

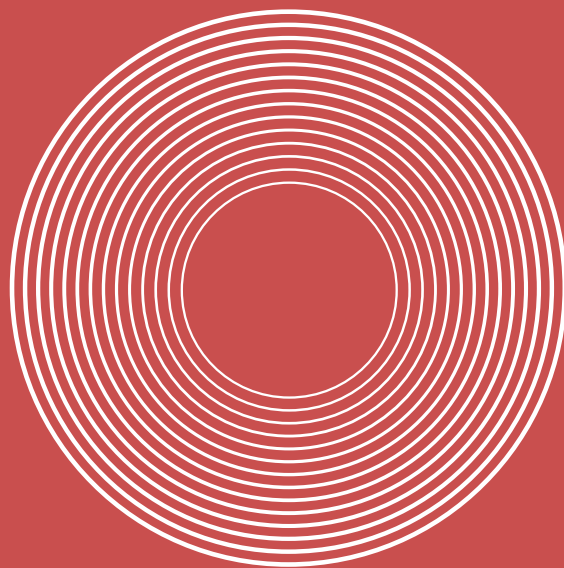
ÖNB

OESTERREICHISCHE NATIONALBANK

Eurosystem

INTELLECTUAL CAPITAL REPORT 2006

Knowledge for Stability



Stability and Security.

The *Intellectual Capital Report* is a review of the OeNB's intellectual capital and its use in the OeNB's business processes and services. The report clarifies the relationships between different types of human, relational, structural and innovation capital and describes various determinants that influence the OeNB's intellectual capital. The report provides an integrated view of the OeNB and serves to assess the consistency of the OeNB's intellectual capital with its knowledge-based strategic orientation.

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Foreword

We have come to live in an age of knowledge, driven above all by continuous technological advances of the World Wide Web. The use of information and communication technologies has risen sharply, considerably changing economic and social processes. A new generation of Internet users who channel information via the World Wide Web are contributing to the generation and dissemination of new knowledge. Hence, the Internet not only provides access to knowledge for everyone, but also enables each and every one of us to shape the world.

Globalization has given rise to new ways of organizing knowledge. Knowledge building takes place within interest communities across national borders, which speeds up and facilitates knowledge generation and minimizes the time lag between knowledge generation and dissemination. Owing to the broadening scope of knowledge building and the simultaneously increasing concentration of tasks, today's knowledge society has become innovation-centered and global.

Knowledge is the decisive production factor for adding value. After all, promoting innovation, flexibility and customer orientation by utilizing new technologies guarantees sound economic results. Against this background, we need to focus our efforts on developing the knowledge-based workplace and intensifying life-long learning.

The outlined developments have had a major impact on the world of finance and the service-based economy. This means that the Oesterreichische Nationalbank (OeNB) is also faced with new challenges, given its role as an integral part of the Eurosystem and European System of Central Banks, both of which already represent efficient knowledge networks.

Responding to these challenges, the OeNB has placed its strategic focus on knowledge management and is becoming a knowledge-based central bank. In the reporting year, the OeNB continued to make a significant contribution to knowledge generation by performing knowledge work in all its core business areas. Publications on economics, statistics, financial stability, banking supervision, payment systems as well as euro banknotes and coins present the results of its knowledge work to the public (knowledge transfer). Moreover, the OeNB regularly organizes widely renowned conferences, a meeting ground for the international exchange of knowledge.

As Governor of the Oesterreichische Nationalbank, I am very pleased with our contribution to knowledge work in 2006 as captured in this (fourth) Intellectual Capital Report. I am confident that the report will serve as an important starting point and catalyst for future developments.

Governor Klaus Liebscher



1 Knowledge Goals and Intellectual Capital Report Model

1.1 Knowledge Goals

A modern service provider, the OeNB sets great store by knowledge management. By establishing medium-term knowledge goals which mirror its strategic objectives and mission statement, the OeNB ensures quality and success. These knowledge goals, which are detailed below, provide the framework for the effective and efficient management and utilization of the OeNB's intellectual capital for optimum user benefit.

The OeNB's Knowledge Goals

Competence through specialized knowledge

The OeNB is an active player in the Eurosystem and has established itself as a recognized center of competence. This requires identifying key topics with a guaranteed potential for the future and accumulating and further developing relevant, high-quality specialist knowledge.

To this end, OeNB staff in all business areas must have highly specialized knowledge and must show top-level ability to perform well, a distinctive willingness to learn and great flexibility. Versatile personnel management instruments and targeted training and education measures are crucial factors supporting and promoting this requirement.

Confidence through knowledge transfer

Public confidence in the top-quality fulfillment of central bank tasks is every central bank's most important asset. To keep it at a high level, the OeNB pursues an active information policy. The proactive transfer of knowledge is targeted at increasing the public's understanding of how a central bank works and thus contributes to ensuring public confidence.

