

*As providers of financial services, we consider risk management one of our core competencies. As a result, risk management is an integrated part of our controlling process, which involves identifying, measuring, aggregating and managing risks. This process is used to determine how capital is allocated to the Group's various divisions.*

## Responsibilities

In our business, successful management essentially means controlling risks in order to increase the value of the Allianz Group. This is done through risk-adequate allocation of capital resources and activities required to achieve sustainable growth. As a result, the Board of Management formulates the business objectives of the Allianz Group on the basis of return and risk criteria. These objectives are implemented by the Allianz Group Center and the local operational units. Our risk-control strategy involves assignment of responsibility for risk management to local entities, which operate within the legal frameworks applicable for their respective locations.

This decentralized approach is complemented by centralized responsibility. This is necessary because we need to deal with an accumulation of global risks which can considerably increase potential risk exposure. As a result, central controls are essential. The responsibility for central control lies with Group Risk Controlling, a unit that was expanded in 2002. Central control now also includes the banking business.

Group Controlling assesses the Allianz Group's risk exposure on the basis of local and global risks. The results of these analyses are then submitted to senior management. At the same time, Group Controlling ensures that the processes are transparent and comprehensive. Risk management activities are supervised by both internal and external auditors.

## Risk Categories

Total risk exposure of the Allianz Group is subdivided into individual risk categories:

**Actuarial risks** These risks are based on the technicalities of the insurance business: we have to guarantee future payment commitments, and the volume of such payments must be calculated in advance. Different actuarial risks exist in the various insurance lines.

In **property and casualty insurance**, actuarial risks arise from an unexpected variance:

- \_ the volume of losses exceeds premiums fixed in advance (**premium risk**), or
- \_ the payout for claims made is higher than the corresponding provisions (**reserve risk**).

In **life insurance**, actuarial risks arise because we are committed to making guaranteed long-term payments in return for a fixed insurance premium calculated in advance even though the biometric data of the population may change over time (e.g., longer life expectancy as a result of medical progress).

**Credit and counterparty risks** These risks involve potential losses that may result from the default of a business partner. "Default" means the inability or refusal of a counterparty, an issuer or another contracting party to meet contractual obligations. Credit risk also includes the risk of a deterioration of a business partner's creditworthiness. It thus includes:

- \_ **credit risks** from the lending business and credit insurance
- \_ **counterparty risks** from trading activities
- \_ **country risks** in connection with cross-border transactions and the local business of foreign units.

Counterparty risks from trading activities relate primarily to derivatives and especially OTC transactions. In the insurance business, these risks stem from the possibility that receivables may remain unpaid, in particular those due from reinsurers.

**Market risks** Market risks result from portfolio valuation fluctuations due to changes in share prices, interest rates or exchange rates. Also risk relevant are changes observed in the variation behavior (volatility) of an asset price, for example.

In the banking business, the volatility risk especially concerns trading activities, which are shown in the institution's trading portfolio. Unlike the latter, the non-trading portfolio, which contains customer business and strategic investments, is exposed to long-term factors. In this case, the market risk is essentially the **interest rate risk** resulting from granting long-term fixed-rate loans, which are funded in part by short-term deposits. In addition, loans and deposits in foreign currencies are exposed to **currency risks**.

**Investment risks** in the insurance business primarily include all counterparty and market risks. There is a direct link between investments and obligations to our customers. Certain insurance lines are exposed to an **interest guarantee risk**. Life insurance, for example, must generate the guaranteed interest payment agreed upon.

**Liquidity risks** These risks can materialize under various circumstances, for example:

- \_ if present or future payment obligations cannot be met in full or as of the due date, or
- \_ if refinancing capital can only be raised at higher rates (**refinancing risk**) in the case of a liquidity crisis or if assets can only be liquidated below current market prices (**market liquidity risk**).

