

Example:

A model family:

First partner is 35 years old.
Second partner is 32 years old.
They have a child who is 10 years old.
Income per partner is 600 €.
They both have approximately 10 years of service.
They do not have any borrowings.
They have their own real estate.

What sort of a family protection do they need?

The calculation is valid for both partners. In the example, we will show the calculation for only one partner. The exact same is valid for the other as well. In case of death with any of the partners, the living partner would have a lot of difficulties with the child's education and undisturbed smooth financial life obligations. A child would have the right to (after the death of one of the parents) a family pension of approximately 225 € (or less because the parents have a relatively low service period; therefore, a family pension would be below the average). This means a substantial loss of income that is assigned to financing family obligations.

For families with small children, in this case the child is 10 years old, a minimum insurance sum is recommended:

Insurance sum = 4 x Annual net income
Insurance sum = 4 x 13 x Monthly net income
Insurance sum = 4 x 13 x 600 €
Insurance sum = 31.200 €

We need a minimum insurance sum in the amount of 31.200 €. In case of death of the insured person, the insurance company pays out that exact insurance sum. Many heirs of the insured person spend their insurance sum for a purchase of various goods, cars, furniture, etc. They simply spend the money, which is the biggest mistake in that case. The insurance sum is not provided for the closest ones of the insured person to benefit and prosper financially in case of the insured person's death.

It is necessary to invest the paid out insurance sum in an investment return, for example, 10 % of the annual rate of return. If we take into account the expected return, it would annually come down to a 3,120 € return. That would monthly mean 260 € of the expected income amount from the invested capital (insurance sum).

If we make an account, the living partner would draw his income:

- from the address of the family pension of 225 €,
- from the address of the paid out insurance sum of 260 €.

This would generally mean 485 € monthly at his disposal, which provides a material base for normal living and normal progress of a child's education. Thus, the partner’s monthly income, in the amount of 600 €, was covered by the family pension and the insurance sum in term insurance in a total expected amount of 485 €.

5. FACTORS FOR THE CALCULATION OF THE OPTIMUM INSURANCE SUM

According to our discoveries, we can dismember influences on an insurance sum: life status, inflation, taxes, income, outcome and the rate of risk. We will thoroughly analyse and show (in this example model) how the factors influence the optimum insurance sum.

Personal capital or assets present (in a personal social security) the highest possible form of security (insurance) and can also present an independance from work and monthly income pay for a person. As long as a person has assets, capital in such an amount that the income from the productive capital input guarantees an amount of income that can cover all financial obligations (no matter what the personal medical situation is), then the security is taken care of, or the person can cover life expenses by him or herself. Different levels of the annual interest rate bring (as time passes) a different final result of our savings. We can talk about effective yield only when all tax liabilities are settled.

Created capital decreases the need for insurance, partially as well, which means a lower need for insurance that saves the person's insurance funds. It is wise to invest the saved funds in a capital investment that creates new capital even faster, which even more rapidly decreases the need for buying an insurance sum. When a person reaches the level where invested productive capital is sufficient to cover personal security, the person does not need life insurance.

6. SETTING UP A MODEL OF A PERSON'S PROPERTY SECURITY

A model of calculating an optimum insurance sum takes into account influential factors of income and outcome. We will present you with a list of factors that occur monthly, annually and at a damaging event. Influential factors are valid for the calculation of the optimum insurance sum for term insurance, as well as for the optimum insurance sum of a disability insurance.

INCOME:

1. Pension
2. Bank interest savings
3. Insurance savings yield
4. Mutual fund yield
5. Share yield

6. Bond interest
7. Leased real estate yield
8. Other yield from money investments
9. Other capital yield
10. Collection sell
11. Additional income of family members
12. Income from our own company
13. Help of relatives
14. Help of the country
15. Help of the humanitarian organisations
16. Other income.

OUTCOME:

1. Credit obligations
2. Rent
3. Share of family expenses
4. Expenses for children's education
5. Other expenses for children
6. Other obligations
7. Expenses for relatives
8. Means for the payment of hired services
9. Collection purchase
10. Outcome from our own company
11. Expenses at the damaging event
12. Open investment
13. Adaptation of life residences
14. Other expenses.

