

HIDDEN RISKS FOR MARKETS & BOND MARKET FRAGILITY

Discussion Material

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BMCG Frankfurt / 26th June, 2018





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DISCUSSION TOPICS



CYCLE RISK FOR MARKETS

Current market dynamics, deal structures and behaviors can be checked against stylized trends of the 'typical' financial bubble.

The conclusion: In important segments, capital markets exhibit classic vulnerabilities of bubbles

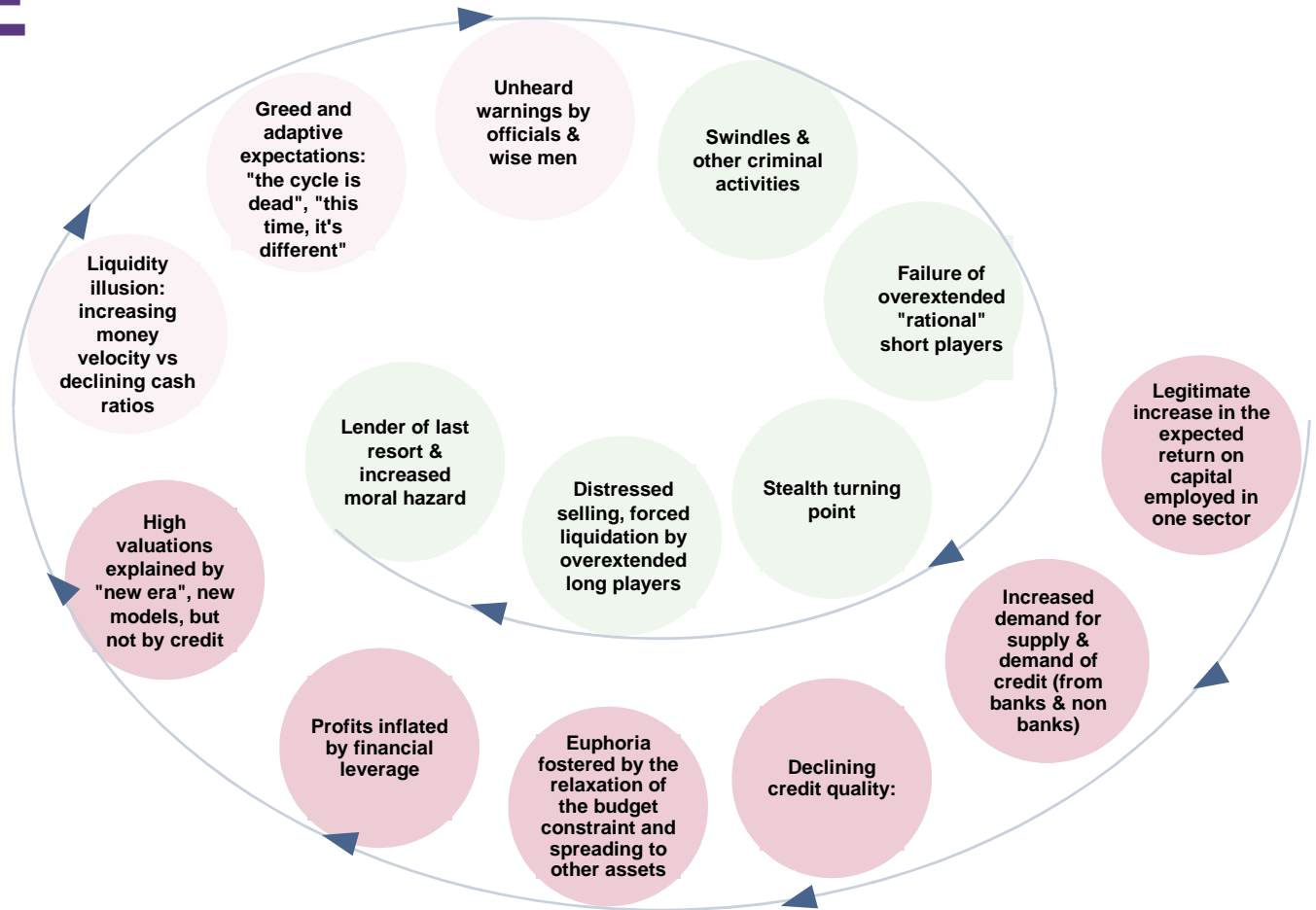
01



THE “BUBBLE MODEL” VS CURRENT REALITIES

“Stability begets Instability“ ...

