Comments on Session "Risk monitoring approaches"

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Agenda

- Which variable should be used as a target?
- How to aggregate the banking sector?
- Which type of crisis are we talking about?
- Are current macro-models adequate?
- Which feedback effects should we include in macro models?

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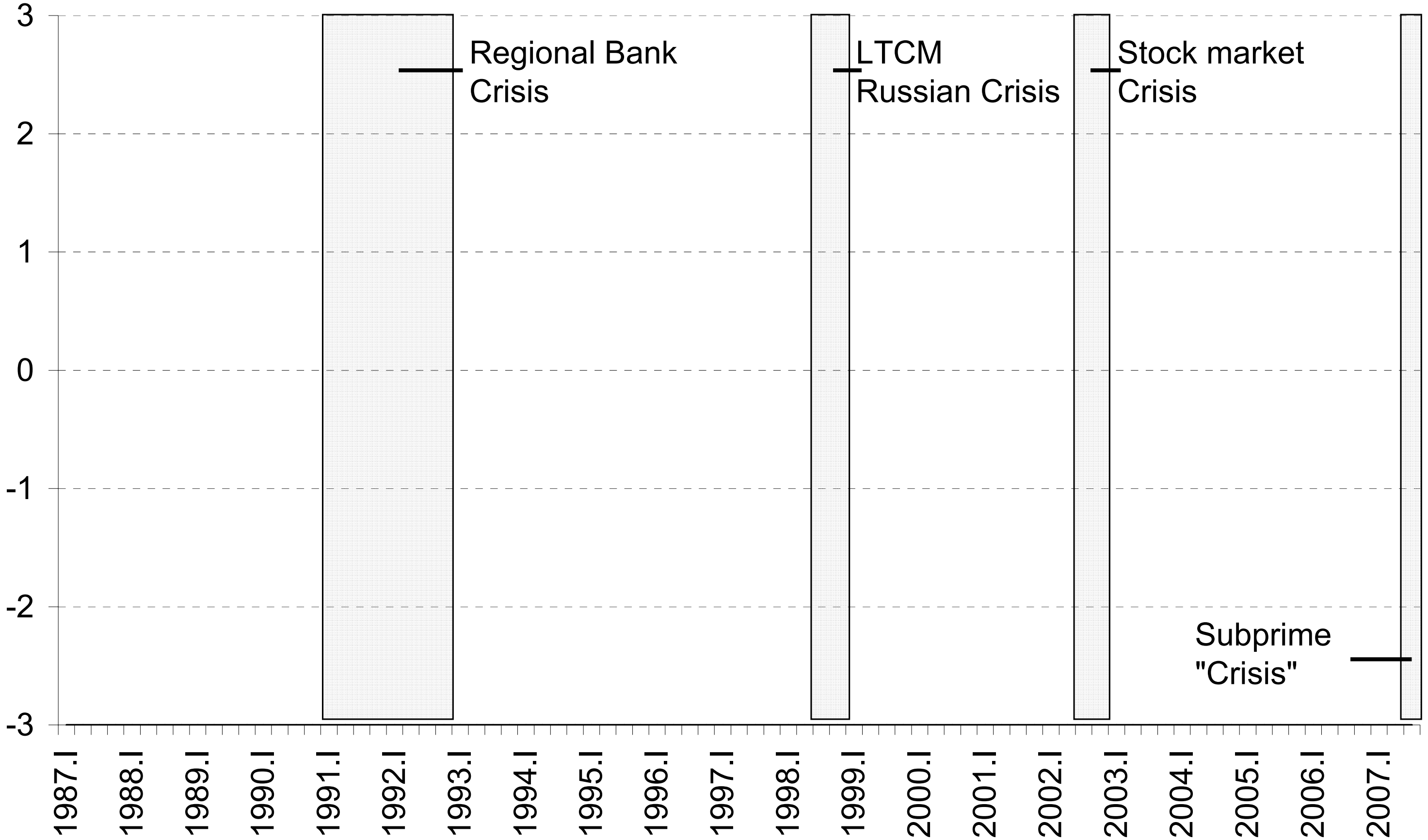
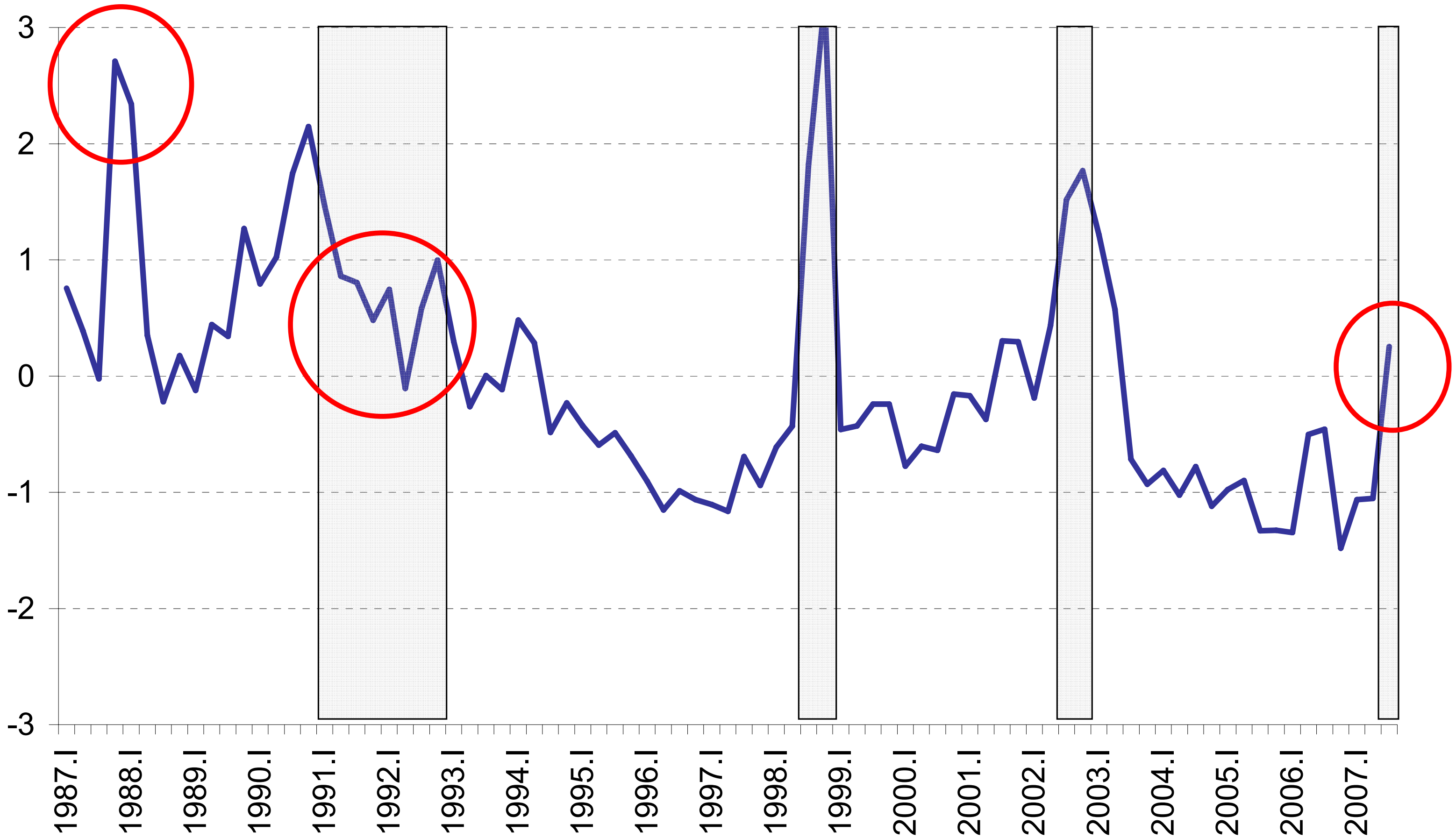
Stress in the Swiss banking sector



