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The Role of the Second and Third Pension Pillar in the Hungarian Pension System

Summary: The sustainability of pension systems is a highly topical issue across Europe, and increasing the role of supplementary occupational and voluntary pension schemes to complement the mandatory state pillar is on the agenda in almost every country. Following a brief introduction of the Hungarian pension system, our article analyses the historical development and the current role and state of retirement savings based on the most recent data available. Although all three pillars exist in Hungary, data reveal that the Hungarian pension system continues to rely far too heavily on the first pillar, the sustainability of which is surrounded by risks. Retirement plan products can only partially fulfil the ultimate role of providing significant and regular supplementary pension for future retirees. Old-age financial security can be improved substantially by systematically increasing the role of voluntary pension pillars and incentivising annuity products.

Keywords: pension system, annuity, supplementary pension, tax allowance
JEL codes: D14, G23

The issue of pensions is not without stake in Hungary today, and the population decline coupled with an ageing population poses grave challenges to the pay-as-you-go pension system (NYIKA – Pension and Old Age Roundtable, 2010). This, along with the risks associated with the long-term sustainability of the state pension system, increases the significance of occupational and voluntary (second and third pension pillars) retirement plans.

Interpreting retirement savings requires a brief overview of the theoretical background as their role is very different in societies with fully funded or pay-as-you-go pension systems. Placing uniform measurement requirements on a common theoretical foundation was inevitable in international organisations that comprise, among others, developed countries (EU, OECD, IMF, etc.) (Lequiller – Rougemont, 2004 and Oksanen, 2004). The debate that started at the beginning of the 2000s in this context resulted in the following key observations.

- Developed countries have designed separate models for pensions and the social safety net linked to individual employers and for the mandatory social security system applicable to all employers. The first is a funded model, while social solidarity typically plays a crucial role in the second.
- The expected liabilities of the pension system must be assessed differently for each of the two pension systems.
- In pension systems that differ from the funded model, costs (recognised liabilities) are greater.

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- Labour cost is not system-dependent (as it also has components that represent greater weight than the pension element).
- From a methodological perspective, the best common approach would be integrating implicit pension liabilities into statistical systems. Its downside is that implicit pension liabilities integrated into statistical systems increase the debt-to-GDP ratio substantially, which could upset the application of numerous other rules.

It is because of this – in particular, because of the last pragmatic argument – that implicit pension liabilities have not become a part of statistical systems to date. The 'deficit', however, is only temporary – at least in Europe –, as based on the decision of the European Commission, social security pension liabilities must be quantified in the national accounts from 2017. In addition, the current implicit pension liabilities of the social security system must also be presented every three years as supplementary data. The preliminary debate on this matter undoubtedly contributed to the adoption of measures aimed at improving the sustainability of pension systems, which typically entailed a (gradual) raising of the retirement age (OECD 2015a, pp. 23–25). For example, the retirement age for men entering the labour market at age 20 was raised to 68 years in the Czech Republic, Ireland and the United Kingdom, to 67 years in Denmark, Australia, Italy, Poland, the Netherlands, Germany and Canada, to 65 years in Estonia and to 63 years in France. The fact that the idea of a uniform European retirement age has also been raised demonstrates that this is a general issue concerning all (Portfolio, 2011). Experiences in Hungary are similar: In 2009, a decision was made to raise the statutory retirement age from 62 to 65 years on a gradual basis, to abolish the 13th month pension and to change the indexation arrangements for pensions (Swiss indexation above 5% GDP growth and inflation-linked pension raises below that value). The latest pension-related measures were analysed in a recently published study of the National Bank of Hungary (MNB) (Berki et al., 2016). The four key measures in Hungary were the following.

- Retirement age increase. Old age retirement age is gradually being raised to 65 from 62 years.
- Reversal of the private pension fund system. In 2011, approximately 2.9 million fund members returned to the state pension system. As a result, re-entering members were again granted 100% state pension eligibility as their retirement savings accumulated in private pension funds were placed back into the state pension system.
- Tightening of early retirement rules. As of 2013, early retirement opportunities were eliminated altogether and disability pension terms were tightened significantly. Concurrently, the eligibility of people drawing disability pensions below the statutory retirement age was also reviewed.
- The 40-service-year rule for women. Starting from 2012, women with at least 40 years of service are allowed to retire, regardless of whether they have reached the applicable retirement age.

According to the study, without the reforms, the GDP-proportionate deficit of the pension system would have fluctuated at around 2% until 2040–2045, after which it would have gradually grown to 4–4.5% of annual GDP. Based on the GDP-proportionate deficit estimated following the reforms, overall, the measures lowered the deficit of the pension system in the short term: the pension balance does not show a deficit until approximately 2035. Afterwards, however, the deficit will gradually rise (partly owing to demographic reasons) to 4–4.5% of GDP, i.e. levels similar to those recorded before the reforms. Estimated future pension deficits are reduced to the largest degree – by 1.3

percentage points on average in proportion to GDP – by the increase in retirement age. This decline is explained in equal parts by growing contribution revenues in the context of longer labour market careers and diminishing pension expenditures due to shortened retirement periods. The transformation of the private pension fund system will continue to lower annual deficits until 2045; afterwards, however, it will start raising the deficits. The elimination of early retirement opportunities continuously reduces estimated deficits by 0.3–0.4 percentage points in proportion to GDP. Finally, the average annual balance deterioration resulting from the '40-service-year rule for women' amounts to around 0.5 percentage points, of which 0.3 percentage points can be attributed to the payment of full pensions despite the longer retirement periods. The study also touches on aspects of sustainability, which are summarised in two indicators.

- ADL (Accrued-to-Date Liabilities): the debt of the pension system existing (in an implicit form) at a given moment in time.
- OSNL (Open-System Net Liabilities): the present value of pensions (less future contribution payments) to be paid after the pension contributions of currently active contribution payers and after the future contribution payments of the population that is yet to enter the labour market. Being a more forward-looking indicator, OSNL is also suitable for measuring the sustainability of the pension system. The effects of each measure are presented in *Table 1*.

