Risk-based supervision of Risk-Sharing Pension Schemes

Peter Skjødt

Executive Director, Msc Econ.

Danish Insurance Association

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Why risk based supervision?

"Reported earnings follow the rules and principles of accounting. The results do not always create measures consistent with underlying economics. However, corporate management's performance is generally measured by accounting income, not underlying economics. Risk management strategies are therefore directed at accounting rather than economic performance"

Enron in-house risk-management handbook

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Agenda

- The Danish story on risk-based supervision
- Drivers for change
- Lessons to be learned
- Moving towards Solvency II – just a few words

Ingredients in the Danish risk-based approach to supervision

- Market Values
  - assets and liabilities at market-consistent values since 2002
- Stress testing - the Traffic Lights (scenario testing since 2001)
- IFRS consistent accounting rules (since 2005)
- Yield curve (zero-coupon bond structure) 2005
- Guidance on Market Discipline (introduced 2004)
- Risk-based supervision introduced as a legal requirement early in 2007
- Own Risk Capital Assessment (2008)

But what really triggered the adoption and acceptance of risk based insurance supervision?

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Traditional Danish Life Insurance

- With-profits – risk sharing
- Guaranteed benefits
- 4,5 percent after tax!!
- Issued when interest rates were high (15-20 per cent)
- No difference between life insurance and pension
- Principle of contribution
  - Calculation
  - Distribution

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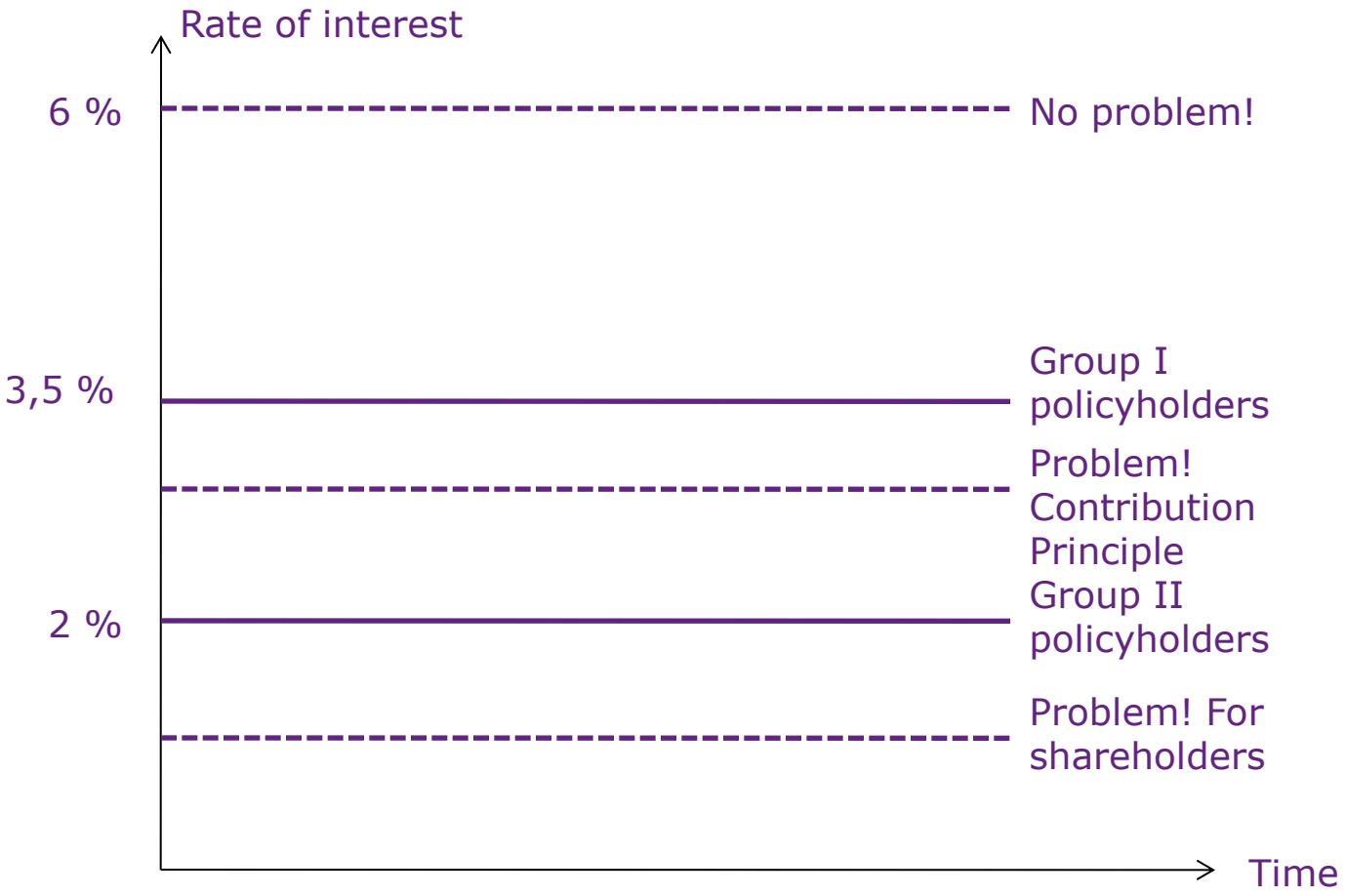
With Profits: Risk sharing – who bears the risk?

