
József Banyár, Koppány Nagy, Ferenc Szebelédi, László Windisch, Zoltán Zubor: Background to the pension insurance recommendation^{1*}

Pension insurance contracts concluded after 1 January 2014 provide eligibility for tax incentives in the context of disposition over taxes. With a view to ensuring that the insurance products available on the market contribute to financial self-reliance, serve customer needs and requirements and comply with the objectives of the legislator, the Magyar Nemzeti Bank issued a recommendation on 26 May 2014. This article summarises the theoretical and practical considerations underlying the recommendation. Our point of departure is that simple, transparent products are best suited to these objectives. The tax incentive alone is a suitable tool for supporting sales and should accordingly be passed on in its entirety as an advantage for customers. Annuities and various combinations thereof are optimal tools for achieving pension objectives, while lump-sum payments are only justified in exceptional cases. In the case of unit linked insurance, special attention must be paid to investments and costs. Long-term savings geared towards pensions should be coupled with life-cycle type investment solutions which contain increasingly lower risk instruments as age progresses, compared to instruments with higher yield potential during the initial period. Customer benefits can only be achieved if excessive costs are avoided, which calls for the introduction and reinforcement of products with better cost indicators compared to those found previously on the market, along with the effective cooperation of intermediaries in disseminating these products among customers.

INTRODUCTION

A monotonous downward trend in terms of contract volume has characterised the life insurance market for many years (even if we eliminate the effect of group life, accident and health insurance). Additionally, life insurance provisions have stagnated over the past few years and premium revenues on recurring premium policies have also been falling. The gradual phasing-out of earlier tax allowances was one of the drivers of this decline, along with the financial crisis unfolding from 2008 and waning consumer confidence in life insurance products. A reversal of this trend may be seen in 2014, as a significant step forward was taken in case of tax allowances, one of the three negative factors, with the introduction of a tax allowance on pension insurance. Moreover, there are signs of easing in the financial crisis; at the same time, overcoming the confidence crisis may take years and bold steps by the sector, the legislator and the supervisory authority are necessary. Some changes have already taken place, primarily aimed at improving the transparency of unit linked life insurance: these efforts include the introduction of the total cost indicator (TCI) in 2009 (MABISZ, 2009-2014) or the regulation on commissions taking effect next year, but

much work still remains to be done in this regard. Among the functions defined in the Act on the Magyar Nemzeti Bank (the “Central Bank Act”), reinforcing public trust in the financial intermediary system is one of the priority objectives of the Magyar Nemzeti Bank (MNB). With a view to this, the MNB has issued its pension insurance recommendation and hopes to see the pension portfolio supported by the tax allowance built using products that are capable of restoring and bolstering consumers’ shaken confidence.

From 1 January 2014, an independent annual tax allowance is granted on newly concluded pension insurance contracts, amounting to 20% of the pension insurance premium paid during the tax year, and capped at HUF 130,000. This is similar to the rate of the tax allowance granted on pension schemes not sold by insurance companies (voluntary pension funds, retirement plan accounts). In other words, this step will eliminate the differentiated management of the various retirement plans from the perspective of tax law, which has long since been contested by the insurance industry and regarded as a major competitive disadvantage of life insurance geared towards pension insurance. The tax allowance follows the positive trend that has emerged over the past few years

* The views expressed in this article are those of the author(s) and do not necessarily reflect the official view of the Magyar Nemzeti Bank.

¹ MNB (2014).

in terms of its method, which consists of the tax allowance increasing the pension insurance amount instead of trying to persuade taxpayers to forego using their cash over the long run by providing immediate cash benefits.

Even in the short period that has elapsed, the positive effects of the newly introduced tax allowance on the life insurance market can already be felt. This initial upswing can only remain successful in the long run if consumer confidence in life insurance products and insurance companies is restored, which hinges upon the success of pension products. In order for the legislator to maintain tax allowances over the long term, it must be convinced of its utility at the very least. In the case of life insurance geared towards pension savings, adequately regulating access is essential, but not enough. Regulation of voluntary pension funds and retirement plan accounts is relatively broad and deep, and one of the cornerstones of this regulation is a strict cap on costs. The situation is slightly different in case of pension insurance, as only access is really regulated, while other parameters, options and costs are not. It is an important social interest to ensure adequate livelihood for the elderly; supplementary savings geared towards pensions can play a major role in this. Contribution to livelihood during elderly years is a social interest on the one hand, but also an individual need that is often not consciously recognised on the other hand. Fulfilling the state's interest derived from individual needs related to savings geared towards pensions across the broadest possible range calls for the availability of pension products on the market that are truly suitable for satisfying the needs and requirements of customers. State and consumer protection interests are roughly the same in the case of pension insurance, however only covered risks are defined in the form of legal instruments.

As the prudential and consumer protection supervisory authority, the MNB considers it a priority to ensure the presence of products on the financial markets that meet the needs and requirements of customers and are capable of fulfilling their social function. With a view to these objectives, the MNB issued a recommendation on pension insurance on 26 May 2014 in order to foster product development and pricing by insurance companies. The recommendation comprehensively covers the main expectations and advice regarding pension insurance products. This article attempts to present the background underlying these recommendations. In this article, we first present the fundamental principles of the recommendation, the risks to be covered and the role of the tax incentive, followed by a detailed discussion of the services provided, annuities, the life-cycle investment structure and the theoretical background of cost requirements. In conclusion, we present expectations in terms of sales and examine the recommendation as a tool.

PRINCIPLES OF THE RECOMMENDATION

Prior to formulating the recommendations geared towards insurance companies, the MNB defined the fundamental principles representing the starting point of expectations and constituting a unified framework for such. The fundamental principles are simultaneously customer-focused and prudential in their approach: they define a product structure that offers an advantage for customers and promotes the safe operation of insurance companies, which is sustainable in the long run and builds on consumer confidence. In the MNB's target system, these two aspects complement each other to facilitate the sound, reliable operation of the financial system. The fundamental principles define expectations regarding the structure and sale of the product, and the role of the tax incentive.

