CRD IV capital requirements

Definition of capital conceptual:
I. solidity / loss absorption capacity
II. "distance to default" (measurement)
III. public disclosure (comparability)
IV. going and gone-concern concepts

Capital requirements conceptual:
I. level of public's risk acceptance
II. demands / expectations
III. base for public disclosure
IV. base to compare institutions

$$\frac{\textit{Definition of Capital}}{\textit{Total Risk Exposure Amount}} \geq \textit{Capital Requirement}$$

TREA conceptual:
I. all risk types managed, measured and quantified in one variable
II. proportionate (with scale and risk)
III. institutions' own risk assessment captured via internal models + ICAAP

Remember:
I. solvency is ultimo object of prudential supervision
II. own funds requirement is the core of prudential supervision
III. but not the only means for achieving supervisory goals

I. Elements of the capital ratio

Capital requirements: Pillar I (4,5/6/8/8%*) + Pillar II	**Buffer expectation level:** Buffer on top of Pillar I + Pillar II

$$\frac{\textit{Definition of Capital}}{\textit{Total Risk Exposure Amount}} \geq \textit{Capital Requirement}$$

Pillar I requirements CRR.92.3
Elements of Total Risk Exposure Amount (TREA)
a. Credit risk – banking book.
b. Position risk and LE risk – trading book.
c. FX, commodities and settlement risk.
d. CVA risk for OTC derivatives.
e. Operational risk.
f. Counterparty credit risk.

Pillar II risks CRD.97+98
Measured and quantified in TREA, at least risk concepts:
- Stress testing (including market risks)
- Concentration risk
- Residual risks from credit risk mitigation
- Securitisation risk
- Liquidity risk
- Diversification (including geographical location)
- Business model risk
- System risk

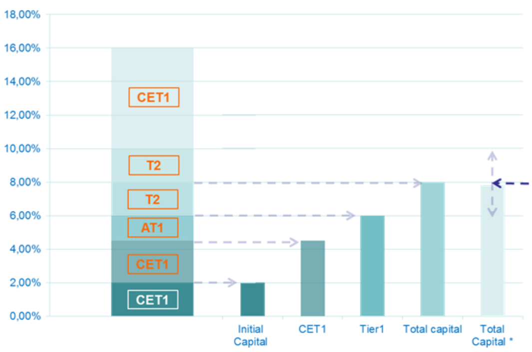
II. Pillar I capital ratios

Requirement	Ratio		
Common equity tier 1 capital ratio - requirement CRR.92.1.a	$\frac{\text{CET 1 capital}}{\text{Total risk exposure amount}}$	≥	4,5%
Tier 1 capital ratio – requirement CRR.92.1.b	$\frac{\text{Tier 1 capital}}{\text{Total risk exposure amount}}$	≥	6%
Total capital ratio – requirement CRR.92.1.c	$\frac{\text{Own funds}}{\text{Total risk exposure amount}}$	≥	8%
Basel I floor – requirement CRR.500.1.b	$\frac{\text{Own funds}}{\text{Total risk exposure amount *}}$	≥	8%

* TREA corrected by either 80% (Basel I or SA) for CR and no OpRisk

III. Capital requirements

CRD IV official capital ratio's



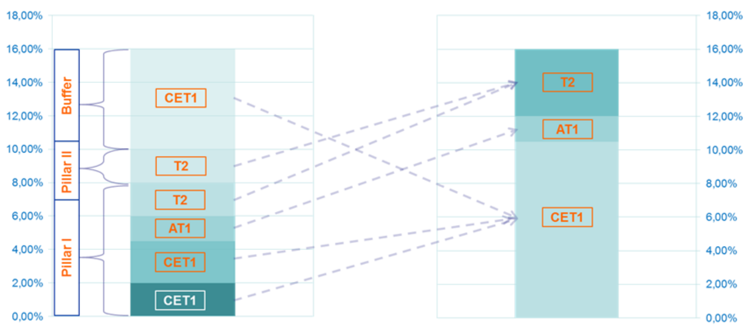
Total Capital*
Total capital requirement including 80% Basel I / SA floor. Outcome dependent on floor versus "normal" total capital requirement.

Pillar II – add-on
Always adds up to "normal" total capital requirement.

Example assumes: 6% Buffer (as sum of all buffer components) on top of 2% Pillar II add-on.
By definition Pillar I equals 8% based on Total Risk Exposure Amount (TREA) for all risk factors.

IV. Capital hierachy

CRD IV hierachy of requirements	**CRD IV capital quality hierachy**



De Nederlandsche Bank Eurosysteem

CRD IV Academy – August 2013 – *Quick Reference Card CRD IV capital requirements*
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