



Peter Part (Ed.)

***AUSTRIA: Pension
Projections 2004 - 2050***

AUSTRIA: *Pension*

Projections 2004 - 2050

**Austrian Contribution to the EU Ageing Report
by the Economic Policy Committee and the
European Commission
(published in February 2006)**

**Peter Part (ed.), Roman Freitag,
Karin Königsreiter, Werner Lenzlbauer,
Karin Schönflug, Johann Stefanits**

Contents

1. Pension System: Overview	7
1.1 General Structure of the System	7
1.2 Recent Reforms	7
1.3 Second and third pension pillars	8
2. Description of the Projection Model and its Base Data	9
2.1 Official Long-Term Pension Projections in Austria	9
2.2 Description of the Applied Projection Models within the EU Framework	9
3. Demographic and Macroeconomic Scenarios until 2050	11
3.1 Demographics and labour force developments until 2050 (based on EUROSTAT)	11
3.2 Labour force and employment developments	11
3.3 Long run growth in Austria	12
4. Public Pensions: Projection Results	13
4.1 Overall results	13
4.2 Number of pensions and their future development	13
4.3 Average pensions and their future developments	14
4.4 (Social security) contributions and the overall pension deficit	15
4.5 Sensitivity analysis	15
The Editor	16
Literatures	17

The Working Papers are written by the staff of the Federal Ministry of Finance or experts working in cooperation with them. It is their objective to stimulate public discussion on economic policy issues emanating from the work of the Ministry. Views expressed do not necessarily represent official views of the Ministry, but are the responsibility of the author.

Your comments and suggestions should be directed to:

Dr. Kurt Bayer,

Deputy Director General for Economic Policy and International Affairs

phone.: ++43/1/514 33/ext.

e-mail: kurt.bayer@bmf.gv.at

Dr. Alfred Katterl,

Division of Economic Policy Analysis

phone: ++43/1/514 33/ext.

e-mail: alfred.katterl@bmf.gv.at

A free copy of the Working Paper can be ordered at:

Federal Ministry of Finance,

HR Development and Internal Communications

Himmelpfortgasse 8, A-1015 Vienna

phone: ++43/1/514 33/1346

Internet: www.bmf.gv.at

1. Pension System: Overview

1.1 General Structure of the System

The Act on the Harmonisation of Austrian Pension Systems came into effect on 1 January 2005. The main element of this Act represented the introduction of a uniform pension system for all employed under 50 years. In consequence, this new pension system will gradually replace the many different pension schemes for private sector employees, self-employed, farmers and civil servants. All public pensions are and will also in future be footed on a pay-as-you-go (PAYG) system. Survivor and disability pensions add up to a considerable proportion (around one third) of total pension benefits. Despite the major reforms undertaken in Austria during the past decade also within the second and third pension pillars, public pensions are still by far the primary source of income for retirees (more than 95%).

Pension entitlements are subject to individual life-time earnings, reaping the maximum benefits of 80 % of average earnings in the case of 45 insurance years¹ at the statutory retirement age of 65 years. The annual accrual rate will be continuously lowered from 2 to 1.78 percentage points until 2009. The basis of average individual earnings will be extended gradually from the best 15 to 40 income years until 2028. An easier achievement of a pension (instead of 15 years only 7 years of contributory economic activity are required, for the remaining 8 years child care periods are sufficient) will affect especially pension entitlements of women with child care periods. A benefit will be granted provided that 7 years of pension contributions in a working life have been established. Pension benefits are adjusted yearly by consumer price inflation. Past contributions and maximum contribution levels are indexed by net wage growth. The statutory retirement age is basically harmonised at 65 years for men and women (with longer phases of fading in for women until 2033). Early retirement will be fully eliminated by 2017. A pension corridor was introduced between 62 and 68 years, but with an actuarially fair discount/bonus of 4.2 % per year before/after 65 years and at minimum when 450 insurance months have been acquired. Pension benefits are subject to personal income taxation and to social security contributions, above all on health care.

Public pension expenditures are financed by contributions and additional public transfers for

granting minimum income standards, serving contribution-free benefits, etc. The federal budget covers the deficits in most public pension schemes in the case of their actual emergence. Pension contributions are levied on gross salaries (split up into an employer's and an employee's part) and deducted from gross salaries before personal income taxation.

1.2 Recent Reforms

Pension reforms were already introduced in 1993 and in 1997 as part of the 1996/97 fiscal consolidation package. The reforms in the 90s focused especially on a change in the adjustment formula from gross to net wages, the extension of the benefit assessment period to the best 15 years, new disincentives for early retirement, the introduction of higher incentives to take part-time retirement and the imposition of a "pension security contribution" on civil servants' pensions.

In 2000, 2003 and in 2004 the reform process has been stepped up very ambitiously. The reform of 2000, increased all early retirement ages by 1.5 years until 2003, in the general schemes from 55 to 56.5 years for women and from 60 to 61.5 years for men. The disability early retirement scheme was abolished on 1 July 2000 following a ECJ ruling on equal treatment. The widow(er)s' pensions schemes were tightened by stricter income related ceilings. In case of early retirement, the discount rate was raised further.