Active communication and cooperation with its customers enables the OeNB to continually improve its products and services and to adapt them to market requirements.

Interdisciplinarity through internationality and cooperation

The OeNB aims at ensuring financial stability in Austria and at contributing to the smooth functioning of the Eurosystem both through strong links between the OeNB's various sections and national as well as international partners, and through close cooperation within the OeNB group¹ itself.

To fulfill these tasks in the best possible way, the OeNB seeks out cooperation with numerous partners, e.g. Eurosystem counterparts, commercial banks, public authorities and scientific institutions.

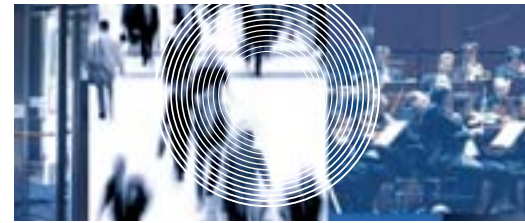
Efficiency through modern management

The OeNB strives to constantly improve its business processes and services. Improvements relate both to economic aspects (i.e. the efficient performance of tasks within the entire group) and to the reliable and high-quality execution of operational tasks. Special emphasis is placed on the management of operational risks.

The OeNB aims at achieving the highest possible level of efficiency by further developing its business administration expertise and by using innovative methods and techniques as well as a secure infrastructure.

¹ The term "group" is used like in the Annual Report.





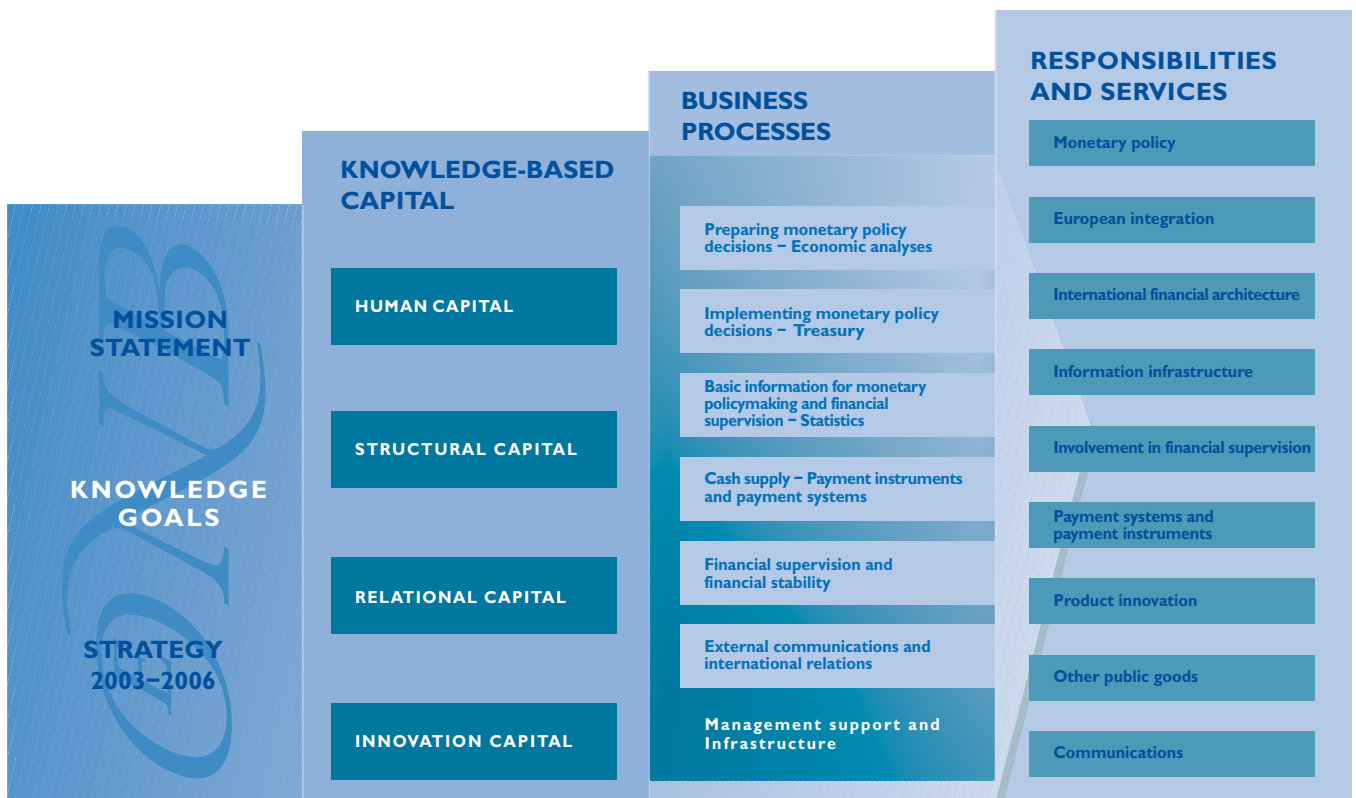
1.2 Intellectual Capital Report Model

The OeNB's Intellectual Capital Report establishes a close connection between knowledge-based capital, business processes and the OeNB's broad range of services and responsibilities. The model used for these purposes reflects the OeNB's integrated approach to analyzing its intellectual capital and captures interfaces as well as interlinkages. The findings of the report serve as a foundation for the OeNB's knowledge-based strategic orientation.

