ECB Regulation & Policies:

driving bank risk appetite & financials

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10.2019

Three Pillars of Prudential Supervision

Pillar One	Pillar Two	Pillar Three

Pillar One

Requirements set by the law to be applicable to all banks ***on equal terms***

A. Loss Absorbing Resource Requirements (LARRs)

- ❖ *capital requirements*
- ❖ *capital buffers*
- ❖ *eligible resources (TLAC: only for G-SIB)*

- LARRs are function of risk weighted exposures (RWE)

B. Leverage Requirement

- defined as a function of leverage exposure (LE)

C. Liquidity Requirements

- ❖ *Short Horizon (LCR)*
- ❖ *Long Horizon (NSFR)*

Pillar Two

Authorities set requirements for each bank based on a discretionary assessment of each supervised institution

A. Loss Absorbing Resource Requirements (LARRs)

- ❖ *capital requirement*
- ❖ *eligible liabilities (MREL) for all banks*

B. Liquidity Requirement

C. Pillar2 Guidance

- Not legally binding

Pillar Three

Aimed to foster market discipline imposing disclosure about…

➢ ***.. risks:***

- ❑ *risk type*
- ❑ *risk level*
- ❑ *risk measurement*
- ❑ *risk processes*
- ❑ *risk management Organization*

➢ ***… own funds and liabilities***

- ❑ *type*
- ❑ *level*
- ❑ *connections with balance sheet capital*

Capital Requirements

Pillar One	Pillar Two
Minimum capital requirements	**Supervisory review process**

- *P1 capital requirements set to absorb losses due to:*
  - ❑ *Credit Risk*
  - ❑ *Counterparty Risk*
  - ❑ *Operational Risk*
  - ❑ *Market Risk*
    - *interest rate risk*
    - *equity risk*
    - *currency risk*
    - *commodity risk*

- *Capital requirement are obtained from:*
  - ❑ *either a* ***standardized approach***;
  - ❑ *or a bespoke approach based on* **internal models** *developed by the bank and validated by the Authority*

- *The Authority sets the P2 capital requirement in a way to:*
  - *cover in full the Pillar 1 risks*
  - *absorb losses caused by any other relevant risks (Pillar 2 risks)*
    - ❑ *Interest rate risk on the banking book*
    - ❑ *Strategic risk*
    - ❑ *………*

- *P2R decided considering:*
  - ❑ *the bank's Internal Capital Adequacy Assessment Process* ***(ICAAP)***
  - ❑ *the Supervisory Review and Evaluation Process* ***(SREP)***

Tier 1 Capital

- **Characteristics**
  - Permanently available to the bank
  - Callable at issuer option after 5+ years (NCA's approval needed)
  - Discretionary distributions and no incentive to redemption

- **Common Equity Tier 1 Capital (CET1)**
  - Shareholders equity +/- unrealized gains/losses, with deduction of:
    - Intangible Assets (in full);
    - Minority Interest (in part);
    - Tax Deferred Assets (in part)
    - Investments in Insurance Companies and Financial Institutions

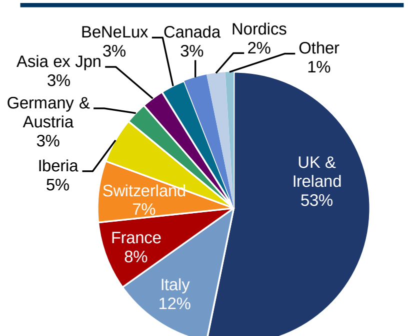
- **Additional Tier 1 Capital (AT1)**
  - preferred shares + perpetual subordinated debt
  - automatic conversion / write off in CET1 if CET1 ratio below a floor
  - no more than 25% of the minimum T1 capital requirement
  - minimum floor for mandatory conversion: 5.125%

UniCredit €1.25bn PNC6 AT1

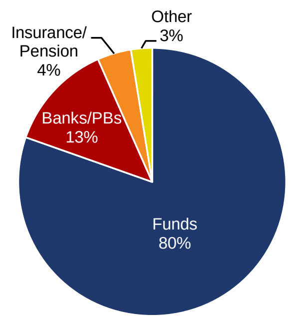
Unicredit Prices the Largest Notional at the Lowest Coupon among its CRD IV Compliant AT1s

- On 15.05.2017, UniCredit S.p.A successfully priced a €1.25bn PNC6 AT1 bond at a coupon of 6.625%
  - Expected issue rating: B+ by Fitch
  - Re-offer price: 100%
  - The PNC6 is the largest among its AT1s with the lowest coupon ever achieved by UC given its 6.75% €1bn PNC-2021, 9.25% €500m PNC-2022 and 8.0% $1.25bn PNC-2024 CRD IV compliant AT1s outstanding
  - Competitive pricing with no new issue premium. UC's outstanding PNC-2021, with a call date ~2yr shorter, was trading at a spread of ~633bps (annual basis) at announcement and the new issuance priced at a margin of 638.7bps.