In terms of product structure, the MNB expects simple and transparent structures, with customer needs already taken into account during product development. Sales must be geared towards finding the right contract for the customer suited to its needs, and the insurance company's incentive system must foster the long-term maintenance of contracts. The advisory activities provided by intermediaries must also support this. The tax incentive must be geared towards increasing the customer's savings, and the insurance company must not have an interest in seeing the contract terminated prior to expiry.

DEFINING PENSION INSURANCES

Risks to be covered

The Act on Personal Income Tax defines pension insurance as life insurance where the insured event:

1. is the death of the insured, or
2. obtaining eligibility for pension benefits as per the legal regulation on retirement provisions paid by social insurance, or
3. at least a 40 per cent damage to one's health condition, or
4. reaching the retirement age specified in the contract in accordance with the legal regulations in force at the time of entering into the contract.

An additional condition is that 10 years must pass between the conclusion of the contract and its fulfilment, unless:

- payment occurs due to death or disability
- the insurance company's performance is not a decreasing annuity and the annuity is paid until the end of the tenth year of disbursement or the death of the insured.

The wording of the legislation suggests that the correct interpretation is that materialisation of any of the above specified risks qualifies as an insured event in the case of the pension insurance product. In an opposite interpretation, any simple term life insurance would fit the definition, which is clearly not the legislator's intention.

Product structure

Good products and effective market operation are contingent upon the simplest possible structures and greatest transparency of the products. Initiating the unbundling of complex product fosters competition and transparency, and has already allowed costs to be slashed in several areas² simply by preventing service providers from concealing their costs behind complex product structures. In our case, unbundling refers to distinguishing the savings and other risk components of the product, and presenting separate rates for each of them. This solution makes the contents of the product and the price of each component clearer for the customer. This not only allows them to choose the product best fitted to their needs, but also allows the comparison of the rate components of the various schemes.

TAX INCENTIVES

Under the current scheme, the tax incentive does not take the form of an element decreasing the tax base, but as a state subsidy funded from the customer's taxes, making it unclear who ultimately benefits from the tax incentive. The main possibilities are:

1. The subsidy (or a portion thereof) ends up at the insurance company, improving its profitability. This takes place if the cost of the pension insurance product exceeds its yield.
2. A sub-case of the previous case consists of the subsidy (or a portion thereof) being used as commission for insurance intermediaries. This scenario applies if the commission impacts the fluctuations of the cost side of the cost-to-yield balance presented above in such a manner that the commission rises, rather than decreases as would be expected in case of such product, compared to the conventional degree, as a product back to by the state is easier to sell.
3. Support materialises entirely in the form of extra yield for customers.

It is not obvious which of the above scenarios materialises and in what combination; the realities may also differ from one insurance company to the next. In order to achieve the desired objective, the market needs to be nudged (Thaler–

Sunstein, 2011). The objective is clearly to see the customer benefit from the tax allowance, which is the objective we strive for with our recommendation.

With a view to the above considerations, the recommendation states as a fundamental principal that the state subsidy in the form of the tax incentive is intended for the customer. To implement this, the MNB expects no other costs besides the asset-proportionate costs incurred by the management of assets to be deducted from the state subsidy and equal treatment to insurance premia in terms of the deduction of costs, furthermore defining limits on product pricing. For the sake of adequate transparency and due to any potential repayment obligations that may arise, it is necessary for the state subsidy received and the return realised on it to be distinctly stated across the entire term. A special ad hoc account could serve this purpose, or any other accounting solution based on which the received subsidy and its return can be stated. Based on this same principle, if the contract is terminated for a reason other than benefit payout, the redemption value should be 100 per cent in respect of the state subsidy and its return, as this revenue cannot be used to pay either commission or any other costs and it would therefore be unwarranted to define any lower redemption amount. This is also important due to the need to ensure the insurance company's interest in maintaining the contract. Taxation law sanctions (repayment of the subsidy received increased by an additional 20 per cent) represent a sufficiently dissuasive force, and there is no need for the insurance company to apply any further cost deduction to the customer.

BENEFITS

General information

Pension, as a form of old-age income, best serves its objectives in the form of regular payments paid lifelong, in other words the depletion of funds accumulated during the beneficiary's active years must by default be distributed over its entire remaining life expectancy, as the chances of accumulating new capital or accessing new sources of income decrease as age progresses. At the same time, in the case of supplementary pensions, the role of other pension system elements and the income stemming from such must be taken into account, as well as the exact amount of supplementary pension funds accumulated to be able to accurately define its objective. In Hungary, old-age livelihood is mainly ensured by social security pensions in the form of monthly payments indexed to inflation, which thus continuously maintain their absolute purchasing power. Supplementary pensions cannot therefore have the objective of ensuring minimum livelihood or even

² For instance in the field of telecommunications, where several states have enforced the unbundling of complex packages (The Economist, 2014).

partially replacing social security, and thus do not warrant excessively strict requirements. Ensuring old-age livelihood at the highest standard can be achieved in several manners, and old-age security or the perception of such security can be achieved merely with the existence of accumulated wealth.

This is why when formulating the recommendation, a flexible proposal was outlined, calling for the market introduction of products capable of serving the broadest possible range of customer needs and requirements.

We feel that the service rendered should be primarily defined as a function of the accumulated funds. The recommendation is based on the premise that sufficient funds will be accumulated over the long term (i.e. primarily if savings are set aside from a relatively young age) to enable the payment of a meaningful annuity. The default recommendation is thus to use the amount in the form of a lifelong annuity furnishing regular income (discussed in depth later in this article).

