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**FINANCIAL**  
**MARKET**

A background image of a financial chart, possibly a candlestick or line chart, rendered in a light, semi-transparent grey. The chart shows various peaks and troughs, typical of market data.

# Derivatives and risk management

in the new EU regulatory landscape

Chateau Valtice, 22-23 May 2008

MASARYK UNIVERSITY  
FACULTY OF ECONOMICS AND ADMINISTRATION

INSTITUTE FOR FINANCIAL MARKET

# **Derivatives and risk management in the new EU regulatory landscape**

BRNO 2008

Review:  
Ing. Dagmar Linnertová

Editor:  
Ing. Gabriela Oškrdalová

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# Contents

<b>Foreword</b> .....	5
Martin Svoboda (Dean, Faculty of Economics and Administration, Masaryk University)	
<b>Portfolio valuation and hedging using derivatives and complex structured products</b> ...6	
Martin Svoboda (Dean, Faculty of Economics and Administration, Masaryk University)	
<b>Derivatives and risk management; Hedging risks</b> .....	13
Sarah Dees (Executive Director, New Markets Structured Sales, Goldman Sachs)	
<b>Modifying risks and return expectations by using structured products</b> .....	24
Heinrich Karasek (Manager, Structured Products & Equities, Bank Sal. Oppenheim jr. & Cie.)	
<b>Innovation in stock-related products</b> .....	43
Ales Jelinek, (Equity Derivatives Solutions CEEC, NATIXIS)	
<b>Derivative use in the Czech asset management and pension funds industry – legislative framework</b> .....	51
Michal Franěk (Deputy Director, Financial Markets Legislation, Ministry of Finance)	
<b>Derivatives and pensions funds – CZ case</b> .....	56
Viktor Kotlán (Director, Institutional Asset Management and Structured Products, Česká spořitelna)	
<b>Asset-liability management &amp; optimized strategic asset allocation; Benefits of structured investments</b> .....	59
Tomas Hochmeister (Institutional Sales Czech Republic & Slovakia Global Equity Derivatives, Societé Générale)	
<b>Changes to the CRD: Large exposures</b> .....	70
Jiří Król (Director, Financial Markets Policy, Ministry of Finance)	
<b>UCITS reform; Management company passport</b> .....	75
Zdeněk Husták (Of Counsel, BBH Prague, Attorneys at Law)	
<b>Internal market for asset management; Challenges for 2008 and later</b> .....	79
Didier Millerot (Deputy Head of Unit, Asset Management, European Commission)	

## Foreword

On 22nd to 23rd May 2008, an international seminar dealing with the use of derivatives by financial institutions and with the changes of European Union regulation targeted at banks and collective investment funds was held at the Valtice chateau.

In the view of the recent turbulences on the financial markets, the subject of the seminar was very topical as it was focused on such issues as the creation of financial derivatives and their use as risk management tools by financial institutions. The seminar was further devoted to the upcoming fundamental changes of European legislation for collective investment funds and their potential impact on business in the financial sector. One of the seminar panels was directly concerned with the reform of the Capital Requirement Directive for credit institutions and investment firms.

The seminar hosted delegates of financial institutions leading the global derivatives market (Goldman Sachs, Société Générale, Sal. Oppenheim jr. & Cie.), as well as important representatives of the European Commission, the Czech National Bank and the Czech Ministry of Finance. The findings discussed at the seminar represent a valuable asset not only for portfolio managers, traders and risk managers, but also for senior managers in various financial services institutions responsible for strategic development of their businesses.

The seminar was organized by the Institute for Financial Market, which was launched towards the end of 2007 as a research institute of the Faculty of Economics and Administration, Masaryk University. As part of its activities, the Institute holds specialist seminars for financial institutions, conducts research primarily concerned with the financial market, its regulation, and consumer behaviour on the financial market. The Institute also plans to cooperate with financial subjects and to provide support for specialist education and training aimed at professionals in the financial sector. Last but not least, the Institute has an ambition to systematically participate in financial education of the general public, including high school and university students. More information about the Institute for Financial Market is available at [www.institute-fm.econ.muni.cz](http://www.institute-fm.econ.muni.cz).

Brno, June 2008

Martin Svoboda  
Dean, Faculty of Economics and Administration  
Masaryk University





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## Portfolio valuation and hedging using derivatives and complex structured products

Derivatives and risk management in the new EU regulatory landscape

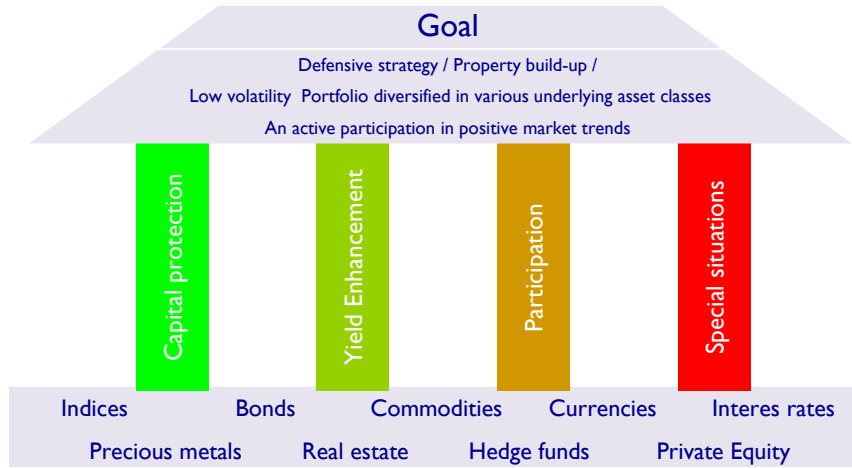
» Martin Svoboda, Dean, Faculty of Economics and Administration, Masaryk University

Derivatives and risk management in the new EU regulatory landscape

### Portfolio according to Markowitz

- Strategy is grounded on modern portfolio theory by Harry M. Markowitz, a Nobel Prize laureate in economics.
- The goal is a defensive strategy based on a wide diversification of the portfolio, a diversification concerning not only various types of the underlying classes of assets (shares, indices, commodities, currencies, alternative investments), but also different product structures, issuers, and lifespan.
- In the medium and long run, this strategy provides investors creditable return even when the prevailing market trend is downward and, simultaneously, it promises an attractive participation when overall market direction is upward.
- By investing in a single security, the investor gains an efficient access to the potential of structured financial products without the need to invest one's time and effort in the choice of suitable components.

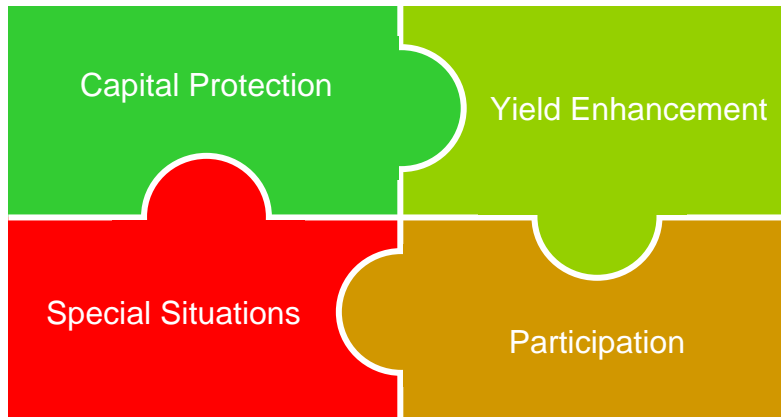
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### The Entire Band of Asset Classes: Selected Underlyings

Shares	Indices	Strategies	Commodities	Currencies
Microsoft	MSCI World	Dividends	GSCI	EUR/USD
IBM	Dow Jones IA	Value	DJ-AIG	EUR/JPY
Royal Dutch	S&P 500	Growth	Gold	EUR/CHF
DuPont	NASDAQ 100	Momentum	Silver	USD/JPY
Amgen	EURO STOXX 50	Sector Rotation	Platinum	USD/GBP
Nokia	DAX 30	Ethical	Oil	USD/CNY
BASF	Nikkei 225	Seasonal	Natural Gas	USD/ZAF
NTT DoCoMo	CECE-EURO	Timing	Copper	CHF/HUF
Rio Tinto	HSCEI China	Long/Short	Aluminium	
Nestlé	AMEX Biotech	Market Neutral	Wheat	
Coca-Cola	DJ Internet	Hedgefunds	Corn	
GlaxoSmithKline	STOXX Telecom		Sugar	

## The Puzzle: Solutions For Every Investment Target



## Capital protection

- The basic motivation of the strategy is to provide investors with risk-free or moderately risky investment products which are in the maximum degree independent of overall market trends and may serve as a basis for consistent return amounting to approximately 5 per cent p.a.
- Products with full capital guarantee, or fixed-interest rate investments
- discount products deeply in the money
- plus a combination of discount products and put warrants
- as well as callable structures ('Express') are utilized.
- Another group of instruments fitting in this category are bonus products with barrier level over 40 per cent of the initial price
- defensively oriented hedge funds
- 'Lock-in' certificates ('All Time High') with active protection mechanisms.

»



## Yield Enhancement

- This segment represents products promising an attractive performance potential in virtually all, at least slightly probable, investment scenarios (statistically speaking), i.e. growth phases, stagnation period, and to a certain degree also slump phases).
- This is primarily the domain of Bonus and Protect Momentum products, combining unlimited return and a comfortable hedging with a potential for overproportionate participation in market growth.

»

## Participation

- The selection of classic open end products aims at participating in markets with particularly interesting growth potential chances in the medium run.
- Nowadays, primary investment goals are oriented towards technological megatrends (such as biotechnology), emerging markets countries (China, India, Eastern Europe), as well as commodities, above all agricultural products (soft commodities).

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## Special situations

- As this strategy incorporates financial products of relatively speculative nature, it utilizes various short-term opportunities, volatility fluctuations, market inefficiencies, and special situations identified by means of a technical analysis.
- In the centre of attention are the so-called 'vola plays' providing partial hedging and enabling investors to benefit from periods when the fluctuations in the price of highly volatile shares calm down.
- In addition, this segment offers investors with a potential for engagement in the currency and interest area.

