János Kun

The hen lays no golden eggs – thoughts about the pension funds

As opposed to what was assumed at the inception of private pension funds in 1998, the funds do not facilitate economic growth; on the contrary, they increase the general government deficit, deteriorate the image of Hungarian economy, and hinder compliance with the Maastricht criteria for euro convergence. Private fund members are far from being secured a higher pension compared to non-members. The world is witnessing a paradigm shift: countries are restricting or terminating their private pension fund systems, and the World Bank has reassessed its position that was clearly supportive of the establishment of such funds. To its current knowledge, it would not recommend that Hungary establish private pension funds. The hen lays no golden eggs, and the most beneficial action would be to discontinue private pension funds. Discontinuation would result in a HUF 500 bn annual reduction in the general government deficit shown, as a minimum, and would decrease government debt by eight and a half percent of the GDP. Should there be no opportunity to discontinue them, the second best option is voluntary membership, allowing members to return to the social security system.

EVOLUTION OF THE SYSTEM – SAVINGS AND DEFICIT

The Hungarian system of private pension funds was established in 1998, as part of the process whereby in the second half of the nineties a range of former socialist countries adopted private pension funds at the World Bank's suggestion,[1] following Latin American examples. Figures of the first six months of 2009 reveal that 19 private pension funds are run in Hungary with a total membership of 3 million, and the funds managed by them amount to HUF 2,200 bn.[2] At the inception of the system, the employees of the time were offered a free choice in joining the system. Currently, all career starters are required to join a fund and their employers are similarly required to transfer the equivalent of eight percentage points of the employee's pension contribution to a private pension fund, which equalled one quarter of the pension contribution as of the system inception. When these employees retire, they will be eligible to a 25 percent less pension compared to non-members of private pension funds.

The pensions of the current pensioners did not decrease with the emergence of private pension funds; consequently, social security runs a deficit, because the contributions paid to the private pension funds do not cover the current pensions. The deficit would be avoidable if active wage earners agreed to pay the full pension of the current pensioners, in addition to saving up for their own future pensions, which means they would pay twice. The continuous accumulation of deficit is discontinued when all the pensioners are fund members, around 2040, because at that point, reduced contributions will need to cover reduced pensions only, which amount to 25 percent less compared to those of non-members.

Social security is compensated from the central budget for the deficit generated as a result of the contributions being transferred to private pension funds. This in 2009 – according to figures in the central budget – amounts to HUF 354 bn, approximately 1.4 percent of the GDP.

If the central budget had a surplus, it would not be a problem; however, it is not the case. For this reason, compensation of the social security for the deficit resulting from private pension funds adds to the general government deficit, resulting in government securities being issued. Currently, the government debt incurred on these grounds accounts for some 8.5 percent of the GDP and is expected to grow, through continuous generation of deficit, to as high as 40–50 percent of the GDP of the time around 2040. In addition to compensating the deficit of social security, the central budget is also burdened with paying an interest on the general government debt accumulated on account of the private pension funds, which currently[3] amounts to HUF 180 bn, 0.6 percent of the GDP annually. On the whole, existence of the private pension funds adds approximately 2 percent to the annual general government deficit.

The annual deficit will keep growing in the years to follow, as, for a few years, masses of employees who are not fund members will retire, which means that they paid their entire pension contributions to, and will receive their full pensions from social security, and will be replaced by employees who are fund members, meaning that they pay a portion of their pension contributions to private pension funds. In the continuation, when also masses of fund members retire, the deficit will discontinue growing on these grounds; however, by that time, the interest burden of the government debt accumulated in the meantime will have reached a significantly higher amount.

