AEB Event: Actuarial Profession in Russia – A new approach

# The Russian pension system
# Opportunities and challenges

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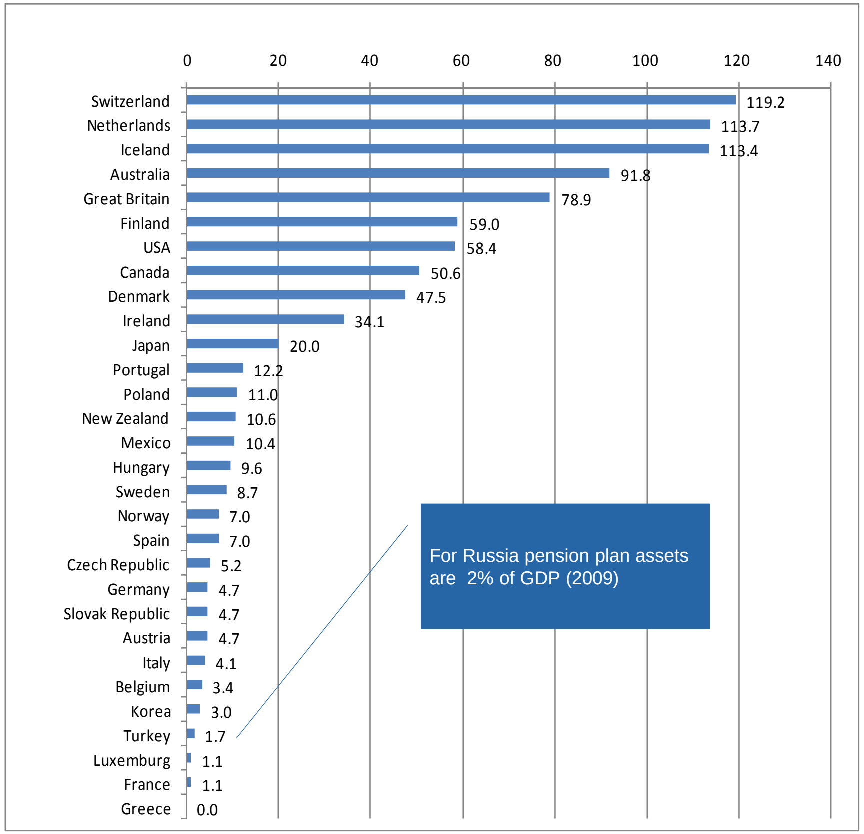
# Content

- Overview of development of the Non State Pension Fund system
- Overview of development of the Obligatory Pension Insurance (OPS)
- Risks associated with NSPFs, OPSs and employers
- The changing role of actuaries in assessing risk and value

# Non-State Pension Funds

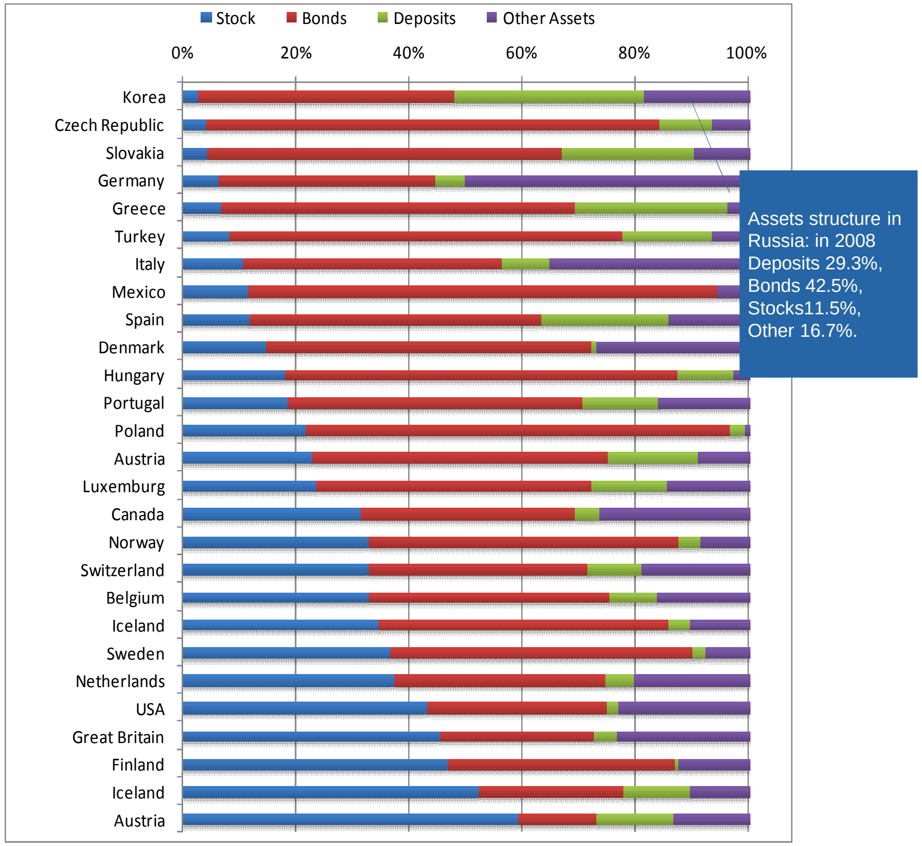
Russian market is comparable with market in Eastern Europe whose age is not more than 5-10 years. It differs from more developed Western markets where non-state pension funds operate for more than 20 years. Pension assets in NSPFs are still a negligible percentage of Russian GDP.