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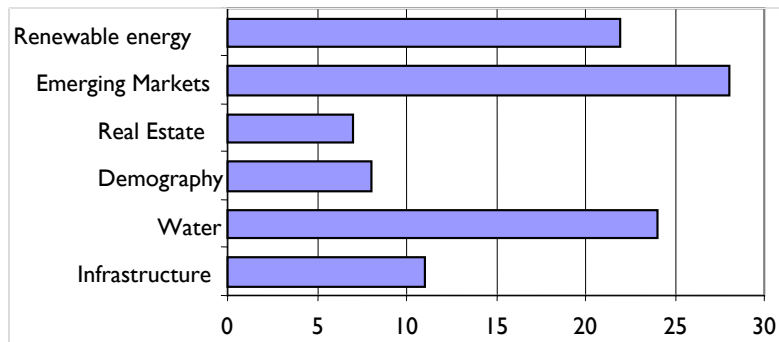
## Themes and future trends

- Renewable Energy
- Emerging Markets
- Water
- Infrastructure
- Hedge Funds
- Commodities
- Energy Commodities
- Soft Commodities
- Precious Metals
- Currencies
- Sustainability
- Africa
- Alpha Products
- Volatility

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page 10

## Demanded trends



(Research: 150 financial consultants and asset managers)

## Conclusion I.

- The retail investor becomes the centre of attention of issuers („Struggle“ for investors' sympathies)
- The ability of issuers and financial brokers to react promptly to all investment trends and make them available to a wide range of investors
- To offer investment in shares, indices, currencies, commodities or, on the other hand, the use of special investment strategies
- To invest with a very low risk rate

## Conclusion II.

- The investors always find on the market a suitable derivative on the condition that s/he defines:

- 1) Investment period
- 2) Risk s/he is willing to undergo
- 3) Market expectations

**If there is a derivative on the market, the investor may give priority to it over a direct investment in an underlying asset.**



## Derivatives and Risk Management Hedging risks

May 2008



## Introduction

**Sarah Dees, Vice-President**  
**New Markets Assets (FICC), Goldman Sachs**

### **Goldman Sachs**

*"Goldman Sachs is a global investment banking, securities, and investment management firm that provides a wide range of services worldwide to a diversified client base that includes corporation, financial institutions, governments, and high net worth individuals."*

**Scenario**

- Hedging is a powerful financial tool. It can be used as a strategy to enhance or insure against investments
- There is a limited derivatives market in the Czech Republic through which to employ hedging strategies

**Presentation**

- The Benefits of Hedging
- Users and Purposes of Hedging
- Examples of Hedging Instruments
- 3 Case Studies
- Recommendations to the Czech Republic

**Financial and Commodity Derivatives are Financial Instruments that have been Traded in Global Markets for the past 20 Years**

They are used for two purposes:



**Hedging:** Risk reducing strategies with the aim to limit losses or lock-in profits in bear and bull markets respectively

**Speculation:** Leveraged investments bearing unlimited profits or losses



## Illustration: The Benefits of Hedging

### Hedged Returns Over Time (S&P 500)

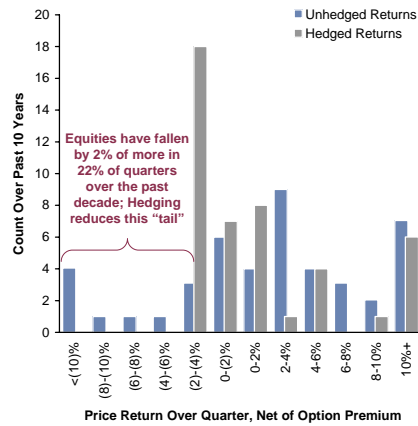
Year	Cost of 1-Year at-the-Money Put	S&P 500 Return	Hedged Return
1996	4.1%	25.1%	21.1%
1997	5.2%	26.4%	21.2%
1998	6.9%	25.5%	18.6%
1999	8.0%	19.6%	11.6%
2000	6.6%	(7.7)%	(6.3)%
2001	6.5%	(12.7)%	(7.5)%
2002	7.9%	(21.8)%	(7.4)%
2003	10.1%	21.5%	11.4%
2004	5.9%	9.7%	3.8%
2005	5.1%	6.1%	1.0%
2006	4.3%	12.6%	8.3%
Average	6.4%	9.5%	6.9%
Std. Dev.		16.8%	11.0%
Avg / Std. Dev.		56.5%	62.5%
Max		26.4%	21.2%
Min		(21.8)%	(7.5)%

Puts limit downside risk in bad years

Improved risk-adjusted return

Source: Bloomberg, Goldman Sachs Research estimates

### Hedging Changes the Expected Return Distribution MSCI-World Returns, "Hedged" Includes 3-month ATM Put



Equities have fallen by 2% of more in 22% of quarters over the past decade; Hedging reduces this "tail"

## Who Hedges and Why?

### The Use of Derivatives is Widespread. Hedging is Often Used for Risk Management Purposes

Users	Reason
Corporate Treasury	Asset and Liability Management
Asset Managers and Pension Funds	Risk Management
Governments and Municipalities	Debt Management
Central Banks	Liquidity Access Optimisation
Corporate Investors	Input & Output Matching Reducing the Cost of Funding
General Public	Inflation or Recession Hedging

## Hedging Instruments

### Interest Rate Risk

- Interest Rate Swaps
- Interest Rate Futures

### Equity Risk

- Equity Options
- Equity Swaps

### Credit Risk

- Credit Default Swap
- Credit Options

### Commodity Risk

- Commodity Options
- Commodity Swaps
- Commodity Forwards

### Currency Risk

- FX Options
- FX Forwards

## Hedging Principles Checklist

### What Factors Affect a Hedging Strategy?

#### Is There a Profit or Position to Protect?

- Specific position to protection or general portfolio insurance?
- Locking-in current levels or protecting against tail risk?

#### Are There Specific Risks to Protect Against?

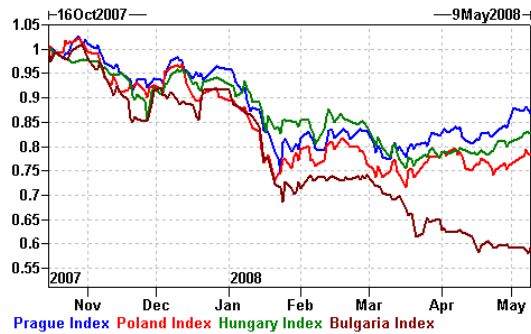
- Risk that market drifts lower or Gaps lower?
- Macro inflection points: interest rates, FX, inflection points
- Geo-political event risk
- Comfortable with momentum, but not with valuations



## Case Study 1 Hedging Equity Risk

### Bear Markets in Europe since Summer 2007

- 50bn CZK in equity portfolios in the Czech Republic in mid 2007
- Global and CEE markets declined 15% since August 2007
- Loss in Net Asset Value approx 7.5bn CZK (equivalent to 1% GDP of the Czech Republic)



Source: Goldman Sachs – Past performance figures are not a reliable indicator of future returns

## Case Study 1 Hedging Equity Risk

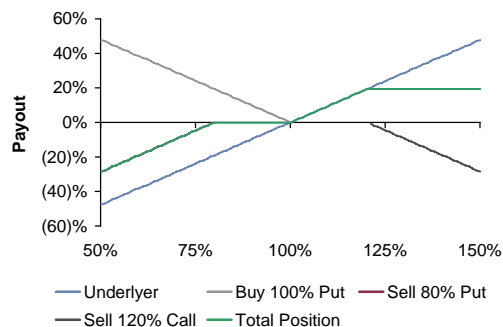
### Hedging Strategy

- An investor has an exposure to the Prague equity index PX
- The investor wishes to hedge his position in summer 2007
- Option strategy
  - Buy 100% Put option
  - Sell 80% Put option
  - Sell 120% Call option
- Underlyer: Prague Index PX
- Maturity: 2 years
- Denomination: CZK
- Premium: 0%

### Results

- In February 2008, the price of the underlyer dropped to 75% of the initial spot price seven months ago
- The Investor incurred a **loss of 5%** as opposed to a **loss of 25%** if he didn't hedge

### Option Hedging Strategy



## Case Study 1 Hedging Equity Risk

### Accounting for an Put Option on the PX Index

- The investor has €50,000 exposure to the Index PX. The market price of the index is €50. The investor wishes to hedge the downside price risk, and on 1 July 2007 enters into an at-the-money put option expiring in 2 years. The exercise price is €50 per share and the investor paid a premium of €4,000 (or 8% of notional). The put option is designated as a fair value hedge of the PX index. Effectiveness is measured by comparing decreases in fair value of the PX index below €50 with the intrinsic value of the option
- The following illustrates the two year calculation of fair values

	1 Jul 2007	31 Dec 2007	31 Dec 2008	30 Jun 2009
PX Index	50	45	46	38
Put Strike	50	50	50	50
Fair Value of Put	4	8	6	12
Time Value	4	3	2	-
Intrinsic Value	-	5	4	12

## Case Study 1 Hedging Equity Risk

### Accounting Journal Entries (Hedge Accounting)

- For simplicity assume hedge effectiveness is assessed annually and effectiveness tests are met

	31 Dec 2007	31 Dec 2008	30 Jun 2009
<b>P&amp;L</b>			
Gain/Loss on PX Index	(5,000)	3,000	(8,000)
Gain/Loss on Derivative	4,000	(2,000)	6,000

- Note that if it is probable that the AFS security will be sold upon the expiration of the option, the investor may apply cash flow hedge accounting. If cash flow hedge accounting were applied, gains or losses are taken to equity until the expiry of the hedging relationship. Assuming again that the hedge is assessed on an intrinsic basis, the accounting journal entries for a cash flow hedge would be as follows



## Case Study 1 Hedging Equity Risk

### Accounting Journal Entries (Hedge Accounting) (Continued)

- For simplicity assume hedge effectiveness is assessed annually and effectiveness tests are met

	31 Dec 2007	31 Dec 2008	30 Jun 2009
<b>P&amp;L</b>			
Change in Time Value of Option	(1,000)	(1,000)	(2,000)
Recycled Loss on Disposal of PX Index	-	-	(12,000)
Recycled Gain on Option	-	-	12,000
<b>Index (Other Recognised Gains/Losses)</b>			
Gain/Loss on PX Index	(5,000)	1,000	(8,000)
Gain/Loss on Derivative	5,000	(1,000)	8,000

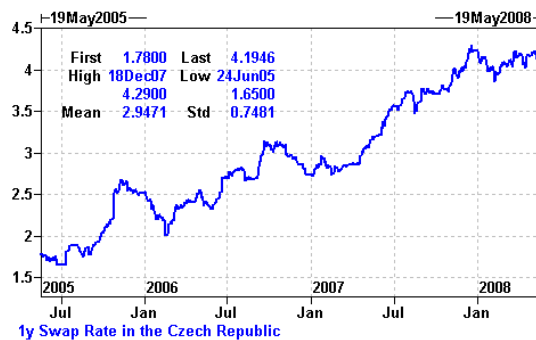
- If no hedge accounting had been applied, the company would have recognised the gains and losses on the PX Index in equity until disposal and a loss on disposal of €8,000



## Case Study 2 Hedging Interest Rates Risk

- The level of interest rates in the Czech Republic was the lowest in Europe in the last few years
- The Czech National Bank has increased interest rates since 2005 in order to fight inflation
- Companies and banks that used variable funding experienced significant increase in financing costs

Since May 2005  
the 1y swap rate increased  
from 1.7% to 4.2%



Source: Goldman Sachs – Past performance figures are not a reliable indicator of future returns

## Case Study 2 Hedging Interest Rates Risk

### Problem

- For example in February 2007 CSOB Prague issues 5y bond with a variable coupon at mid swap with a notional of CZK100mio
- Mid swap rate in February 2007 is 3.35% and the expected payment in February 2008 is therefore  $3.35\% * CZK1,000mio = CZK33.5mio$
- CSOB has a view that the mid swap rate will be 4.2% in one year time and the coupon payment CZK42.0mio which is CZK8.5mio

### Solution

- Buy a simple 5y at the money Cap on Czech 5y swap rate for 0.25% of the notional which translates into CZK2.5mio

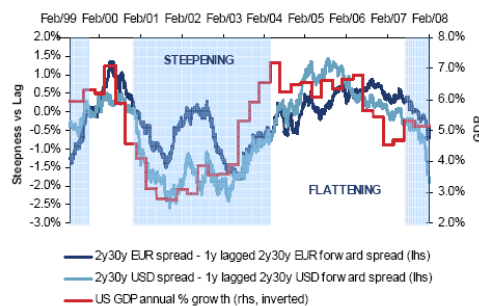
### Result

- Increased financing costs are compensated by profit from the derivative of  $(4.2\% - 3.35\%) * 1,000mio = CZK8.5mio$
- In total, CSOB pays 2.5mio (premium) + 42mio (coupon) – 33.5mio (profit from option) = CZK11mio
- If not hedged, CSOB would pay CZK42mio which is 31mio higher
- Alternatively, if the mid swap rate decreased below 3.35% in one year time, CSOB would only pay CZK2.5mio above the coupon payment.

