UAB CRO Forum

Day 3 - *Panel 1*

Liquidity Risk and Digitalization Dynamics

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Day 3 (Session 1) – Managing Liquidity Risk & Digitalization Dynamics

1. Basel III Liquidity Metrics
2. Deposits Behavior in Digital Age
3. Central Bank Backstops

1. Basel III Liquidity Metrics
(Content Coverage)

- Brief reflection on original Basel III (2014/15) and LCR/NSFR
- Experience since implementation? Challenges?
- Back-testing?
- Liquidity Transferability? Group Level LCR vs jurisdictional entity level?
- Have LCR/NSFR served the purpose? Shortcomings? Limitations?
- Complementary Measures? Banks? Further Reg. requirements under ILAAP
- Level of liquidity measured through LCR/NSFR
- Going Forward / Further Enhancements / Additional Measures
- System Levels 'LCR' (banking sector, financial sector, 'spillage' to domestic economy, cross jurisdictional outflows)

2. Deposit Behavior in Digital Age

(Content Coverage)

- Growth of digital banking platforms
- Digital Arms of traditional banks vs fully Digital banks
- Growth By numbers / volumes / size
- Digital customers' profile, type of products (deposits)
- Volatility of deposits, traditional vs digital
- Behavioral Analysis, empirical evidence

1. Basel III – LCR/NSFR lessons learned and empirical evidence

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1. LCR / NSFR (Strengths and Weaknesses)

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A. Response to 2008 – 2010 Crisis

B. Ten years since implementation

C. Served the purpose?

D. What are the strengths and weaknesses?

1. LCR / NSFR (Strengths and Weaknesses)

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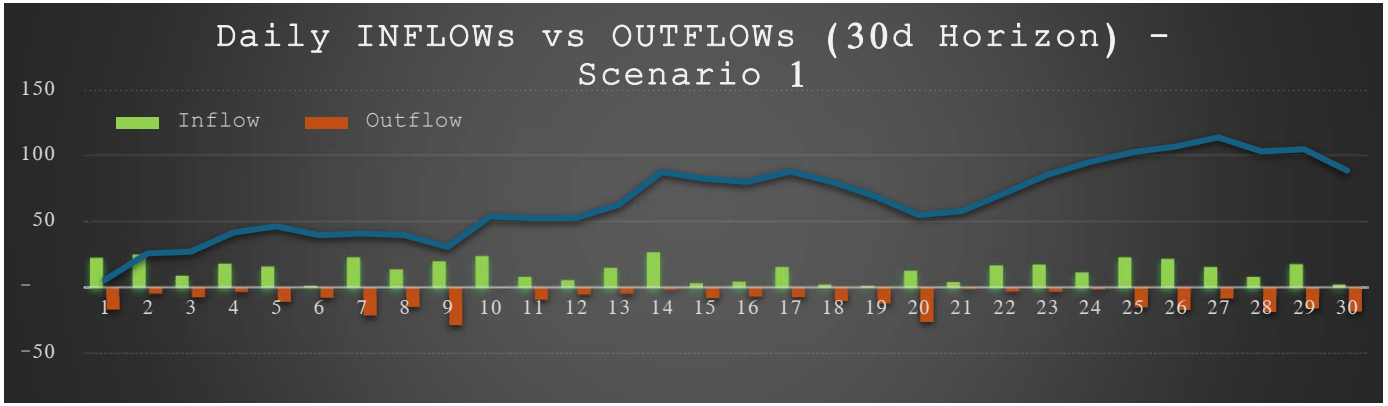

