Toolkit for Risk-based pensions supervision

Case Study

Germany

Risk-based Pensions Supervision provides a structured approach focusing on identifying potential risks faced by pension funds and assessing the financial and operational factors in place to mitigate those risks. This process then allows the supervisory authority to direct its resources towards the issues and institutions which pose the greatest threat.

The IOPS Toolkit for Risk-based Pensions Supervisors provides a 5-module framework for pensions supervisors looking to apply a system of risk-based supervision. A web-based format allows: a flexible approach to providing updates and additions; users to download each module separately as required; and a portal offering users more detailed resources, case studies and guidance. The website is accessible at www.iopsweb.org/rbstoolkit.

This document contains the **German Case Study.**

GERMANY[1]

I. Background

A. Pension System

Germany's pension system consists of the following parts:

- *Statutory Pension Insurance (Gesetzliche Rentenversicherung - GRV):* providing old age, disability and survivors' benefits (in the case of registered co-habitation), financed on a PAYG basis. Statutory pensions insurance, however, offers social security not only in old age, but also during the working phase - in the shape of rehabilitation benefits or pensions because of reduced earning capacity. The vast majority of the population is covered, with statutory pension insurance making up around 85% of an average household's retirement income. Starting in 2012 the retirement age of 65 is being gradually increased to 67 by 2029. Pensions are largely calculated from the respectively insured income. Based on years and level of contribution with 45 year average earnings providing around a 70% replacement rate.

- *Occupational pension schemes (company pensions):* though voluntary, since 2001 employees in Germany have had the right to employee funded, occupational retirement provision and these funds are now growing (with over half of those subject to compulsory social insurance also having an occupational pension by 2003). Occupational plans in Germany are DB in nature with employers deciding how occupational retirement provision should be implemented (sometimes in conjunction with collective agreements), choosing from the following five different forms (2 or more may be implemented by an employer): Direktzusage (book reserves), Unterstützungskassen (support funds), Direktversicherung (direct insurance), Pensionskassen (pension institution) and Pensionsfonds (pension funds). Pensionskassen are life insurance companies the sole purpose of which is to provide financial protection linked to an employment relation against biometric risks. At the end of 2009 *Pensionskassen* and *Pensionsfonds'* assets were worth EUR 123,3 billion (USD 151 billion). There were 182 *Pensionskassen* and *Pensionsfonds as of 30 June 2010* with a total of 8.002 million members and beneficiaries as of 31 December 2008.

- *Individual pension provisions:* private insurance contracts known as Riester products were introduced in 2001 (13,85m being established by the end of June 2010, including home ownership). A minimum guarantee is required (capital preservation), withdrawals are not allowed until age 60 and must be taken as a life-annuity. Tax advantages and subsidies apply to these products - the level depending on individual income levels and number of children (€300 tax break per child born after 1st January 2008; those under age 25 who purchase a Riester product

[1] This case study was drafted by Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) for the country case study produced for the IOPS risk-based supervision project with additional material supplied specifically for the Toolkit.

will receive a one-off bonus of €200). The new Home Ownership Pensions Act (*Eigenheimrentengesetz* – EigRentG) passed by the German parliament on 4 July 2008 came into effect retroactively on 1 January 2008 and makes saving for a pension through the "Riester" system even more attractive. Home ownership is now becoming part of old-age provisions. State-subsidised pension savings can *e.g.* be used for the purchase or construction of one's own home. At the end of June 2010 there are 345.000 contracts signed.

B. Risk-based Supervisory Approach

The different types of occupational retirement provisions, such as Pensionskassen (pension institution), Pensionsfonds (pension funds) and Direktversicherung (direct insurance) are supervised by the Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin). The authority was established in 2002 as an integrated supervisor - responsible for the supervision of banks (around 2000) and financial service institutions (over 710), insurance undertakings and securities firms – in response to the financial institutions themselves merging to become financial conglomerates and offering increasingly overlapping and competing products. In addition to over 443 insurance companies, BaFin supervises 153 Pensionskassen and about 29 Pensionsfonds, about 6,000 domestic investment funds and about 73 asset management companies (as of March 2010). It employs a total of around 1,900 staff. It is funded entirely out of fees and contributions from the institutions and companies that it supervises and is independent of the Federal budget.

