

CRR II Regulatory challenges for the next three years

**We provide an overview of the upcoming
CRR II requirements.**

<https://www.pwc.com/gx/en/services/advisory/basel-iv.html>



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Foreword

After more than two years of intensive discussions and deliberations, the EU’s “Banking Package” was finalised on 14 February 2019 and passed the EU parliament on 16 April 2019. The final drafts entered into force on 27th June 2019. The general date of application for CRR is 28th June 2021.

The implementation of the Banking Package, consisting of significant amendments to the Capital Requirements Regulation (“CRR II”), the Capital Requirements Directive (“CRD V”), the Bank Recovery and Resolution Directive (BRRD II) and the Single Resolution Mechanism changes, banks will find themselves running out of runway quickly.

From our point of view, the Banking Package will impact the banking industry on a larger and more intense scale than CRR/CRD IV (i.e. the predecessor of the Banking Package).

This brochure presents the results of these discussions, giving you an overview of the new CRR II requirements, as well as providing some thoughts on how they will impact the banking industry and what can be done today to get prepared.

We hope it will prove useful for you.

Kind regards,



Martin Neisen, PwC Germany
Global Basel IV Leader



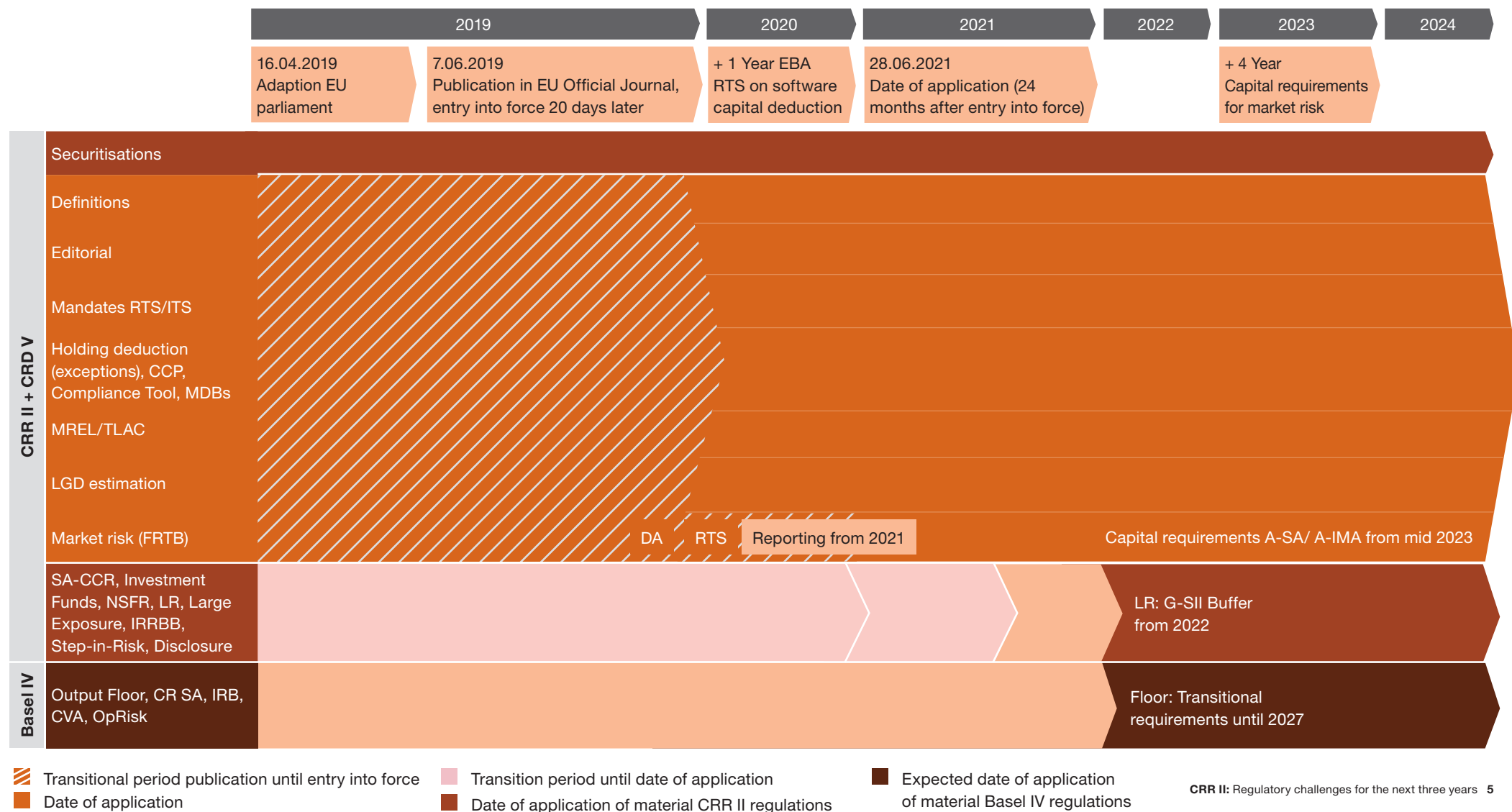
Stefan Röth, PwC Germany
National Basel IV Standardised Approach Workstream Leader

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Preface

The new requirements of CRR II

Fig. 1 New requirements of CRR II enter into force gradually, starting in 2019

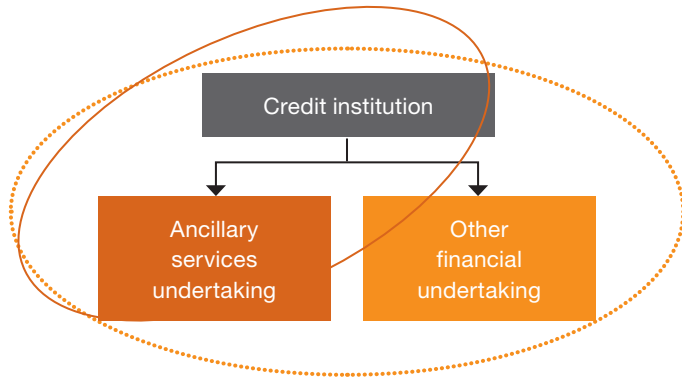


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Own funds, consolidation and MREL/TLAC

Supervision on consolidated level

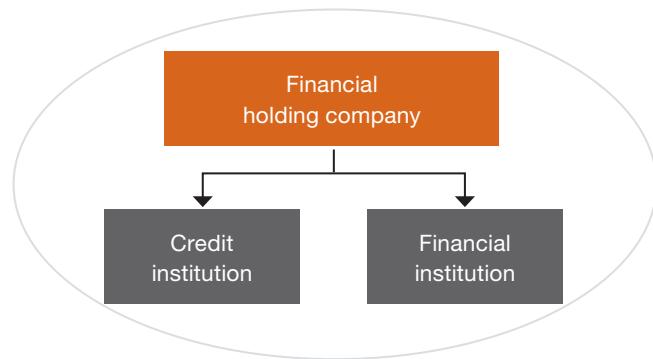
Fig. 2 Prudential consolidation under CRR II requirements



One provider of ancillary services is enough to create a group

Other financial undertakings:

- To be measured at equity (also subsidiaries)
- If step-in risk is identified, the supervisory authority may require consolidation.



(Mixed) financial holding companies must apply for supervisory approval. With approval they are responsible for the group.

Exceptions:

- Non-operational, no management decisions, no resolution entity
- Superordinate entity as subsidiary
- No obstacles to effective group supervision

Groups established in a third country:

Obligation to set up an intermediate parent unit (IPU) in the EU

The “bracket” for the banking activities of this group in the EU, under which all relevant entities are to be consolidated.

The obligation applies from a total balance sheet of €40 bn or more, incl. branches within the EU



¹ Point of non-viability

Requirements for own funds instruments and deductions

Criteria for CET1 instruments

- In case of **subsequent issuances**, institutions do not need permission of competent authorities, but a notification is sufficient.
- **Profit and loss transfer agreements** are applicable under certain conditions (at least 90% of voting rights, same EU Member State, loss compensation obligation, discretion to decrease amount by allocating a part to funds for general banking risk, limited cancelability).

Deductions of CET1

- **Exceptions from the deduction** are possible **for software**. Requirements: prudently valued and not negatively affected by resolution, insolvency or liquidation of the institution. EBA-mandate for developing a RTS
- A general deduction obligation for **negative goodwill** (badwill) was **not adopted**
- New deduction for **minimum value commitment** on CIUs
- New deduction in form of **minimum loss coverage for new Non-Performing Exposures (Prudential Backstop)**
- Temporary exemption from deduction of equity holdings in insurance undertakings without prior authorisation

Criteria for AT1- and T2-instruments

- **Indirectly issued capital instruments** are no longer accepted
- PONV-clause¹ required: Option to reduce repayment claims in whole or in part on the basis of regulatory requirements (**regulatory “bail-in”**).
- Prohibition of netting or set-off agreements
- **Grandfathering** for not directly issued instruments (until end of 2021) and for instruments, that do not contain a bail-in clause or are subject to a netting agreement (up to 6 years after the date of entry into force of CRR II).

