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Crisis: new risk factors.
Economical and accounting view

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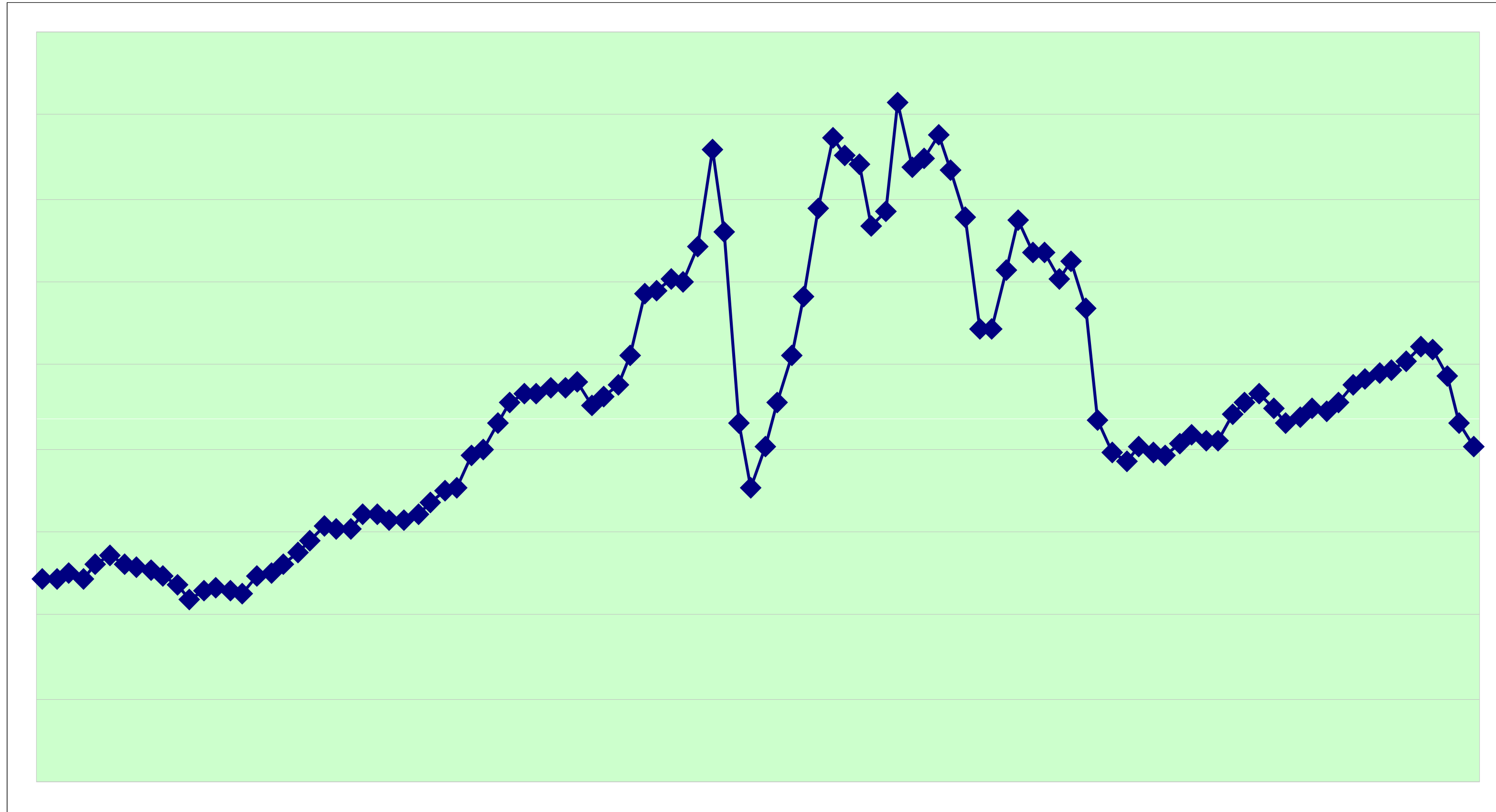
Moscow, June 2009