Market data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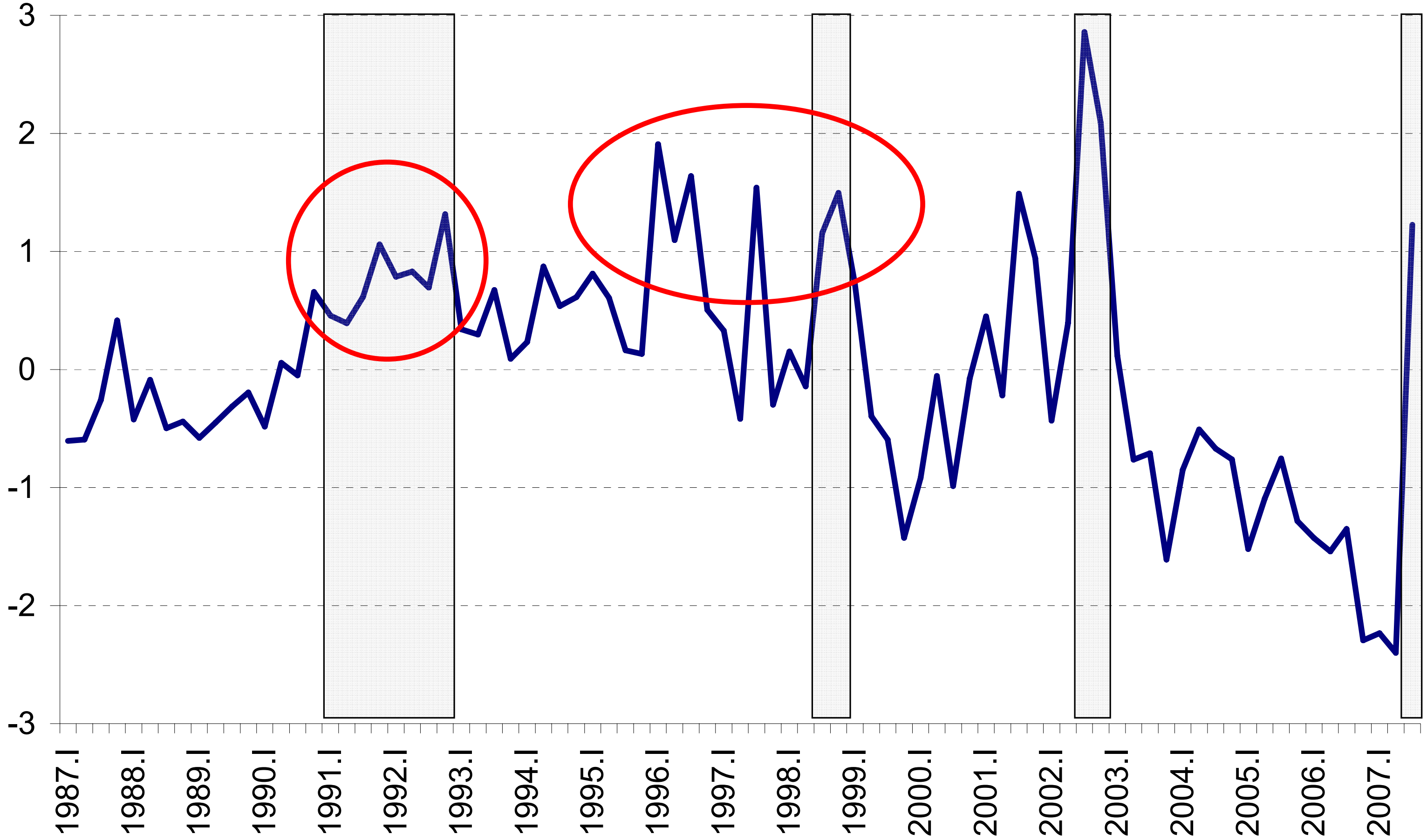
Book data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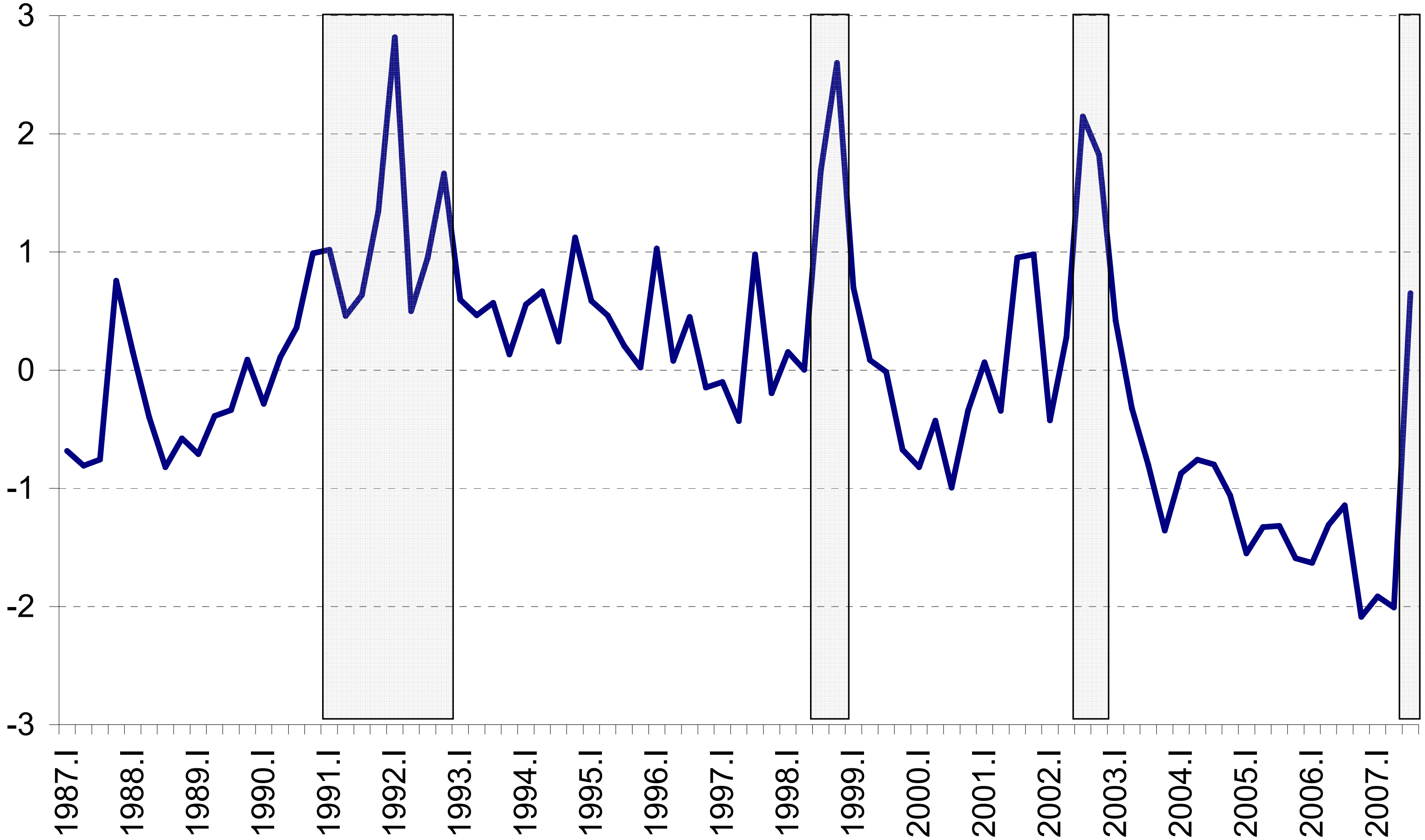
Market and book data



