

Systemic Risk: The events of 1998 from an industry perspective

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*The opinions expressed herein
are solely those of the author,
and not necessarily those of
Credit Suisse*

Introduction

■ Defining Systemic Crises

- Events that impact the system, not just individual counterparties or a market.
- e.g. bank “runs”, market “gridlock”, crisis of confidence, failure of key utilities.
- In some definitions, also critical to impact the underlying real economy
- The normal rules and boundaries of usual market function are in question

■ Possible Candidates

- 9/11: „Is the payment system going to work? Will confidence return?“
- Post Tech-Bubble Correction (2002-03).
- **Russia/LTCM: „Markets keep getting worse and less liquid. Will this continue? Are my counterparties solvent?“**
- [Avian Flu – „Can I run my business if nobody comes to the office?“]

Russia Crisis:

Joint Announcement of the Government & Central Bank (8/17/98):

- Devaluation of Ruble (previously pegged)
- Implementation of capital controls
- Restructuring of Local Currency Debt

■ CSFB research comment from that period:

“A major surprise to the market . . . CSFB had certainly not expected Russia to devalue, default and restrict convertibility at the same time; one of the 3, but not all 3 at the same time.”

■ Some estimates that market participants lost \$100bn

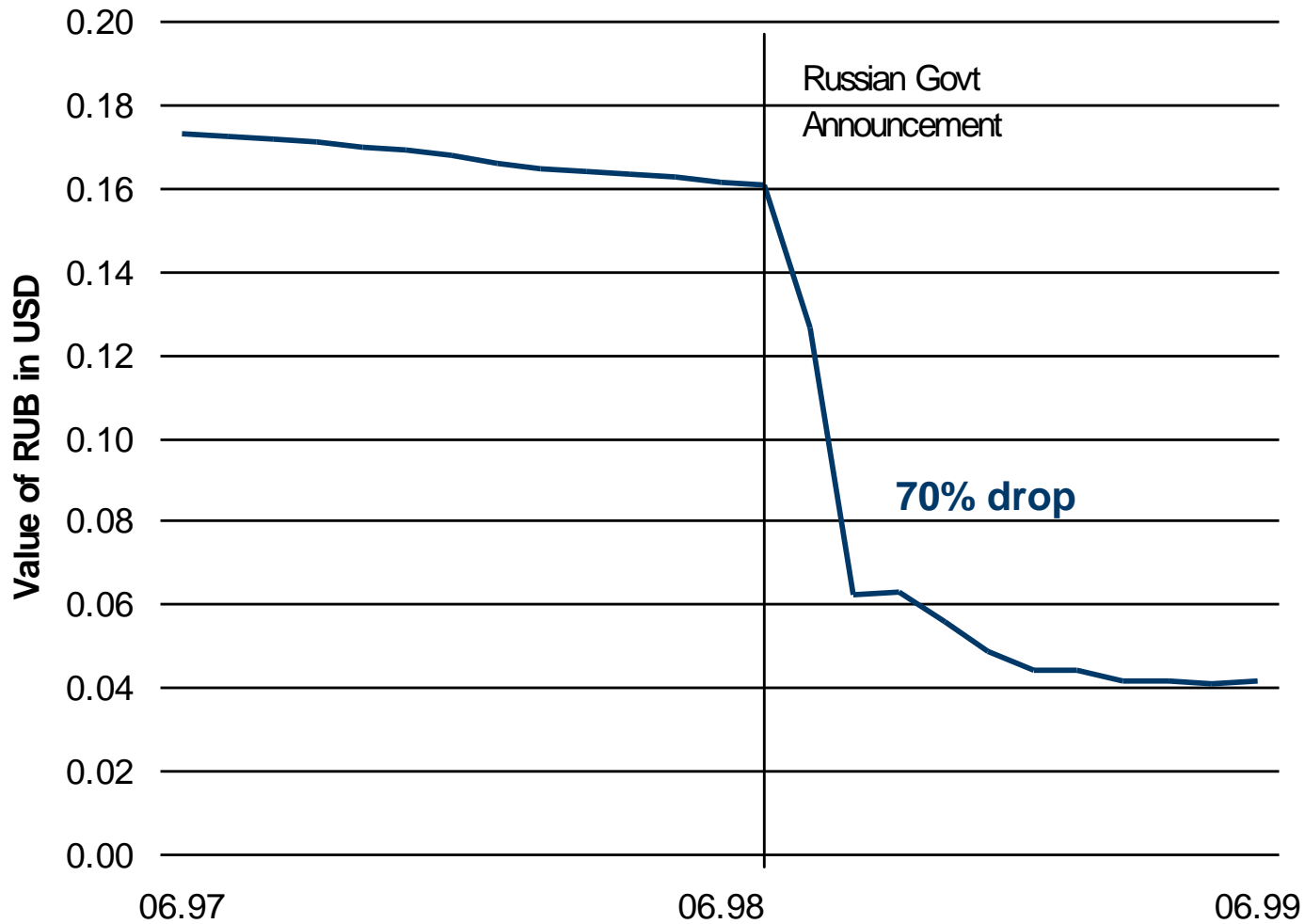
Russian debt default (hard currency bond prices)