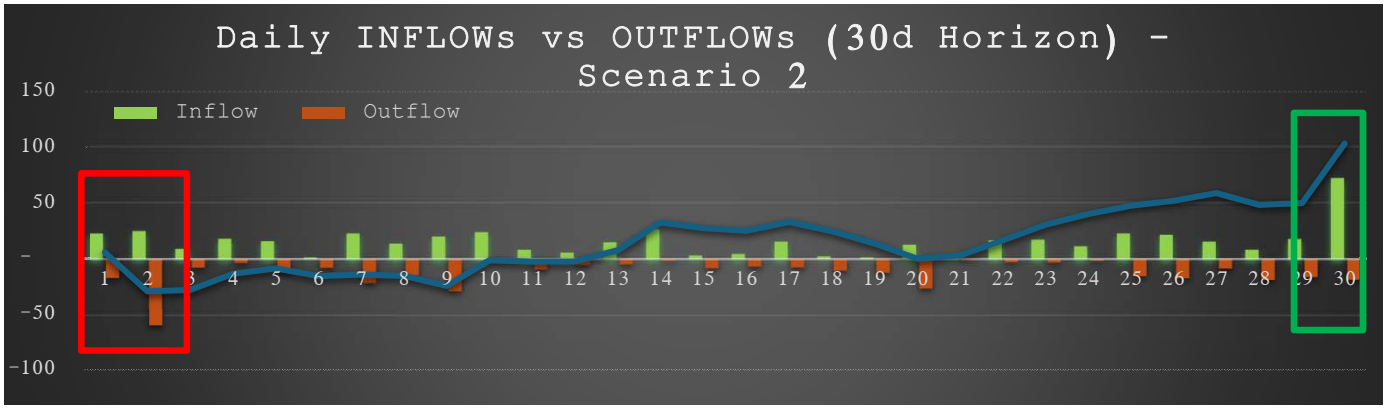

- 30 days horizon is a LONG FUTURE ref. to liquidity
- LCR is more like a STRUCTURAL mid term liquidity measure
- 'intra day', 1 day 5 days is fundamental to liq. Management
- Treasurers in charge
- But CROs must be aware and have direct insight through Realtime MIS or through Middle Offices

1. LCR / NSFR (Strengths and Weaknesses)

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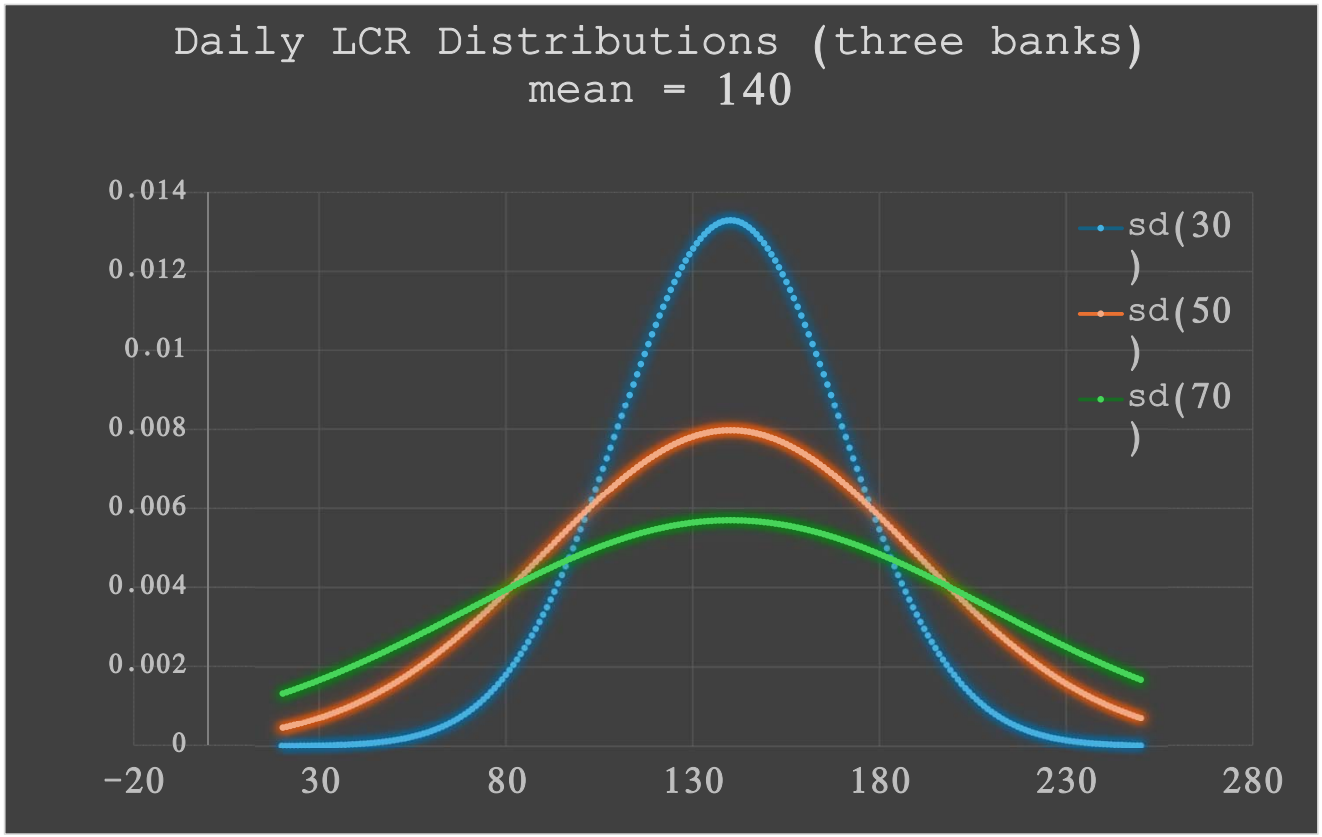

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1. Empirical experience of LCR since implementation in 2015