Aggregation of financial sector

- **Sum of assets/liabilities or losses implicitly implied that one bank results compensate the other (= portfolio view)**

- **But one bank good condition does not automatically compensate for another bad condition**

Aggregation of financial sector

$$S_t = \sum_{i=1}^{N} \mathrm{Profit}_{i,t}$$

$$S_t = \sum_{i=1}^{N} \mathrm{Loss}_{i,t}$$

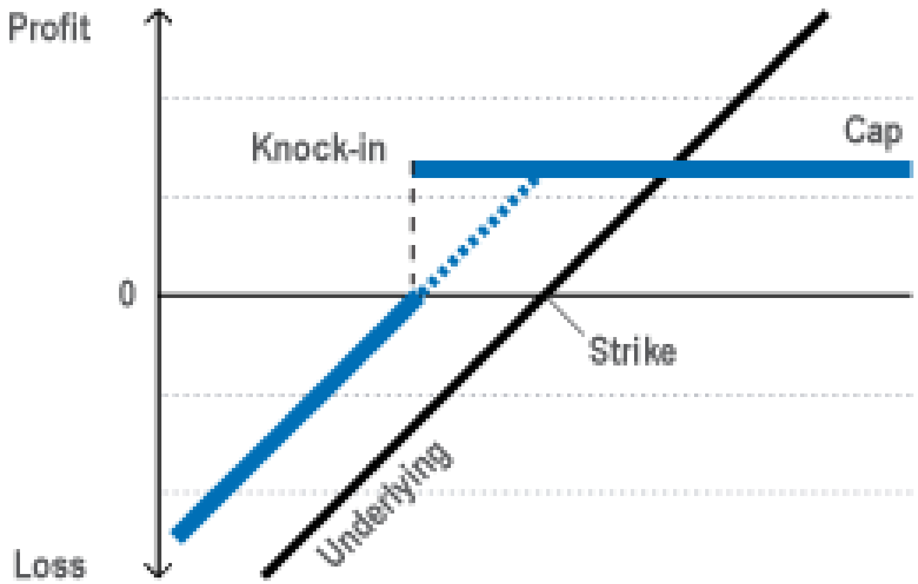
$$S_t = \sum_{i=1}^{N} \left(\mathrm{Loss}_{i,t} \middle| \mathrm{Loss}_{i,t} > \bar{L}_i \right)$$

Aggregation of financial sector

$$E_t = \max\left(\sum_{i=1}^{N} A_{i,t} - \sum_{i=1}^{N} D_{i,t}, 0\right)$$

Aggregation of financial sector

- **Multi barrier discount certificate**



Definition of crisis

- Aggregate losses
- Simultaneous defaults

- Credit crunch
- Shortage of liquidity
- Bank run

Adequacy of macro-models

- General equilibrium model are by construction stable…
- … and thus no made to generate imbalances or disruptions.
- Are they adequate to detect extreme events that can impair financial stability?

Non linear link with economy

- Traditionally, we look for linear relations between macro variables and bank condition
- If we think of the banking sector as a barrier discount certificate, then its stability is non linear
- Empirical evidence on the Swiss banking sector show the importance of non linear relations

Feedback effects

- **Influence of distressed bank on other banks (direct or indirect)**
- **Influence of one sector on another**
- **Influence of the financial sector on the economy and vice-versa**