The funds invested in private pension funds on an annual basis equals the deficit incurred by the social security system due to private pension funds, or, it is slightly less than that, given that a portion of fund revenues is used to cover the funds' operating costs. The relevant law and government decree provide detailed regulations for the types of investments permitted for funds to keep assets in.[4] Until 2007, the funds purchased government securities for approximately three quarters of their assets. At that time, rules were modified to require members' funds to be classified in various portfolios based on the time remaining to until retirement, and to set up a portfolio for young members with a higher ratio of shares. Consequently, the ratio of government securities dropped to 50 percent and that of shares increased.[5]

INVESTMENTS OF THE FUNDS, AND THEIR IMPACT ON THE ECONOMY

The main motive behind establishing private pension funds was that the funds improve the economy's performance through their investments. Let us examine the impacts of each form of investment on the Hungarian economy.

Purchase of Hungarian government securities

Let us suppose that the funds invest their assets in Hungarian government securities in full. Apart from their operating costs, the funds purchase as many government securities as the budget issues to finance the social security deficit incurred due to the existence of the funds. The funds receive a yield of the government securities, and reinvest it in government securities. In effect, they also purchase the government securities issued by the budget in order to finance the interest on the deficit generated on account of the funds. When a fund member retires, his/her assets accumulated in the fund to be converted to a life annuity will, on average, equal precisely the government debt incurred as a result of him/her joining the private pension fund.

As the assets of the fund member is are offset against government debt, which, or the interest of which is to be repaid by the next generation, the fund member's pension will invariably be paid by the next generation, just as if he/she did not join the private pension fund at all. His/her pension will not be the same, as the valorisation rules applicable to the expected pension to be paid by social security will not be equivalent to the interest rates of government securities and, similarly, conversion to life annuity is subject to different rules. It cannot be predicted which pensioner will be better off, the one that voluntarily joined a pension fund, or the one that did not. Nor can it be foreseen whether those that started their careers after private pension funds were established and were required to join a fund will receive a higher pension compared to that considered without the existence of private pension funds. One thing is for sure: if the pensioner is better off, the next generation must pay more.

In a fortunate case, the next generation's contributions to the pension funds will cover private pensions payable. In such a case, the next generation purchases the securities sold to cover payment of pensions to the pensioners' generation: the securities change hands like a baton (Cesaratto, 2006). If the payments of the next generation are insufficient to pay the pensions, the securities must be sold external to this circle, which means that pensions will need to be funded from non-pension savings. That leads to higher interest levels and restricted investment facilities of the next generation. However, at the same time, higher interest levels decrease security prices, and, accordingly, the value of pensions. (International Labour Office, 2001)

Funding Hungarian companies

One of the objectives of setting up private pension funds was to generate extra capital for Hungarian companies through their investments in shares and purchase of bonds, and to bring about higher performance of the economy. Small and medium enterprises (SMEs) in Hungarian ownership do suffer from undercapitalisation, but are too small to increase their own capital through public issuance of shares or bonds. Evidence to this is the fact that new companies are rarely listed on the Hungarian stock exchange, involving only a negligible amount of capital. Corporations for whom raising capital at the stock exchange is a valid option are in foreign ownership, and the owner is not interested in being listed on the Hungarian stock exchange. Due to the characteristics of the Hungarian corporate structure, no change is expected in this respect in the future. A good illustration of the failure is the fact that the Budapest Stock Exchange used to have 45 shares listed prior to the adoption of the pension fund system at the end of 1996 and 43 at the end of 2008.

In their study on the Hungarian private pension funds, *Impavido* and *Rocha* (2006) put it politely: “Pension funds have played a modest role in the development of the capital market.” (page 26) As a positive example, they mention the development of the government security market and the mortgage bond market. Development of the government security market cannot be considered as a positive sign, as it signifies growing government debts. Pension funds could but slightly contribute to the development of the mortgage bond market: their investments in mortgage bonds are not detailed in the statistics; they keep altogether less than five percent of their portfolio in bank and corporate bonds.