Minority interests

- Instead of the previous individual enumeration Art. 81 (1) CRR II refers to **CET1 items**. **Therefore OCI and 340g HGB reserves should be eligible in the future**. Minority interests in equally supervised intermediate holding companies in third countries will be eligible in the future.
- For **“Qualified eligible liabilities”** of G-SIIs, a regulation similar to the calculation for qualified AT1/T2 is introduced

¹ Point of non-viability

MREL and TLAC – overview

CRR

- TLAC minimum requirement for G-SIIs in the EU
- Eligibility criteria for TLAC and MREL
- Deduction rules for investments in TLAC instruments for G-SIIs (TLAC-holdings)
- Qualifying eligible liabilities for G-SIIs
- TLAC reporting & disclosure

MREL

- General requirement for all CRR institutions
- Institution-related requirement to be fulfilled according to Pillar II
- Consideration of loss absorbency, recapitalisation + market confidence buffer
- Subordination requirement for G-SIIs and „Top Tier Banks“ (13.5% RWA / 5% LRE)
- RWA-/LRE-based (analog TLAC)
- In certain cases TLOF-based subordination requirement

BRRD

- MREL minimum requirement for all resolution entities and subsidiaries
- Institution specific adjustments for TLAC
- Possibility of distribution restrictions, when noncompliant with MREL/TLAC (M-MDA)
- MREL reporting and disclosure

MREL and TLAC

- Common criteria for eligible liabilities and for instruments that are excluded from a bail-in
- Prohibition of indirect emissions
- Explicit bail-in-clause for third country emissions
- Prior approval of the resolution authority for the repurchase or redemption of eligible liabilities
- Reporting and disclosure requirements to be fulfilled

CRD

- Buffer requirements (reference for MREL/TLACGuidance)
- MREL and TLAC are relevant for the determination of the maximum distributable amount (MDA)

TLAC

- Pillar I-requirement
- Applicable for G-SIIs
- When CRR II will come into force: 16% RWA/6% LRE, from 2022 on: 18% RWA/6,75% LRE
- Deduction rules for investments in TLAC instruments for G-SIIs (TLAC-holdings)
- Significant subsidiaries of non-EU G-SIIs must meet a minimum requirement of 90% of the EU G-SII level to be fulfilled with subordinated instruments; nonsubordinated instruments to a maximum of 3,5% RWA or when max. 5% excluded liabilities

3

Credit risk and counterparty credit risk

Revisions to the standardised and IRB approaches for credit risk

Exposure classes

- Supplement the multilateral development banks and international organisations with further entities
- In the asset class “secured by real estate”, the rights and responsibilities of national supervisors to review risk weights of 35% and 50% were strengthened

SME factor

- Institutions shall adjust the exposures to a SME (RWEA) by multiplying with a revised SME factor
- The factor is based on the total amount owed to the institution by the SME or the group of connected clients of the SME (e.g., SME + Non-SME)
- The factor multiplies the part of exposure up to 2.5 Mio. € with a weight of 0,7619 and the remaining part above 2.5 Mio. € with a weight of 0,85.

Infrastructure Supporting Factor

- To promote the financing of public infrastructure, certain „corporates” and “specialised lending” positions can receive a support factor
- High qualitative requirements for the application of the support factor
- Support factor of 0.75

¹ Major changes by CRR II

Application requirements and RWA calculation for investment funds (1/2)

The institutions may only determine the risk weight for CIUs in accordance with the look-through approach (LTA) (incl. Modified Standardised Approach) or the mandate-based approach (MBA) if the following criteria for the recognition eligibility acc. to Art. 132 (3) CRR II are cumulatively fulfilled. In all other cases the fallback approach (RW 1.250%) should be applied.

Application requirements for investment funds – LTA and MBA

I. Requirements for CIUs and administrator¹

The CIU is one of the following:

- an undertaking for collective investment in transferable securities (UCITS)
- an AIF managed by an EU AIFM registered under Article 3(3) of Directive 2011/61/EU;
- an AIF managed by an EU AIFM authorised under Article 6 of the AIFM Directive;
- an AIF managed by an authorised non-EU AIFM
- a non-EU AIF managed by a non-EU AIFM
- A non-EU AIF, not marketed in the EU and managed by a non-EU AIFM in a third country (Article 67 (6) of Directive 2011/61/EU)

II. Requirements for the prospectus

The CIU's prospectus or equivalent document shall contain the following information:

- the **categories of assets** in which the CIU is authorised to invest;
- the relative **limits and methodology for** calculating any investment limits;

III. Reporting¹

The CIU's reporting to the institution meets the following requirements:

- the exposures of the CIU shall be **reported at least as frequently as that of the institution**;
- the **level of detail of the financial information is sufficient to** enable the institution to calculate the risk-weighted position amount of the CIU according to the approach chosen by the institution;
- if the institution applies the LTA, the information about the underlying positions is **verified** by an **independent third party**.

¹ Major changes by CRR II

Application requirements and RWA calculation for investment funds (2/2)

Fig. 5 RWA calculation for investment funds

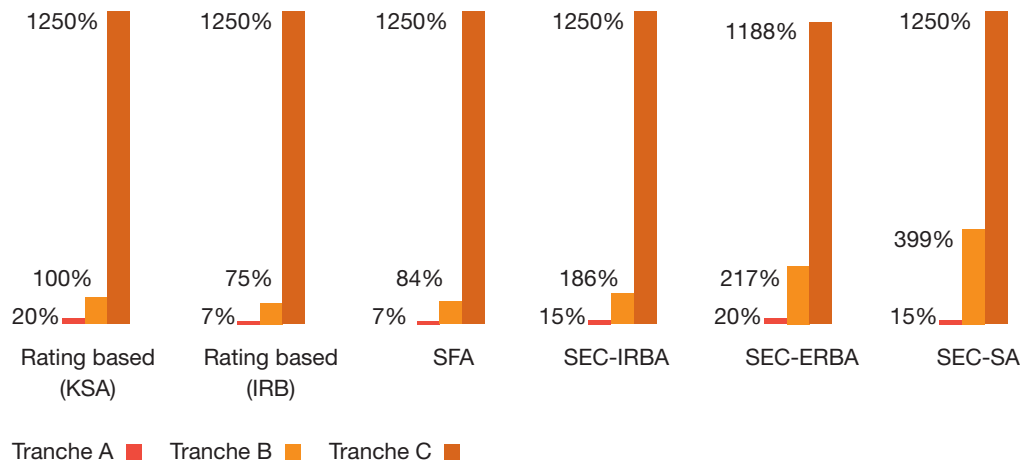
		Regulated funds (UCITS or AIF that are allowed to be marketed in the EU)	Unregulated funds	
Granularity Conservatism	Look-through approach (LTA)	<ul style="list-style-type: none"> „Look-Through” of the assets, under IRB including PD (LGD and EAD, if applicable) Requires steady and sufficient information about the composition, confirmed by third parties Calculation performed by the institution Exclusion of derivatives from the RWA calculation for CVA risks under certain conditions 	Not applicable	Hierarchy of approaches
	Modified standard approach (IRB only)	<ul style="list-style-type: none"> Determination of underlying assets’ risk weights based on Standardised Approach (except for equities and securitisations) Third party calculation possible if the third party complies with the requirements of Art. 152 (7) a CRR II and the correctness of the third party calculations is confirmed by an external auditor (as in the Standardised Approach) CVA adjustments as in LTA 	Not applicable	
	Mandate-based approach (MBA)	<ul style="list-style-type: none"> The CIU’s investment guidelines and maximum limits are used to derive the SA risk weights. Exceptions for participations, securitisations and other underlying risk positions as in the LTA (! Mod. Standardised Approach) Conservative treatment (i.e. highest possible risk weights) 	Not applicable	
	Fallback approach (FBA)	<ul style="list-style-type: none"> A general risk weight of 1,250% is assigned to the total risk position. 		

New approaches to calculate risk weights for securitisations

Entry into force
1. January 2019

New rules for STS securitisations

Fig. 6 Approaches to calculate risk weights for securitisation



SEC-ERBA (Approach based on external ratings)

SEC-SA (standardized approach)

SEC-IRBA (Approach based on internal ratings)

RW 1.250%

- Due to the new approaches and the defined approach hierarchy, the data requirements and the complexity of the RWA calculation increase significantly (capital requirements of the securitised portfolio, A, D, default rates, cash flows,...).
- As a rule, an increase in the RWA for the securitisation portfolio is to be expected.

