



Bundesanstalt für  
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### **Explanatory notes on the implementation plan**

Institutions intending to move to the IRB Approach are expected to prepare a meaningful implementation plan and to submit it to the banking supervisor. The implementation plan is a binding description of a bank's own implementation dates for all of the rating systems for which it is seeking approval to use the IRB Approach. It is an elementary, essential part of the application to use the IRB Approach. Please note that the implementation plan has to be completed in German.

In order to provide institutions with guidance, this document will

- briefly outline the essential requirements for the temporary and permanent partial use of the IRB Approach,
- set out the minimum content requirements for an implementation plan and
- provide a form for a tabular overview of the implementation plan.

Institutions must comply with these instructions regarding the content and structure of the implementation plan.

The implementation plan to be submitted by the institutions consists of two parts. In the **first part**, the institutions must explain the implementation process and comment on all of the aspects listed in section 1 of this document. In the **second part**, the form provided as an example in section 2 of this document is to be completed and submitted.

## **Requirements for the temporary and permanent partial use<sup>1</sup> of the IRB Approach**

This document describes the underlying systematic structure of the rules for the temporary and permanent partial use of the IRB Approach (IRBA) insofar as they are of relevance for the preparation of the implementation plan. For a complete description of these requirements, the relevant rules of law should be consulted. Particularly all thresholds connected with temporary partial use have to be calculated in accordance with section 67 of the Draft Solvency Regulation (*Solvabilitätsverordnung*, hereinafter referred to as the "SolvV") ("IRBA coverage ratio").

### **• Entry threshold for IRBA institutions<sup>2</sup>**

In order to qualify as an IRBA institution, an institution must already be using the desired approach for a certain minimum share of its overall portfolio. For exposures which are to be treated according to the most ambitious IRB Approach intended for implementation, a lower limit of 50% of both the exposure values ("EAD") and of the risk-weighted assets ("RWA") applies. This requirement is intended to ensure that the IRB Approach is used for risk measurement in core business from the outset.

### **• Requirements for temporary partial use**

Temporary partial use is restricted to a maximum of 5 years. A supervisory condition for the implementation plan is that a total of at least 80% of the volume of both the exposure values and the RWA must have been transferred to the IRB Approach after 2½ years at the latest (achievement of the supervisory reference level). This is intended to ensure that institutions implement the IRB Approach rapidly. Up to the achievement of the supervisory reference level, institutions must be able to calculate in parallel the capital requirements for the entire portfolio according to the Standardised Approach for credit risk.<sup>3</sup> This obligation ceases to apply only after the banking supervisor has confirmed that the institution has achieved the supervisory reference level<sup>4</sup>.

### **• Exit threshold for temporary partial use**

The exit threshold for temporary partial use is achieved as soon as a total of at least 92% of the volume of both the EAD and the RWA have been transferred to the IRB Approach. BaFin may lower this threshold at the request of the institution in well-founded exceptional cases.

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<sup>1</sup> section 64 et seqq of Solvency Regulation (SolvV) of December 14, 2006; temporary partial use within the meaning of Article 85 (2), permanent partial use within the meaning of Article 89 of Directive 2006/48/EC of June 14, 2006, Official Journal of the European Union of June 30, 2006, L 177, p. 1

<sup>2</sup> The rules for institutions apply accordingly to groups of institutions and financial holding companies which submit an IRBA application for the calculation of regulatory capital requirements at group level pursuant to section 57 (1) of SolvV.

<sup>3</sup> Principle I can be applied until 1 January 2008.

<sup>4</sup> This obligation of a parallel calculation ceases in cases named in section 65 sentence 3 of SolvV.

The reasoning behind these criteria is that institutions should be urged to apply the IRB Approach as comprehensively as possible, but that banking supervisors must retain discretion to take account of certain special features of the institution.