While according to the article the ADL indicator expressing the current implicit debt of the pension system was not affected by the measures significantly, the overall effect on sustainability is negative; the reversal of the private pension fund system and the '40-service-year rule for women' offset the effects of the increase in retirement age and the tightening of early retirement privileges, and the indicators presented raise implicit debt by 6% (from 252 to 258% in total). Based on the article, the OSNL indicator improves by approximately 50% of GDP overall, from 203 to 153%. The last column of the table, however, reveals that the retirement age increase played a major role in this decline, as the measure in itself improved the indicator expressing the sustainability of the pension system at a rate corresponding to 68% of an-

Table 1

SUSTAINABILITY EFFECTS OF MEASURES RELEVANT TO THE PENSION SYSTEM (%)

Scenarios	ADL	Future expenditures	Future contribution-type revenues	OSNL	Individual effects	
		(A)	(B)	(A)–(B)	ADL	OSNL
Pre-reform scenario	252	686	483	203		
Retirement age increase	242	653	519	135	–10	–68
Reversal of the private pension fund system	253	741	593	148	11	13
Tightening of early retirement rules	252	738	614	124	–1	–24
'40-service-year rule for women'	258	754	601	153	6	29

Source: (Berki et al., 2016, p. 7)

nual GDP. The authors of the paper also point out that these models are especially sensitive to economic developments and demographic assumptions, and this is particularly true for the OSNL model. The main conclusion of the sensitivity analyses presented in the full English version of the study is that the effect of economic assumptions (real interest rate, economic growth, wage increase, inflation and pension indexation) exceeds the effects of demographic factors substantially (Freudenberg et al., 2016). However, two factors should be borne in mind in this regard.

Based on the sensitivity analyses, the real interest rate is the most sensitive assumption of the model, which is justified in the case of present value calculation. In this regard, it should be noted that the 3% rate applied by the authors is a value commonly used in the literature on pension-related liabilities. Importantly, however, this benchmark was defined in a period of accelerated economic growth and higher yields. At present, the real interest rate in Hungary stands at around 1%, and the low real interest rate is assumed to be constant even in the medium-term as a joint consequence of low inflation and an accommodating monetary policy. Thus, the assumption of a persisting 3% real interest rate also implies that the real interest rate will remain above 3% for an extended period of time, which does not appear to be a well-substantiated assumption whatsoever at this time. In terms of the model, the 3% real interest rate appears to be more of an optimistic, rather than a realistic, assumption. The significance of this factor is aptly demonstrated by the fact that the use of a 2% real interest rate value instead of the 3% applied in the standard scenario raises the existing implicit debt to 313% from the 258% shown in the standard scenario, while adjusting upward the rate of forward-looking debt (OSNL) from 153% to 559%, which could offset the effects of the examined pension measures several times over.

While we do not dispute the viability of the statement that the impact of economic factors in the model is greater than those of demographic factors, we need to draw attention to the deviation revealed by the study's ODR indicator for Hungary (old age dependency rate – the ratio of people aged 65 and above compared to the population aged 20–64) and by the ratios calculated from the population projections of the Hungarian Demographic Research Institute (HDRI). Indeed, the differences between the two are substantial (*Table 2*).

The rather optimistic approach used for the most sensitive parameter and the optimistically estimated elderly/active population ratios as compared to the data of the Hungarian Demographic Research Institute make upside risks (a less sustainable system) more

Table 2

RATIO OF THE ELDERLY COMPARED TO THE ACTIVE POPULATION

ODR (old age dependency ratio)	2015	2030	2045	2060
Hungarian Demographic Research Institute (HDRI), baseline scenario	0.29	0.41	0.58	0.67
Hungarian Demographic Research Institute, high scenario	0.29	0.42	0.61	0.69
Hungarian Demographic Research Institute, low scenario	0.29	0.41	0.58	0.69
Values of the MNB study	0.29	0.37	0.49	0.57

Source: Own calculation based on HCSO Hungarian Demographic Research Institute (2015) data

probable regarding the effect on the values of the standard scenarios of the study and the sustainability consequences affecting the state pension system drawn from them. Taken together, these factors point to the appreciation of voluntary retirement plans to supplement the pay-as-you-go pension system; indeed, they may be capable of mitigating the sustainability risks of the state pension system and the risk of old-age poverty. *Botos J. – Botos K.* (2011) also point out that in the long run, the pension system will require reforms in any event, specifically because of the demographic challenges described above. At the same time, an important addendum to the debates on the pension system is that in addition to increasing the role of the second and third pillars, which play an auxiliary role, the source of the problem must also be managed (for example, by incentivising families to have children). An important element of their pension system proposal, which is based on a point-system, is that it takes the financial expenditures and individual time consumption of having children into account, with the aim of having a positive effect on (or at least not to penalise) having children. The anthology of studies edited by *Kovács* (2012) lined up numerous theoretical and practical arguments for and against linking the willingness to have children and the pension system; empirical evidence, however, demonstrates that the extended scale of the social security system (welfare systems) has a negative impact on productivity (Mészáros, 2012, p. 11) which is why the issue is certainly worth revisiting. There is also consensus in that connecting the pension system and having children in itself cannot doctor demographic problems in the short term, as any substantial demographic change requires a longer time horizon and the combined effects of multiple measures aimed at encouraging families to have children.

With such risks of sustainability and the state pension pillar in place, the weight of retirement objectives among the savings goals of households is also an important issue. One of the most comprehensive statistics on savings is the MNB's report that analyses the financial accounts of households *(see Table 3)*.

It is clear that in the period from 1995 to 2015, the population's financial assets have multiplied more than tenfold at nominal value. In examining the underlying ratios, the following should be highlighted.

- The decline in the share of currency and bank deposits is obvious.
- The increase of debt securities is substantial after 2010 and can primarily be explained, as is the increase in stocks and shares, with the deteriorating yield environment.
- Insurance technical reserves exhibited continuous growth between 1995 and 2010; however, this momentum was subsequently interrupted and the 20.1% share of financial assets in 2010 plummeted to 8.9% by the end of 2015.
- The elimination of the private pension fund system in 2012 played a crucial role, representing 10% of the decline in itself.
- Between 2010 and 2015, the share of life insurance reserves, which include advance retirement savings, decreased significantly at a rate of over 1%.
- The share of other (voluntary) pension funds in households' financial assets dropped slightly in 2015 compared to 2010.