Income and outcome will be systematically tabled to monthly, annual and current expenses at and after the damaging event. The difference between income and outcome plays a crucial part in the need for an optimum insurance sum. The exact figures can be calculated if we take into account the rate of the insured person's and inheritor's risk, and what the yield is that is expected to increase the principal that is the result of a paid out insurance sum. The following table list presents an example of a form for data inscription required by the search and a set example model.

Table 1. An example model of an optimum insurance sum for term insurance

OPTIMUM INSURANCE SUM IN TERM INSURANCE				
INFLUENTIAL FACTORS		**MONTHLY**	**ANNUAL**	**AT THE EVENT**
INCOME AT AND AFTER THE DAMAGING EVENT	1. Pension			
	2. Bank interest savings			
	3. Insurance savings yield			
	4. Mutual fund yield			
	5. Share yield			
	6. Bond interest			
	7. Leased real estate yield			
	8. Other yield from money investments			
	9. Other capital yield			
	10. Collection sell			
	11. Additional income of family members			
	12. Income from our own company			
	13. Help of relatives			
	14. Help of the country			
	15. Help of the humanitarian organisations			
	16. Other income			
	TOTAL INCOME			
UTCOME AT AND AFTER THE DAMAGING EVENT	1. Credit obligations			
	2. Rent			
	3. Share of family expenses			
	4. Expenses for children's education			
	5. Other expenses for children			
	6. Other obligations			
	7. Expenses for relatives			
	8. Means for the payment of hired services			
	9. Collection purchase			
	10 . Outcome from our own company			
	11. Expenses at the damaging event			
	12. Open investment			
	13. Adaptation of life residences			
	14. Other expenses			
	TOTAL OUTCOME			
DIFFERENCE BETWEEN INCOME AND OUTCOME				
EXPECTED INVESTMENT YIELD (%)				
OPTIMUM INSURANCE SUM				

6. A CONSTRUCTION OF MATHEMATICAL FORMULAE FOR CALCULATING THE OPTIMUM INSURANCE SUM

The expected missing needed monthly amount for covering the expenses after the damaging event:

$$\sum_{i=1}^{n} EMA = \sum_{i=1}^{n} EMO - \sum_{i=1}^{n} EMI$$

EMO – expected monthly outcome after the damaging event
EMI – expected monthly income after the damaging event

Total missing annually needed monthly amount for covering the expenses after the damaging event:

$$\sum_{i=1}^{n} EMA * 12$$

Total missing needed annual amount for covering the expenses:

$$\sum_{i=1}^{n} EAA = \sum_{i=1}^{n} EAO - \sum_{i=1}^{n} EAI \ ,$$

where:
EAO – expected annual outcome after the damaging event
EAI –expected annual income after the damaging event

Overall total missing annual expenses (annual and monthly) after the damaging event:

$$\sum_{i=1}^{n} EMA * 12 + \sum_{i=1}^{n} EAA$$

Needed single amount at the damaging event equals $\sum_{i=1}^{n} NSA$, where:

EIY - Expected investment yield (insurance sum presents an increasing principal)
$INF_{(CY-1)}$ - Last year's inflation (current year –1)
OptIS - Needed optimum insurance sum

6.1. Expected investment yield above the inflation rate

Formula for the calculation of the optimum insurance sum is (in case $EIY - INF_{(CY-1)} > 0$):

$$OPT_{zv} = \frac{\sum_{i=1}^{n} EMA * 12 + \sum_{i=1}^{n} EAA}{EIY - INF_{(CY-1)}} + \sum_{i=1}^{n} NSA$$

Formula is valid if: $EIY - INF_{(CY-1)} > 0$. The positive result for OptIS tells us the needed amount of the insurance sum, the investment covers the needs for a "limitless" period of time. The negative result for OptIS tells us that the person does not need the insurance sum. But if the person has taken out a personal insurance, the existing insurance sum can be decreased.

If the result for OptIS equals zero, the person does not have to change the insurance sum, but it would have been wise to look over the needed monthly, annual and single expenses one more time. If the result for OptIS equals zero or is negative, the need for the insurance sum does not exist. In that case, investment yield does not play any role at all in the calculation.