- **Permanent partial use of the IRB Approach**

Certain exposures may be exempted permanently from the use of the IRB Approach (see sections 68-70 of SolvV). For these exposures, the Standardised Approach for credit risk has to be applied.

### **1. Minimum requirements for the content of an implementation plan**

The implementation plan must be broken down into supervisory exposure classes, business units, internal customer segments and the IRBA risk parameters that need to be estimated. Internal rules with detailed provisions regarding time and content are to be laid down for combinations of the above, in particular for the following.

- Development of the rating methodology.
- Preparation of the technical concept for IT implementation of the rating methodology.
- IT implementation (broken down into prototypes and applications for operational business as well as test phases).
- Training of staff, including management staff, with regard to the rating methodology and the IT application.
- Formal acceptance of the new rating system and implementation as "the" rating system of the institution.
- Transition of existing business to be covered by the IRB Approach to the new rating system.

To that end, a project plan including allocation of resources for the implementation plan is to be submitted.

The targeted dates for the entry threshold, achievement of the supervisory reference level and the exit threshold with qualified, approved rating systems are to be indicated.

In addition, a list of all the internal portfolios which are to be permanently exempt from the IRB Approach owing to particular regulations is to be provided (see sections 68-70 of SolvV).

The exempt portfolios are to be comprehensively quantified in this list (number of major obligors, aggregate volumes, risk content).

## 2. Format for the tabular overview of the implementation plan

The form for the implementation plan is structured as an Excel file. As an Excel workbook, this file consists of three worksheets – “Umsetzungsplan” (*Implementation plan*), “Ausnahmen vom IRBA” (*Exemptions from the IRBA*) and “Wahlrechte zum Abdeckungsgrad” (Options regarding the coverage ratio) – which are to be completed and submitted.

Notes on selected columns:

### “Umsetzungsplan” (Implementation plan)

- Column V** The term “*Risikogewichtete IRBA-Positionswerte in % aller Aktiva (ohne 5.) (ggf. ohne 6.)*” stands for the targeted IRBA coverage ratio of RWA pursuant to section 67 (3) sentence 2 of SolvV with regard to the rating system considered. The population is thereby calculated in accordance with section 67 (4) of SolvV (if necessary, including certain exposures of the exposure classes securitisation, equity, and exposures arising from business in investment fund assets). Expected considerable portfolio adjustments during temporary partial use must be taken into account. Exposures within the scope of application of suitable rating systems are recognised as IRBA RWA in the coverage ratio’s numerator and denominator only as of the target date for the start of use (assuming the prior grant of approval to use the IRB Approach). The Standardised Approach for credit risk must be applied appropriately until then.
- Column VI** The term “*IRBA-Positionswerte in % aller Positionswerte (ohne 5.) (ggf. ohne 6.)*” stands for the targeted IRBA coverage ratio of EAD pursuant to section 67 (3) sentence 1 of SolvV with regard to the rating system considered. The population corresponds to that used in column V.
- Column IX** The term “*Insgesamt angestrebter Abdeckungsgrad in % für Spalte V. (ohne 5.), (ggf. ohne 6.)*” stands for the targeted coverage ratio for IRBA RWA pursuant to section 67 (3) sentence 2 of SolvV with regard to all of the rating systems deemed to be suitable for the IRB Approach at that time.
- Column X** The term “*Insgesamt angestrebter Abdeckungsgrad in % für Spalte VI. (ohne 5.), (ggf. ohne 6.)*” stands for the targeted coverage ratio for IRBA exposure values pursuant to section 67 (3) sentence 1 of SolvV with regard to all of the rating systems deemed to be suitable for the IRB Approach at that time.

**Column XI** Under the term "*Zeitpunkt der Inbetriebnahme*", the starting dates for the use of the relevant components<sup>5</sup> of the rating system as a key (partial) instrument for the measurement and management of counterparty risk have to be filled in; this does not refer only to the technical final stage of the modelling process.  
It is presumed that the relevant rating system component will be ready for supervisory examination six months after the starting date. Furthermore, it is assumed that the institution wants to start using the rating system for the IRB Approach as soon as it has obtained approval. If the institution is aiming for a different date for examination or the use of the IRB Approach than that assumed, then this date is to be indicated separately.