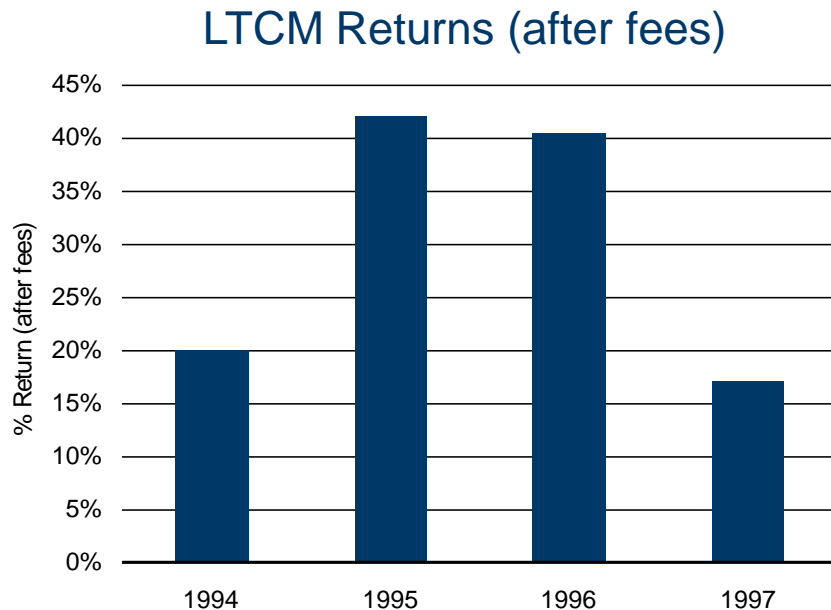
Source:
Datastream

Russian currency devaluation

Source: Bloomberg



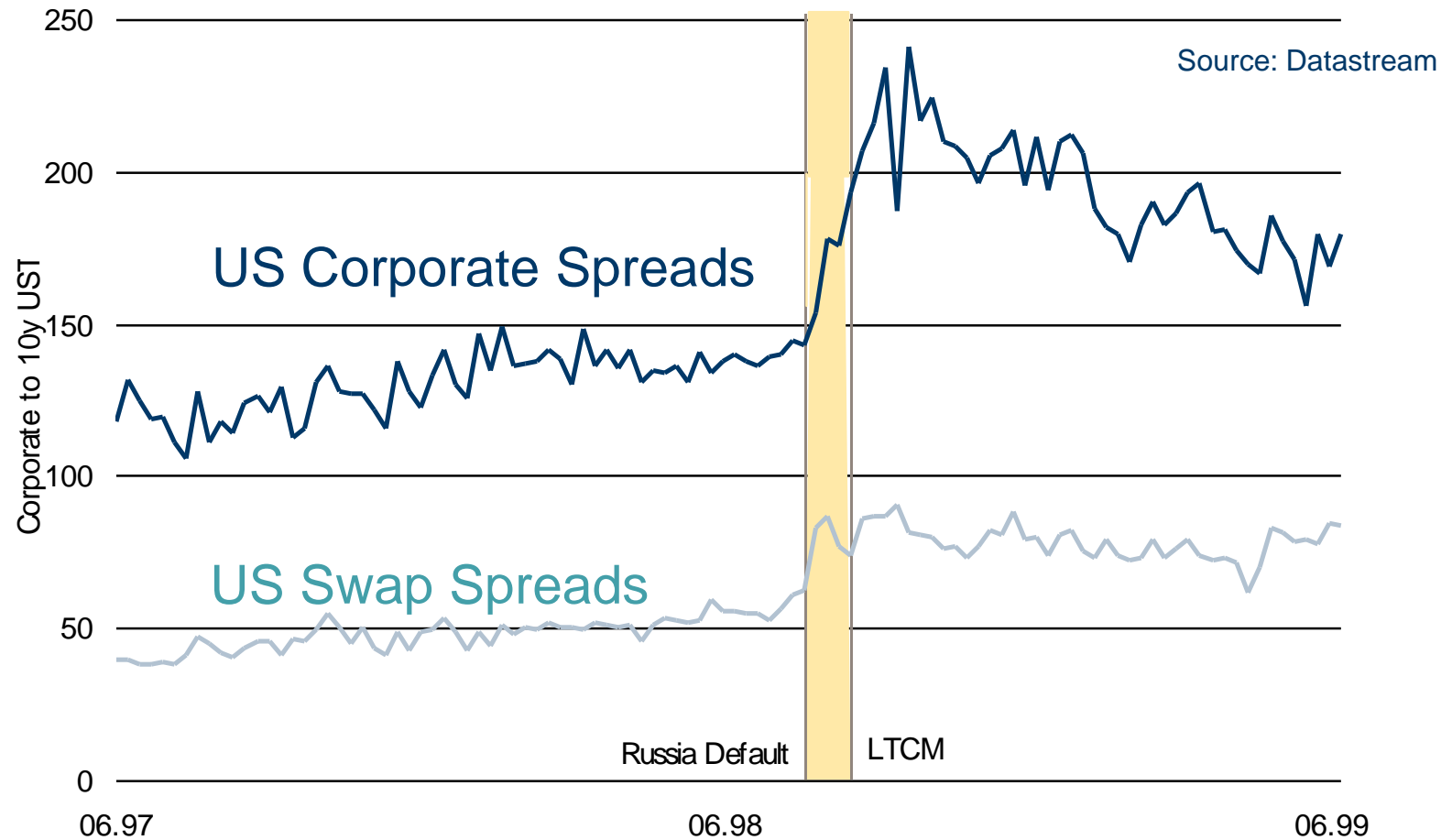
LTCM Returns – the good years



- Highly prestigious global hedge fund
- Very large (>100bn in assets)
- Sophisticated, arbitrage oriented
- Highly leveraged (>25-1 in early 1998)
- Moderate net realized volatility
(target was risk of S&P 500)
- Excellent returns in first 4 years

Source: P. Jorion “Lessons of Long Term Capital Management

Spread expansion



Volatility of S&P 500 (market implied)