The Austrian Pension Reform of 2003 increased statutory (early) retirement ages and implanted strong incentives to work longer into the system (extending the base of average earnings from 15 to 40 years until 2028 in combination with a cap on losses of 10%, raising the deduction in case of early retirement to 4.2% per year). Retiring early shall become an exception to the legal retirement age. But at the same time elderly workers have been made more attractive from employers' point of view, in particular by lowering non-wage labour costs. Part-time retirement was redesigned to prevent this scheme to be used as a possibility for early retirement.

The establishment of harmonised guaranteed pension accounts, effective since 1 January 2005, is a new system of individual transparent pension accounts with the key rule of 45 - 65 - 80 (45 insurance/contribution years, retirement age of 65 years and a public pension amounting to 80% of average life-time earnings). The cap on losses based on the "old" system

¹ including pension contributions, equally ranking waiting periods for parental leave and child care, unemployment, military service, etc.

was modified starting with a 5% cap and accumulating step-wise to 10% until 2024. These accounts will clearly show contributions paid in as well as other credits acquired, such as child care, military service and unemployment times. Child care times, military or civil service or hospice leaves will become effective with a contribution base of 1.350 €. Contribution rates will be uniformly set at 22.8%. For farmers and self employed a contribution rate of 15% and 17.5% is effective, the difference to the standard contribution rate is borne by the federal government. To guarantee the viability of financing, a sustainability factor has been introduced to cope with unforeseen developments, such as adverse future demographic deviations. If work has been in the area of "hard labour" for each year 3 months may be subtracted from the retirement age. A committee elaborates on the criteria of "hard labour" right now. Earliest possible retirement is at the age of 60 years. The discount ratio amounts then to 2.1% per annum instead of the standard rate of 4.2%.

upward trend over the past years. In 2004, life insurance contracts grew by 8.5%, which resulted in a volume of premiums of 6.19 bil. €. While private life insurance generally leads to a one-time payment, private pension insurance contracts are usually concluded for the purpose of obtaining a life-long pension. The income from current premium payments made in respect of this type of pension insurance increased by 8.3% to about 474 mil. € in 2004. The new premium-aided pension savings scheme ("Zukunftsvorsorge"), available since early 2003, has, thereby, been successfully established as a predominant old-age provision product of the third pillar and not as a simple finance investment tool. This scheme has been recording strong growth since its 2003 launch. In 2004, the number of contracts surged by 68% to 456,485. 68% of the contracts have a stipulated term of at least 20 years, 42% of at least 30 years.

1.3 Second and third pension pillars

The second pillar (firm-related benefits) has turned to be now partly mandatory. But it is still of much less quantitative importance than the public pay-as-you-go system, though their volumes have increased rapidly in recent years. While in 2000 about 284,000 persons had earned entitlements to occupational pensions (excl. the "new severance pay"), this number increased to 413,000 in 2004 (of which 44,000 persons were receiving benefits). This corresponds to 13% of all employees. Currently, there are 15 occupational and six supra-plant pension funds in Austria administering total funds of 10 bil. €. Moreover, some employers pay premiums towards a life insurance bought for staff members.

Since 1 July 2002, the Occupational Staff Provision Act – better known as "new severance pay" – has been in force in Austria. Every employer has to transfer 1.53% of the monthly salary of an employee to a staff provision fund ("Mitarbeitervorsorgekasse") set up especially for this purpose. The new severance pay and thus also the staff provision funds have shown a very dynamic development, already more than 1.200,000 employees are in this new system. When benefits become eventually due employees may choose between receiving the entire severance pay or a life-long pension.

Concrete arrangements for private pension plans (third pillar) are made by the individual. Traditionally, life insurance has already played a major role, and life insurance contracts have continued to show a significant

2. Description of the Projection Model and its Base Data

2.1 Official Long-Term Pension Projections in Austria

Traditionally, medium-term pension projections, covering at least five future years, are contained in the yearly opinion submitted by the Austrian Pension Advising Council (PAC) to the federal government in preparation of annual pension adjustments. This consultative body represents the main forum for periodic policy discussions. It is composed of experts, academics, government and social partner representatives.

Initially, these medium-term projections which are limited to the private sector schemes (“gesetzliche Sozialversicherung”) have been the central policy instrument for assessing pension developments. However, the tendency towards a more frequent use of quantitative analyses and external advice was intensified during past reform efforts. As a result, long-term pension projections based on demographics by Statistics Austria were presented as a complementary tool to clarify the need of adjustment and to assess the impacts of the major reform efforts initiated by the federal government. This has proven to be a very helpful and transparent instrument. This is why, with the aim to have long-term pension projections constantly available and to safeguard long-term financial sustainability of the Austrian pension system, the federal government set up a permanent monitoring mechanism as of 2007. An expert committee will then review financial developments in the pension system every three years and in particular with regard to the sustainability factor newly established in 2005. This sustainability factor will have to be applied, if the trend deviates upwardly from the assumed (demographic) path c.f. because life expectancy has risen more strongly. As a result, higher pension expenditures will have to be matched by equal burden sharing through lower benefits, higher contributions and the federal budget. While no automatic adjustment enters into force, the committee is obliged to put forward respective proposals affecting the retirement age, the contribution rate and the pension adjustment to the government.