It is also recommended to delay the depletion of accumulated funds in the case of lower principal amounts as well, but extending it over the entire lifetime would reduce the annuities payments to very small amounts. This would logically present a temporary annuity as an option, but this scheme is certainly not suitable for pension insurance, as it would consist of customers waiving the option of potential bequest for a slightly higher annuity amount, which is one of the main obstacles to the spread of life annuities. The main issue with temporary annuities is they end right when they would be most needed. This could be avoided if these principals were paid out at a more advanced age, however few heed this advice, and therefore as a compromise we recommended fixed-term phased withdrawal for both customers and service providers.

Lump sum withdrawal is generally not a preferred solution for savings geared towards supporting old-age livelihood due to the risk of their quick depletion; however, some exceptions – fundamentally three types – can be accepted. The first scenario is when the amount of savings is high and there is no need or requirement for high annuities. In this case, the lump sum withdrawal of part of the amount is capable of fulfilling the customer's needs without jeopardising its sufficient long-term continuous income, on condition that it does not exceed 30-50 per cent thereof. Another possible scenario is the materialisation of a very firm and justified customer need/requirement, for instance with a view to moving into a retirement home or plans by the customer to purchase an annuity from another insurance company. In the third scenario, the amount of savings is so low that they cannot fund even a medium-term fixed term annuity (i.e. annuity payments would also be low in this case as well).

Life annuities

Based on the foregoing, we believe that pension insurance should be fundamentally provided and collected in the form of life annuities. The global annuities market, however, shows a gloomy picture (even gloomier if we limit ourselves to the Hungarian annuities market). Looking at this sector, significant (but nowhere truly large) voluntary life annuity markets can only be identified in a handful of countries. The mandatory annuities market is larger, but this approach (i.e. mandatory annuitisation) is not an option under consideration in the field of Hungarian pension insurance.

In the case of voluntary life annuities – in contrast to mandatory ones – customers have the power to decide whether or not to purchase a life annuity, when they receive their pension benefit which allows for the purchase of an annuity. Their decisions are primarily shaped by the desire to avoid two things:

1. receiving a lower expected value as an annuity than what they paid as a lump sum premium
2. seeing the unused part (or a large portion thereof) of their funds inherited by a non-relative in the event of their relatively early death

Both of these considerations dissuade many people from opting for a life annuity, which explains the small size of voluntary annuities markets. The former leads to a self-generating process. Those who are certain that they will not reach an advanced age or uncertain whether they will live long enough will not opt for an annuity, providing for a sort of auto-selection among the insured. For this reason, insurance companies can expect the mortality composition of individuals purchasing annuities to be better compared to the overall population (but worse from their perspective), increasing annuity premia. This however, will dissuade even more rationally thinking individuals from the annuities market, leading to a further rise in premia, etc. This will result in involuntary annuities premia being so high that they will only be worthwhile for a minority certain to look forward to a long life expectancy.

The second consideration will even dissuade many from this minority from the annuities market, as even retirees with high life expectancy can die young. Most people like to adopt the following pattern of thought: "I do not know what I will spend my pension principal on. If I live long enough, I will spend it entirely on myself and deplete it, otherwise I will bequeath it to my children and grandchildren." Purchasing an immediate life insurance annuity calls for abandoning this presumptive thinking and making a firm decision to spend pension savings on oneself – a decision few are capable of.

It is not only customers who are hesitant; insurance companies are also reluctant to sell life annuities. The main issue is that the life expectancy of people and specifically annuitants is gradually rising at a rate that is not known, constituting the longevity issue. In other words, the premia collected during the early period of the term may not be enough to cover the annuities paid out to insurance holders reaching an advanced age.

Several attempts have been made to address these issues. One of them is so-called impaired annuities, which provide a discount to insurance holders capable of proving that they are sick/disabled, and therefore have a shorter life expectancy. This could make annuitisation attractive for this group, in contrast to a scenario where a uniform premium table is applied. At the same time, this solution is recommended for markets which have thriving annuity markets, which is not the case in Hungary.

Another solution is to try to reach a compromise. Even customers wary of annuities can easily admit that their excessive longevity, while otherwise desirable and positive, could have catastrophic consequences for them, as their financial resources are likely to be entirely used up, and their physical and mental condition unsuitable for finding new resources. This warrants a sort of financial "catastrophe coverage" for everyone, in other words a way to secure sufficient supplementary income at a very advanced age, should they live that long. This does not require the purchase of an immediate life annuity using the totality of one's funds, which would give rise to the issues mentioned above. It would suffice for them to purchase a long-term deferred annuity using a smaller portion of their funds, which may not even begin if the deferred date were not reached, but would very much come in handy if it were.

For the most part, this solution addresses the two reasons giving rise to customer wariness and the issue facing insurance companies, as the larger portion of pension principal can be bequeathed, the expected annuity payout will be lower, and thus the premium and its potential divergences and the longevity issue facing insurance companies will also be smaller in the case of an expectedly much shorter annuity compared to a longer one.

This type of solution is theoretically not novel, but it remains relatively obscure and should therefore be highlighted for stakeholders (i.e. customers and service providers). The Canadian Moshe Milevsky proposed "Advanced-Life Delayed Annuities" (ALDA) (Milevsky, 2004) in case of involuntary annuities, although he also cites earlier origins. The OECD

started promoting the concept in 2008 in relation to mandatory annuities (Antolin, 2008), which became a quasi-official recommendation for countries having implemented a recapitalised pension reform and approaching the annuitisation phase. József Banyár (Banyár, 2012) promoted the solution in Hungary, and Kolos Ágoston (Ágoston, 2008) also discovered it independently.

The question is what portion of pension principal should be used to purchase a deferred annuity, and why the MNB recommends allocating 25–30 per cent for this purpose? There is a self-explanatory answer to this: pension principal should be distributed (ignoring indexation) in such a manner that we receive equal monthly annuities for the rest of our lives, with the life annuity portion only paid out from an advanced age.