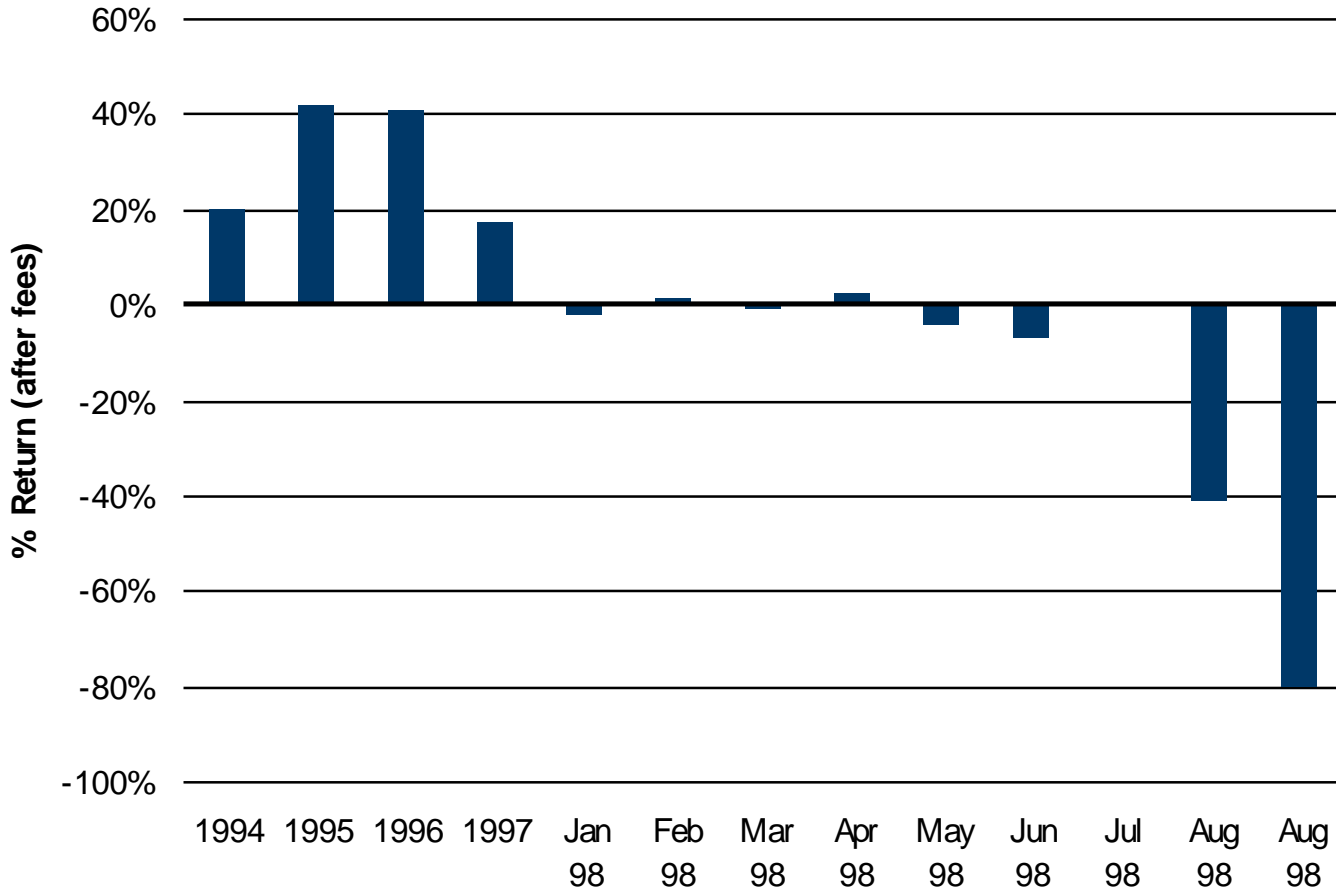
Source: Datastream

Estimated Source of LTCM Losses

<u>Investment</u>	<u>Loss (\$mm)</u>
Russia and other emerging markets	430
High-yield (junk bond) arbitrage	100
Standard & Poor's 500 stocks	203
Equity pairs trading	286
Equity volatility bets	1300