**Pension assets in NSPFs as % of GDP, 2008**




*Source: pension statistics for OECD, PwC analysis*

**Distribution of pension assets between different investment categories**




*Source: pension statistics for OECD, PwC analysis*
*No 2009 information available at aggregate level for Russia*

# Non State Pension Funds - Market Snapshot
## 30 June 2010

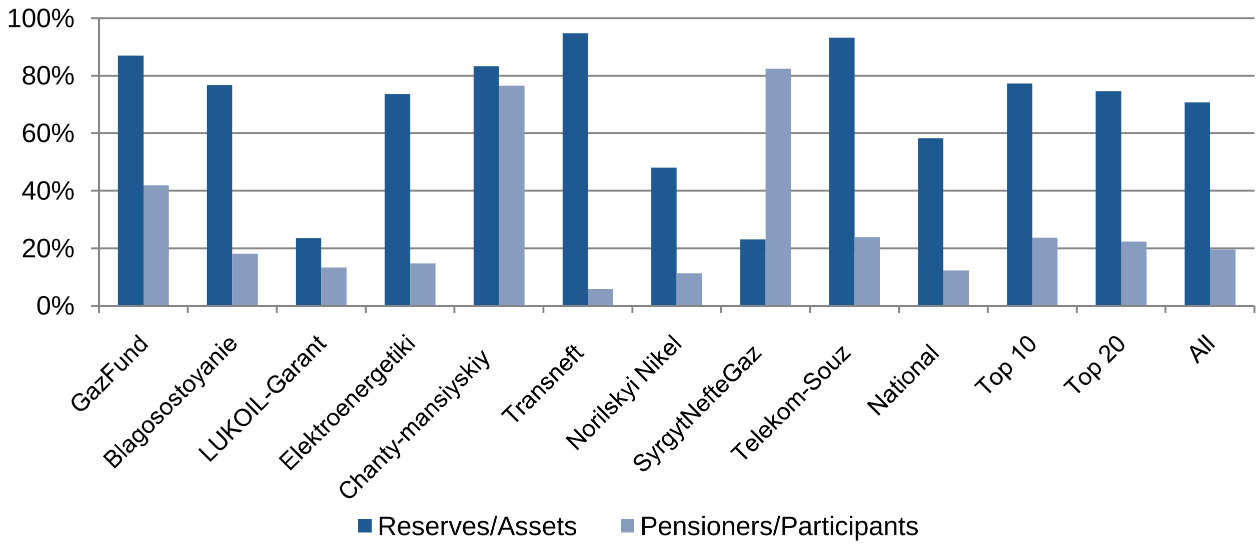
| bln RR | Total assets value of the fund | | Pension reserves | |
|---|---|---|---|---|
| GazFund NSPF | 318 | 38% | 277 | 47% |
| Blagosostoyanie NCNSPF | 148 | 18% | 114 | 19% |
| LUKOIL-Garant NCNSPF | 56 | 7% | 13 | 2% |
| Elektroenergetiki NSPF | 30 | 4% | 22 | 4% |
| Chanty-mansiyskiy NSPF | 27 | 3% | 23 | 4% |
| Transneft NSPF | 25 | 3% | 24 | 4% |
| Norilskyi Nikel NCNSPF | 18 | 2% | 9 | 1% |
| SyrgytNefteGaz NSPF | 14 | 2% | 3 | 1% |
| Telekom-Souz NSPF | 14 | 2% | 13 | 2% |
| National NSPF | 13 | 2% | 7 | 1% |
| Top 10 | 663 | 79% | 512 | 87% |
| Top 20 | 736 | 88% | 549 | 93% |
| All | 836 | 100% | 591 | 100% |

*Source: npf.investfunds.ru*

- Assets and liabilities are very concentrated – the two largest funds represent more than half
- All major funds are captive funds created by the biggest employers in Russia
- The level of payout varies significantly from one fund to another