Quantitatively speaking, under this recommendation, the pension principal (C) should not be converted to the annuity based on the initial annuity insurance formula³

$$\ddot{a}_x$$

where the annual annuity amount would be

$$\frac{C}{\ddot{a}_x}$$

(paid out in 12 instalments in case of an annual annuity), instead distributing this principle over the entire lifetime, but with the insurance holder only committing to annuitisation from an advanced age (x+n). The annuity amount worth purchasing can be calculated using the following formula

$$\frac{C}{\ddot{a}_{\overline{n}|} + {}_n\ddot{a}_x} \quad 4, 5$$

This formula is officially the formula of a guarantee period life annuity at the beginning (until year n), where in the event of the insurance holder's death in under n years, the remaining annuity is paid to the heirs for the remaining period until n (as a lump sum or an annuity, a mere technical issue), but if the insurance holder survives the term, a deferred annuity of the same amount is launched.

The guarantee period annuity can be broken down into two annuities: an annuity certain of n years, where principal amounts to

$$\frac{\ddot{a}_{\overline{n}|}}{\ddot{a}_{\overline{n}|} + {}_n\ddot{a}_x} \cdot C$$

³ $\ddot{a}_x$ meaning: net (exclusive of costs) present value of HUF 1 of the life-contingent annuity of an insurance holder of age x, i.e. its net premium.

⁴ ${}_n\ddot{a}_x$ meaning: net premium for the life annuity deferred by n years, purchased by the insurance holder at age x, with payout starting at age x+n – provided that the insurance holder survives until that age.

⁵ $\ddot{a}_n$ meaning: formula for the annuity certain for n years ("phased withdrawal"): guaranteed for n years, but only until then.

and a deferred annuity purchased using the remaining portion

$$\frac{{}_n\ddot{a}_x}{{}_n\ddot{a}_x + {}_n\ddot{a}_x} \cdot C$$

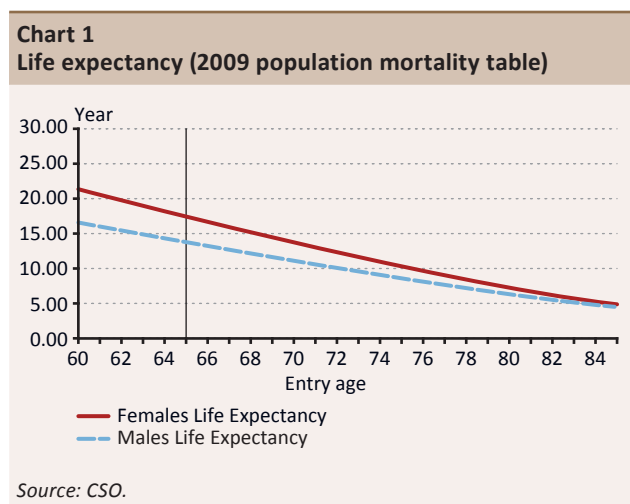
It is actually enough to purchase this annuity at retirement using the smaller portion of principal, as holders are capable of allocating the greater portion of their funds for a foreseeable period of n years

$$\frac{{}_n\ddot{a}_x}{{}_n\ddot{a}_x + {}_n\ddot{a}_x} \cdot C$$

for a foreseeable period of n years.

A further question is the value of n . Logically, it is relatively high, but not too high. The OECD recommends that $x+n$ should be approximately 80-85 years.

The Banyár (2012) paper contains calculations illustrating how this translates relatively to annuity premia. The following can be said on the matter approached from a different perspective. Based on the 2009 population mortality table, Chart 1 shows life expectancy at various ages.



At first glance, this also represents life annuity premia with a zero per cent technical interest rate.⁶ For instance a woman has a life expectancy of 17.63 years at age 65, which means that net principal (excluding service provider charges) of $10\,000 \cdot 12 \cdot 17.63 = \text{HUF } 2,115,600$ must be accumulated.

In reality, premia will be higher than this, as individuals opting for annuities have better life prospects compared to the total population, as mentioned above. The premia on guarantee period life annuities (applied to a HUF 1 monthly annuity) is also higher, as shown by Table 1.

Table 1

Life expectancies and premiums of guarantee period life annuities

Age of entry	65
Remaining male life expectancy	13.73
Remaining female life expectancy	17.63
Guarantee period annuity premium	
Male – until age 80	17.94
Male – until age 85	21.15
Female – until age 80	20.08
Female – until age 85	22.27

However, if we look at the ratio of “catastrophe coverage” within the guarantee period annuity, i.e. deferred annuity, we get low relative values according to Table 2

Table 2

Proportion of the deferred annuity premium within the guarantee period annuity premium

Age of entry	65
Male – from age 80	16%
Male – from age 85	5%
Female – from age 80	25%
Female – from age 85	10%

Therefore the recommended strategy seems like a reasonable compromise based on the figures as well, even if we have to take into account that:

- only unisex annuities can be determined at present, with no differentiation allowed between men and women. This means that the uniform annuity premium is situated between the premia for the two genders, but is somewhat closer to the higher value defined for women (who are predominant in this age bracket)
- annuitants feature a higher proportion of individuals reaching an advanced age, therefore actual ratios will be higher than those specified above.

A manner of thinking differing from the above is also possible. We can also say that it is irrelevant whether the annuity provided by “catastrophe coverage” is identical to the annuity certain received until then. In this case, we divide the pension principal among the two objectives and look at the amount of annuity obtained under these conditions. We further fine-tuned the calculations compared to the above by taking into account the fact that annuitants’ life expectancy is higher compared to the population mortality table, and thus tried to present seemingly realistic values.