Directional trades in developed countries	371
Yield-curve arbitrage	215
Interest swaps	1600

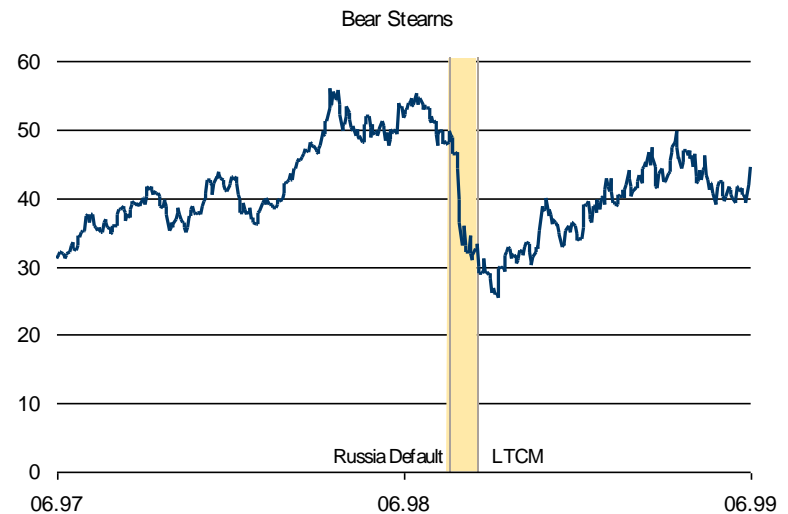
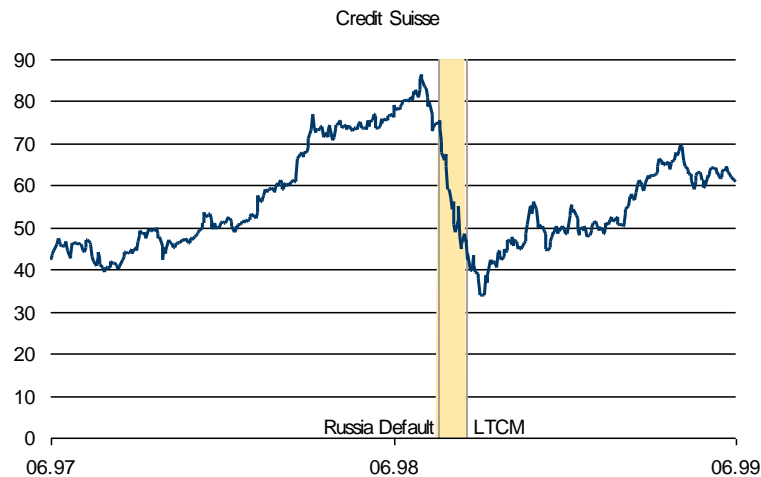
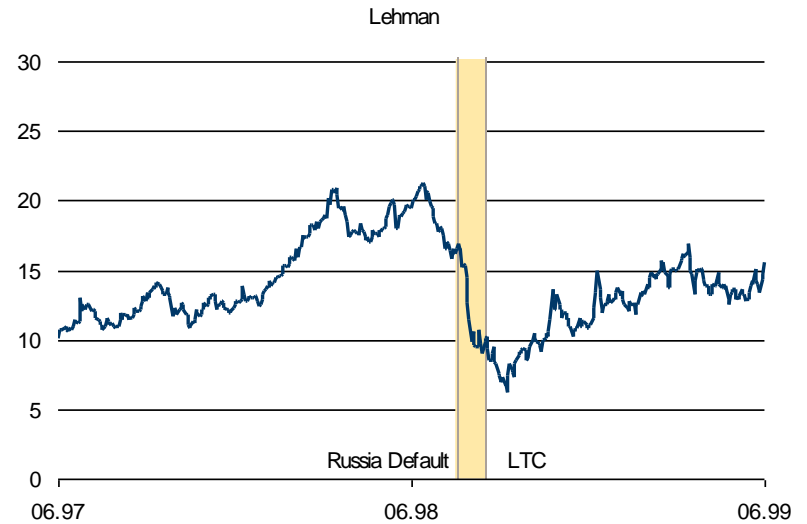
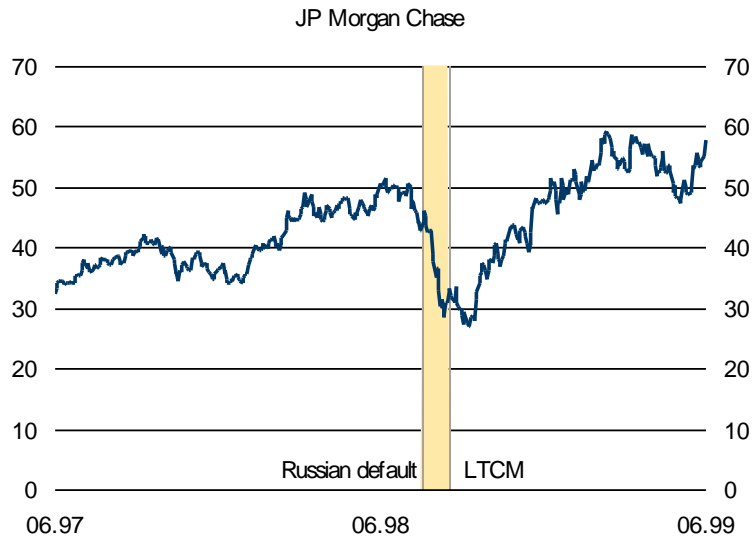
Source: R. Lowenstein "When Genius Failed: The Rise and Fall of LTCM"