Four separate organisational units, known as Directorates, have been set up to deal with "Cross-Sectoral Issues/Internal Administration", "Banking Supervision", "Insurance and Pension Fund Supervision" and "Securities/Asset Management Supervision". The last 3 are responsible for solvency and market supervision. Functions that extend beyond individual sectors are carried out by the cross-sectoral departments of the "Cross-Sectoral Issues/ Internal Administration" Directorate.

Further functions that extend beyond individual sectors are carried out by the President and his staff. For example, the cross-sectoral International Department (INT) is responsible for BaFin's international bilateral and multilateral functions. Among other things, it represents German interests in the EU and other international bodies and participates in the development of international regulatory standards. INT also oversees short and long-term advisory projects (twinning) with foreign supervisory authorities. These activities serve to reinforce the influence and competitiveness of Germany as a financial centre. Further units under the heading of the President are internal audit, presidents' office and press relations.

The Cross-Sectoral Risk Modelling Group is responsible for issues of principle relating to the quantitative mathematics modelling of market, credit, liquidity and operating risks and carries out on-site inspections of these models. It continues to participate in the further development of regulatory law, where it brings its market expertise to relevant working groups. In the medium term the Group is also scheduled to assist in the supervision of insurance companies and investment companies, not least because of current developments in international supervisory law (*e.g.* Solvency II Framework Directive or hedge funds).

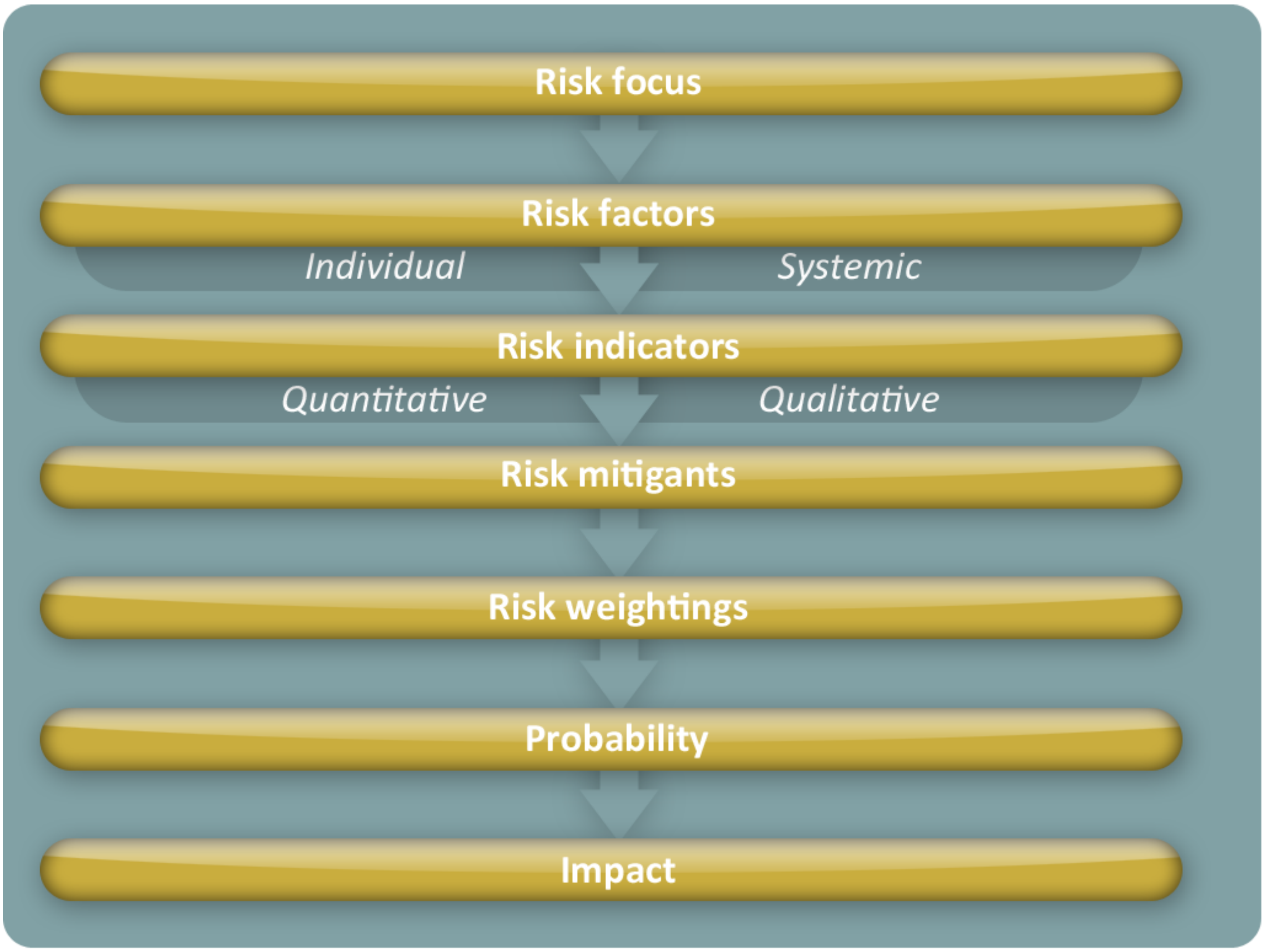
34 employees work in BaFin's department for "Supervision of Occupational Retirement Provision; Supervision of *Pensionskassen*, Pensionsfonds and Health Insurers" with regards to the supervision of Pensionsfonds and Pensionskassen. This department is part of BaFin's Directorate "Insurance and Pension Fund Supervision"