Fisher, Minsky and Kindlberger find that Risks are building as confidence and leverage morph into over-confidence and over-indebtedness





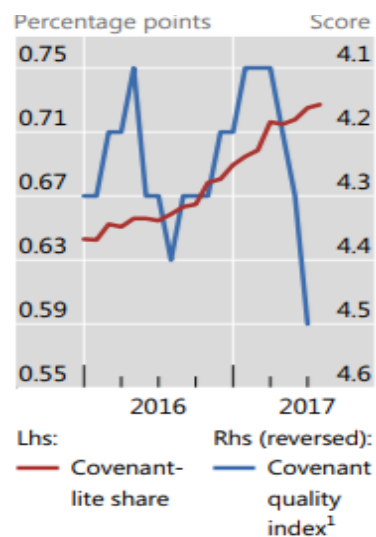
SELECTED STYLIZED TRENDS VS THE CURRENT CYCLE

	Apparent this cycle	Evidence	Market Risk
As the cost of credit lags expected returns, financial upswing is credit fueled	✓	Private sector debt to GDP higher than in 2006 in the G20 <i>Role of non-banks as credit provider</i>	
As debt volumes rise, quality declines	✓	High debt service ratios despite low interest rates <i>Covenant lite transactions</i>	
Financial leverage inflates profits.	✓	Record margin debt at the NYSE <i>Use of financial leverage in funds</i>	✓
Unusual valuations justified through “new era” (not credit)	✓	“Disruption” is the new buzzword <i>Out of sync with fundamentals</i>	
Liquidity illusion	✓	Supply is high, cash balances are not <i>Regulation forcing ST view while QE pushing investors in illiquids</i>	✓
Market breaks without obvious reason			✓

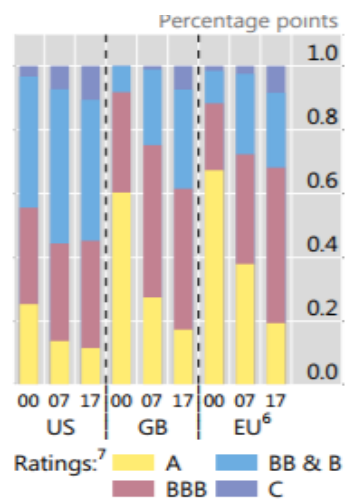


SOME OBSERVATIONS

Covenant Standards decrease



Rating Distributions deteriorate



Eurozone Debt-to EBITDA ⁸⁾



Liquidity, money supply and markets growth ¹⁰⁾

	Central banks' liquidity ⁹⁾	Global M3 broad money	Global equities market cap
As of Q3 2017 (USD)	17trn	85trn	62trn
Growth since 12/08 (%)	+179	+85	+140
Y-o-Y Growth (%)	12,6	+6,5	+22

1) Three-month rolling average; a higher score corresponds to a weaker covenant.
 6) AT, BE, DE, DK, ES, EE, FI, FR, GR, IE, IT, LU, NL and PT
 7) A = Aaa-A3; BBB = Baa1-Baa3; BB and B = Ba1-B3; C = Caa1-C
 8) Source Eurostat / BIS
 9) Global Monetary Base,
 10) Source : Thomson Reuters Datastream



MARKET FRAGILITY

Liquidity seems to evaporate as volatility rises, arguably leading to selling pressure and this amplified price moves that seem excessive relative to their fundamental catalyst

- Do changes in market structure cause fragility ?
- What could increase market robustness ?

02



FACTORS WHICH CAN AMPLIFY OR MITIGATE A POSSIBLE LIQUIDITY BOTTLENECK

- **Regulation**

- Overall regulation is seen as key driver of (lower) liquidity in today's markets (unintended consequence)

- **Automation**

- Increase in “non-traditional” liquidity providers like high-frequency traders (HFTs). Arguably increase liquidity in “normal times” but may exacerbate volatility in “times of stress”.
- If investors mistakenly attribute a technically-driven crash to worsening fundamentals, this could inadvertently reinforce market fears, potentially leading to a more severe downturn
- HFT low capitalization, large volume trades, operational risk Operational / Technical “glitch” risk
- Automation effect on liquidity is difficult to access, but deal transparency should eventually have a positive impact on execution

- **Exchange traded products and systematic trading strategies**

- E.g. Target volatility strategies: increase equity exposure in low volatility environment and decrease exposure in highly volatile markets (consume liquidity when it is low)
- Levered ETFs/ETPs (levered long VIX ETPs during Feb 2018 VIX spike)
- no historical evidence of ETFs flow patterns in crisis, however we believe it could intensify negative impact

- **End of ECB bond-buying program**

- in a bear market without ECB purchases, the full impact of lower liquidity will probably be higher than anticipated today



INVESTOR BEHAVIOR – WILL THEY STEP IN ?