The Hungarian experiences are also underpinned by international studies. *San Martino* (2007), as well as *Raddatz* and *Schmukler* (2008) arrive at similarly detailed conclusions by examining Argentinean and Chilean pension funds. *Chan-Lau* (2004) states that, as a general rule, pension funds in emerging economies have a limited role in the development of the capital market. In his opinion, it is rooted in the fact that domestic investment facilities are few, and the regulations applicable to fund investments are strict. He also mentions that a certain *herding behaviour* dominates pension funds in the capital market, which intensifies the vulnerability of capital markets.

Let us examine a case where the funds invest a portion of their assets in Hungarian shares. Shares yields on an average of years tend to be higher than those of government securities, but are considerably more volatile. If pension funds purchase the right shares at the right time, and sell them at the right time, fund members' assets convertible to life annuities will be higher than as if the fund only invested in government securities. In such cases, the portion of the fund member's pension represented as government debt equals only the amount that would be generated as a result of investment in government securities, and the pension surplus represented as the difference in the yields of investments in government securities and shares is the profit.

This profit, however, is not seen at the level of society. The number of shares traded in the market does not increase as a result of pension funds emerging as buyers, only a rearrangement is seen among the owners of shares. Because the private pension funds do not purchase all the government securities issued to compensate for the social security deficit generated by their establishment, demand for government securities decreases, resulting in a growing yield of government securities, and the government will only be able to issue securities with a higher interest rate in the future – assuming all other factors remain unchanged. Concurrently, demand for shares will rise, as the pension funds appear on the share market as buyers. It increases the price, yielding a profit to those that have invested in shares earlier. Subsequently, however, a higher price reduces the yield of shares. The next generation must purchase the shares that will cover the pensions of their time. If demand for these is insufficient, share prices will decrease, and the pensions available will be less in value. Even if the yield of shares is higher in the long run compared to that of government securities, certain age groups would have been better off choosing an investment in safer government securities, due to a higher volatility of shares.

Foreign investments of private pension funds

The rules applicable to investments of private pension funds allow pension funds to purchase foreign shares, too. And so they do, considering that the choice of Hungarian shares is insufficient to make up portfolios with a higher ratio of shares only using Hungarian shares. According to calculations considering 26 countries by *Pfau* (2008), the yield of pension funds is 21.3 percent lower if they do not invest abroad, but the volatility of a portfolio of purely domestic shares is 20.1 percent lower, because the volatility of foreign instruments is increased by changes in the exchange rates. Based on figures relevant to the period between 1995 and 2006, he does not recommend foreign investments for Hungary, on account of the outstanding performance of the Hungarian capital market.

PRIVATE PENSION FUNDS AS A CALL FOR ATTENTION

With the establishment of private pension funds, a portion of the earlier implicit debt in the pay-as-you-go pension system is converted into explicit debt. *Cesaratto* (2006) cites parts of the World Bank's suggestion concerning establishment of private pension funds, which identify conversion of a portion of implicit debt into explicit debt as an objective of establishment, in order to direct attention to the problems of the pension system, and to urge political decision-makers to be economical.

This intention does not consider the need to distinguish between *net and gross* implicit debt. *Gross* implicit debt on pensions at a given point in time is the present value of the social security's total pension liability (Németh, 2009). According to calculations made by *Orbán* and *Palotai* (2006), it amounted to 228 percent of the GDP in 2005, but through a recommended higher age of retirement proportionate to an increased life expectancy, it would decrease to 115 percent. High gross implicit debt on pensions, however, poses no problem, provided the pension contributions paid by future generations cover future pensions, it only indicates that the pension system includes a broad range of the population, and provides decent pensions. Establishment of private pension funds makes a portion of this debt explicit. What poses a problem is net implicit debt, being the present value of the difference between future pension liabilities and pension contributions. Making a portion of the gross implicit debt explicit is not a suitable method to establish the existence and amount of such debt.