Classic example.
Please suggest what is it



Fill in notes

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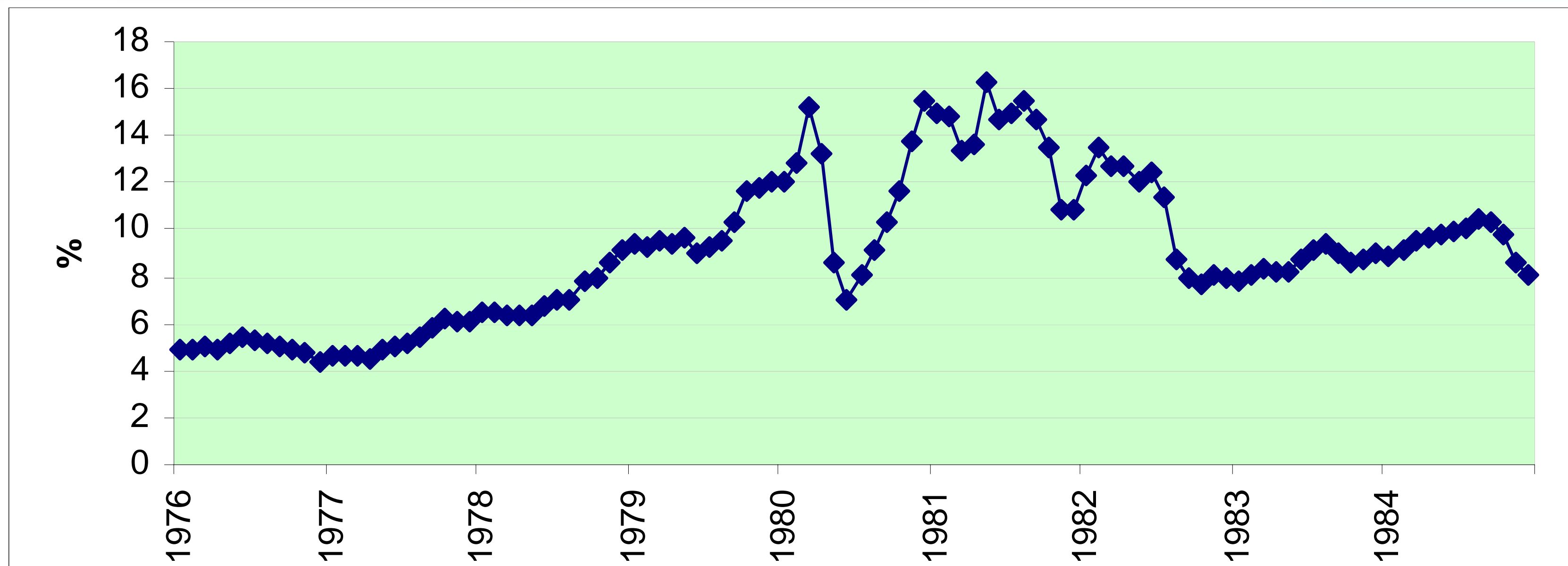
Classic example.
US Short term TB interest rates spike in 1970-80s