1. Simple

- legal enforceability of the asset sale
- no other charge
- clear and documented approval criteria
- no active portfolio management
- homogeneity
- no re-securitisation
- no failed positions
- at least one payment made
- cash flows do not depend on the sale of the underlying
- positions allocated by the originator
- strict underwriting standards that must be disclosed

2. Transparent

- access to statistical/historical failure rates, in particular to targets and price developments (five-year period)
- external inspection of a sample
- liability cash flow model before and after pricing (ongoing)
- joint responsibility of originator, sponsor and SSPE for compliance with transparency requirements
- the final documentation should be available to investors no later than 15 days after completion of the transaction.
- transmission of non-financial information

3. Standardised

- risk retention
- mitigation of further risks limited to currency and interest rate risks
- at-arm's-length interest rates
- prepayment events in revolving structures
- definitions, remedies and measures related to delinquency
- rules for the settlement of disputes between the parties

Counterparty Credit Risk

Fig. 7 Three topics of interest regarding counterparty credit risk

EAD for Derivatives

3 new methods introduced,
3 methods deleted



CVA Risk Capital Charge

No changes – against EBA
recommendations



Exposures to CCP

Setting new details for
calculation



Counterparty Credit Risk – EAD for Derivatives

Fig. 8 Thresholds to calculate exposure at default introduced by CRR II

	Size of gross on- and offbalance sheet derivative business (relative)		Size of gross on- and offbalance sheet derivative business (absolute)	Adequate for...
SA-CCR	> 10% of total assets	or	> 300 mln. EUR	<ul style="list-style-type: none"> Institutions above the thresholds of the simplified SA-CCR Less complex portfolios below the SA CCR threshold for which the full SA CCR application is economically beneficial
Simplified SA-CCR	≤ 10% of total assets	and	≤ 300 mln. EUR	<ul style="list-style-type: none"> Institutions with derivative volumes within given thresholds Simple portfolios or portfolios without excessive independent collateral amounts
Revised Original Exposure Method	≤ 5 % of total assets	and	≤ 100 mln. EUR	<ul style="list-style-type: none"> Institutions with small derivative-portfolios below the defined thresholds

The new standardised approach for counterparty risks (SA-CCR)

Determination of the EAD according to the SA-CCR: $EAD = \alpha \times (RC + \text{Multiplier} \times \text{AddOn})$

Alpha	<p>Alpha = 1,4</p> <ul style="list-style-type: none"> Regulatory scaling factor analogous to the alpha factor in the IMM and the beta factor in the current SM 		
Replacement costs	<ul style="list-style-type: none"> current replacement cost Calculation depending on whether a netting set is collateralized/uncollateralized Consideration of parameters from collateral agreements <table border="1" style="width: 100%; background-color: #d3d3d3;"> <tr> <td style="background-color: #555; color: white; text-align: center; padding: 5px;"> No Variation Margin $RC = \text{MAX} [V - C; 0]$ </td> <td style="background-color: #555; color: white; text-align: center; padding: 5px;"> Variation Margin $RC = \text{MAX} [V - C; TH + MTA - NICA; 0]$ </td> </tr> </table>	No Variation Margin $RC = \text{MAX} [V - C; 0]$	Variation Margin $RC = \text{MAX} [V - C; TH + MTA - NICA; 0]$
No Variation Margin $RC = \text{MAX} [V - C; 0]$	Variation Margin $RC = \text{MAX} [V - C; TH + MTA - NICA; 0]$		
PFE Multiplikator	<ul style="list-style-type: none"> takes into account risk-reduced effects of overcollateralization and negative market values reduces the AddOn in these cases $\text{Multiplier} = \text{MIN}\{1; \text{Floor} + (1 - \text{Floor}) \times \exp((V - C) / (2 \times (1 - \text{Floor}) \times \text{AddOn}^{\text{aggregate}}))\}$ 		
AddOn	<ul style="list-style-type: none"> potential future increase in current exposure Dependence on the volatility of the business activity 		



Exposures to central counterparties

Fig. 9 New requirements for transactions with central counterparties

Changes at a glance		Consequences
Clearing Member (CM) → Central Counterparty (CCP)	<p>QCCP:</p> <ul style="list-style-type: none"> Simplified calculation method for prefunded contributions to the default fund Statutory anchoring of the application of a risk weight of 0 % to unfunded contributions to the default fund <p>Non-QCCP:</p> <ul style="list-style-type: none"> For prefunded and unfunded contributions to the default fund, the factor of 1.2 will no longer apply in RWA calculation 	<ul style="list-style-type: none"> Simplified procedure, as only one method for the RWA calculation to QCCP will apply Own fund requirements decline for Non-QCCP Impact on own fund requirements for default funds of QCCP depend on individual default fund contributions
Clearing Member (CM) → Client	<ul style="list-style-type: none"> Adaption of the methodology for adjusting the EAD to the margin period of risk There are two different procedures depending on the EAD-method SA-CCR and IMM: Guidelines for the MPOR Simplified SA-CCR and OEM: constant factor of 0.21 	<ul style="list-style-type: none"> Adjustments due to new EAD methods necessary Analyze impacts together with the SA-CCR implementation
Client → Clearing Member (CM)	<ul style="list-style-type: none"> Simplified procedure for checking the applicability of the preferred risk weight of 2 % or 4 % Instead of the previously required independent written legal opinion that the client would bear no losses on account of the insolvency of its clearing member a recourse to a precedent case is now sufficient 	<ul style="list-style-type: none"> Simplification of the processes to demonstrate the criteria Easier application of the 2% 4% risk weight possible – capital relief

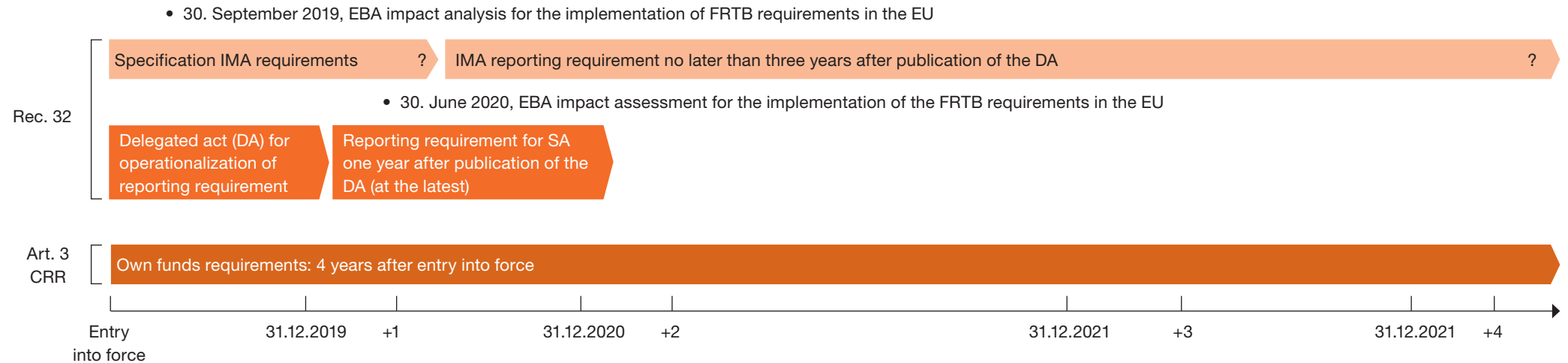
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Market risk

The fundamental review
of the trading book

FRTB implementation by CRR II – Overview

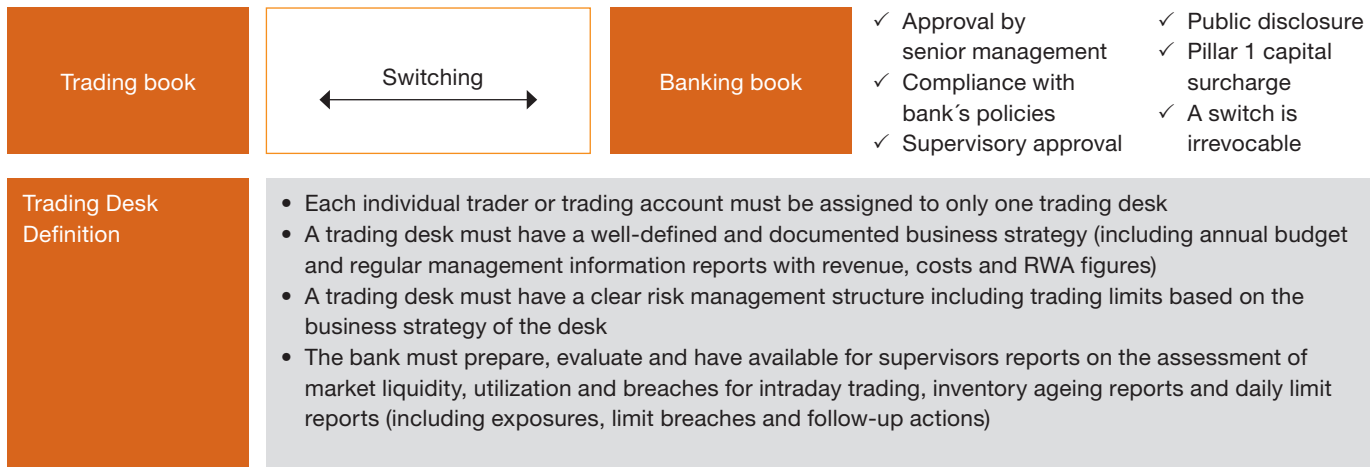
Fig. 10 FRTB implementation by CRR II on a timeline