As BaFin is an integrated supervisor and as the supervision of Pensionskassen, Pensionsfonds and life insurers offering direct insurance are closely linked in Germany, the approach to risk-based pension supervision adopted by BaFin is based on the system used to supervise the insurance sector. The overall risk-based supervisory system is based on measures, stress tests and risk scoring. One major measure, the maximum guaranteed interest rate, was reduced from 2.75% to 2.25% for Pensionskassen as of 1st January 2007. It also applies to Pensionsfonds if they provide similar guaranties to insurance entities.

Pensionskassen and Pensionsfonds are required to submit 'scenario calculations for forecasts' several times a year, to assess their current financial situation and future trends should there be any declines in their investments. Stress tests have been added as an additional quantitative instrument amongst reporting requirements (so far only applied to Pensionskassen).

II. Risk-based Supervision Process

Figure 1. RBS Process



1. Risk Focus

Supervisory Objectives

BaFin's principal objectives in the area of insurance and pension fund supervision is to protect the interests of consumers such as members, beneficiaries, policyholders and insured persons to ensure the proper functioning, stability and integrity of the German financial system. Supervisory risk therefore increases in cases where the supervised entity has a propensity for crisis or is lacking in quality.

BaFin assigns the undertakings under its supervision to risk categories, with a view, among other things, of determining the intensity of supervision. BaFin incorporates findings from the risk classification process into its supervision plans for Pensionsfonds and Pensionskassen in that it takes into account the risk classification results when selecting its on-site inspections.

Nature of Pension System

Given BaFin's objectives, the risk classification used by the authority sets out to estimate the risk that an entity cannot meet its payment obligations or cannot fulfil its contractual obligations under its policies at all times. The purpose and reasoning behind the applicable classification process is to arrive at a definitive estimate at any given time for each entity, as to how far BaFin's supervisory objectives are endangered so that a decision may be taken as to the ongoing supervisory mission (supervision planning).

2. Risk Factors

A. Individual

Reporting and Publishing Platform

In order to complete its risk assessments on supervised entities, BaFin uses an electronic reporting system - the Reporting and Publishing Platform (MVP). At least 1,000 data fields are required to be completed by each fund, with the system allowing for the delivery of electronic documents and files via a secure Internet connection (HTTPs or SSL). It uses advanced certificates pursuant to section 2 no. 2 of the German Digital Signature Act (*Signaturgesetz* – SigG) for authentication on BaFin's and the reporter's sides.

This service is intended for those providers who would like to meet BaFin's notification, reporting and transmission requirements on the basis of a simple and secure electronic data exchange system. In their present stage of development the services offered provide for the delivery of files and the downloading of procedure-related transaction and processing logs.

