Market Risk and capital requirements: a hide and seek game

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Outlook

- Regulatory mindset
- Banks and markets
- A hide and seek game?
- Fire internal risk models?
- Quantitative Impact Studies (QIS) dismissed?
- The cons of Standardized Sensitivity Based Approach (SA/SBA)
- A pragmatic approach to finalizing FRTB
  - Monitoring of SA/SBA to IMA and look for « real outliers »
  - Inclusion of settlement prices as modellable risk factors
  - Revamp PnL Attribution Test according to regulators' objectives

Regulatory mindset

- "The financial system is changing to rely more on markets and less on banks – this is a major positive development".
  - FSB reports to G20 Leaders on financial regulatory reforms, August 2016
  - Good summary of a decade of financial reforms?
- Usefulness of banking intermediation on financial markets?
  - Easing hedging and risk transfers
  - Providing liquidity

Regulated banks and financial markets

- Should banking intermediation on markets be reduced?
  - Release bank capital and frozen assets (Initial Margin requirements)
- Cons of new regulations
  - Favour less regulated shadow banking
  - Evanescent liquidity: can the buy side become two sided in troubled times?
    - Taper tantrums, flash krachs, runs on repos
  - Standard measures of market liquidity fail to capture new sources of financial instability.

A hide and seek game?

- "I'll say it again; I'd like you to print it. There is no big wave of additional capital ».
    - Mark Carney, December 2015
- "There's an ugly rumour that global regulators are planning Basel 4 - a new set of regulations to keep banks in check - And it's not true".
    - Mark Carney, January 2016, Christian Noyer's symposium, Paris
- "We agree with the premise of the Basel Committee that this exercise was about not raising capital requirements"
    - Daniel Tarullo, September 2016, CNBC
- EBA chair Andrea Enria said that regulators were fed up with the **hide and seek** approach of banks in lobbying against every regulatory change.
    - http://www.reuters.com/article/regulations-banking-basel-idUSL8N1BK2MT

Fire internal risk models?

- Evidence regarding market RWA variability?
  - RWA density ratios (RWA/total assets)
  - Comparing apples and tomatos?
    - Risk and leverage.
- Small RWA density ratios issues are already mitigated by liquidity constraints (NSFR, LCR)

Fire internal risk models?

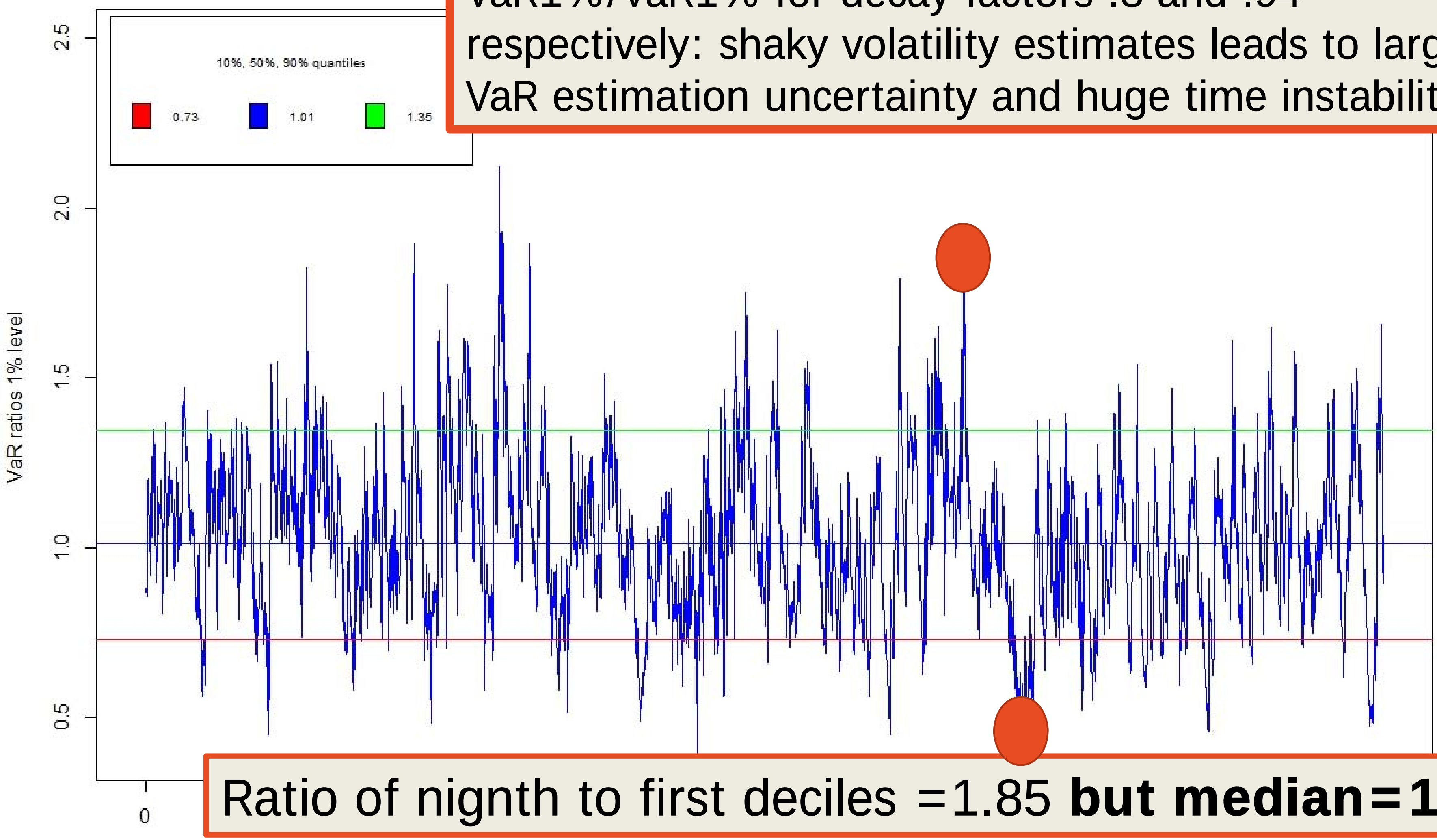
- Dismiss internal models in favour of standardized approaches?
  - Will it actually reduce RWA variability!?
- Distrust of supervisory process?
  - Internal models regulatory monitored and approved
  - Any significant change needs to be audited and approved prior implementation
  - Avoiding strategic modelling choices within IMA
    - Grace period, disclosure of old and new risk metrics when updating

Fire internal risk models?