2.2 Description of the Applied Projection Models within the EU Framework

The Austrian pension projections within the given EU framework are based on two autonomous models, covering the private sector and the civil service schemes, respectively. They include all benefits and contributions to old-age, early-retirement, disability and survivor schemes. The pension projections, therefore, include all public pension expenditure, amounting to 14.3% of GDP in total, but do not cover additional social assistance benefits of roughly 0.4% of GDP. Total pension spending is defined as the outlays before taxation and before social contributions, health care contributions in particular. In addition, administrative costs of around 0.2% of GDP are included in total pension spending as well as certain outlays for health prevention and rehabilitation, and World War II pensions. The pension projections contain the effects of all existing major pension reforms. This implies that the most recent 2005 reform has already been built completely into the pension projections. The cut-off date for measures included, therefore, is 1 October 2005.

Both models consist of partial equilibrium models and comprise deterministic elements only. In order to achieve consistency in the results, the two basic models for the private and the public sectors are consolidated, both as to macroeconomic developments and to expected shifts of contributors from one to the other category of schemes. For instance, the developments in public sector employment are captured by the private sector model, vice versa the macro scenario of the private sector schemes forms an important input into the civil service projections. Hence, though the two models are fully autonomous, they have been made fully consistent with regard to employment and wage developments.

The private sector model, accounting for nearly three quarters of total public pension expenditure is central to simulate the financial effects of population ageing. It covers all relevant social insurance schemes, for blue and white collar employees (ASVG), self-employed and farmers, among others. The model is composed of two major blocs that are intimately linked together. The macro part is made up of ten modules, reflecting economic, labour market, public finance and pension insurance developments. In effect, most single

parameters are endogenously determined with the exception of participation and inflation rates, which fit in as exogenous inputs. The pension-specific micro part relies on inputs from the macro side on employment and on the payroll, from demographics and from age-related time series describing past pension contributions and benefits. These micro modules are designed so as to incorporate already enacted reforms with their effects in the near and distant future and to simulate reform options. These pension modules permit to calculate the great bulk of already existing pensions, the number of new pensions and of exits, average pension benefits and replacement rates as well as aggregate figures in a given (future) year. In the opposite direction, pension contribution rates and the level of the social insurance pension deficit covered by the federal budget feed back into the macro modules.

Secondly, the civil service model takes into proper consideration the fact that these pension benefits are fully financed out of the federal, Länder and the various communal budgets. The federal sector clearly dominates by size. In this vein, the federal segment comprises all pension and survivor benefit payments to civil service retirees of the federal government, the postal, telecom and railway services and specific groups of regional governments, such as primary and secondary school teachers. However, the model also takes account of all vital developments at the

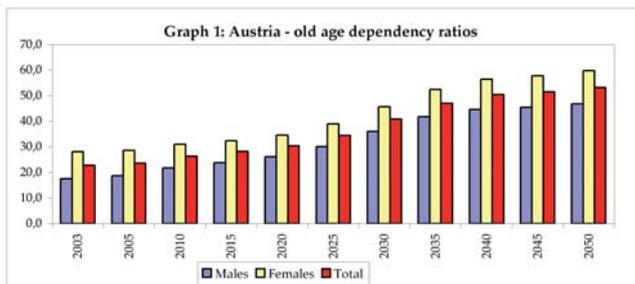
other government levels. With respect to these numerous schemes and some differing features and evolutions in these schemes, a number of rough approximations had to be incorporated into the model, especially for pension payments of the Länder and municipalities. This also applies to ongoing structural reforms in the public sector which aim at enhanced application of private-sector-based labour contracts to their employees. As a general trend, civil service developments are assumed to be much more exposed to the present age-structure in the civil service and the future internal reforms rather than to demographics and economic developments, which are nonetheless taken into adequate consideration. These reform measures will dwell upon the comprehensive efforts to harmonise private and public sector pension systems, raising effective retirement ages and contribution rates as well as pursuing restrictive recruitment in the public sector in general and into the civil service status in particular. In the long run, while gradually phasing in, it is presumed that around 130,000 employees (of about 307,000 civil servants in 2004) in the public sector will shift from civil service to private sector contracts. This goes together with the assumption of restrictive public sector recruitment until 2015, including in the postal, telecom and railway services. As a result, the number of civil service pensions will fall markedly in the long run.

3. Demographic and Macroeconomic Scenarios until 2050

3.1 Demographics and labour force developments until 2050 (based on EUROSTAT)²

The Austrian population is expected to remain rather stable at a number of 8.2 mil. persons, with even a slight increase until 2030 before starting to decline. While there is almost no change in the size of population, the effects of the changes in the age profiles will be markedly more dynamic. The old-age dependency ratio (the ratio of persons 65+ years to the age cohort 15-64 years), however, more than doubles from 23% at present to 53% due to the baby-boom generation reaching the retirement age and markedly higher longevity (by approximately 7 years for females and 8 years for males respectively). The male old-age dependency ratio, thus, will accelerate more dynamically than the female one. The economic dependency ratio (i.e. the young and old age cohorts together) will step up from 100% to closely above 120%, as the fall in the young population in consequence of low fertility rates will not compensate for the much stronger rise of older people.

The labour force population 15-64 years will continue to expand modestly from 5.5 to 5.6. mil. people until 2015 before commencing to go down fairly rapidly. The labour force potential is then presumed to amount to 4.8 mil. persons in 2050, which is, despite continuous positive net immigration, projected to be reduced by 15% compared to the present number, also in combination with a, in general, rising average age of the labour force. In total, however, the Austrian trends resemble very closely aggregate EU developments.