# Non State Pension Funds - Ratio Analysis

30 June 2010

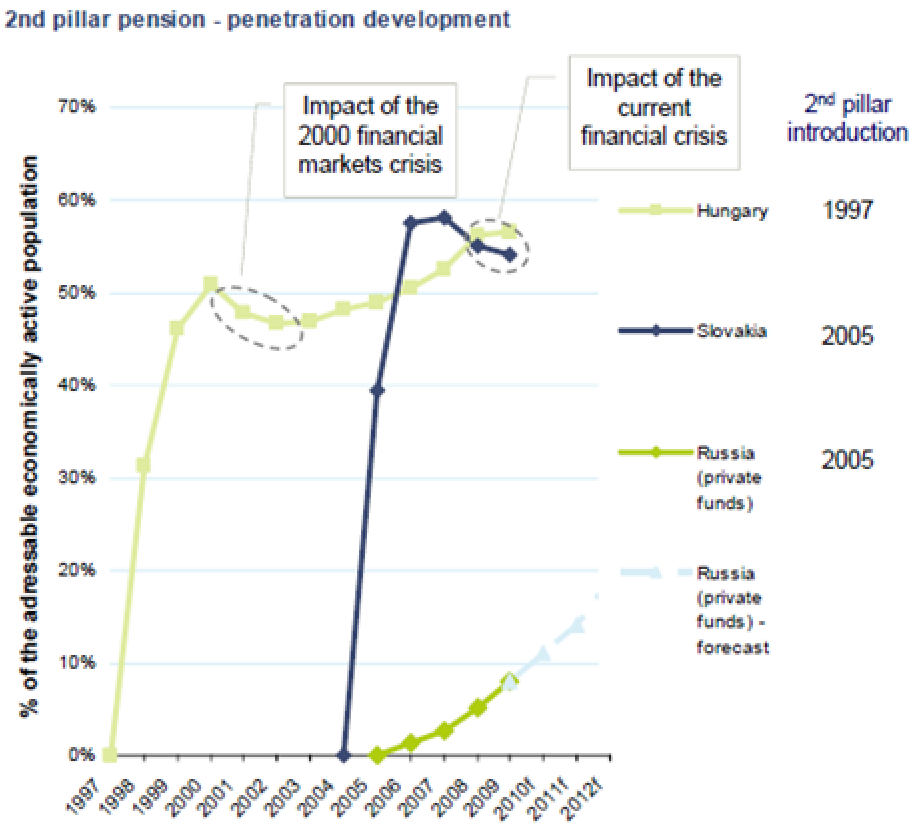



*Source: npf.investfunds.ru*

- Share of pensioners as a total number of participants is currently low.
- However, it is expected to grow as more participants approach pension age and life expectancy improves.

# Obligatory Pension Insurance

In relatively comparable countries like Slovakia and Hungary, the penetration increase was much faster than in Russia – strong political support being the major reason. Only 10% of the admissable population in working age is participating in the OPS.




*Source: National Insurance Regulators*

Hungary

- Obligatory scheme for people who became economically active after 1998 (career starters)
- Voluntary for all other - may opt-out from the 1st pillar and invest a part of their pension contribution to 2nd pillar funds
- Decrease in 4th and 5th years due to higher number of contributors switching back to 1st pillar as a result of the lack of the left-wing government support and decline in financial markets in 2000-2002

Slovakia

- Voluntary scheme** – contributors may opt-out from the 1st pillar and invest a part of their pension into 2nd pillar funds
- Penetration increase in initial years driven by significant government and public support
- Decrease in 4th and 5th year driven by people opting out back to the 1st pillar – due to negative results of 2nd pillar funds

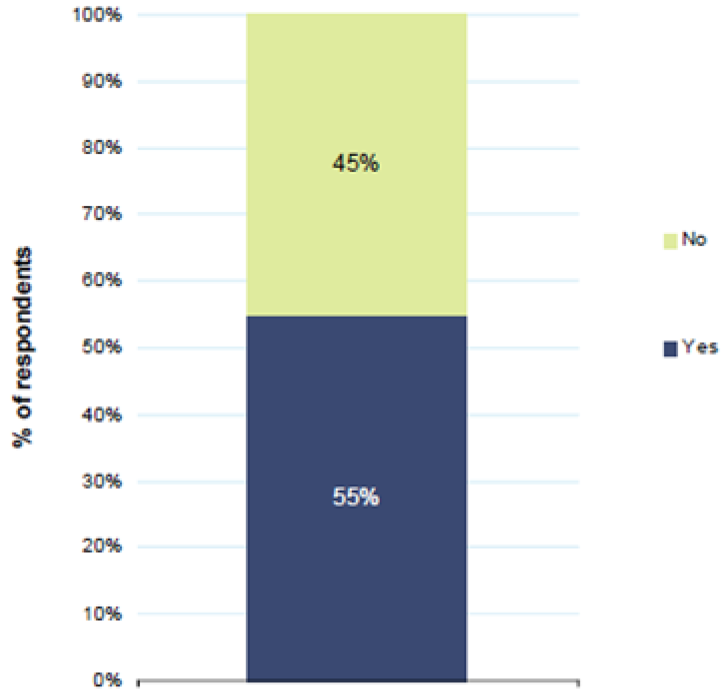
Russia

- Participation in the 2nd system is mandatory for people beyond certain age
- Opting-out to non-state funds is voluntary

# Obligatory Pension Insurance

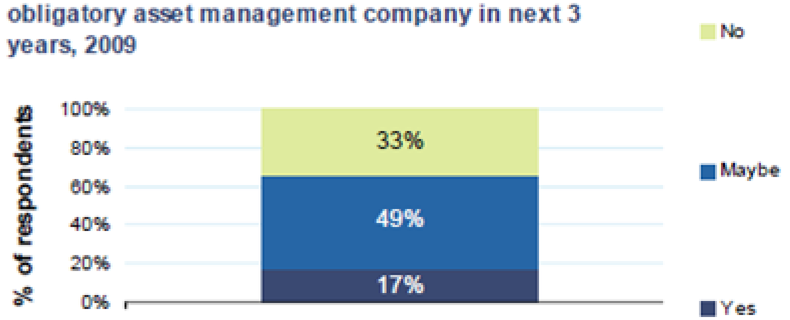
Key hurdle is lack of awareness. For example, even within PwC employees awareness of second pillar pension is relatively low (55% of employees)