⁶ This is recommended to preserve the value of the annuity, i.e. featuring indexation using a relatively high index. The premium can be decreased by increasing the interest rate, but this results in increasingly smaller value allocation.

Table 3**Size and proportion of the annuity certain and life annuity in case of different distribution of capital**

Annuity certain								
		Principal ratio of the annuity certain						
		60%	65%	70%	75%	80%	85%	90%
Switching age	75	50,000	54,167	58,333	62,500	66,667	70,833	75,000
	80	33,333	36,111	38,889	41,667	44,444	47,222	50,000
	85	25,000	27,083	29,167	31,250	33,333	35,417	37,500
Life annuity								
		Principal ratio of the annuity certain						
		60%	65%	70%	75%	80%	85%	90%
Switching age	75	32,174	28,152	24,130	20,109	16,087	12,065	8,043
	80	51,608	45,157	38,706	32,255	25,804	19,353	12,902
	85	100,020	87,518	75,015	62,513	50,010	37,508	25,005
Proportion								
		Principal ratio of the annuity certain						
		60%	65%	70%	75%	80%	85%	90%
Switching age	75	1.55	1.92	2.42	3.11	4.14	5.87	9.32
	80	0.65	0.80	1.00	1.29	1.72	2.44	3.88
	85	0.25	0.31	0.39	0.50	0.67	0.94	1.50

The distribution of principal amount and the choice of switching age fundamentally impact the initial (fixed) annuity and the life annuity amount. For instance considering a zero per cent technical interest rate and HUF 10,000,000 initial principal, we obtained the annuity values specified in Table 3 in the event of that 60, 65, 70, 75, 80 per cent of the initial principal is used for the annuity certain and the life annuity starts at age 75, 80, 85. As a point of departure, we took into account a realistic unisex mortality figure: (in line with the composition of over-65 age group) considering a 30 per cent male and a 70 per cent female mortality rate, and considering mortality 30 per cent lower compared to the population mortality.

Due to the application of a zero per cent technical interest, the values listed in Table 3 are expressed in real terms (assuming that the yield credited to the annuitant is equal to inflation), allowing for a real comparison.

Fund distribution and entry age parameters should be chosen so as to yield an attractive initial annuity while keeping life annuity from dipping too low. In the case of a high switching age, we do not receive a high initial annuity even if a large portion of funds are allocated to the initial annuity period. If we expect the initial annuity to be at least 40,000 and life annuity to be at least 25,000, then a distribution of funds of 60–65 per cent is recommended for life annuity starting at

age 75 and distribution of 75 per cent in the case of a life annuity starting at age 80.

The picture is greatly nuanced by the management of longevity risk by the insurance company and its generation of the unisex mortality table used to define annuities. Changes in mortality assumptions do not affect annuities certain, but strongly impact life annuities (Table 4).

Table 4**The effect of different assumptions on mortality to the value of deferred life annuity**

		75 years/60%	75 years/65%	80 years/75%
Annuity certain		50,000	54,167	41,667
Life annuity	50% ffi / 0.75	35,705	31,242	36,876
	30% ffi / 0.75	33,669	29,460	34,334
	30% ffi / 0.5	26,349	23,055	24,622

For instance, the value of a life annuity is not significantly impacted by the upward weighting of female mortality from 50-50 per cent to the actual distribution (30-70 per cent), however the assumption of far better life prospects for annuitants (the probability of death is not merely 75, but 50 per cent of that of the total population) results in a significant decline.

SPECIAL RECOMMENDATIONS FOR UNIT LINKED LIFE INSURANCES

Life-cycle approach investments

One of the keys to the success of savings geared towards pensions is the right investment. This is due to the fact that a pension is the longest-term investment objective, featuring a savings cycle ranging from ten years up to the total active portion of a career, i.e. 40-45 years. Savings periods shorter than ten years are generally not considered as being purely geared towards pension, and are instead late savings of the final period, which, while certainly being very useful, likely only enable the accumulation of smaller amounts of funds than needed to ensure sufficient (supplementary) pension, and thus differ little from general purpose saving in terms of their nature. It is no coincidence that savings periods of at least ten years are defined as the condition for tax incentive eligibility.

Insurance companies fundamentally offer two types of products in terms of investment risk: alongside traditional products, unit linked [UL] insurance products also appeared on the Hungarian market approximately 20 years ago. In the case of traditional insurance, the insurance company guarantees a return to customers equivalent to technical interest through the balance of the premium and the pledged insurance benefit. In order to foster safe operation and avoid excessive pledges, the legislator has capped technical interest (currently at 2.9 per cent), with the majority of insurance companies offering products featuring technical interest rates of around 2 per cent or less. Insurance companies generally pay back at least 80 per cent of return over and above the technical interest rate, the so-called excess return.⁷ In the case of traditional products, the insurance company assumes the investment risk up to the technical interest rate level. This is a predictable and safe solution for the customer. In order to safely generate the technical interest, insurance companies generally strive to invest the funds in investments featuring the lowest possible risk, and thus the excess return achieved is likely to be low even during good periods. In the longer run, however, a higher return can be attained with a well-chosen investment structure.

Unit linked insurance products were created specifically for this purpose. In their case, the customer bears the investment risk and capital can be fully invested in assets best suited to the customer's needs and life situation. Practical experience,

however, shows that customers generally have a hard time assessing the risk they are able to safely undertake and are thus unable to choose the right assets. Another key factor is that in the case of long-term investments, not only does investment composition need to be adjusted to market conditions, but the level of risk must also be adjusted to the remaining horizon. The recommendation therefore suggests that pension insurances follow the so-called life-cycle approach. This approach consists of continuously adjusting the portfolio risk level to the time remaining until pensionable age. This represents a higher level of risk towards the beginning of the term, gradually declining levels during the term and a lower level of risk towards the end of the term. The underlying thought is that higher risk is paired with greater yield potential if the assets are chosen correctly (or rather, it should only be undertaken under this condition). As the investment is for the longer term, high volatility is less relevant and smoothing is unnecessary due to uniformity. The so-called average cost effect also mitigates risk, as the cashflow of the savings is continuous and received in small portions; therefore assets are purchased in small quantities at different asset prices. Once risk needs to be reduced as age advances, the assets can be regrouped in small volumes following a long transition, keeping the impact of asset price fluctuations on the investment far lower. At the beginning of the period, higher risk can be undertaken on the lower capital, while towards the end of the period, it is no longer worthwhile to undertake high risk on the accumulated capital.

