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Layout & Distribution: Valéria Kozakova

Tackling with Macroeconomic Trends and Tail-risks

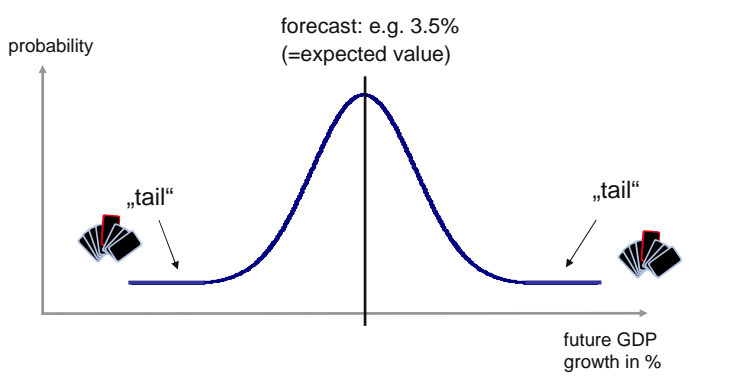
Clemens Muth

Tackling with Macroeconomic Trends and Tail-risks

Mounting tail-risks in the world economy



Increased number of "wild cards" at the tail



Tackling with Macroeconomic Trends and Tail-risks

Need to include tail-risk and trends into risk management

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Schematic Illustration of risk over time

- Current business environment characterised by acceleration of change and complexity
- Ignoring trends leads to distortions in risk modelling
- (Macroeconomic) tail risks cannot be modeled by typical market models
- Wall Street Consensus usually tends to underestimate downside risks

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Tackling with Macroeconomic Trends and Tail-risks

Significant tail risks at the eve of 2007

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- Geopolitical risks (e.g. new terrorist attacks, Iraq, Iran, N. Korea)
- Possible US recession triggered by slump in housing prices
- US twin deficit (budget, current account)
- Unusually low credit spreads
- Future development of energy prices
- Risk of global pandemic
- Structural change in credit markets

NAHB Housing Market Index (sentiment index of US home builders)

Source: MR Economic Research

→ Are tail risks adequately addressed by financial markets participants?

- Looking at the baseline forecast is not enough esp. nowadays
- Economists need to assess wild cards, not just to track the Consensus +/-
- Importance of integration of economists into risk management processes

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Tackling with Macroeconomic Trends and Tail-risks

Case study 1: More challenging environment for credit markets as central bank hikes work thru the economy

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Real GDP (in %) growth likely to cool down in 2007

Region	2005	2006e	2007e
USA	3.2	3.3	2.5
Euroland	1.4	2.3	1.8
Japan	2.6	2.7	1.8

Federal Reserve and ECB policy rate (in %)

Source: MR Economic Research

- Fed increased policy rate for the 17th time in a row to currently 5.25%
- ECB increased policy rate to 3.25% on Oct. 11
- Growth in industrialized countries is expected to cool down

Expected macroeconomic cooling

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Tackling with Macroeconomic Trends and Tail-risks

Case study 1: Are credit markets enough prepared for the upcoming cyclical cooling of the economy?

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- Structural change in credit markets
- Boom of the CDx market since the beginning of the century
- Increased role of non-banks in the credit market, incl.
 - hedge funds
 - pension funds
 - insurers
- Increased complexity of structures including administration/settlement

Global Credit derivatives outstanding (tn US\$)

Source: International Monetary Fund, April 2006

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Tackling with Macroeconomic Trends and Tail-risks

Case study 1: Thinking of a “wild card” on credit markets: A question of liquidity

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- Transparency on financial markets about „ultimate holder of credit risk“ limited
 - What is the likely impact of the changed market structure on default rates and LGD?
 - Are central banks informed enough to tackle a potential downside?
- Many banks heavily dependent on permanently liquid and functioning markets („deal flow risks“)
- May/June EM turbulences and GM/Ford case 2005 as early warning signals?

EMBI Global composite total return index

Source: JP Morgan

→ Do capital market participants (banks, non-banks) adequately measure and price liquidity risk as the new structural set-up of credit markets goes into its first economic downswing?

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Tackling with Macroeconomic Trends and Tail-risks

In the long-run

Mega-trends drive the global economy

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Macro economy			Market & regulation		
Globalization	Shift to Asia	Structural disinflation	Increasing transparency requirements	Consolidation	Value chain evolution
Politics & society			Nature & technology		
Demographic change	Urbanization	Orientation towards ethical values	Increasing speed of technological change	Climatic change	

→ Are firms adequately including mega-trend risks into their strategy and risk assessment?

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Tackling with Macroeconomic Trends and Tail-risks

Case study 2: Structural disinflation in major economies had to be incorporated by insurers

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Consumer Price Index 1981 – 2005 (% change)

Source: MR Economic Research

10y-govt.-bond yields 1990 – 2005 (in %)

Source: MR Economic Research

- Increasing deregulation (e.g. services industry) and international integration, reduced transportation and communication costs and competition leading to sustained price pressure
- More stable currencies, wage moderation, increasing pressure for fiscal discipline, supporting lower nominal interest rates
- Consequences for insurers had to be incorporated (example: guarantees in life insurance)

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Case study 2: Structural disinflation: Focus on CPI and wage inflation is not enough – example France

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Discrepancy between common price indices and claims inflation in France

- Included side effects of mega-trend “structural disinflation”
- Risk of inadequate incorporation into pricing and reserving esp. in casualty lines

French wage index, indices for medical costs and claims inflation

Source: MR Economic Research

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... but “mega-trend” structural disinflation could be seriously affected or reversed by “wild cards”

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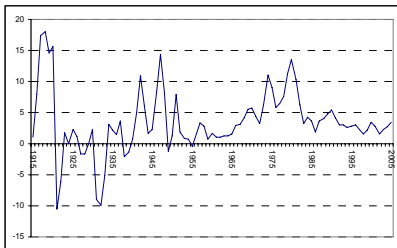
“Comeback of US Inflation”:

1. “100-year-event”:
US-inflation rises to 15%*
2. “30-year-event”:
US-inflation rises to 8-9%*
3. “20-year-event”:
US-inflation rises to 5%*



* illustrative

US CPI 1915-2005



Source: MR Economic Research

→ Are insurers adequately understanding and addressing the risk of inflation vs. the trend of structural disinflation?

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Tackling with Macroeconomic Trends and Tail-risks

Four questions for our discussion

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Q1 Are tail risks adequately addressed by financial markets participants?

Q2 Do capital market participants (banks, non-banks) adequately measure and price liquidity risk as the new structural set-up of credit markets goes into its first economic downswing?

Q3 Are firms adequately including mega-trend risks into their strategy and risk assessment?

Q4 Are insurers adequately understanding and addressing the risk of inflation vs. the trend of structural disinflation?

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