6.2. Expected investment yield equal to inflation rate

In case if: $EIY - INF_{(CY-1)} = 0$, the previous formula is irrational. In that case, length of period during which the invested principal is used to the value zero, need to be foreseen.

If y denotes the expected principal consumption years, formula for calculating the minimum needed insurance sum $EIY - INF_{(CY-1)} = 0$ is:

$$OPT_{is} = (\sum_{i=1}^{n} EMA * 12 + \sum_{i=1}^{n} EAA * p + \sum_{i=1}^{n} NSA$$

6.3. Expected investment yield below the inflation rate

In case $EIY - INF_{(CY-1)} < 0$, we talk about decreasing the principal in a certain period. In that case, the principal is losing its value as years go by. It is devalued. Therefore, it is reasonable to introduce the correction, at least for the inflation rate for the expected years of the used up principal.

Correction is calculated as follows: $(1 + | EIY - INF_m |)^Y$, where:

INF_m – average inflation in the past m years
$| EIY - INF_m |$ – absolute yield value of the negative investment result
y – expected years of the principal consumption

The expected principal needs to be calculated with the help of a geometrical sequence. In the first year a person needs the insurance sum:

$$OptIS_1 = (\sum_{i=1}^{n} EMA * 12 + \sum_{i=1}^{n} EAA) * (1 + \left|EIY - INF_m\right|^1 + \sum_{i=1}^{n} NSA$$

In the *y*-th year, the person needs the insurance sum:

$$OptIS_y = (\sum_{i=1}^{n} EMA * 12 + \sum_{i=1}^{n} EAA) * (1 + \left|EIY - INF_m\right|^Y + \sum_{i=1}^{n} NSA$$

Formula for the calculation of the minimum needed insurance sum, in case $EIY - INF_{(CY-1)} < 0$, is as follows. Altogether, we need the amount of all the annual needs for the minimum insurance sum:

$$OPT_{is} = (\sum_{i=1}^{n} EMA * 12 + \sum_{i=1}^{n} EAA) * RF + \sum_{i=1}^{n} NSA$$

RF denotes a row factor, i.e. factor of a final row sum for *y* years:

$$RF = (1 + \left|EIY - INF_m\right| * \frac{(1 + \left|EIY - INF_m\right|)^y - 1}{\left|EIY - INF_m\right|}$$

The insurance sum that is invested in a negative investment yield by the person or heirs, below the inflation rate, can be consumed in *y* years. There is an adequate amount each year.

In addition, annual adjustments of the needed minimum insurance sum are reasonable. We have supposed that the annual inflation rate for the current year is not taken into account when a person takes out an insurance. However, if we take into account the annual inflation in the year when the insurance was taken out, supposing that a damaging event happens just before the renewal and a new

calculation, it is necesssary to increase the optimum insurance sum for an inflation rate that is expected for the current year. We can also take the correction where last year's inflation is taken into consideration.

If inflation in the past year (current year –1) is denoted by $INF_{(CY-1)}$, needed minimum insurance sum if we take into consideration the current inflation is[13]:

$$OptIS_{INF} = OptIS * (1 + INF_{(CY-1)})$$

7 MODEL FOR PRACTICAL USE

Tabled data input gives a simple opportunity to those less apprenticed to put in all the needed amount of influential factors. It is reasonable if a person (a counsellor) is present when putting in data, someone who is familiar with the rights from the basic social field, because it has been noticed that the individuals do not know the expected payments in case of a death or disability.

According to formula calculations, it does not acquire high technology, therefore the calculations are possible with the simplest and the most basic calculator. That certainly speaks to the benefit of the suggested model.

The result - optimum insurance sum - means the optimum security for an individual or a family. This means money savings during the insurance period or material safety after the damaging event.