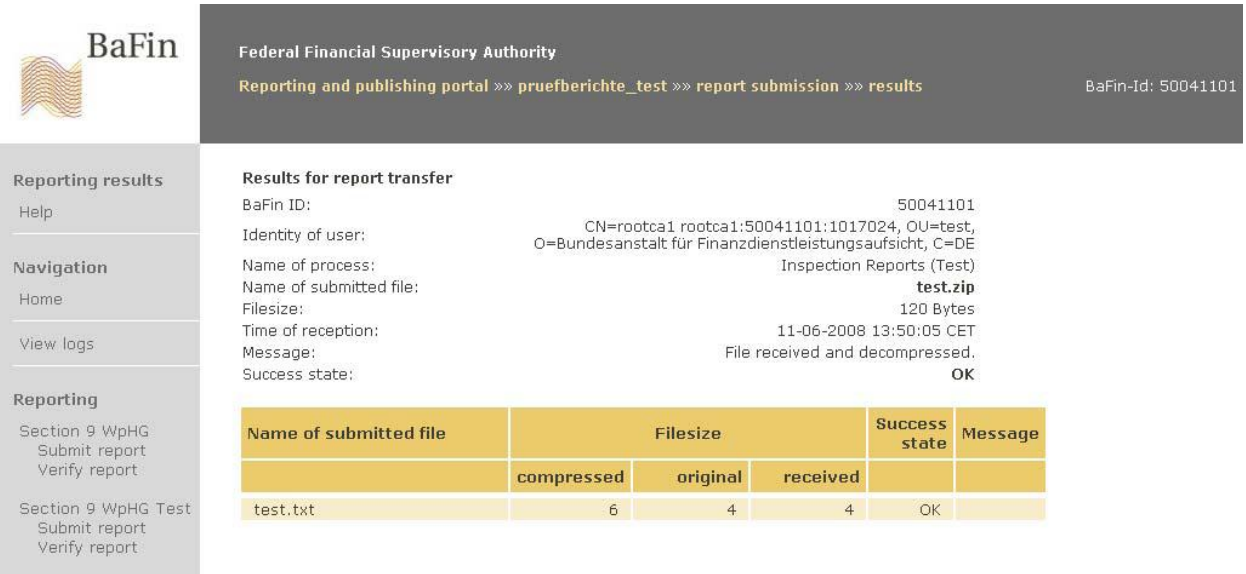
In addition to the documentation provided, the supervised may seek assistance on any technical questions and problems from our support hotline at mvp-support@bafin.de.

The home screen of the MVP can be accessed on the BaFin website: http://www.bafin.de/. The overview page for companies is accessed using the "Companies" link.

Once the transfer has taken place successfully, a success notification is displayed containing information about the transferred file (see figure below). This displays:

- Name and size of the transferred file archive
- Time of transfer
- Status with success or failure notification
- All the files contained in the archive, together with the packed and received file size and the unpacked file size, as well as the success status.

Figure 2: BaFin Transfer notification



Source: BaFin

Model of risk classification

BaFin has developed a model of risk classification, which it uses for the companies and institutions it supervises. This model forms a core part of BaFin's risk-oriented approach to supervision. In 2005, BaFin began to classify the companies and institutions being supervised using a 12-position risk matrix. The horizontal axis of the risk matrix shows the **quality** of the supervised company, on a four-level scale. The vertical axis indicates the company's relevance to the system, previously also referred to as **impact**, on a three-level scale.

The **quality** and **impact** of the supervised company or institution are assessed by the competent supervisory department. The risk classification process is the cornerstone of any evaluation of a Pensionsfonds or Pensionskasse, both as to its **quality** and its **impact** in the market, *i.e.* its systemic relevance. The decisive factor is the level of their total investments.

A rating system operated by specialists is used to determine the **quality** of a Pensionsfonds or Pensionskasse. The **impact** that a crisis at one of the entities may have on the stability of the financial system is fundamentally determined using cut-off points (see below). The final classification is a combination of the quality assessment and the ranking of the entity's impact dimension.

Figure 3: BaFin Risk Classification

		quality			
		A	B	C	D
impact	high				
	medium				
	low				

The **impact** is categorised as high, medium or low. The **quality** of most Pensionsfonds and Pensionskassen is determined by the rating system on the basis of the score awarded to criteria which have been set out in criteria catalogues. These criteria are divided into three sub-divisions: "*asset, financial and income situation*", "*growth*" and "*quality of management*", each of which is evaluated and scored. The scores awarded to each sub-area are based on key figures specific to the industry or on qualitative criteria. The evaluation system combines the sub-area scores in order to arrive at an overall score, which is then transferred to a four-level scale from A (high) to D (low).