- **Observations:**

- During the crisis *long term* investors sold very little “risk assets” while *short term* investors sold larger blocks (corporate bonds & equity) (ESRB Working Paper No. 18).
- The Feb VIX spike mainly systematic trading and technically driven

- **What to expect:**

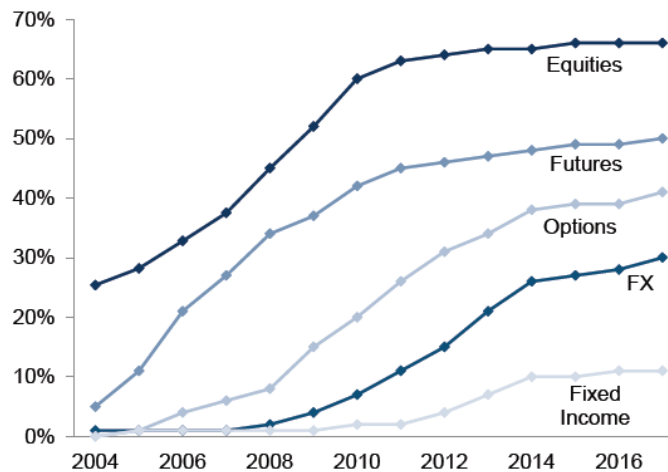
- Similar behavior in other periods of market turmoil as was the case during recent BTP turmoil
- Very few market participants are able to hold cash outright to wait for a dislocation.
- Limited bank balance sheet availability e.g. to hedge funds constrain their ability to step in during stressed market.
- Asset managers run at constant leverage with very little ability to expand their balance sheets in times of stress when they may face redemptions
- Long term real money investors’ capacity to offer additional liquidity in times of stress will be very limited. Opportunistic selling in order to shift exposure to illiquid assets is unlikely at larger scale



SOME OBSERVATIONS

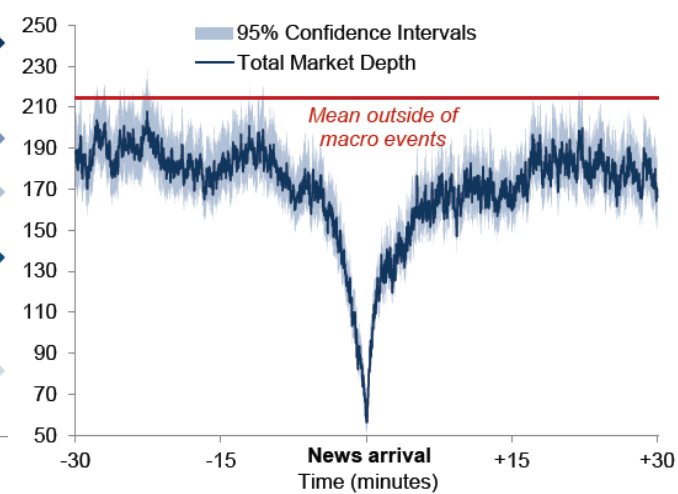
Growth in algorithmic trading ¹⁾

Market share of algorithmic trading by asset class, %



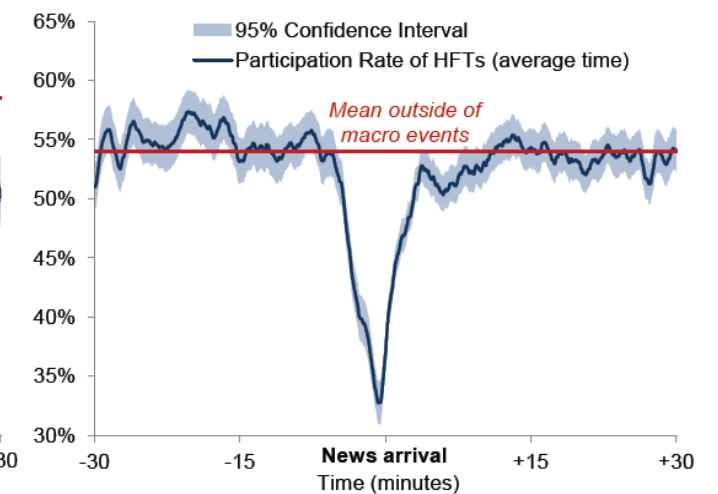
Market depth drops around fundamental news events.....²⁾