"Ausnahmen vom IRBA" (Exemptions from the IRBA)

**Column D** Under the term "*Risikogewichtete KSA-Positionswerte in % aller Aktiva*", the quotient of the total of RWA for these exposures and the total of all RWA of the institution has to be calculated.

**Column E** Under the term "*KSA-Positionswerte in % aller Positionswerte*", the quotient of the total of the exposure values for these exposures and the total of all exposure values of the institution has to be calculated.

**Column G** Under the term "*Aussagen zum Risikogehalt*", the ratio used (e.g. ratio of loan loss provisioning) and the respective figures have to be submitted.

"Wahlrechte zum Abdeckungsgrad" (Options regarding the coverage ratio)

**Column C** Under the term "*Risikogewichtete Positionswerte in % aller Aktiva*", the quotient of the total of RWA – under the Standardised Approach for credit risk or the IRB Approach – for these exposures and the total of all RWA of the institution has to be calculated.

**Column D** Under the term "*Positionswerte in % aller Positionswerte*", the quotient of the total of the exposure values – under the Standardised Approach for credit risk or the IRB Approach – for these exposures and the total of all exposure values of the institution has to be calculated.

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<sup>5</sup> A rating system component refers to exactly one of the three risk parameters (PD, LGD, CF) and comprises all procedures to assess credit risks, to assign exposures to grades or pools and to estimate that credit risk parameter.

- **Example of a tabular overview of the implementation plan**

The following example of an application for approval of the Foundation IRB Approach<sup>6</sup> is designed to illustrate the format of the table. With regard to an application for approval of the Advanced IRB Approach<sup>7</sup>, it should be noted that the “Insgesamt angestrebter Abdeckungsgrad in %” (Total IRBA coverage ratio targeted as a percentage) will increase only when all components of the rating systems required to determine the necessary credit risk parameters (PD, LGD, CF, M) are fully operational for the respective bank’s own portfolios. IRBA positions, for which no distinction is made between the Foundation IRB Approach and the Advanced IRB Approach (e.g. “Mengengeschäft” (Retail business), “Spezialfinanzierungen mit einfachem Risikogewicht” (Slotting Approach for Specialised Lending), are included for the approach for which the bank has requested approval.<sup>8</sup>

The following example is merely for illustrative purposes.

In the example, the Foundation IRB Approach is targeted.

The portfolio can be broken down into the following business units.

- Privatkunden Deutschland (Retail customers in Germany)
- Firmenkunden Deutschland (Corporate customers in Germany)
- Firmenkunden Ausland (Corporate customers abroad)
- Banken (Banks)
- Staaten (Sovereigns)

In this example, the Standardised Approach for credit risk can be applied permanently to the sub-portfolios for the supervisory exposure classes “Institute” and “Zentralregierungen” in accordance with the exemption provision to section 70 of SolvV. For the sake of simplicity, the specimen institution has no further IRBA positions which are not included in the coverage ratio pursuant to section 67 (4) sentence 1 of SolvV.

The portfolio of the “Privatkunden Deutschland” business unit is subdivided into the following customer segments.

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<sup>6</sup> Use of own estimates only for PD for the IRBA exposure classes “Zentralregierungen” (Central government), “Institute” (Institutions) and “Unternehmen” (Corporates) within the meaning of section 59 (1) Nr. 1 c of SolvV.

<sup>7</sup> Use of own estimates for PD, LGD and CF for the IRBA exposure classes “Zentralregierungen” (Central government), “Institute” (Institutions) and “Unternehmen” (Corporates) within the meaning of section 59 (1) Nr. 1 b of SolvV.