The biggest advantage of this model is that it is simply applicable for all financial life situations. The expected yield at the damaging event is taken into account. The insurance sum presents the investment from which yield is derived for the insured person and heirs. Data that we do not take into account are simply left out. The model has a maximum flexibility and offers an opportunity, depending on a different individual's views, for simulation of various situations for one person or more. Advantages, provided with a set up model:

- analysis of the financial life situation of the individual and his family,
- takes into consideration the current and future situation of the insured person,

[13] Since all calculating data are based upon anticipation, it is reasonable to forecast the inflation effect in the declaration of the income and outcome. Index outcome and income also exist and they are regulated by the state. In a foreign currency, an error up to 3% in the calculation of the optimum insurance sum occurs at the end of each year. A negative sign in front of the result for the optimum insurance sum (for example -12.000 €) means that the insured person does not need an insurance sum and that he or she is overinsured.

- it presents an optimistic view of the insurance sum, as well as the insurance expenses,
- it materializes "abstract" goods, such as personal insurance,
- takes into consideration the individual view on the expected investment yield,
- is practically applicable for the insured person, insurance and insurance company's negotiators,
- gives an opportunity for viewing the existing insurances in the market,
- warns the individuals and families of the possible risks that were not taken into consideration by themselves.

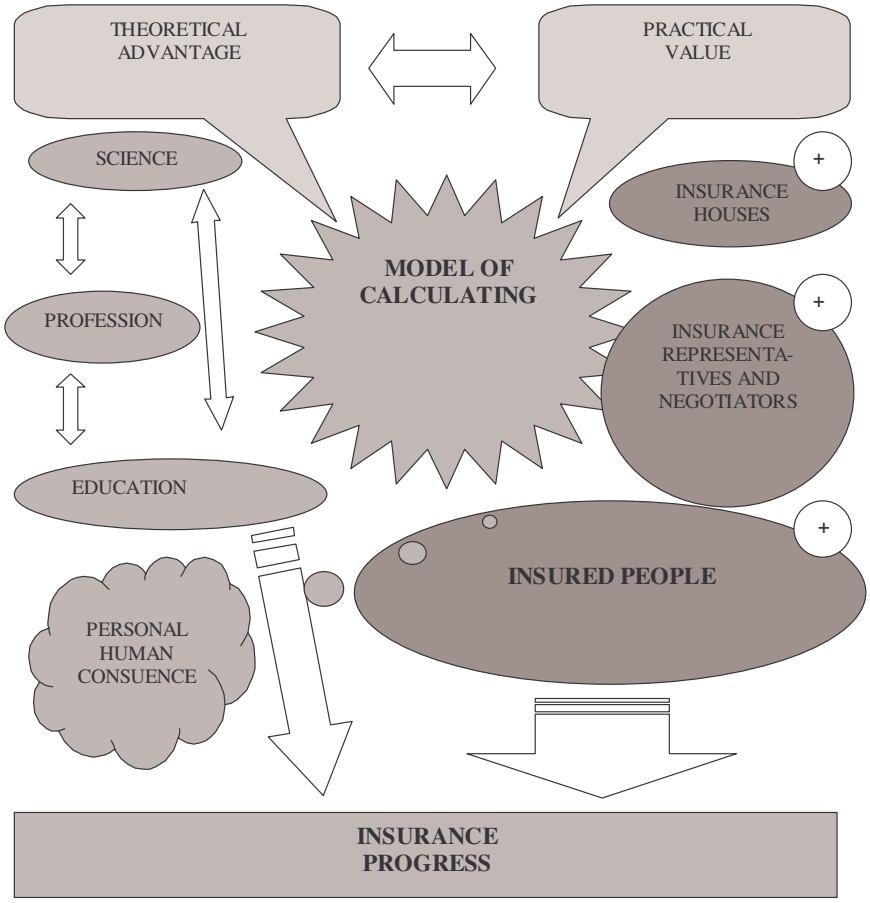

Figure 1. Theoretical and practical value of the suggested model

Due to a different income strength of the potential buyers of the insurance services, the insurance companies are developing a market strategy in two ways. On one side, they are oriented in the mass market. On the other side, they are trying to sell more progressive and financially less favourable insurance products in the existing market.[14] With a set up model, it is possible to present clearly and to argue the need for insurance, paying no regard to a different purchasing power of future buyers.

If we look at the model from the theoretical point of view, it has upgraded the Meyer theory about the role of personal insurances with the individuals (as well as with the family), in the context of human safety and personal asset creation.