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A. Laurence Ball (JHU) – "Liquidity Risk at Large U.S. Banks"

- Examined back-testing based on quarter-end 2019 disclosure data for the six largest U.S. banks (e.g., JPMorgan, Bank of America, Citigroup, Wells Fargo, Goldman Sachs, Morgan Stanley)
- Official LCR assumptions understate actual stresses
- Proposed stress-scenarios with higher runoffs (e.g., retail & wholesale deposits, repo funding, secured inflows), leading to actual effective LCRs that were substantially lower than the reported 115%–134% official range

B. Finadium / FSI brief

- analysis highlights that since the 2023 banking turmoil (e.g., SVB, Credit Suisse), actual deposit runoffs far exceeded the LCR's 30-day assumptions—sometimes missing them in a few hours

The LCR's **30-day runoff assumptions** are increasingly seen as **too optimistic**, failing to capture real-world deposit flight observed in recent bank failures.

Academics and regulators are advocating for **tighter assumptions**, more **granular entity-level monitoring**, and scenarios that allow for much **faster outflows** than currently modeled.

1. LCR / NSFR (Strengths and Weaknesses)

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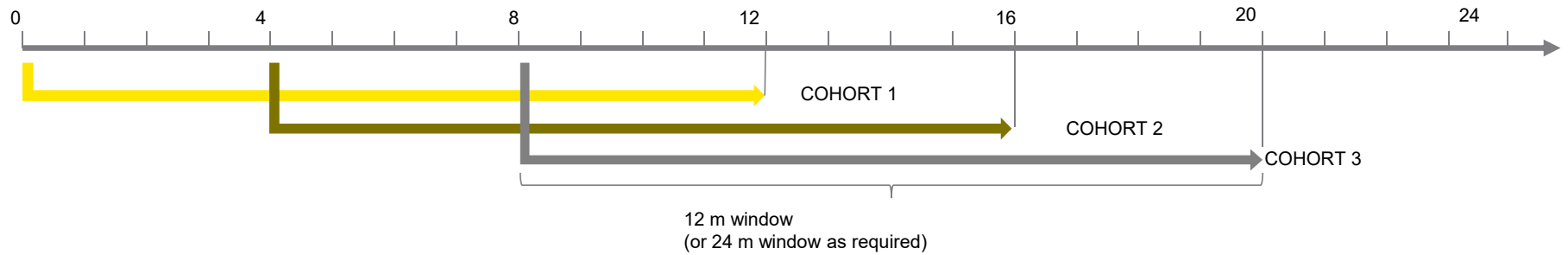