The figures reveal that within households' financial assets, the share of long-term investments dropped both overall and for each component between 2010 and 2015. In view of the rising risks surrounding implicit pension debt and the recognised liabilities of the pay-as-you-go state pension system, it can be concluded that there is a need to change the regulatory environment for those products offered by service providers that can effectively further long-term capital accumulation.

Table 3

FINANCIAL ASSETS OF HOUSEHOLDS

	1995		2000		2005		2010		2015	
Financial assets	**3,640.3**	**100.0%**	**10,174.6**	**100.0%**	**20,126.3**	**100.0%**	**29,871.4**	**100.0%**	**40,326.1**	**100.0%**
Currency and deposits	1,921.5	52.8%	4,138.0	40.7%	7,253.5	36.0%	10,017.1	33.5%	11,489.3	28.5%
Debt securities	220.3	6.1%	854.6	8.4%	1,202.7	6.0%	1,590.8	5.3%	3,755.3	9.3%
Loans	160.6	4.4%	380.0	3.7%	625.7	3.1%	849.9	2.8%	1,154.4	2.9%
Equity and investment fund shares	971.0	26.7%	3,367.9	33.1%	6,940.6	34.5%	10,426.7	34.9%	16,169.1	40.1%
Insurance technical reserves	141.4	3.9%	944.5	9.3%	3,182.4	15.8%	6,001.6	20.1%	3,569.3	8.9%
Non-life insurance reserves	*49.7*	*1.4%*	*110.2*	*1.1%*	*246.2*	*1.2%*	*315.9*	*1.1%*	*308.6*	*0.8%*
Life insurance reserves	*85.1*	*2.3%*	*431.3*	*4.2%*	*1,016.5*	*5.1%*	*1,667.3*	*5.6%*	*1,817.6*	*4.5%*
Pension fund reserves	*6.7*	*0.2%*	*402.9*	*4.0%*	*1,919.8*	*9.5%*	*4,018.4*	*13.5%*	*1,443.0*	*3.6%*
of which: private pension fund reserves	*0.0*	*0.0%*	*182.6*	*1.8%*	*1,246.4*	*6.2%*	*3,100.4*	*10.4%*	*218.9*	*0.5%*
of which: other fund reserves	*6.7*	*0.2%*	*220.3*	*2.2%*	*673.4*	*3.3%*	*918.0*	*3.1%*	*1,224.1*	*3.0%*
Financial derivatives	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.2	0.0%	0.7	0.0%
Other accounts receivable	225.4	6.2%	489.7	4.8%	921.4	4.6%	985.0	3.3%	4,188.1	10.4%

Source: Edited MNB (2016/2) data

SPECIFIC RETIREMENT PLANS

European countries generally have a wide-ranging institutional structure serving the pension system, with the following typical institutions:

- state pension,
- life insurance (as well as other banking/investment products),
- voluntary pension funds [in contrast with the Hungarian pension system, where equity capital is missing, these funds typically function as joint-stock companies],
- occupational pension (the pension assets are featured in the employer's balance sheet; there is no capital – in terms of regulation, the Hungarian pension fund model partly relies on this model).

As regards the purpose and nature of the services, funded pension products (life insurance, pension funds) have a very long accumulation period (15 to 40 years) and are exceedingly sensitive to predictability both in terms of household consumption components (price and wage stability) and the effects of production/employment and consumption/credit cycles. It should not be overlooked that pension products are also financial products and as such, are considered preferred assets that also promote social objectives which, as evidenced by the examined international examples, is also manifested in the area of taxation.

The taxation environment of pension products in Europe is neither unified nor harmonised. There are, however, some common taxation rules in countries where the state contributes less to maintaining the pension system (Whitehouse, 2001). In the remaining part of the paper, we will (as per the termi-

nology used in the EU) assign state pension to the 1st pillar, products based on voluntary employer contributions to the 2nd pillar and products based on individual retirement plans to the 3rd pillar.

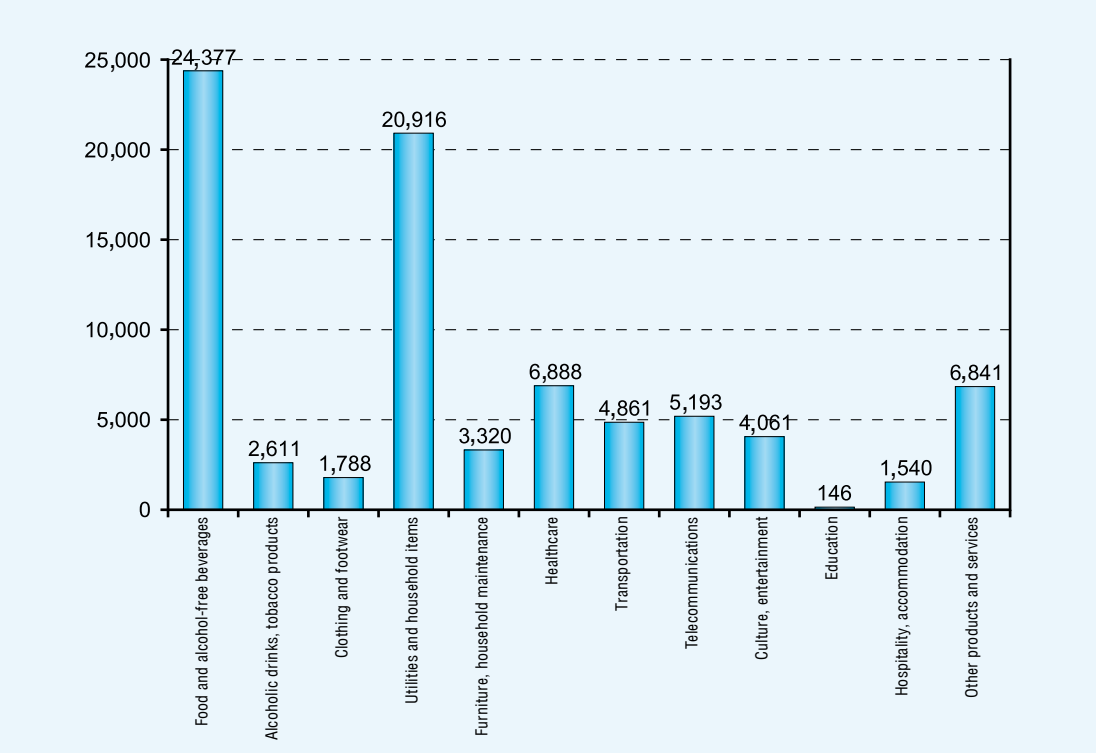
In the case of voluntary employer contribution based pension programmes (2nd pillar), yields are typically not capital protected and, relative to the tax rates applicable to salaries, a lower tax rate is applied – with a lag compared to the current Hungarian system – at the time of the actual receipt of the employee's salary. In most countries, individual retirement plan products (3rd pillar) enjoy some form of a tax benefit compared to non-retirement purpose savings – nearly everywhere, there is a clear distinction between regular (institutional, private, etc.) asset management and long-term retirement purpose investments, where safety requirements are deemed far more important than yields. As regards the tax allowances linked to the products, it can also be stated that positive discrimination is more typical in the case of annuity-type products.