The priority of knowledge transformation is the steady improvement of customer benefit. The quality of the OeNB's services is determined to a great extent by the economically sound deployment of its knowledge-based capital. In this context, the Intellectual Capital Report not only forms an integral part of internal control mechanisms but also serves as an important tool within the OeNB's communications repertoire.

Aided by illustrations, the report outlines intellectual capital stocks and flows and presents indicators which serve as management instruments for achieving the four knowledge goals. As many indicators are subject to targeted management decisions, the tables listing the various indicators also specify medium-term development goals. The tables also quote indicator values for 2005, allowing for the quantification and assessment of changes over time.

The integration of aspects of the Intellectual Capital Report into the OeNB's Annual Report is testimony to the former's growing importance. The information about the OeNB's knowledge management represents an ideal complement to the information about the OeNB's overall performance presented in the Annual Report.





Jeder Euro ist hart verdient. Gut, dass er die Mühe wert ist.

Der Euro ist eine stabile Wahrung und ein angesehenes, sicheres Zahlungsmittel. Das gewahrleistet die Oesterreichische Nationalbank gemeinsam mit der EZB und den anderen Zentralbanken des Eurogebiets. Preisstabilitat und Sicherheit werden auch in Zukunft unsere hochsten Ziele sein. Wir sorgen fur das sichere und stabile Umfeld, in dem jeder erwirtschaftete Euro seine optimale Kaufkraft entwickeln kann. Mehr Informationen erhalten Sie unter (01) 40420-6666 oder www.oenb.at

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Stabilitat und Sicherheit.

2 Knowledge-Based Capital

2.1 The Four Knowledge-Based Capital Types

The appropriate deployment of the different knowledge-based capital types is crucial in managing the OeNB's intellectual capital. The OeNB uses the following four types of knowledge-based capital (to different extents and in various combinations) to implement business processes and to render services.

1. **Human capital** comprises staff structures as well as the staff skills applied to business processes. It is captured by indicators which relate to e.g. "staff structure" or "flexible working arrangements."
2. **Structural capital** encompasses both the organizational framework and the technical infrastructure designed to ensure smooth business operations. Examples of related indicators are "management structure" and "infrastructure."
3. **Relational capital** indicators illustrate the importance of national as well as international customers and partners, and of the public. In this context, the OeNB publishes indicators on e.g. "cooperation and networks" and "Internet-based communications."
4. **Innovation capital** comprises the resources the OeNB invests in future-oriented concepts and projects. Some key indicators are "staff resources utilized for innovative projects" and "internal R&D expenditure."

However, knowledge-based capital should not exclusively be seen as attributable to one of the above categories, but should also be considered from the overall process perspective: If staff members (human capital) prepare a joint position together with members of the European System of Central Banks (ESCB) (relational capital) using appropriate technical systems (structural capital), they render a service to the OeNB while at the same time enlarging the knowledge base they will be able to build on in the future (innovation capital).

Investment in knowledge-based forms of capital has a long-term effect on the quality of the implementation of business processes and thus on sustainable corporate success.



2.2 Human Capital

Indicators	Value 2006	Target	Corresponding knowledge goals				Value 2005
			Competence	Confidence	Interdisci- plinary	Efficiency	
Staff structure							
Full-time equivalent staff (year-end)	931.7	↘	●			●	947.5
Fluctuation rate (%)	0.6	→		●			0.9
University graduates (%)	34.3	↗	●				32.4
Flexible working arrangements							
Part-time employees (%)	7.1	→	●			●	7.3
Staff in teleworking scheme (%)	4.5	→	●			●	4.0
Staff on sabbatical	4	→	●			●	9
Diversity management							
Women (%)	38.5	↗	●				39.2
Women in specialist positions (%)	22.9	↗	●				19.6
Women in management positions (%)	20.4	↗	●				17.9
Knowledge acquisition							
Training days per employee (annual average)	4.1	→	●			●	3.8
Training participation rate (%)	57.2	→	●			●	59.9
Cost of training and education per employee (EUR)	2,298	→	●				2,150
Number of completed and certified training courses (in-service)	13	→	●			●	18
Number of internal job rotations	41	↗	●			●	38
Number of working visits to national and international organizations	29	↗	●			●	25
Knowledge transfer							
Number of employees with external teaching assignments	18	↗	●	●		●	22
Number of (co)supervised master's theses/dissertations	17	→	●			●	
Number of interns from technical colleges	28	→	●			●	

In 2006, the medium-term objective of gradually reducing headcount could be reached, mainly on the back of a restrictive hiring policy. As in previous years, the staff fluctuation rate remained at a low and stable level. In view of the OeNB's quest for excellence in central banking and for a leading position among central banks in Europe, new staff members must have first-rate qualifications, as is among other things reflected by the increased share of university graduates.