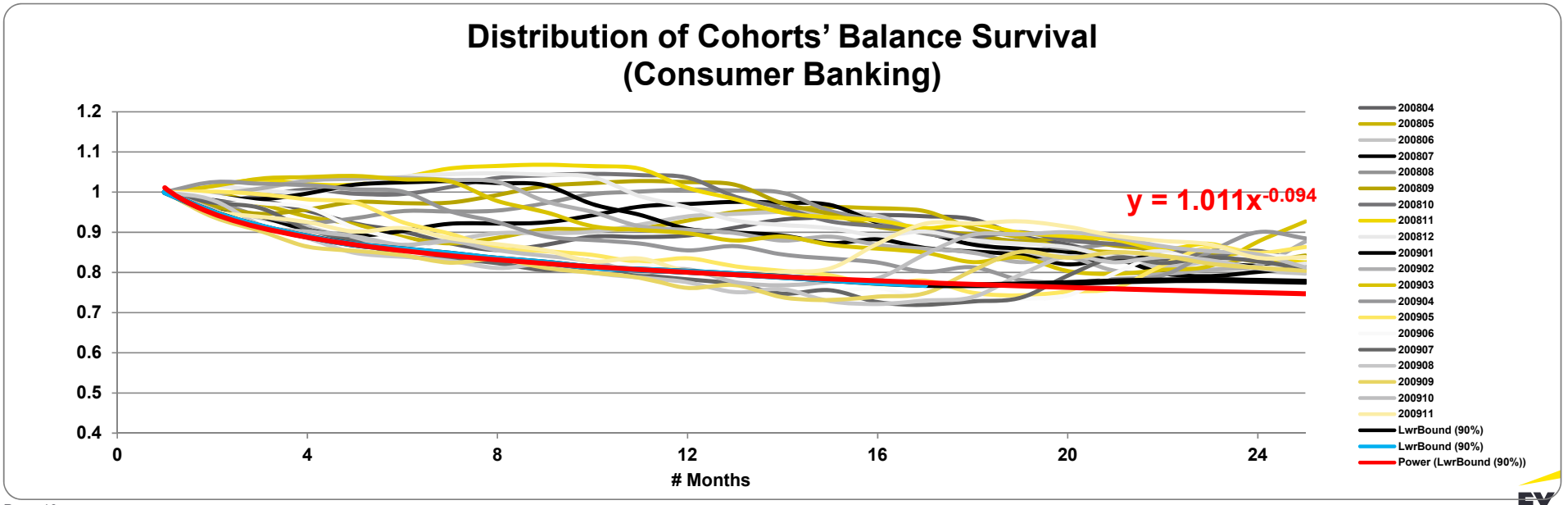

1. NMD Behavioral Analysis – Decomposition to 'equivalent' Fixed Term

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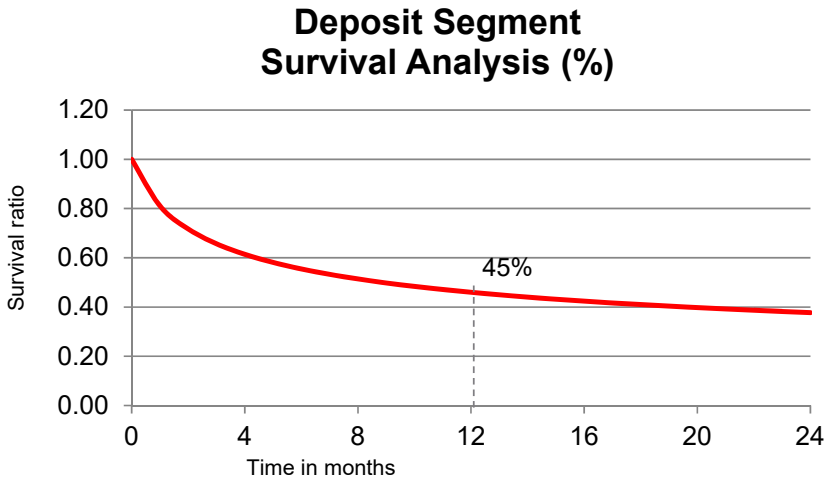

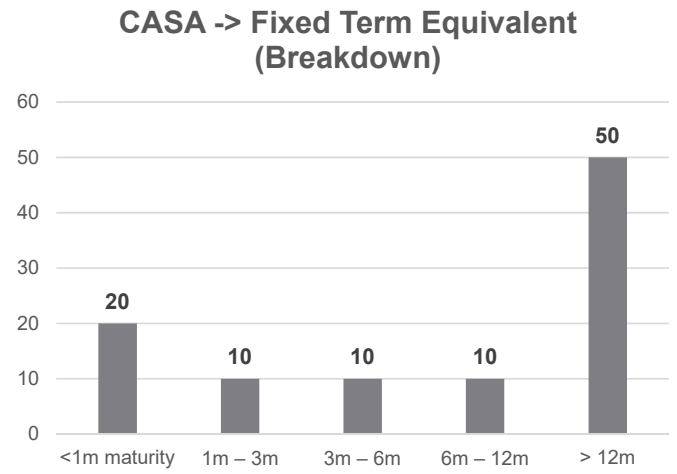

Post modeling an NMD of 100 AED, would be represented as a combination of equiv. term-deposits as shown in the table

Amount	Tenor
20 AED	<1m maturity
10 AED	1m – 3m
10 AED	3m – 6m
10 AED	6m – 12m
50 AED	> 12m

1. NMD Behavioral Analysis (Survival / Stickiness) ?

(How different is it compared to LCR run-off rates)