## Case Study 3 Hedging Against Global Economic Slowdown

### The Rate Curve Historically Steepened during Economic Downturn

- The US economy has already weakened, with GS economics expecting GDP growth to be negative in H1 2008
- With the likelihood of a marked economic slowdown increasing both in Europe as well as globally, we focus on an investment that will likely perform in a recessionary environment when other assets such as equities under perform
- Steepening risk is priced off the forward curve in the market and pays off when realized steepness in the future is larger than the steepness priced in

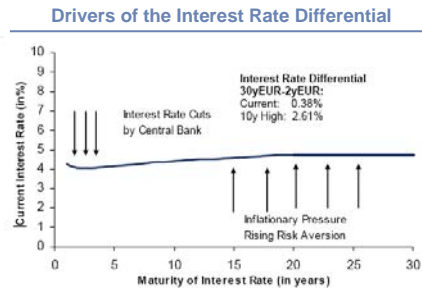


Source: Goldman Sachs – Past performance figures are not a reliable indicator of future returns

## Case Study 3 Hedging Against Global Economic Slowdown

### 100% Principal Protected Note Linked to Yield Curve that Profits from Economic Slowdown

- From an investor perspective buying a 100% principal protected Note with an embedded option on e.g. the difference between the 30 year and the 2 year interest rate offers a particularly attractive investment
- Some investors have “exploited” the steepening of the US interest rate curve and **the trade has proved extremely beneficial for them** given negative correlation between GDP and steepness
- At maturity, an investor receives 100% of his capital **PLUS:**  
**Participation \* Max(30yEUR – 2yEUR – Strike, 0)**
- Suitable for both institutional and retail investors



Source: Goldman Sachs – Past performance figures are not a reliable indicator of future returns

## Conclusion Why Czech Investors Should Hedge

- According to AKAT CR\* total assets under management in mutual funds declined by CZK20bn in Q1 2008. This is a result of losses and redemptions which were triggered by falling markets
- The largest impact has been on equity and fixed income funds. This contrasts to guaranteed funds which reported a positive growth in terms of assets
- Had the asset managers (including pension funds) hedged during the recent market downturn the loss would have been significantly reduced
- With low interest rates and high inflation, diversification and hedging is the key way to generate real rates of return in unfavourable market conditions

\*Source: www.akatcr.cz



## Conclusion

### Why Czech Investors Should Hedge

- **Hedging – potential implications for the Czech economy**
  - Less volatile and higher risk-adjusted returns of pension and mutual funds
  - Protection against “fat tail events” such as recent correction in global markets
  - More efficient Asset and Liability Management
  - Better stability of the Czech capital market



## Conclusion

### Recommendations to the Czech Republic

1. **Review of the Current Legal Restrictions on Derivatives Use**
  - Legal restrictions on use of derivative instruments for asset managers
2. **Improve Accounting Standards**
  - Need for more clarity over Czech accounting standards
  - Tendency for auditors to view hedging instruments as speculative investments
3. **Upgrade Infrastructure and Technical Equipment**
  - Out-dated IT, Accounting, Trading and Other Systems
4. **Local Asset Managers are Hesitant to Be the First to Start Using Derivatives**
5. **Knowledge, Awareness and Understanding of Derivative Instruments can be Improved**



## Questions and Answers



BANK SAL. OPPENHEIM JR. & CIE. (ÖSTERREICH) AG

## Modifying Risks and Return Expectations by Using Structured Products

Chateau Valtice, 22 May 2008

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BANK SAL. OPPENHEIM JR. & CIE. (ÖSTERREICH) AG

### Speaker

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### Welcome!

**Heinrich Karasek, CEFA**

Director Structured Products & Equities

President ZFA (Austrian Derivative Association)



## Content

### Utilizing Certificates

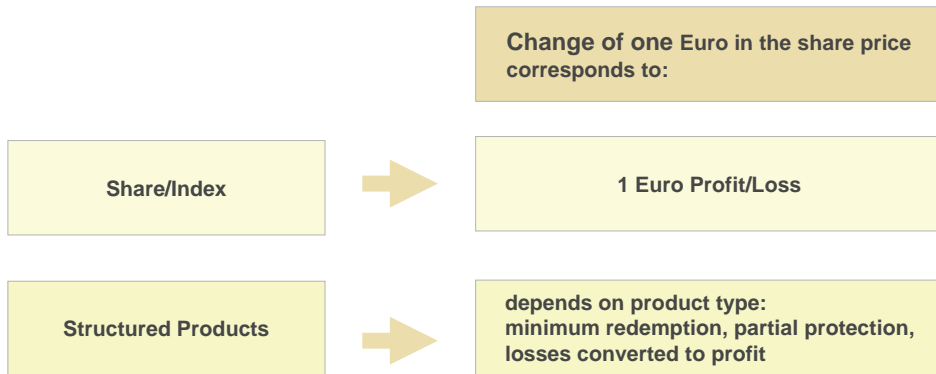
- Opportunities And Limitations Of Using Investment Products	Page 4
Strategies - To Implement Your Market Expectation	Page 7
Reverse Convertibles	Page 9
Discount Certificates	Page 13
Express Certificates	Page 16
Bonus Certificates	Page 19
TWIN-WIN-Certificates	Page 23
Investment Strategies With Certificates	
- Classification Of Risk In A Dynamic Way And Rating Of Certificates	Page 26
Development Of The Certificate Market, Respective Size And Market Analysis	Page 32

## UTILIZING CERTIFICATES

### Opportunities And Limitations Of Using Investment Products

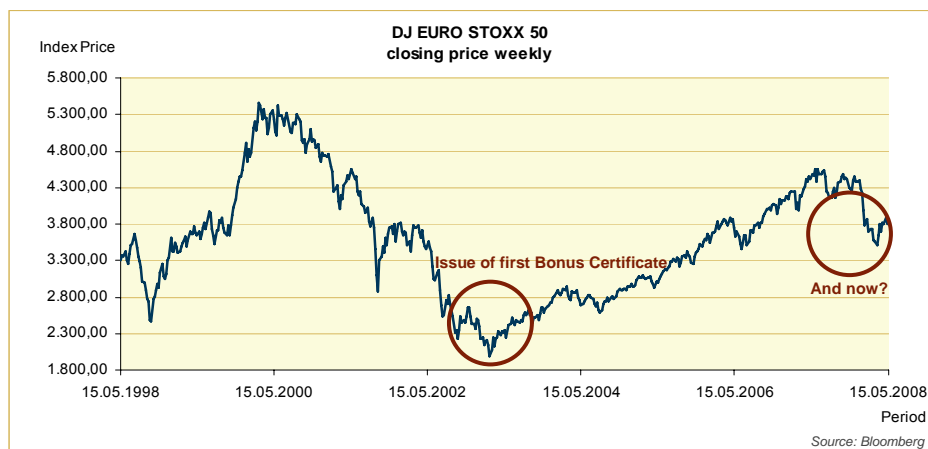


### Multiple Risk-Return Profile



### The European Equity Market During The Last Ten Years

A rough ride for investors from time to time – the road can be smoothed by using the right instruments, e.g. Bonus certificates.



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## STRATEGIES

### To Implement Your Market Expectation

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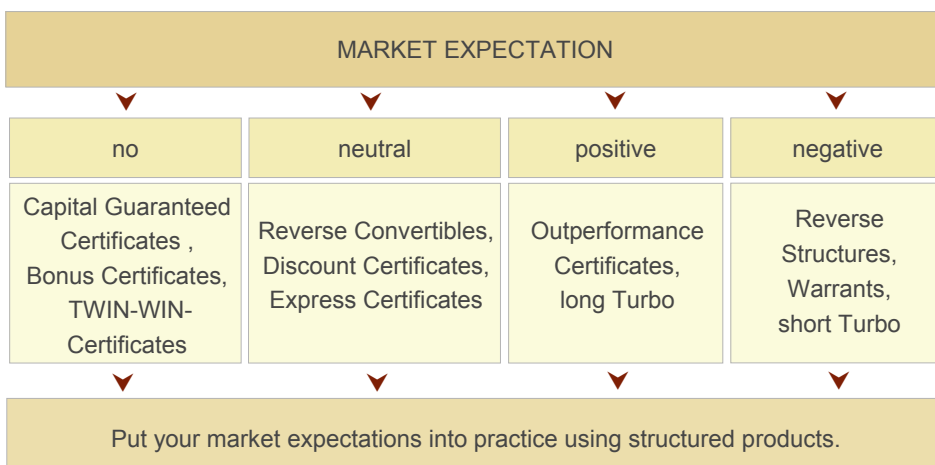


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## STRATEGIES

### The Ideal Product For Each Market Expectation

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## REVERSE CONVERTIBLES

### High Yields For Sideward Markets



## REVERSE CONVERTIBLES

### Higher „Coupon“ Than Government Bonds

	High-Yield-Bond	Bonds in Foreign Currencies	Reverse Convertibles
High Coupon due to ...	Credit Risk	FX Risk	Share
BUT there is risk...	No redemption due to insolvency	Lower redemption due to devaluation of the currency (higher redemption in case of appreciation)	Delivery of shares in case of lower share price

REVERSE CONVERTIBLES

**CLASSIC-Reverse Convertibles**

<b>ISIN</b>	DE000SEL6TK5
<b>Underlying</b>	Schoeller-Bleckmann Oilfield Equipment AG
<b>Start</b>	6 February 2008
<b>Maturity</b>	23 December 2008
<b>Strike Price</b>	48,07 EUR
<b>Coupon p.a.</b>	13,50%
<b>Offer Certificate</b>	101,32%
<b>Maximum Yield</b>	6,56%
<b>Maximum Yield p.a.</b>	11,02%

*Indicative Levels are based on current market data on 15 May 2008. The figures represent gross performance and do not include any provisions.*

**Redemption**

At maturity the investor receives the nominal amount provided that the underlying quotes are at or above the strike price. Otherwise shares are delivered at maturity – the coupon is paid in any case.

• Market Expectations:

- short-/medium term investment in sideward markets, there is the possibility of a market disruption during the investment period

• Ideal structured product:

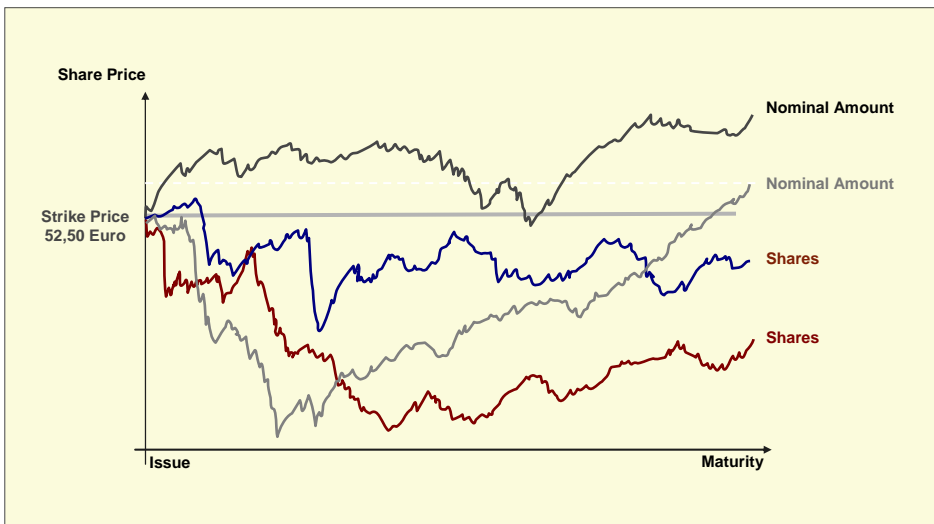
- the coupon is paid in any case

**Payoff Profile at Maturity**



REVERSE CONVERTIBLES

**Reverse Convertibles - Performance And Redemption**



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## DISCOUNT CERTIFICATES

### Strong Returns - Appealing Entries

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## DISCOUNT-CERTIFICATES

### Discount Certificates – Benefit From Below Market Entry

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#### Discount certificates offer:

- to purchase the certificate at a lower price than the current price of the share or the index
- to benefit from gains, even if the value of the underlying remains unchanged or falls slightly
- in return: profit is limited by cap

#### Your advantage:

- risk cushion through discount at time of purchase
- maximum profit in sideward markets
- investment for a fixed term

- **the discount is higher,**
- **the better the dividend yield**
- **the higher the volatility**
- **the price of the option increases with longer maturity**
- **cede of dividends**

## DISCOUNT-CERTIFICATES

### CLASSIC-Discount-Certificate

<b>ISIN</b>	DE000SDL0V93
<b>Underlying</b>	Komerční Banka AS
<b>Start</b>	19 April 2007
<b>Maturity</b>	23 December 2008
<b>Cap</b>	4.500 CZK
<b>Price of Underlying</b>	4.230,00 CZK
<b>Offer Certificate</b>	156,24 EUR
<b>Discount</b>	6,92%
<b>Maximum Yield</b>	14,29%
<b>Maximum Yield p.a.</b>	24,32%

*Indicative Levels are based on current market data on 15 May 2008. The figures represent gross performance and do not include any provisions.*

- Outperformance:
  - sideward markets BUT limited due to cap
  - maturity is determined at issue
- Ideal conditions:
  - high dividend yield / high implicit volatility

- Market expectations:
  - sideward markets for short-/medium term investments
- Advantage:
  - the investor buys the underlying at a discount in comparison to the current share price

Payoff Profile at Maturity



## EXPRESS-CERTIFICATES

Easy. Fast. Attractive.