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Fill in notes

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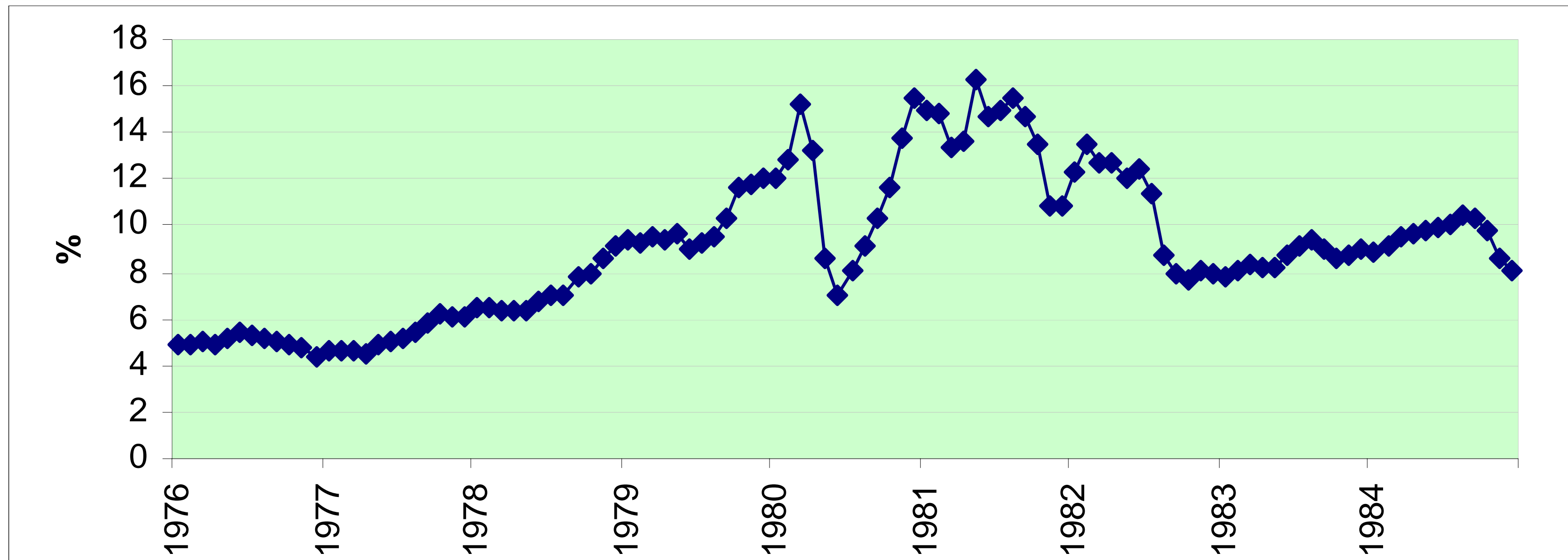

- Crisis in US S&L due to interest rate mismatch in BS: short-term funding vs long-term mortgages
- As one of results: explosive growth of OTC interest rate derivatives markets: since almost zero in 1985 up