PRIVATE PENSION FUNDS AND THE MAASTRICHT CRITERIA

The EU sets compliance with the Maastricht criteria as a condition to adopting the euro. Out of these criteria, meeting the criteria concerning a government debt limited to 60 percent of the GDP (or at least decreasing) and of a maximum 3 percent budget deficit poses significant problems to Hungary. Meeting these criteria is important for the EU because an excessive budget deficit of a country crowds out capital from the others, due to the free movement of capital.

The reason and expediency of these criteria is not analysed in this study; nevertheless, it must be noted that the general government deficit caused by private pension funds does not crowd out any capital, as capital supply equivalent to the deficit turns up at the private pension funds. The newly acceded EU member countries running such pension funds have proposed not to consider the deficit generated due to the pension funds on establishing compliance with the criteria, i.e. to consider pension funds as a part of public finances. EUROSTAT did not accept this reasoning, and classified pension funds to belong to the private sector (European Commission, 2009). The outcome was a compromise that lacks economic sense: the deficit that falls short of compliance with the criteria is allowed to be compensated by the deficit generated by private pension funds only up to 2009, at an annually decreasing rate, in 2009 by 20 percent of the deficit generated due to the pension funds. It means that in the coming years, which are crucial for adopting the euro, no adjustment will be allowed; not even for compliance with the Stability and Growth Pact applicable after the euro has been adopted, which is, in theory, even stricter than the Maastricht criteria.

Creditors to Hungary and international credit rating agencies examine the figures of general government deficit and government debt including the deficit generated due to the pension funds. All these would not cause a problem if the public finances were in surplus, and government debt would only amount for a maximum of 20 percent of the GDP. But the case, unfortunately, is different.

THE IMPACT OF TERMINATION OF PRIVATE PENSION FUNDS

If private pension funds were terminated, and the contributions currently received by them were to be added to the social security's income, the general government deficit would be reduced by 1.4 percent as the social security would not incur a deficit due to the private pension funds, and it would not need to be compensated from the central budget. If the assets accumulated by the pension funds reverted to the state, general government debt would be reduced by approximately 8 percent, and the government's interest payment obligation on that portion of the government debt would be cleared.[6] That would improve the general government deficit by an additional 0.6 percent.

A lower rate of general government deficit and government debt is crucial not only for compliance with the Maastricht criteria and the Stability and Growth Pact: these are also important indicators for determining country risk. Lower government deficit and government debt account for a lower country risk and, accordingly, a lower risk premium, less expensive financing for government debt. (I have not quantified its impact.) The country risk that improves due to the termination of pension funds results in more inexpensive credits for Hungarian banks and companies as well.

In their years of retirement, members of private pension funds will receive a pension 25 percent less from the social security system compared to those that paid all their contributions to the social security system. In the event pension funds are terminated, former members of the funds also receive their full pension from the social security, similarly to those that never joined private pension funds. A higher pension from the social security, however, will not cause a deficit, as the required extra income will be available from the payments made by the contributors of the time, considering that the contributors of the time will not direct a portion of their payments to private pension funds.

In order to reorganise the pension system, the Round Table for Pension and Old Age Issues[7] prepares proposals. They work to develop a system that eliminates the net implicit debt of the social security pension system and, accordingly, to ensure that three quarters of pension contribution payments and three quarters of the pension are in balance in the long term. Development of a new pension system would not be affected by the termination of the private pension funds: if three quarters of payments in and three quarters of payments out are in balance, one hundred percent of payments in and one hundred percent of payments out will also be in balance.

Due to the confidence crisis evolved as a result of the international financial crisis, Hungary is to take fast action to reduce general government deficit. The recently adopted proposals, such as increased VAT and excise tax, as well as reduced support to local governments reduce demand, thus further intensifying the decline in production, further deteriorating the situation of Hungarian enterprises, and increasing growing unemployment. In the event the funds are terminated, the balance of public finances would improve by a minimum of HUF 500 billion without any decline in the standard of living, consumption and increase in unemployment.