The way in which these criteria are applied across the whole of BaFin is described in the following section on risk indicators.

Each year, BaFin evaluates the **auditor's report** of each company's or institution's annual financial statements as a means of monitoring the respective risk situation. The findings of this evaluation then form the basis for the risk classification. A change in the risk situation of the supervised company or institution may prompt BaFin to move the company to a different risk class.

Information collected during the year may also affect the risk situation of the supervised company or institution, necessitating a change to another risk class. The depth and focus of supervision for each supervised company or institution is dependent on its risk classification. This, therefore, forms a significant basis for BaFin's annual audit planning. It allows BaFin to establish its priorities in even greater detail than before, and avoid imposing unnecessary workloads.

B. Systemic

The **impact** measure determines, as outlined above, what consequences or impact a crisis within a company could have on the financial market. This is not directly a measure of systemic relevance but could be taken as an indicator or criteria of that. The largest insurance undertakings and Pensionsfonds and Pensionskassen are furthermore subject to ad hoc data requests which complement BaFin's regular reporting and also serve macroprudential surveillance purposes. This also supports BaFin's ability to identify macroprudential risks and use these insights for its ongoing supervision. Furthermore, BaFin can directly react towards current and topical issues and risks that have been identified through other channels and gather data on these.

3. Risk Indicators

A. Quantitative

Sub-division 1: assets, financial and income situation

At the outset, in the sub-division "*assets, financial and income situation*", quantitative criteria are adopted which, for the purpose of proper accounting, are designed to give a true and fair image of the assets, financial and income situation of the entity. A pre-condition is that the criteria give an indication as to the relationship between the entity's assets and liabilities (financial position), its financing and above all the future liquidity of the entity or the amount and sources of profit as well as the extent and the reasons why the entity's equity capital has altered over a given time period (profit situation). Information available on the assets, financial and income situation of an entity, which at the time of classification is not yet reflected in the data supplied, can also be considered.

Examples for quantitative criteria are:

"Security" criteria:

- Ratio of actual equity capital to estimated equity capital (solvency ratio)
- Profit and loss transfer agreement with the parent company
- Stress testing (Pensionskassen only)
- Positive investment valuation reserves = hidden investment reserves (unbalanced) as a percentage of total investments
- Negative investment valuation reserves = hidden investment charges (unbalanced) as a percentage of total investments
- Actual/estimated ratio of guarantee assets at book value
- Actual/estimated ratio of restricted assets at book value
- Actual/estimated ratio of guarantee assets at present value
- Actual/estimated ratio of restricted assets at present value

"Success" criteria:

- Net interest earned = Net investment income
- Current average yield on investments = current investment income
- Acquisition cost ratio (gross/net) = actual acquisition costs/gross premiums earned
- Administration cost ratio (gross/net) = actual administration costs/gross premiums earned
- (Estimated) relative gross surplus
- (Estimated) relative difference between net interest earnings and average actuarial interest rate
- (Estimated) relative result by application of other bases of calculation

Details of the stress tests performed can be found in the **Annex.** BaFin, for one, has revised its **stress tests** (applied to Pensionskassen only) in the light of the financial crisis (*e.g.* considering more extreme declines in equity markets).

Sub-division 2: Growth

The sub-division "growth" illustrates the development of the company either in relative terms (peer group comparison) or in absolute terms (on a standalone basis). The evaluation of growth is carried out exclusively on the basis of quantitative criteria. No linear connection exists between the growth of a company and the rating result. Unusual growth can be seen as negative.

Examples for criteria are:

- Percentage change in written premiums over the previous year (premium growth)
- Percentage change in current premiums over the previous year (premium growth excluding single premiums)
- Percentage change in written premiums on average over the last 3 years (premium growth)
- Percentage change in current premiums on average over the last 3 years (premium growth excluding single premiums
- Lapse ratio
- Percentage change in the number of proposals compared to the previous year
- Percentage change in the number of proposals on average over the last 3 years

Sub-division 3: Quality of management

The sub-division "Quality of management" contains criteria that better describe the capacity of management (decision makers) to efficiently carry out the business management tasks that fall within its responsibility. Included in this are other measures and actions taken by management within the framework of its business policy such as the equipping and setting up of an institution or company (organisational structure).