- Asymmetric risk and reward



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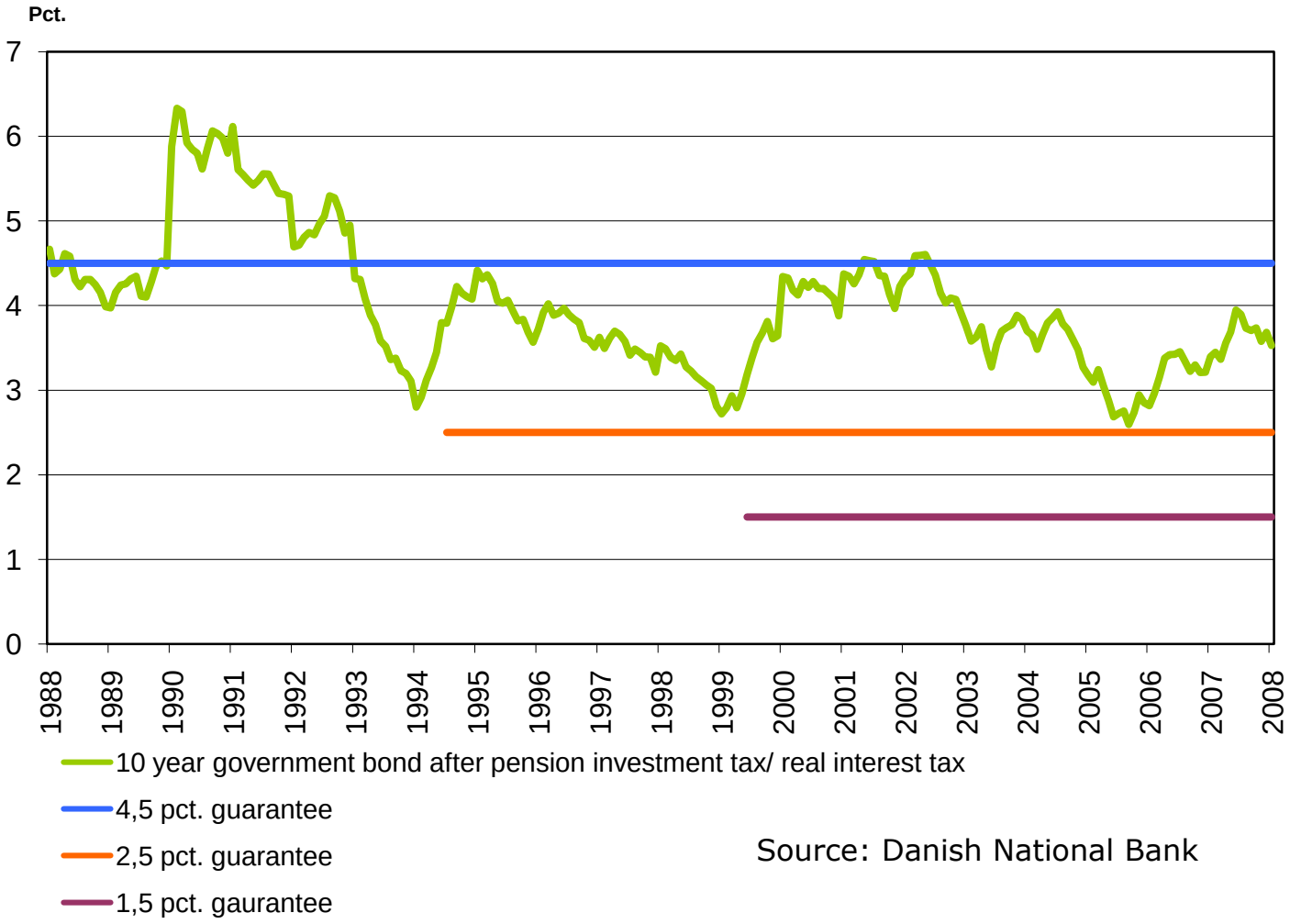
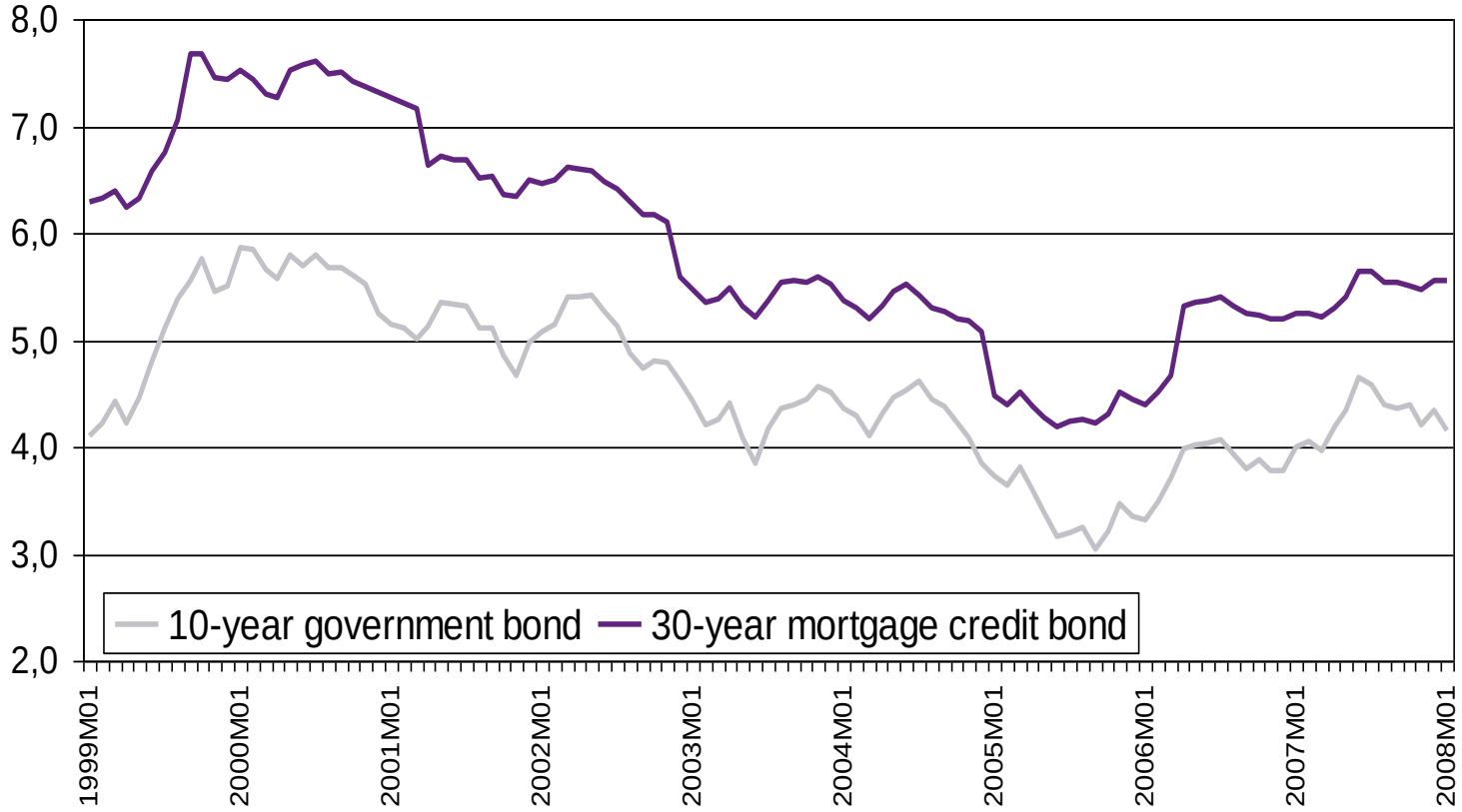
Maximum basic interest rates and yield to maturity on a 10 year government bond after pension investment tax/real interest tax 1998-2005