**Health insurance risks** Health insurance risks are treated either as property and casualty insurance risks or as life and health insurance risks, depending on the segment to which the health insurance is assigned in the given market.

## Management of the Allianz Group through risk capital

We control our activities through our respective local companies. Economic Value Added (EVA) and risk capital are the most important parameters used in the context of our risk-based controlling process.

Risk capital is required to cover unexpected losses. The amount of risk capital is calculated by using internal models. These models are based on generally accepted quantification methods, which are used for purposes of group-internal risk management as well.

In the insurance business, we calculate risk capital for premium, reserve, investment and credit risks. Within these risk categories, we distinguish between the following types of risks:

- \_ **actuarial risks.** In property and casualty insurance these include the premium and reserve risks for the various insurance lines. Reinsurance is considered separately. In the case of life insurance, we calculate the insurance provisions required.
- \_ **investment risks,** which include market and counterparty risks. The market risks are subdivided according to dividend-bearing instruments, interest-bearing instruments and real estate. The credit and counterparty risk as part of investment risks is assessed on the basis of the debtor's creditworthiness or rating class.
- \_ **credit and counterparty risks** in connection with receivables in the insurance business. This risk is mainly assessed on the basis of the financial strength or the rating class of our reinsurance partners.

In 2002, we launched a comprehensive project which substantially improved internal risk analysis in the insurance business. Our new tools enable us to systematically evaluate internal data by means of models based on the theory of probability. This process takes into account the special characteristics of our local units as well as the specific nature of their risks. It also takes into account portfolio effects. In the current year, we intend to further stabilize the results of this large-scale project. By 2004, we expect to be able to convert our value-oriented controlling to risk capital that was calculated with the help of this model. At present, we are using risk capital models provided by the Standard & Poor's rating agency.

## Risk controlling in the insurance business

To control risks in the insurance business, we focus on premium risks, reserve risks, credit and counterparty risks and investment risks.

**Premium risks** Premium risks are controlled primarily with the help of actuarial models used to calculate premiums and monitor claim patterns. In addition, we issue guidelines for concluding insurance contracts and assuming insurance risks. In the case of life insurance, we essentially concentrate on biometric risks – e.g., life expectancy, disability, illness and long-term care requirements. We also focus on risks that could arise from future policy cancellations.

Risk management also includes participation in scientific and technical loss prevention. We regularly carry out technical studies for the manufacturing and automobile industries, for example. The sole purpose of these studies is to reduce the probability of claims and keep losses to a minimum.

Natural disasters such as earthquakes, storms and floods represent a special challenge for risk management. Although they happen considerably less frequently than other incidents, the consequences are far more extensive when, for example, entire regions are devastated. We make use of special modeling techniques to control such risks. They involve the collection of data on earthquakes and weather patterns, which are used to simulate natural disaster scenarios and estimate the potential for damage.

**Reserve risks** We have to constitute provisions for insurance claims that have been submitted but not yet settled. The amount is estimated on the basis of past experience and on the use of statistical methods. We also limit risks by constantly monitoring the development of these provisions and use the information we obtain to make forecasts. In the area of life insurance, reserves are calculated by using actuarial methods. In addition to other criteria, these calculations take into account the biometric data of the populations insured by using, for example, national mortality tables.

**Credit and counterparty risks** To limit its liability from insurance business the Group cedes part of the risks it assumes to the international reinsurance market when necessary. When selecting our reinsurance partners, we consider only companies that offer excellent security. Our Group companies use comprehensive rating information for the active management of credit risks. This information is either in the public domain or gathered through internal investigations.

**Investment risks** Investments are an integral part of insurance coverage. They ensure our ability to meet the payment commitments we make in our insurance contracts. The tight link between insurance obligations and investment of the capital related to these obligations is investigated by using specific models. This also enables us to manage risks arising from interest guarantees provided to our customers.

We monitor market risks by means of sensitivity analyses and stress testing. Exchange rate fluctuations represent a risk that can essentially be disregarded because our insurance commitments are to a very large extent backed by funds in the same currency.