**PwC survey - Awareness of the possibility to opt-out from the government pension fund, 2009**

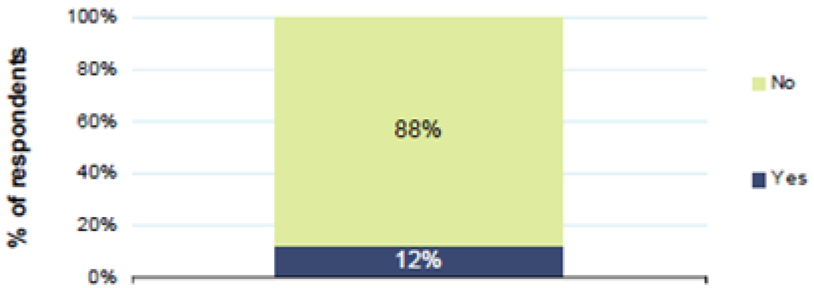



*Source: National Insurance Regulators*

**PwC survey - Are you planning to select your obligatory asset management company in next 3 years, 2009**

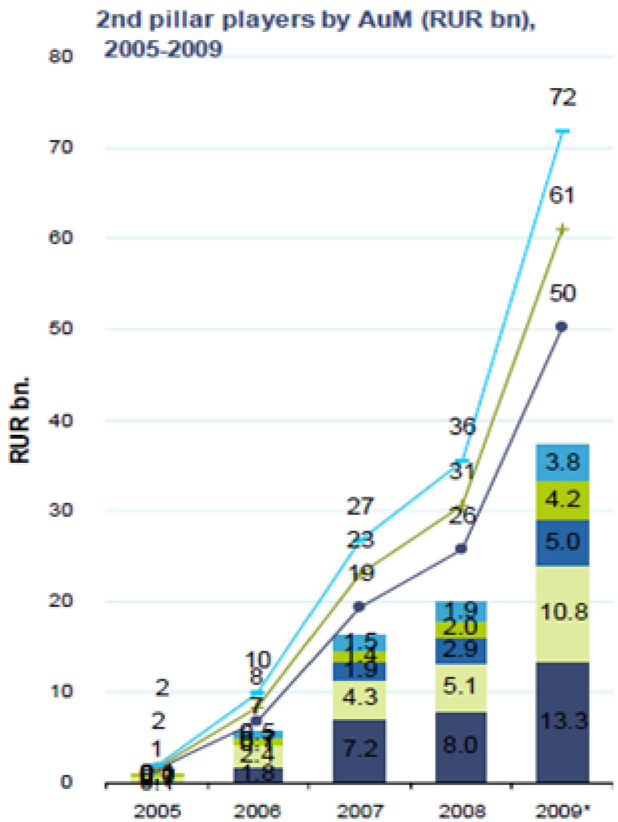



**PwC survey - Did you select your obligatory asset management company?**



# Obligatory Pension Insurance

Non state 2nd pillar market is currently controlled by captive companies, some of which are already targeting free market as well due to its potential.




| | 2005 | 2006 | 2007 | 2008 | 2009* |
|---|---|---|---|---|---|
| Top 10 market share | 74% | 68% | 73% | 73% | 70% |
| Top 20 market share | 83% | 83% | 86% | 86% | 85% |

| 2009 AuM Market leaders | CAGR (06-08) | Change 9m 08 - 9m 09 | Change 08-9m 09 |
|---|---|---|---|
| Elektroenergetiki | 84% | 95% | 107% |
| Gazfond | 67% | 95% | 116% |
| Norilsky Nikel | 480% | 61% | 72% |
| Lukoil-Garant | 45% | 99% | 112% |
| Blagosostojanie NPF | 113% | 36% | 65% |
| Total | 89% | 80% | 102% |
| Top 20 | 93% | 76% | 99% |
| Top 10 | 95% | 71% | 94% |

*Source: National Insurance Regulators*

# Obligatory Pension Insurance

## New players associated with banks and insurance companies which entered in the past 2-3 years are leveraging their existing networks (branches and agents) to gain share

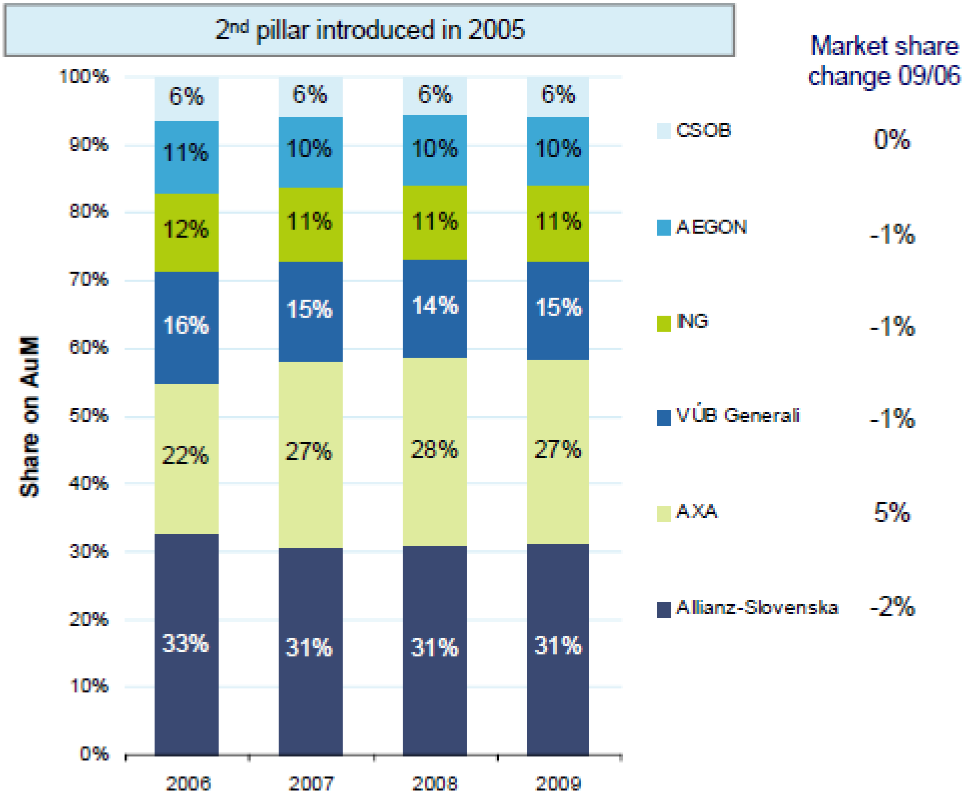
| Player | Description | Rank by AuM 2009* | Rank by no. of contracts sold before year 2009 | AuM CAGR 2005-2008 | AuM Change 3q2008-3q2009 | 2009* AuM market share |
|---|---|---|---|---|---|---|
| Generalli NPF | Insurance associated | 51 | 40 | - | 6036% | 0.2% |
| Sberfond Reso | Insurance associated | 42 | 30 | - | 1012% | 0.3% |
| Raiffeisen NPF | Bank associated | 15 | 35 | 125% | 77% | 2% |
| Sberbank | Bank associated | 10 | 18 | 157% | 49% | 3% |
| Bolshoi | Affiliated with Renova and SUAL, | 6 | 5 | 29% | 95% | 5% |
| Rus' | Retail-focused | 9 | 4 | 255% | 95% | 3% |
| Socium | Former Captive fund of GAZ auto manufacturer | 7 | 3 | 435% | 61% | 5% |
| Lukoil-Garant | Captive, oil, finance | 2 | 2 | 45% | 99% | 15% |
| Blagosostojanie NPF | Captive, rail monopoly | 1 | 1 | 113% | 36% | 19% |