to USD 400+ trillions of outstanding amount in 1H 2008 (according to BIS survey)
- Standard approaches to hedge interest rate exposure
- Did they have any ground for not taking into account interest rate risk?

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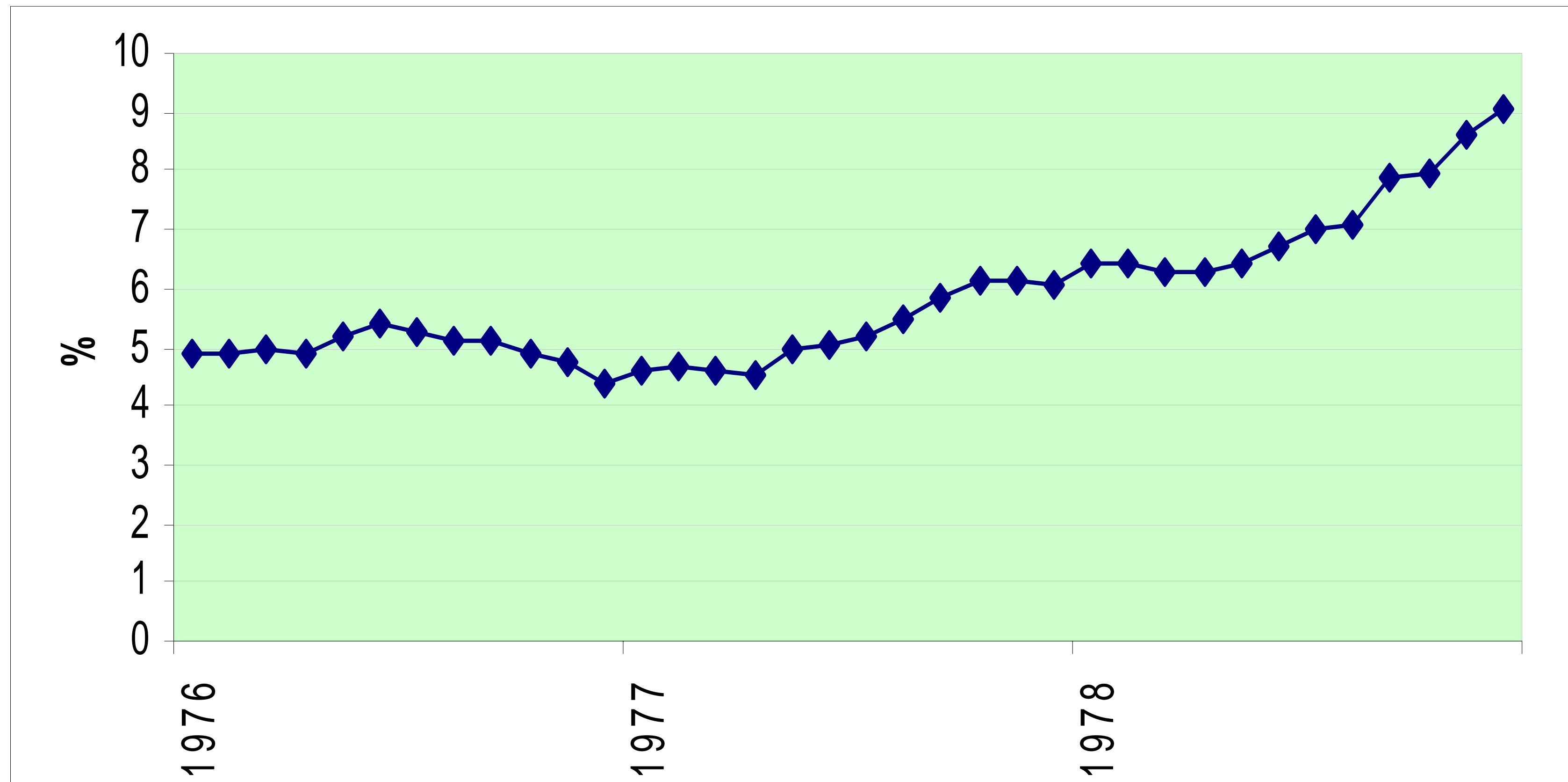
Classic example.
Up to 1978 interest rate risk was “residual”