- The publication of CRR II does not come with a new binding capital requirement for market risk
- Further specifications are conducted through delegated acts, RTS or ITS
- A reporting requirement will enter into force that requires the calculation of the new standardised approach
- The capital requirement is not expected to enter into force until four years after the publication of CRR II

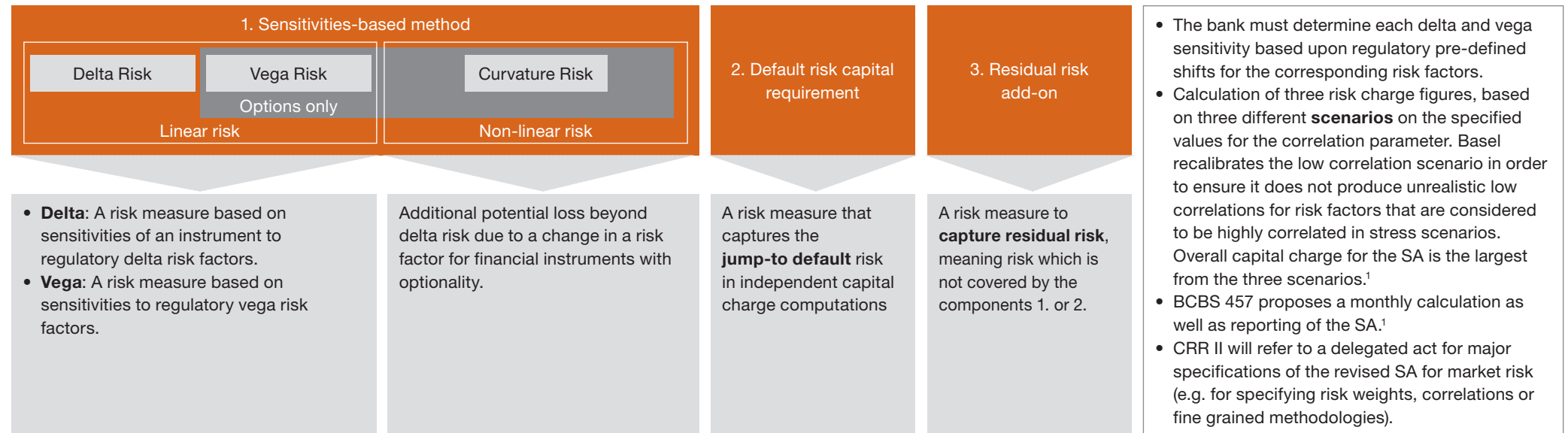
Requirements for trading desks and reclassification

- CRR II clarifies the reclassification requirements.
- EBA is mandated to clarify the circumstances in which a reclassification of position is permissible (within 5 years).



The new standardised approach for market risk is an entirely new method not related to the present standardised approach

Fig. 12 New standardized approach for market risk consists of 3 components



¹ New in BCBS 457. Not reflected in CRR II draft yet

For banks having a “large trading book”, the requirements according to CRR II lead to substantial challenges



Uncertain timeline

- CRR II does not introduce new binding capital requirements for market risk, these will be introduced by a delegated act (end 2019/ beginning 2020)
- Reporting requirements starting in 2020



Data requirements

- Revised SA increases data requirements significantly as compared to current SA
- FRTB implementation should be used to optimize the internal risk management processes



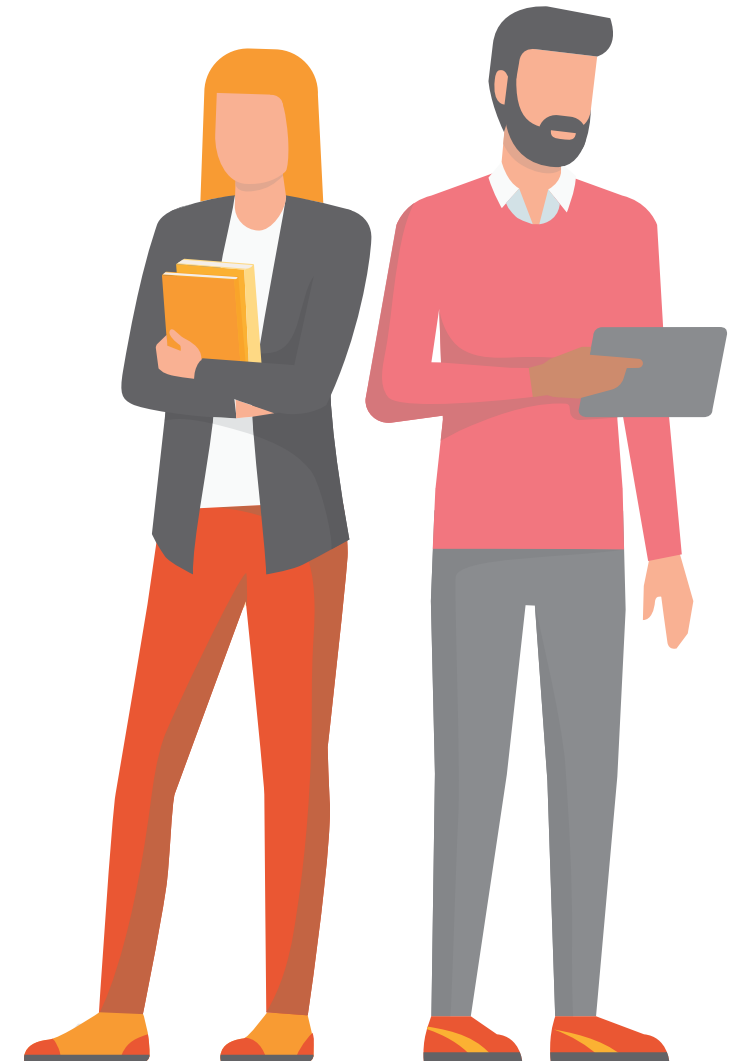
Trading strategy

- Early analysis of thresholds and trading book boundary requirements: Evaluation of the need for a SA implementation and possible adjustments in the area of position management and trading strategy



Optimisation

- Recalibration of the requirements can lead to renewed RWA effects and possibly to a noticeable reduction in the capital requirement under the SA
- Renewed analysis necessary in order to estimate the potential effects (e.g. in relation to the capital floor and IMA)



Regarding internal market risk models, no major changes were applied during the EU Trilogue process

In general, the final CRR II include the requirements published in earlier CRR II drafts. In comparison to the CRR currently in force, significant changes result on the following topics:

Model approval

Model approval will be on a trading-desk level instead for risk categories. The following criteria must be met by each trading desk to get approved:

- **Qualitative requirements:** Clearly defined business strategy and organisation
- **Quantitative requirements:** Pass backtesting exercises and the P&L attribution test

Expected Shortfall

While the **Value at Risk (VaR)** is replaced by the **Expected Shortfall (ES)**, the following changes result from the change of risk measure:

- **Additional liquidity horizons:** while the VaR was based on a 10 day liquidity horizon under the ES the liquidity horizon can be scaled up to 120 days
- The **confidence level** is at 97,5% (VaR 99,9%)
- The additionally calculated **stressed VaR (sVaR)** is reflected in the new model by calibrating the ES model to a period of **stressed market condition**

Default Risk Charge

- While in the incremental risk charge (IRC) used in the current CRR both, default risk and migration risk were considered, the new **default risk charge (DRC) replace the IRC only considers default risk**
- **Double counting** of migration risk is prevented as it is already considered in the capital requirements included in the ES
- Significant changes under the DRC include:
 - Additional **equity instruments** and positions of **defaulted debt securities** must be considered and calculated under the assumption of unchanged positions instead of an unchanged risk level
 - Shall include two **systematic risk factors** and reflect the dependence between recovery rates and systematic risk factors