Allocation by Region



Allocation by Investor Type



Source: Bloomberg as of 15th May 2017

Issue Size and Format:	€1.25bn - Non-Cumulative Temporary Write-Down Deeply Subordinated
Maturity Date:	Perpetual (corporate duration of UniCredit S.p.A.)
Interest:	Fixed at 6.625% p.y. until the First Call Date, then reset every 5 years to the aggregate of the Margin (no step-up) plus the then 5-Year Mid-Swap Rate. Non-cumulative - Payable semi-annually
Redemption:	(i) On any Optional Redemption Date (*Call);* (ii) Upon reduction of interest deductibility or obligation to pay additional amounts; (iii) Upon loss of recognition as AT1 in whole/part Always subject *to prior regulatory approval* and in (ii) and (iii) in compliance with the relevant provisions of the CRR
General Redemption Option:	3 June 2023 (First Call Date) and on any interest payment date thereafter. Redemption price will be equal to the Prevailing Principal Amount, plus any accrued interest and any additional amounts due;
Optional Cancellation of Interest:	The Issuer may decide in its sole discretion, to cancel any payment of interest on any interest payment date on a non-cumulative basis. No dividend pusher / no dividend stopper
Mandatory Cancellation of Interest:	Mandatory Cancellation upon (i) insufficient Available Distributable Items; (ii) distributions in excess of Maximum Distributable Amount or (iii) the occurrence of a Contingency Event
Loss Absorption Event:	If CET1 Ratio of the Group or Issuer has fallen below 5.125 per cent or the then minimum trigger specified in the relevant regulation to Additional Tier 1 instruments ("Contingency Event") *then the Issuer shall* cancel any interest accrued and reduce the principal by the amount required to remedy the trigger breach taking into consideration other instruments with similar write down triggers (and prior loss absorbing instruments) where possible
Margin:	638.7bps
Denominations:	€200k+1k thereafter

Tier 2 instruments (T2)

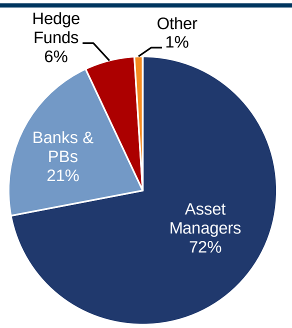
- Deep subordination (junior only to going concern capital)
- Debt with long term maturity (at least 5 years)
- Straight line regulatory amortization in the last 5 years
- Buybacks and early redemptions need regulatory approval
- Statutory non viability loss absorption
- No more than 25% of the minimum Total Capital required

BPER €500m 10NC5 Tier 2

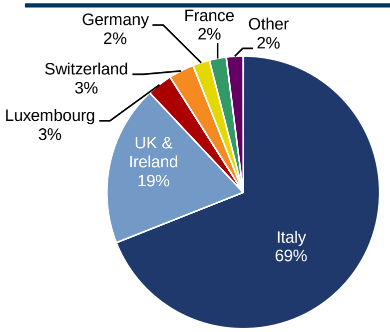
Lowest Coupon for a Benchmark T2 from a Sub-IG Italian Bank

- On 23rd May 2017, BPER Banca S.p.A. successfully priced €500m RegS 10NC5 Tier 2 subordinated notes with a 5.125% annual coupon
- First institutional subordinated issuance by the Bank since 2007 and the first access to the unsecured institutional market since 2011
- The 5.125% coupon is the tightest ever for a benchmark subordinated transaction by a sub-IG rated Italian bank
- On 15 May 2017 BPER communicated to the market a € 10NC5 Tier 2.
- On Tuesday 23 May, the order book was opened for the Tier 2 deal with interest of Mid 5's% area
- In the early afternoon the Issuer set the final yield/coupon at 5.125%

Allocation by Investor Type



Allocation by Region



Security:	Dated Callable Subordinated, Tier 2
Issuer Ratings:	Ba2 (Moody's) / BB (Fitch)
Exp. Issue Ratings:	B1 (Moody's) / BB- (Fitch)
Size and Format:	€500m - Reg S, bearer form
Coupon:	5.125%, Annual, Act/Act (ICMA), reset after year 5 to prevailing 5yr MS + 491 bps margin
Margin:	491.0bps
Reoffer Price/Yield:	100% / 5.125%
Maturity:	31st May 2027
Issuer's Call:	31st May 2022 at par, subject to prior regulatory authorisation
Regulatory Call:	At any time at par, upon full (or partial) exclusion from the Tier 2 Capital of the Issuer, subject to prior regulatory authorisation
Tax call:	At any time at par, as a result of required additional amounts (withholding tax), subject to prior regulatory authorisation
Non-Viability:	Statutory (with contractual recognition of such powers)
Denoms:	€100k + €1k
Governing Law:	English, but for Subordination governed by Italian law

Combined Buffer Requirement (CBR)

- Banks must also comply with the CBR requirement, where CBR consists of:
  - **Capital Conservation Buffer (CCB = 2.5%)**

  \+ **Countercyclical Capital Buffer**

  \+ (alternatively)

    - § **Systemic Risk Capital Buffer**
    - § **Global – SII Capital Buffer** (SII=systemically important institution)
    - § **Other - SII Capital Buffer**

- Some buffer are global in scope; others are set by the NCAs

- In the case of such a breach, the banks are constrained in terms of the discretionary distributions that they can pay out
  - Maximum Distributable Amount – **MDA**
  - Capital Conservation Plan