We limit credit risks by setting high requirements on the creditworthiness of our debtors and by spreading the risk. We consolidate our exposure according to debtors and across all investment categories, and we use limit lists to monitor exposure.

In individual cases, we use derivative financial instruments such as swaps, options and futures to hedge against changes in prices or interest rates. The end users of these derivatives are Allianz Group companies. Our internal investment and monitoring rules are considerably stricter than the regulations imposed by supervisory authorities.

Market and counterparty risks arising from the use of derivative financial instruments are subject to particularly strict control procedures:

- \_ credit risks are assessed by calculating replacement values.
- \_ market risks are monitored by means of up-to-date value-at-risk calculations and stress tests and limited by specifying stop-loss limits.

We limit liquidity risks by reconciling our investment portfolio with our insurance commitments. In addition, we plan our cash flow from ordinary activities.

Asset structure and diversification are other elements in our management of investment risk.

**Organizational risk controlling** In terms of organization, we limit our investment risks through a clear separation of management and controlling functions. Within the Allianz Group, risk management is implemented in cooperation with the local units in a top-down bottom-up process. The Allianz Finance Committee, which is made up of members of the Allianz Board of Management, delegates far-reaching decision-making authority to the regional Finance Committees, which monitor activities in their respective regions or countries. The duties and responsibilities at each decision-making level are defined by guidelines issued at the Group level. These guidelines are then applied by the regional Finance Committees, which formulate specific local investment guidelines. These are adapted according to national legislation and the nature of the local insurance and capital markets. Operational responsibility for investment portfolios lies with the local units.

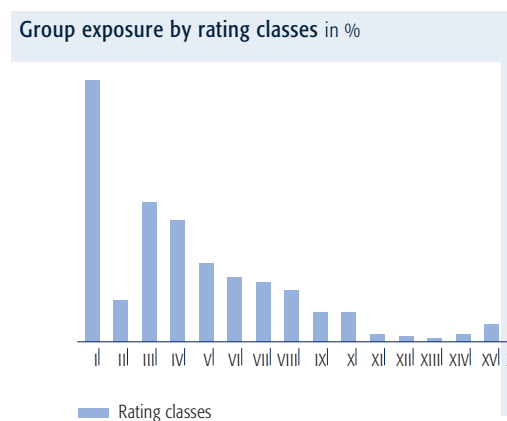
**Risk capital** At the end of fiscal 2002, risk capital before minority interests was composed as follows: In property and casualty insurance, 16.1 billion euros were allocated for actuarial risks, 0.8 billion euros for credit and counterparty risks and 3.9 billion euros for investment risks. Risk capital in life insurance came to a total of 11.1 billion euros as of December 31, 2002.

As a minimum, the capital we allocate to our local units meets the requirements for an A rating from Standard & Poor's.

### Risk controlling in the banking business

In this business segment, the following types of risks are controlled: credit and counterparty risks including counterparty risks from trading activities, country risks, market risks in the trading and investment portfolios, and liquidity risks.

**Credit and counterparty risks** These risks are directly linked to granting credits in the banking business. The bank controls these risks through guidelines and credit risk committees. The ratings of our customers and their credit engagements represent the central element used in the approval, supervisory and control process in the area of credit and derivatives activities. This process involves analyzing and weighting the various creditworthiness characteristics of the customers and presenting the results in the form of rating scales. The forecasting quality, up-to-dateness and portfolio coverage of the rating methods used are controlled by periodic sampling and regular reports.