Examples for criteria are:

- Quality of investment guidelines = Investment and risk management of restricted assets
- Other aspects = Risk management and audit process, internal audit, attitude towards BaFin and company strategy

B. Qualitative

BaFin's model has been adapted from the insurance sector for use with pension funds which offer guarantees. Consequently mostly quantitative indicators are used (see above).

The **quality** axis takes account of both qualitative and quantitative elements. Qualitative elements include, for instance, the findings of the annual financial statements or on-site inspections, while quantitative elements include key figures from solvency supervision.

4. Risk Mitigants

The assessment and rating of quality takes place on a net basis. As can be seen from the list of indicators above, both risks and mitigants are considered at the same time.

5. Risk Weightings

When establishing the overall score it must be borne in mind that the sub-division "*Assets, financial and income situation*" lends itself better to objective assessment than the other sub-divisions because of the significantly greater number of objective and verifiable quantitative criteria available. This means that in a majority of cases it is over weighted. If, however, all the sub-divisions are equally weighted or the sub-division "*Assets, financial and income situation*" is not the determining factor in the overall "Quality" score then this must be mentioned in the column "Supplementary comments and explanations on the calculation of the overall score". In particular, where applicable, it should be stated which area was over weighted.

6. Probability

Probability is not considered separately in BaFin's risk assessment. The net quality ratings (A, B, C, D) reflect the probability of a risk occurring.

7. Impact

The **impact** of a supervised company or institution is determined primarily from its relative size compared with its peers, and from its market share if the relevant market is of significance for the economy as a whole.

The impact a crisis at a Pensionskassen or Pensionsfonds could have on the financial market is determined exclusively from applying cut-off points – defined by the amount of investments. By applying the amount of the entity's investments, the entity can be given a ranking on each individual market and, in addition, the investment volume indicates how important the entity is for the financial markets.

The following cut-off points have been established:

- *Level 3* (high impact): Pensionskassen or Pensionsfonds whose investments total at least EUR 10bn.
- *Level 2* (moderate impact): Pensionskassen or Pensionsfonds whose investments total at least EUR 1bn but less than EUR 10bn.
- *Level 1* (low impact): Pensionskassen or Pensionsfonds whose investments total less than EUR 1bn.

In individual cases an exception may be made to these established criteria (*e.g.* when the investment volume almost reaches the next cut-off point or when an entity holds a position in an individual market that is important for the stability of the financial sector as a whole). It is only possible to jump one cut-off point (*e.g.* from 1 to 2, or from 3 down to 2). Any such exceptional treatment must be discussed in the risk assessment meeting and minuted. In addition, in such cases, a written report must be added to the file indicating which impact level should have been applied and why an exception was necessary.

8. Quality Assurance

The rating system used by BaFin to determine the quality of Pensionsfonds or Pensionskasse is operated by specialists.

After the examination of the "quality" dimension, criteria for each of the subdivisions the responsible supervisor provides the results of his assessment with a grad (A-D), while cross-checking the quality of his examination with colleagues within his section and within his department by an interview panel on the basis of peer discussions. The results of the examination of the "impact" dimension are provided by a specialised section within BaFin for all supervised entities.

For security reasons and to improve the quality of the risk classification process, validation of the model is needed. Validation implies conducting a quality control on the data input, data output and the whole process. BaFin distinguishes between a "small validation" (plausibility check) and a "big validation" (statistical-mathematical validation). Both kinds of validation are conducted on a regular basis, whereas under specific circumstances an extraordinary validation can be executed. Depending upon the result of the validation, it might be needed to change the risk classification process and to customise it to the result of the validation. Trigger for validations could be externally, *e.g.* changes in legislation or internal factors like the introduction of completely new rating system. Results of the validation are documented.