LTCM Returns (cont'd)



Source: P. Jorion "Lessons of Long Term Capital Management

Financial stocks down 50% (fairly representative sample)



Source: Datastream

LTCM period

- Prices moved outside of “normal” ranges and continued to slide
- Normal stabilizers not working - no new “risk capital” entering market (most trying to exit)
- Bank management under pressure to avoid risk of further loss
- Forced liquidation of leveraged positions
- Volume declined in many markets, in some cases dramatically
- Rumors of major financial institutions under pressure
- Increase in derivative exposures and risk of contagion
- Crisis continued for a period, even after LTCM rescue

Comments & Conclusions

Source: Datastream

Conclusions

Systemic events are not just the „fat tails“ of normal markets; rather they involve fundamentally different processes & actors

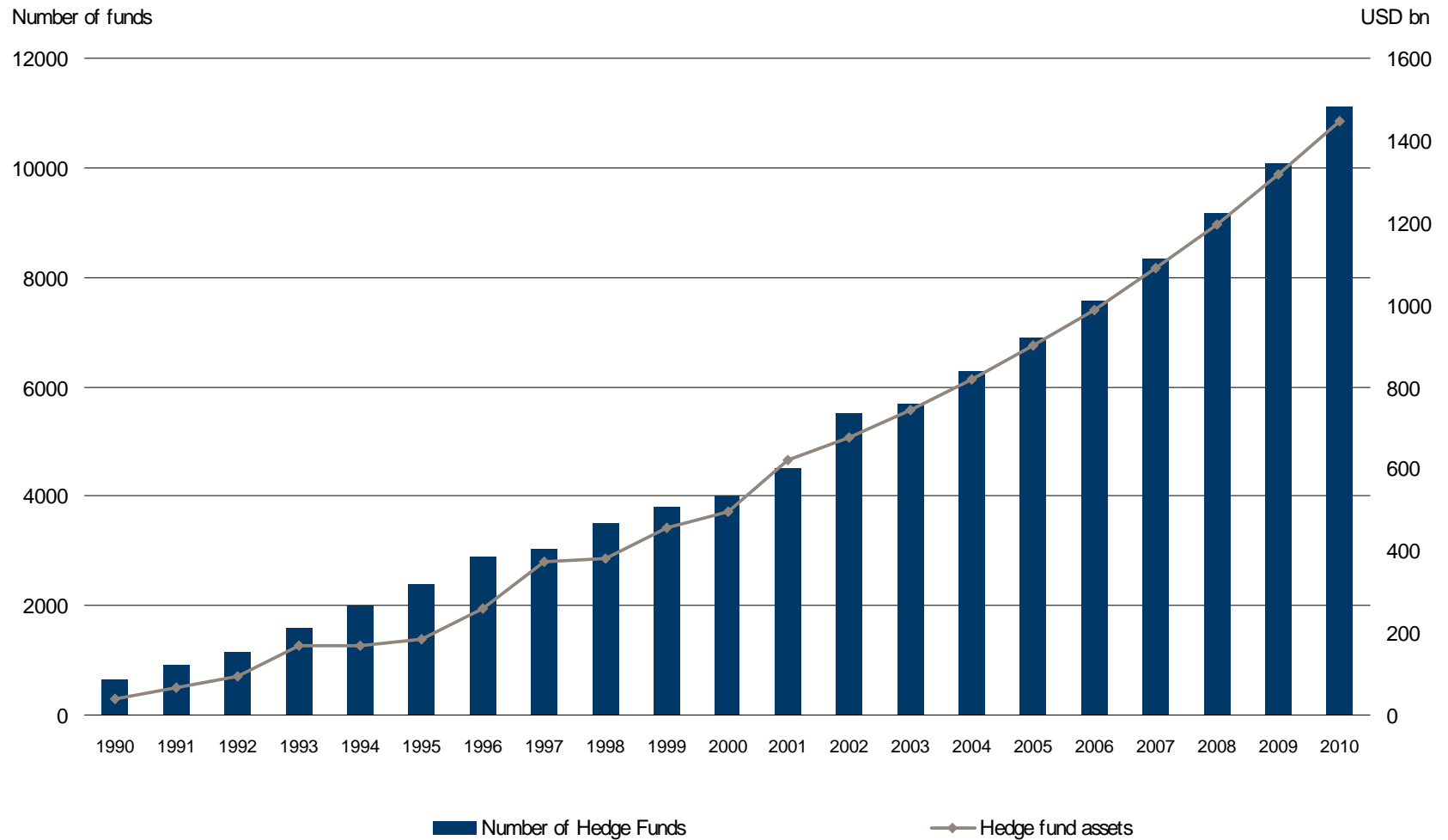
Most risk processes and market behavior assumes that markets have a stable distribution – need to be wary around that assumption.

Markets will often converge to trades that provide profits assuming that certain market features are reliable in a given system; high value placed on stability of earnings. This stability can be threatened when trades get overcrowded.

No static „magic formula“ to deter systemic risk. An adaptive system will need an adaptive response.