Quelle: Eurostat (2004)

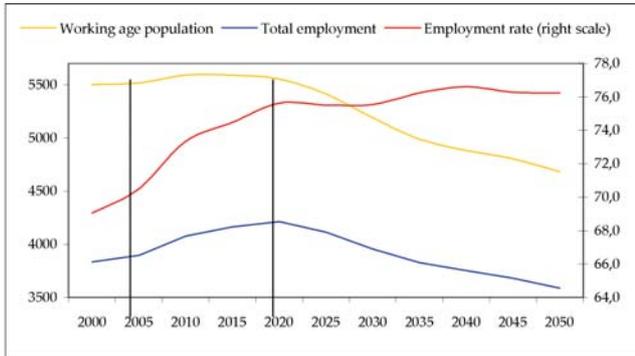
3.2 Labour force and employment developments

Since the common macroeconomic projections of the AWG already account for the pension reforms of the last years, in particular the effects of raising and harmonising legal retirement ages and enhancing financial incentives to remain longer at work, their effects on employment are reflected by the Commission macro assumptions accordingly. In addition, unemployment rates are expected to converge to their structural level of 3.4% (NAIRU) until 2008. For Austria, overall, these assumptions imply a long run increase of the employment rate of approximately 6.5 percentage points until 2035 (from 69.5 in 2004 to just above 76%), staying at this level thereafter. The old-age employment rate is expected to double from the internationally very low level of 30% at present to around 60% in 2050. This relates to the effective increase of the retirement age by about 3 years. Women's employment is expected to increase by nearly 10 percentage points from 62% to approximately 72%, to a large degree coupled with the applied OECD cohort approach, prescribing higher current labour force participation of younger females into the future.

This increase of overall employment rates is assumed to result in a further slight rise of employment in the period from 2012 to 2020 despite the already ongoing reduction of the labour force. Then employment will start to decline rather swiftly by around 0.5% per year on average until 2050, thereby steadily contributing negatively to potential GDP growth. For Austria, therefore, there is only a limited medium-run window of opportunity to counteract sinking employment figures already from about 2012 on. An ensuing increase of the employment rate until 2020 could, at least in part, offset further the effects of the ageing population on overall employment and GDP growth (see graph below).

² The Eurostat demographics deviate to a certain extent from the demographic scenario very recently provided by the Austrian Statistical Office in 2005. Here, the old-age dependency ratio will rise only to 46% in 2050 due to higher net immigration until 2015, slightly higher fertility rates and lower increase in life expectancies.

Graph 2: Labour force and employment developments until 2050



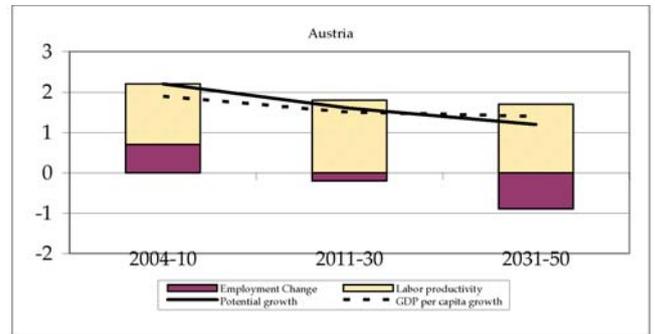
Source: EC, AWG (2005)

3.3 Long run growth in Austria

The economic and employment growth up to 2050 is strongly influenced by shrinking labour supply due to the ageing population. The European Commission projects a reduction in per capita growth for Austria to 1.4% from 1.9% today, while the EU-25 figures are 2.2% and 1.4%, respectively. Potential growth is projected to decline even more from 2.2% to 1.4% (see GDP per capita and potential growth rates in graph below). In the long run the average growth rates in Austria will, thus, cease to relate to nowadays potential growth in the absence of any measures. The developments for Austria in this regard are mostly in accordance with the average EU-15 and EU-25 developments. Particular moderate potential growth rates of around 1% are projected around the year 2030 because of accelerating falling employment. After 2035 a small rebound of potential growth to 1.4% on average is presumed to occur in line with higher female employment. Economic welfare in Austria increases slightly less than for the EU-15. Nevertheless, for the relative position of Austria in a welfare comparison within the EU-15, nothing much is expected to change.

The assumptions of the projections include that productivity rates (GDP per employed) of all Member States are in the long run converging to an average rate of 1.75%. This makes productivity growth from 2020 the sole source of economic growth. Productivity growth in the model depends on constant investment in relationship to GDP and on technological progress, which approximately reflects the development in the US. This precludes that the Austria, together with its EU partners, manages to become a more knowledge based and innovative society in the sense of the Lisbon strategy.

Graph 3: Driving factors of future GDP growth



Source: EC, AWG (2005)

Compared to the EU-25 and EU-15 averages, the most striking features in the Austrian case are the weaker employment growth until 2010 and the stronger decrease of employment from 2011 onwards than in most other EU countries. The same holds for labour productivity growth, even compared to the EU-15, average productivity is assumed to be slightly less dynamic in Austria. Nevertheless, the growth of GDP per capita declines less rapidly in Austria, the downward movement of the Austrian curve exhibits a more pronounced kink in the period 2011 to 2030 and is nearly horizontal in the remainder of the projection period.