All of these pillars also exists in Hungary; therefore, it is important to examine the weight of each pillar on the revenue and expenditure side. In terms of revenue, three categories can be distinguished within the three pillars outlined above. The state pillar contains coverage for old-age pensions, survivors' pensions and service dependent pensions (ONYF, 2016). Since social security operates in a pay-as-you-go system, in the case of a balanced Social Security budget this amount is considered to be the 'revenue side' of the pillar, funded from social contribution taxes and pension contributions. The occupational pillar consists of the payments of employers into voluntary funds and the revenues of the sole operational occupational pension provider. The individual retirement plan pillar contains revenues from annuity products, i.e. membership payments into voluntary and private pension funds, almost one quarter of the HUF 440 billion life insurance market and the annual savings on retirement savings accounts. Among these components, life insurance should be viewed with caution as the current pension insurance category has been offered as a life insurance product for retirement purposes only since 2014. On the other hand, several internal life insurance surveys have shown that the number of contracts concluded specifically for direct retirement purposes is around 10–15% and the share of those with delayed retirement purposes is similar. Contracts are considered to be life insurance products with delayed retirement purposes in those cases where the allocation of savings for retirement purposes was not the customer's specific and express intention at the time of contract conclusion (nearly a half of all contracts fall into this category), but this objective emerged gradually over time (in order to supplement pensions).

The expenditure side only includes annuity out-payments in addition to state pension expenditures. Obviously, the fundamental goal of pension is to ensure old age livelihood. The HCSO measures the consumption structure from a number of different aspects, including the status of the reference person (this is illustrated by *Figure 1,* which can be viewed as the average consumption structure of pensioners). Figure 1 clearly shows that per capita expenditures amounted to HUF 82,524 on average in 2016. We also examined expenditures according to the frequency of the related purchases in general, with the assumption that more significant items were almost certainly purchased at least once a month or more frequently (food and beverages, utilities, healthcare, overhead, telecommunications). These items alone account for more than 6/10ths of the average monthly consumption. It is important to note, however, that several additional items can be assumed to be purchased at least once

Figure 1

PER CAPITA CONSUMPTION OF HOUSEHOLDS IN THE CASE OF A RETIRED REFERENCE PERSON (100% = HUF 82,542)



Source: Edited HCSO Statistical Reflections (2016) data

a month; therefore, the share of items requiring monthly or more frequent payments may constitute 70–80% of the average expenditure structure.

Accordingly, we believe that the item best corresponding to the content criteria of pensions (including supplementary pensions) is monthly annuity. Lump-sum services, which are generally paid on the date on which the retirement age is reached, do not contribute considerably to lifelong expenditures – although they undoubtedly improve the current financial status of retirees –, as persons reaching the retirement age are expected to live for 15–20 additional years as retirees. Below we examine the status of the individual pillars relative to one another in 2015.

Table 4 demonstrates that the state in general, and the pay-as-you-go pension system in particular, account for the most significant share, which translates into excessive dependence from demographic and economic circumstances even on the part of retirees. Since voluntary employers' payments into pension funds account for a mere 1.5 percent of the funds, this area has the greatest room for improvement in view of the low basis. On the expenditure side, the introduction of annuity payment obligations/annuity incentives could reduce the gap between revenues and expenditures. Increasing the role of the voluntary pension pillars and incentivising annuity products may improve old-age financial security significantly.

Table 4

WEIGHT OF THE THREE PILLARS OF THE PENSION SYSTEM IN HUNGARY (2015)

HUF billions or percentages	Government	Employer	Employee	Total
REVENUES				
Revenue from social security pension expenditures (old-age, survivors', nfík 40)	2,952.6			
Employer payments into voluntary pension funds and to occupational pension providers		40.1		
25% of life insurance, individual payments into voluntary pension funds and to retirement savings accounts (estimated value)			204.2	
Total	**92.4%**	**1.3%**	**6.4%**	**3,196.9 100.0%**
EXPENDITURES				
Social Security pension expenditures	2,952.6			
Non-state annuity payments				
• voluntary pension fund		0.96		
• insurance companies (estimate)			1.0	
Total	**99.93%**	**0.07%**		**2,954.6 100.0%**

Source: Based on data released by the Central Administration of National Pension Insurance (ONYF) (2016), Allianz Occupational Pension Provider (AFNYSZ) (2016) and MNB (2016/1), supplemented with employee data estimates[1]

In Hungary, supplementary pension products refer to retirement savings accounts, pension insurance and voluntary pension funds. We will expand upon this concept by describing employers' pensions. Customers are eligible for a 20 percent tax allowance on the first three products, the analysis of which clearly shows the extent of the actual incentive received – and the tax effect generated – by specific arrangements that are essentially incentivised under competitive neutrality *(Table 5)*.