Modellable & non-modellable risk factors

- Capital requirements for modellable risk factors are calculated by the ES model
- Capital requirements for **non-modellable risk factors (NMRF)** must be calculated on basis of a **stress scenario** with limited consideration of diversification benefits
- The BCBS also proposed **further changes on the NMRF requirements** in January 2019¹:
 - The requirement of no more than 30 days between two real price observations has been amended to at least four real price observations within 90 days or at least 100 real price observations in the previous 12 months are available
 - **Simplified calculation of stressed loss:** banks are allowed to use a common stress period for all risk factor of a particular risk class. The period over which the loss should be calculated has to be the same as the liquidity horizon specified for the ES measure with a floor of 20 days

¹ New in BCBS 457. Not reflected in CRR II draft yet

5

Liquidity, Leverage Ratio and Large Exposure

Introduction of a minimum requirement for NSFR (1/2)

Minimum Level 100%

• Available Stable Funding:

- Liabilities and Equity
- Weighting factors depend on maturity and product type

• Required Stable Funding:

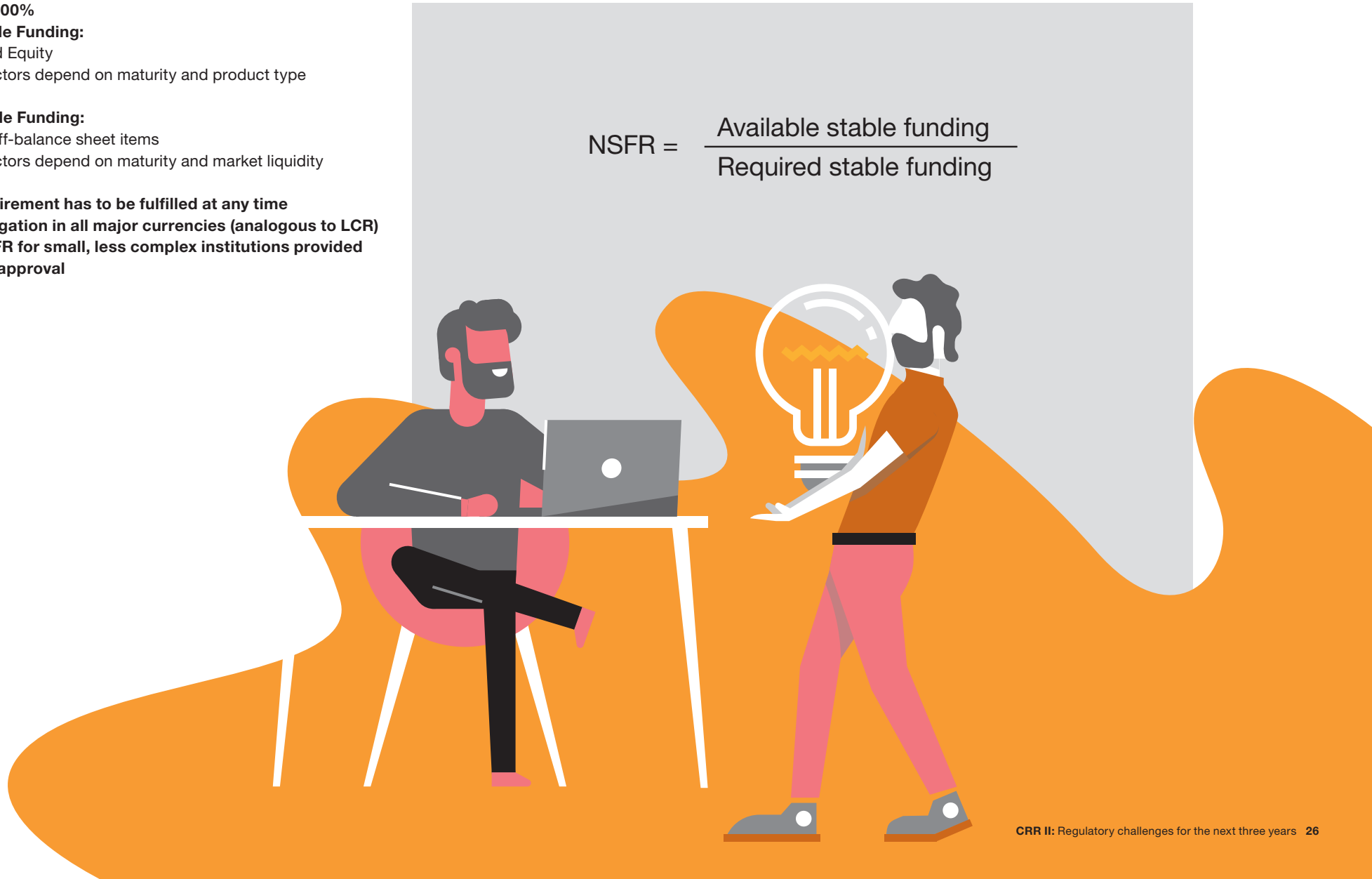
- Assets and off-balance sheet items
- Weighting factors depend on maturity and market liquidity

• Minimum requirement has to be fulfilled at any time

• Reporting obligation in all major currencies (analogous to LCR)

• Simplified NSFR for small, less complex institutions provided a supervisory approval

$$\text{NSFR} = \frac{\text{Available stable funding}}{\text{Required stable funding}}$$



Introduction of a minimum requirement for NSFR (2/2)

Fig. 14 Calculation of available stable funding

ASF factor = 100%

- Regulatory own funds before deduction items (provided RM > 1 year)
- Liabilities with RM ≥ 1 year, if no termination options
- Liabilities with RM ≥ 1 year, as long as no lower ASF factor is defined

ASF factor = 95%

- Fixed-term deposit with RM < 1 year and sight deposits, which are considered as stable deposits¹

ASF factor = 90%

- Fixed-term deposits with RM < 1 year and sight deposits, which are considered as retail deposits¹

ASF factor = 50%

- Operational deposits¹
- Liabilities with RM < 1 year provided by nonfinancial customers
- Liabilities with RM > 6 months and < 1 year provided by financial customers and CBs
- Any other liabilities with RM > 6 months and < 1 year

ASF factor = 0%

- Liabilities without maturity
- Liabilities with RM < 6 months provided by financial costumers
- Any other liabilities

$$\text{Net Stable Funding Ratio} = \frac{\text{Available Stable Funding (ASF)}}{\text{Required Stable Funding (RSF)}} \geq 100\%$$

Calculation of required stable funding

RSF factor = 0%

- Cash reserve
- Central bank reserves
- Level 1 assets*
- Monies due from SFT with RM < 6m, if coll. with L1 assets

RSF factor = 5%

- Other unencumbered Level 1-assets¹
- Monies due from SFT and RM < 6m
- Certain credit lines
- Derivatives with negative market value

RSF factor = 7% and 7,5%

- Level 1 covered bonds
- Off-balance sheet related products with RM between 6 months and 1 year

RSF factor = 10%

- Monies due from Financials with RM < 6 months (except SFT)
- Trade finance products depending on RM

RSF factor = 12% to 55%

- Unencumbered level 2A-assets¹
- Unencumbered level 2B-assets¹
- Monies due from transactions with Non- Financials RM < 1 year
- Monies due from Financials with RM between 6 months and 1 year
- ...

RSF factor = 65%

- Loans with risk weight of 35%

RSF factor = 85%

- Loans with risk weight > 35%
- ...

RSF factor = 100%

- All other assets
- Derivatives with positive market value

$$\text{Net Stable Funding Ratio} = \frac{\text{Available Stable Funding (ASF)}}{\text{Required Stable Funding (RSF)}} \geq 100\%$$

¹ Definition analogous LCR

Introduction of a binding leverage ratio by CRR II

Fig. 15 Binding leverage ratio by CRR II

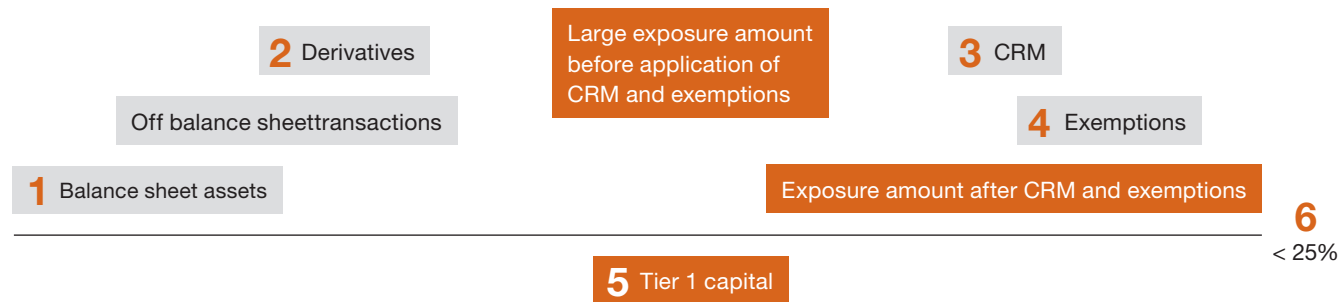
Introduction of a non-risk-based ratio to restrict the build-up of excessive leverage in the banking sector as a main lesson learned from the global financial crisis.