Source: Danish National Bank

Development in the Danish interest rate levels



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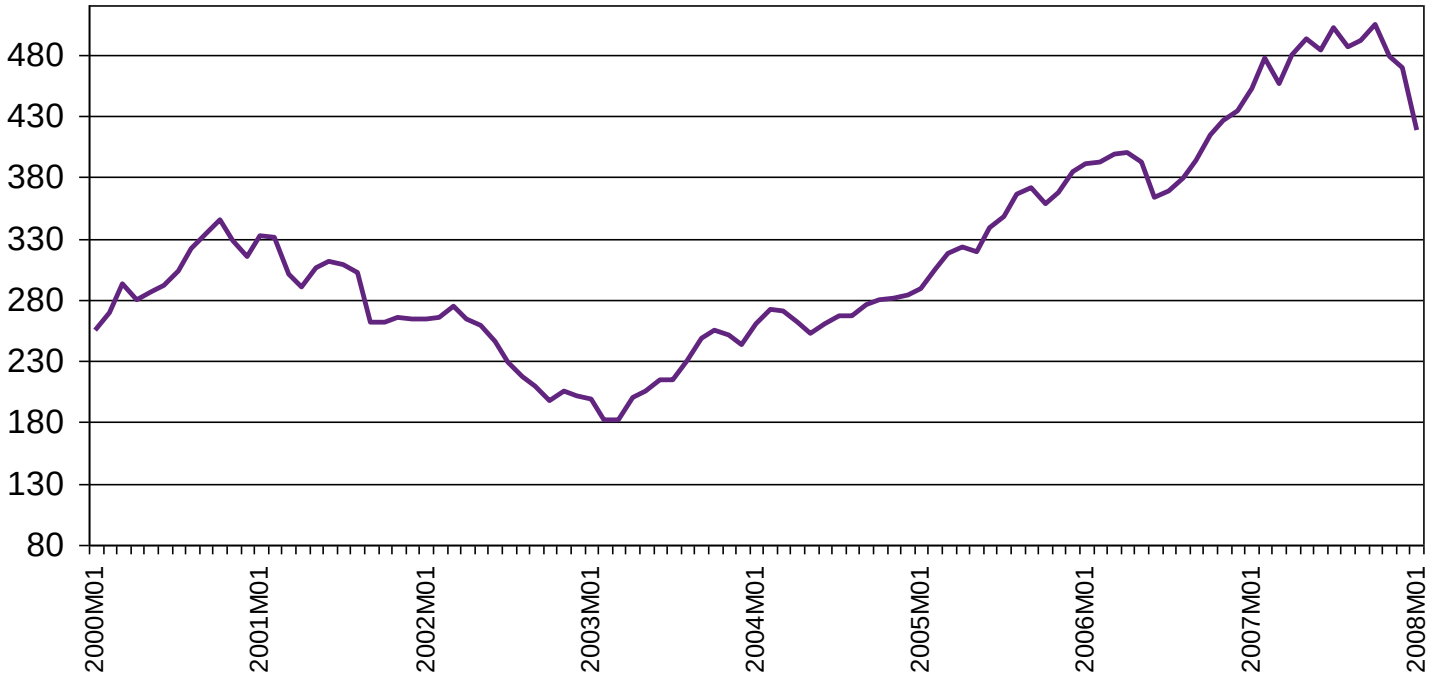
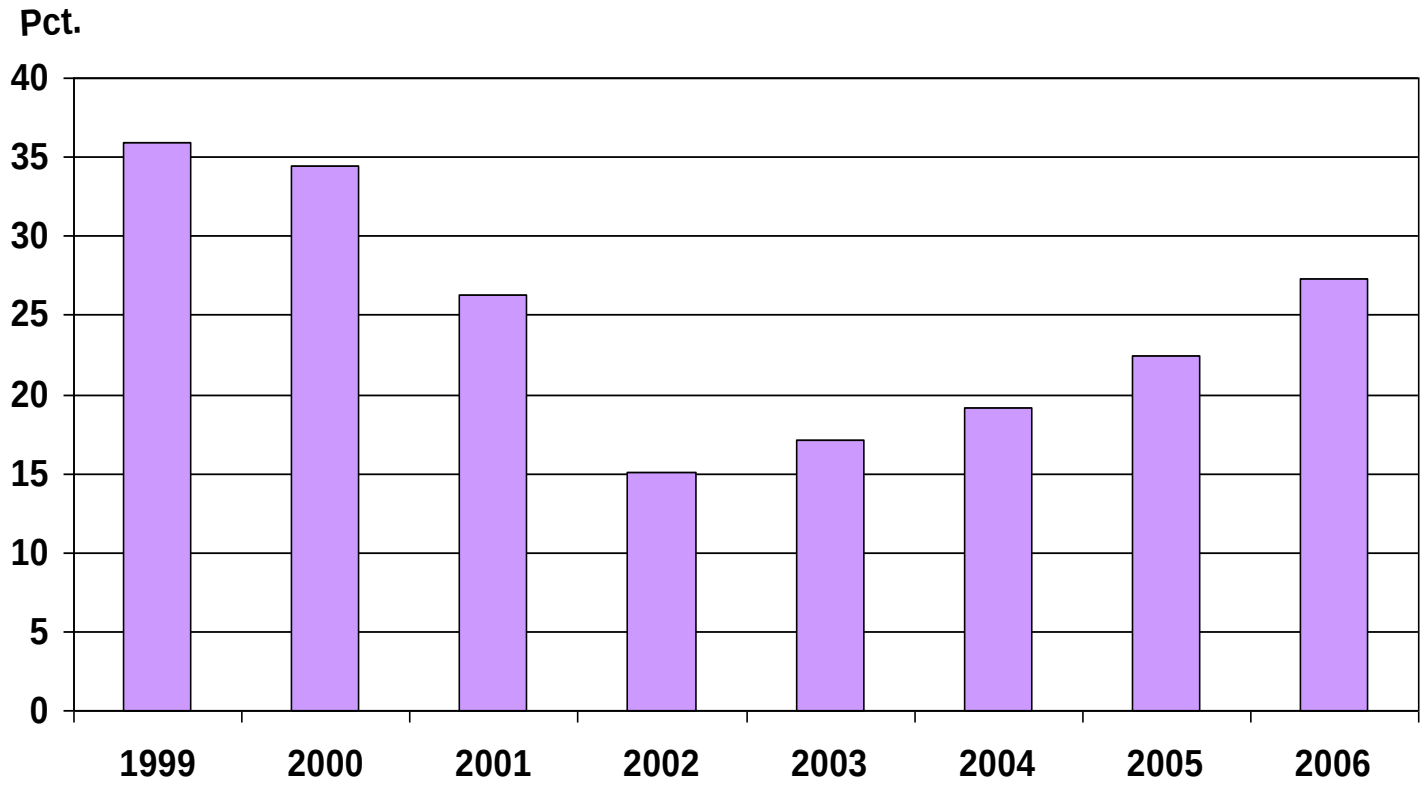
Development in the Danish OMXC20 stock index

