

Asset and Liability Management with ultra-low/negative interest rates

The Perspective of a Swiss Bank
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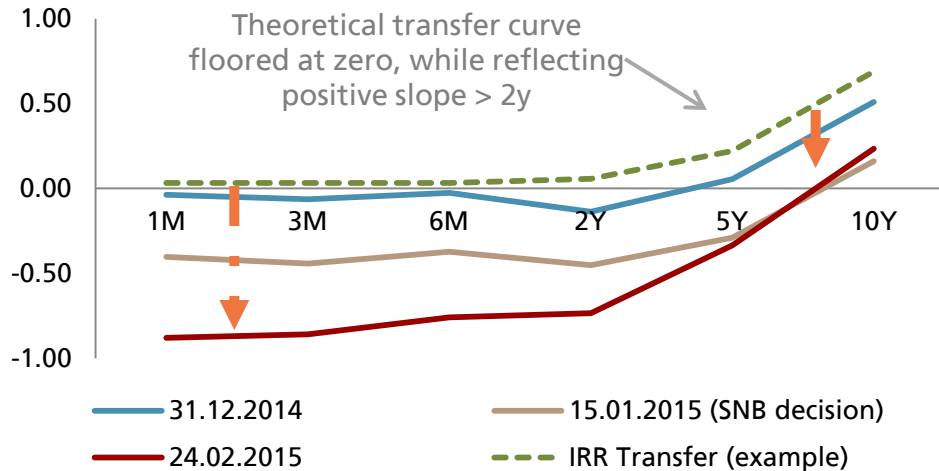
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- 4 Further Challenges

1 Market Environment

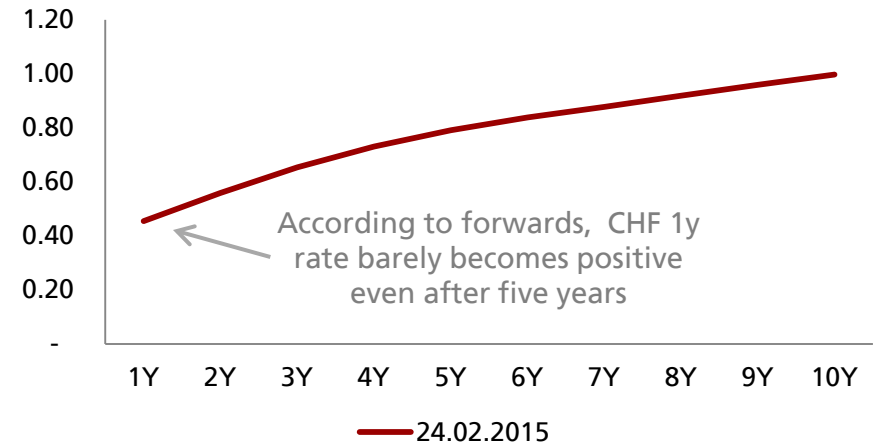
Market Overview (1/2)