Guaranteeing maximum employee flexibility, alternative working arrangements remained popular with OeNB staff in the reporting year. Only the number of staff on sabbatical declined.

Putting Diversity Management into Practice

Although the share of women in overall headcount declined slightly in 2006, their share in specialist and management positions grew moderately. This positive development can be attributed to the OeNB's stepped-up efforts to create an environment conducive to increasing the share of women in key positions. Among other things, the OeNB has established a platform for discussing



gender-specific issues, generating related ideas and developing strategies for the professional advancement of women within the OeNB. This initiative is designed to provide a sustainable basis for further successful work in this area.

Developing Specialist and Management Competence

In 2006, staff development mainly focused on redesigning training opportunities with the central aim of enabling the OeNB's employees to face future challenges associated with the implementation of strategic objectives. The OeNB's comprehensive training program is intended to endow OeNB staff and management with the skills and know-how necessary for optimum performance and efficient leadership.

The exchange of information and knowledge in the area of human resources (HR) has been intensified, mainly in the context of the ESCB-wide redesign and institutionalization of HR-related bodies and the creation of a related Internet platform. As in previous years, many OeNB staff members made use of the varied training opportunities central banks in other EU Member States organized. Moreover, the OeNB complemented its own training program with a three-day management seminar entitled "Global Dialogue for Inspiration – Vienna Forum." The lectures and discussions which took place in course of the seminar fostered the development of individual perspectives and an exchange of experience, and contributed to the establishment or intensification of ESCB-wide networks.

As the OeNB strives for excellence in central banking, it places increasing emphasis on specialist know-how. Consequently, the OeNB has made various efforts to promote its status as an attractive workplace for experts, such as the recent enhancement of options for OeNB staff pursuing a specialist career. The concept for these new career possibilities for junior staff and high-potential employees was finalized in early 2007.

Another focus of the OeNB's HR development is its program for identifying and promoting high-potential employees (career potential analysis). As the pilot and evaluation phases for this program have been completed, it is now open to employees suited to a management or specialist career. The program combines critical self-assessment and assessment by others within the framework of an HR development center to provide participants with feedback and professional recommendations on their development potential. The recommendations, in turn, form the basis for well-targeted measures to promote and prepare high-potential employees for their prospective tasks, which ensures the availability of a pool of highly qualified future candidates from which to fill management and specialist positions.

Targeted Development Measures for High-Potential Treasury Staff

In late 2006, the OeNB conducted a separate development module for staff members of the OeNB's Treasury Section designed to identify participants' strengths and weaknesses and capture them in individual profiles. Complemented by 360-degree feedback and self-assessments, the results of these profiles provide the basis for individual and joint development steps over a period of three years. Progress analysis is used to systematically evaluate each individual and joint step in the program. Moreover, treasury staff members are offered the possibility to gain practical experience by participating in the trading activities of the OeNB's New York Representative Office.

The OeNB is the only central bank within the ESCB which has a representative office in the United States, which is why the OeNB also offers treasury staff employed by other European central banks the opportunity to participate in international job rotations at the OeNB's New York Representative Office.

2.3 Structural Capital

Indicators	Value 2006	Target	Corresponding knowledge goals				Value 2005
			Competence	Confidence	Interdisci- plinarity	Efficiency	
Management structure							
Staff-to-manager ratio	7.5	→				●	7.5
Number of product managers	79	↘	●			●	75
Number of process managers	43	↘	●			●	
Decentralized structure							
Number of representative and branch offices	7	→	●	●		●	7
Infrastructure							
Number of IT applications	205					●	202
Number of internal service level agreements	53	↗	●		●	●	
Number of OeNB help desk queries (including case status logs)	19,707		●		●	●	
Availability of the ARTIS payment system (%)	99.80	→	●	●		●	99.95
Error-free payment transactions (%)	99.99	→	●	●		●	99.99
Environmental protection and quality assurance							
Number of certified areas	11	↗	●	●	●	●	
Number of environmental auditors	9	→				●	12
Number of quality auditors	16	→				●	18
Procurement							
Catalogue orders as a percentage of total orders	38.50	↗				●	38.26
Number of calls for tender	26			●		●	25
OeNB group							
Number of subsidiaries in payment systems services	5		●		●	●	6

Recognized Role in Crisis Management and in Maintaining Financial Stability

In 2006, the OeNB continued to further develop and improve its structural capital. Optimal structures are, for example, of crucial importance in financial stability and banking analysis. After all, maintaining financial stability and particularly the stability of the banking system is a core central banking responsibility.