Based on the processing of PIT returns, in 2015 tax allowance was claimed in nearly 465,000 cases in a total value of HUF 14.9 billion in relation to the three supplementary retirement savings products. This required total payments of nearly HUF 74 billion, and this amount was paid by certainly less than 465,000 taxpayers into the three products, as one taxpayer is entitled to hold multiple products (from a taxation perspective, this is an expedient decision up until the HUF 280,000 rate of the combined tax allowance ceiling). Apparently, the HUF 3.5 billion increment between 2014 and 2015 in allowances claimed was largely due to pension insurance (an increment of HUF 2.35 billion) and, to a smaller extent, to voluntary pension funds (an increment of HUF 1.252 billion[2]), while a slight drop can be observed in the case of retirement savings accounts. Examining the three products in greater detail we find that

Table 5

TAX ALLOWANCE CLAIMED FOR SUPPLEMENTARY PENSION PRODUCTS (2014/2015)

	2014			2015		
	Persons	HUF millions	On this basis, payments amount to (HUF millions)	Persons	HUF millions	On this basis, payments amount to (HUF millions)
20% of the amount paid to voluntary mutual pension fund accounts	339,958	7,167	35,835	344,830	8,419	42,095
20% of the amount paid to retirement savings account	29,741	2,424	12,120	28,972	2,364	11,820
20% of the amount paid under pension insurance contract(s)	43,394	1,661	8,305	90,946	4,011	20,055
Total	**413,093**	**11,252**	**56,260**	**464,748**	**14,794**	**73,970**

Source: MNB: http://www.mnb.hu/felugyelet/idosorok/iv-penztarak, http://www.mnb.hu/felugyelet/idosorok/v-aranykonyv
processing of PIT returns from 2014 and 2015

Retirement savings account (NYESZ-R)

The statutory background of retirement savings accounts is regulated by Act CLVI of 2005 (on retirement savings accounts). Examining the tax effects of the activity, the figures reveal the following *(Table 6)*.

These figures demonstrate that the repayments to retirement savings account holders amounted to HUF 80,000–90,000 per year on average, which – based on a 20% tax credit – amounts to HUF 400,000–500,000 per year in savings. With the exception of the withdrawal option, the account in essence functions as a securities account. Given that securities accounts are typically held by the wealthy and in view of the volume of the savings, it appears to be the upper-middle class that is most likely to take recourse to retirement savings accounts. Accordingly, despite its 10-year history, the number of such accounts is low, estimated at approximately 40,000 (Surányi, 2013). An important element of the regulation is that the definition[3] of pension service as per the retirement savings accounts explicitly serves capital accumulation purposes without any opportunity or possibility for decumulation (such as a monthly annuity). As far as its taxation rules are concerned, as is the case with other retail retirement payments, a 20% tax refund rule is applicable to this particular product up to HUF 100,000 (or up to HUF 130,000 if retirement age is reached before 1 January 2020). Overall, it is clear that the primary objective of this product is to accumulate capital and to support long-term commitment. The objective of establishing old-age financial security (through the predictable and regular supplementation of monthly state pension), however, is only partially supported by this product and only for a strictly selected target group. This is in contrast with the practice of Western European countries, where annuity-type payments are generally preferred.

Table 6

RETIREMENT SAVINGS ACCOUNT TIME SERIES (2008–2015)

Retirement savings accounts	2008	2009	2010	2011	2012	2013	2014	2015
Repaid tax allowance (HUF millions)	2,544	2,587	3,071	2,697	2,730	2,577	2,424	2,364
Number of persons claiming repayments (1,000 persons)	27.2	28.7	33.2	33.5	33.2	31.5	29.7	29.0
Average repayment (HUF)	93,529	90,139	92,500	80,507	82,229	81,886	81,504	81,596
Rate of tax allowance	20%	20%	20%	20%	20%	20%	20%	20%
Base of average repayment (payment) (HUF)	467,647	450,697	462,500	402,537	411,145	409,431	407,518	407,980

* 2013 – data estimates
Source: Ministry for National Economy (2016)

Retirement life insurance (pension insurance)

Retirement life insurance was first classified under preferential retirement savings from 1 January 2014. According to the definition set out in the PIT Act,[4] retirement life insurance must meet 4 criteria, which – as is the case with retirement savings accounts – do not include compulsory annuity-type payments, but at the same time the MNB's recommendation pertaining to pension insurance (MNB, 2014) includes the provision of an annuity option for service providers. As retirement life insurance was only included in the category of products subsidised by a tax allowance from 2014, the time series is very short but it should be examined nevertheless.

According to data provided by the NTCA, in 2015 tax returns a total of 90,496 persons claimed tax refunds under the legal title of retirement life insurance, claiming the refund of a total of HUF 4,011 million (Table 5). More or less in line with the above, at 117,000, MABISZ statistics[5] for the end of 2015 cite a slightly higher number of regular premium pension insurance contracts.[6]

Pension insurance premiums at the end of 2015 amounted to HUF 24,316 million, which means that a given customer pledged annual savings of slightly above HUF 200,000 per year upon contract conclusion.

This begs the question what the potential of the pension insurance market is and how many people can actually get supplementary pension in this way. Firstly, we may establish that most insurance-related research takes retirement purpose within life insurance to range between 15% and 20% and, given the portfolio of life insurance contracts, the pension insurance potential is around 200,000–300,000 persons. Among those taking out life insurance, the ratio of persons who simply wish to put money aside regularly is at around 30–40% – with many of them likely considering clarifying this objective in the hope of receiving the 20% tax allowance. Replacement products should also be counted among the reducing factors – and based on these two factors we believe that pension insurance could provide a solution for supplementary pension to approximately 300,000–400,000 people, assuming that the current framework conditions remain unchanged.

A number of insurance products offered by service providers were often accused of being expensive; consequently, it is highly significant that the reduction of costs is the MNB's

priority issue and that the MNB has regulated, among other things, the recommended price ceilings in its recommendation (MNB, 2014).

The logic of the 20% tax refund concerning premiums paid is not substantially different from the conditions of retirement savings accounts. Based on the presented (two-year) time series, pension insurance provides a perceivable pension supplementation solution for a wider audience than retirement savings accounts and accordingly, the amounts of per capita savings are also lower.