4. Public Pensions: Projection Results

4.1 Overall results

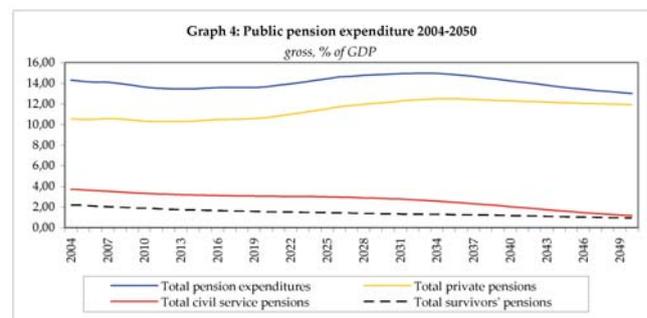
Population ageing represents a major financial challenge for the Austrian public pension systems, which are predominantly PAYG based. The higher old-age dependency ratio will also show up eventually in a marked increase in the number of pensions by one fourth. Overall public pension expenditures in Austria are, thus, projected to rise from 13.4% of GDP in the year 2004 to a high of 14.2% of GDP in 2032, then a decline to 12.0% of GDP in 2050 will follow. Including other pension expenditures (c.f. for rehabilitation, administrative costs) the figures for total pension expenditures will peak in an increase to 15.1% of GDP in 2035, from a starting level of 14.3% in 2004. Expenditure dynamics are presumed to be dampened considerably by recent reforms inaugurating higher legal retirement ages, stricter eligibility conditions, to a much larger extent actuarially fair pension benefits, pension adjustment to consumer price developments and the harmonisation of the various public pension systems. These factors will even reinforce in the long run, as the cap of 10% on pension losses will gradually phase off, in particular after 2033 when the harmonisation of public pension systems will be fully effective. Consequently, the Austrian projections manifest even an apparent drop in public pension expenditures below their initial value from 2035 to 2050 to 12% in terms of GDP (to 13.1% incl. other pension expenditures). Net public pension expenditures, with its initial level of 11.5% of GDP in 2004, follow roughly similar long-term trends as gross public pension expenditures.

This underlying dynamism is driven mainly by spending developments in the social insurance schemes by the private sector (i.e. employees, self-employed, farmers). The pension expenditures of the social insurance system will rise by 20%, from 10.5% of GDP to a peak of 12.5% in the year 2035, then levelling off around 12% of GDP thereafter. The increase is mainly based on the increased number of pensions all together. Pension reforms are noticeably slowing down the expenditure dynamics due to a higher effective retirement age through the rise of legal (female) retirement ages and major disincentives for early retirement as well as the dampening effects on the benefit ratio. This trend exhibits also the assumption that a larger proportion of public sector employees will be transferred from the civil service to the ASVG scheme. The comparison of the different areas of pension spending reveals most clearly the trade off between spending on civil servants and them

being transferred to the ASVG system in the medium and long run. Spending on civil servants goes down, while the social insurance spending compensates this decrease.

For this reason, pension expenditures for the federal and local governments and communities are projected to steadily decline to 1.2% of GDP, starting from a level of 3.8% in 2004. The assumption that a large number of public sector employees will be insured in the ASVG system in future is the reason for this decline as well as the future replacement rates with newly and gradually harmonised civil servants' pensions.

The overall revenues (in particular from social security contributions from the social security and the civil service schemes) will remain constant until 2020 at a level of 9%, as these are intimately linked to the developments of the wage sum, after this they will slowly recede to a level of 8.5% of GDP in 2050. Based on the projections 2005 to 2050 the Austrian pension system appears to be sustainable in the long run, as the total deficit in terms of GDP will not rise over the long run. Nevertheless, possible risks shall not be omitted from expectations, as also the sensitivity analyses demonstrate below.



Source: BMSG, BMF (2005)

4.2 Number of pensions and their future development

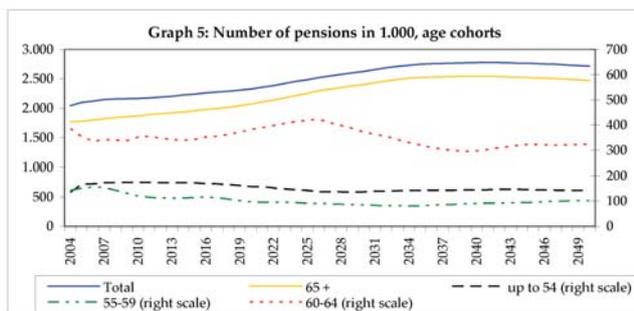
In 2004, a total expenditure of 2.34 mil. public pensions has been accounted for, 2.04 mil. in social pensions and 295,000 pensions for civil servants (a share of 13% of all pensions). Approximately 750,000 pensions were awarded to people aged under 65, this relates to around 970,000 people in that age cohort and makes up for a high percentage of 32% of all pensions. In comparison: the employment rate for people aged 55-65 is only 30%, which is one of the lowest quotes in all EU Member States. The number of survivors' pensions

amounted to around 610,000 in 2004, which is a share of approximately 26%.