$$\text{LR} = \frac{\text{Tier 1 – Capital}}{\text{On-balance sheet exposure} + \text{Off-balance sheet exposure} + \text{Derivatives} + \text{SFTs}} \geq 3,0\%$$

- Introduction of a binding **minimum ratio of 3%** (Art. 92 (1d))
- Exclusion of certain exposures from the **exposure measure**, e.g. exposure against central banks, Clearing Members, QCCPs, pass-through loans, certain promotional loans,... (Art. 429a)
- Introduction of an **adjusted Leverage Ratio (aLR)**, to be satisfied at all times, if exceptions for central bank exposures are being used (Art. 429a (7))
- Changes to the treatment of **credit risk adjustments** for on- and offbalance- sheet positions (Art. 429 (4))
- Netting of **pre-financings and intermediate loans** with the client's deposits in case of building societies (Art. 429 (7))
- Introduction of a **modified SA-CCR** to calculate the exposure value of derivatives (Art. 429c)
- Clarification of the treatment of **written credit derivatives** (Art. 429d)
- Clarification of the treatment of **regular way sale purchase and sale** of financial assets (Art. 429g)
- New **reporting and disclosure requirements** (Art. 430 und 451)
 - Reduced scope for small and less complex institutions
 - Enhanced scope for large institutions to cover window-dressing behaviour

Significant Changes to the Large Exposure Framework

Fig. 16 New calculation of the large exposure limits by CRR II



Balance sheet assets

- Long and short positions in trading book instruments are to be off-set only where financial instruments are of the same seniority or where the short position is junior to the long position
- Allocation of financial instruments into buckets based on different degrees of seniority

Exemptions

- Gradual elimination of exemptions for exposures to EU central governments (neither in EUR nor EU national currency) by 2022
- Exemptions for MREL-related risk exposures
- Exemptions for clearing members' trade exposures and default fund contributions to qualified central counterparties

Derivatives

- Consideration of indirect exposures from (credit) derivatives
- Mandatory application of the (simplified) SA-CCR or the OEM to determine the risk exposure amount of derivatives
- Application of IMM not permitted for derivatives (for SFT still applicable)

Credit Risk Mitigation

- Obligation to use CRM for large exposure purposes, if applied within the calculation of own funds requirements
- Application of substitution approach, regardless of the collateral type used, provided that the CRM was also applied for the calculation of RWA

Tier 1 Capital

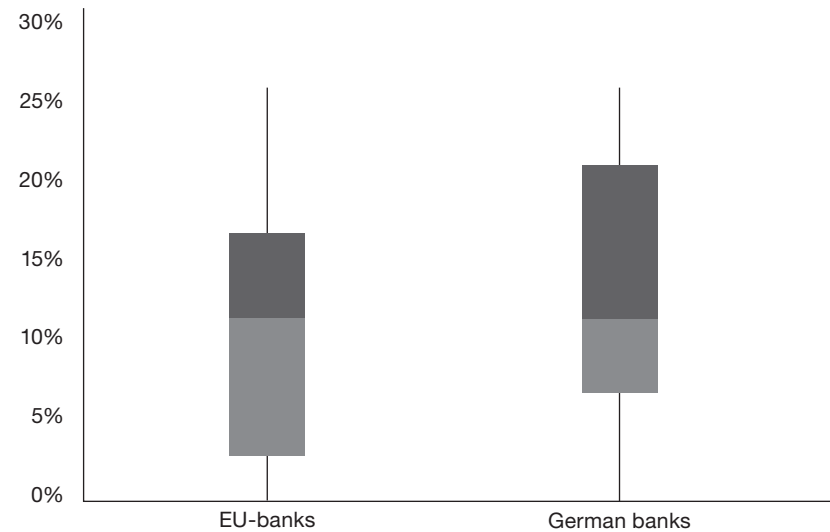
- Tier 1 capital as the sole reference for the definition of large exposures and the determination of the large exposure limit
- No longer consideration of Tier 2 capital instruments for the determination of large exposure limits

Large exposure limit

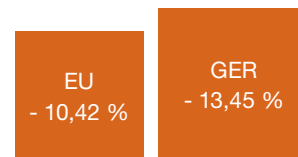
- Obligation for institutions to submit a plan for a timely return to compliance with large exposure limits
- EBA guidelines to specify how competent authorities determine "exceptional cases" for allowed overshooting and time to return to compliance and measures to be taken
- G-SIIs shall not have risk exposures to other G-SIIs greater than 15% of Tier 1 capital

No Consideration of Tier 2 capital & lower limit for G-SIIs

Fig. 17 Reduction of the large exposure limit in %

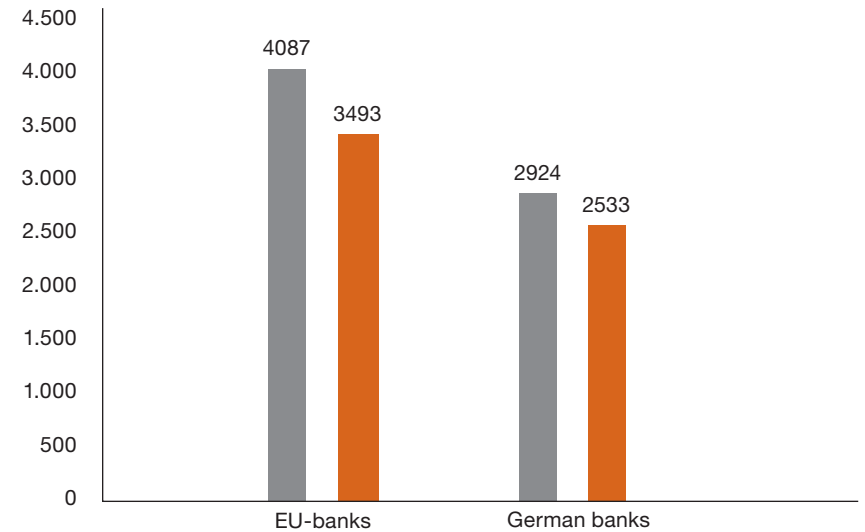


The aggregate large exposure limit across all banks will decrease by an average of 10.42% in the EU and by 13.45% in Germany in particular. Banks must act now and take the adjusted requirements into account in their capital planning process!



Source: EBA (2018): EU-wide transparency exercise results.¹

Fig. 18 Large exposure limit according to CRR and CRR II



Large exposure limit according to CRR (in € Mio) ■ Large exposure limit according to CRR II (in € Mio) ■

Source: EBA (2018): EU-wide transparency exercise results.³

¹ The evaluation was carried out on the basis of the cut-off date 31.12.2017.

6

Reporting and disclosure

Changes to regulatory reporting by CRR II

Proportionality

- Differentiation in large, small and non-complex and other institutions
- EBA to produce recommendations for reducing the reporting burden of small and non-complex institutions, e.g.
 - a waiver for the asset encumbrance reporting requirement below a certain threshold
 - a reduced reporting frequency for own funds, large exposures and asset encumbrance

to Do

- ✓ Analysis of the requirements for small and noncomplex institutions

Reporting by resolution units

- Article 99 extended to cover reporting by resolution units
- Additional requirements for the reporting of MRELcompliant liabilities as well as the leverage ratio

to Do

- ✓ Identification of resolution groups
- ✓ Review of reporting requirements
- ✓ Fulfilling MREL and LR minimum requirements

Market risk reporting












- EBA tasked to develop a delegated act to complete the fundamental review of the trading book
- Additional reporting requirements enter into force before the pillar I minimum capital requirements of FRTB
- Banks may be forced to report on the FRTB capital requirements starting in Mid-2020, even if these are reflected in the capital ratios starting four years later

to Do

- ✓ Accompany the development of the delegated act
- ✓ Prepare for the reporting requirement in 2020

New Pillar III market disclosure requirements (1/3)