In the event private pension funds were liquidated, operating and funds management costs of the pension funds would be eliminated, which in 2008 amounted to a minimum of HUF 37 bn.[8] It is also significant savings for society, however, it is only a by-product of the proposal. The essence of the proposal is to improve the general government balance.

OTHER EXPECTED BENEFITS AND REALITY

We have seen that the key benefit expected in the wake of establishing private pension funds – a positive impact on the development of the economy – has not been achieved. Now, let us examine whether the other expected benefits have been materialized.

Discipline of contribution payment

Considering that all contributors can see their contribution paid on their individual account, it was hoped that they would be interested in payment, and the *discipline of contribution payment* will improve. It has not been achieved, as the payment of contribution to a private pension fund entails payment of other contributions and of personal income tax. Moreover, a central element in the proposal being prepared by the Round Table for Pension and Old Age Issues is to reinforce the link between contributions and future pension. If it is accomplished, the discipline of contribution payment will improve even if private pension funds do not exist.

Similarly, improved discipline of contribution payment was expected to ensue from the heritability of private pension fund accounts. This facility also failed to improve payment discipline. It is to be noted here that although social security pensions are not heritable, they contain elements similar to inheritance: widow(er) pensions and orphan benefits. These are more beneficial from a social aspect, and provide greater social security compared to the heritability of the amount kept on fund accounts.

Transparency and security of the system

Transparency of operation was deemed as an advantage of private pension funds, whereby the membership will always be aware of their savings and expected pensions, as opposed to the variable rules applicable to the social security system, and the non-transparent system of determining pensions. In addition, the private pension system was also expected to be *free of political caprice.*

Fund members do receive a statement of their savings once a year; moreover, certain funds also provide a facility for fund members to follow their respective account balances via the Internet, but the system is still not transparent, and investments and costs deducted under various legal titles cannot be followed. Since its inception, the act on private pension funds has been amended at over two hundred points, which shows that the operation of private pension funds is not independent of the current political intention, either. A fundamental element, the minimum pension guarantee of private pension funds has been eliminated. The Hungarian Parliament adopted the act on private pension and its institutions on December 24, 2009, which reregulated the private pension system. According to the new act, private pension funds will cease to exist on December 31, 2013, and new institutions, i.e. private pension insurance companies will be formed. The largest opposition party announced that if it comes to power, it will execute further changes. The amount of pensions to be disbursed can be modified even without the modification of the act on private pensions due to the tax rules and the financial regulatory system. The new act prescribes that a "designated" annuity provider be established by a separate law that will probably be a state owned organization, This will further reinforce political dependence. By the way, the Round Table for Pension Issues envisages transparent and stable rules free of politics for the social security system as well.

Competing pension funds

No justification is seen of the assumption that members will shift to funds with better performance, which will cause *pension funds to compete* in order to maximise their yields. In reality, minimal movement is seen among pension funds, and not even the newcomers select a fund on the grounds of performance; advertisement, agent activity and recommendation of the employer weigh more. The financial culture of the population is insufficient to assess fund performance. It is desirable to provide financial training education to the population, through teaching basic finance at school, but on a social scale, it is more useful for all to train themselves in their respective professions and let their pensions depend on the success they have achieved in their professions instead of their knowledge of finance. Moreover, assessment of a financial service provider's performance is a demanding task even for a financial expert, and the result is ambiguous.

Higher pensions

On establishing private pension funds, the decision-makers considered *higher pensions* to be generated through the operation of the pension funds, compared to the system purely controlled by social security. A recent research paper by Orbán and Palotai (2005) does not support this assumption. The paper states that sustainable pensions (i.e. not calling for any other public finance support other than the compensation of the deficit generated by the existence of pension funds) provided by the pension funds at a rate equal to that provided by the social security system require a real yield of 2.7 percent. That yield rate provides a pension equal to the one within the social security system only to the employees that were members of a private pension fund all through their lives. Those that had worked before private pension funds were established, and joined one voluntarily, need a higher rate of yield in order not to lose on it. Considering that the real yield of pension funds for the past ten years is negative for the time being, it is highly questionable when they can meet the yield requirement. Moreover, even if some private pension funds do achieve the expected yield on average, some will be unable to ensure pensions equal to that purely controlled by the social security system.