Source: IB

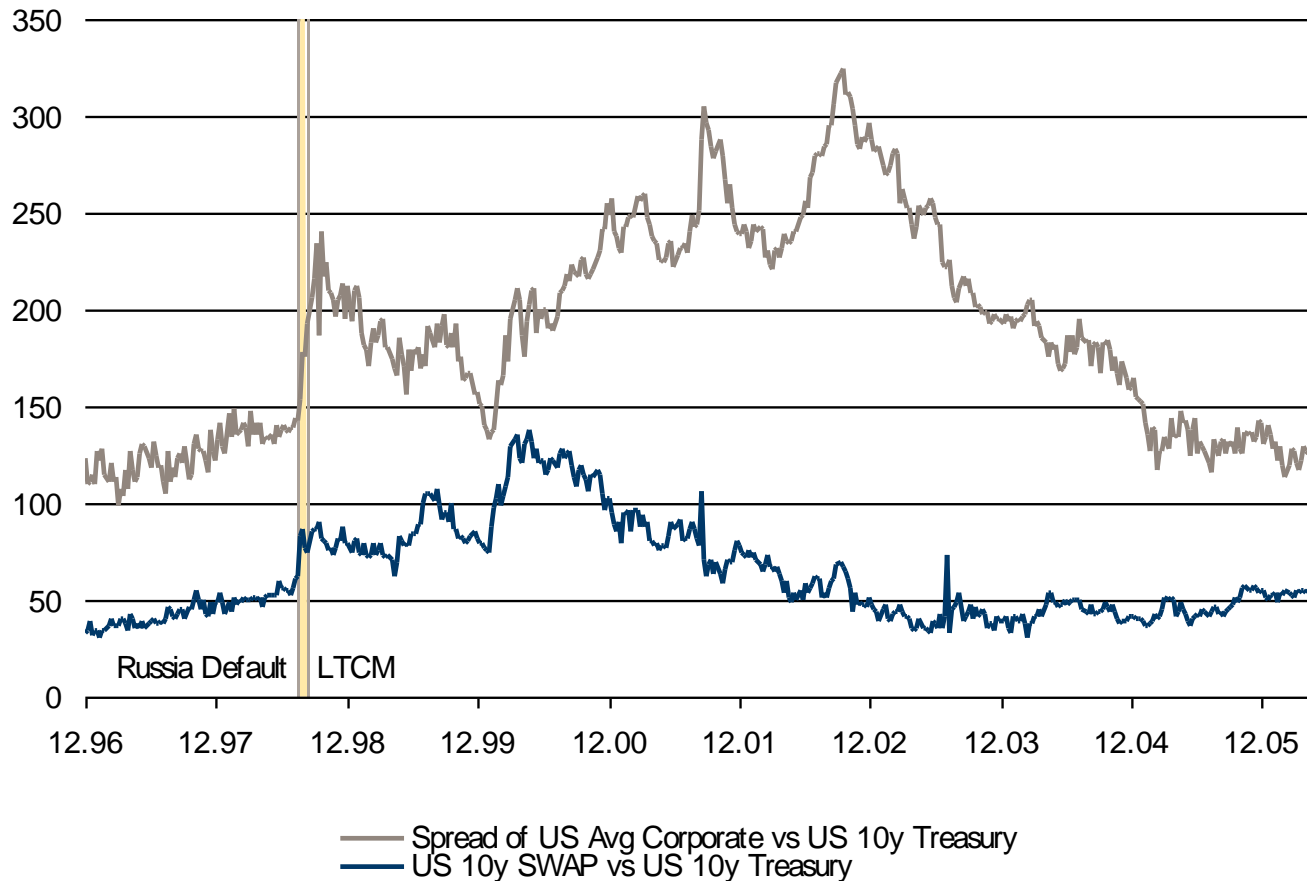
Growing importance of hedge funds



projected 10% growth p/a

