BaFin

UNIONE BANCARIA E BASILEA 3 RISK & SUPER*VISION* 2016

SMA – the latest revision of the new and single approach to OR capital requirements

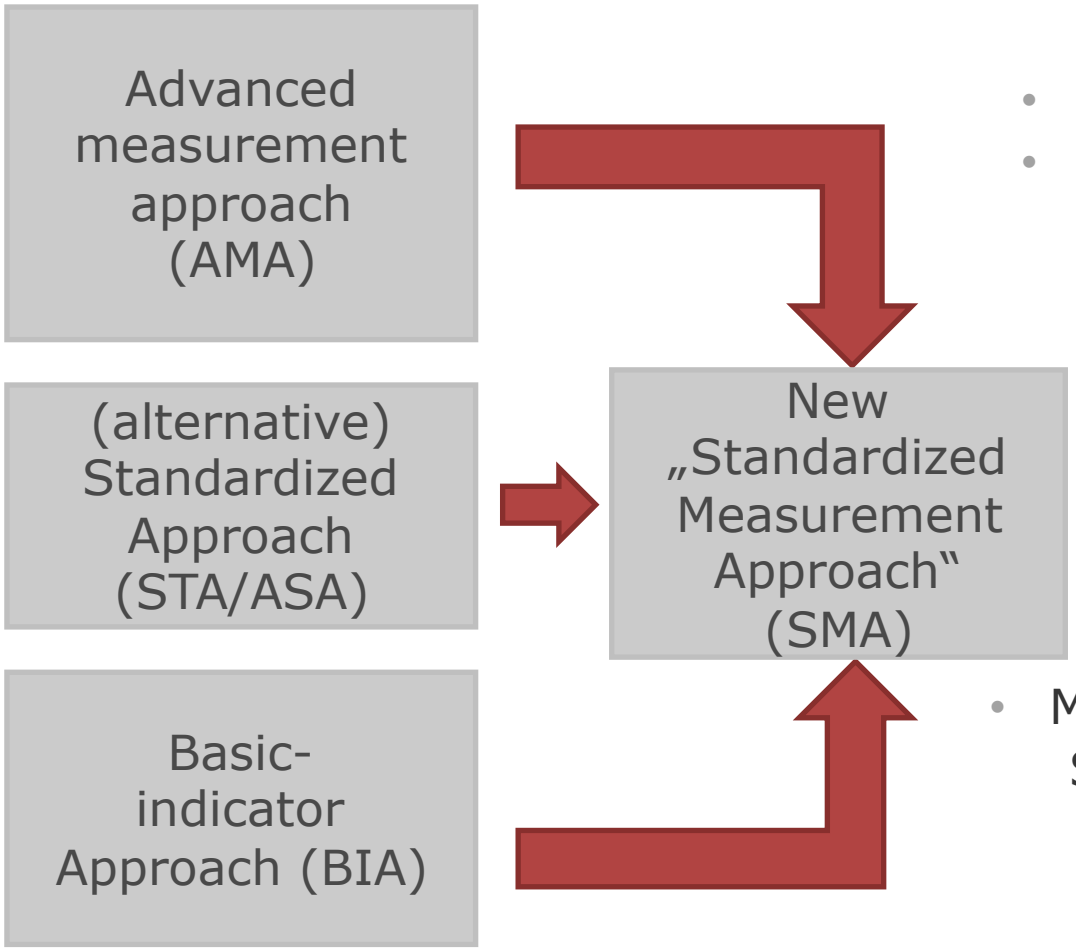
Disclaimer

The presentation is not necessarily the opinion of BaFin but rather the private opinion of the presenter

Content

- Current System vs. future system
- Revision of the standardized approaches
  - First draft of October 2014
  - Second draft of March 2016
    - SMA-Capital calculation
    - BI-Component with new features to address the issues of „high NIM“, „high fee“, „leasing“ and „dividend income“
    - LC-Component
    - Qualitative criteria

Current system vs. future system



- Abolishment of AMA
- No replacement with a model based approach

- Merger of the Standardized Approaches

Current Standardized Approaches

BaFin

- BIA/STA bases on the relevant indicator (see article 316 CRR ff)
- $Rel.Indi. = Interest\ Income - Interest\ Expense + dividend\ income + Fee\ Income - Fee\ Expense + Net\ P\&L\ TB + other\ operating\ Income$
- BIA: Indicator weighted with 15%
- STA: Indicator distributed to different business lines which weights the distributed Indicator with 12%, 15% and 18%