Due to the ageing population the number of pensions will significantly rise until 2050. In the Austrian projections, it will increase by about 24% to nearly 2.9 mil. pensions. The peak level of around 3 mil. pensions will be reached in 2035. This is nevertheless a markedly lower increase than the overall increase of the share of the older population (65+ years) of the working population (increase of 92% until 2050). This is due to

- an increase of the employment rate because of the (long rung) amplification of the legal retirement age leads to a noticeable turnaround in the number of pensions in the age cohort 55-64: a reduction of pensions by 24% from around 750,000 to 570,000 in accordance with the increased employment is projected. The share of early pensions of total pensions is, thus, reduced from 32% to 20% until 2050.
- the number of widowers' and widows' pensions remains constant at about 600,000 until 2050, in essence, as a percentage it will be reduced to 22%. This is because of modelling the contemporary change in family structures and also because life expectancies of women and men are expected to converge more and more.
- fewer double pensions are being awarded; for example pensions for WWII victims or veterans are fading out.

The Austrian projections are also based on the assumption that because of an abolishment of tenure in the public sector and consequently pensions for civil servants are being replaced by social security pensions. Linked with a restrictive policy in new public hiring (based on today's reforms until 2015), the number of pension benefits will be reduced by more than 40% from nearly 300,000 to around 175,000. This causes the projections to rise by 147,000 additional social security pensions until 2050.



Source: BMSG, BMF (2005)

The most obvious observation to be made from the analysis of the number of pensions is the marked drop in early pensions as of 2025. This is the time when the female legal retirement age will commence to converge to the male age. All pensions for retirees older than 65 years continually rise, whereas pensions up to 59 years are assumed to remain relatively constant especially after 2020.

4.3 Average pensions and their future developments

Overall, Austrian pension systems are characteristic for fairly high gross and net replacement rates by international comparison in combination with long contribution periods. The average old age pension (gross) in the social security system, however, amounted to 946.5 Euro (males: 1,239.4 Euro; females: 725.7 Euro) per month (14 times a year) in 2004. Moderate pension adjustments in the last few years and the newly introduced deductions have dampened average pensions though already during past years. Also in the medium and long run it is to be expected that average pensions will increase less in comparison to active wage earnings.

This is due to

- the change of indexing pensions from net wages to consumer prices
- considerably higher deductions for earlier retiring of 4.2 percentage points per year, if a retirement occurs before the age of 65
- significantly longer insurance times are preconditions for the maximum replacement ratio of 80 % (45 years)
- steep income curves are no longer advantaged
- the replacement rates are depending on life-long incomes and not on the last incomes of a person insured.

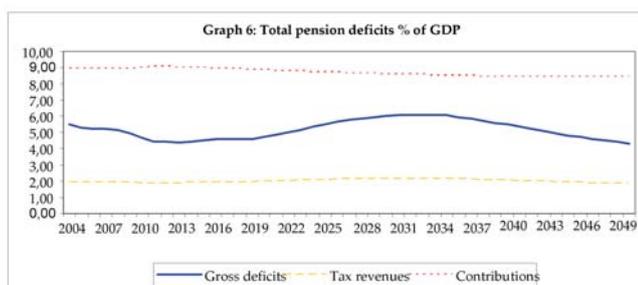
These dampening effects on average benefits will in particular materialise after 2033 when the overall ceiling on pension losses by 10% will fade out ultimately. Moreover, lower benefit ratios are especially concerning the benefits for civil servants. This will result in a significant overall drop in the benefit ratio by close to 5 percentage points of GDP in relation to wage developments (as highlighted in the EPC Ageing Report).

4.4 (Social security) contributions and the overall pension deficit

Pension contributions in Austria are closely linked to the development of contribution bases, mostly gross earnings. It can, therefore, be assumed that also in the future their level will move in accordance with gross wage earnings. In this way, contributions are projected relatively constant in the social security system with a little over 7% of GDP. The structural shift from public servants into the social security system will cause a noticeable decrease in contribution payments of those former employed in the civil servants' scheme by approximately 0.6 percentage points of GDP. In total, a marginal decrease of contributions (and other revenues) from 8.8% of GDP to 8.5% of GDP until 2050 is projected.

Approximations for tax revenues of pension incomes for 2004 result in a total value of 1.9% of GDP. The projections assume that until 2050 tax revenues will only decrease marginally (to 1.8% of GDP). As a result, the increase in the number of pensions would generate higher tax revenues in future, but this will be offset by comparably lower average pensions combined with reduced tax progressivism, above all in the sector of civil servants.

The latest reforms will reduce the deficit in the pension system by approximately 1 percentage point of GDP until 2015. According to projections the deficit in the pension area increases rapidly from 2015 onwards due to the enlargement of public pension expenditures, by 1.5 percentage points a peak level of about 6% of GDP will be reached in 2035. After that mark the deficit will constantly fall, but at a slower pace than expenditures, since revenues are also declining. According to medium and long run projections and accounting for tax revenues to remain relatively constant and for contributions slowly to decline, overall government debt does not pose severe financial sustainability problems. The development of total pension deficits exhibits the through-peak development of the s-shaped expenditure curve which is caused by the pension reform being gradually implemented.