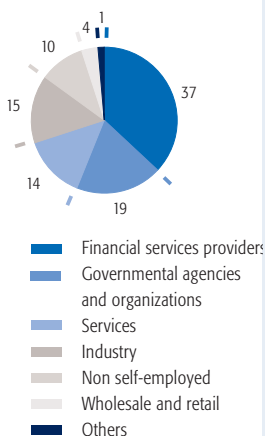


In the past year, Dresdner Bank increased the number of rating classes from 8 to 16. The first six classes correspond to “investment grade”, classes VII to XIV signify “non investment grade”. Rating classes XV and XVI are default classes according to the Basel II Definition. At the end of fiscal 2002, about 70 percent of all counterparty risks in the trading and banking portfolios of Dresdner Bank fell into rating classes I to VI.

The volume of the overall portfolio is to a great extent determined by the banks trading business, which involves primarily transaction with very low default probability, i.e. with state and local agencies and financial services providers. Approximately 85 percent of the transactions with public agencies or organizations are rated in the top risk class I. Approximately 60 percent of the transactions with financial services providers fall into risk classes III to V. These two segments represent 56 percent of the bank's total portfolio.

Counterparty risks are now centrally controlled by Dresdner Bank's Risk Management and Control Committee, which is headed by the Chief Risk Officer of Dresdner Bank. The newly created body issues the appropriate guidelines and standards for the risk strategy and risk control of the Dresdner Bank Group and ensures compliance. In addition, the committee decides on essential projects involving a credit risk. In this context, the Risk Management and Control Committee oversees the coordination between the risk management of the company's divisions and the Corporate Center Risk Control Unit. This is done in close cooperation with Allianz AG's Group Risk Controlling (Allianz Group Center). In addition, the committee is responsible for the monthly audit of the overall portfolio. This audit, which is performed in cooperation with the divisions, is controlled by Risk Controlling. Its purpose is to monitor credit risks on a continuing basis and to make sure that the management's credit risk strategy is adhered to.

**Trading and loan portfolio by industry sectors in %**



In the past year, Dresdner Bank set up the Institutional Restructuring Unit (IRU) at Dresdner Bank. The task of this unit is to unwind non-strategic obligations of Dresdner Bank that are exposed to a high risk, thus liberating risk capital. This process primarily concerns lines of credit in North and South America, in Germany and in the areas of private equity and commercial real estate.

We account for the development of risks in the lending business by making allowances for individual risks and country risks. In setting up risk provisions, we consider the credit-worthiness of the borrower, the general economic environment and risk-reducing measures, for example securities. In 2002, total risk provisions in the banking business amounted to 7.6 billion euros.

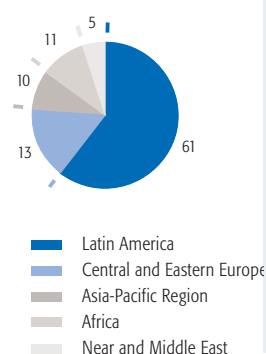
Counterparty risk from trading activities: in the credit-sensitive trading business with OTC derivatives, the selection of counterparties plays a decisive role. The selection process is aimed at counterparties with top-quality credit ratings. In the derivatives portfolios of Dresdner Bank, 95 percent of the positive replacement values, which are essential for assessing counterparty risk, involve counterparties in risk classes I to VI described above and are thus of "investment grade". To reduce the counterparty risk from trading activities, so-called cross-product netting master agreements with the business partners are set up. In the case of a defaulting counterparty, netting makes it possible to offset any claims and liabilities not yet due.

	12/31/2002 € bn
Specific loss allowances	6.8
General loss allowances	0.8
<b>Total</b>	<b>7.6</b>

**Country risks** We control these risks by using internal country ratings. These ratings are based upon macroeconomic data and key qualitative indicators. The latter take into account the economic, social and political environment and focus on a country's ability to make payments in foreign currencies. At present, Dresdner Bank's country rating system includes eight risk groups.

At the end 2002, Dresdner Bank's country risk provisions totaled 367 million euros. The regional breakdown of this amount is shown in the chart.