CHF

CHF Rates Development

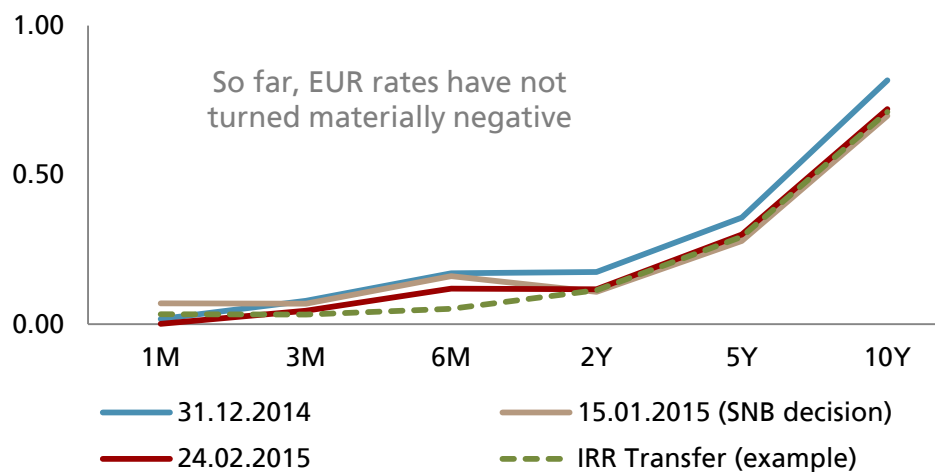


CHF Yield Curve in 5 Years according to current Forward Rates

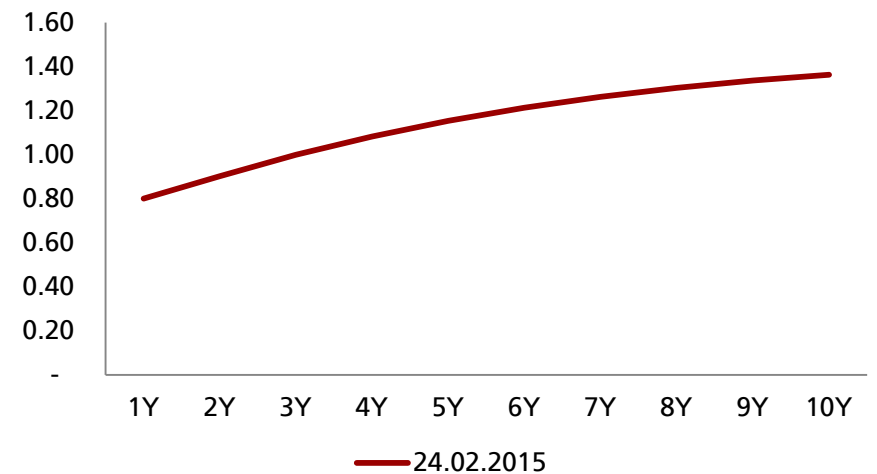


EUR

EUR Rates Development



EUR Yield Curve in 5 Years according to current Forward Rates



Market Overview (2/2)

Global Lowflation

- Consensus has made a systematic error with inflation forecasts as the sources of inflation have reverted to being global
- The Euro-area is characterized by competitive deflation
- China's economic growth is slowing down
- Global commodity demand is decreasing

Unprecedented Central Bank Easing

- Over 20 independent central banks have eased policy during 2015
- The European, Swiss, Danish and Swedish central banks have imposed negative rates
- The Swiss and Danish central banks led the way in this uncharted territory with deeply negative rates

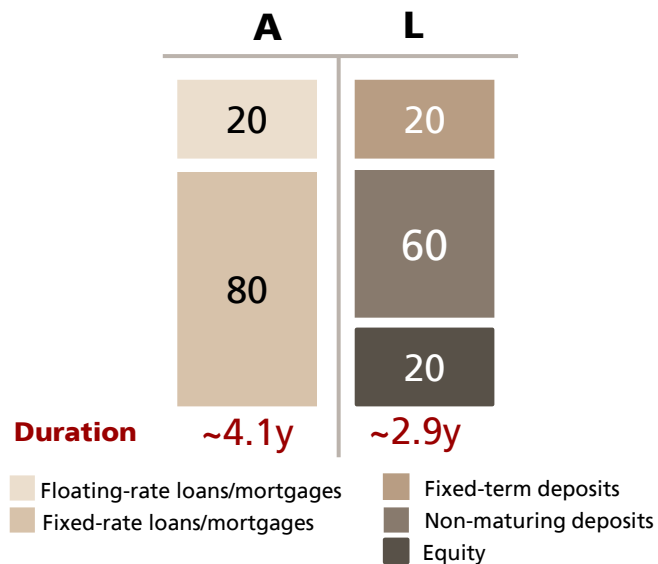
The scope for policy mistakes has increased greatly

Balance Sheet Structure

Since the low interest environment started in 2009, an increasing number of clients have been incentivized to move from fixed-term into non-maturing deposits and from mid-term into longer-term mortgage products. Recent central bank decisions have further intensified this development