To ensure that banking supervision processes run smoothly, the OeNB is intent on steadily optimizing use of available structures and raising the quality of its analyses, which ultimately feeds into maintaining the OeNB's competence as a partner in banking supervision. In this context, the OeNB has created structures to support the efficient conduct of routine analyses based on a set of complex models. The evaluation of results and the calculation of performance indicators for the Austrian banking system have been largely automated, which makes it easier to identify institutions requiring supervisory attention. The interpretation of these results as well as special analyses both at the individual bank level and at the systemic level require a high degree of expertise and the ability to think in a structured and integrated manner. For this reason, the OeNB continuously invests in specialist training, for instance in the context of Basel II. This increases



both human and structural capital. Regular workshops which bring together experts from different OeNB divisions facilitate the exchange of expertise. Linking insights gained from individual bank and systemic results has significantly improved the quality of analyses. This approach is supported by the OeNB's Systemic Risk Monitor, which simulates the contagion effects of critical developments at the individual bank level.

The OeNB has compiled an internal handbook on crisis management which outlines the responsibilities of the various organizational units in the event of a crisis and defines processes to be applied; this ensures timely action and swift data retrieval. Should a crisis occur, OeNB staff can resort to structures which have been tested in financial crisis simulation exercises at the ESCB level.

Providing Customer-Oriented Statistics

High-quality analyses of financial stability and monetary policy issues require current, reliable data and expert know-how. Efficient structures and processes in the area of statistics are essential for providing reliable economic and financial market analyses. For this purpose, a Total Quality Management concept covering customer orientation, organizational quality and the efficiency of processes in addition to data quality was introduced in the area of banking statistics in 2006. A first quality report was published in 2006; it confirms the high quality of the services provided and the OeNB's commitment to improving process and product quality as well as customer satisfaction, reflecting the Banking Statistics and Minimum Reserve Division's motto: "Quality as a result of our competence."

Two examples demonstrate that modernization, quality and service orientation can be successfully harmonized: First, against the background of the New Basel Capital Accord (Basel II), whose introduction made it necessary to reorganize supervisory reporting, the OeNB, the Federal Ministry of Finance, the Financial Market Authority and Austrian banks seized the opportunity to align reporting requirements with international standards and to eliminate redundancies in order to keep down costs for banks.

Second, in early 2006 the OeNB introduced a new reporting system for balance of payments data to raise data quality. To keep the reporting burden for enterprises low, the OeNB has opted for using data already available wherever possible. Moreover, the OeNB introduced new data retrieval features on its website and further improved the customer-oriented statistics it provides for Austria's economic policymakers and the Austrian public.

Committed to Environmental Protection

In fulfilling its tasks, the OeNB sets great store by environmental protection. Hence, the OeNB not only observes environmental protection laws but also takes measures to continually improve its corporate environmental performance. The OeNB achieved EMAS (Eco-Management and Audit Scheme) certification in 1998 and recertification in the reporting year after a follow-up audit.

Optimization efforts allowed the OeNB to reduce its energy consumption by roughly 5% in 2006, among other things by cutting back on electricity use. The OeNB's recently updated corporate environmental policy acknowledges the risks involved in climate change and states the OeNB's intention to make its activities fully carbon neutral in the long run.

2.4 Relational Capital

Indicators	Value 2006	Target	Corresponding knowledge goals				Value 2005
			Competence	Confidence	Interdisciplinarity	Efficiency	
Cooperation and networks							
Number of days on which the OeNB hosted events	264	→		●	●		279
Number of days on which the OeNB hosted international events	106	→		●	●		111
Number of national bodies with OeNB representatives	99		●		●		96
Number of international bodies with OeNB representatives	218		●		●		203
Number of technical assistance activities	33	→	●	●	●		30
Number of information visits to the OeNB	150	→	●	●	●	●	126
Number of lectures delivered by OeNB staff	711	→	●	●	●		608
Number of cash authentication training courses ²	308	→	●	●	●		282
Publications and public relations							
Number of OeNB publications	64	→	●	●			67
Number of papers published in specialist journals by OeNB staff	150	↗	●	●			137
Number of scientific papers published in refereed journals by OeNB staff	49	↗	●	●			49
Number of press releases	157		●	●			162
Number of press conferences	25		●	●			27
Number of inquiries to OeNB hotlines	38,153	↗	●	●		●	33,535
Confidence index (%)	79	→		●			76
Image index for the fourth quarter	7.32	→		●			7.23
Internet-based communications							
Number of page impressions on the OeNB website (daily average)	56,448	↗	●	●		●	56,748
Number of visits to the OeNB website (daily average)	8,288	↗	●	●		●	5,949
Number of newsletter subscriptions	14,953	↗	●	●		●	12,834