9. Supervisory Response

The results of the risk classification process that BaFin uses are shown graphically in a 12-field matrix. The matrix is two-dimensional corresponding to the supervisory risk profile: **Quality of the entity** (horizontal axis) and the possible **Impact on the stability of the financial system** (vertical axis). The combination of the Quality ranking and Impact ranking displays the entity's entire risk profile and as a result constitutes its risk classification. The entity's own individual "Quality" is shown on the horizontal axis of the 12-field matrix. The vertical axis is used to set out the "Impact" that a crisis in a Pensionsfonds or Pensionskasse could have on the stability of the financial sector. The matrix enables all the 12 possible risk classification results to be displayed.

The classification of the entity in the 12-field matrix is shown by an alphabetical-numerical combination (rating class) taken from the vertical and horizontal axes. The grading along the horizontal axis is given visual effect using colours (see fig. 4).

Figure 4: BaFin 12-Field Matrix

Quality / Impact	A	B	C	D
3	3A	3B	3C	3D
2	2A	2B	2C	2D
1	1A	1B	1C	1D

Source: BaFin

In this system the estimated impact is given a numerical rating, *i.e.* 1 ("low"), 2 ("medium"), and 3 ("high"), and quality is given an alphabetical rating, *i.e.* A ("high"), B ("fairly high"), C ("fairly low") and D ("low").

The degree of supervisory work and the main areas of attention are determined for each supervised entity by its risk classification. As a consequence this is an important basis for BaFin's yearly supervision planning. In this way BaFin can set priorities much better than before and so avoid unnecessary workload.

The degree of supervision increases as an entity's quality decreases. Entities ranked C or D clearly require attention. However, the Supervisory Authority cannot completely forgo checks on entities ranked in the A category. After appropriate time intervals it must take a closer look at the actual risk situation of the entity.

Risk classification also drives resource planning within BaFin. Based on the classification, the Supervisory Authority can direct its resources toward those institutions and companies where their risk classification indicates that they require more intensive supervision than others. BaFin decides in what shape and form this more intensive supervision will be carried out by reference to the risk situation at the supervised entity. BaFin's supervisory mission is therefore risk-oriented and based on individual circumstances. In planning **audits**, supervisors refer to the risk situation they encounter in each individual case, reflecting the current state of affairs and need for action at each company and institution.

As a rule, the risk classification of all entities is updated once a year as at 30 September once the annual report, auditor's report and the latest annual returns of the entity are to hand.

Important information received in between two updates, such as the approval for or abandonment of a business class, changes in the ownership structure or ad-hoc declarations as to the financial situation of the entity, may require an update of the risk classification in advance of the annual review.

ANNEX: STRESS TESTING

Stress tests simulate the effects of crisis-like changes in the capital markets on the balance sheet of a supervised entity and are designed to allow for timely measures to be taken to increase risk-bearing capacity, should results be negative.

Stress tests have been added as an additional quantitative element amongst reporting requirements for the risk management of investments (so far only applied to insurance companies including Pensionskassen). The stress test shows whether or not the undertaking can meet its contractual obligations without taking countermeasures in a simulated crisis situation. Undertakings must also have a solid footing with a view to capital market crises arising in the future. The current BaFin stress test provides for four scenarios:

- Bonds only test: 10% decline in the price of fixed-income securities; (credit risks taken into account)
- Equities only test: Decline in the price of equities against the relevant index level at 31 December 2009; (credit risks taken into account)
- Bond and equity test: Decline in the price of equities against the relevant index level at 31 December 2009 and 5% decline in the price of fixed-income securities; (credit risks taken into account)
- Equity and property test: Decline in the price of equities against the relevant index level at 31 December 2009 and 10% decline in the market value of properties; (credit risks taken into account)

The discounts applied to equities are shown in the following table:

EuroStoxx 50 (share price index)	Stress factor (single scenario) in %	Stress factor (mixed scenarios) in %
from 5246 to 5435 or above	45	25
from 5056 to 5245	45	25
from 4866 to 5055	45	25
from 4676 to 4865	45	25
from 4486 to 4675	44	24
from 4296 to 4485	41	22
from 4106 to 4295	38	21
from 3916 to 4105	35	20
from 3726 to 3915	32	19
from 3536 to 3725	29	18
from 3346 to 3535	27	17
from 3156 to 3345	24	16
from 2966 to 3155	22	15
from 2776 to 2965	20	14
from 2586 to 2775	18	13
from 2396 to 2585	16	12
from 2206 to 2395	14	12
from 2016 to 2205	13	11
from 1826 to 2015	11	11
up to 1825	10	10

The variations taken into account are based on the market environment on the day the stress test is carried out and, consequently, follow a rule-based approach.