Express Certificates - Direct Return Access

Express certificates are:

- profitable - chance to achieve an attractive yield
- lucrative - in case of sideward markets
- partially protected - if the call level is below the reference price
- buffered - comfortable risk buffer through PROTECT-level

Your advantage:

- autocallable: if the underlying quotes at or above the call level on valuation day, the certificate pays an appealing redemption amount
- only the closing level of the underlying determines the redemption amount at maturity

- possibility of early redemptions until maturity
- various risk buffers for early and final redemption
- longer maturity permits a larger risk buffer
- cede of dividends

CLASSIC-Express-Certificate

<b>Underlying</b>	DJ EuroSTOXX50
<b>Reference Price at Issue</b>	4.087,12 points
<b>Start</b>	28 February 2007
<b>Maturity</b>	07 April 2011
<b>Observation Dates</b>	31 March 2008 31 March 2009 31 March 2010 31 March 2011
<b>respective Call-Level</b>	3,675.00 points 3,675.00 points 3,675.00 points 3,675.00 points
<b>PROTECT-Level only on the last observation date</b>	2,850.00 points
<b>respective early redemption amount</b>	108.00 Euro 116.00 Euro 124.00 Euro 132.00 Euro

Payoff CLASSIC-Express		
Issue date	fixing of reference price of the index	Call-Level = 100.00 Euro
on 1 <sup>st</sup> observation date	underlying $\geq$ 90,00% (Call-Level) no ▼	yes ► Redemption 108.00 Euro
on 2 <sup>nd</sup> observation date	underlying $\geq$ 90,00% (Call-Level) no ▼	yes ► redemption 116.00 Euro
on 3 <sup>rd</sup> observation date	underlying $\geq$ 90,00% (Call-Level) no ▼	yes ► redemption 124.00 Euro
on 4 <sup>th</sup> observation date	underlying $\geq$ 90,00% (Call-Level) no ▼	yes ► redemption 132.00 Euro
	the index closes between the PROTECT-Level at 80,00 Euro and the Call-Level at 100,00 Euro? no ▼	yes ► redemption 100.00 Euro
	redemption equals to the amount expressed in Euro considering the actual level of the index and the respective ratio	



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## BONUS-CERTIFICATES

Minimum Redemption. Risk Buffer. And Unlimited Profit.

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## BONUS CERTIFICATES

### PROTECT-Bonus-Certificates – Gain (Even) From Weakening Markets

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#### PROTECT-Bonus-certificates offer:

- Bonus: the bonus amount is paid in a sideward or slightly falling market as long as the underlying does not hit or breach the PROTECT-Level
- unlimited chance of profit in case of rising markets
- at maturity the investor is at worst in a no lesser position than having invested in the share or in the index

#### Ideal for the following market expectations:

- uncertainty about a sustainable and positive performance of the underlying
- price decline can not be ruled out

- **Bonus, risk buffer, unlimited chance of profit**
- **cede of dividends**

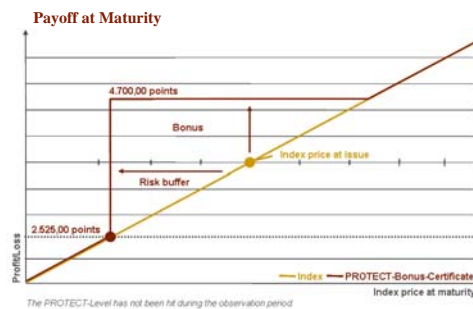
## Mechanics Of A PROTECT-Bonus-Certificate

<b>ISIN</b>	DE000SBL66M8
<b>Underlying</b>	DJ EURO STOXX 50
<b>Strike Price</b>	3.525,00 points
<b>Start</b>	12 June 2006
<b>Maturity</b>	22 September 2009
<b>Price Underlying</b>	3.839,57 points
<b>Bonus Level</b>	4.700,00 points = 22,41%
<b>Bonus Amount</b>	1.175,00 points
<b>PROTECT-Level</b>	2.525,00 points = 65,76%
<b>Offer Certificate</b>	€ 41,51
<b>Bonus Yield</b>	13,23%
<b>Bonus Yield p.a.</b>	9,55% p.a.

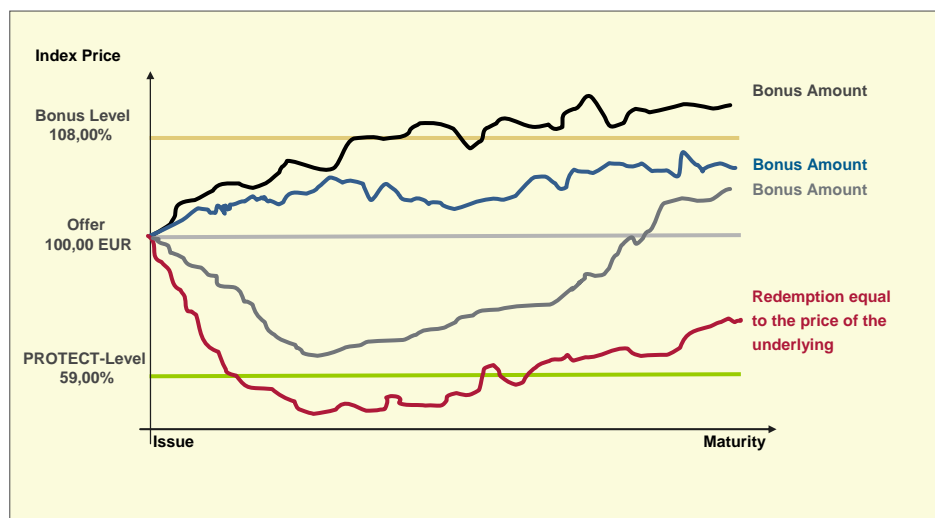
*Indicative Levels are based on current market data on 15 May 2008. The figures represent gross performance and do not include any provisions.*

- Market expectations:
  - long term rising markets with a risk of market disruption during the expected investment period
- Ideal structured product:
  - risk buffer via a partial protection - the investor expects the indices to recover from a market decrease;
  - unlimited and full participation in the positive performance of the underlying

- Ideal conditions:
  - high implied volatilities and high dividend yields
- Outperformance:
  - slightly falling markets and sideward moving markets



## PROTECT-Bonus-Certificate: Performance And Redemption

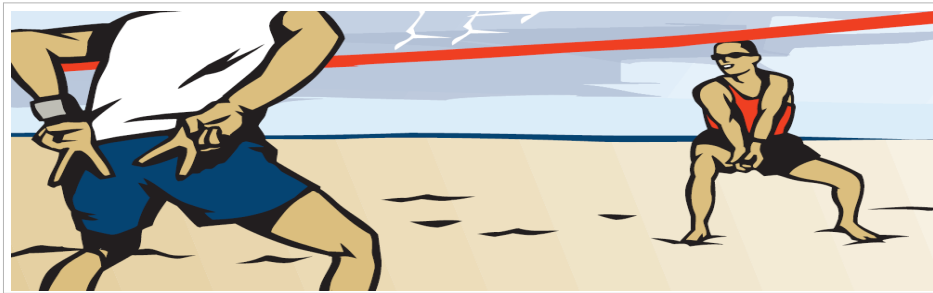


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## TWIN-WIN-CERTIFICATE

### Win In Case Of Rising And Falling Markets

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## TWIN-WIN-CERTIFICATES

### TWIN-WIN-Certificates – Profit From The Ups OR Downs

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#### TWIN-WIN-certificates offer:

- participation in rising as well as in falling markets
- unlimited and full participation in the positive performance of the underlying (could even be leveraged!)
- negative performance of the underlying is paid as positive performance as long as the PROTECT-Level is not breached during the observation period

#### Ideal for following market expectations:

- uncertainty about positive performance of the underlying
- decline in price can not be ruled out

- **benefit from over proportional participation rate**
- **risk buffer, chance of unlimited profits**
- **cede of dividends**

## TWIN-WIN-Certificate

<b>ISIN</b>	DE000SEL6ZE5
<b>Underlying</b>	DJ EURO STOXX 50
<b>Price Underlying</b>	3.850,16 points
<b>Start</b>	5 February 2008
<b>Maturity</b>	25 June 2010
<b>Strike Price</b>	3.850,00 points
<b>PROTECT-Level</b>	2.500,00 points = 64,93%
<b>Leverage</b>	1,25
<b>Offer Certificate</b>	101,63 Euro

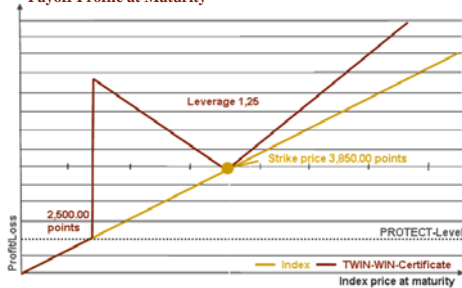
*Indicative Levels are based on current market data on 15 May 2008. The figures represent gross performance and do not include any provisions.*

### Redemption

At maturity the investor will participate in the positive performance with a leverage of 1,25 (that is to say if the index closes above the strike price), if the PROTECT-Level has not been breached. Should the underlying close below the strike price on the observation date, the negative performance is paid as a positive performance as long as the PROTECT-Level has not been breached during the observation period. If the PROTECT-Level is hit during the observation period, the redemption amounts to the closing level of the underlying on the valuation date, BUT the investor still has the possibility to participate with the leverage of 1,25 above the strike price in rising markets.