The OeNB Keeps the Austrian Public Informed

In 2006, the OeNB successfully continued its information campaign revolving around the slogan “I work hard for my money. *Good that every euro is worth it.*” Targeted media cooperation reached 80% to 90% of all Austrians. A series of seminars for journalists as well as numerous press conferences and press talks contributed to a better understanding of the OeNB’s and the ESCB’s/Eurosystem’s tasks and their fulfillment.

Publications represent a further important communications medium. The OeNB’s regular publications “Monetary Policy & the Economy” (German and English), “Statistiken – Daten & Analysen” (German with English executive summaries) and folders on topics such as the balance of payments, statistics and payment systems are directed at the general public and experts in Austria and beyond.

² The indicator “Number of cash authentication training courses,” subsumed under “Number of lectures delivered by OeNB staff” in 2005, is now shown separately.



Additionally, the OeNB runs information stalls at trade fairs across Austria, where OeNB staff members inform visitors about the central bank's tasks within the ESCB/Eurosystem. An especially popular topic with visitors was banknote security. In addition to broadly targeting the general public, the OeNB also endeavored to provide specific information to experts in Austria, in particular commercial bank staff and retailing staff. Professional cash handlers may also seek detailed, up-to-date information (in German only) on the cash expert pages of the OeNB's website, which were completely redesigned in 2006.

The OeNB Cooperates with Neighboring Countries and its ESCB Partners

The tasks and functions of central banks depend strongly both on the situation in banking and financial markets and on the dimensions and development dynamics of the overall economic environment. Within the framework of a comprehensive project focusing on the "Central European Region" (CENTROPE), which includes the Brno, Bratislava and Vienna metropolitan areas, the OeNB examined the issue of central banking in a regional context together with national and international economic research institutions. In a final workshop, the region's economic potential was analyzed. The project resulted in recommendations for a regional long-term strategy for the OeNB, in particular as a hub for cash logistics and payment services.

Cooperation with central banks in Central, Eastern and Southeastern Europe (CESEE) was continued and reinforced; it comprised e.g. exchanges in the cash logistics field, a workshop on the introduction of euro banknotes and coins, and regular working visits dealing with statistics, human resources development and financial stability. In addition, transition countries endeavoring to become market economies continued to receive support in the form of courses held at the Joint Vienna Institute (JVI) in 2006.

In 2006, Austria followed Portugal, Poland and Hungary as the focus of the ECB's Cultural Days in Frankfurt. Over a four-week period, the Cultural Days highlighted a total of 35 events and 16 films made in Austria, providing positive publicity for the OeNB's rich tradition of cultural sponsoring.

Numerous OeNB Exchanges in Economic Science and Research

In May 2006, the OeNB held its 34th Economics Conference on the topic "Globalization: Opportunities and Challenges for the World, Europe and Austria." The OeNB's annual Conference on European Economic Integration was organized jointly with the European Bank for Reconstruction and Development (EBRD) in the reporting year and dealt with the topic "The Changing Landscape of FDI in Europe." Other major events organized on the occasion of Austria's EU presidency in the first half of 2006 and a stepped-up volume of specialized seminars and workshops provided opportunities to establish and intensify important contacts. In 2006, the OeNB hosted a total of 264 event days attended by more than 11,000 persons. Furthermore, OeNB staff promoted the exchange of knowledge within the framework of the ESCB and international institutions, e.g. by presenting academic contributions at international conferences and by publishing in scientific journals.

Lively Public Interest in the OeNB's Money Museum

Since the reopening of the OeNB's Money Museum in 2003, attendance has surged by 226% to a total of 12,358 visitors. The Money Museum's participation in the 2006 Long Museum Night was crowned with special success: 1,396 visitors were counted. Moreover, the Money Museum contributed to the activity program the City of Vienna organizes for children every summer.

2.5 Innovation Capital

Indicators	Value 2006	Target	Corresponding knowledge goals				Value 2005
			Competence	Confidence	Interdisci- plinarity	Efficiency	
Innovation							
Staff resources utilized for innovative projects (%)	4.9		●			●	7.6
Internal R&D expenditure (EUR 1,000)	3,693	→	●			●	3,967
Number of research cooperation projects with external partners	44	→	●		●		42
Number of research visits	1	↗	●		●		1
Number of opinions prepared on economic research promotion	571		●				554
Idea management							
Number of submissions to the staff suggestion scheme	48	↗	●		●	●	

Change as the Driver of Innovation

Against the background of constantly changing demands, the OeNB strives to anticipate future key topics in central banking. The OeNB's innovation capital is determined to a considerable degree by the use of new technologies, the implementation of new ideas by highly qualified staff, and innovative projects resulting from these ideas.