Fig. 19 Proportionality in disclosure requirements by CRR II

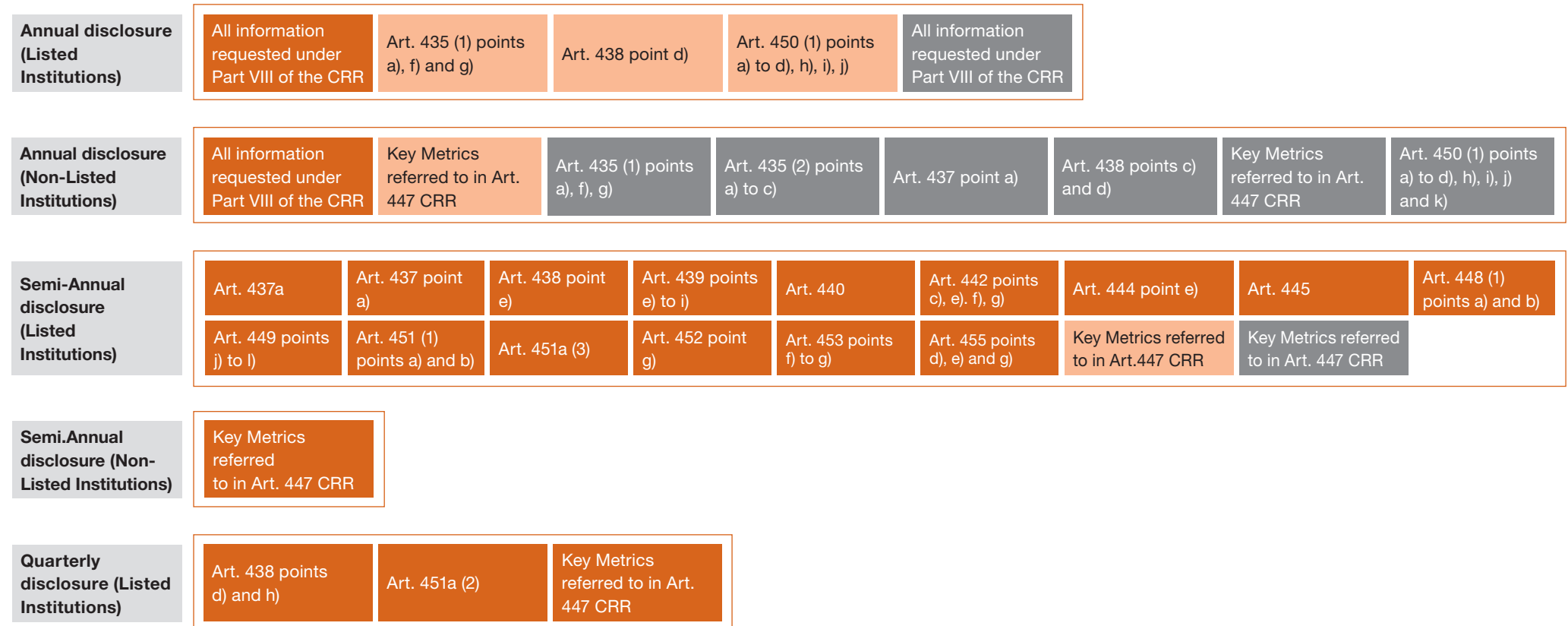
	Listed Institutions			Non-listed Institutions	
	Annual	Semi-annual	Quarterly	Annual	Semi-annual
Large Institutions					
Other Institutions					
Small Institutions					

-  Full disclosure according to part 8 of CRR
-  Disclosure of selected information, which cover partly requirements of part 8 CRR
-  Disclosure of selected information, which cover main requirements of part 8 CRR
-  Solely disclosure of key metrics template.

The CRR II contains references to all the new disclosure requirements contained in the Basel Stage II document but also strengthens the principle of proportionality by distinguishing between institutions' size and capital market orientation:

New Pillar III market disclosure requirements (2/3)

Fig. 20 Overview of disclosure requirements by CRR II



Other Institution ■ Small Institution ■ Large Institution ■

New Pillar III market disclosure requirements (3/3)

New requirements

- New empowerment to **EBA to develop uniform disclosure formats** aligned with international developments **until 31.12.2019 (new Art. 434a)**
- **New key prudential metrics table (new Art. 447)**: significant focal point for the disclosures of all institutions irrespective of size especially on own funds, leverage ratio, LCR, NSFR and MREL
- **New disclosure of TLAC requirement** for G-SIIs and material subsidiaries of non-EU G-SIIs **(new Art. 437a)**
- **New disclosure of liquidity requirements (new Art. 451a)**; disclosure of LCR and NSFR composition in accordance with the Commission Delegated Regulation (EU) 2015/61

Enhanced disclosure requirements

- **Risk management (Art. 435)**; additional disclosure of information on intra-group transactions and transactions with related parties having a material impact on the risk profile of the consolidated group
- **CCR (SA-CCR) (Art. 439)**; additional collateral-related disclosure requirements on the amount of segregated and unsegregated collateral received and posted, per collateral type, further broken down between collateral used for derivatives and securities financing transactions (SFTs)
- **Credit and dilution risk (Art. 442)**; additional disclosure on the definitions of “past due” and “default” for accounting and regulatory purposes as well as of the amount and quality of performing, non-performing and forborne exposures
- Market risk for institutions under FRTB rules (Art. 445)
- **IRRBB (Art. 448)**; additional disclosure of the key modelling and parametric assumptions used in internal measurements systems
- **Securitizations (Art. 449)**; additional distinction of disclosure requirements for STS and non-STS-positions
- **Clarifications on the remuneration disclosures (Art. 450)**; additional disclosure requirement on the use of derogations from the remuneration rules of CRD (Art. 94(3))
- **IRBA (Art. 452)**; additional disclosure requirement on the functions involved in the development etc. of credit risk models and on the internal ratings process by exposure class
- **CRM techniques (Art. 453)**; additional disclosure of the corresponding CCF and the CRM associated with the exposure and the incidence of CRM techniques with and without substitution effect

7

Challenges & Strategic implications

Data & IT – Challenges through innovations

Fig. 21 Impact of the new CRR II requirements on IT systems

The new CRR II requirements have an impact on IT systems in relation to:

Data

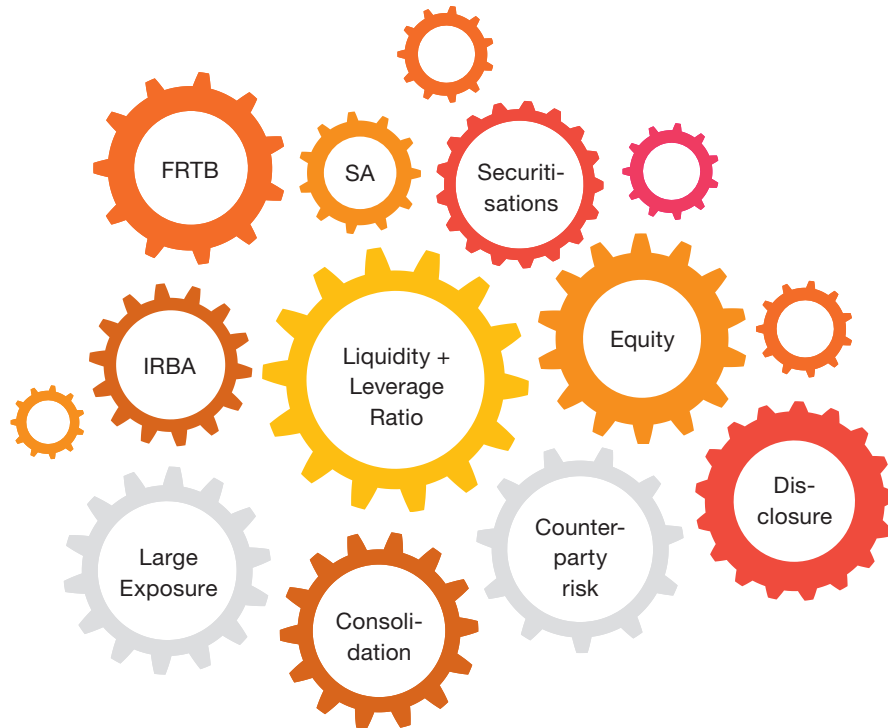
- Availability of data
- Quality of data

System architecture

- Functionality of the systems
- Connections to the systems

System performance

Comparability of information



Data availability and quality

Additional new data/information for e.g. CRSA, IRBA, counterparty risk, FRTB, large exposures or securitisations

System architecture

Changes due to, among other things, comparability of different messages, different Consolidation groups or automation of previously manual processes

System performance

Impacts on the system utilization e.g. due to large amounts of data or parallel calculation of SA and IRBA (output floor)

Comparability of information

Comparability e.g. of the consolidation groups or FINREP and COREP

CRR II means a number of challenges to institutions

FINREP vs. COREP

- Different determination of book values
- Linking of accounting and supervisory law information

Data supplies

- Automated connection of information :
 - Internal Models
 - Securities
 - Securitisations
- Automated processing of new information