OMXC20 stock index,
Danish stock market



Equity in percentage of financial assets in life insurance



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Market conditions in life insurance right after 2000

- Interest rates falling in an environment of guaranteed benefits
- Danish and international equity markets under pressure

That combination is a challenge to a pension scheme with asymmetric risk sharing features:

- Shareholder capital at increased risk (contribution according to calculation)
- Redistribution between policyholders? (contribution according to distribution)
- Ultimate risk with tax payers?

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Danish Traffic Light System

- Introduced just **before** the financial turmoil (created political tension!!)
- Measures the capital strength against two risk scenarios which are possible, but which have not occurred
- Addition to Solvency I requirement
- Two stress test scenarios: **Yellow and Red stress test scenarios**
- An example: In the Red Test shares drop by 12 per cent in value; in the more extreme Yellow Test shares drop by 30 per cent.
- When a company does not fall into the yellow or the red category, it is deemed to be in a **green light situation**
- Measurement and reporting is done every half year

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DFSA traffic lights (yellow and red light)

Stress	red light	yellow light
Yield curve (worst of)	+/-70bp	+/-100bp
Equity	-12%	-30%
Real estate	-8%	-12%
FX	10 day 99%-VaR	10 day 99,5%-VaR
Credit	8% of weighted values	8% of weighted values

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Danish Traffic Light System - in practice

- Risk categories in the stress test: Interest rates, equity, credit risk, currency risk, default risk, risks in subsidiary companies, risks associated with real estate properties and liability risks

	2001	2002	2003	2004	2005	2006
Companies	88	71	68	65	63	62
Companies in red light	1	2	0	0	0	0
Companies in yellow light	40	11	0	6	6	0

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Experiences with traffic lights

- Initial opposition
- Only supplement to Solvency I regime
- Pro cyclicality: how does supervisor react to fluctuating markets when contracts are long term
- Does neither cover risk on actuarial parameters nor correlation
- Worst interest rate scenario may be rising rates – due to the convexity of the liabilities – even though over time the real difficulties will be lower interest rates
- Short term traffic light scenario may prevent optimal long term investment strategy – hence the guarantee is paid indirectly by a lower expected return
- No compulsory publishing standard and therefore difficult to compare companies
- But it has worked relatively well