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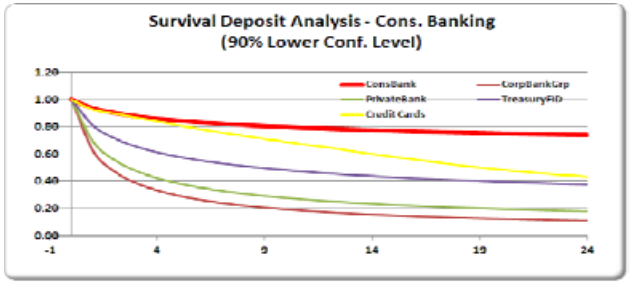
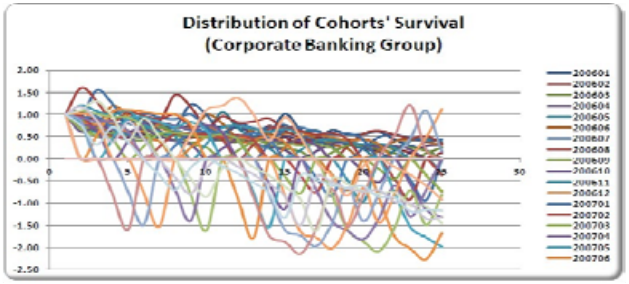
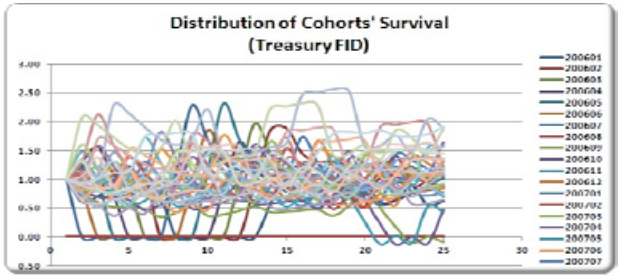
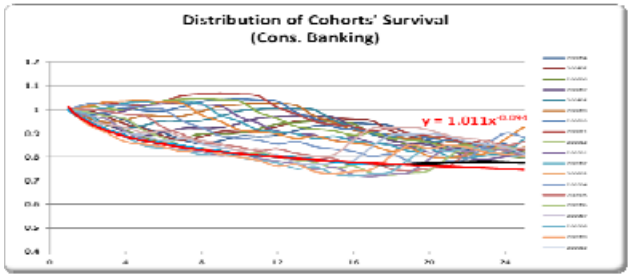
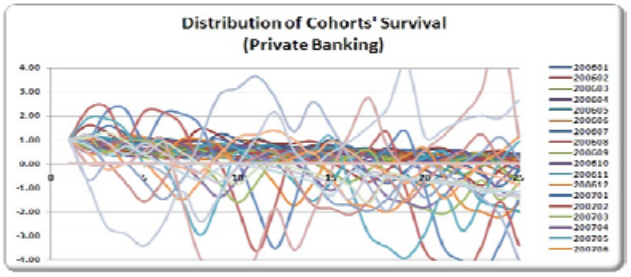
We provide our solution to Mashreq, consisting of an all-inclusive framework and software, which allow the bank to use it for future runs. Proper handover will be provided to the teams. Below, we demonstrate our framework:

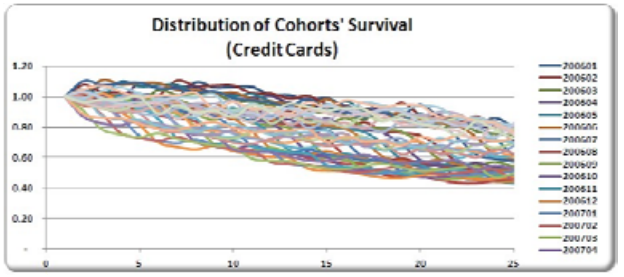


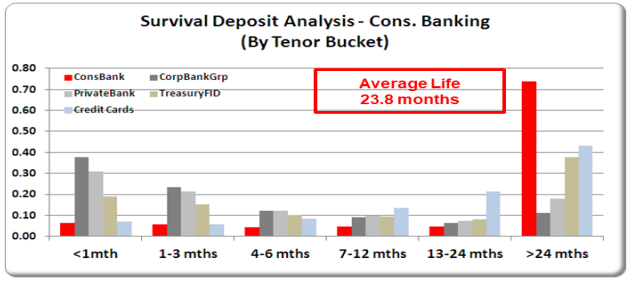


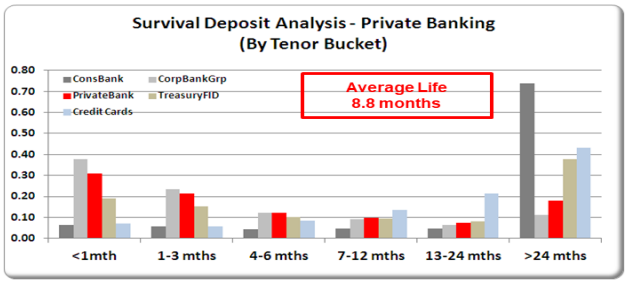


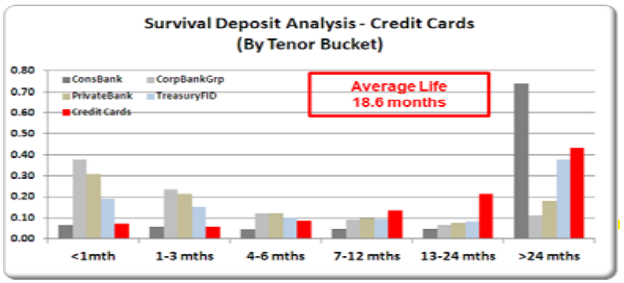












1. LCR / NSFR (Additional Mesures)

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- 'intra day', 1 day 5 days is fundamental to liq. Management
- Maturity Liquidity Gap
- LCR 'Variations' based on assumptions:
  - Runoff rates: Retail Deposits (empirical evidence?) Further segmentation and behavioral analysis
  - Are you convinced that in a Stress situation you will observe only 5 – 10% runoff rates of Retail Deposits?
  - Interbank (100% OUTFLOW vs 100% INFLOW) ? Isn't it a Stress? Will all banks repay dues in a Stress?
  - Modified / Adjusted LCR (country experience and bank own experience of 'runoff rates'
  - (%) of breaches out of period dates
  - Volatility of Daily LCR (i.e. X standard deviations)
  - CBC – Counter - Balancing Capacity

1. Counter-Balancing Capacity

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- Counterbalancing Capacity (CBC) - a set of available actions and resources a bank can use to meet its liquidity needs during a stress event, beyond relying on normal funding sources.