To fulfill its strategic priorities, the OeNB makes sure that these priorities are clearly communicated and accepted throughout the OeNB. In 2006, strategically important topics were for the first time discussed across all hierarchical levels and business areas of the OeNB. The process by which priorities for the future were elaborated with the OeNB's top management was characterized by the concerted search for solutions and broadly based identification with the results among staff. In the next few years, the OeNB will press ahead with work on these priority topics.

In a time of rapid technological change and globalization, a flexible and proactive approach is required of organizations. Apart from projects, the staff suggestion scheme represents an important source of innovation. In 2006, some 75% of the suggestions submitted by staff centered on cost savings, health, quality improvements and environmental protection.

The introduction and development of new technologies are also considered a step toward active knowledge management at the OeNB. The OeNB uses wikis³ and sharepoints⁴ in selected areas to efficiently provide staff with timely information and to facilitate working together, especially on projects.

For its central servers, the OeNB also uses open-source products to phase out legacy systems, to optimize platforms⁵ and to reduce the need for hardware. Apart from conforming more to general market trends, such systems provide for cost savings.

³ A wiki is a collection of pages on the Internet or Intranet that is not just read-only, but that allows visitors to change content online.

⁴ Sharepoints are portal-based tools for consolidating various applications and information from nearly any data source.

⁵ We use the term "platform" to denote the combination of computer hardware and operating systems.



New Technologies Feed into New Products

Before the introduction of an innovative technical solution, users had the option of posting bank sort code (Bankleitzahl) queries and making related downloads from the OeNB's website only via browser.⁶ A new system now enables them to access these data via web services, which do not require direct user access. Such web services have become widespread and among other things have become a valuable component of various integration and innovation approaches of a service-oriented IT architecture.

Simultaneously with the 40th anniversary of the OeNB's Anniversary Fund for the Promotion of Scientific Research and Teaching, the OeNB introduced an option for applicants to submit research projects in economics, medicine (clinical research), social sciences and the humanities directly via the OeNB's website. When applicants enter data on the website, the project personnel costs and the completeness of the documents submitted by the project manager (project outlines, curricula vitae, literature references, etc.) are automatically reviewed electronically.

Apart from the IT application the OeNB already runs for the Europe-wide Counterfeit Monitoring System CMS,⁷ the OeNB has been able to provide other IT applications for ESCB-wide use. In the course of 2006, the OeNB for instance implemented the ESCB's new Tender Operations System (TOP). From the first quarter of 2007, TOP will be at the disposal of the ECB and the euro area NCBs to handle tender operations. In the interest of user comfort and security, cutting-edge web technologies were deployed when implementing this system.

Use of State-of-the-Art Analysis and Monitoring Instruments

The OeNB developed a pioneering software tool to analyze systemic risk in the banking sector, the Systemic Risk Monitor. This internationally novel analysis instrument has met with a positive response and great interest among central banks and universities. The OeNB has communicated its findings and experience at numerous conferences and workshops and to other central banks, e.g. the Bank of England, within the framework of knowledge sharing.

The OeNB strives to provide high-quality, plausible data about banks and other financial intermediaries. To this end, it has switched to a new, much more comprehensive system for checking data quality. The new system implements various methods to check the plausibility of data reported to the OeNB. The main merit of the new system is that it allows for a flexible adaptation of the scope of data checks and for an automatic adjustment of the plausibility parameters on the basis of historical data developments. Moreover, procedural models developed for individual specifications were made applicable to data quality checks by breaking down reporting entities into three priority groups corresponding to large, mid-sized and small entities. To improve monitoring, the OeNB developed a Java-based application that provides for the visual presentation of unusual developments in individual banks' data.

⁶ A browser is the software used to display web pages.

⁷ The CMS is a central repository of all statistical and technical information on counterfeits that provides a comprehensive overview of counterfeit banknote and coin volumes throughout the euro area as well as in every EU country.

Cash Cycle



**IDENTIFICATION OF CASH REQUIREMENTS
COORDINATION**



MÜNZE
ÖSTER
REICH



cebs

**PRODUCTION
STORAGE**



**PACKAGING
PROCESSING
RETURN**



DISTRIBUTION



banks

banks

businesses
and consumers



3 Business Processes and Services

3.1 Business Processes

To perform its core tasks economically and to high standards, the OeNB must continuously optimize its business processes, for instance its cash supply services for Austrian businesses and consumers. The euro's 5th anniversary as well as Austria's geographical location at the center of Europe, an advantage for cash logistics, motivated the focus of this chapter on the business process "cash supply" in Austria.