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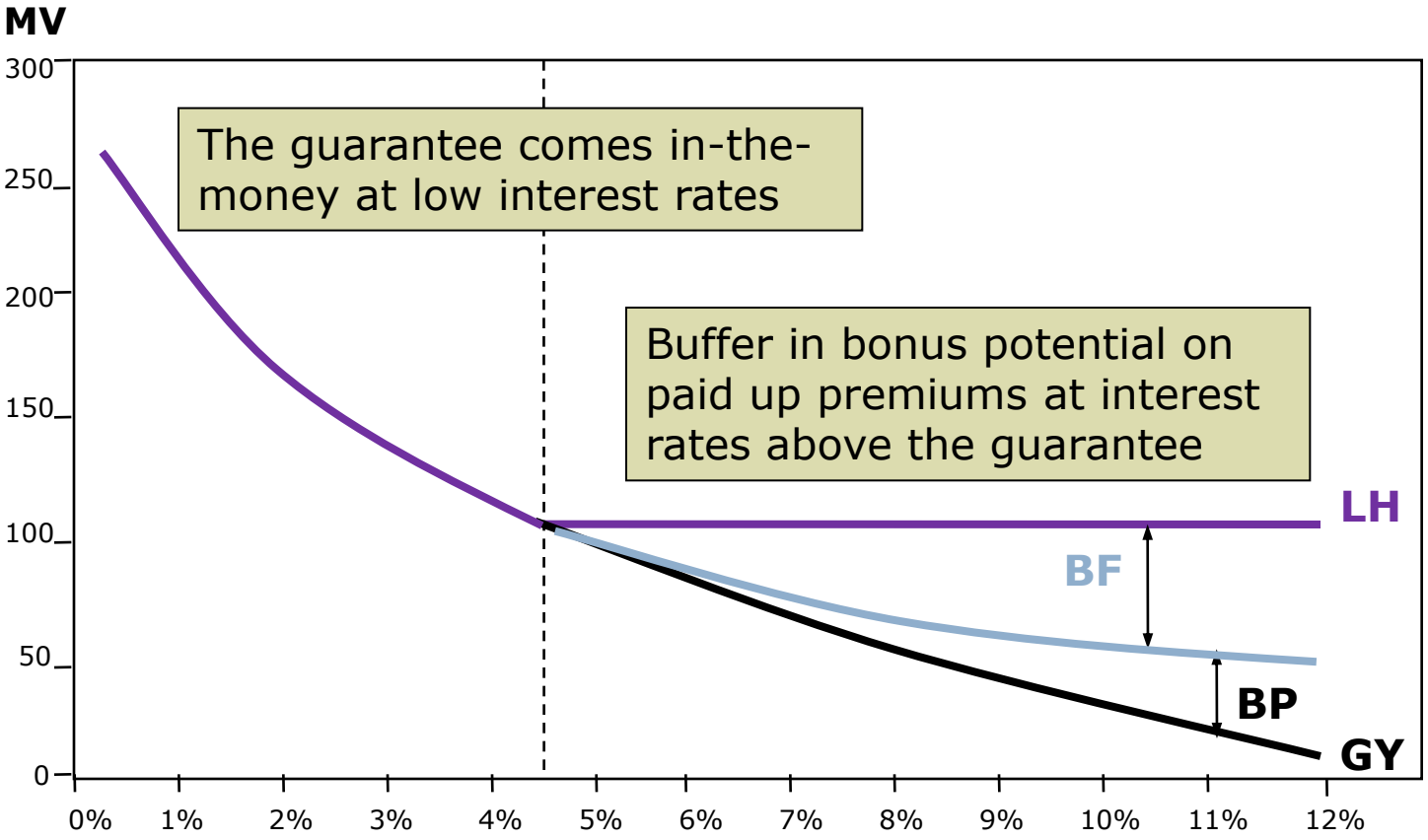
New accounting rules more risk sensitive - example of market value for a 4,5%-guarantee