- BIS/EBA HPE (Hypothetical Portfolio Exercises) show large variability of market RWA
  - But portfolios are not representative of banks' inventories
  - HPE are prone to « choice of date » effect:
    - Sensible modelling choices can lead to X4 changes in risks on a single day
    - Though this cancels out when averaring
      - No issue with average number of VaR exceptions
      - Capital metrics do involve averaging

Assessment of VaR (risk) models (from Laurent & Omidi Firouzi (2016))

VaR1%/VaR1% for decay factors .8 and .94 respectively: shaky volatility estimates leads to large VaR estimation uncertainty and huge time instability.



Ratio of nignth to first deciles =1.85 **but median=1**

QIS/Monitoring Exercises dismissed?

- Excerpts from Explanatory note on the revised minimum capital requirements for market risk (2016)
  - "When the Basel 2.5 market risk reforms were finalized in July 2009, the impact study indicated an average (median) increase of 223.7% (102.0%) in market risk capital requirements".
  - "QIS estimates at the time suggested that total market risk capital requirements as a proportion of overall Basel capital requirements would increase from 7.3% to 19%".
  - "Subsequent to these high QIS estimates, however, bank data provided as of end-June 2014 showed that total market risk capital requirements formed a 5.7% share of overall Basel III capital requirements".

QIS/Monitoring Exercises dismissed?

- Difference between average and median
  - This suggests that some banks game QIS
    - More likely did not consider the unattended implications of poor QIS contributions
- Still, QIS figures (EOY 2015) might underestimate capital charges!
  - Banks still struggle with implementation issues
  - Optimistic views regarding the scope of Non Modellable Risk Factors (NMRF)?
  - Optimistic stance regarding desk eligility to IMA

QIS/Monitoring Exercises dismissed?

- Industry considers a X4 increase of market RWAs as a credible scenario due to extension of scope of SA
- Final figures might be lower due to reduction in inventories, especially for expensive risk classes
  - At the expense of liquidity provision
  - Gaming SA? Risk weights and correlation prescribed.

The cons of SA/SBA

- Not that granular: uncapitalized basis risks within SA buckets and migration within SA buckets
- Too expensive (large risk weights) regarding long-only positions (liquidity provision)
- Poor incentives regarding effective risk management, risk culture and pillar 2/3 requirements

The cons of SA/SBA

- Alignment of marginal cost of capital leads to comonotonic portfolio exposures (Borch)
- Increase in systemic risks: concentrated positions, financial instability
- Systemic risk mainly stems from exposures to common shocks rather then interconnectedness
  - See September 2016 Basel III monitoring report

Finalizing FRTB: Effective monitoring of SA/SBA.

- Huge reputational damage in case of divergence between SA and IMA
  - Discredit on both SA and IMA, thus on risk-based capital ratios
- Recalibrate SA risk weights in order for SA to be in accordance with median IMA/SES capital charge.
- Would only target outliers as scheduled by regulators
- SA would become a credible fallback to IMA
- Complies with Basel Commitee stated objectives regarding overall market RWAs

Finalizing FRTB : Redefine « real price » criteria for NMRF

- MRF real price criteria may not provide good incentives regarding data management and market transparency
- Include settlement prices from CCPs or bilateral CSA
  - Thus aligning streams on OTC markets and regulatory capital
  - https://www.linkedin.com/pulse/real-prices-risk-weighted-assets-trading-book-jean-paul-laurent?trk=mp-reader-card
- Align NMRF and SA correlations for better consistency between IMA and SA?

Finalizing FRTB : build in a more effective PnL Attribution Test

- Curently, large uncertainties regarding desk eligibility criteria to internal modelling.
- Should not be solved through a FAQ but hard-coded in Basel text.
- Should foster effective convergence between risk and front office models
  - Scope of risk factors, proper mapping of risk sensitivities, pricing models in Risk and FO.
- Should properly account for reserving policies out of scope of risk modelling.

Market Risk and capital requirements: Conclusion

- Monitor implementation (FRTB compliance)
  - "The Basel Committee will continue to monitor the impact of the capital requirements for market risk on banks as they move towards implementation, to ensure consistency in the overall calibration of the Pillar 1 capital framework" (FRTB page 4)
  - "The revised internal model and standardized approaches, **as well as the relationship between the two approaches**, will be monitored by the Committee" (FRTB page 4)

Market Risk and capital requirements: Conclusion

- Use ongoing (June 2016) and further monitoring exercises (EOY 2016, June 2017) to:
  - Properly calibrate SES multipliers
  - Update SA risk weights
- In accordance with stated objective of not unduly increase market RWAs
- … And to comply with Basel Committee rules.

Market Risk and capital requirements: Conclusion

- Freezing all rules by EOY 2016 not realistic
- Fine tuning with limited scope through addendums when required
  - MRF real price criteria (settlement prices)
  - PLA test (as required by FRTB)
    - “The Committee will continue to conduct further quantitative assessment on the profit and loss (P&L) attribution test required for the revised internal models approach”.