A result of "0" in the stress test means that, even in the event of an extreme crash, the investments are sufficient

- to cover the undertaking's obligations vis-à-vis the members and beneficiaries and
- not to endanger the solvency of the undertaking.

A negative result, on the other hand, does not mean that the fulfillment of the obligations is actually under threat.

Depending on the result of these scenarios the company is subject to certain notification obligations towards BaFin.

This rule-based process means that the discount applied increases as share prices rise so as to take into account the higher potential for prices to fall. Where prices have declined the discount is reduced since the potential for a further decline is lower.

The minimum discount is 10%. The maximum discount in the equity only scenario is 45% and 25% in a mixed scenario.

In addition, the following aspects should be noted:

- The bond and equity test assumes that prices on both the equity and bond markets decline at the same time,
- The equity and property test assumes that prices on both the equity and property markets decline at the same time,
- Section 341b of the Commercial Code (Handelsgesetzbuch – HGB)[2] does not apply to equity portfolios.

The BaFin stress test as at 31 December 2009 takes into account:

- Reserves on the assets side of the balance sheet,
- Buffers on the liabilities side (free RfB (provisions for bonuses and rebates), terminal bonus fund),
- Capital and
- Hedging operations.

Furthermore, features that are specific to the company in question, for example a shorter duration in the bond portfolio, can also be taken into account after the balance is calculated. This means that an undertaking can include valuation reserves contained in registered instruments, mortgages, loans and other investments in stress tests in certain circumstances, and, under specific conditions, can take account of the fact that (part of) its equities are hedged.

If an undertaking does not pass the stress test taking into account its valuation reserves or hedging strategies, this does not mean that the undertaking is no longer in a position to meet its obligations vis-à-

[2] The Commercial Code (HGB) comprises provisions specifically applicable to insurance undertakings, inter alia on the valuation of investments (sections 341b to 341d HGB). The supervisory authority checks if these provisions are complied with in the course of both onsite and off-site inspections. As a basic principle investments of insurance undertakings (stocks, investment trust units, and other fixed-income and variable-yield securities) had to be treated as current assets, which meant that even temporary losses in value to an amount below the acquisition price shown in the balance sheet had to be written down at the balance-sheet date and thus to the detriment of the undertaking's profit (strict principle of lower-of-cost-or-market value).

An exception to this is section 341b (2) HGB, whereby insurers may treat their investments as fixed assets if and to the extent they serve business operations on a permanent basis. Consequently, insurers are required to write down values only in the event of lasting depreciations (restricted principle of lower-of-cost-or-market value). This rule is in order to mitigate the effects of current capital market developments, *i.e.* to protect the securities markets from short-terms effects as a result of high volatilities.

The rule is, moreover, designed to create stability in an unstable and depressed stock market environment and to prevent resulting fluctuations in the policy-holders' profit-sharing benefits. The more detailed rules governing this exception are contained in an Auditors' Standard agreed with the supervisory authority. Furthermore the supervisory authority requests insurers to report quarterly not only book values but also current values of investments to evaluate the financial stability of the insurers and its risk bearing ability on the basis of current / market values of its investments.

vis its policyholders at the present time. A negative stress test result is merely to be understood as a signal that the undertaking has a reduced risk-bearing capacity and that this must be rectified early on.

The following concrete measures can be considered in this respect:

- Additional capital,
- Investment reallocation,
- Hedging of investments on the capital markets and
- Reduction in the surplus participation.

In supervisory terms, a failed stress test does not automatically trigger certain measures. Rather, decisions to increase a company's risk-bearing capacity require an individual assessment of the undertaking in question.

In addition, companies have to carry out at least quarterly internal stress tests based on a BaFin set of minimum scenarios. Depending on the result, certain notification obligations have to be met.

In the case of small entities, BaFin is entitled to alleviate the conduct of stress tests on an individual basis, based on the kind and volume of investments and the kind of business the Pensionskasse forms.

IOPS Toolkit for Risk-based Pensions Supervisors
www.iopsweb.org/rbstoolkit