- Yes, they did



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Interest rate risk management

- Some assumptions:
  - There are fixing floating rates that reflects short term money market activity (Libor, Euribor, MosPrime)
  - There exists possibility to raise money at floating rates
- These assumptions leads, for instance:
  - Theoretically OIS3M = Libor3M (for USD)
  - Libor1Y = IRS1Y
  - Basis swaps should be traded without spread
  - FX Swap implied yield = Short term interest rate
- Let us look on recent developments

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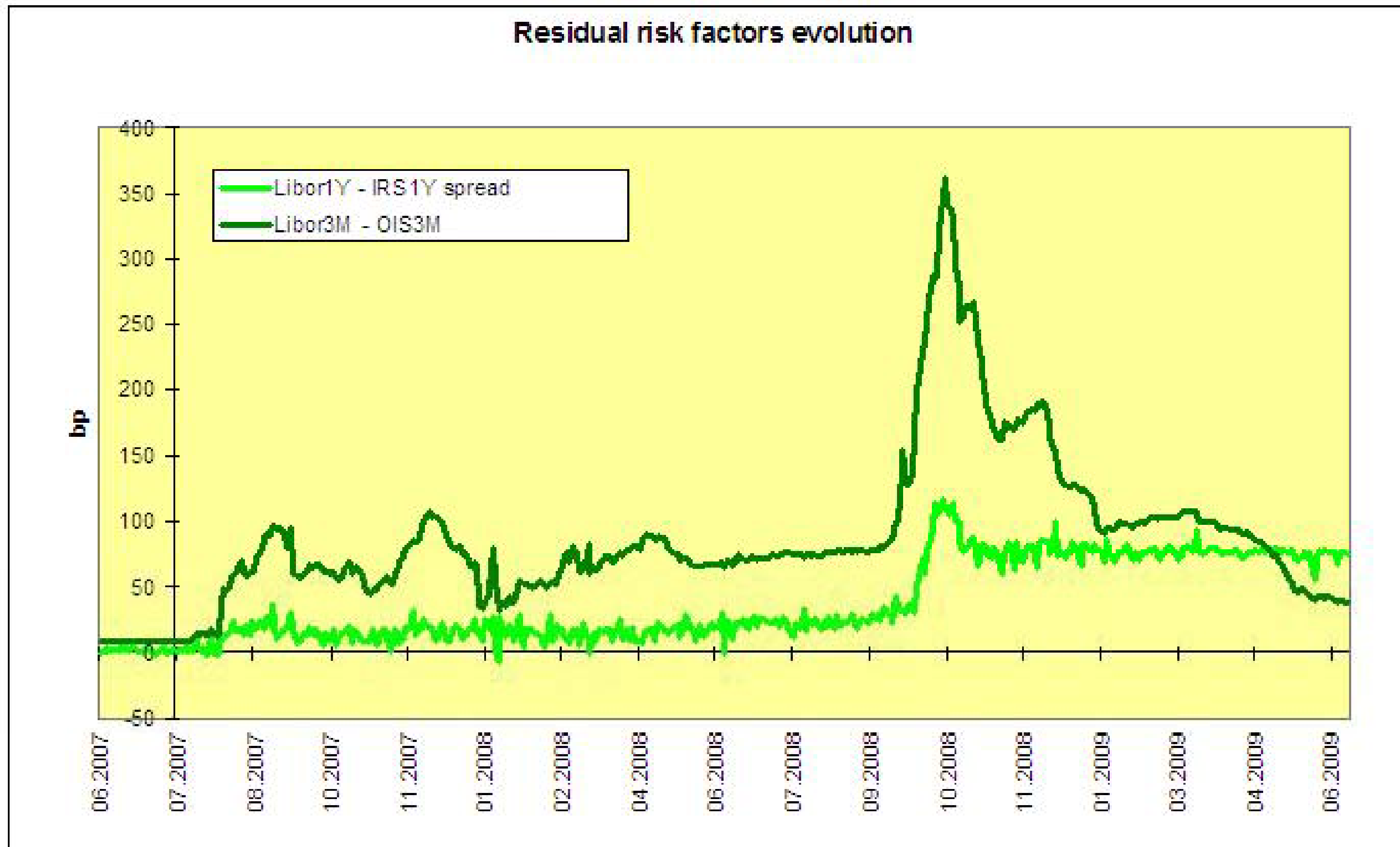
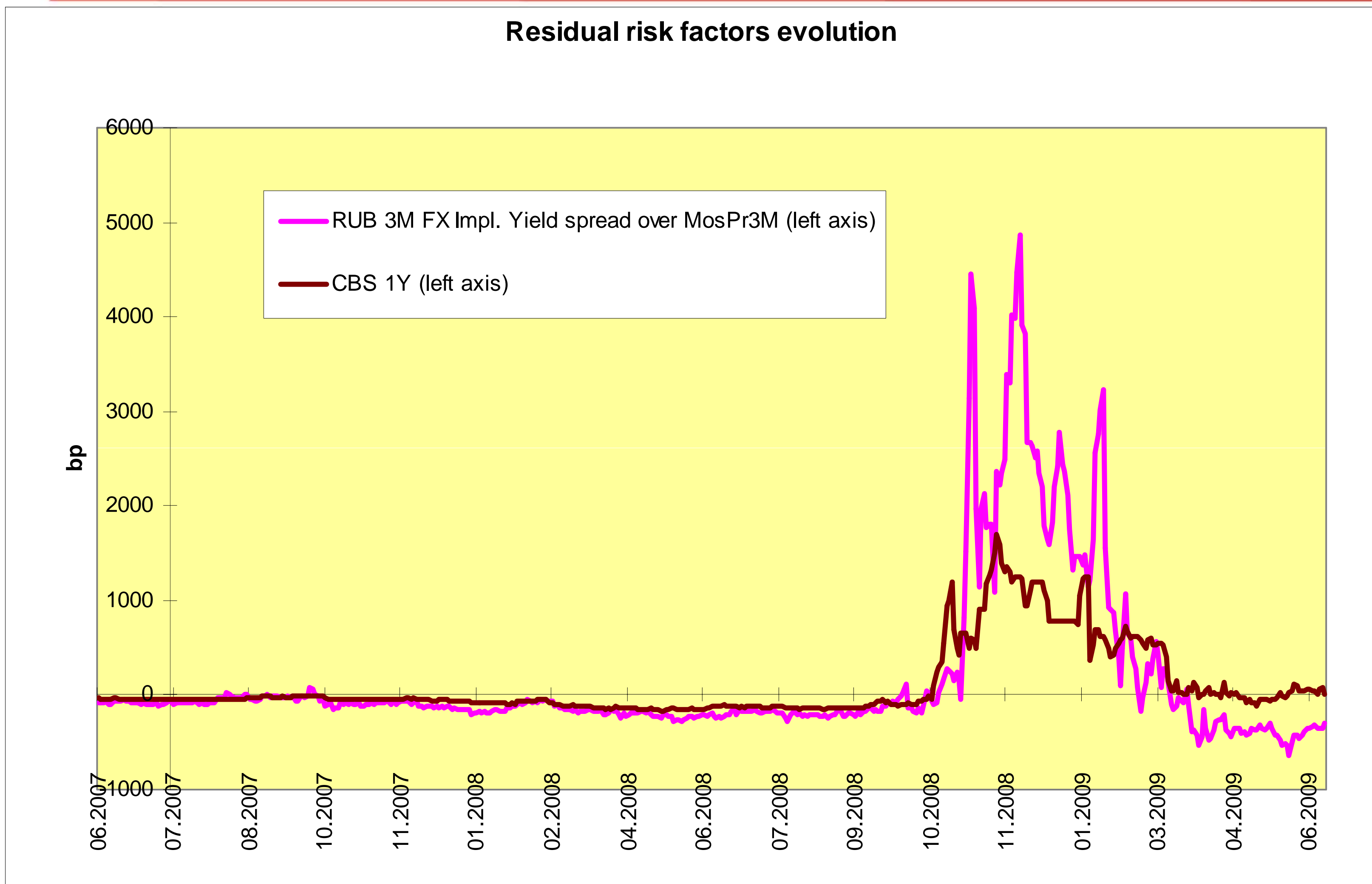
“Residual” risk factors evolution. 1/3
USD specifics