Theoretically, it demolishes all those "false" theories that talk about personal insurances in terms of abstract goods, prestige and the need for no personal insurances.

From the business custom's point of view, communication between the insurance representatives and insurance company's workers, with the insured person, is primarily a form of offering advices and help to an insured person. That is always emphasized in all educational forms, but rarely realised in the real world. The advices are explicitly oriented in taking out an insurance policy, which means that the overall communication with the insured person is used only as a means of reaching the final goal – taking out an insurance policy.[15] Taking out an insurance policy means a capital profit for the insurance company and security for the insured person. With the help of a model, the insurance representatives find it easier to advise in personal insurance sales.

Direct marketing is one of the marketing fields that is expected to rise in the future world.[16] In these systems, what is most present is that the middlemen are difficult to educate for the correct selling and counselling of the insurance programmes. By introducing a model, they are easily and quickly prepared to be able to clearly argue a personal insurance sale to a customer, the future insured person. Besides that, they have to be familiar with the insurance programme (insurance price list) and posess some communication skills.

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[14] Dimovski, V., Trženje zavarovalniških storitev v Sloveniji, 6. dnevi Slovenskega zavarovalništva, Slovensko zavarovalno združenje - GIZ, Portorož - Ljubljana, June 1999, p. 61.
[15] Ivanjko, Š., Dobri poslovni običaji v zavarovalništvu, 6. dnevi Slovenskega zavarovalništva, Slovensko zavarovalno združenje - GIZ, Portorož - Ljubljana, June 1999, p. 99.
[16] Starman, D., Direktni marketing, Gospodarski vestnik, Ljubljana, 1994, .5.

7. PRACTICAL USE FROM THE INSURED PERSON'S POINT OF VIEW

In a similar way that the insurance representative argues the need for personal insurance, it is also how the individuals and families can calculate the need for personal insurance by themselves. This gives them the advantage to negotiate more equally with the insurance representative or middleman when taking out an insurance policy. The model presents an argued personal social security to an insured person – a safer life. It decreases the expenses for false or unwanted insurance. It also contributes to a positive creation of personal assets. The model also gives an opportunity to the less apprenticed and skilled to negotiate with the representative about the future insurance programme.

When examining the existing insurance sum with the help of a suggested model, we can find out that the individual or family is over or under insured. In that case, it is reasonable that they take out an optimum insurance accoring to the calculation of the suggested model. With that, they accept the optimum responsibility for their life security, as well as for the security of their close ones.

When examining a personal or family insurance situation, it can happen that the insured ones are over insured. In that case, it is reasonable to set an optimum amount of the insurance sum. The insured person is spared from the unnecessary expense of the superfluous personal insurance. The decreased amount is usually not negligible and gives the opportunity for those means to be invested in a more profitable insurance form.

8. OTHER POSSIBILITIES

If a person assures a personal liquid capital that would be activated in the case of a damaging event in the acquired amount, then he does not need to take out a personal insurance. Besides the person's role and concern for his assets through various institutions: banks, insurance companies and trust companies, their assets can also appear elsewhere if a person has time, knowledge and current information. A person’s money funds can be increased in other ways as well.

The possibilities are the following:

- single securities, shares, bonds, cash receipts,
- buying properties, houses, appartments, garages and other real estate,
- investing in gold or other precious metal,

- purchasing precious stones,
- purchasing valuable old objects,
- money loans,
- investments in a child's sporting career,
- gambling,
- investments in their own or family business company,
- investments in art work of famous or unknown authors,
- investments in progress of internet marketing,
- investments in authorship and other intellectual work,
- and other similar possibilities that are open to human ingenuity.

9. CONCLUSION

The insurance profession will always be exposed to new risks that will require a fast response. Factors that influence mortality and life insurance in the future are:[17]

- progress in medicine,
- new diseases,
- change of insurance terms,
- changes in marketing methods,
- the aiming market.

Personal social security will, in spite of the new insurance products and new risks, stay in a domain of the individual or family in the context of a positive creation of personal property.