Countercyclical Capital Buffer (CCyB)

- Meant to ensure that the domestic banking system can withstand a stress while supplying credit
- It helps in recognizing losses as soon as they arise w/o limiting lending
- Set quarterly by each NCA (% of RWEs in its own jurisdiction)
- Raised/lowered with a broadly symmetric process to match the risk of banks' forward losses
- Subject to gradual changes to let banks met it through retained earnings
- Standard range is 0 - 2.5%, but positive if the economy is at mid cycle

Systemic Risk Capital Buffer (SRB)

- It addresses systemic risks of a long-term, non-cyclical nature not covered by Capital Requirements
  - Correlation: correlated exposures, liquidity, leverage cycle, tail risk
  - Contagion: balance sheet, clearing & settlement
  - Clustering: same market; interconnections

- First applied in the 2014 Comprehensive Assessment (1% * RWE)

- Set by NCAs

- No maximum, but it is required either a EU Commission notification to (if in typical range [1%-3%]), or authorization from (if higher requirements)

- Accumulation rules for combining the SRB with G-SII / O-SII buffers

CB for Systemically Important Institutions (SII)

- SII Qualification is decided by the National Competent Authority (NCA), according to EBA's standards and guidelines

- **Global SIIs Capital Buffer (G-SII Buffer)**
  - G-SIIs (Global-SII) have systemic relevance for the global economy
  - G-SIIs allocated in 5 bands, with buffer going from 1% to 3.5%
  - In Italy, only Unicredit is a G-SII (lowest band)

- **Other SIIs Capital Buffer (O-SII Buffer)**
  - O-SIIs are banks of systemic relevance for the domestic economy
  - NCAs assign the status of O-SIIs to its domestic banks, having considered:
    - the bank's size,
    - the bank's complexity and cross border activities and
    - the bank's relevance for the EU and/or for its domestic economy,
    - the bank's interconnections with the overall financial system
  - NCAs enjoy discretionary power in setting this buffer

- G-SII and O-SII buffers cannot be applied concurrently

O-SII Determination

Overall and category scores and variations from previous year

(basis points)

Banking group	Overall score		Size		Importance		Complexity		Interconnect-edness	
	2017	var.	2017	var.	2017	var.	2017	var.	2017	var.
UniCredit	**3,429**	**-25**	2,871	171	2,014	-107	5,377	178	3,585	-209
Intesa Sanpaolo	**2,631**	**113**	2,160	-117	2,657	143	2,933	164	2,817	304
Banco BPM	**373**	**-24**	537	9	557	21	190	-4	216	-113
Monte dei Paschi di Siena	**322**	**-53**	464	-18	391	-15	245	-164	199	-5

Categories of systemic importance

Bucket	O-SII score interval	O-SII buffer
6	4,000 and up	1.25%
5	[3,000-3,999]	1.00%
4	[2,000-2,999]	0.75%
3	[1,000-1,999]	0.50%
2	[350-999]	0.25%
1	[0-349]	0.00%

Transitional period applicable to the O-SII buffers

(per cent)

Banking group	From 1 Jan. 2018	From 1 Jan. 2019	From 1 Jan. 2020	From 1 Jan. 2021	From 1 Jan. 2022
UniCredit	0.25	0.50	0.75	1.00	1.00
Intesa Sanpaolo	0.19	0.38	0.56	0.75	0.75
Banco BPM	0.00	0.06	0.13	0.19	0.25
Monte dei Paschi di Siena	0.06	0.00	0.00	0.00	0.00

Supervision and Pillar 2 Requirements

- The key elements to identify Pillar 2 capital requirements are:
  - Internal Capital Adequacy Assessment Process (ICAAP)
    - banks are responsible for their own internal adequacy assessment process
  - Supervisory Review and Evaluation Process (SREP)
    - SREP is conducted by the competent supervisory authority

- A Joint Supervisory Team (JST) is assigned to each bank
  - JSTs consists of staff from both the ECB and NCAs
  - JSTs run yearly a Supervisory Review and Evaluation Process (SREP) to assess the extent to which banks have:
    - adequate capital to sustain its financial, business and operational risks
    - sound organizational structure and managerial processes
    - reliable and effective internal control systems;
    - viable business models that ensure profitable operations
  - JST Head submit proposals for decision to the Single Supervisory Board

SREP methodology at a glance: four key elements

SREP Decision

- Quantitative capital measures
- Quantitative liquidity measures
- Other supervisory measures

Overall SREP assessment – holistic approach

→ Score + rationale/main conclusions

1. Business model assessment	2. Governance and risk management assessment	3. Assessment of risks to capital	4. Assessment of risks to liquidity and funding
Viability and sustainability of business model	Adequacy of governance and risk management	Categories: e.g. credit, market, operational risk and IRRBB	Categories: e.g. short-term liquidity risk, funding sustainability

Feeds into the Supervisory Examination Programme (SEP)

Source: EBA

Pillar 2: Capital Decision

SREP Bank X
Final Evaluation

Pillar 2 Requirement

P2R is legally binding.

Breaches have direct legal consequences for banks.