*Source: National Insurance Regulators*

# Obligatory Pension Insurance

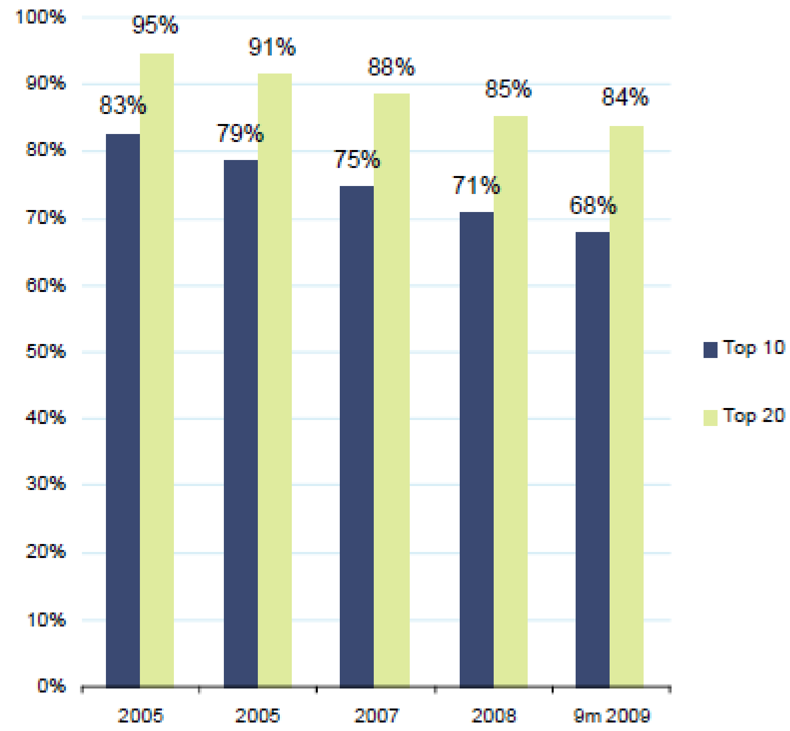
The Slovak example shows that leading players were able to defend their share. However, this was after penetration saturation. Therefore, there are opportunities in Russia to significantly grow market share for OPS.

**Slovakia - 2nd pillar market, 2006-2009**




| | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|
| Addressable market penetration* | 58% | 58% | 55% | 54% |

**Russia - Market share of leading companies, in number of policies 2005-2009**




| | 2005 | 2005 | 2007 | 2008 | 9m 2009 |
|---|---|---|---|---|---|
| Addressable market penetration* | 2% | 2% | 5% | 9% | 13%** |

*Source: National Insurance Regulators*

# Obligatory Pension Insurance – Ratio Analysis
## 30 June 2010

| | Assets under OPS (bln RR) | | # of people insured under OPS (000) | |
|---|---|---|---|---|
| Blagosostoyanie NCNSPF | 25 | 17% | 1,041 | 14% |
| LUKOIL-Garant NCNSPF | 21 | 15% | 1,114 | 15% |
| Norilskyi Nikel NCNSPF | 9 | 6% | 441 | 6% |
| GazFund NSPF | 8 | 5% | 230 | 3% |
| Bolshoi Pension Fund NSPF | 7 | 5% | 397 | 5% |
| Elektroenergetiki NSPF | 7 | 5% | 290 | 4% |
| Sberbank NSPF | 6 | 4% | 164 | 2% |
| Socium NSPF | 5 | 3% | 342 | 5% |
| Chanty-mansiyskiy NSPF | 4 | 3% | 110 | 2% |
| StalFund NSPF | 4 | 3% | 221 | 3% |
| Top 10 | 94 | 66% | 4,722 | 65% |
| Top 20 | 118 | 83% | 6,032 | 83% |
| All | 142 | 100% | 7,308 | 100% |

*Source: npf.investfunds.ru*

- Much lower concentration of assets compared to non-state pension provision
- Exponential growth of assets over the past several years
- In the long-run assets under OPS are expected to exceed those of non-state pension funds (assuming hires opt out from the state pension fund)