Insurance needs wider professional attention and involvement of the state, insurance companies, professional and scientific institutions in the economic field, Chamber of Commerce and various specialists from different fields who are prepared to accept and take on insurance as a professional challenge.[18] Scientific, professional and educational programmes, will give the opportunity of getting even more experiences, which beneficially give feedback to these fields.

The common goal of all these participating in the process of insuring basic and personal social security should be: to enlighten the individual and the

[17] Bogataj, M., Življenjska zavarovanja, Fakulteta za pomorstvo in promet, Portorož, 1998, p. 23.
[18] Ivanjko, Š., (1996): Zavarovanje kot prodaja nevidnega blaga, Dnevi slovenskega zavarovalništva 1996, Proceedings, Slovenski zavarovalni biro - Društvo ekonomistov Ljubljana, Bled - Ljubljana, May 1996, p. 49.

family. Life insurance is marked as a necessary and fundamental element of the individual and family financial programme or life plan in developed economies.[19] It is absolutely necessary that the individuals and families know the recommended optimum amount of the insurance sum for term insurance. It is not only a financial duty to our closest ones (children and parents), but a moral duty as well: insurance of necessary social security of people who are close to the insured person, or an insurance policy taker who also has a wide-range of human moral duty to look after his loved ones.[20]

In case we want to become more economical and productive in the field of personal social security and creation of personal property, it holds true that productivity is a product or a function of an ability product, knowledge and motivation, as well as external factors. If an individual wants to complete his work successfully, he needs necessary, adequate professional knowledge and an adequate concern for his work.[21] The ability of transmitting our experiences in a structural and social connection to an environment makes it possible to learn from our experiences and other people's experiences as well. The joining of our and other people's experiences is an incomprehensible learning potential.[22]

Progress in that field is approaching (we are exaggerating on purpose) with cosmic speed. "Pantha rhei" (all is flowing, all is changing), a wise saying of the Ancient Greek philosopher Heraklit, is gaining (on the door steps of the third millenium) unimagined acceleration. Yet, no matter what one principle will still be valid, the present is progressing on the basis of past achievements.[23] Personal insurance and personal social security is not something that should be left to coincidence. We will be more than pleased if the presented model contributes at least a bit to that - a good settlement.

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OPTIMALNI IZNOS SVOTE ŽIVOTNOG OSIGURANJA

Sažetak

Osobno osiguranje predstavlja jedan od izvora osobne socijalne sigurnosti, te se promatra kao kategorija osobnog vlasništva. Pritom se često javlja pitanje kako odrediti odgovarajuće životno osiguranje. Kada se osiguravaju materijalne vrijednosti (kuća, automobil…), osigurana svota obično ne predstavlja poseban problem. On se pak može pojaviti kod apstraktnog dobra kao što je životno osiguranje. U ovom radu predstavljamo model koji, u skladu s financijskom situacijom i predviđanjima za budućnost, omogućava izračun optimalne svote osiguranja života.

APPENDICES

OPTIMUM INSURANCE SUM IN TERM INSURANCE - 1				
INFLUENTIAL FACTORS		**MONTHLY**	**ANNUAL**	**AT THE EVENT**
INCOME AT AND AFTER THE DAMAGING EVENT	1. Pension			
	2. Bank interest savings			1.000,00 €
	3. Insurance savings yield			
	4. Mutual fund yield			
	5. Share yield			750,00 €
	6. Bond interest			
	7. Leased real estate yield	300,00 €		
	8. Other yield from money investments			
	9. Other capital yield			
	10. Collection sell			320,00 €
	11. Additional income of family members			
	12. Income from our own company			
	13. Help of relatives			
	14. Help of the country			2.500,00 €
	15. Help of the humanitarian organisations			
	16. Other income			
	TOTAL INCOME	**300,00 €**	**0,00 €**	**4.570,00 €**
UTCOME AT AND AFTER THE DAMAGING EVENT	1. Credit obligations	150,00 €		
	2. Rent			
	3. Share of family expenses			
	4. Expenses for children's education			
	5. Other expenses for children			
	6. Other obligations			
	7. Expenses for relatives			
	8. Means for the payment of hired services			
	9. Collection purchase			
	10 . Outcome from our own company			
	11. Expenses at the damaging event			3.500,00 €
	12. Open investment			
	13. Adaptation of life residences			
	14. Other expenses			250,00 €
	TOTAL OUTCOME	**150,00 €**	**0,00 €**	**3.750,00 €**
DIFFERENCE BETWEEN INCOME AND OUTCOME		**150,00 €**	**0,00 €**	**820,00 €**
EXPECTED INVESTMENT YIELD		**15 %**		
OPTIMUM INSURANCE SUM		**- 12.820,00 €**		