Pillar 2 Guidance

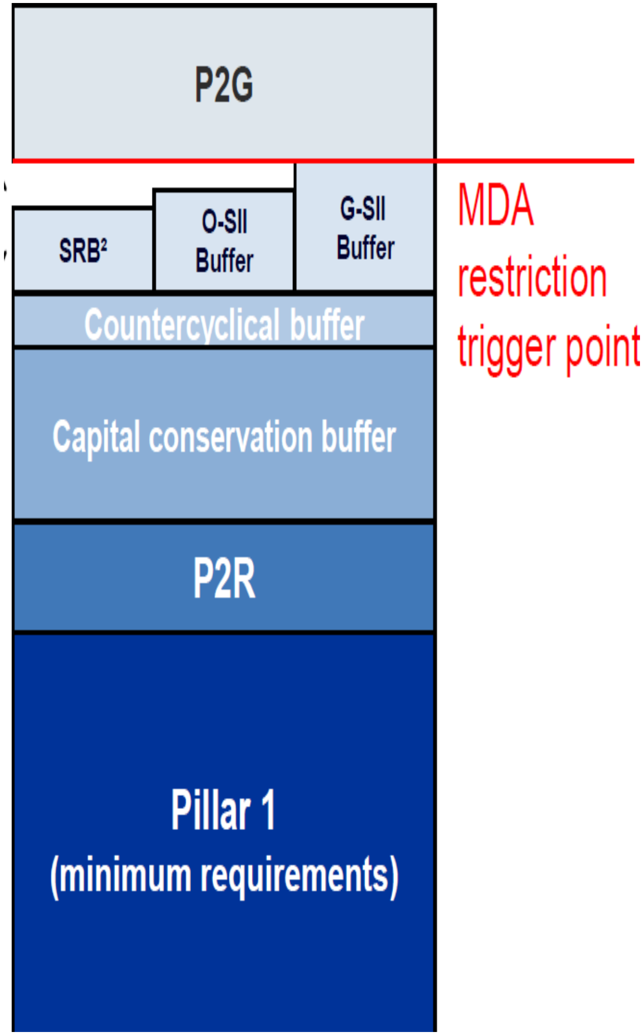
P2G is not binding since it is merely the supervisory expectation about capital appropriate to cope with remote situations

*A failure to meet Pillar 2 guidance **does not** automatically trigger regulatory actions.*

Nonetheless, the ECB expects banks to meet Pillar 2 guidance.

- Pillar 2 capital add-ons are institution-specific measures that should be used to address risks, or elements of risk, to which an institution is exposed.
- Hence, they should not be used as macro-prudential instruments or to address the systemic risk posed by an institution.

The Loss Absorption Waterfall



- Own funds allocated in a sequential order:
  - first to P1R; next to P2R; then to CCB; then P2G
- Under the stacking order, banks facing losses will **first** fail to fulfil their Pillar 2 guidance.
  - no predefined consequence from its breach
  - supervisors consider reasons & circumstances
  - they "expect" P2G (no repeated breaches)
- In case of **further losses**, they would breach the combined buffer requirement (CBR) triggering:
  - restrictions on the maximum distributable amount (restriction on discretionary payments)
  - drafting a capital conservation plan to be approved by the supervisory Authority
- **Even further depletion of own funds** would lead to a breach of Pillar 2 requirements, resulting in a wide set of additional supervisory actions
  - balance sheet repair,
  - capital increase,
  - managerial/organizational changes

Distress

- To facilitate the recovery from distressed, but not yet failing banks, banks have an obligation to draw up a **Recovery Plan** defining what they would do in case of distress to restore economic and financial soundness

  – It must be approved by the Supervisory Authority, once verified its:

  - Completeness
    – comprehensive, updated, with assumptions/choices explained
    – identification of obstacles to implementation,
    – Test of the recovery plan against an adequate range of distressed scenarios
  - Quality
    – integration with governance and risk management framework
    – internal consistency, with a framework of indicators triggering actions
    – sufficient range of recovery options that can restore viability
  - Credibility
    – realistic and plausible assumption and valuations

Core Business Lines and Critical Functions

- In their recovery plan, banks must identify, and ensure continuity of, critical functions and core business lines to restore full viability

- Critical functions
  - – services to third parties of systemic importance to financial stability / economy
    - Size: market share, number of transactions, number of customers
    - Substitutability: # competitors, mkt concentration, entry barriers, substitution speed
    - Impact: interbank exposures, derivatives holdings, loss of market confidence
  - – most common critical functions are:

▪ Retail Deposits	Retail Lending	Payments
▪ Corporate Lending	Corporate Deposits	Clearing and Settlement

- Core Business Lines
  - – set according to revenue contribution, strategic/operational relevance, …
  - – often overlaps with segments used for financial reporting

Resolvability

- A bank is "resolvable" if the Resolution Authority (RA) can credibly:
  - either liquidate it under normal insolvency proceedings
  - or resolve it, by applying its different resolution tools and powers …

  …while minimizing adverse effects on the financial system of the Member State in which the bank is established, or other Member States...