- the *ability of a bank to generate liquidity in a short period of time* by selling assets, drawing on secured/unsecured facilities, reducing lending, or using central bank facilities

Source of Liquidity	Description
Unencumbered HQLA	Liquid assets not pledged elsewhere (e.g. government bonds)
Repo capacity	Eligible securities that can be used in repo operations
Committed facilities	Undrawn credit lines from other banks or central bank lines
Central bank access	Collateral eligible for discount windows or ELA
Loan reduction / asset sales	Ability to reduce lending, sell off loans/assets, or securitize
Intra-group transfers	Support from parent or affiliate entities (subject to ring-fencing)

1. Conclusion
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- LCR / NSFR have fundamentally reshaped bank liquidity management, with clear benefits seen over the past decade
- The implementation in 2014/15 has strengthened banks' short-term and long-term liquidity profiles
- Banks now hold larger buffers of liquid assets and rely more on stable funding, making them more resilient
- Back testing and real-world situations alike demonstrate that banks with healthy LCR/NSFR weather stresses far better than those without
- Further strengthening / complementary liquidity metrics and processes is essential

2. Digital Banking & Deposits Behavior

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2. Growth of Digital Banking Users

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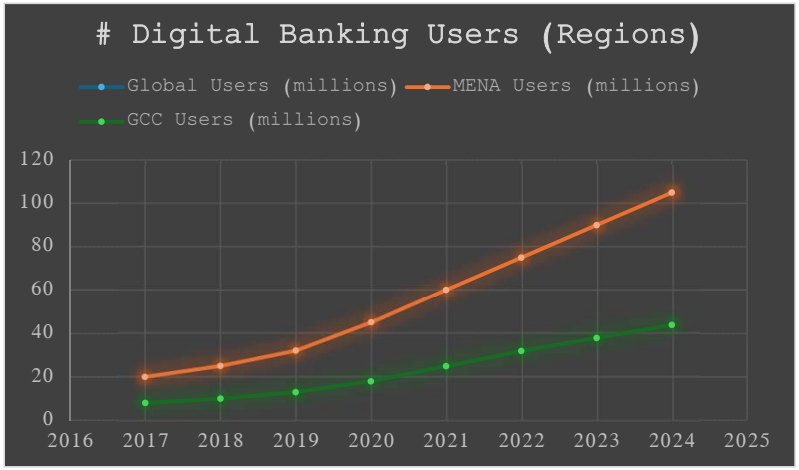
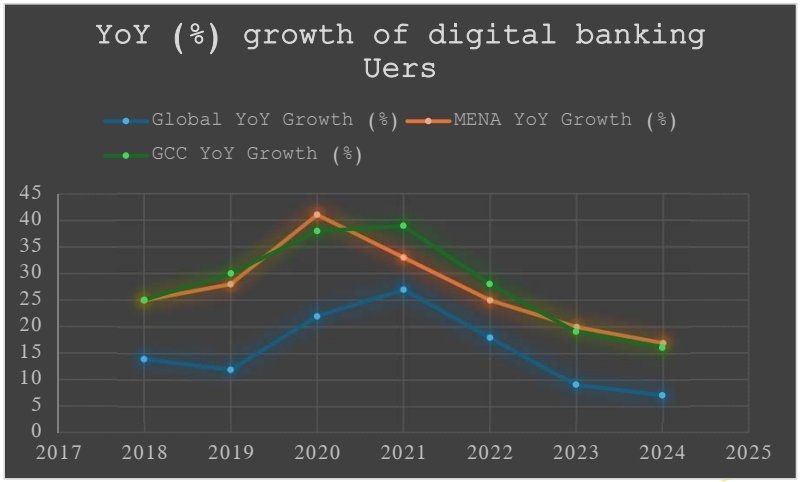
- Growth of digital banking is at a 'speed'
- Not a competitive advantage anymore, but a mater of surviving in the market
- Digital platforms are a must for traditional banks
- Accelerates banking and transactions
- Creates convenience, but also the new risks