“Residual” risk factors evolution. 3/3
RUB specifics



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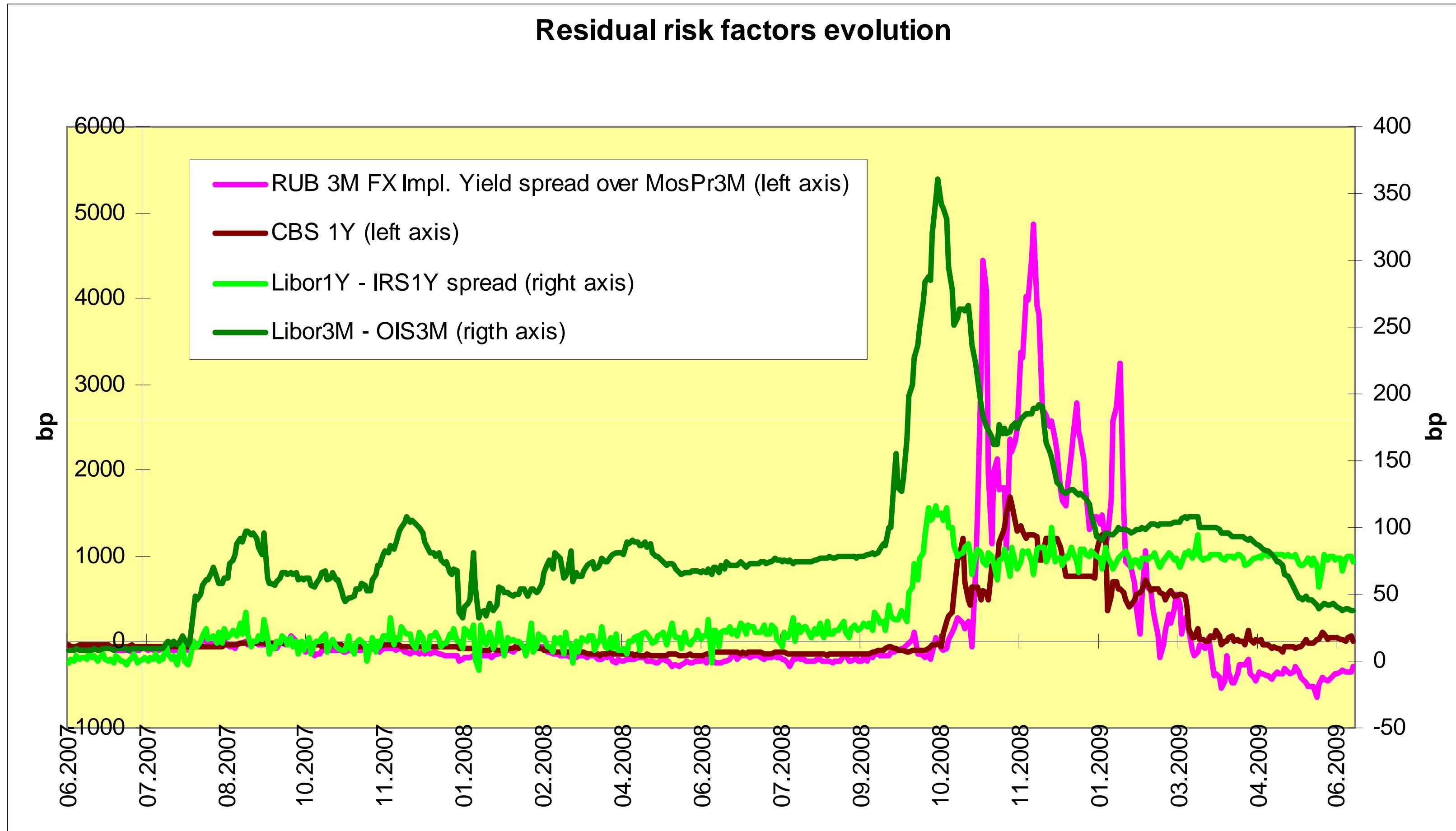
“Residual” risk factors evolution. 2/3
USD & RUB



- These risk factors are not residual no more!
- IRR model should be improved

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Example. Model BS

ASSET	LIABILITY
RUB: 100 mio USD equivalent 2Y loan MosPrime3M + spread	USD: 100 mio USD 2Y LIBOR3M Floater deposit
OFF BALANCE	
Roll-over 100 mio USD 3M FX Swap	

- Formally: NO Liquidity risk; NO FX risk; NO interest rate risk
- But greatly exposed to “basis” / “residual” risk : mismatch between FX Swap RUB implied yield and MosPrime 3M

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Approaches to manage liquidity and IR risks

- Standard approach:
  - Liquidity and interest rate risk are being managed separately
  - Interest rate risk is being managed separately for each currency using plain vanilla IRS
  - Liquidity is managed not taking into account currency of cash inflows and outflows
    - Thus CBR N3, N4 ratios are set across currencies – as normal practice
  - Basis risk is not taken into account

- This approach could lead to:
  - Significant un-manageable “basis” / “residual” risk

- To improved
  - Basis risk in the banking and trading books should be recognized and quantified
  - Liquidity is not managed across the currencies but the limits for single currencies should be introduced (the process ongoing)
  - Generally critically consider all implied assumptions
  - Stress test – brake of assumptions

Accounting vs Economical (risk management) view

- Risk management view: NPV, “fair value”
- Accounting view: IFRS (NPV of Trading book + Accruing of Banking book + Hedge accounting)
- Accounting view should be taken into account:
  - Accounting publishes official P/L that is considered by shareholders and all externals (auditors, rating agencies, counterparties)
  - hedge should not kill the bank (it should not generate IFRS P/L killing the bank)
  - killing of official profit will be not supported by management / shareholders
  - hedge accounting is one of the possible instruments but should be implemented very carefully:
    - cash flow hedge accounting removes volatility mismatch from Trading result to equity
    - fair value hedge accounting allows to revalue hedged items of banking book
    - everything should be properly documented
  - Theoretically IFRS allows to revalue banking book items, there is lack of such practice

Thank you

Your questions are welcome!

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