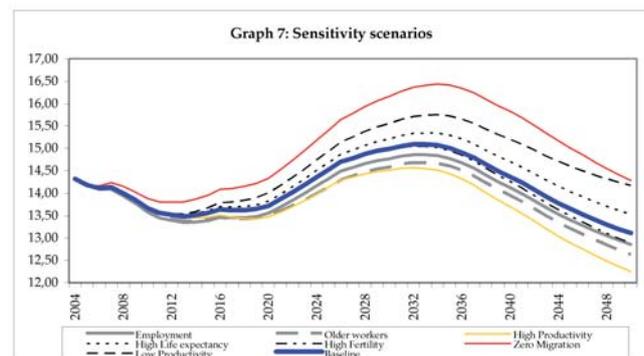


Source: BMSG, BMF (2005)

4.5 Sensitivity analysis

The sensitivity analyses explain the risks of projected developments of public pension spending:

- The expenditure projections react strongly to changes in demographic parameters, old age dependency ratios are immediately reflected, a higher birth rate only functions as an inbuilt time lag.
- An increase/decrease of the employment rate by 1 percentage points in relation to the baseline scenario results in changed pension expenditures of +/- ¼ percentage points of GDP until the end of the projection period. This implies labour market reforms, especially concerning a reduction of unemployment and increased women's participation.
- An increase/decrease of the old age employment ratios (between 55 and 64 years) by 5 percentage points as compared to the baseline scenario results in changes of pension expenditures of +/- ½ percentage points of GDP at the end of the projection period. The baseline projections assume that the employment rate of older workers will increase from 30% to nearly 60% due to the pension reforms and the harmonisation of gender specific retirement ages.
- If the average productivity growth will change by +/- ¼ percentage points, public pension expenditures will change by +/- 1 percentage point of GDP. Since employment also goes down due to the reduction in labour supply, future growth will be dependent of productivity increases. Structural reforms aiming for a knowledge based society and increased competition are a necessary anticipation for that matter.



Source: BMSG, BMF (2005)

The sensitivity analysis shows for the Austrian case, that the highest risks for public pension expenditures are in the case of the zero migration scenario, the lowest risk is related to the scenario with higher productivity. The low productivity scenario is the second highest risk scenario for the pension projection exercise in the Austrian case. All other scenarios do not diverge much from the base line results.

The Editor

Peter Part (ed.), Deputy Director in the Federal Ministry of Finance, Economic Policy Division, Member of the EU Economic Policy Committee and Ageing Working Group, Member of the Austrian Pension Committee.

In der Reihe Working Papers erschienen:

Harald Stieber, (2006). Exogenous determinants of Austrian economic growth. Working Paper 4/2006.

Kurt Bayer, (2006). Europa and Asia in the Macroeconomics of Globalisation. Working Paper 3/2006.

Arnd Einhaus, Edith Kitzmantel, Anton Rainer, (2006). Ist die Einkommensbesteuerung geschlechtsneutral? Working Paper 2/2006.

Kurt Bayer, (2006). Growth and Employment through Innovation. Working Paper 1/2006.

Ulrike Mandl, (2005). Stand und Entwicklung ausgewählter Bereiche der wissensbasierten Wirtschaft in Österreich. Working Paper 5/2005.

Nikolaus Fink, Alfred Katterl, Manuel Schuster (2005). Wirtschaftspolitik und Dynamik der Wirtschaftssektoren in Österreich 1995 – 2003. Working Paper 4/2005.

Ulrike Mandl, Karin Schönplflug (2005). Steigerung es Wirtschaftswachstums durch F&E und Humankapital. Working Paper 3/2005.

Peter Part, Karin Schönplflug (2005). Wirtschaftswachstum und Arbeitsmarktreformen. Working Paper 2/2005.

Brandner Peter, Frisch Helmut, Grossmann Bernhard, Hauth Eva (2005). Eine Schuldenbremse für Österreich. Working Paper 1/2005.

Ertl Birgit (2004). Der Kampf gegen Geldwäscherei und Terrorismusfinanzierung. Working Paper 4/2004.

Vitzthum Elisabeth (2004). Reformvorschläge für eine verstärkte Zusammenarbeit zwischen Welthandelsorganisation und Internationalen Finanzinstitutionen. Working Paper 3/2004.

Burgstaller Markus, Stieber Harald (2004). Ausgabenquoten im internationalen Vergleich: Behindern hohe Quoten die Wettbewerbsfähigkeit eines Staates? Working Paper 2/2004.

Vondra Klaus, Weiser Harald (2004). Basel II: Was wirklich hinter der Asset Return Correlation und

ihren Auswirkungen auf die Prozyklizität steckt. Working Paper 1/2004.

Katterl Alfred, Part Peter, Stieber Harald (2003). Die neuen Haushaltsregeln der EU für die Überprüfung der Stabilitätsziele. Working Paper 5/2003.

Mandl Ulrike (2003). European policy making. Die offene Methode der Koordinierung als Alternative zur Gemeinschaftsmethode? Working Paper 4/2003.

Corrales-Díez Natalia (2003). Die EU Außenvertretung im Internationalen Währungsfonds (Deutsch/Englisch). Working Paper 3/2003.

Bayer Kurt (2003). Entwicklungspolitik im 21. Jahrhundert – Die Rolle der Weltbank. Working Paper 2/2003.