Year \ Region	Global Users (millions)	MENA Users (millions)	GCC Users (millions)
2017	1400	20	8
2018	1600	25	10
2019	1800	32	13
2020	2200	45	18
2021	2800	60	25
2022	3300	75	32
2023	3600	90	38
2024	3850	105	44

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2. Factors influencing customer decision for the placements of deposits

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Cust \ Factor	Convenience	UI / UX	Yield	Brand / Relationship	Risk / Security
Gen X (1965 – 1980)				✓	✓
Gen Y (1981 – 1996)	✓		✓	✓	✓
Gen Z (1996 - 2012)	✓	✓	✓		

- Risk Aversion still plays and will continue playing a major role (i.e. the more the wealth – more the risk aversion)
- However, the trend is obvious and consistent, despite the 'slower $$$-wise shift'

2. Factors influencing customer decision for the placements of deposits

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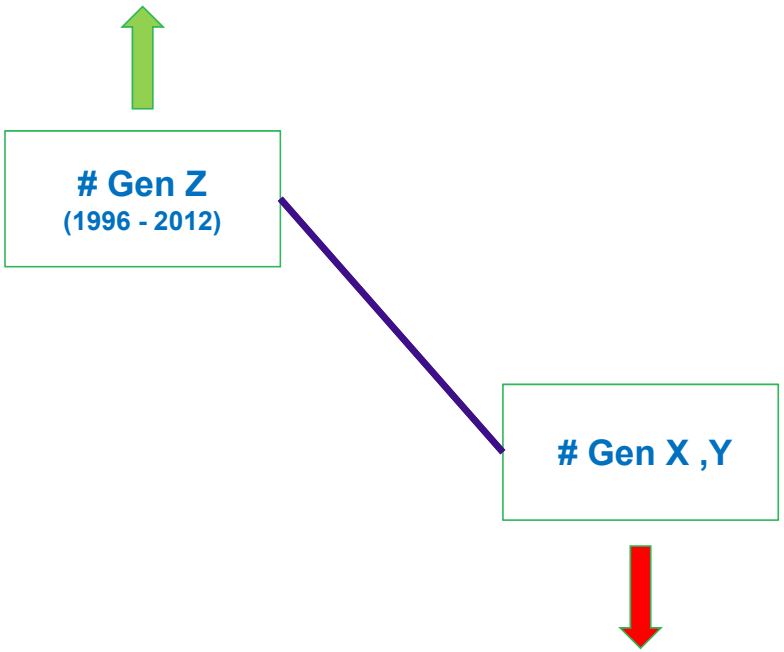

- Risk Aversion still plays and will continue playing a major role (i.e. the more the wealth – more the risk aversion)
- However, the trend is obvious and consistent, despite the 'slower $ $ $ -wise shift'
- Digital Ony Banks have been consistently offering 0.5% - 2% higher deposit rates (on the back of lower operation cost)
- Critical Thresholds for loyalty / stickiness:

  (1) Total Digi. Bank Banking (%) Total Personal Banking

  range of 40% - 60%, however, digital savvy users remain vigilant and exploring their opportunities

2. Historical ‘Bank Runs’

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2. Current / Future ‘Bank Runs’

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What is determining the 'choice of a bank' decision?

(Traditional Bank with Digital Banking Platform vs Fully Digital Bank)

 # Gen Z

- Retail / Consumer
- Highly Mobile and digitally savvy
- Rapidly growing segment
- Risk Takers

?

- Balance going forward
- Reflection on 'stickiness of deposits'

 # Gen X, Y

- Established
- Trust with a personal banker
- Risk averse
- Not always 'digital'

2. The new entrants to the market – FinTechs (non-depositary taking FIs)

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- Payment platforms, Wallets, etc.
- Difference between a Wallet Account vs Banking Deposit (CA) account?
- There is a 'spillover', still not a major, but a trend is consistent

- Ownership of the funds?
- Recoveries / Distribution in the Resolution Process?
- Guarantee Programs (Governmental / Other)

2. Run off Rates (in digital space)

(DRoR – Deposit Run Off Rates)

- How to approach the assessment of deposit stickiness in digital age?
- Function becomes a bit more complex

DRoR = f

- Deposit Rate (above the market)
- Channel (dig.only, referral, etc.)
- (%) of Digital Banking / Total Banking
- Generation (X, Y, Z)
- Depth of the market / Digital Depth
- Systemic Volatility
- Survival Analysis
- Interest Rate environment
- Trust in the banking System / Sentiment
- Others.