Reasoning of new approach

BaFin

- Reasons of AMA abolishment:
  - Supervisors expectation not fulfilled
  - Gaming in capital and lack in adequacy of capital
  - Complexity and lack in Comparability
- Reasons of BIC in SMA
  - Consideration of different business models on risk profile
  - Avoiding negative values
  - Large banks hit by more and larger losses
- Reasons of LC in SMA
  - Abolishment of AMA
  - Increasing risk sensitivity and
  - assuring capital adequacy

BaFin

Revision of the standardized approaches

As at first consultation of autumn 2014

Revision of the standardized approaches

BaFin

As at first consultation of autumn 2014

- $Business\ Indicator(BI) = Interest\ Component(IC) + Service\ Component(SC) + Financial\ Component(FC)$

with

- $IC = Absolute\ Value(Interest\ Income - Interest\ Expense)$
- $SC = Fee\ Income + Fee\ Expense + other\ operating\ Income + other\ operating\ Expense$
- $FC = Absolute\ Value(Net\ P\&L\ TB) + Absolute\ Value(Net\ P\&L\ BB)$

- Dividend Income not used anymore

Revision of the standardized approaches

BaFin

As at first consultation of autumn 2014

Size depending buckets

BI (in Million €)	*α–coefficient*	*real α*
0-100	10%	10%
>100-1.000	13%	10%-12,7%
>1.000-3.000	17%	12,7%-15,57%
>3.000-30.000	22%	15,57%-21,36%
>30.000	30%	21,36%-app.30%

BaFin

Revision of Standardized Approach

As at March 2016

Latest changes

- March 2016 BIS published a new consultation document (CD): http://www.bis.org/bcbs/publ/d355.htm
- →Includes the Notice of the AMA abolishment and presents the „one fits all" approach – the so called Standardized Measurement Approach (SMA)
- →Integration of a Loss Component within capital formula of the SMA
- →Integration/adressing of reasonable issues raised by industry within the indicator component
  - Provision driven Business model
    - Equal treatment of different fee business models (originate and distribute, distribute only)
    - Limited effect of high banks with high fee banks share
  - High Net Interest Margin banks
  - Equal treatment of Leasing and Credit
  - Equal treatment of dividend income

SMA– 2 Components

BaFin

As at March 2016

Calculation of SMA-Capital:

$$SMA\ Capital = \begin{cases} BI\ Component, if\ Bucket\ 1 \\ 110Mln + (BI\ Component - 110Mln) \cdot Ln\left(\exp(1) - 1 + \dfrac{Loss\ Component}{BI\ Component}\right), if\ Buckets\ 2-5 \end{cases}$$

- Using of two Components:
  - Business Indicator Component (BIC): Indicator Component based on P&L Figures (less risk sensitive but stable)
  - Loss component: Component based on internal loss experiences (risk sensitive but more volatile)
  - Both components determine the same – an estimation of a value at risk at a certain confidence level
  - The LC is used to correct the BIC in case that the LC differs but the LC has a limited influence
  - Indirect incentives on risk management: good management leads to lower losses what leads to lower levels of capital
- But: the use of LC is limited on banks with BI>1 Bln €. To avoid cliff effects the correction is limited on capital of Bucket 2 to 5
- Note: BI> 1 Bln € are mainly banks with total assets from at least 30 Bln €

SMA– 2 Components

As at March 2016

Potential Influence of the LC-correction on final capital

LC in terms of BIC	SMA capital change of Bucket 2 - 5
0	-45,87%
0,5	-20,33%
1	0,00%
1,5	16,88%
2	31,33%
3	55,14%
5	90,48%
10	146,12%
20	207,82%
30	245,69%

- Automatic floor of about 54% of BIC
- Because of the logarithm feature less than proportionate capital increase
- →despite that the LC is more risk sensitive and indicates better the capital adequacy the highest weight to determine the capital requirements is still given to the BIC
- →pretty stable capital outcome even in case of large loss experiences

BaFin

Business Indicator Component

SMA - BIC

BaFin

As at March 2016

$$BI = ILDC_{Avg} + SC_{Avg} + FC_{Avg}$$

Where:

Avg = Average of the items at the years: t, t-1 and t-2

$$ILDC_{Avg} = Min\left[Abs\left(II_{Avg} - IE_{Avg}\right); 0.035 * IEA_{Avg}\right] + Abs\left(LI_{Avg} - LE_{Avg}\right) + DI_{Avg}$$

$$SC_{Avg} = Max\left(OOI_{Avg}; OOE_{Avg}\right) + Max\left\{Abs\left(FI_{Avg} - FE_{Avg}\right); Min\left[Max\left(FI_{Avg}; FE_{Avg}\right); 0.5 * uBI + 0.1 * \left(Max\left(FI_{Avg}; FE_{Avg}\right) - 0.5 * uBI\right)\right]\right\}, \text{ where:}$$

$$uBI = ILDC_{Avg} + Max\left(OOI_{Avg}; OOE_{Avg}\right) + Max\left(FI_{Avg}; FE_{Avg}\right) + FC_{Avg}$$

$$FC_{Avg} = Abs\left(Net\ P\&L\ TB_{Avg}\right) + Abs\left(Net\ P\&L\ BB_{Avg}\right)$$

Addressed problems in comparison to the first consultation:

- **High NIM issue**
- **Issues of different business model:**
  - **Leasing vs. Credit**
  - **Originate and distribute vs. distribute only**
- **Fee business issue**
- **Issue of different accounting standards: dividend income**

SMA - BIC

BaFin

As at March 2016

- Still size depending Buckets
- Bucket dimension changed
  - Bucket 1&2 old merged to Bucket 1 new (BI 0-1 Bln €)
  - Bucket 4 old divided to Bucket 3&4 new (Bucket split on BI=10 Bln €)
- Still increasing but new calibrated Alpha-coefficients
- → 5 classes with Alpha between 11% and 29%

BI buckets in the BI Component — Table 2

Bucket	BI Range	BI Component
1	€0 to €1Bln	0.11*BI
2	€1Bln to €3Bln	€110Mln + 0.15(BI – €1Bln)
3	€3Bln to €10Bln	€410Mln + 0.19(BI – €3Bln)
4	€10Bln to €30Bln	€1.74Bln + 0.23(BI – €10Bln)
5	€30Bln to +∞	€6.34Bln + 0.29(BI – €30Bln)

.

SMA – BIC adjustments

BaFin

As at March 2016

Banks with high net interest margin (High NIM)

- With the merger of all approaches the ASA (alternative standardized approach) is lost which give banks the opportunity to use a limited interest spread of 3.5% on interest earning assets
- Especially banks in countries with high inflation could have a OpR-overcapitalisation
- In Europe just some specialized banks are affected (f.e. Factoring Banks)

- →solution: automated Cap on the interest margin by 3,5%

$$Min\left[Abs\left(II_{Avg} - IE_{Avg}\right); 0.035 * IEA_{Avg}\right]$$

- →similar results as with the ASA

SMA – BIC adjustments

BaFin

As at March 2016

Different treatment of dividend income

- Depending on the accounting standards Dividend Income can be part of interest income or can be an separate item
- Within IFRS dividend income is a separate item

- Solution: To avoid disadvantages in jurisdictions where dividend income is part of interest income BCBS decided to include dividend income into the indicator

$$ILDC_{Avg} = Min\left[Abs\left(II_{Avg} - IE_{Avg}\right); 0.035 * IEA_{Avg}\right] + Abs\left(LI_{Avg} - LE_{Avg}\right) + DI_{Avg}$$

SMA – BIC adjustments

BaFin

As at March 2016

Banks with different distribution business models

- Differentiation of banks with the different business models „distribute only" and „originate and distribute"
- Both have a similar OR-Profile but because of the addition of Expenses within the former approach the „originate to distribute" model double burdened
- Solution: Use of the max value of Fee Income and Fee Expenses. The same with Other Operating Income/Expenses

$$Max\left(OOI_{Avg}; OOE_{Avg}\right) + Max\left(FI_{Avg}; FE_{Avg}\right)$$

- →This solution addresses already the issue of banks with High Fee share

SMA – BIC adjustments

BaFin

As at March 2016

Banks with high fee share

- In general the fee business contributes more to the operational risk exposure
- → max fee income/expenses; it explains better the operational risk profile for normal international active banks with diverse business models
- →although the max value instead of adding fee income/expenses helped already banks with high fee share the capital increase for them could be tremendous
- Solution:
  - For Banks where fee contributes more than 50% to the BI the fee impact is limited on 10% of the part which exceeds the 50%-BI
  - Floor: the advantage is floored by the absolute value of net fee