- Ideal structured product:
  - participation in rising as well as in falling markets
  - unlimited and full participation in the positive performance of the underlying (could be even leveraged!)
  - negative performance of the underlying is paid as a positive performance as long as the PROTECT-Level is not being breached during the observation period
- Ideal condition for a launch of the structured product:
  - high dividend yields/ high implied volatilities/ high interest rate differential (e.g. USD against JPY)

### Payoff Profile at Maturity



## INVESTMENT STRATEGIES WITH CERTIFICATES

### Classification Of Risk In A Dynamic Way And Rating Of Certificates



## Perception of Risk and Types of Certificates

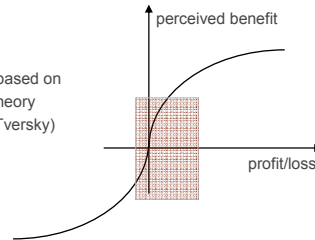
Large preference to avoid worst case risks after 2000-2003

- capital guaranteed certificates

• the investor is particularly sensitive to small losses

- bonus certificates
- express certificates
- parachute certificates

Utility function based on  
Prospect Theory  
(Kahnemann/Tversky)



• expectations of decreasing market oscillation (volatility)

- discount certificates
- bonus certificates

## Risk Features Of Certificates

The risk of certificates depends on:

- type of certificate
- payoff feature
- underlying(s)
- maturity
- foreign exchange risk
- risk free interest rate
- creditworthiness of issuer

**the risk is dynamic**

Methodical standards for measuring risks of certificates:

- objective and comprehensive risk valuation
- comparability of investment types and issuers
- capturing particular details of structured products
- consideration of risks: price changes, interest rate, foreign exchange, volatility and issuer

**Use VaR to rank structured products by risk classes**

## Concept of Value at Risk

VaR describes the risk of losses in Euro (or in %):

- indicates a theoretical maximum loss that is not exceeded with a very high probability

Therefore three factors are crucial:

- holding period (10 days)
- confidence level (99%)
- investment amount (10.000 €)

VaR marks a point on the probability curve of possible yields.

**VaR can be calculated both for single and overall positions.**

## Implementation of VaR Values in Risk Classes

Determination of risk classes on the basis of VaR for benchmark investments

- estimated period of five years
- VaR refers to the investment amount of 10.000 EUR

Risk Class	Limit in EUR	Benchmarks	Investor Type
1	$0 < \text{VaR} \leq 250$	fixed income indices ( 1 - 5 years)	safety driven
2	$250 < \text{VaR} \leq 750$	i.Boxx Europe, EMU Bond Index	willing to take limited risk
3	$750 < \text{VaR} \leq 1.250$	ATX, DAX, DJ EuroStoxx 50, Dow Jones, S&P 500	willing to take risk
4	$1.250 < \text{VaR} \leq 1.750$	members of indices (average)	willing to take increased risk
5	$1.750 < \text{VaR} \leq 10.000$	volatile small shares (e.g. Shares of solar companies)	speculative

VaR Werte For Certificates (15 April 2008)

Product	ISIN	Maturity	VaR 10 days	Risk Class	Underlying	VaR 10 days
PROTECT- Bonus- Certificate	DE000SBL66M8	22 September 2009	796,05	3	DJ EURO STOXX 50	843,76
TWIN-WIN- Certificate	DE000SEL6ZE5	25 June 2010	891,55	3	DJ EURO STOXX 50	843,76
CLASSIC- Reverse Convertible	DE000SEL6TK5	23 December 2008	714,31	2	Schoeller-Bleckmann Oilfield Equipment AG	1,299.00
CLASSIC- Discount- Certificate	DE000SDL0V93	23 December 2008	936,92	3	Komerčni Banka AS	1,083.00
CLASSIC- Express- Certificate	DE000SCL6FH2	7 April 2011	851,61	3	DJ EURO STOXX 50	843,76

Development of the certificate market,  
respective size and market analysis

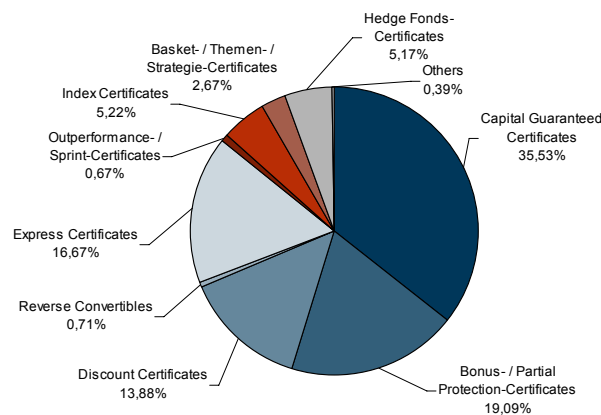


## Development Of The Certificate Market And Its Respective Size

- In 1989 the first certificate was issued – it was a participation note on the Dax index.
- The size of the market has grown to be significant:
  - the German market is the largest and has been estimated at 136 billion Euro end of March 2008 (source: Derivate Forum).
  - in Austria the market volume of the five biggest issuers amounts to 5,4 billion Euro. The total market is estimated to be about 12 billion Euro (source: Zertifikate Forum Austria).
- huge growth rates are expected:
  - Germany: in 2007 the volume in certificates rose by 17.2%. By 2010 volume is expected to increase to 194 billion, that is a further increase of 20% p.a.
  - Austria: in 2007 the market volume of certificates grew by 19,9% - it is expected that in 2008 the market will rise by 20%.

## Market Analysis - Breakdown Of The Market By Product Categories In Germany

### Open interest in investment products by product category as of 31 March 2008

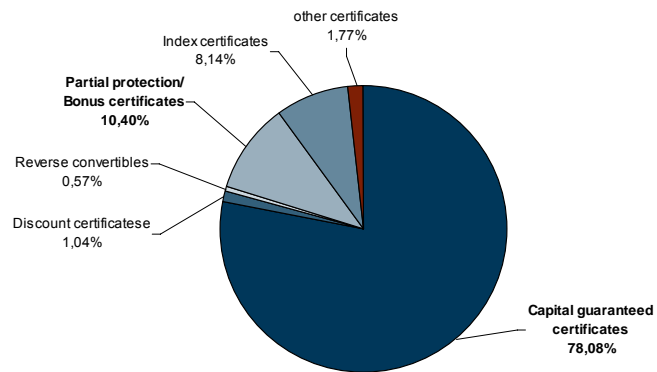


Source: Deutscher Derivate Verband



## Market Analysis – Breakdown Of The Market By Product Categories in Austria

### Open interest in investment products by product category as of 31 March 2008



Source: Zertifikateforum

## Q&A...



**Thank you for your attention!**

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1010 Vienna/Austria  
www.oppenheim-derivate.at

+43 (1) 518 66 - 24 24

[derivate@oppenheim.at](mailto:derivate@oppenheim.at)

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Team Klassische Medien  
50667 Cologne

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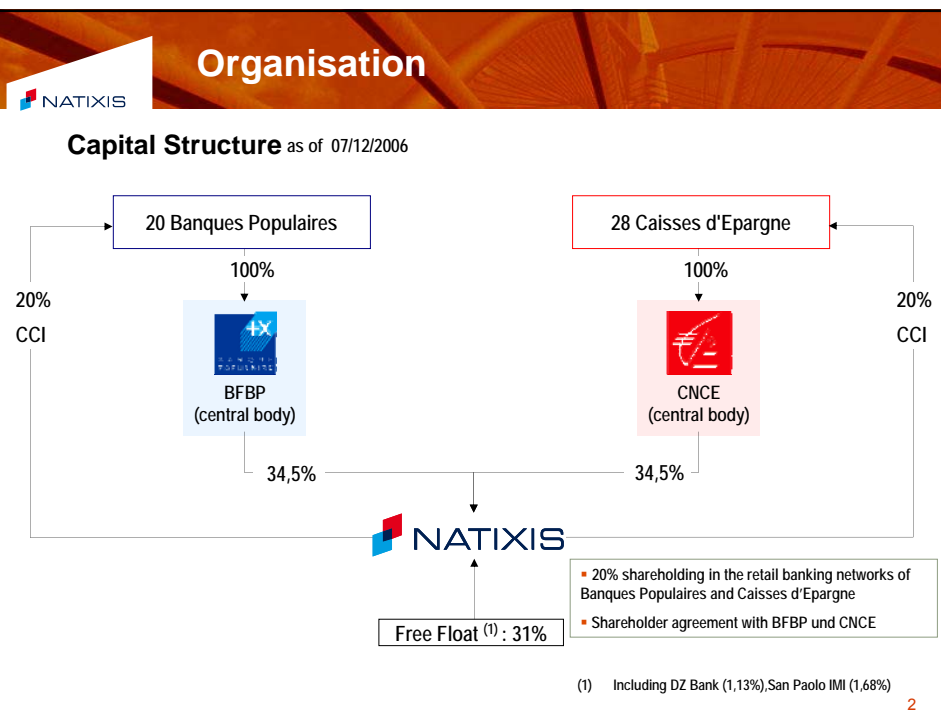
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## Innovation in Stock-Related Products

May 2008  
Frankfurt

Ales Jelinek, NATIXIS

Im Trutz Frankfurt 55  
D-60322 Frankfurt am Main  
Tel: (+49) 69 97153-367  
Fax: (+49) 69 97153 102



### Popular correlation products in recent years



- 100% capital protection
- Maturity: 3-5 years
- Underlying: Basket of Stocks (15-30 stocks, global exposure)

#### Examples:

- Altiplano, Corridor
- Swing
- Everest
- Cappuccino

3

### Altiplano:



$$C(t) = \begin{cases} X\%, & \text{if } S_{it} > \text{Barrier} \times S_{i0}; X\%: \text{Coupon (e.g. 10\%)} \text{ depends on the Performance of the Stocks} \\ Y\%, & \text{if } S_{it} \leq \text{Barrier} \times S_{i0}; Y\%: \text{Minimum Coupon, e.g. 1,50\%} \end{cases}$$

- Observation: yearly, monthly, daily
- Coupons depending on the number of stocks that break the barrier during the observation period
- Catch-Up mechanism
- Lock-In mechanism
- Take-Out mechanism
- Corridor: higher coupon; reduction of the coupon dependent on the number of stocks that break one of the barrier (upper barrier or lower barrier)

4

## Correlation Products - Still Space for Innovations?

### Swing:

$$C(t) = \text{Max} \left\{ \text{Min}_{j=1}^n \left| \frac{S_{jt}}{S_{j,t-1}} - 1 \right|; Y\% \right\}; Y\% : \text{minimum coupon, e.g. 3\%}$$



- **Observation: yearly**
- **Minimal coupon guaranteed;**
- **Coupon paid dependent on the stock with the minimum absolute performance**
- **Option with a low probability of positive intrinsic value at maturity**
- **Lock-In mechanism**

5

## Correlation Products - Still Space for Innovations?

### Cappuccino:

$$C(t) = \text{Max} \left\{ Y\%; \frac{1}{n} \times \sum_{j=1}^n R_j \right\};$$

Y% : Minimum coupon, e.g. 2%;

$$R_j = \text{e.g. 13\% for } \frac{S_{jt}}{S_{j0}} > 1, \text{ else } R_j = \frac{S_{jt}}{S_{j0}} - 1$$



- **Observation: yearly**
- **Floor-alternative**

6

## Correlation Products - Still Space for Innovations?

### Everest:

$$C(t) = \text{Max} \left\{ Y\%; X\% + P \times \text{Min}_{j=1}^n \left[ \frac{S_{jt}}{S_{j0}} - 1 \right] \right\}$$

Y% : minimal coupon of e.g. 2%;

X% : basic coupon of e.g. 8%;

P : participation, e.g. 30%



- **Coupon as a sum of the basic coupon (X%) and the participation (P) on the worst performing stock**
- **Minimal coupon guaranteed**
- **Observation: yearly, monthly, daily**
- **Lock-In mechanism**
- **Take-Out mechanism**
- **Target Redemption**

7

## Correlation Products - Still Space for Innovations?

### Everest „Best x Worst“

$$C(t) = \text{Max} \left\{ Y\%; X\% + \text{Max}_{j=1}^n \left[ \frac{S_{jt}}{S_{j0}} - 1 \right] \times \text{Min}_{j=1}^n \left[ \frac{S_{jt}}{S_{j0}} - 1 \right] \right\}$$