OPTIMUM INSURANCE SUM IN TERM INSURANCE - 2				
INFLUENTIAL FACTORS		**MONTHLY**	**ANNUAL**	**AT THE EVENT**
INCOME AT AND AFTER THE DAMAGING EVENT	1. Pension			
	2. Bank interest savings			
	3. Insurance savings yield			
	4. Mutual fund yield			
	5. Share yield			
	6. Bond interest			
	7. Leased real estate yield			
	8. Other yield from money investments			
	9. Other capital yield			
	10. Collection sell			
	11. Additional income of family members			
	12. Income from our own company			
	13. Help of relatives			
	14. Help of the country			2.500,00 €
	15. Help of the humanitarian organisations			
	16. Other income			
	TOTAL INCOME	**0,00 €**	**0,00 €**	**2.500,00 €**
UTCOME AT AND AFTER THE DAMAGING EVENT	1. Credit obligations			22.000,00 €
	2. Rent			
	3. Share of family expenses			
	4. Expenses for children's education			
	5. Other expenses for children			
	6. Other obligations			
	7. Expenses for relatives			
	8. Means for the payment of hired services			
	9. Collection purchase			
	10 . Outcome from our own company			1.500,00 €
	11. Expenses at the damaging event			3.000,00 €
	12. Open investment			
	13. Adaptation of life residences			
	14. Other expenses			1.000,00 €
	TOTAL OUTCOME	**0,00 €**	**0,00 €**	**27.500,00 €**
DIFFERENCE BETWEEN INCOME AND OUTCOME		**0,00 €**	**0,00 €**	**- 25.000,00 €**
EXPECTED INVESTMENT YIELD		**4 %**		
OPTIMUM INSURANCE SUM		**25.000,00 €**		

OPTIMUM INSURANCE SUM IN TERM INSURANCE - 3				
INFLUENTIAL FACTORS		**MONTHLY**	**ANNUAL**	**AT THE EVENT**
INCOME AT AND AFTER THE DAMAGING EVENT	1. Pension	200,00 €		
	2. Bank interest savings		50,00 €	850,00 €
	3. Insurance savings yield			15.000,00 €
	4. Mutual fund yield	50,00 €	115,00 €	
	5. Share yield		90,00 €	
	6. Bond interest			2.000,00 €
	7. Leased real estate yield			
	8. Other yield from money investments		75,00 €	
	9. Other capital yield			
	10. Collection sell			2.000,00 €
	11. Additional income of family members	150,00 €		
	12. Income from our own company			15.000,00 €
	13. Help of relatives		500,00 €	1.000,00 €
	14. Help of the country			2.500,00 €
	15. Help of the humanitarian organisations			
	16. Other income			
	TOTAL INCOME	**400,00 €**	**830,00 €**	**38.350,00 €**
UTCOME AT AND AFTER THE DAMAGING EVENT	1. Credit obligations	275,00 €		7.500,00 €
	2. Rent			
	3. Share of family expenses	170,00 €	955,00 €	
	4. Expenses for children's education	110,00 €	245,00 €	
	5. Other expenses for children	95,00 €	175,00 €	
	6. Other obligations			
	7. Expenses for relatives			
	8. Means for the payment of hired services		200,00 €	
	9. Collection purchase			
	10 . Outcome from our own company			
	11. Expenses at the damaging event			2.500,00 €
	12. Open investment			20.500,00 €
	13. Adaptation of life residences			
	14. Other expenses		500,00 €	
	TOTAL OUTCOME	**650,00 €**	**2.075,00 €**	**30.500,00 €**
DIFFERENCE BETWEEN INCOME AND OUTCOME		**- 250,00 €**	**- 1.245,00 €**	**7.850,00 €**
EXPECTED INVESTMENT YIELD		**14 %**		
OPTIMUM INSURANCE SUM		**22.471,43 €**		