<sup>8</sup> The description in this paragraph abstracts from particularities that arise with respect to the subcategories of IRB positions „purchased receivables” and „covered bonds issued by credit institutions”; cf. section 59 (1) of SolvV for details.

- Freiberufler (Self-employed)
- Gewerbetreibende (Small businesses)
- Hypotheken (Mortgages)

As the institutions have to estimate the parameters PD, LGD and CF for retail exposures, the rating systems of the three retail customer segments all have components for the estimation of the three risk parameters PD, LGD and CF. The rating system for the "Freiberufler (Self-employed)" customer segment, for instance, comprises the tools "Freiberuf (Self-employment) I" (for the PD component), "Sicherheiten (Collateral) I" and "Blanko (Unsecured) II" (for the LGD component) as well as "CCF 1" and "CCF 2" (for the CF component). The sub-portfolio in the "Freiberufler" customer segment can be included in the indication of the targeted IRBA coverage ratio in the tabular overview "Umsetzungsplan" (implementation plan) only when the last component of the rating system (here upon completion of "CCF 2") is scheduled for use internally, i.e. in this example, as of 1 August 2004.

The situation for the sub-portfolios in the "Gewerbetreibende" and "Hypotheken" customer segments is much the same as that for the "Freiberufler" customer segment. The only thing to be noted is that individual components of the rating systems can be applied to a number of sub-portfolios (e.g. "Sicherheiten I" for "Freiberufler" and "Gewerbetreibende").

The portfolio of the "Firmenkunden Deutschland" business unit is divided into the customer segments "Gewerbetreibende (Medium-sized businesses)" and "Großkunden (Wholesale customers)". As, in the example, approval is sought only for the Foundation IRB Approach, merely the PD in the "Unternehmen" exposure class is to be estimated. This is achieved here by means of the "GW III" and "Konzernrating (Group rating)" rating systems, which will be used as of 1 July 2005 and 1 December 2006.

The implementation dates for the rating system components together with the targeted coverage for RWA and exposure values, which are given only for the fully implemented rating systems, can be found in the following table. These data show that the specimen institution will reach the entry threshold for the IRB Approach on 1 July 2005 and will have sufficient portfolio coverage through IRBA portfolios on 1 June 2006, thus achieving the supervisory reference level. According to the example, on 1 December 2006, a targeted degree of portfolio coverage is reached which will be sufficiently large in the long term. All of the remaining portfolios (here, for example, the portfolio of the "Firmenkunden Ausland" business unit) will be deemed to be immaterial and can be assigned permanent risk weights according to the Standardised Approach for credit risk.

In the example, the following RWA and exposure values are used for the individual portfolios (in EUR million).

Portfolio	KSA <sup>9</sup> RWA	IRBA RWA (estimated)	KSA exposure values	IRBA exposure values (estimated)
"Freiberufler"	30.0	22.6	20.0	22.0
"Gewerbtreibende (Mengengeschäft)"	40.0	30.0	20.0	22.0
"Gewerbtreibende (Unternehmen)"	48.0	36.0	66.0	72.6
"Hypotheken"	54.0	40.6	54.0	59.4
"Großkunden" (in the IRB Approach)	24.0	18.0	34.0	37.4
"Großkunden" (permanent partial use)	4.0		6.0	

The table values for the implementation plan are obtained as follows.

"Freiberufler"

Column V

Numerator: 22.6

Denominator: 22.6 (IRBA part) + 40 + 48 + 54 + 24 + 4 (remainder in the Standardised Approach for credit risk) = 192.6

Result:  $22.6 / 192.6 = 11.7\%$

Column IX

Numerator: 22.6

Denominator: 22.6 (IRBA part) + 40 + 48 + 54 + 24 + 4 (remainder in the Standardised Approach for credit risk) = 192.6

Result:  $22.6 / 192.6 = 11.7\%$

"Gewerbtreibende (Mengengeschäft)"