A life-cycle approach to investment structure can be implemented in several manners. A target date portfolio is an obvious solution, where the asset manager optimises the return on investment to the date of reaching pensionable age. Target date portfolios with maturities of ten or more years are rare in Hungary, and there is little experience on such long terms. If the customer nevertheless opts for such a portfolio, the lowest possible risk (e.g. money market funds, bank deposits, etc.) can be undertaken for the period between the maturity date and the date of reaching pensionable age. Target-date funds with guarantee are a specific type of target date portfolio, where either the insurance company or the asset manager guarantees the yield at pensionable age. While in the case of traditional products, insurance companies must continuously generate the technical interest rate,⁸ in the case of target-date funds with guarantee this only applies to the target date. As the savings are for the long term, the impact of cyclicity can be easily managed and a guarantee approaching that of traditional products can be provided at a lower cost.

⁷ Payback of 80 per cent is defined by legislation, but applies to the entire insurance company.

⁸ In the event of any volatility in return, the pledged excess return must be paid out in a good year even if return fell short of technical interest in previous years.

An adequate investment composition can be crafted using the current asset funds used by insurance companies. This merely requires the insurance company to clearly and straightforwardly categorise its asset funds, indicating which ones it recommends investing in for which age bracket, alongside their risk profile. It is therefore advisable to recommend a limited number of asset funds with clearly defined risk levels to allow customers to easily assess their options and simply choose the best-fitting investment composition. For customers seeking greater security, guaranteed-yield asset funds can also be recommended for certain periods.

Costs – Total Cost Indicator (TCI)

The Association of Hungarian Insurance Companies drew up its TCI Charter in 2009 (MABISZ, 2009–2014) with a view to reinforcing consumer confidence in the insurance market at the earlier initiative of the supervisory authority (HFSA, 2007), but following a different approach. The calculation and publication of the TCI Charter is not compulsory, and its adoption is voluntary, but every insurance company offering unit linked life insurance has adopted it.

The TCI presents the costs borne by the customer as a minimum yield to be continuously achieved by the product's underlying asset funds throughout the entire term of the insurance contract (i.e. prior to the deduction of asset management costs) in order for the customer to nominally receive the amount of premia paid according to the original premium requirement as the amount at maturity (or the redemption amount used to calculate TCI at specific points in time in the absence of adequate maturity values).

The actual (a posteriori) cost indicator of a contract depends strongly on the events that occurred (specific contract parameters, customer behaviour, insured events, asset fund performance, etc.), over and above the product parameters. The TCI to be published applies to one product. The indicator values must be calculated and published by insurance companies for several model points, using the assumption defined in the TCI regulations⁹. The assumptions do not cover every product parameter, therefore model points can result in a TCI band in practice.

The insurance companies adopting the TCI Charter committed to capping their cost deductions by keeping their product TCIs within the bands defined by them and specifically issuing

a warning to customers if the specific circumstances of a product do not allow this. Bands defined as targets:

- Up to a term of 10 years: 4.75–6.75 per cent
- At 15 years: 4.25–6.25 per cent
- At 20 years: 3.75–5.75 per cent

Pursuant to the TCI Charter, pension insurance indicators must be calculated using an entry age of 55, 50 and 45 rather than 36, and are referred to as TCI*.

The TCI Charter is based on self-regulation and represents a great step forward in terms of transparency, but its impact is limited stemming from its nature. An examination of the pension insurance product market reveals that some of the products remained above this band (ranging between 1.03 and 7.30 per cent at the lower bound and 2.95 and 9.55 per cent at the upper bound in May 2014).

The performance of pension insurance can be measured retrospectively using the internal rate of return of contract cashflows. Expected performance is indicated by the return H that must continuously be generated by an asset fund for a contract with a specific TCI (more specifically, cost structure) to achieve return h on the contract. Pursuant to the definition of TCI, a return of $h = 0\%$ requires $H = \text{TCI}$.

It is easy to see that if the insurance company only deducts f asset-proportionate costs, the return h can be attained with $H = (1 + \text{TCI}) * (1 + h) - 1$, where $(\text{TCI} = 1 / (1 - f) - 1)$. If other costs deductions occur (e.g. initial costs) the above equation does not apply, but the application of models indicate that in order to achieve the return h on the contract, an asset fund return only marginally higher than $H = (1 + \text{TCI}) * (1 + h) - 1$ is needed.

The state subsidy amounting to 20 per cent of the premium paid¹⁰ is an important factor when purchasing pension insurance. These tax credits increase the internal rate of return of the contract to different degrees as a function of the term (assuming that the tax credit and related eligibility are continuously maintained throughout the entire term), in other words a lower asset fund return (H) is needed to attain the same contract return (h). The longer the term, the smaller the impact. This somewhat offsets the impact consisting of higher TCI generally being associated with shorter terms, as asset-proportionate initial costs are distributed over a shorter period when calculating internal rate of return.

⁹ For instance: 35-year-old insured, only the compulsory insurance services, average insurance premium, annual premium payment through direct debit, term: 10, 15, 20 years (5, 10, 20 years in case of single premium insurance), with the asset management costs of the underlying asset fund also needing to be factored in over and above cost deductions, but not taxes and commissions.