Number of contracts around news events



... as High Frequency Traders withdraw liquidity²⁾

HFT share of market volume, %, around news events

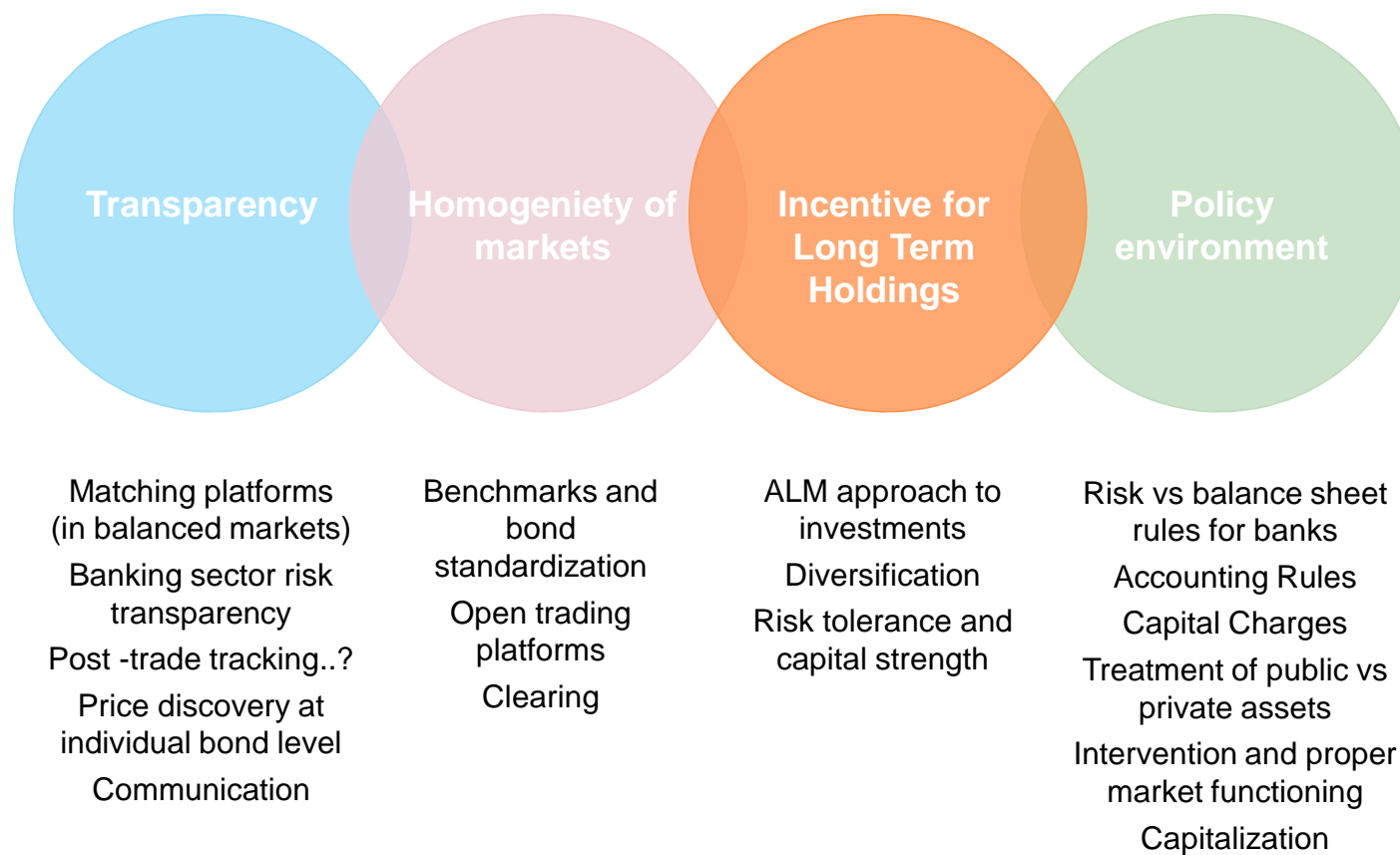


1) Source: Aite Group, Goldman Sachs Global Investment Research

2) Source: Eurex, Hautsch, Nikolaus and Noé, Michael and Zhang, S. Sarah (2017), Goldman Sachs Global Investment Research



BUILDING BLOCKS FOR MORE ROBUSTNESS





TOPICS FOR FURTHER DISCUSSION

- How do you assess whether increase in market volatility becomes an unhealthy development
- Today's complex fragmented market structure so far is untested by recession or Crisis. Will episodes of illiquidity lead to a more lasting market downturns ?
- Has post crisis regulation left us more or less vulnerable to a financial crisis today ?
- How important is diversity of market participants in stabilizing markets and how are assumptions about the behavior of these investors
- Who absorbs supply when everyone sells and central banks stay on the sidelines
- Are geopolitical risks fairly priced ?



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