Before proceeding, we should perform a brief, simplified calculation to examine how much an average pension insurance is worth. Assuming that the insurance yields more or less cover the costs and risk premiums, a customer paying HUF 200,000 per year in premiums for a period of 20 years can expect to receive HUF 4.8 million at maturity, including tax allowance. If we assume that life expectancy after reaching retirement age is approximately 200 months[7], this implies an annuity amount of about HUF 24,000 per month (monthly pension supplement). Average pension insurance, therefore, (disregarding the effects of inflation) translates into a pension surplus of 10–30% for the average retiree with a pension of HUF 120,000 per month, depending on the annuity term (with maximum value considered to be a five-year annuity term). Using a not overly sophisticated sensitivity analysis, in this particular example (20-year term, yield equal to TER [Total Expense Ratio] value) a 1 percentage point yield surplus or yield deficit compared to the TER can generate a shift of around 10% in the maturity amount due to the effect of compound interest. In the case of the typical annuity term (200 months), this implies a HUF 2,400 movement per annuity compared to the 24,000 annuity amount, marking a monthly band of HUF 21,600–26,400. The parameters are realistic and the model even has additional reserves; indeed, many people start pension insurance before reaching the age of 45 (with the retirement age of 65, this would be the entry date for a 20-year term) and in most cases, pension insurance provides an opportunity for the payment of ad-hoc premiums, which can also increase the maturity amount and the monthly annuity. On the one hand, this demonstrates the yield and cost sensitivity of the product; on the other hand, the realistic nature of the example and the stability of the magnitude of cost and yield changes confirm that in an annuity-form, pension insurance could represent a significant supplement to state pensions.

Voluntary pension fund – A hungarian speciality

In its current form, the voluntary pension fund look back on 20 years of history, with its regulatory framework set out in Act XCVI of 1993 on Voluntary Mutual Insurance Funds. This regulation simultaneously made an attempt to establish the framework of occupational pension (closed fund) and to set up financial service providers (open fund) within the very same organisational structure. As a consequence of the above-mentioned duality, the regulation of the fund proved to be uneven – given the corporate and sectoral background, funds are special entities without equity capital and clear ownership will. By today it has become clear that the vast majority of fund members have joined funds that are service providers by nature with a banking or insurance business background. Key data for the sector are presented in *Table 7*.

Based on the table, the following conclusions can be drawn.

- Despite a continuous drop in membership, the number of members (1.149 million) exceeds the participation in any other retirement plan.

Table 7

VOLUNTARY PENSION FUND TIME SERIES (2008–2015)

Voluntary pension fund	2008	2009	2010	2011	2012	2013	2014	2015
Membership at end-of-year (1,000 persons – mnb data)	1,370.4	1,328.4	1,298.1	1,267.3	1,226.6	1,185.0	1,169.6	1,149.8
Contribution paid by members (huf millions – mnb data)	48,039	48,925	47,256	57,573	57,928	65,554	75,467	71,232
Contribution paid by employers (huf millions – mnb data)	62,471	59,991	48,174	45,245	43,018	39,463	39,054	38,048
Coverage reserve at end-of-year (huf billions – mnb data)	688	791	849	821	907	980	1,081	1,147
Repaid tax allowance (huf millions – ngm data) *	7,638	6,672	6,775	4,708	4,642	5,905	7,167	8,419
Number of persons claiming repayments (1,000 persons – ngm data)	465.3	422.9	386.6	349.2	339.2	339.6	340.0	344.8
Average member contribution / person / year	35.1	36.8	36.4	45.4	47.2	55.3	64.5	62.0
Average employer contribution / person / year	45.6	45.2	37.1	35.7	35.1	33.3	33.4	33.1
Average tax allowance repayment/person (huf 1,000)	16.415	15.777	17.526	13.481	13.685	17.388	21.082	24.415
Average repayment date (calculated value, 20%) (HUF)				67,407	68,426	86,939	105,410	122,075
Ratio of refund claimants to total membership	34.0%	31.8%	29.8%	27.6%	27.7%	28.7%	29.1%	30.0%
Annual payments by members without tax refund claims (HUF)				37,072	39,123	42,618	47,769	36,198
Average coverage reserve at end-of-year/ member (huf thousands)	502	595	654	648	739	827	925	998
Lump-sum payments (huf millions)	54,297	49,288	39,075	56,773	52,830	24,242	20,524	24,930
Provision of allowances (huf millions)	394	391	434	468	551	560	734	964
Service total (huf millions)	54,691	49,680	39,509	57,242	53,380	24,802	21,257	25,894
Payments made after the expiration of the waiting period, but within the accumulation period (huf millions)	42,107	44,415	10,734	51,212	33,086	28,093	33,962	34,913

*estimated values for 2013

Source: MNB data 2016/1 and NGM, 2016

▸In view of the amount of individual contributions and tax refunds, this product typically targets the lower-middle class, with the average of individual membership fee payments barely exceeding HUF 5,000 per month in 2015. Average individual payments by tax refund claimants is slightly above average, but calculating with the 20% PIT allowance effective in 2014, even these claimants saved only HUF 105,000 on average in this form.

▸The drop in average per capita employer contributions has been continuous from 2008 to 2013 and has been stagnating at a level of HUF 33,000 per year (i.e. HUF 2,500–3,000 per month) since then.

▸The fact that only a third of the members take advantage of the PIT allowance and that two thirds of the contributors do not points to a mass educational problem.

▸The calculated average annual payments of the approximately 800,000 voluntary pension fund contracts for which no tax refund claims were submitted amounted to HUF 36,000 (HUF 3,000 per month) in 2015. Calculations show that in order for these contracts to reach the HUF 4.8 million capital amount of the average pension insurance (which provides a 10–30% pension supplement to the average retiree) would require a 100-year long retirement plan.

▸The average coverage reserve (per member) amounted to HUF 998,000 at the end of 2015. The HUF 72,000 average increment of the coverage reserves arose in such a manner that employers and members together paid 95,000 on average (per capita); i.e. slightly less than half of the average payments of those with a retirement plan. In view of the low volume of savings and the slow increase in coverage reserves it is questionable whether an average pension fund member will be able to get any substantial pension supplementation through this particular form of savings.