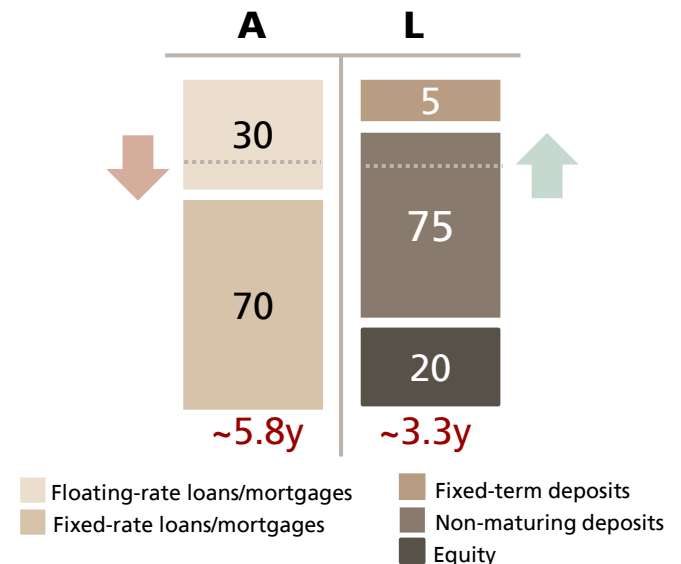
Higher % of Fixed-term Deposits & Short-/Mid-Term Mortgages

Illustrative example (CHFbn)



Higher % of Non-maturing Deposits & Longer-Term Mortgages

Illustrative example (CHFbn)



Before 2009

1Q 2015

Beyond 2015

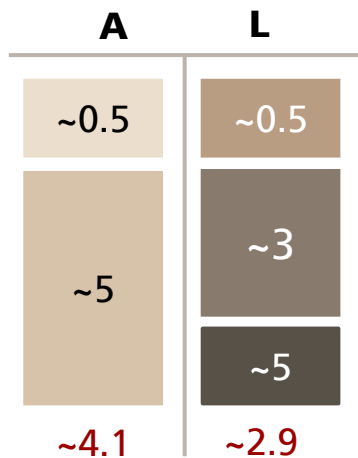
Without appropriate steering, negative or low interest rates can significantly influence the long-term structure of the balance sheet

Implications for Interest Rate Risk Transfer / Net Duration Target of Assets

Ideally the balance sheet will exhibit a very high degree of natural duration netting capacity with any imbalance economically hedged with the external market via fixed vs. float interest rate swaps. The higher the imbalance between asset and liability duration, the higher the reliance on the external market to enable hedging of inherent interest rate risk

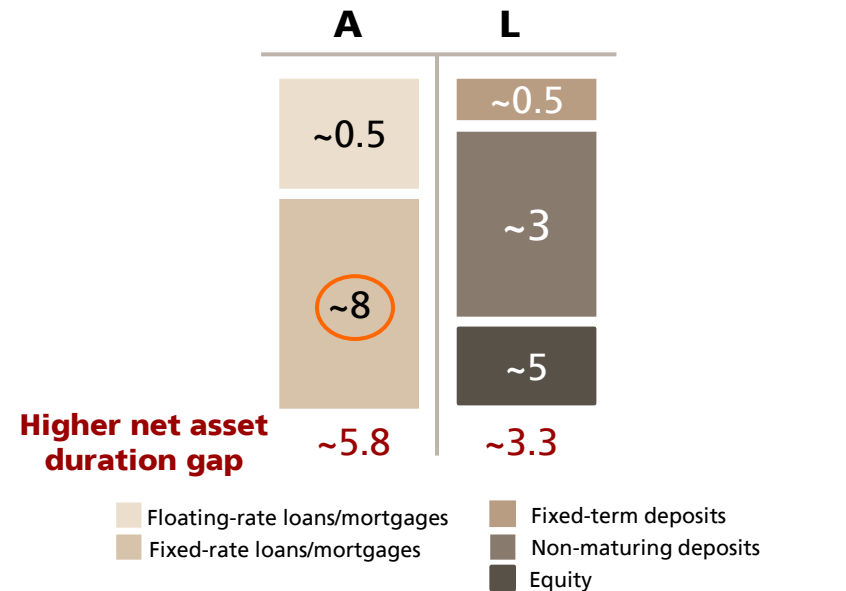
Higher % of Fixed-term Deposits & Short-/Mid-Term Mortgages

Illustrative example (Duration, years)



Higher % of Non-maturing Deposits & Longer-Term Mortgages

Illustrative example (Duration, years)