Y% : minimal coupon, e.g. 1%;

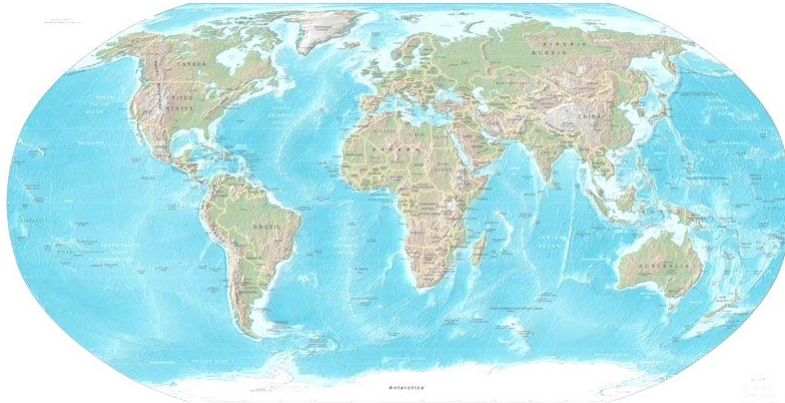
X% : basic coupon, e.g. 10%



- **Higher coupon if the dispersion of the two stocks (best and worst) declines**
- **Product may have a positive performance even on a bear market, especially if even the best performing stock has a negative performance**

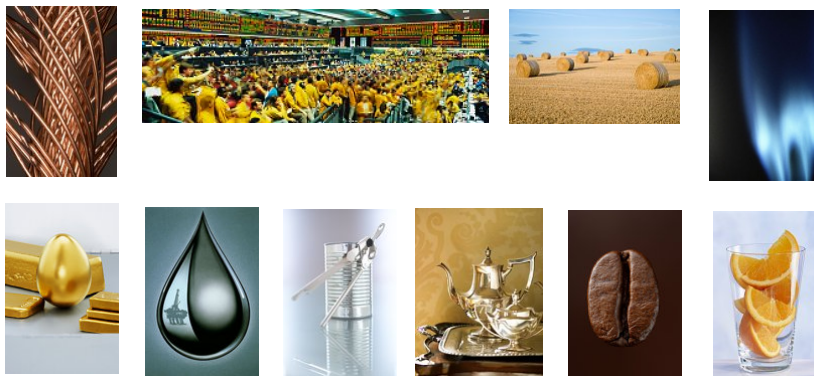
8

## New Underlying Assets Constitute the Product Innovations



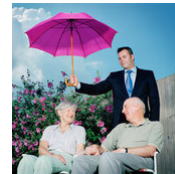
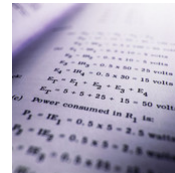
## New Underlying Assets Constitute the Product Innovations

### **Commodities:**



## New Underlying Assets Constitute the Product Innovations

- **New Indexes (Themes)**
- **Dynamic Indexes (basket composition depends on the given algorithm)**
- **Alternative Assets (e.g. life insurance policies on the secondary market)**



11

## Global Alpha Rotator

- **Dynamic strategy**
- **Stocks selection (15) from a pool of 200 stocks**
- **Selection criterion: Sharpe Ratio**
- **Underlying: 5 stocks with the highest value of Sharpe Ratio**
- **Yearly rebalancing and new selection**
- **100% capital guarantee**
- **Maturity: 3 years +**
- **Participation on the performance of the underlying**



12



## Alpha-Products

### Alpha Express Structures (Index vs. Index):



- **Coupon and early cancellation with redemption = 100% in case of outperformance after the first year**
- **Double coupon and early cancellation with redemption = 100% in case of outperformance after year 2**
- **Capital guarantee or conditional capital guarantee at maturity in case that there was no outperformance in previous years**

13

## Alpha-Products

### Capital Guaranteed Structures (Basket of Stocks vs. Index):



$$C(t) = \text{Max.} \left\{ Y\% ; \frac{1}{n} \times \sum_{j=1}^n \text{Min.} \left[ \frac{S_{j,t}}{S_{j,0}} - \frac{I_t}{I_0} ; \text{Cap} \right] \right\}$$

Y% : minimum coupon, e.g. 2%; Cap : e.g. 10%

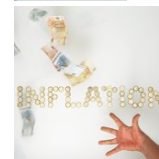
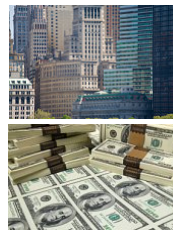
- **Coupon depends on the average relative performance of the underlying stocks versus index**
- **Minimum coupon payment**
- **Cap**

14

## Hybrid Products

- **Mixture of different Asset Classes:**

- **stocks**
- **bonds**
- **inflation**
- **real estate**
- **commodities**
- **currencies**
- **alternative assets**



- **Participation products:**

- **usually capital guaranteed**
- **usually one final payoff**
- **optimisation mechanism very popular („Rainbow“, „Himalaya“, „Best of“)**

15

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16



## Derivative use in the Czech asset management and pension funds industry – legislative framework

“Derivatives and risk management in the new EU regulatory landscape”

Institute for financial market seminar

22 May 2008

Michal Franěk

Ministry of finance Czech Republic



## Collective investment – UCITS funds

- Investments in derivatives – Act on Collective Investment („ACI“) - harmonised with 85/611/EC UCITS Directive („UCITS“).
- Soon harmonised with 2007/16/EC implementing Directive („ID“) - clarification of certain definitions of UCITS Directive



## Collective investment – UCITS funds 2

- 1) Purpose of derivative investments
  - As a part of fund's investment policy (§ 26/1/g ACI; Art. 19/1/g and Art. 21/3/3rd indent UCITS)
  - As a part of fund's employment of techniques and instruments used for efficient portfolio management (§ 27/2 ACI and its implementing decree No. 604/2006; Art. 21/2/2nd sentence UCITS and Art. 11 ID)



## Collective investment – UCITS funds 3

- 2) Types of eligible derivative instruments
  - a) derivatives dealt in on regulated markets (§ 26/1/f) ACI; Art. 19/1/g)/1st sentence UCITS and Art. 8 ID)
  - b) OTC derivatives under specific conditions (§ 26/1/g) ACI; Art. 19/1/g)/2nd sentence UCITS and Art. 8 and Art. 9 ID)



## Collective investment – UCITS funds 4

- 3) Duties of managers regarding derivatives investments
- a) to employ a risk-management system (to monitor and measure risk, to assess of the value, to communicate it to supervisor) - § 27/1 ACI; Art. 21/1 UCITS
  - b) to follow investment limits - § 27/3-7, § 28/5 ACI and § 4, 5 of implementing decree No. 604/2006; Art. 21/2,3 and 22/1/2nd indent



## Collective investment – non-UCITS funds marketed to public

- Legal rules for derivative investments mirroring those applicable to UCITS funds
- a) non-UCITS funds investing in transferable securities – see § 49b/2-6, § 51/1/f) ACI and implementing decree No. 604/2006
- b) non-UCITS funds of funds – see § 49/2-6 ACI and implementing decree No. 604/2006 and also § 51/1/f) with regard to § 55/6,7 ACI
- c) open-ended real-estates funds – just for efficient portfolio management - see § 49b/2-6 ACI



## Collective investment – non-UCITS funds marketed to qualified investors

- No rules applicable to derivatives investments in ACI; depend on founders' and managers' decision
- Investment policy (i.e. including derivative investments) must be specified in prospectus



## Pension funds

- Pension fund may employ derivatives investment only for hedging purposes (§ 33/7 of State contributory supplementary pension insurance Act) and representing no more than 5% of its assets (§ 34/4/2nd sentence)



## Future

- Less quantitative limits in legislation, more risk-based approach?
- This would require change of UCITS Directive in case of UCITS funds



## Thank you!

Contact: [michal.franek@mfcz.cz](mailto:michal.franek@mfcz.cz)

[jan.sovar@mfcz.cz](mailto:jan.sovar@mfcz.cz)

## Derivatives and pensions funds – CZ case

Viktor Kotlán  
Director, Institutional Asset Management  
Email: vkotlan@csas.cz

### TOPICS

---

- Philosophy of regulation
- Hedging vs. speculation
- Derivatives vs. structures
- Conclusions



## PHILOSOPHY OF REGULATION

- Industry concept – dealing with other people's money
- Versus: sophisticated investors (compare municipalities, non-fin corporations, ...)



## HEDGING VS. SPECULATION

- Thin line btwn protection and risk taking
- Definition of the limit (5%): volume vs. exposure?
- Matching IR risk with swaps out of the limit?



## DERIVATIVES VS. STRUCTURES

### - What is more risky:

- Discount certificate (non-derivative?)

vs

- Structured bond (derivative)



### - How will you tell in legislation?

## CONCLUSIONS

### - Disclosure over regulation

### - Industry standards and peer pressure

- ?





## Asset-Liability Management & Optimized Strategic Asset Allocation

*Benefits of Structured Investments*

May 2008

Tomas Hochmeister

The **Banker**

ALM FIG BANK OF THE YEAR 2007



Equity Derivatives House of the Year

# Asset-Liability Management & Optimized Strategic Asset Allocation

## Benefits of Structured Investments

May 2008

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Equity Derivatives House of the Year

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The attention of investors is drawn to the fact that, by the maturity date, the price of certain products can be subject to an important volatility due to the evolution of market parameters and more precisely the price of the underlying instrument and the interest rates. The potential return may be reduced by the effect of commissions, fees or other charges.

Certain products embed leverage i.e. either the issuer of these products may borrow funds to invest more than 100% of the amount initially invested by the investor in the underlying assets or the issuer of an underlying instrument may borrow funds to invest more than 100% of its assets in other assets, which involves in both cases further risks. Therefore, the value of these products will amplify the upwards and downwards movements in the value of the underlying assets or in the value of these other assets, and these products may even have no value.

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Back testing permits the calculation of returns that the product would have had if it had been launched in the past, presented according to the maturity date. It allows an understanding of how the product would have performed at different market stages over previous years.

For certain Products with a capital protection, such capital protection is only ensured on the Maturity Date, and the secondary market price of the Notes may fall below this capital protection during the life of the Notes. Moreover the investor should be aware that the capital protection feature requires for the Issuer, the Guarantor and/or their affiliates, to enter into hedging transactions which have a cost and which may affect the market price, liquidity or value of the Notes, especially when comparing them to the market price, liquidity and value of the underlyings of the Note.

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## **Benefits of Structured Investments**





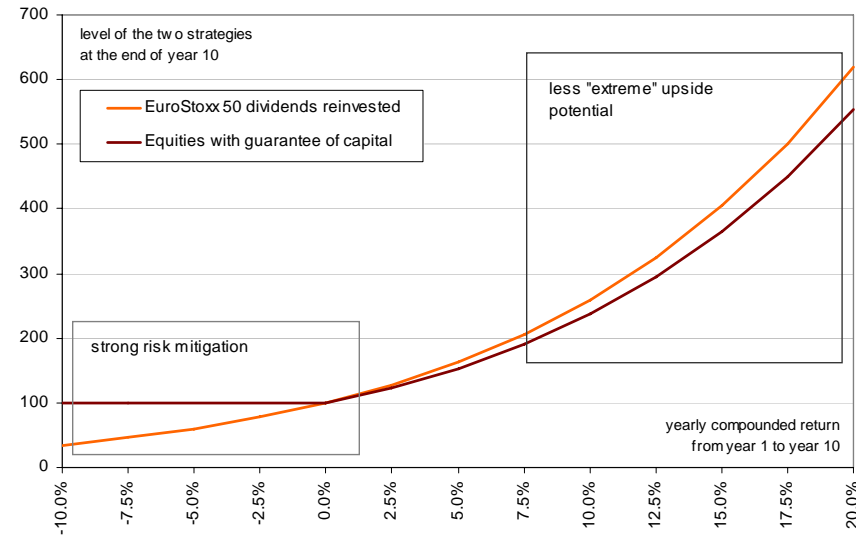
# Why to invest in structured solutions ?