OPTIMUM INSURANCE SUM IN TERM INSURANCE - 4				
INFLUENTIAL FACTORS		**MONTHLY**	**ANNUAL**	**AT THE EVENT**
INCOME AT AND AFTER THE DAMAGING EVENT	1. Pension	250,00 €	90,00 €	
	2. Bank interest savings			50.000,00 €
	3. Insurance savings yield			21.000,00 €
	4. Mutual fund yield		500,00 €	
	5. Share yield		200,00 €	
	6. Bond interest			
	7. Leased real estate yield			
	8. Other yield from money investments			2.000,00 €
	9. Other capital yield			
	10. Collection sell			500,00 €
	11. Additional income of family members	110,00 €		
	12. Income from our own company			
	13. Help of relatives	50,00 €	500,00 €	
	14. Help of the country			2.500,00 €
	15. Help of the humanitarian organisations			
	16. Other income			
	TOTAL INCOME	**410,00 €**	**1.290,00 €**	**76.000,00 €**
UTCOME AT AND AFTER THE DAMAGING EVENT	1. Credit obligations			
	2. Rent			
	3. Share of family expenses	200,00 €	1.000,00 €	
	4. Expenses for children's education	100,00 €	250,00 €	
	5. Other expenses for children	100,00 €	150,00 €	
	6. Other obligations			1.500,00 €
	7. Expenses for relatives			
	8. Means for the payment of hired services		1.000,00 €	
	9. Collection purchase			
	10 . Outcome from our own company			
	11. Expenses at the damaging event			3.500,00 €
	12. Open investment			30.000,00 €
	13. Adaptation of life residences			
	14. Other expenses			
	TOTAL OUTCOME	**400,00 €**	**2.400,00 €**	**35.000,00 €**
DIFFERENCE BETWEEN INCOME AND OUTCOME		**10,00 €**	**- 1.110,00 €**	**41.000,00 €**
EXPECTED INVESTMENT YIELD		**4 %**		
OPTIMUM INSURANCE SUM		**- 16.250,00 €**		

OPTIMUM INSURANCE SUM IN TERM INSURANCE - 5				
INFLUENTIAL FACTORS		**MONTHLY**	**ANNUAL**	**AT THE EVENT**
INCOME AT AND AFTER THE DAMAGING EVENT	1. Pension			
	2. Bank interest savings			
	3. Insurance savings yield			
	4. Mutual fund yield			4.500,00 €
	5. Share yield			550,00 €
	6. Bond interest			
	7. Leased real estate yield			
	8. Other yield from money investments			7.500,00 €
	9. Other capital yield			22.500,00 €
	10. Collection sell			
	11. Additional income of family members	165,00 €		
	12. Income from our own company	175,00 €		
	13. Help of relatives			
	14. Help of the country			2.450,00 €
	15. Help of the humanitarian organisations			
	16. Other income			
	TOTAL INCOME	**340,00 €**	**0,00 €**	**37.500,00 €**
UTCOME AT AND AFTER THE DAMAGING EVENT	1. Credit obligations			7.500,00 €
	2. Rent			
	3. Share of family expenses	150,00 €	1.500,00 €	
	4. Expenses for children's education			
	5. Other expenses for children			
	6. Other obligations			
	7. Expenses for relatives			
	8. Means for the payment of hired services		1.000,00 €	
	9. Collection purchase			
	10 . Outcome from our own company			
	11. Expenses at the damaging event			2.500,00 €
	12. Open investment			
	13. Adaptation of life residences			
	14. Other expenses			
	TOTAL OUTCOME	**150,00 €**	**2.500,00 €**	**10.000,00 €**
DIFFERENCE BETWEEN INCOME AND OUTCOME		**190,00 €**	**- 2.500,00 €**	**27.500,00 €**
EXPECTED INVESTMENT YIELD		**15 %**		
OPTIMUM INSURANCE SUM		**- 26.033,33 €**		