Before 2009

1Q 2015

Beyond 2015



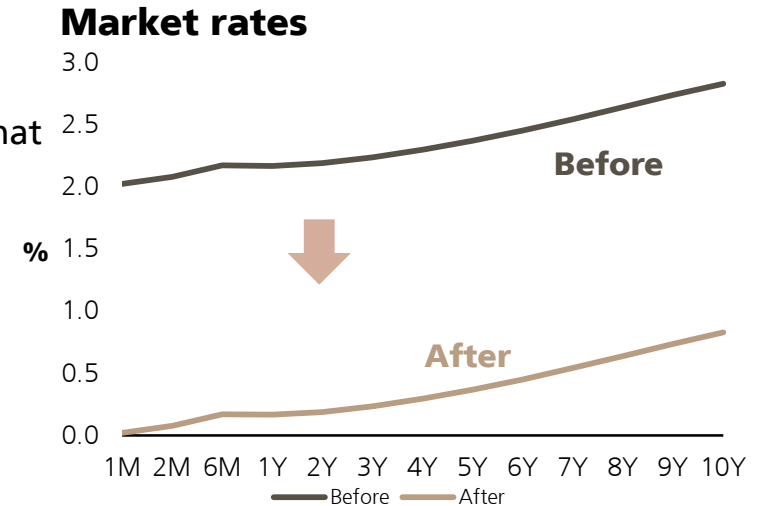
Note: While the duration of the asset side will be a function of changing client preference, the duration of the liability side is dominated by behavioral duration of NMDs

2 Scenario Analysis

Net Interest Income (NII) Scenario Analysis

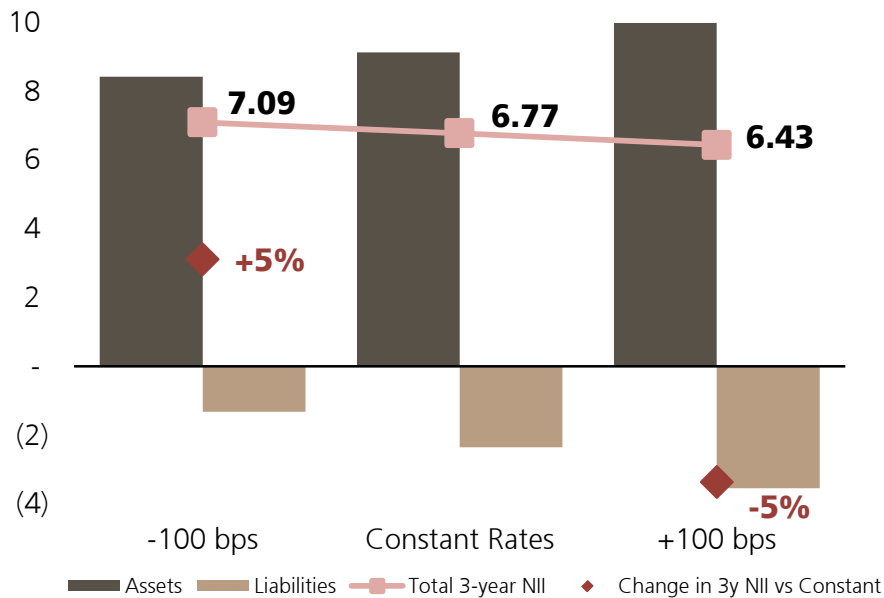
Yield curve assumed to drop from > 2% to < 1%

- Initially, the balance sheet appears to profit from falling rates (NII +5% for -100bps), as the duration of the deposits is shorter than that of the assets
- But after a sustained period of low market rates, the bank can hardly profit further from falling rates due to flooring of deposits
 - Liability expense already at a minimum
- Overall Net Interest Margin has become compressed
 - NII recovery through volume increase, if feasible (LCR, LRD,...)