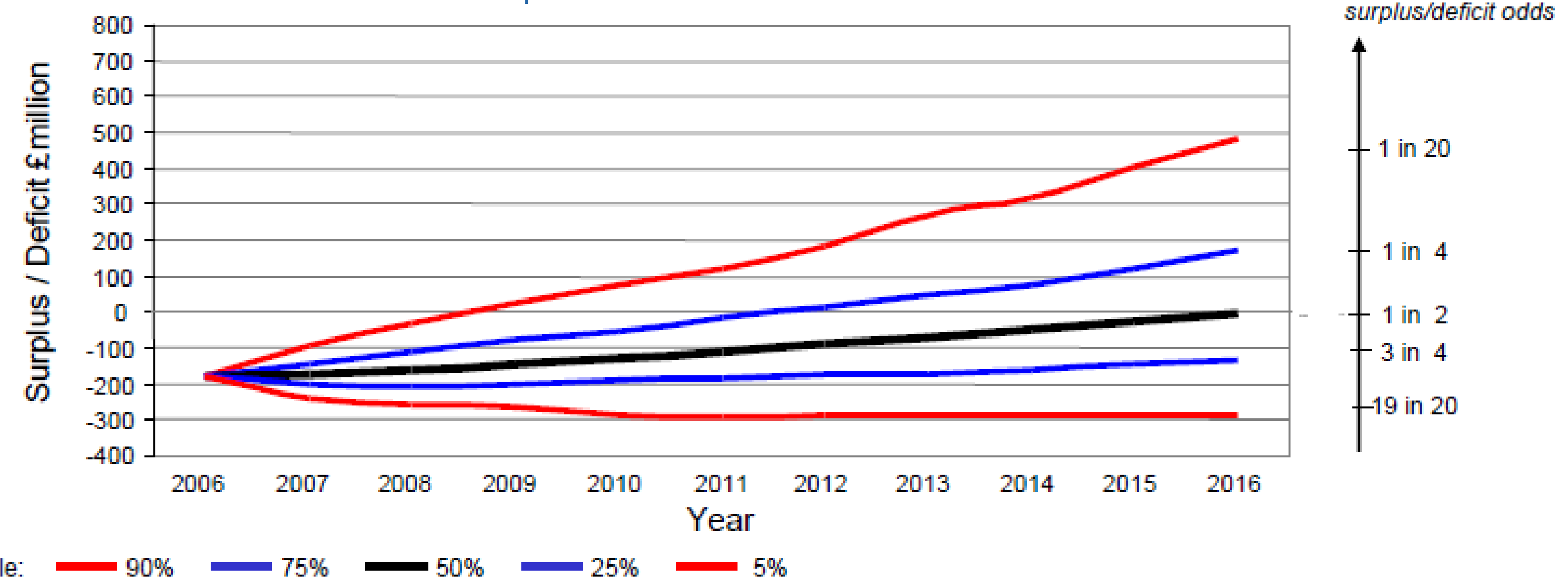
# Potential Risks associated with NSPFs and OPSs

| | Non-State Pension Provision | OPS |
|---|---|---|
| Risks for the Fund | DC schemes:<br>• built-in investment return guarantees<br>DB schemes:<br>• wrong pricing<br>• interest rate risk<br>• asset value volatility<br>• longevity risk<br>• regulatory risk<br>Overall solvency and potential liquidity risk in future: when share of pensioners becomes much higher, amount of current contributions will be insufficient (necessity of ALM). | • No current pensioners<br>• Legislation on payouts is unclear.<br>• Significant changes are possible<br>• 0% investment return guarantee<br>• Potential longevity risk |
| Risks for the Employer | • Investment return could be insufficient to provide pension promise and additional funding may be required to meet employer's obligations.<br>• Risk of the fund going bankrupt if pricing for DB schemes is wrong. | Currently no risks for employers but legislation may change significantly in future. |

# NSPF – Actuaries can carry out complex ALMs

Actuaries have the technical skills to develop the most appropriate asset strategy to meet the objectives of the Fund. ALM will be required as funds become more mature and no reliance can be placed only on the investment return to fund future obligation.

IAS 19 Surplus/Deficit with current conditions



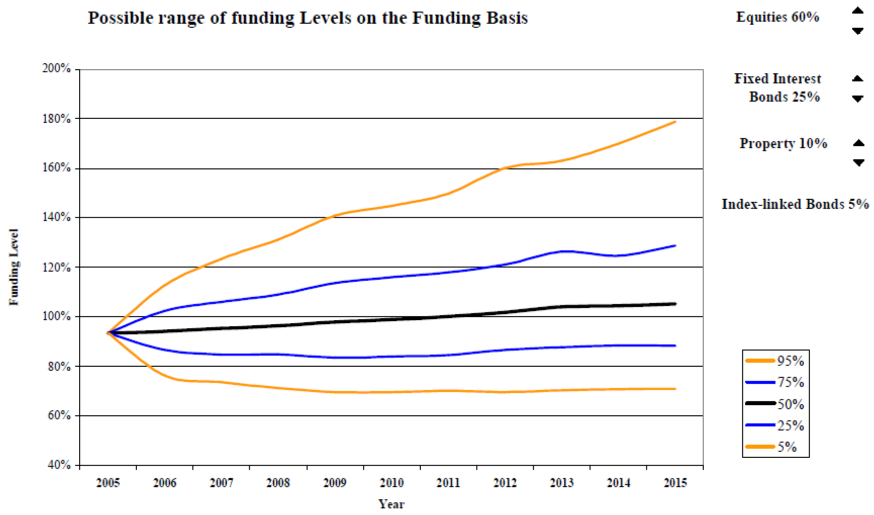

**60% equities and 40% bonds (new monies invested in same proportion)**

Assuming contributions are maintained for 10 years, the following likelihoods of the funding position in 10 years' time are implied by the current funding strategy:

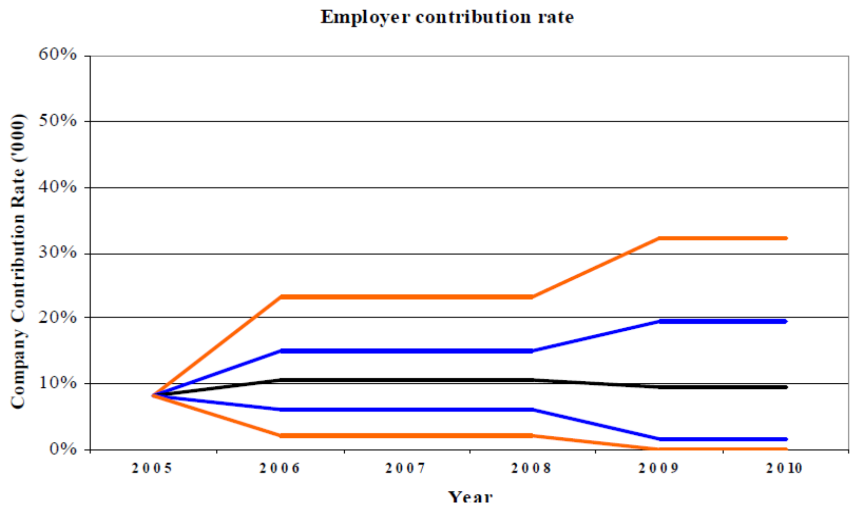
- 5% probability that there will be a surplus greater than £450m (ie 1 in 20)
- 50% probability that there will be a deficit (ie 1 in 2)
- 5% probability that there will be a deficit greater than £300m (ie 1 in 20)