$$SC_{Avg} = Max(OOI_{Avg}; OOE_{Avg}) + Max\left\{Abs(FI_{Avg} - FE_{Avg}); Min\left[Max(FI_{Avg}; FE_{Avg}); 0.5 * uBI_{Avg} + 0.1 * (Max(FI_{Avg}; FE_{Avg}) - 0.5 * uBI_{Avg})\right]\right\}$$

with:

$$uBI = ILDC_{Avg} + Max(OOI_{Avg}; OOE_{Avg}) + Max(FI_{Avg}; FE_{Avg}) + FC_{Avg}$$

SMA – BIC adjustments

As at March 2016

Example to illustrate the adjustments of high fee (example 1) and how the floor works (example 2)

Input

	Example 1	Example 2
II	100	100
IE	90	90
FI	90	90
FE	80	10

Indicator

		GI	BI (old)	BI (new without cap) - uBI	BI (new with cap)
Example 1	ILDC	10	10	10	10
	SC	10	170	90	54
	Final Indicator	20	180	100	64
Example 2	ILDC	10	10	10	10
	SC	80	100	90	80
	Final Indicator	90	110	100	90

SMA – BIC adjustments

BaFin

As at March 2016

Different treatment between credit and lease finance

- credit and lease business have similar processes and similar operational risk exposures
- The inherent default risk of lease business is already covered by credit risk
- Depending on the accounting standards lease income/expenses are part of other operating income/expenses
- F.e. IFRS classifies operating lease as part of other operating income/expenses.
- Within operate leasing the redemption is part of lease income
- →capital requirements could increase multiple times compared to credit
- solution: treatment of lease business like credit → consideration of expenses for depreciation or net gains/losses for the selling of leased assets

$$ILDC_{Avg} = Min\left[Abs\left(II_{Avg} - IE_{Avg}\right); 0.035 * IEA_{Avg}\right] + Abs\left(LI_{Avg} - LE_{Avg}\right) + DI_{Avg}$$

BaFin

Loss Component (LC)

& qualitative requirements for the loss data base

SMA - LC

BaFin

As at March 2016

Introduction of the loss component

- Increasing marginal coefficients of BI because Loss data shows that large banks suffers more large losses, but even banks of the same size (BI) shows large deviation of loss profile
- less capital incentives to increase the risk management of the BI – losses are only included in other operating expenses
- Solution: adjustment of the BIC result by an internal loss driven component

  →additional risk sensitivity

  →(indirect) incentive to increase risk management

$$\begin{aligned} \textit{Loss Component} = \; & 7^{*}\textit{Average Total Annual Loss} \\ & + 7^{*}\textit{Average Total Annual Loss only including loss events above €10Mln} \\ & + 5^{*}\textit{Average Total Annual Loss only including loss events above €100Mln} \end{aligned}$$

- No use of scenarios/external data: enormous supervisory burden and difficulties to introduce such tools in a standardized way but banks are invited to add these elements for Pillar II purposes to the LC

SMA – LC and loss data base

As at March 2016

To avoid gaming there is a need of clear rules for loss data

- Banks need documented processes/procedures for identification and treatment of loss data
- Loss data must be comprehensive
  - 10 year observation period
  - For the first time a 5 year observation period possible
- De minimis gross loss threshold of 10.000 €
- Proper process to determine grouped losses

SMA – LC and loss data base

BaFin

As at March 2016

- For each loss the following must be recorded:
  - Date of occurrence, discovery, accounting
  - Gross loss (loss before any recoveries)
    - which includes
      - + Direct charges, impairments, settlements, write downs
      - + Costs incurred as a consequence of the event (f.e. legal expenses, repeirment costs)
      - + Provisions
      - + Pending losses (with definitive financial impact)
      - + Timing losses
    - Not included are costs f.e. like insurance premiums, maintenance costs
  - Recoveries (insurances)

SMA – LC and loss data base

As at March 2016

Losses used for calculation :

- Losses must used no later than accounting date
- Net loss before recovery of insurances
- Boundary losses
  - Losses related to credit **are not** part of the LC
  - Losses related to market **are** part of LC

Capital requirements for banks that do not meet the qualitative criteria:

- At least 100% BIC
- Additional capital set by the supervisory authority