**Country risk provision by region in %**



**Market risks** Dresdner Bank uses a proprietary value-at-risk model that takes into account all aspects of general and specific risks. Value-at-risk is defined as the potential loss which may occur during a specific period of time and with a given confidence level. In 1998, the German Federal Supervisory Authority for Financial Service Providers (BAFin) first approved Dresdner Bank's value-at-risk model for purposes of reporting in accordance with Principle I of the German Banking Act. It also approved the improvements made in 2001 and 2002. The value-at-risk data used to calculate capital adequacy requirements for regulatory purposes must take into account potential market movements within a confidence level of 99 percent, based on an assumed holding period of 10 trading days.

Market risks in the trading portfolio: the risks from Dresdner Bank's trading activities decreased in comparison to the previous year. This is mainly attributable to reduced holdings of interest-bearing instruments.

To validate the quality of the value-at-risk model, our bank performs regular backtests. For this purpose, the value-at-risk calculated on the basis of the current position is compared to the actual change in value on the following day. This shows whether the model used provides an adequate assessment of the risks.

For purposes of setting internal limits and risk determination, we calculate value-at-risk with a confidence level of 95 percent and a one-day holding period. Unlike the value-at-risk calculation required by the supervisory authority, which is based on market data from the past, we thus assign greater weight to the most recent market fluctuation. This ensures that value-at-risk data more accurately reflect current market developments.

**Value-at-risk statistics**

(99 % confidence level, 10-day holding period)

	Year-end	2002 annual statistics			Year-end
	2002 € mn	Mean value € mn	Maximum € mn	Minimum € mn	2001 € mn
Aggregate risk	81	120	167	35	147
Interest rate risk	65	101	147	65	124
Equity risk	45	53	83	26	64
Currency/ commodity risk	13	17	104	2	18
Diversification effect <sup>7)</sup>	- 42	- 51	-	-	- 59

<sup>7)</sup> No diversification effect can be taken into account since the maximum and minimum values were measured at different dates.

ten-day holding period). As in the case of trading, the bank controls this risk by setting value-at-risk limits.

The value-at-risk for interest rate risk in the banking portfolio of Dresdner Bank Group decreased 67 percent to 31.9 million euros at the end of the year. This indicator also takes into account portfolio effects. The reduction is mainly due to the deconsolidation of Deutsche Hyp.

**Currency risks** at Dresdner Bank are limited by applying the following principle: all loans and deposits in foreign currencies are refinanced or reinvested in the same currency with matching maturities.

**Liquidity risks** As part of a Group liquidity policy, Treasury and Risk Control establishes principles for liquidity management. This policy meets both regulatory requirements and internal standards. The liquidity risk limits include a reporting process for limit breaches and provisions for emergency planning.

Liquidity risk measurement is based on the liquidity management system. This system models the maturities of all cash flows and draws up a scenario-based liquidity balance sheet, taking into account available prime-rated securities.

**Organizational risk controlling** At the organizational level, risk management and risk controlling are strictly separated on the basis of the principle of dual control. Dresdner Bank's risk management sets the limits for the company's different activities that are exposed to risks. This is done in accordance with a general framework approved by the Board of Management.

**Risk control in asset management**

Risk control in asset management is an integral part of the processes of the local units or the investment platform. The Corporate Center ensures that Group-wide standards for asset management are applied at the local level. The individual asset management companies continually monitor the portfolio risks of the customer assets they manage by using analytical tools specifically adapted to the risk profile of the product concerned. At the same time, the performance of the various product lines is periodically monitored and analyzed at the Group level.

**Operational risks**

**Operational risks** are risks caused by inadequacies or faults in business processes or controls. These may be related to technical problems or employees, operational structures or external influences. We intend to minimize such risks by installing a comprehensive system of internal controls and security systems in each operating unit. Operational risks are limited by a wide range of technical and organizational measures such as redundant hardware configurations, communications equipment and systems, back-up computing facilities, and data backups to maintain IT capability in emergencies. In addition, procedures are in place for safeguarding the confidentiality and integrity of stored data and information. For this purpose, high-performance firewall systems were introduced to protect the IT network against external interference along with complex access authorization procedures, supervision and control processes. The principle of dual control is adhered to in the case of operating procedures. The purpose of these measures is to ensure and document an adequate standard for Group-internal processes.