▸The majority of payments are made in a lump sum and despite the growth, annuity-type payments amount to less than HUF 1 billion (for less than a 1,000 payment transactions). It is also obvious that non-retirement fund withdrawals (during the accumulation period) have continuously and substantially exceeded lump sum and annuity pension services in the past 3 years and represented a comparable magnitude even in previous years.

This indicates that voluntary pension funds are more of a form of social self-provision for the lower-middle-class than a funded product that efficiently supplements state pensions.

In regard to the applicable tax rules, based on the existing system (effective in 2016), we observed the following:

- in the case of membership payments, as a general rule, the tax credit for voluntary pension funds is 20% of the amounts paid by the given member, but HUF 150,000 at the most,
- employer contributions are taxed as fringe benefits (they are exempt from social contribution tax up to a limited amount and rate).

The product's tax environment cannot be viewed as stable in the long term: the current tax environment was set up in 2011 and additional changes were introduced as of 1 January 2017: employer contributions have become pre-determined benefits not classified as fringe benefits (with an overall public burden of 49.98% instead of 34.51%). We may conclude overall that the accumulation of pension capital at pension funds – that is required for the annuity supplementing the state pension – is more of an exception than the rule. Besides the low per capita payments, the main reason for this dysfunction is the lenient regulation of fund withdrawal. We can also state that under the current circumstances, this form is not suitable for most members to accumulate a sufficient level of pension capital to provide them with annuities for their retirement without using any other forms of savings. Trends suggest that the product is

transforming; it has gradually become a cheap retail social form of self-provision instead of the initial employer-focused form of provision. Even the direction of planned changes points to a 'pillar shift'.

The persistence of the low yield environment can increase the significance of security ('although the yield is low, at least it is secure'), which could raise additional problems in the lack of equity capital (inability to provide guarantees).

Occupational pension

Occupational pension is a relatively new institution in Hungary and can be best described as a pension fund that operates in a company form while also meeting capital buffer requirements. Legal framework was established by Act CXVII of 2007 on Occupational Pension and the Related Institutions in response to Regulation (EC) No. 39/2003. Given that only a single service provider has been active in the market since 2011, we have insufficient information to characterise market practice. In regard to opportunities and features, it should be noted that this form has been essentially tailored to the 2nd (occupational) pillar. However, in contrast with the voluntary pension fund (which was also aimed at this market initially):

- owing to the joint-stock company form, it is able to distinguish employee groups without violating the principle of member equality (on the basis of position, occupational hazard, stressful nature, etc.);
- it recognises the institution of conditional eligibility, based on which the handover of employer savings can be made conditional upon time-related conditions (a maximum of 5 years), which in turn facilitates the strengthening of long-term employer-employee relations;
- the joint-stock company's equity capital can be used to set solvency criteria against it (in contrast with the fact that pension funds have no equity capital), which also allows for pension service defined with the service;
- it can undertake biometric risks (related to death or disability) in respect of members on its own right;
- with inheritance being an exception, paid amounts can only be used for pensions.

Payments are dominated by employer contributions but, as is the case with voluntary pension funds, employees can also set aside advance savings. As regards employer contributions, the pattern is the same as described above in relation to the voluntary pension funds. However, for the time being, employer supplementation is not accompanied by tax allowances.

Occupational pension is an institution based on European examples; it has perspective but in the Hungarian pension system it is currently only an opportunity. We feel that the systemic review and harmonisation of the regulatory environment of voluntary pension funds and occupational pension funds should be considered.

OUTLOOK AND SUMMARY

Modern lifestyle entails an increased focus on social solidarity (including the growth of state pension systems), higher education levels for women, lower fertility rates and a higher life expectancy. This also means that sustainability poses one of the greatest challenges to state pension systems that function on a pay-as-you-go basis. This underscores the significance of capital-accumulating supplementary pension systems. In regard to pension expenditures we found that on the one hand, the size of state expenditures represents a sustainability risk (the contributions/taxes funding expenditures

must be collected even under volatile economic and deteriorating demographic conditions), and on the other hand, the high ratio of state participation in pension expenditures represents substantial old-age dependency.

Although accumulated assets largely depend on available incomes (and the resulting per capita GDP), OECD data still demonstrate that countries with only voluntary pension plans in place (including the Czech Republic, Poland and Hungary) are less likely to accumulate pensions that are substantial in proportion to the size of their respective economies. These OECD countries mostly include former socialist countries and in their case, the time that has passed since the regime changes has not been sufficient to set up regulations or create well-functioning markets where participants can systematically promise occupational pensions to their workers (OECD, 2014 – Tables F3 and F6).

At the same time, since corporate stability among large corporations is relatively high in Hungary with increasing demand for trained workers, tools serving the retention of trained employees may gain more and more relevance. In Western Europe, as well as Anglo-Saxon countries, this objective, in addition to other tools, is served by occupational pension schemes. As we draw a comparison with voluntary pension programmes, it should be remembered that the cost burdens of occupational pension schemes are generally lower than for voluntary schemes, which better serves capital accumulation objectives as well. Taken together, these factors allow us to conclude that the pressure on the state pension system and the risk of old-age poverty can be alleviated more effectively with the occupational (second) pension pillar than with individual retirement plans (third pillar).

Implicit pension debt figures are not included in the international statistical system for the time being, but this will change from 2017. In analysing the effects of recent pension-related measures, the study by *Berki et al.* (2016) concluded that because of these measures, although the implicit pension debt (accrued-to-date, ADL) rises from 252% to 258% of the 2010 GDP figure, the open-system net liabilities index (OSNL) drops from 203% to 153% of 2010 GDP. In our study, we draw attention to the discount rate sensitivity of the forward-looking approach. In this regard, it should be stressed that the application of the more cautious 2% value instead of the 3% real interest rate (discount factor) that has been traditionally used in the previous period adjusts the OSNL to 559%, which could override the effect of the pension measures under review several times over. We also wish to note that the old age dependency rate used in the study relies on far more favourable data than any of the 2015 population projection scenarios proposed by the Hungarian Demographic Research Institute. Consequently, we found that forward-looking pension liability could be substantially greater than stated in the study, which represents significant uncertainty and risk regarding the sustainability of the state pension system.