¹⁰ We assume that the other conditions for this (e.g. limits) are met.

Table 5**Asset fund return H ensuring return h on the contract at one model point**

h	0	1%	3%	6%
H	3,399%	4,457%	6,580%	9,777%
$(1 + \text{TCI}) * (1 + h) - 1$	3,399%	4,433%	6,501%	9,603%

Table 6**Impact of tax credit on the asset fund return H ensuring a return h on the contract at one model point**

	h	0%	1%	3%	6%
10 years	without 20%	5,51%	6,61%	8,82%	12,14%
	with 20%	1,01%	2,15%	4,43%	7,84%
15 years	without 20%	3,40%	4,46%	6,58%	9,78%
	with 20%	0,51%	1,62%	3,83%	7,13%
20 years	without 20%	2,60%	3,64%	5,72%	8,86%
	with 20%	0,48%	1,57%	3,74%	6,98%

When calculating the TCI, cost deductions must include the premia deducted on minimum mandatory risks, but not the expected benefit. This distorts the value of the indicator upwards; in reality, only the premium portion (expenses and commissions) exceeding the value of actual risk should be factored in. This distortionary effect (see the divergence of the first row of Table 7 from the adequate values) depends strongly on the term (it is higher in case of shorter terms) and the minimum mandatorily risk.

Table 7**Distortionary effect of mortality risk on the TCI at one model point**

Term	10 years	15 years	20 years
No risk	5.51%	3.40%	2.60%
Sum insured = annual premium	6.13%	3.73%	2.80%
Sum insured = 5 * annual premium	8.79%	5.10%	3.63%

Note: Sum of the service and invoice value and sum insured in the event of death.

If customers opt for higher risk compared to the minimally defined level, the indicator may be distorted downwards by the assumption that only minimally compulsory risks must be taken into account in the case of particularly high expenses and commissions.¹¹ The distortion depends largely on the

ratio represented by the value of the “actual” risk and the ratio of expenses and commissions within the expense deducted as the risk premium, and how the insurance company defines the unisex mortality table serving as the basis of “actual” risk. Whether the benefit rendered by the insurance company in the event of death is provided over and above the account balance or as the maximum of the sum insured and the account balance is also relevant.

The TCI Charter relies on the assumption that the contract will not be terminated earlier based on either an insured event or redemption. Although redemption is an important and integral option of a life insurance policy, it cannot be conciliated with the fundamental objective of pension insurance, which provides the grounds for the state subsidy. Therefore, we can ignore this effect in terms of the (“adjusted”) TCI factoring in the probability of cash flows. Taking into account termination triggered by insured events cannot materially change the value of the TCI if there is no mortality risk at all. Otherwise, the adjusted TCI will understandably be lower and the difference proportionally smaller, the higher the expenses and commissions incorporated into the risk premium.

The TCI is defined per product as per the TIC Charter. Due to the method used for defining TCI and the divergences among specific contracts (even if only in terms of the sums insured), the yields achieved on individual contracts may differ substantially for the same asset fund return and product TCI. The product’s TCI is a good point of reference for defining the

¹¹ For instance, if the insurance company minimally pays out the annual premium over and above the account balance to the beneficiary in the event of the death of the insurance holder, the TCI of 3.4 per cent jumps to 4.06 per cent at the 15-year term model point in the case of expenses and commissions of 66.7 per cent. However, if the insurance holder opts for an insured sum of 5-fold the annual premium, the TCI rises by 3.58 per cent, approximately two-thirds of which stems from the elevated expenses and commissions. In other words, if the TCI were to include only cost components corresponding to expenses and commissions, a higher sum insured would result in a contract with a higher TCI compared to the TCI calculated according to the Charter.

Table 8
Impact of mortality risk features on TCI distortion at one model point
(15-year term)

Mortality table	Expenses and commissions*	Sum insured			
		none	annual premium	5 * annual premium	20 * annual premium
50% male	0%	3.40%	3.62%	4.51%	8.35%
Benefit and account balance and maximum sum insured		3.40%	3.42%	3.65%	6.82%
80% male	0%	3.40%	3.68%	4.83%	10.02%
50% male	33.3%	3.40%	3.73%	5.10%	11.52%
50% male	66.7%	3.40%	4.06%	6.98%	32.48%

*As a percentage of the gross premium.

**The benefit in the event of death applies over and above the account balance in the other rows of the table.

Table 9
("Adjusted") TCIs at one model point taking into account the probability of cashflows

	Term	10 years	15 years	20 years
No risk	Normal	5.51%	3.40%	2.60%
	Adjusted	5.55%	3.41%	2.59%
Sum insured = 5 * annual premium, 0% expenses and commissions	Normal	7.64%	4.51%	3.28%
	Adjusted	6.03%	3.60%	2.68%
Sum insured = 5 * annual premium, 66.7% expenses and commissions	Normal	12.72%	6.98%	4.71%
	Adjusted	11.22%	6.14%	4.16%

expected performance of the contract, but is far from being sufficient.

Taking into account of the above calculations and considerations, the MNB pursues a slightly different approach compared to the TCI Charter. The TCI* defined in the TCI Charter covers various different cases, one of which is pension insurance. For the sake of differentiation and ease of management, it introduces the designation TCI^{ny}, with the following criteria.

When calculating TCI, the value that can be achieved with at least one underlying asset fund (which can even be a low-cost money market fund) is taken into account. The lower threshold can be breached by two percentage points with no justification needed, due to asset funds with differing costs. The TCI can exceed the threshold if a short written justification (e.g. the product is a pension insurance carrying high risk, with regard to the management costs of one or several sophisticated asset funds over and above insurance company charges) is provided.