International experience suggests that the costs of providing life annuities may reach as high as 15–20 percent of the funds' capital converted into annuities, (The present value of the expected life annuity is so much lower than the accumulated funds.) Though the act adopted in December 2009 permits to charge only 5 percent, it determines a zero percent technical interest rate which is unfavourable for the annuitants. *Orszag* and *Stiglitz* (2001, page 31) report on a study stating that the costs may reach as high as 40–45 percent of the invested funds.[9]

It is imaginable that in twenty or thirty years, when the system will have reached maturity, and masses will convert their accumulated receivables to annuities every year, a crisis similar to the current one might sweep through the world. (Members of private pension funds lost HUF 466 billion last year. Almost all members had less funds on their accounts than what they had paid in over the years.) In such a case, the ones that retire in the wrong year will receive considerably lower annuities until the end of their lives compared to the ones that will retire a few years earlier or later. This cannot be helped by the requirement of the current regulation to transfer the funds to a lower-risk portfolio five years prior to retirement because – as it is currently seen – even lower-risk portfolios may generate a significant deficit and if the law requires transfer of the funds at a point when the stock exchange is in low depression, the transfer will not help either. Orszag and Stiglitz (1999, page 17) publish a calculation whereby a stock index portfolio converted into an annuity in 1968 would have generated an annuity amount over twice as high compared to the one converted in 1974. Injustice is also possible in the social security system due to the ups and downs of politics, but nothing on this scale.

INTERNATIONAL ENVIRONMENT, PARADIGM SHIFT

A system of private pension funds similar to the Hungarian one was first adopted by Chile in the early 1980s; later, a range of Latin-American countries followed suit. In the nineties, the former socialist countries introduced this system on the recommendation and with the technical support of the World Bank,[10] under the neoliberal economic policy it represented, except for the Czech Republic and Slovenia, where financial culture was the most developed of all. Similar funds exist also in developed countries, with the significant difference, however, that these evolved on their own, instead of being established by reorganisation of the state controlled pay-as-you-go social security system. The Hungarian voluntary pension funds are comparable to the funds of the developed world.

The international literature of economics has never been undivided concerning the usefulness of adopting a mandatory funded pension system corresponding to the Hungarian system of private pensions. The paper by Orszag and Stiglitz (1999) gives an excellent summary of a debate that took place in the United States in the nineties. (As a result of the debate, the system recommended by the World Bank has not been adopted in the USA.)

In a huge study published in 2005, the World Bank (Holzmann and Hinz, 2005) reviewed its earlier stance on mandatory funded pension funds. It is emphasised at multiple points that the World Bank's concepts on pension systems cannot be considered as *blueprints*, only as *benchmarks*. A whole chapter (pages 63–70) is dedicated to proving that the World Bank has never forced its concepts on the pension system upon any country. The essence of this evidence is that only 43 of the 204 loans provided to 68 countries between 1984 and 2004 to support development of their pension systems were used to help establish mandatory private pension funds, and most of these were lent only after the system had been adopted in the respective country.

The theses of this report were discussed by the World Bank's Board of Directors in 2007, and the summary produced from the debate minutes (Holzmann, Hinz and Dorfman, 2008) basically repeats the theses of the earlier report. Both reports state that countries with high public debts and pay-as-you-go pension systems, which represent high implicit public debts, are not recommended to adopt the private pension system. Hungary is one of these countries. *Rudolph* and Rocha (2009) add to the above that transition is particularly harmful for countries where interest on the public debt is higher than the implicit yield of the implicit debt resulting from the pay-as-you-go pension system. Hungary also falls in that category. We can establish that, to its current knowledge, the World Bank would not recommend that Hungary adopt private pension funds.