Consolidation

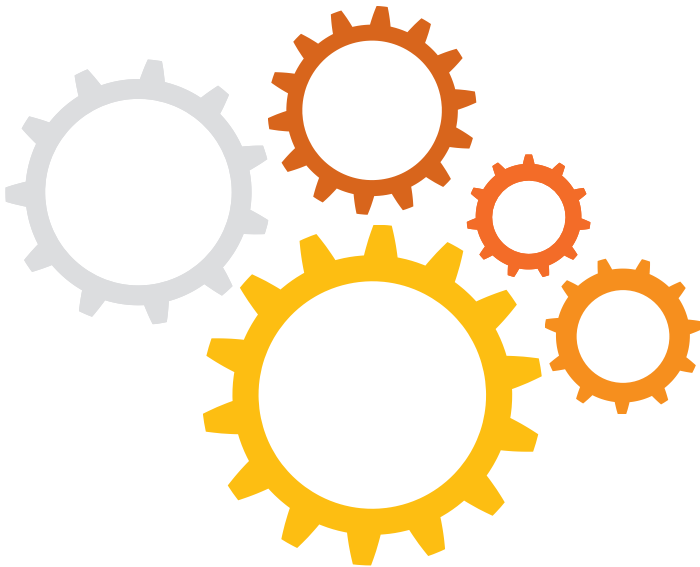
- Differences in investments in the financial statement and regulatory consolidation
- Recognition of internal transactions for both consolidations

Manual corrections

- Automation of manual corrections
- Avoidance/automation of manual preparation and/or reworking
- Representation of different requirements of the reportings for the same key figures

In addition to the ability to report and disclose the CRR II requirements, bank management and the business models of the institutions are also affected. This will be illustrated by a few examples:

- The introduction of binding minimum ratios for the leverage ratio and the net stable funding ratio has forced banks to critically review their balance sheet structure. Due to their structural nature, compliance with both indicators can only be achieved to a limited extent through short-term measures. Rather, it is necessary to analyse how the asset-side and liability-side transactions affect the ratios in order to bring about changes in risk appetite or in the refinancing structure if necessary.
- The new requirements for derivatives (SA-CCR) and in particular market risk (FRTB) mean that transactions in riskweighted assets are taken into account in a much more risk-sensitive way. As a result, both individual transactions and portfolio management measures should be viewed much more strongly than in the past against the background of their impact on regulatory capital requirements.
- Finally, the new rules regarding recovery and resolution have an impact in particular on the structure of the liabilities side of institutions and require planning as to how sufficiently eligible liabilities for compliance with the TLAC and MREL minimum requirements.



One potential avenue to address banks' challenges is to move to a business model that is less balance sheet intense

Fig. 22 Potential way forward for banks

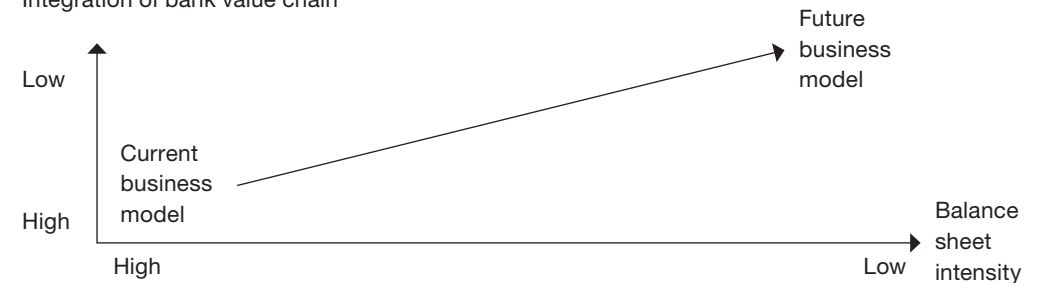
New strategic imperatives

Focus

- **Less intensive balance sheet usage:** Reduce the deployment of your own balance sheet for existing business, or grow new business in a more capital efficient way, e.g. by originate-to-distribute models
- **Disintegration of the bank value chain:** Reduce cost-structure and increase margins by outsourcing of non-core processes, while focusing on best-in-class competencies
- **Full employment of digital technologies:** Full integration and digitization of processes as enabler for new strategic imperatives

Potential way forward for banks

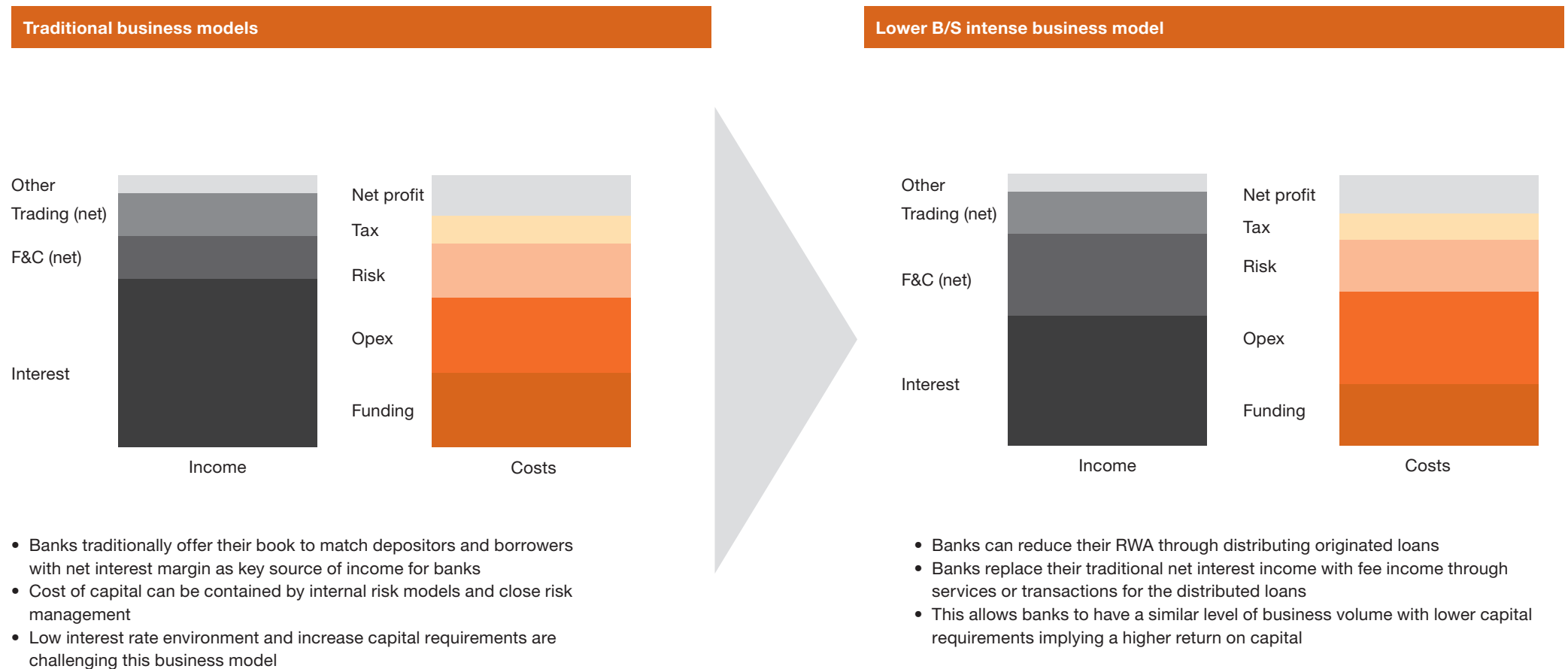
Integration of bank value chain



- Transformation of balance sheet requires definition of 5+ year vision ("BS 2020")
- To be successfully implemented over next years – potential implications on business setup
- Strategic exit management as important capability

Banks should aim to replace balance sheet intense interest income with fee income to maintain or improve margins

Fig. 23 Income and costs across bank business models



What steps do institutions have to take now?

In recent years, many institutions have already dealt with the contents of CRR II within the framework of test calculations and preliminary studies. Institutions may first want to compare the premises set here with the contents of the final regulation or, if this has not yet been done, to carry out the first test calculations.

A second step would then be to set up an implementation program aimed at coordinating the numerous projects to establish the reporting capability in the various CRR II topics. Due in particular to the significantly increased data requirements of the CRR II calculation methods, there is a clear IT connection here, so that release cycles and the times planned for implementation and testing will have a strong influence on program planning.

Finally, the analysis of the impact on business should also be pursued further in order to address the strategic aspects described above.

“ PwC is able to assist your business in this and all other CRR II-related topics and challenges. Just contact us! ”

8

Our Services

“ Our Expertise ”

Whether regarding the Basel Committee, EU-regulation or national legislation – PwC uses our established know-how of the analysis and implementation of new supervisory regulation to provide our clients with high-quality services. Embedded into the international PwC network, we have access to the extensive knowledge of our experts around the world.

PwC can support you in all aspects of getting compliant with the new CRR II requirements.

PwC can draw on long lasting experience of implementing new regulatory requirements by supporting clients in completing quantitative impact studies prior to the implementation of Basel II and Basel III and by the functional and technical implementation of the final regulations.

“ About us ”

At PwC, our purpose is to build trust in society and solve important problems. We're a network of firms in 158 countries with over 250,000 people who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com.

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