  …and ensuring the continuity of the bank's critical functions

- The resolution authority's resolvability assessment should not assume:
  - extraordinary public financial support;
  - non standard central bank liquidity aid

- Pre-requisites for resolution
  - bank is failed or is likely to fail
  - no reasonable prospect for other measures such as precautionary recap
  - a resolution action is necessary in the public interest (resolution objectives)

- Resolution must preserve the *no creditor worse off* principle

Resolution Plan and Strategies

- The Resolution Authority, consulting with the Supervisory Authority:
  - draws up the resolution plan (RP) that defines the measures to undertake in the case the bank has to go through a resolution procedure
  - provides (in the RP) the scenario analysis to check the effectiveness of the proposed resolution strategy
  - in the case of large groups, designs the RP considering both a single and multiple points of entry resolution strategies (SPE vs. MPE)
  - ensures the removal of any impediments to an orderly resolution

- <u>Resolution strategies</u>
  - modified insolvency process
  - asset transfer, usually a partial one (sale of business, bridge bank)
  - asset separation (good bank - bad bank)
  - bail-in

Total Loss Absorbing Capacity Requirement

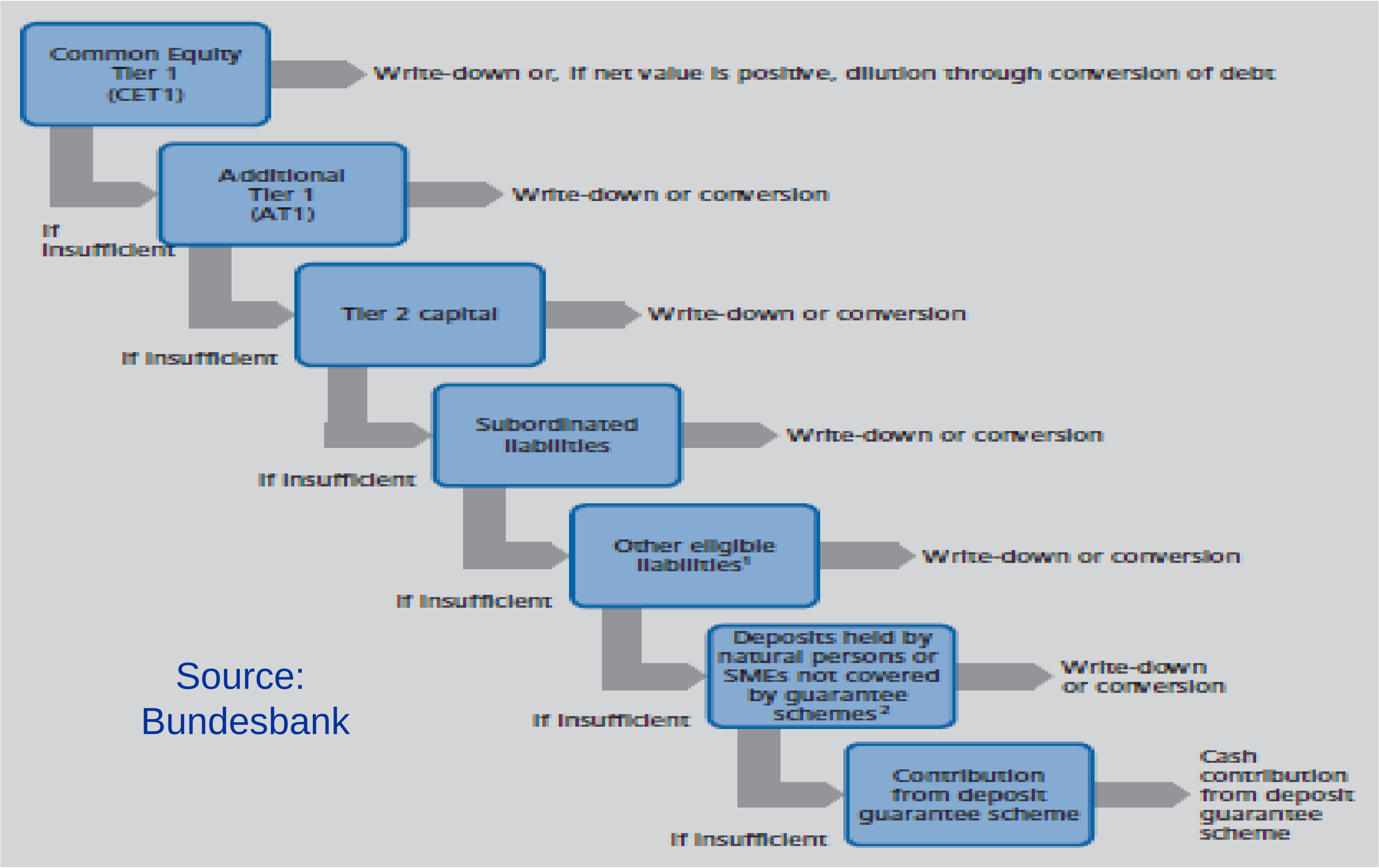
- There must be sufficient loss-absorbing and recapitalization capacity available in a resolution to implement an orderly process able to:
  - preserve financial stability and ensures the continuity of “critical functions”
  - avoid exposing taxpayers to loss

- Resources calibration
  - absorb all existing and potential losses
  - requirements for authorization
  - capitalization above requirements if needed to ensure continuity