Value-at-risk is only one of the instruments used to characterize the risk profile of the Dresdner Bank Group. In addition, the bank also uses operational risk indicators and limits, which are specifically adapted to the risk situation of the trading units. Trading is controlled by setting value-at-risk and operational market risk limits. Current limit utilization is determined and monitored by Risk Controlling on a daily basis. Limit breaches are immediately indicated to the management concerned so that corrective action can be taken.

Market risks in the non-trading portfolio: this risk mainly comprises the risk of interest changes and is analyzed on the basis of sensitivity and value-at-risk indicators (99 percent confidence level,

**Legal risks** result from contractual agreements or legal frameworks. They include risks from the adoption of new statutory regulations, disadvantageous amendments to existing legislation or regulations or prejudicial changes in their interpretation. Legal risks also take into account the possibility that contractual agreements may not be enforceable through legal action or court proceedings. The limitation of legal risks is an important task of the Group's Legal Department. This is done, for example, by using internationally recognized standard documentation and, if necessary, by obtaining legal opinions. Contracts for established products are continuously reviewed to include any amendments required by changes in legislation or jurisdiction. In addition, the Group's Legal Department assists Group companies in matters pertaining to business transactions and contractual negotiations to ensure compliance with minimum standards. It also supports the management and supervisory bodies of Allianz in meeting their statutory obligations.

## Outlook

At the beginning of 2003, we set up a Risk Committee for the Allianz Group. It is composed of members of the Board of Management of Allianz AG and chaired by our Chief Risk Officer. The purpose of this committee is to make early warning indicators from our risk analyses available to the entire Group even more quickly than has been the case in the past. This will establish closer ties between local responsibilities and central risk controlling.

In addition, we intend to strengthen our operating risk management in 2003. Data on internal losses attributable to operating risks will be compiled and analyzed. If the insights gained from this process are sufficiently stable, the data will also be integrated into our risk capital computation model so that the corresponding risks can be backed with capital.

Additional improvements will result from the closer implication of local risk management in the group-wide transfer of know-how, another project for the current fiscal year. In this context, we will concentrate our efforts on Asset-Liabilities Management and Natural Catastrophes.

Dresdner Bank is continually refining its system for the assessment of creditworthiness in the lending and trading business, as well as its authorization, supervision and control processes. These measures are based on the future Basel Capital Accord (Basel II), which is currently being revised. The new accord provides for a fundamental reform of regulatory capital requirements for credit risks and, for the first time, includes operating risks. The objective is to bring statutory minimum equity capital requirements in line with actual risks. Basel II also provides for different calculation options for credit risks and operational risks, whereby different levels of security are permitted within a given risk class. In either case, Dresdner Bank intends to implement the approach with the most stringent requirements. For credit risks, this is the Internal Rating Based Advanced Approach and for operational risks the Advanced Measurement Approach.

## Risk monitoring by third parties

Supervisory authorities and rating agencies are additional risk monitoring bodies. Supervisory authorities specify the minimum precautions that must be taken in individual countries and at the international level. Rating agencies determine the relationship between the required risk capital of a company and the available safeguards (more on this subject on page 25 of this Annual Report). In their evaluation of capital resources, the rating agencies include equity shown in the balance sheet, minority interests and other items representing additional securities in times of crisis. At the end of the year, this total was slightly below the level that corresponds to our current ratings. But the evaluation of creditworthiness and the corresponding assignment of rating classes is not determined by this assessment alone. In addition to capital resources, the rating process also takes into account elements such as, mainly, the strategic position of the company in individual business areas and markets as well as its medium-term business prospects.