In November 2008, Argentina terminated private pension funds with reference to the problems in public finances and the poor performance of the funds, as a result of which the need for funding the state pension system from the central budget decreased by one percent of the GDP, and the public debt by 10 percent of the GDP. Subsidiaries of financial giants such as ING or HSBC were forced to discontinue operation. Both when the government's decision was announced in October and after the parliamentary vote in November, the stock exchange dropped by 25 percent but in both cases it recovered in a few days, and showed equal performance with other stock exchanges in the region for 2008.

At the end of 2008, return from private pension funds to the social security system was made possible in Slovakia, and career starters will not be forced to join a fund any more. A similar step has been taken in Croatia. In Romania, a formerly decided increase in the contribution channelled to private pension funds has been postponed. Rudolph and Rocha (2009) report that in Bolivia and El Salvador political debates have been conceived on reducing the role of private pension funds. *Holzmann, Hinz* and *Dorfman* (2008) state with a general validity that the role of private pension funds will decrease in the world in the future.

EXPECTED RECEPTION IN HUNGARY, COUNTER-ARGUMENTS

The Hungarian population in general has an indifferent attitude to pension funds; many are not even aware which one they belong to. Due to the poor yields in 2008, the overwhelming majority would probably not object to the termination of the funds, particularly if it is carried out entailing fewer measures that would decrease the standard of living and increase unemployment, than heralded.

Termination of the pension funds, however, could raise constitutional worries, because it may be interpreted as nationalisation of the members' property. It is doubted whether receivables from a private pension fund can be considered as property in the first place, as the notion of property includes the right of free disposal, while members do not have free disposal over their private pension fund receivables, they can only convert them to a life annuity, under strict rules. In exchange for losing their receivables, the members receive damages: a state pension one third higher in amount, which is abundant compensation.

THE SECOND BEST SOLUTION

Should the legal arguments against terminating pension funds prevail, there is still a chance. Based on the Slovakian and Croatian examples, voluntary return to the social security system could be permitted until a certain deadline, and rules could be changed not to force career starters to join a pension fund in the future. (Those opting for joining would be required to remain in the system for life.) The poor yields of 2008 would probably induce masses to choose to return, and only few career starters would opt for the pension funds. It would also ease the burdens of public finances. If, for instance, half of the current members chose to return, it would still reduce the annual general government deficit by HUF 250 billion and the public debt by four percent of the GDP.

Notes

1 For a detailed description of the suggestion, see The World Bank (1994).

2 http://www.pszaf.hu/data/cms762369/pszafhu_stat_ido_penztar_2009.II.negyed__v.xls

3 Calculated at an interest burden of 8 percent

4 The rules are laid down in Act 82 of 1997 as amended multiple times and in Government Decree No. 282/2001. (XII. 16).

5 According to the original rules, the various portfolios should have been set up until June 2009. In late 2008, the deadline was modified to June 2011, due to the problems of the Hungarian government securities market.

6 The government securities returned to the state immediately decrease government debt and interest burden due on the debt. Other securities need to be sold first. Gradual action is recommended at this point. Foreign currency received from the sale of foreign securities increases the foreign currency reserves of the country, or can be used for interventions on the foreign currency market.

7 A body assisting the work of the government.

8 According to the data of the Hungarian Financial Supervisory Authority, management costs amounted to HUF 32.4 bn for 2008, exclusive of management fees on the investment certificates worth HUF 470 bn kept in the funds' portfolio, which amounts to a minimum of 1 percent.

9 The study examined the voluntary pension funds in the United Kingdom.

10 The World Bank also provided experts to assist adoption of the systems. In Poland, the World Bank expert who assisted in adoption of a system very similar to the Hungarian one was given the rank of a government commissioner.

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