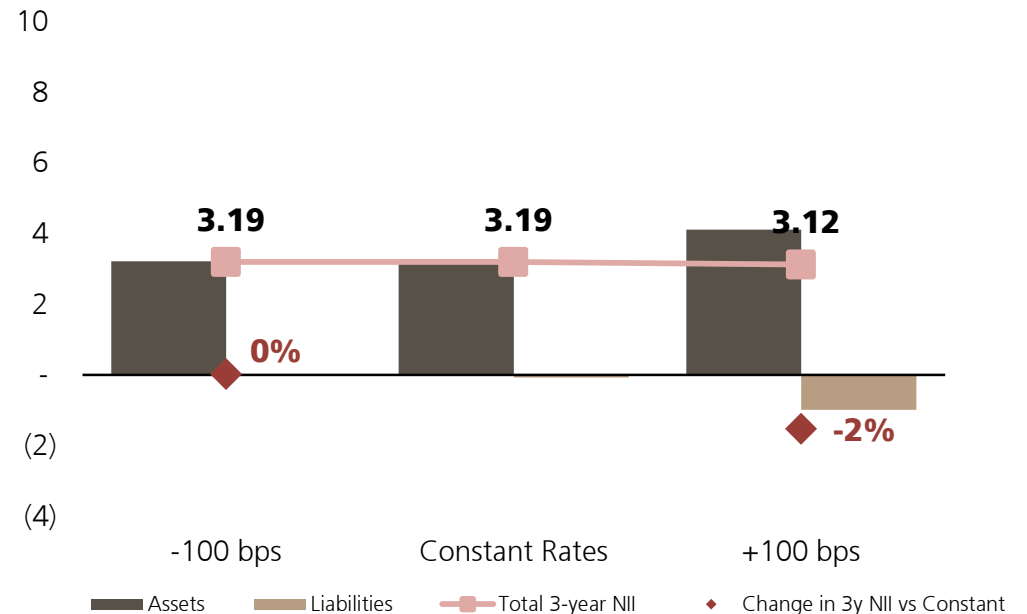


NII becomes less sensitive to rate moves but at a much lower level

3-year NII profile: Before



3-year NII profile: After

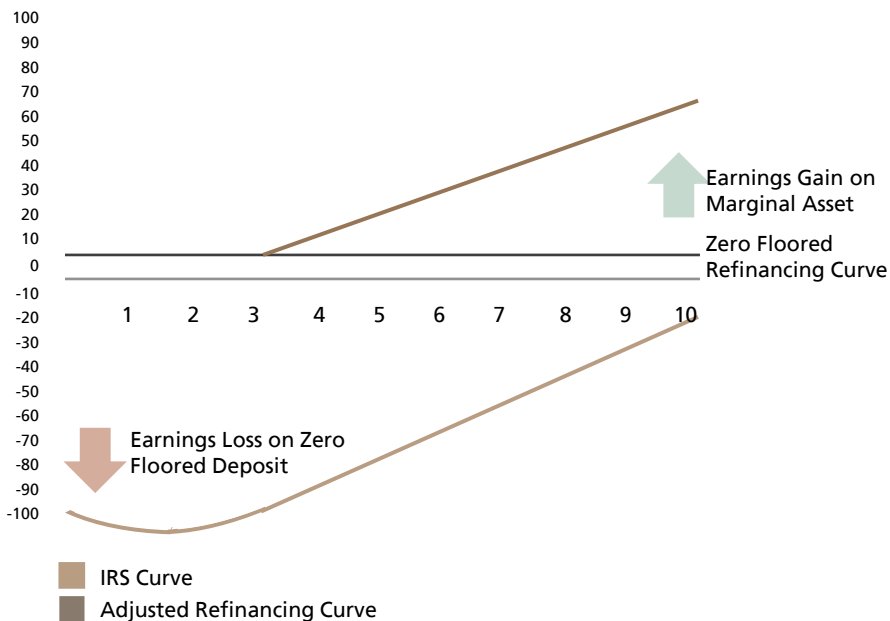


3 Mitigation Measures

When Rates Turn Negative...

As a retail bank cannot, at least initially, charge customers negative rates for short-term or non-maturing deposits (NMD), it is forced to disconnect economically from the external market

Minimum term premium for offering maturity transformation



- The **larger this disconnect the less utility the external market provides** in managing its balance sheet mismatch between asset and liability duration inherent in its product offering
- The bank has little choice but to manage the client demand for duration to the extent that it is willing to invest its **zero floored deposit base at a particular return**
- This can only be done by the bank reflecting the minimum term premium it is willing to accept for investing its NMD and equity in its **asset offering**
- Even if a zero or negative expected economic return was acceptable to a bank, the effects on its earnings in the short term would be severe. The potential **asset duration overhang** that required hedging externally would accrue highly negative initially (potentially for three years) completely **eroding the margin on its asset offering**

A further and far more important consequence of not reacting in such a fashion is that client preference would naturally be to extend the duration of their borrowings to the furthest available tenor as they have the security of not paying negative rates on their savings

Margin Management Becomes A Key Driver....