This underscores the significance of savings that are independent of the state. Having explored the forms of institutional retirement savings typically used in Western European countries, we also examined specific Hungarian retirement plans. We concluded that the number of retirement savings accounts is very low, and in view of the underlying instrument (securities account) and the annual savings of HUF 400,000–500,000 derived from tax refund data we can assume this to be a product for the upper-middle class.

We found that the pension insurance scheme in effect since 2014 had a positive start as more than 100,000 contracts were concluded in the space of two years. The market potential is far higher than this and, given the substantial sales capacity/power of

insurance companies, this specific product can reach (in line with its intended purpose) a broader segment of the population than retirement savings accounts. On average, pension insurance can provide a more substantial pension supplement than the existing average pension, and, depending on the annuity term, it may be as high as 10–30%.

In the case of voluntary pension funds we found that no tax allowances were claimed on approximately 800,000 contracts in 2015 – 70% overall. For these contracts, it would take around 130 years to reach an acceptable amount of pension supplement during a 20-year period with the existing average pension insurance premiums. This is obviously unrealistic and indicates grave educational problems, but the popularity of the product also generates a false image in respect of the social opportunities of a pension solution. Based on their actual use, voluntary pension funds at present can be regarded as more of a social self-provision product (low premiums and easy access) than a solution that can provide regular and substantial supplements to state pensions.

Social positioning failing to cover the pension goal and low literacy levels reduce the demand for suitable pension solutions, which poses yet another problem. The regulatory response to insufficient education and to the problems of information provision coupled with growing sales in the wake of the elimination of the commission limit is likely to facilitate mis-selling and hence, a rising number of customer complaints. However, sanctionability could prove to be difficult at funds due to a lack of equity capital. For instance, moral hazard may arise if members suffering damages as a consequence of mis-selling were also forced to pay the fine imposed on the pension fund. For the time being, however, the voluntary pension fund is the only known and accepted product of the second pillar – occupational pension – that is at least partly linked to employers. Undoubtedly, once the novelty has worn off, this form will become increasingly less appealing to employers, while the level of employers' participation will also be greatly influenced by economic cycles. The trend-like drop in per-capita employer contribution resulted from these factors.

Occupational pension is currently viewed as an unexploited opportunity, which could serve as a foundation for a second – corporate – pension pillar, even through a potential harmonisation of the two existing products. International experiences also confirm the need for an adjustment of the current pension fund regulatory environment; indeed, they demonstrate that GDP-proportionate pension assets are higher in countries where the first and second pillars both function well.

The combination of pensions (including savings accumulated in both the second and third pension pillars) could give rise to income-proportionate digressions of state pensions and diminishing allowances. The latter could also be an appropriate step toward increasing the economy's competitiveness, while the former could be viewed as a step toward reducing implicit pension debt and future pension liabilities, the significance of which currently appears to be underestimated.

Notes

[1] Employee revenue estimates:

- Life insurance: according to the rule of thumb in insurance, 20–25% of life insurance contracts are motivated by retirement plan considerations; based on the statistics of the Association of Hungarian Insurance Companies (MABISZ), 25% of

the HUF 441 billion premium income generated on life insurance contracts was classified into this category (HUF 110.2 billion).

- Voluntary pension fund data from the MNB's statistics (individual in-payments –1/2016).
- The amounts paid into retirement savings accounts are based on estimates derived from 2015 tax returns (Ministry for National Economy [NGM], 2016).
- Annuity out-payments by funds were established using MNB data (2016/1), whereas out-payments by insurance companies are expert estimates.

[2] A significant portion (36.5% in 2015) of the membership payments made by voluntary pension fund members (HUF 66.3 billion in 2015) is not featured in PIT returns. We can observe similar ratios in the case of pension insurance: tax allowance was not claimed for approximately 35% of the gross pension insurance premium revenue.

[3] Pursuant to Section 8 (4) of Act CLVI of 2005, retirement purpose is defined as follows: "The account receivable balance on a pension payment account and the total value of investment assets registered on a pension securities account and/or a pension deposit account will qualify as pension services if the beneficiary of the savings can certify at the time of the termination of the account that he is eligible for pension payments pursuant to Section 3(23) of the Personal Income Tax Act, and the termination of the account takes place no sooner than or after the third tax year following the tax year in which the account was opened".

[4] Pension insurance: life insurance where payment by the insurance company is activated by the death of the insured, by obtaining eligibility for pension benefits under the legal regulation on retirement provisions paid by social security, by no less than at a 40% damage to the insured's health, or by reaching the retirement age specified in the contract in accordance with the legal regulations in force at the time of contract conclusion, provided that at least 10 years pass between contract conclusion and performance by the insurance company in respect of the insured event (unless payment occurs due to death, disability or eligibility for rehabilitation or if the insurance company's performance is not a decreasing annuity and the annuity is paid until the end of the tenth year from the start of disbursement or until the death of the insured).

[5] http://www.mabisz.hu/images/stories/docs/publikaciok/negyedeves/2015-i-iv-negyed.pdf. The MNB (2016/3: 17) figures indicate a slightly higher number (15.9 thousand), 97% (132,890) of the closing pension insurance volume of 137,000, as regular premium pension insurance. Gross premium for 2015 was HUF 31 billion, with the average premium in the case of pension insurance contracts concluded in 2015 amounting to HUF 208,000.

[6] The direction of the deviation is logical as indeed, many customers are unable to take advantage of the PIT allowance (they do not pay tax on a PIT basis or have no PIT payments that would allow them to enforce the allowance). On occasion, one may conclude multiple contracts without taking advantage of the allowances for all them (in consideration of the limits, for example) and obviously, customers sometimes forget to present the contract in their tax returns.

[7] It is 16.6 years that approximates life expectancy after retirement, which ranges between 15 and 20 years, including the increase in pension age centres and the rise in life expectancy.

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