Column V

Numerator: 30.0

Denominator: 22.6 + 30.0 (IRBA part) + 48 + 54 + 24 + 4 (remainder in the Standardised Approach for credit risk) = 182.6

Result:  $30.0 / 182.6 = 16.4\%$

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<sup>9</sup> Standardised Approach for credit risk



### Column IX

Numerator: 22.6 + 30.0

Denominator: 22.6 + 30.0 (IRBA part) + 48 + 54 + 24 + 4 (remainder in the Standardised Approach for credit risk) = 182.6

Result:  $(22.6 + 30.0) / 182.6 = 28.8\%$

The calculations for the other RWA and the exposure values are performed in the same manner. It should be noted that the coverage ratio (Column IX) is not cumulated from the values in Column V as the denominator changes through the progressive inclusion of further portfolios in the IRB Approach.

In order to fill in the table, the IRBA exposure values and the IRBA RWA of all the portfolios should be estimated even if an IRBA rating system does not yet exist for the portfolios. If possible, the table should be filled in using the bank's own (perhaps very rough) estimates.

If it is not possible for institutions to perform these estimations, values according to the Standardised Approach for credit risk rather than the IRBA values can be used in the table for the portfolios concerned. If the above example is modified with the assumption that it is not possible to perform an estimation using IRBA values for the "Gewerbetreibende (Mengengeschäft)" portfolio, then Column V would contain a value of 20.8% for "Gewerbetreibende (Mengengeschäft)" and Column IX would show a coverage ratio of 32.5%. Changes to the estimated exposure values and RWA may also occur as a result of portfolio adjustments (e.g. planned purchases or sale, strong growth or curtailment in individual business lines). These changes should be taken into account if they have a significant impact on the coverage ratio.

Institut oder Institutsgruppe:		Musterinstitut					Datum:		TT.MM.20JJ	
Beantragter IRB Ansatz:		„Basis-IRBA“					Version vom 01.04.2007			
I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.
Maximaler Zeit- rahmen	IRBA- Forderungs- klasse gem. SolvV	Geschäfts- einheit(en)	Interne(s) Kunden- segment(e)	Risiko- gewichtete IRBA- Positionswerte in % aller Aktiva (ohne 5.)  (ggf. ohne 6.)	IRBA- Positionswerte in % aller Positionswerte (ohne 5.)  (ggf. ohne 6.)	Kredit- risiko- parameter	Name des Rating- verfahrens	Insgesamt angestrebter Abdeckungsgrad in %		Zeitpunkt der Inbetrieb- nahme
				für Spalte V. (ohne 5.)  (ggf. ohne 6.)	für Spalte VI. (ohne 5.)  (ggf. ohne 6.)					
<b>1. Vorbereitung des Übergangs auf den IRBA</b>										
	Mengengeschäft	Privatkunden Deutschland	Freiberufler	11,7	10,9	PD	Freiberuf I			01.04.2004
						LGD	Sicherheiten I			01.05.2004
						LGD	Blanko II			01.06.2004
						CF	CCF 1			01.07.2004
						CF	CCF 2	11,7	10,9	01.08.2004
	Mengengeschäft	Privatkunden Deutschland	Gewerbe- treibende	16,4	10,8	PD	GW I			01.04.2004
						LGD	Sicherheiten I			01.05.2004
						LGD	Blanko I			01.12.2003
						CF	CCF 1	28,8	21,6	01.09.2004
	Unternehmen	Firmenkunden Deutschland	Gewerbe- treibende	21,1	34,5	PD	GW III	51,9	55,4	01.07.2005



The sub-portfolios for "Institute" and "Zentralregierungen" – which are to be permanently excluded from the IRB Approach in accordance with the exemption provision explained above and not included in the calculation of the entry threshold and the other transitional thresholds – are to be entered in the appropriate table as follows:

<b>Institut oder Institutsgruppe:</b>	Musterinstitut	<b>Datum:</b>	TT.MM.20JJ			
<b>Beantragter IRB Ansatz:</b>	„Basis-IRBA“	Version vom 01.04.2007				
<b>5. Aufstellung einzelner Geschäftsbereiche, die unter Bezug auf § 67 Abs. 4 Satz 1 Nr. 1 SolvV zeitlich unbeschränkt aus dem IRBA herausgenommen werden</b>						
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>
<b>IRBA-Forderungs- klasse gem. SolvV</b>	<b>Geschäftseinheit(en)</b>	<b>Anzahl der Schuldner</b>	<b>Risiko- gewichtete KSA- Positionswerte in % aller Aktiva</b>	<b>KSA- Positionswerte in % aller Positionswerte</b>	<b>Brutto-Kreditvolumen (in Mio EUR)</b>	<b>Aussagen zum Risikogehalt, gewählte Kenngröße</b>
Zentralregierungen	Zentralregierungen (Schuldner D, Gebietskörperschaften etc.)		0	7	12	0,0% EWB
Zentralregierungen	Ausländische Zentralregierungen (geringe Anzahl wesentlicher Schuldner)	5	2	6	10	0,5% EWB
Institute	Institute (geringe Anzahl wesentlicher Schuldner)	7	3	5	9	0,2% EWB
Institute	Förderinstitute unter den Voraussetzungen gem. § 70 Satz 1 Nr. 1 lit. b SolvV					

Institute	kirchliche Körperschaften des ö.R. gem. § 70 Satz 1 Nr. 4					
Institute	Intergruppenforderungen gem. § 10c Abs. 3 KWG, sofern nicht § 67 Abs. 6 SolvV angewendet wird					
Beteiligungen	Beteiligungen an juristischen Personen mit KSA-Risikogewicht = 0 %					
Beteiligungen	Beteiligungen gem. § 70 Satz 1 Nr. 8 SolvV					
Beteiligungen	Beteiligungen gem. § 70 Satz 1 Nr. 9 SolvV					
alle relevanten	Auslaufende Geschäftsbereiche (Altbestände)					
alle relevanten	Ausnahmefähiges Bestandsgeschäft					
alle relevanten	Öffentlich garantierte Positionen gem. § 70 Satz 1 Nr. 10 SolvV					
alle relevanten	Positionen mit langer Abwicklungsfrist gem. § 70 Satz 1 Nr. 11 SolvV					

For the sake of simplicity, the specimen institution has no further IRBA positions which are not included in the coverage ratio pursuant to section 67 (4) sentence 1 of SolvV.

<b>Institut oder Institutsgruppe:</b>	Musterinstitut	<b>Datum:</b>	TT.MM.20JJ	
<b>Beantragter IRB Ansatz:</b>	„Basis-IRBA“	Version vom 01.04.2007		
<b>6. Aufstellung der IRBA-Positionen, die gemäß § 67 Abs. 4 Satz 1 SolvV nicht in den Abdeckungsgrad eingerechnet werden und für die das Wahlrecht nach § 67 Abs. 5 SolvV nicht ausgeübt wird</b>				
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>IRBA-Forderungs- klasse gem. SolvV</b>	<b>Geschäftseinheit(en)</b>	<b>Risikogewichtete Positionswerte in % aller Aktiva</b>	<b>Positionswerte in % aller Positionswerte</b>	<b>Brutto-Kreditvolumen (in Mio EUR)</b>
Beteiligungen	Beteiligungspositionen nach § 78 SolvV			0
Verbriefungen	Verbriefungspositionen nach § 227 Abs. 1 SolvV			0
alle relevanten	Investmentanteile nach § 83 SolvV			0
alle relevanten	Risikopositionen von gruppenangehörigen Unternehmen gem. § 67 Abs. 4 Satz 1 Nr. 6 SolvV			0
alle relevanten	übergangsweise ausnahmefähige Risikopositionen gem. § 67 Abs. 4 Satz 1 Nr. 7 SolvV			0