## Reason #1 - Achieving a better Risk / Return profile

### Towards a better Risk Management

- **Based on current risk management tools**, it is possible to mitigate the risks borne by an institution which invests in various asset classes such as equities
- **Tailor-made structured investments allow to adjust the risk / return profile of the asset classes**
- For instance:
  - ▶ reduction of the downside risk
  - ▶ vs. give-up of some extreme potential upside
- **Consequence:**
  - ▶ better balance between expected return and risks borne
  - ▶ more comfort by the institutions which do not need to worry in distressed market conditions and buy at then expensive levels protection

### Example: two investments in equity markets



	equities		risk-control solution		
	value	return	value	return	
<b>expected</b>	206	<b>7.5%</b>	196	<b>7.0%</b>	
VaR 95.0%	61	-4.8%	100	0%	10 years horizon
VaR 97.5%	49	-6.9%	100	0%	
VaR 99.0%	39	-9.0%	100	0%	

- Similar expected returns
- Extreme downside risk significantly mitigated

## Why to invest in structured solutions ?

*Reason #2 - Access to a new asset class which provides diversification*

### What we call « hidden assets »

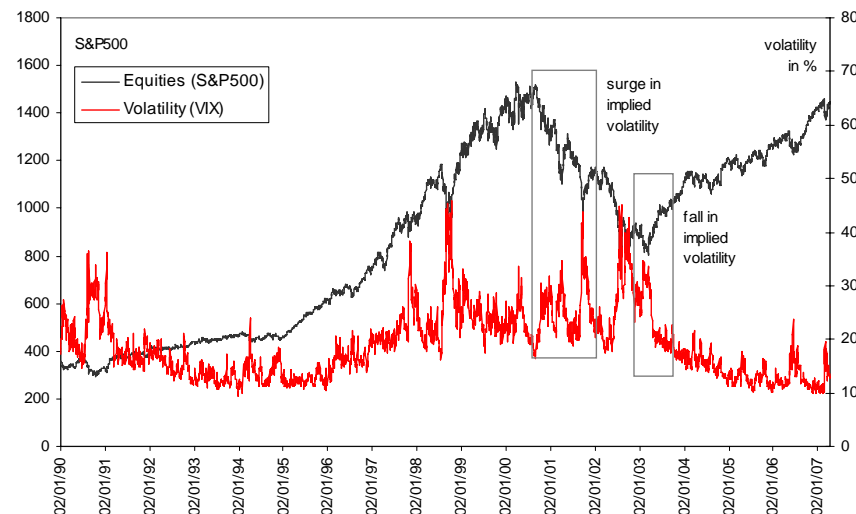
- **Structured investments can give access to new asset classes which are not directly available in the traditional markets: what we call the « hidden assets »**

- ▶ volatility
- ▶ dividends
- ▶ correlation
- ▶ dispersion
- ▶ gap risk
- ▶ etc.

- **What brings hidden assets:**

- ▶ diversification
- ▶ investment opportunities

### Example: benefits of an exposure to implied volatility



- Implied volatility reflects the uncertainty in the markets. It tends to increase significantly in periods of crisis
- Historical correlation with equity returns: -67%
- An exposure to implied volatility provides strong diversification benefits
- It is an asset class which has raised a lot of interests from financial institutions in the past two years

## Why to invest in structured solutions ?

### Reason #3 - Benefit from Market Opportunities, the Warren Buffet case

#### Market Opportunities

- **Aside diversification, structured investments allow to take advantage of financial market conditions compared to financial institution long-term views**
- **A mismatch between financial market prices and financial institution long-term expectations:**
  - ▶ market prices reflect an equilibrium between supply & demand and change constantly
  - ▶ pension funds expectations reflect a long-term investor perspective and are stable
- **For example, in a low risk / low implied volatility situations, the market might give a very cheap price for equity upside potential whereas a long-term institution might not change its expectations in the long-term for equity markets**
- **In such a situation to invest in equities through an option-based strategy vs. a direct investment would be particularly attractive**

#### The Warren Buffet Case

- **Warren Buffet, through its investments with its holding Berkshire Hathaway, changed radically his mind**
    - ▶ 2002: "I view derivatives as time bombs"
    - ▶ 2006: "derivatives, just like stocks and bonds, are sometimes wildly mispriced. [ ... ] We currently have 62 contracts outstanding. I manage them personally"
  - **Warren Buffet took a significant position in equity markets by selling long-dated equity put options**
    - ▶ market view: equity markets will not be lower than today in 10 to 20 years
    - ▶ to take this position requires a structured solution
    - ▶ more than USD 5bn collected as option premium in 2007
- (source: Berkshire Hathaway, Shareholders Letter 2007)*



## Why to invest in structured solutions ?

### Reason #4 - Dynamic Management and optimisation of Market Timing

#### About dynamic management and Market Timing

- **Once the strategic asset allocation decision has been taken, it is important to be comfortable on:**
  - ▶ the « market timing » of the investments
  - ▶ as well as the market timing of potential adjustments
- **This service can be provided by asset managers in a discretionary manner**, for example « balanced » managers as regards the **equity / bonds** or **equity / credit allocations**
- **Structured investments allow to address this need in a transparent manner by catching:**
  - ▶ lowest levels to invest in an asset class
  - ▶ highest levels to exit an asset class and invest in another

#### Example: coming back to the equity investment

- **A pension fund wishes to capture the highest level reached by equities with a 8 years horizon**
- **Example (\*)**: at maturity, the investor receives the maximum amount between:
  - ▶ 100% capital
  - and*
  - ▶  $80\% \times \text{EuroStoxx50MAX} / \text{EuroStoxx50initial} \times \text{capital}$   
*where* « EuroStoxx50MAX » represents the highest level reached by the equity index across 8 years with annual observations
- **Systematic and transparent optimisation of the market timing**

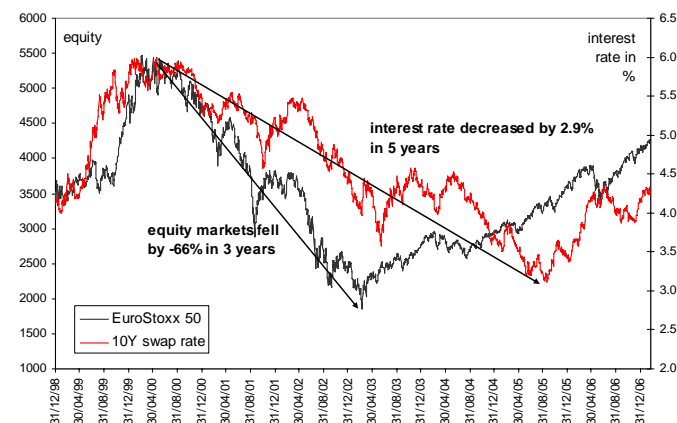
# Why to invest in structured solutions ?

## Reason #5 - Taking into account the Asset-Liability framework

### Meeting long-dated liabilities

- **Financial institutions have often long-dated liabilities / cash outflows objectives**
  - ▶ payments in 5, 10, 20 and 30 years
  - ▶ to pensioners (pension funds), policyholders (insurance companies) or back to the State / the local economy (sovereign accumulation funds)
- **They represent, from a mark-to-market perspective, a strong exposure to interest rate. We usually talk about the « duration » of liabilities**
- **A traditional investment in equities does not bring any particular sensitivity to interest rate. We usually say that equities do not have a specific duration**
- **As a result, a direct investment in equity markets entail an interest rate mismatch between assets and liabilities**
- **This mismatch is not optimal as interest rate risk is not rewarded**
- **Reflected by new Risk-Based European pensions & insurance regulation:** FTK (Netherlands), FSA (UK), SST (Switzerland), Solvency 2 (European insurance), Traffic-Light models (Sweden, Denmark), etc.

### Example: structured investments & duration



- **Structured investments, as soon as they present a « bond » format such as a guarantee of capital, provide « duration » to an asset class**
- **The « guaranteed capital » component can be seen as a zero-coupon bond**
  - ▶ if rates fall by 1%, the value of this zero-coupon bond will increase significantly
  - ▶ example: if the time to maturity of a guaranteed capital investment is 10 years, the value of the zero-coupon will increase by about 10%
- **As a result, from an Asset-Liability viewpoint, a structured investment can be better than a direct investment in a given asset class provided it manages to:**
  - ▶ maintain the expected return
  - ▶ provide a less risky profile
  - ▶ it behaves well when rates fall



## Appendices





# SG CIB, a global leader in Structured Investments

**The Banker**  
ALM FIG BANK OF  
THE YEAR 2007

2007

Celebrating 20 Years  
Of Innovation in  
Equity Derivatives



Risk 20th anniversary issue  
"Modern Great in Equity Derivatives"



The Banker Investment Banking Awards  
"Equity Derivatives House of the Year" 2007



Euromoney Awards  
"Best Equity Derivatives House" 2007



Risk Magazine  
"Equity Derivatives House of the Year" 2008



2006

Confirmation of  
SG Leadership and expertise



IFR  
Equity Derivatives House of the year 2006



The Banker Investment Banking Awards  
"Equity Derivatives House of the Year" 2006



Euromoney Awards  
Top Global Prize  
"Best Bank" 2006



Structured Products Awards  
"House of the Year Equity Derivatives 2006"

2005

Another  
Multi Awarded  
Year



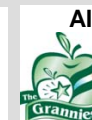
IFR  
Equity Derivatives House of the year 2005



Equity Derivatives House of the Year – Europe



Risk Magazine  
2006 Awards



Albourne 2006

SG:  
Most reasonable leverage provider  
Lyxor AM:  
Best Managed Account Platform

2004

The Grand Slam  
3 times  
« Worldwide Equity Derivatives House of the Year »



IFR  
Equity Derivatives House of the year 2004



Equity Derivatives House



Risk Magazine  
2005 Awards



Albourne 2004

SG:  
Most reasonable leverage provider  
Lyxor AM:  
Best Managed Account Platform



**In euro capital markets, derivatives and structured finance, all around the world, our people make the difference.**





# Changes to the CRD: Large exposures

Jiří Król



## Disclaimer

This presentation does not represent official  
views of the Ministry of finance.



## Structure of the presentation

- Definitions
- Look-through approach
- Reporting
- Discretions and the 800% limit
- Inter-bank exposures
- Intragroup exposures



## Definitions: group of connected clients

*Article 4, paragraphs 6 and 45*

(6) 'institutions', for the purposes of Sections 2, ~~and 3~~ and 5 of Title V, Chapter 2, means institutions as defined in Article 3(1)(c) of Directive 2006/49/EC;

(45) 'group of connected clients' means:

(a) two or more natural or legal persons who, unless it is shown otherwise, constitute a single risk because one of them, directly or indirectly, has control over the other or others;  
or

(b) two or more natural or legal persons between whom there is no relationship of control as set out in point (a) but who are to be regarded as constituting a single risk because they are so interconnected that, if one of them were to experience financial problems, in particular funding or repayment difficulties, the other or all of the others would be likely to encounter funding or repayment difficulties.



## Look through approach to securitisation positions, CIUs and „other items“ (Art. 106)

2. Exposures shall not include either of the following:

(a) in the case of foreign exchange transactions, exposures incurred in the ordinary course of settlement during the 48 hours following payment; or

(b) in the case of transactions for the purchase or sale of securities, exposures incurred in the ordinary course of settlement during the five working days following payment or delivery of the securities, whichever is the earlier.