# Modeling Approach – ALM Outputs

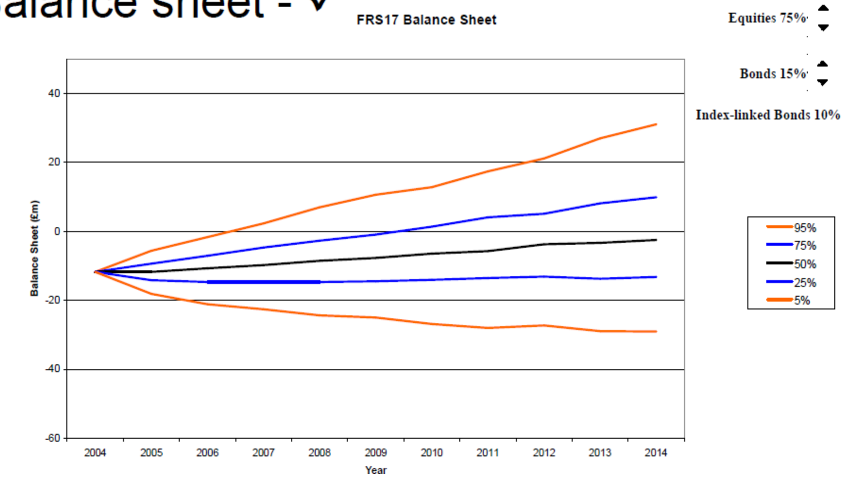
## Funding level objective - ✓



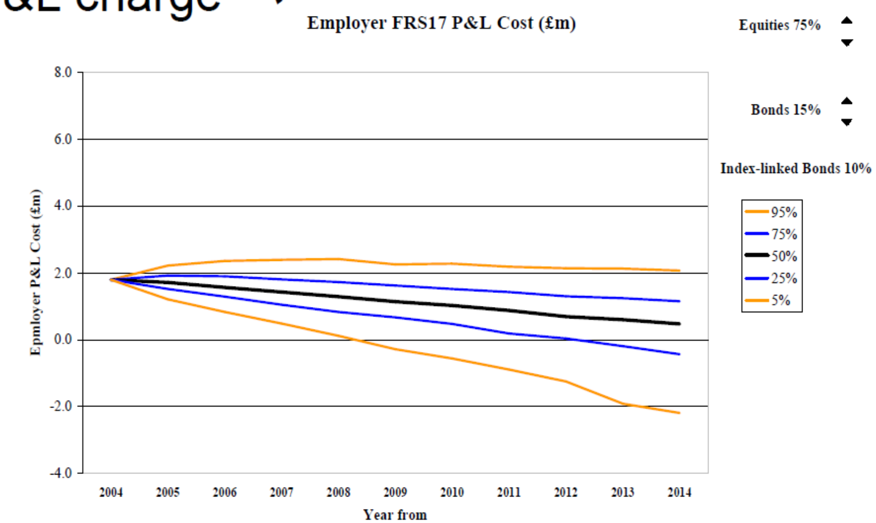

## Contribution rate - ✓




## Balance sheet - ✓

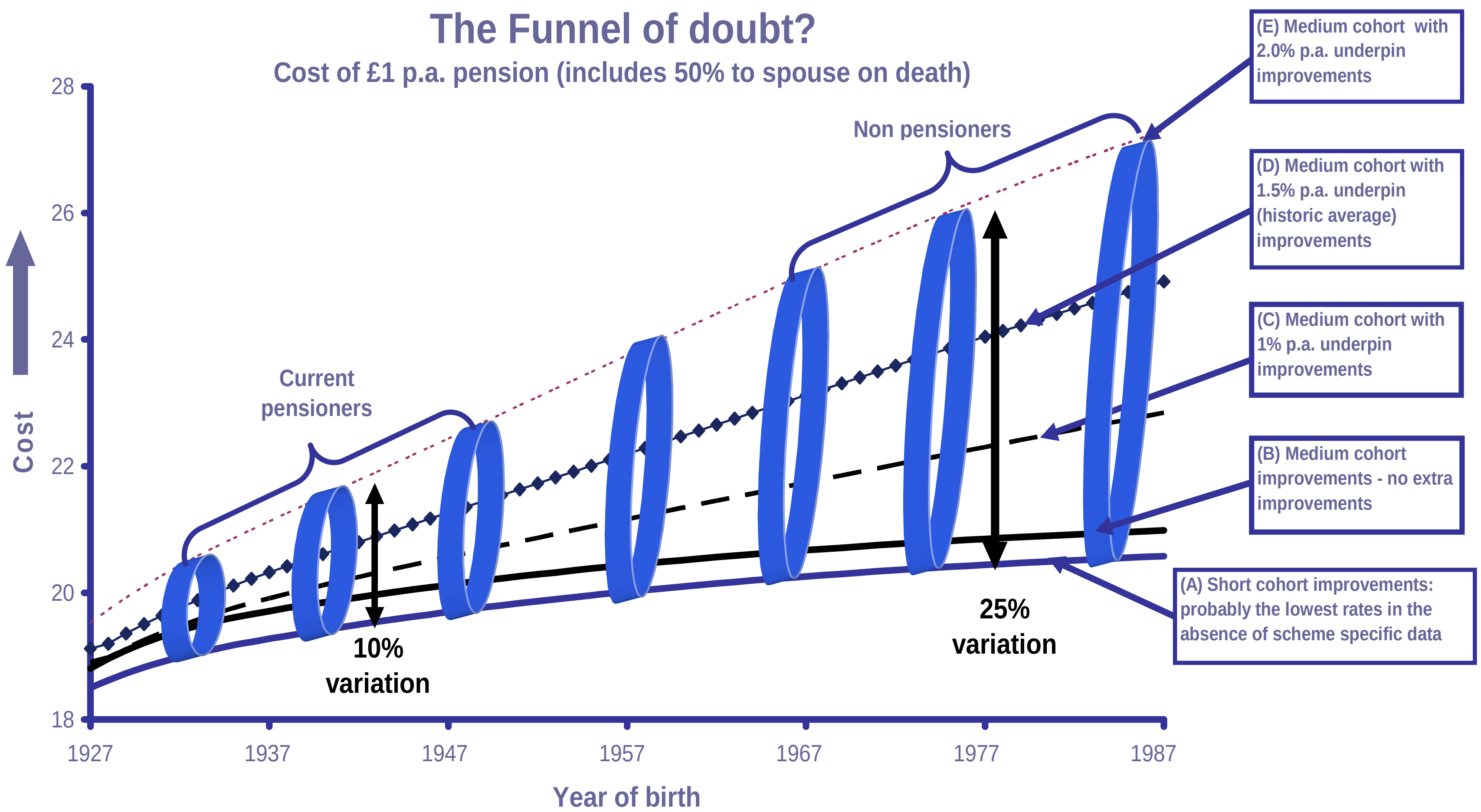



## P&L charge - ✓



# Modelling future longevity costs

Actuaries understand mortality and are best placed to assess the costs of future mortality improvements which can be substantial and pose a threat to future solvency.



# OPS – Actuaries can determine its appraisal value

DCF model to project each element of income and outgo of the fund including: investment income, commissions paid and received, contributions made by contributors, pension payments, operating expenses and other relevant elements. Plus stochastic modeling of any cost of investment guarantee.

Key components of the appraisal value:

| | |
|---|---|
| Adjusted net asset value | Assessment of net balance sheet position of the fund at the valuation date on fair value basis.<br>On the liabilities side, need to assess the pension liabilities of the fund including defined benefit pension schemes, any cost of investment guarantees and options and constructive obligations.<br>On the asset side, need to assess any adjustments required to fair value.<br>The amount of any surplus that we could attach a value to depends on the structure of the transaction. |
| DCF value based on in force cash flows ("VIF") | Value of business in force corresponds to all of the pension agreements in place at the date of valuation for which pension contributions are being paid or have been paid.<br>Two income streams: commissions to asset management company and fees payable to management company for administering the fund. The value to the acquirer depends on its control over the fund and the asset management company (and share of total assets under management by the relevant company).<br>Factors to take into account: demographic profile, future movements, mortality improvements and impact of volatility of market. |
| DCF value of new business ("VNB") | Separate consideration is given to new pension business or contracts underwritten post valuation under value of new business. The cashflows attached to the new business have greater uncertainty attached to them.<br>Factors to be taken into account: workforce profile of potential new participants, market growth and also impact of transaction on future sales volume. |
| Others | Consideration of other elements which create value to the acquirer. |

**Factors affecting the valuation**

- Assets
- Nature of liabilities
- Market risk
- Availability and quality of data
- Demographic
- Constructive obligations
- Value extraction
- Expenses

# Contacts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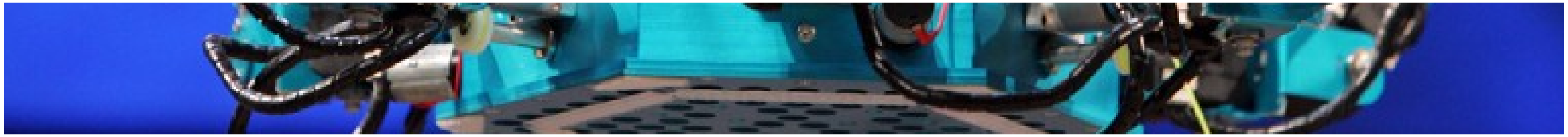

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