2. Has there been a real / full scale run on a bank in 'digital area'

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- Instances:
  - Silicon Valley Bank (2022) – very fast run on a 'high yield' deposits
  - Credit Swiss (2022)
  - MENA Region – Not observed yet, which does not mean that the region is not vulnerable
  - However, many banks have conducted detailed segmentation analysis of their Retail, SME and HNWI deposit portfolios

2. Future of Banking in MENA (Digital Perspective)

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Cust \ Factor	Convenience	UI / UX	Yield	Brand / Relationship	Risk / Security
Gen X (1965 – 1980)				✓	✓
Gen Y (1981 – 1996)	✓		✓	✓	✓
Gen Z (1996 - 2012)	✓	✓	✓		

- Traditional Banks keeping at-par with Digital Banks (Digital Platforms)
- Brand name, Trust and Credit Rating remain a strong factor
- Physical banking is still traditionally a choice for significant customer segment (MENA)

3. Central Bank Backstops

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3. Central Bank back-stops

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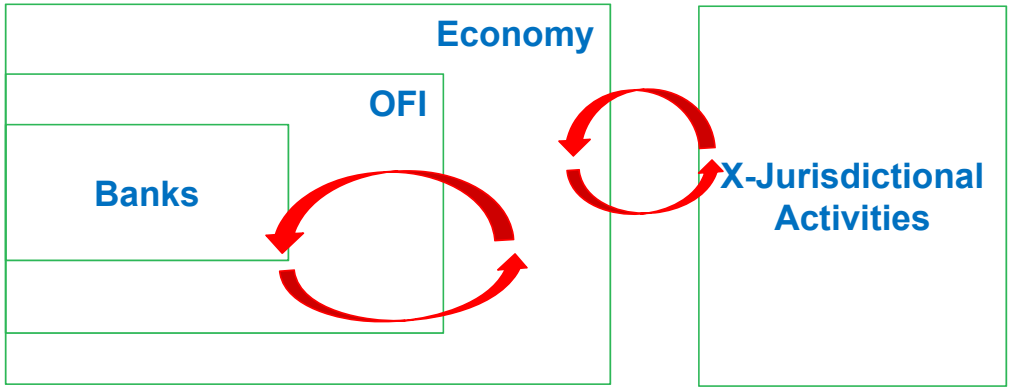

- Deltas & and 'recycles' within the system
- Speed at which liquidity flows within the 'core' system and 'extended' systems
- *d(Inter.Bank) / Total Assets*
- Size of the system & 'elasticity'
- System level 'LCR' like measures

- Qualitative:
  - Operational Readiness
  - Funding & Recovery Plans (Maturity)
  - Overall Liquidity Metrices
  - Composition of funding base

3. Central Bank back-stops

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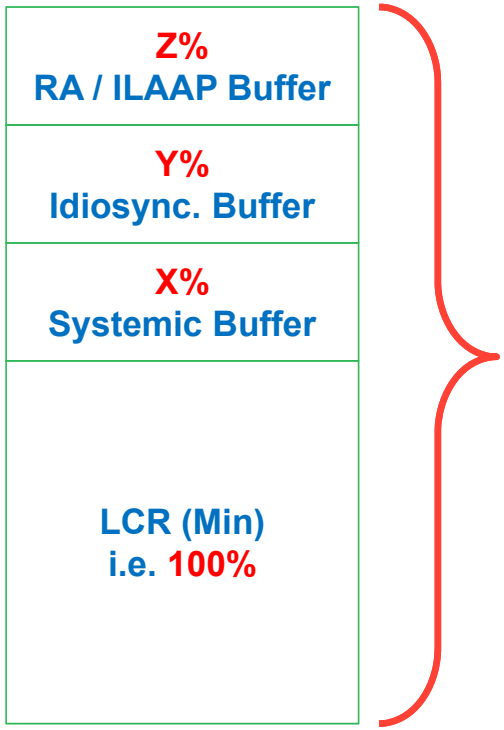

- Common (internal) Regulatory structure of min. LCR requirements
- Similar (not necessarily disclosed) approach by many regulators
- In addition to a robust ILAAP process
- Evolving process and continuous re-assessment of B/S and Funding Profile
- Other aspects to consider:
  - Capture of Liq. Risk and Premium within banks' FTP
  - How the liquidity reflects Pricing of assets?

(A) Appendices

Building a better working world

Reg. Expectation – Integration of Capital & Liquidity Frameworks

- Banks are 'risk takers' - witnessing several bankruptcies or bail outs (last 20 years)
- Capital & Liquidity remain fundamental to banks viability and resilience
- Nine components of Capital & Liquidity Management Framework

Pillar 1	**Capital Management & Allocation**	**Contingent Funding Plans**
Pillar 2 & ICAAP	**Capital Planning & Forecasting**	**RST & Recovery Plans**
Stress Testing & Scenario Analysis	**Liquidity Management & Rep. (ILAAP)**	**Resolution Plans**

- What is the current level of integration across the industry?
- How is it seen from Regulatory perspective?
- What are the common challenges and misconceptions across the industry and regulators