In such an environment, dynamic margin management becomes a key measure to steer the structure of the balance sheet and to avoid large duration gaps in the balance sheet

Asset side

- **Interest rate risk management:**
 - **Increased cost** for hedging interest rate risk of fixed-rate products, as interest rates for client deposits are floored at 0%
 - **Limited hedging capacity**, if clients massively switch from variable to fixed-rate mortgages

1

Measure: Adjust the asset refinancing benchmark

Liability side

- **Limits & targets:** Large existing cash balances and additional cash inflows compromise balance sheet limits and targets (Liquidity-Coverage-Ratio outflows and Due-to-Customer balances)
- **Revenues:** Negative market rates increase revenue pressure significantly which cannot be passed on to retail clients

2

Measure: Introduce deposit fee (wholesale clients) & changes to deposit rate

Margin Management – Potential Measures

If clients are not willing to pay the minimum term premium the average duration of the asset side would be expected to fall and potentially de-lever to the extent that competitors have a lower minimum. Essentially the lack of the markets capacity to re-price, the more banks will wish to move to a more short term product offering to ensure non economic or negative outcomes

Asset Side: Overview of Potential Measures

- Re-benchmark the asset refinancing curve to reflect the breakeven of offering maturity transformation
- Potential add limitations to offering for longer tenors
- Review and ensure documentation risk is well controlled/modified

To protect deposit inflows, interest rates for client deposits are generally floored at zero. However, competitor monitoring is key

Liabilities Side: Overview of Potential Measures

- Introduction of Deposit Fees for Wholesale Clients
- Reduce client rates across the retail offering
- Create alternatives product offerings geared towards increasing the utility of the deposit base
- An opportunity to improve liability structure and reduce unwanted balances

Due to Customers Framework

- LCR outflow targets
- Off-BS Alternatives

4 Further Challenges

BCBS Task Force on Interest Rate Risk in the Banking Book (IRRBB)

Margin pressure will be further intensified by regulatory initiatives

- **BCBS Task Force on IRRBB mandated to update existing (2004) guidance on IR risk regulation¹**
 - To explore options for direct CET1 capital underpinning of IRRBB
 - Main motivation appears to be: (i) to prevent regulatory arbitrage between Banking Book & Trading Book; and (ii) concerns regarding the impact of rising rates on banks' balance sheets
 - Industry (IIF & EBF working groups) sent a detailed response expressing concerns to BCBS Task Force in early August and then on proposed draft QIS templates in December
 - Recent update: Industry response duly acknowledged by BCBS: (i) Consultation Paper, originally targeted for 4Q14, postponed to April 2015; (ii) an earnings measure should also now be considered, not solely an Economic/Fair Value measure of IRRBB exposure; (iii) extensive Quantitative Impact Study (QIS) originally to be conducted during 1Q15, postponed until summer 2015 – draft QIS templates were discussed with industry working groups in November 2014, with consolidated industry feedback sent to the BCBS on December 1st; Related ongoing discussions on boundary between Trading & Banking Books within BCBS Fundamental Review of the Trading Book
- **Current regulatory guidance advocates a Pillar 2 capital treatment of IRRBB**
 - No direct capital charges specifically for IRRBB, but banks must have enough regulatory capital to support it

Standardized Outlier Test

- Supervisors should identify any "outlier banks":
 - IR risk is measured against total regulatory capital
 - Bank is "outlier" if its IR risk leads to an Economic Value decline of > 20% of Tier1+Tier2 capital under standardized IR shock (usually +/-200bp parallel shock²)
- Regulators should require outlier banks to either reduce their IR risk or increase its capital, or both
- Banks should publicly disclose the level of interest rate risk and their policies for its management



Constraints driven by Basel III

Leverage Ratio Denominator and Liquidity Coverage Ratio

LRD rules transmission into additional capital requirement at banks

- LRD rules have been established long before central banks flooded markets with cash
- Banks are forced to hold corresponding central bank balances
- Regulators have so far shown little to no understanding for our request to at least exempt cash at central banks held for LCR purposes from LRD
- Basel III client deposit modelling rules lead to additional consumption of LRD due to the obligatory build-up of HQLA

Too big too fail / Subsidiarization

Subsidiarization is further increasing cost driven by unfavorable LRD rules

- The requirement for legal entity specific LCR and NSFR, whilst not immediately binding, would reduce flexibility for the Group to run at a more efficient liquidity position and buffers at a local level required to manage volatility
- Increased trapped liquidity
- Intercompany relationships and ruling

...And now you are asking why Treasurers are depressive?

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