The MNB recommendation defines the following recommended values as the upper threshold for TCI^{ny}:

- Up to a term of 10 years: 4.25% (instead of the current TCI* of 4.75–6.75%)
- At 15 years: 3.95% (instead of the current TCI* of 4.25–6.25%)
- At 20 years: 3.5% (instead of the current TCI* of 3.75–5.75%)

Instead of band limits, the MNB defines specific values. The TCI Charter regards the customer's decision as arbitrary and defines band limits based on the available asset fund costs. Under the life-cycle approach proposed in the recommendation, the portfolios are linked to specific periods and are also optimally based on government securities adapted to maturity, supplemented in the initial period by higher risk securities with greater yield potential, featuring higher cost levels. As time progresses, the ratio of lower-cost, safer and more balanced yield investments increases. The average cost of should be taken into account for the investment costs entire life cycle. There is no need to determine band limits when defining TCI^{ny}, only specific values.

The defined values must be attained using government securities adapted to the term, contrary to the Charter, which allows their attainment using any asset fund. The average cost of investment within the life-cycle approach can be easily compared to the costs of government securities. In the recommended model, a large portion of investments are placed in government securities with terms adapted to maturity to begin with. Assets with higher yield potential were recommended for the initial period alongside the government securities, with higher costs of investment, representing smaller asset volumes at first. This surplus is balanced out by the less risky assets opted for towards the

end of the period, which are cheaper and feature lower costs applied to far greater savings towards the end of the period. It would be unwarranted to adjust the TCI^{ny} value to the highest values attainable by money market funds, as the latter are short-term assets and thus unfit for taking advantage of the benefits offered by the long-term nature of an investment.

There is also leeway for a 2 percentage point divergence in the case of the TCI^{ny}. In contrast to the TCI*, however, this divergence cannot take on any form, but only in a quantified manner and only if the underlying asset fund qualifies as complex and has higher-than-average yield potential, is return- or capital-guaranteed or is warranted by the insurance risk carried by the product.

The TCI^{ny} value was defined based on the fact that life-cycle approach investments have somewhat higher yield potential compared to the return on long-term government securities. Assuming a 3 per cent medium-term inflation target, a TCI of 3–4 per cent could be sufficient for preserving value. An important element is that both TCI and TCI^{ny} include the price of the risk component, which must also be factored into pricing. We also took into account the higher impact of the tax incentive in the case of a 10-year term compared to longer terms, the reduced opportunities for spreading out costs incurred by the insurance company and the higher price of risk components as age progresses when defining the recommended TCI^{ny} value.

SALES

The right product is essential for reinforcing customer confidence, but is not enough in and of itself. The success of pension insurance sales hinges significantly on the employee or insurance intermediary taking part in the sales process. The MNB has therefore defined its expectations vis-à-vis these parties. One of the central elements of the recommendation stipulates that pension insurance products can only be sold by persons who are familiar with the specific features of pension products and possess adequate investment know-how. In relation to unit linked pension insurance, it is imperative that customers be provided suitable information which facilitates a well-informed decision. In order to prevent fraud and to establish the appropriate cost structure, the MNB recommends so-called “drop-by-drop” commission payout, where the amount of commission paid does not exceed the premium amount received. A minimum solution consists of converging towards the regulation valid from 1 January 2015, with further divergences towards classic “drop-by-drop” commission payout within such a framework under specific circumstances or the maintenance of commission rates allowing the attainment of the target TCI. When defining commission levels, it should also be kept in mind that the

product is more easily marketable compared to average life insurance thanks to the associated tax incentive.

Due to the newly introduced tax incentive, the customer may be better off purchasing insurance under the new terms and conditions, even if they can only terminate their earlier contract at a lower redemption value. This calls for an individual decision and entirely personalised analysis in every case. The MNB states that this is necessary to allow pension insurance to appear as a new savings component; therefore, a practice consisting of regrouping existing savings is not supported.

A key expectation of intermediaries is that they recommend products on the basis of customer needs that satisfy the requirements defined in the recommendation. If a customer has unique needs that cannot be satisfied with a product on the market that complies with the recommendation, the reason therefore must be clearly noted in the context of the needs assessment procedure. Similarly, the choice of a product featuring a higher TCI than the default recommended maximum must also be justified. In the context of assessment, failure to provide these justifications qualifies as a professional error by the intermediary and may result in the launch of legal enforcement procedures.

THE RECOMMENDATION AS A TOOL

The period between the promulgation of the tax incentive in legislation and its entry into force was extremely short, leaving very little time for both insurance companies and the supervisory authority, as applicants of the law, to prepare for the change. This resulted in insurance companies implementing product development by modifying existing products to the smallest extent necessary. The MNB has identified a need for providing assistance as soon as possible to market participants to enable the creation of products best suited to state and customer expectations.

These expectations can be formally formulated in the form of a recommendation supplemented by informal tools (reconciliations, consultations). Recommendation is an excellent tool for shaping market participants’ behaviour, leaving them ample leeway while providing a clear point of reference. The recommendation cannot be enforced through legal avenues, but this is not necessary. In extreme cases, indirect instruments are available, however the reconciliation mechanisms with stakeholders offer a guarantee that market participants will identify with the fundamental principles and values defined and adapt their conduct to such.

The recommendation is novel in several different ways. The MNB has defined the reinforcement of consumer

protection and the dissemination of a preventive approach as clear objectives alongside prudential considerations. This recommendation represents the first instance where the MNB has defined product-level requirements with a view to seeing new portfolios built on contracts strongly adapted to customer needs and carrying no systemic or market risk, conducive to restoring consumers' shaken confidence.

Thanks to consultations with insurance sector, intermediary and trade organisations and the competent areas of the Ministry for National Economy and the incorporation of comments whenever possible, the application of a stricter set of instruments can be avoided, and broad compliance with the recommendation is likely. The MNB will measure implementation of the recommendation and may issue amendments or recommendations for further legislation depending on the results.

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