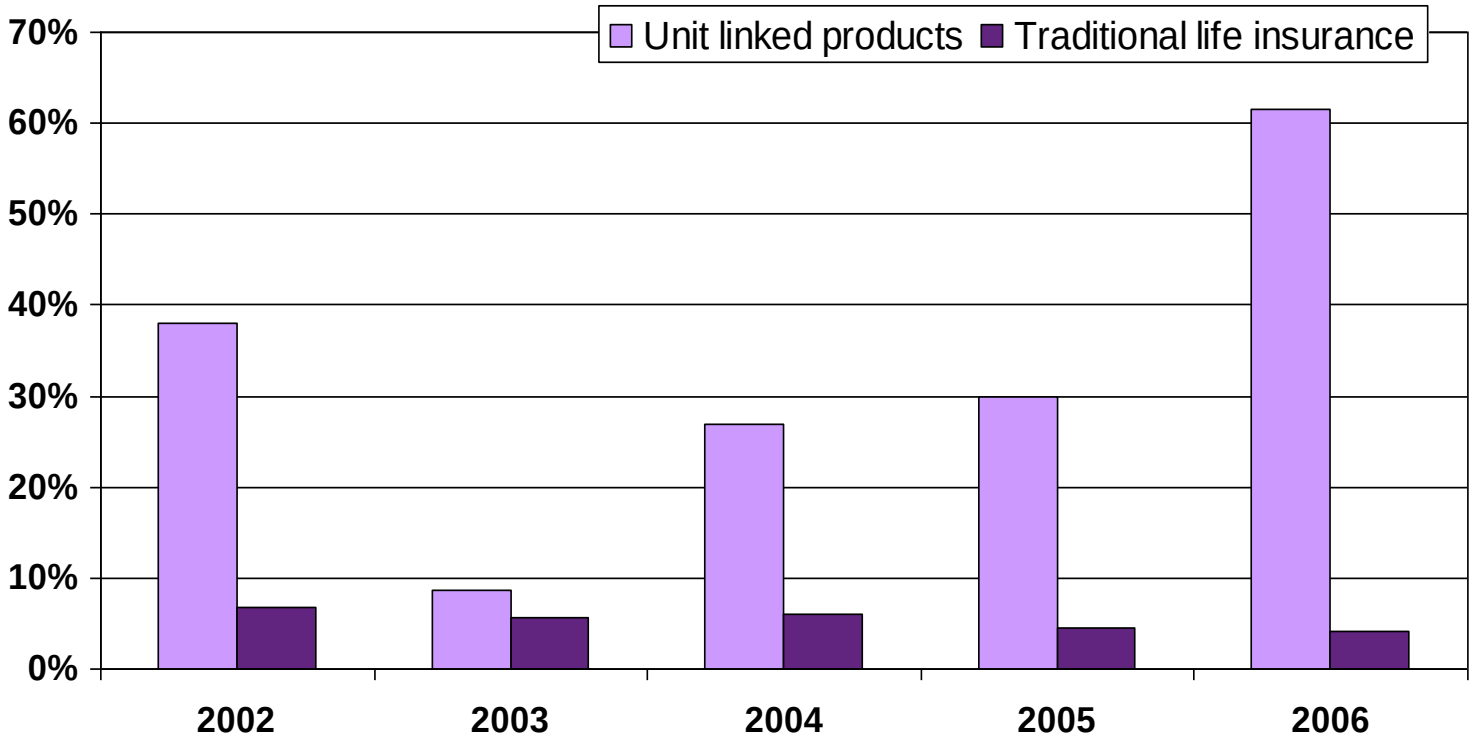


- LH = Life insurance provisions
- BP = Bonus potential on future premiums

BF = Bonus potential on paid up premiums

GY = Market value of guaranteed benefits

Towards less risky products: Growth in gross premiums for unit link and traditional life insurance



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Danish life insurance a few years ago

- With-profits contracts with high guarantee
- The risk profile did not show up in the accounts
- Smoothing of profits (through collective bonus) reduced both transparency and need for solvency capital
- Clear asset/liability management was not systematically performed
- Interest rate risk was unhedged
- Equity levels were very high

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Drivers for change in the Danish life market

- Political pressure (government)
- Supervisory strategy (risk-based supervision)
- Market pressure – events after 2001 revealed underlying risks
- Policyholder interest had grown due to the significance of pillar II schemes

What happened in the Danish market?

- Efforts made to align capital requirement with risk – next step will be Individual Capital Assessment as from January 2008
- Market consistent accounting rules
- Interest rate risks were hedged (with great success)
- New products with lower risk were introduced
- Policyholder demand was met
- Risks are increasingly borne by policyholders
- Solidarity features in pillar II have weakened
- The traffic lights are feeding into the risk management process

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In conclusion – lessons to be learned

- Pragmatic rules are not perfect, but they can initiate risk awareness and sound management
- Often resistance from companies at outset – traffic lights embedded into risk management
- For those developing (selling) systems and expertise: do not make it too complicated

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Risk-based supervision – moving towards Solvency II

- a risk-based solvency system to be introduced in the EU by 2012
- a directive proposal is being discussed in the European Parliament
- based on an economic approach: assets and liabilities at market consistent values
- rests on 3 pillars
- gives incentives to understand, monitor and control risks
- companies are (should be) preparing by now!
- Danish companies are supportive

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A few words on Solvency II – why bother at this stage?

- Approach to solvency II in practice