3. In respect of exposures referred to in Article 79, paragraph 1, points m, o and p, where there is an exposure to underlying assets, a credit institution shall look through to the underlying exposures where it is aware of them in order to determine the existence of a group of connected clients.



## Inter-bank exposures (Art. 111)

1. A credit institution may not incur an exposure, after taking into account the effect of the credit risk mitigation in accordance with Articles 112 to 117, to a client or group of connected clients the value of which exceeds 25 % of its own funds.

(i) Where that client is an institution, this value may not exceed 25% of its own funds or the amount of EUR [X] million, whichever is higher.

(ii) Where a group of connected clients includes one or more institutions, a credit institution may not incur an exposure, after taking into account the effect of the credit risk mitigation in accordance with Articles 112 to 117, to all connected institutions the value of which exceeds the difference between 25% of its own funds or the amount of EUR [X] million, whichever is higher, and the sum of exposure values to the other connected clients that are not institutions. The sum of exposure values, after taking into account the effect of the credit risk mitigation in accordance with Articles 112 to 117, to other connected clients that are not institutions may not exceed 25% of a credit institution's own funds.

Member States may impose a lower amount than EUR [X] million.





## Discretions and the 800% limit

~~2. Where that client or group of connected clients is the parent undertaking or subsidiary of the credit institution and/or one or more subsidiaries of that parent undertaking, the percentage laid down in paragraph 1 shall be reduced to 20 %. Member States may, however, exempt the exposures incurred to such clients from the 20 % limit if they provide for specific monitoring of such exposures by other measures or procedures. They shall inform the Commission and the European Banking Committee of the content of such measures or procedures.~~

~~3. A credit institution may not incur large exposures which in total exceed 800 % of its own funds.~~

~~24. A credit institution shall at all times comply with the limits laid down in paragraphs 1, 2 and 3 in respect of its exposures. If in an exceptional case exposures exceed those limits, that fact value of the exposure shall be reported without delay to the competent authorities which may, where the circumstances warrant it, allow the credit institution a limited period of time in which to comply with the limits.~~



## Intragroup exposures (Art. 113)

~~2. Member States may fully or partially exempt from the application of Article 111(1), (2) and (3) exposures incurred by a credit institution to its parent undertaking, to other subsidiaries of that parent undertaking or to its own subsidiaries, in so far as those undertakings are covered by the supervision on a consolidated basis to which the credit institution itself is subject, in accordance with this Directive or with equivalent standards in force in a third country.~~

~~13. Member States may fully or partially exempt~~ The following exposures shall be exempted from the application of Article 111(1):

~~(f) asset items and other exposures secured, to the satisfaction of the competent authorities, by collateral in the form of debt securities issued by central governments or central banks, international organisations, multilateral development banks, Member States' regional governments, local authorities or public sector entities, which securities constitute claims on their issuer which would be assigned a 0 % risk weighting under Articles 78 to 83 exposures to counterparties referred to in Article 80(7) or 80(8). For this purpose, point (d) of Article 80(7) shall not be applied. Exposures that do not meet these criteria, whether exempted from Article 111(1) or not, shall be treated as exposures to a third party;~~



**Thank you for your attention!**



Brzobohatý Brož & Honsa

## UCITS Reform Management Company Passport

Institute for Financial Market Conference

Valtice, 22nd May 2008

Zdeněk Husták ([ZHustak@bbh.cz](mailto:ZHustak@bbh.cz))

BBH 6/6/2008

Slide 1



Brzobohatý Brož & Honsa

### Scope of Management Companies Activities

ANNEX II UCITS Directive

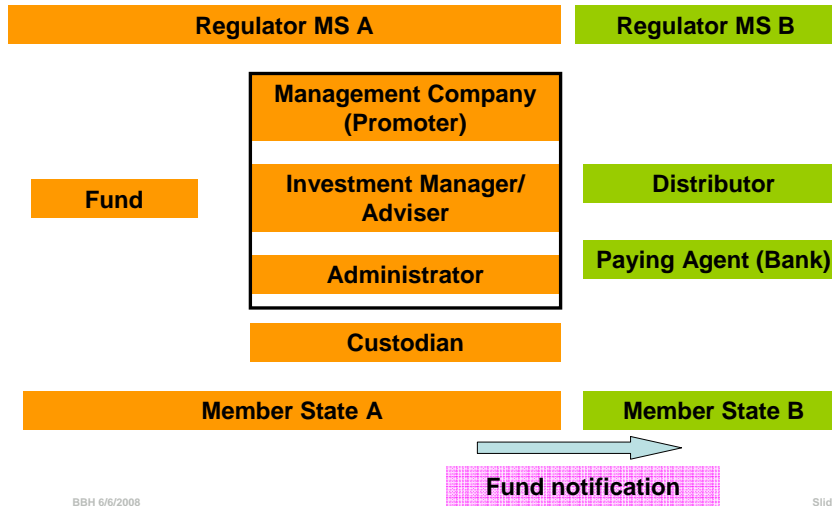
„Functions included in the activity of collective portfolio management“

- Investment management
- Administration:
  - legal and fund management accounting services
  - customer inquiries
  - valuation and pricing (including tax returns)
  - regulatory compliance monitoring
  - maintenance of unit-holder register
  - distribution of income
  - unit issues and redemptions
  - contract settlements (including certificate dispatch)
  - record keeping
- Marketing

BBH 6/6/2008

Slide 2

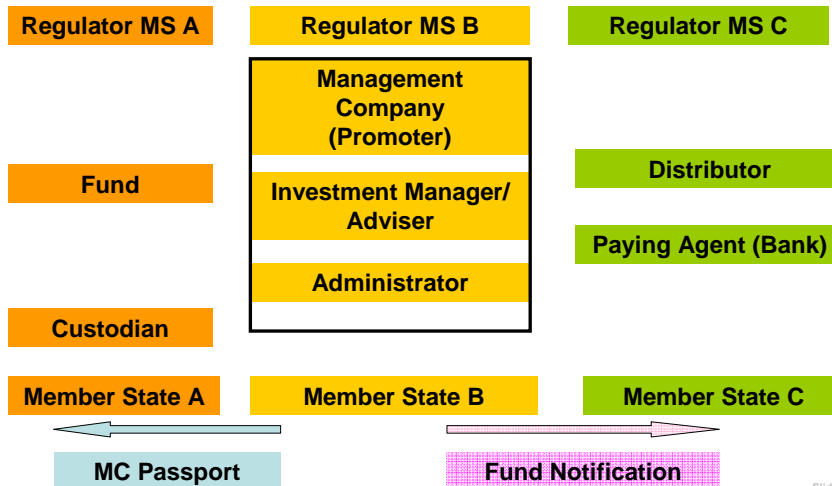
### Current structures



BBH 6/6/2008

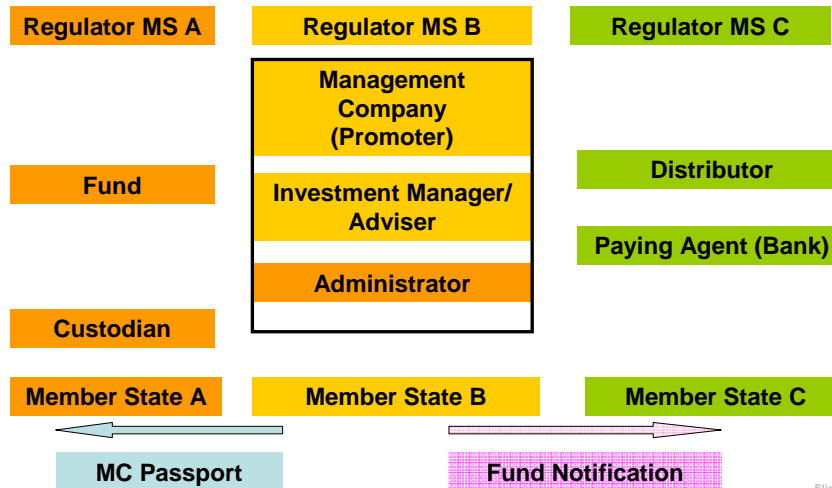
Slide 3

### Full Management Company Passport



Slide 4

## Partial Management Company Passport



## MC Passport and Risk Management considerations

- Responsibility of Management Company (Promoter) for risk management of a Fund
- Outsourcing issues
- Partial MC Passport
  - Will fund domicile member state require risk management function being conducted in this state /at least partially/?
  - What should be the role of a custodian in fund risk management from the regulatory perspective?
- Regulatory cooperation and „common approach“
  - Will there be a „common understanding“ of regulators of what the „standard“ risk management of fund looks like?
  - „Over-sensitiveness“ of some MS towards use of derivatives and some risk mitigation techniques

**Thank you for your attention**

**Contact**

Zdeněk Husták, of counsel  
Brzobohatý Brož & Honsa v.o.s., Attorneys at law  
Klimentská 10  
110 00 Prague 1, Czech Republic  
tel.+ 420 234 091 355  
e-mail: [zhustak@bbh.cz](mailto:zhustak@bbh.cz)  
web: [www.bbh.cz](http://www.bbh.cz)

# Internal Market for Asset Management Challenges for 2008 and later

*Didier MILLEROT  
European Commission  
DG MARKT G4*

DG Marché intérieur et services

1

## The main challenges

- How to build on the UCITS success story while taking account of market evolution?
- How to develop the Internal Market beyond UCITS, while making sure that there is clarity on products suitable for consumers vs more qualified investors?
- How to make sure that retail investors are provided performing and diversified investment opportunities, while keeping an appropriate level of information and protection?
- Need to take into account the new political environment: less legislative appetite (Single Market Review), need to build strong economic cases

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## The UCITS Reform

Basic idea: preserve the UCITS approach while improving the efficiency of its functioning

- Improve the notification procedure and develop the management company passport
- Provide new management opportunities: mergers and master feeder structures
- Improve disclosure rules: Key Investor Information

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## The UCITS Reform

Management company passport is the biggest challenge:

- Technically: allocation of responsibilities between home/host? supervision and enforcement of rules related to activities/risk management procedures performed on a remote basis (Common funds)? Funds/ManCo need proportionate and cost-effective procedures?
- Politically: UCITS IV is a package, MCP is a key part linked with other (master/feeder), better regulation constraints

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4



## **New IM developments: non-harmonised funds and private placement**

- Today, only UCITS benefit from IM passport
- Legitimate right for other products to get one but subject to better regulation test: 1) strong economic case 2) no undesired effect (both economic and legal)

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5

## **New IM developments: non-harmonised funds and private placement**

- Private placement: for what products? Which qualified investors? Impact assessment in May
- Non-harmonised funds: case built by OEREF industry report, need to evaluate case for other products (ex. Funds of Hedge funds) based on national experience. Retailisation study. Communication in the autumn.

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## Current debate on retail investment products

- Differences of legal framework/approach for products offered to retail investors? Is this a problem? Are some of these products mis-sold to consumers?
- Call for evidence in the autumn: maybe some issues of investor information/protection but no Commission conclusion yet (autumn)
- What is an appropriate level of consumer protection? Need for EU vs national action? Need to move from a sectoral to a more horizontal approach? What consequences?

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7

Masaryk University  
Faculty of Economics and Administration

Institute for Financial Market

# **Derivatives and risk management in the new EU regulatory landscape**

Edited by Ing. Gabriela Oškrdalová

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**INSTITUTE FOR FINANCIAL MARKET**

FACULTY OF ECONOMICS AND ADMINISTRATION, MASARYK UNIVERSITY

**A:** Lipová 41a, 602 00 Brno, Czech Republic **W:** <http://institute-fm.econ.muni.cz>