- Eligible liabilities
  - expose holders to loss with no material risk of legal dispute or compensation
  - force holders to absorb losses in time of stress avoiding disrupting bank’s critical functions or financial stability
  - stable, long-term claims

Liabilities Cascade in a Bail-in Event

- Transparent creditors hierarchy is needed

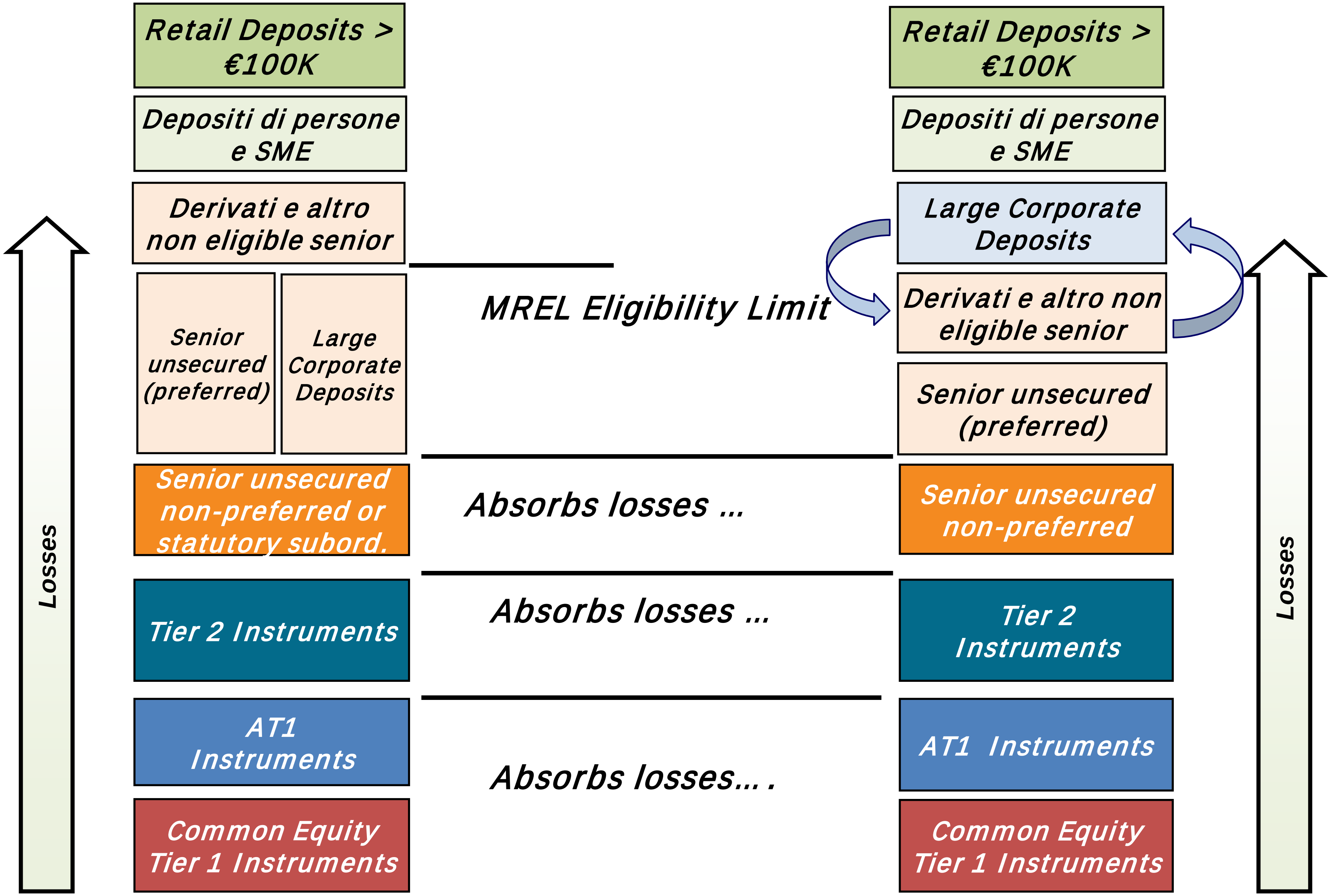


Source: Bundesbank

Eligibility Criteria

1. Issued & maintained by the resolution entities (REs) and fully paid up
2. Not funded, directly/indirectly by (& not owed to) REs or related parties
3. Bail-in under EU Law (exceptions)
4. Neither secured nor subject to guarantees
5. At least one year maturity
6. No holder’s right to accelerate the service of the debt
7. No incentives for redemption, repurchase, repayment prior to maturity
8. No derivatives
9. No set off - netting rights
10. Interest/dividend payments not amendable based on credit standing

Cascata della Loss Absorption



Germania, Francia, Spagna **Italia (da 01/2019)**

TLAC Requirement

- Global standard originally proposed by the Financial Stability Board
  - applies to G-SIIs only
  - defined in terms of both RWE and leverage exposure
  - now part of the EU Commission CRD5-CCR2 Package

• Currently:	P1: min	16% * REA	or	6.00% * LEA
– from 2022:	P1: min	22% * REA	or	6.75% * LEA