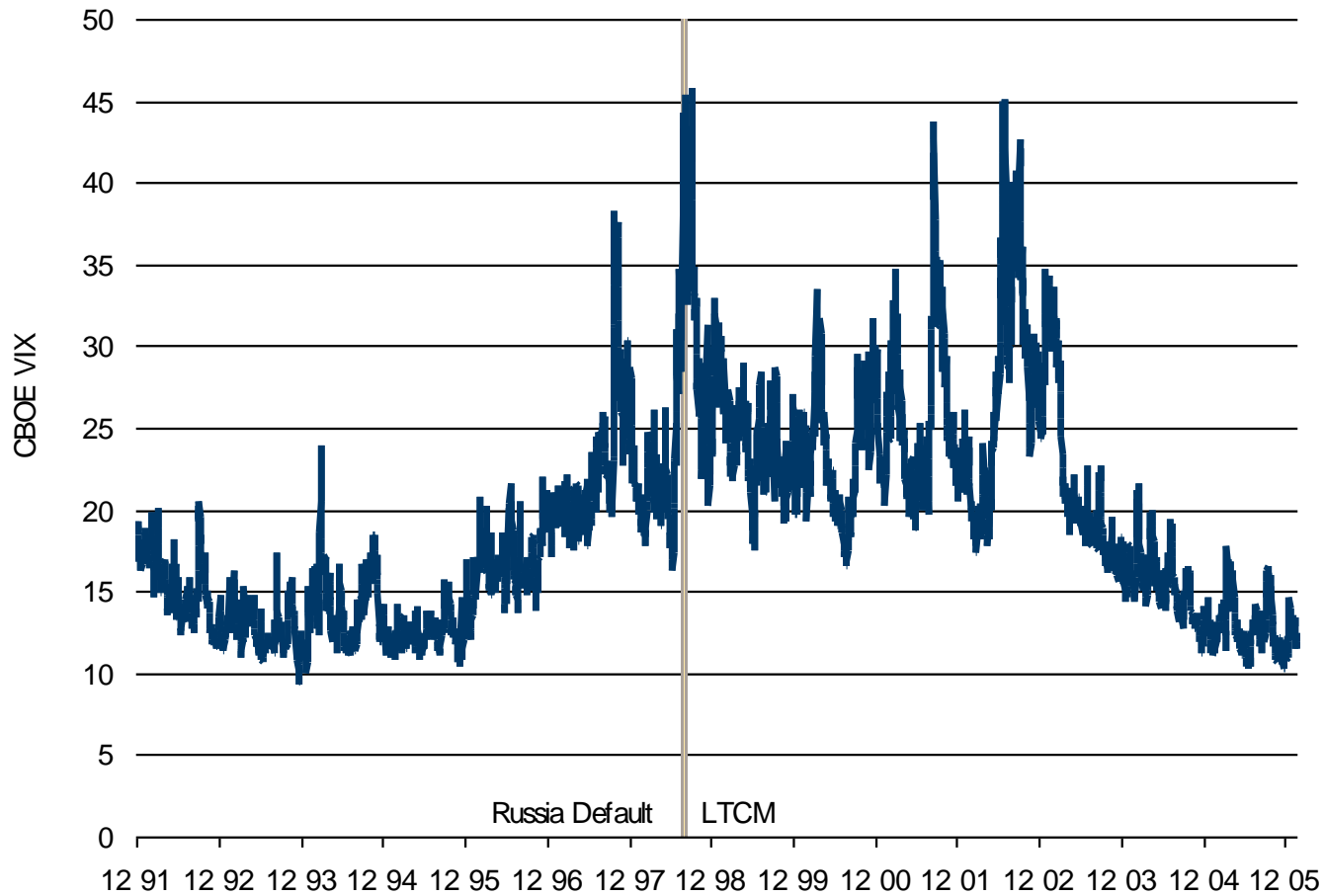
Source: HFR

Current Conditions: Swap vs Corporate Spreads



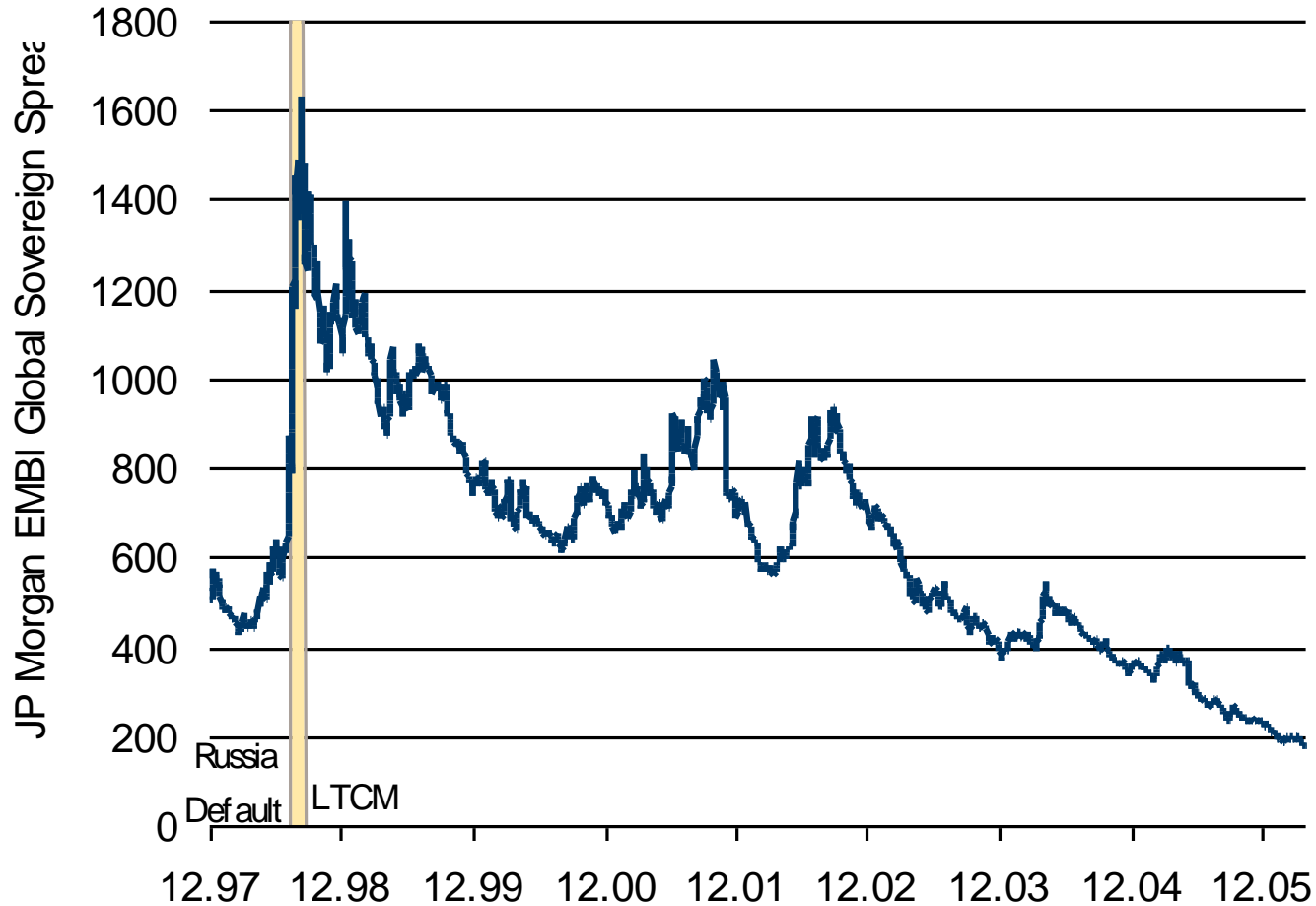
Source: Datastream

Current Conditions – Equity volatility



Source: Datastream

Current Conditions – Emerging Markets



Source: Datastream