Part Peter (2003). Real exchange rate developments in the accession countries. Working Paper 1/2003.

Part Peter (2002). Finanzielle Auswirkungen der Bevölkerungsalterung. Working Paper 8/2002.

Bauer Bernhard (2002). Kleine und mittlere Unternehmen: Übersicht über Bedeutung, bereits getroffene und mögliche weitere Maßnahmen auf EU-Ebene und in Österreich (Materialiensammlung). Working Paper 7/2002.

Tzanoukakis Kira (2002). Die Verfahren zur Sicherung der Konvergenz in der Europäischen Union. Working Paper 6/2002.

Rabitsch Franz (2002). Die österreichischen Wachstumsprognosen 1978 bis 1999. Working Paper 5/2002.

Karlinger Liliane (2002). An Equilibrium Analysis of International Fiscal Transfers as Insurance against Asymmetric Shocks. Working Paper 4/2002.

Morawek Roman (2002). Reale Konvergenz im Euroraum mit besonderer Berücksichtigung der EU-Osterweiterung. Working Paper 3/2002.

Hauner David (2002). The Euro, the Dollar, and the International Monetary System. Working Paper 2/2002.

Traxler Christian (2002). Verteilungspolitische Aspekte von Kapitalsteuerwettbewerb. Working Paper 1/2002.

- Kutos Paul** (2001). Euro exchange rate policy: Institutions and procedures. Working Paper 8/2001.
- Part Peter, Stefanits Hans** (2001). Austria: Public Pension Projections 2000 - 2050. Working Paper 7/2001.
- Katterl Alfred** (2001). Renditen der Universitätsausbildung. Working Paper 6/2001.
- Burger Christina** (2001). Strukturindikatoren. Working Paper 5/2001.
- Moser Erhard** (2001). Das Europäische Wirtschafts- und Sozialmodell. Stand der Umsetzung ein Jahr nach Lissabon. Working Paper 4/2001.
- Nitsche Wolfgang** (2001). EU-Erweiterung: Budgetäre Auswirkungen wirtschaftlicher Anpassungsszenarien. Working Paper 3/2001.
- Nitsche Wolfgang (2001). Österreich im neuen Europa. Überblick über die Argumente zur EU-Erweiterung. Working Paper 2/2001.
- Part Sigrid** (2001). Der Vertrag von Nizza: Ein Wegweiser für die Europäische Integration. Working Paper 1/2001.
- Part Peter** (2000). Entwicklung der Definition für das mittelfristige Budgetziel in den Stabilitäts- und Konvergenzprogrammen. Working Paper 8/2000.
- Pregebauer Andreas** (2000). Österreichischer Finanz- und Kapitalmarkt in der WWU. Working Paper 7/2000.
- Wieser Robert** (2000). Österreichische Strukturpolitik in der WWU. Working Paper 6/2000.
- Part Peter** (2000). Österreichische Budgetpolitik in der WWU. Working Paper 5/2000.
- Bayer Kurt, Katterl Alfred, Kutos Paul, Part Peter, Pregebauer Andreas, Wieser Robert** (2000). Aktuelle Herausforderungen für die österreichische Wirtschaftspolitik in der WWU. Working Paper 4/2000.
- Rainer Anton** (2000). Indexprobleme der realen Volkswirtschaftlichen Gesamtrechnung und Verzerrungen bei Prognosen und Analysen. Working Paper 3/2000. vergriffen
- Wieser Robert** (2000). Regulatoren in Netzwerkindustrien. Eine polit-ökonomische Synthese. Working Paper 2/2000. vergriffen
- Katterl Alfred, Part Peter** (2000). Koordination der Wirtschaftspolitik in der EU. Working Paper 1/2000. vergriffen
- Felbermayr Gabriel J.** (1999). The Political Economy of Financial Crises. Working Paper 6/1999.
- Saghy Hannes M., Fürstaller Katharina, Fuchs Franz** (1999). Die neue Bedeutung der Einkommenspolitik als nationales Politikfeld im Rahmen der Europäischen Wirtschafts- und Währungsunion. Working Paper 5/1999.
- Pregebauer Andreas** (1999). Transmissionsmechanismen der Geldpolitik. Working Paper 4/1999.
- Nitsche Wolfgang** (1999). Kosovo-Krise und Wiederaufbau. Working Paper 3/1999.
- Herbeck Gabriele** (1999). Kostennutzenanalyse in der EU. Working Paper 2/1999. vergriffen
- Bayer Kurt** (1999). Der OECD-Wirtschaftsbericht über Österreich 1999. Working Paper 1/1999.
- Part Peter** (1998). Öffentliche Finanzen in der Europäischen Union. Working Paper 3/1998.
- Schuh Andreas-Ulrich** (1998). Beschäftigung und Arbeitslosigkeit aus österreichischer und europäischer Sicht. Working Paper 2/1998.
- Bayer Kurt, Katterl Alfred, Wieser Thomas** (1998). Economic policy in EMU. National Necessities and Coordination Requirements. Working Paper 1/1998. vergriffen

Imprint:

Published, owned and edited by Federal Ministry of Finance

HR Development and Internal Communications

Himmelfortgasse 8, A-1015 Vienna

Designed and printed by "Printing Office of the Federal Ministry of Finance"

Vienna, February 2006

www.bmf.gv.at