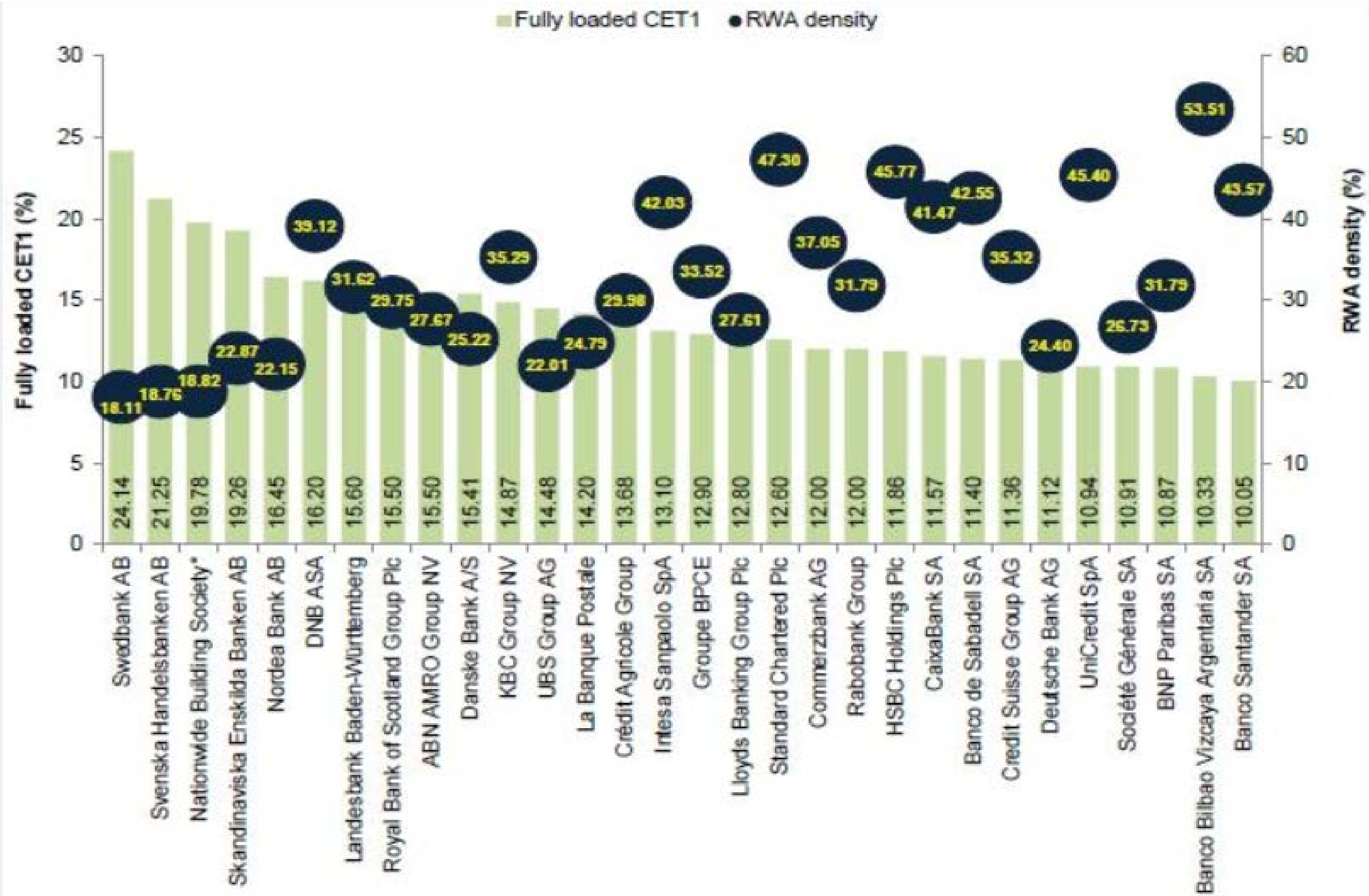
- Subordination requirement for eligible instruments
  - a limited exception allowed (rank *pari passu,* or junior)

- Authorities can set:
  - the TLAC requirement above the minimum (not the EU case)
  - a TLAC buffers (not the EU case)
  - a firm specific requirement

Eligible Liabilities Requirement in the EU

- MREL
  - “**M**inimum **R**equirement for Own Funds & **E**ligible **L**iabilities”
- Rooted in 2014 Bank Recovery and Resolution Directive (BRRD)
- Now amended in the BRRD II to harmonize it with TLAC
- General requirements for all banks set by the Resolution Authority
  - slightly different “eligibility status” from TLAC
- Loss Absorption Amount: LAA = P1CR + P2CR + CBR
- Recapitalization Amount: RA = P1CR +P2CR + (CBR – 125 bps)
  - Variable component open to change
- An implicit SRM reference point

RWE Density


Fully loaded CET1
RWA density
Fully loaded CET1 (%)
RWA density (%)
30
25
20
15
10
5
0
60
50
40
30
20
10
0
24.14
21.25
19.78
19.26
16.45
16.20
15.60
15.50
15.50
15.41
14.87
14.48
14.20
13.68
13.10
12.90
12.80
12.60
12.00
12.00
11.86
11.57
11.40
11.36
11.12
10.94
10.91
10.87
10.33
10.05
18.11
18.76
18.82
22.87
22.15
39.12
31.62
29.75
27.67
25.22
35.29
22.01
24.79
29.58
42.03
33.52
27.61
47.30
37.05
31.79
45.77
41.47
42.55
35.32
24.40
45.40
26.73
31.79
53.51
43.57
Swedbank AB
Svenska Handelsbanken AB
Nationwide Building Society*
Skandinaviska Enskilda Banken AB
Nordea Bank AB
DNB ASA
Landesbank Baden-Württemberg
Royal Bank of Scotland Group Plc
ABN AMRO Group NV
Danske Bank A/S
KBC Group NV
UBS Group AG
La Banque Postale
Crédit Agricole Group
Intesa Sanpaolo SpA
Groupe BPCE
Lloyds Banking Group Plc
Standard Chartered Plc
Commerzbank AG
Rabobank Group
HSBC Holdings Plc
CaixaBank SA
Banco de Sabadell SA
Credit Suisse Group AG
Deutsche Bank AG
UniCredit SpA
Société Générale SA
BNP Paribas SA
Banco Bilbao Vizcaya Argentaria SA
Banco Santander SA

Leverage Ratio (LR)

- A minimum capital ratio «*non risk based*» set at 3%
- Defined in terms of Tier 1 Capital vs. "leverage exposures"
  - Measurement of Leverage Exposure (LE) based on accounting standard
  - LE are different from RWE (no risk weighted / mitigation)
- Backstop against excessive leverage

Indicator	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018
CET1 ratio	13.69%	13.77%	13.74%	13.88%	14.32%	14.64%	14.16%	14.10%	14.18%
Tier 1 ratio	14.57%	14.71%	14.75%	14.88%	15.32%	15.63%	15.34%	15.30%	15.40%
Total capital ratio	17.18%	17.29%	17.44%	17.56%	17.97%	18.14%	17.81%	17.76%	17.83%
Leverage ratio (transitional)	5.30%	5.39%	5.29%	5.32%	5.39%	5.60%	5.37%	5.36%	5.32%
Leverage ratio (phased-in)	4.99%	5.03%	5.04%	5.08%	5.17%	5.41%	5.14%	5.14%	5.11%

Liquidity & Funding Requirements

- Regulatory Response at Pillar 1 Level
  - Liquidity Coverage Ratio (LCR) Requirement
  - Net Stable Funding Ratio (NSFR) Requirement

- Regulatory response at Pillar 2 level
  - Possible additional requirements following the SREP outcomes
    - higher LCR and NSFR, compared to P1 requirement
    - constraints on other liquidity metrics, such as:
      - survival period - cash outflows - liquidity buffer
  - To improve quality/timing of the SREP decision, banks must:
    - report additional liquidity monitoring metrics (ALMM)
    - implement the Internal Liquidity Assessment Process (ILAAP)

Liquidity Coverage Ratio (LCR) Requirement

- LCR is the result of a stress test simulating a shock
- LCR requirement
  - banks must hold a sufficient level of HQLA (high quality liquid assets) to withstand for 30 days a funding stress
- LCR is the ratio between the stock of HQLA and the net cash outflows expected to occur in 30 days of a severe stress scenario
- <u>As a Pillar 1 requirement</u>, the buffer of HQLA must fully cover the expected net cash outflow in a 30 day stressed scenario

$$\boldsymbol{LCR} = \frac{\boldsymbol{High\ Quality\ Unencumbered\ Liquid\ Asset}}{\boldsymbol{(Cash\ Outflow - Cash\ Inflow)\ over\ 30\ days\ of\ stressed\ liquidity\ scenario}}$$

> 100%

High Quality Liquid Asset (HQLA)

- Banks must comply with a specified structural composition of the HQLA buffer tilted toward extremely high quality liquid asset (Level 1 Asset)

- High Quality:
  - easily & immediately converted into cash at little or no loss of value
  - not pledged to secure, collateralize or credit enhance transactions

- Level 1 asset (highest quality - not subject to haircut)
  - at least 60% of the required HQLA

- Level 2A assets (medium quality - 15% haircut)

- Level 2B assets (lowest quality - haircut between 25% and 50%)
  - no more than 15% of the required HQLA

LCR Regulatory Stress Test

1. No access to new “non core” funding
   - no interbank market access
   - only collateralized (central) bank refinancing
2. Significant outflows of “core” and “near core” funding
3. No cash inflow from non performing loans (NPL)
4. Credit commitment entirely drawn down by customers
5. Only partial loans roll over
6. HQLA + inflows in a fx used up to outflows in same fx
7. Cash inflow may only offset 75% of expected outflows

Net Stable Funding ratio (NSFR)

- The amount of Available Stable Funding (AFS) must at least match the amount of Required Stable Funding (RSF)

$$NSFR = \frac{AFS}{RFS} \geq 100\%$$

- **Available Stable Funding (AFS)**
  - capital and liabilities reliable over the NSFR horizon (1 year)
  - "stability weighted" available funds
    - tenor, type and counterpart

- **Required Stable Funding (RSF)**
  - Amount of reliable funds over next year that the bank needs given:
    - its assets
    - its behavior

NSFR vs. LCR requirement