The Central Bank's Key Role in Cash Supply

Banknotes, or cash in general, are the best known and most highly publicized product of NCBs such as the OeNB. The OeNB plays a key role in the business process "cash supply." Cash supply operations are marked by the effort to keep the cash cycle as efficient as possible and to strengthen the public's confidence in the currency.

The turn of the year 2006/2007 marked the 5th anniversary of euro cash circulation in Austria. The cash cycle covers numerous phases from planning to production to the provision of consumers and businesses with banknotes and coins. Once cash has been returned, it is processed, meaning that security checks are performed to determine its fitness for recirculation. After the cash has passed these tests, it reenters the cash cycle. Following the introduction of the euro, this processing chain was extended to include aspects like coordination with the ECB, cross-border transports and hub functions.

The OeNB: A Base for Cash Distribution and Processing

The first step in the cash handling process is determining how much of the product is required, as is typical for any product. Demand is determined using key indicators of currency in circulation recorded throughout the year (volumes and values of cash in circulation, unfit rates, number of lodgments and withdrawals, circulation quality, etc.).

Whereas the cash requirement figures fed directly into production decisions prior to the introduction of the euro, production decisions are now coordinated by the ECB. As the euro is legal tender in 13 EU Member States, the determination of production volumes must be coordinated with all NCBs. Once the banknote production decision has been taken, production volumes are assigned to the different banknote printing works that manufacture one or more denominations by order of the Eurosystem. In Austria, Oesterreichische Banknoten- und Sicherheitsdruck GmbH (OeBS) assumes this task. The production of different denominations at different sites ultimately results in cross-border transports to bring banknotes where they are needed. Because Austria is located very near the new EU Member States in Central and Eastern Europe, it plays a key role in transport logistics. Euro coin requirements are coordinated by the European Commission, and national requirements are fully met by the national mints. The mint volumes require ECB approval. Münze Österreich AG manufactures euro coins for Austria.



Once freshly printed euro banknotes have reached the country of destination, they are issued to national consumers and businesses. Banknotes paid out at bank counters or withdrawn from ATMs – in 2006, some 123.6 million ATM withdrawals with a total volume of EUR 15.9 billion were made in Austria⁸ – enter the economy as a general and anonymous means of exchange. According to projections by the OeNB, some 2 billion cash transactions with a volume of roughly EUR 50 billion are made annually in Austria, signaling that cash payments are by far the most popular form of payment in the country.

Cash Security – Ensuring Confidence in the Euro

The OeNB sees its responsibility with regard to currency in circulation in establishing a cash security network to safeguard public trust in the currency. By cooperating with the Austrian police, the public prosecution authority and the media, by providing training for professional cash handlers, and by performing activities at the branch level, the OeNB endeavors to protect the public from counterfeits to the greatest possible extent. The comprehensive security network also includes the inspection of banknote authentication and counting equipment. The OeNB Test Center performs these inspections free of charge for manufacturers and merchandisers of banknote authentication and counting equipment. The results of the tests are made available online.

Sooner or later, every banknote is returned to the central bank – in the euro area, not necessarily the one that issued it. According to OeNB estimates, a banknote is returned to the OeNB about three or four times before it is destroyed because it is too damaged or soiled to be reissued. In Austria, cash returns are handled by Geldservice Austria (GSA) at GSA's regional and Vienna offices, and at the OeNB and its branch offices. The OeNB's competence and supervisory power ensure that the OeNB is in a position to efficiently monitor cash processing.

The OeNB's objective is to guarantee that banknotes in circulation meet the highest possible (Eurosystem) quality standards. Reissue fitness controls are performed on the basis of criteria established and supervised by the OeNB. If a banknote is deemed to be too soiled or worn for reissue, it is rejected as unfit during sorting. In 2006, some 17% of the banknotes processed and thus tested by the OeNB or GSA were rejected as unfit and were destroyed. Once banknotes have been declared fit, they are packaged and stored in state-of-the-art vaults. Cash, a valuable asset and the most important means of exchange in economies, must be available at all times. By creating strategic reserves, the central bank guarantees that sufficient cash is on hand to respond to demand fluctuations.

With the euro representing a currency of international stature and the OeNB having acquired considerable experience in cash logistics, the OeNB has become a cash hub for CESEE. Because Austrian banks have a strong presence in the CESEE market and because tourism is a large source of revenue in Austria, more banknotes are returned to than issued in Austria. After processing, euro banknotes must be reissued for Eurosystem use. In line with the cash hub concept, the OeNB delivered the initial supply of euro banknotes to Slovenia on behalf of the Eurosystem.

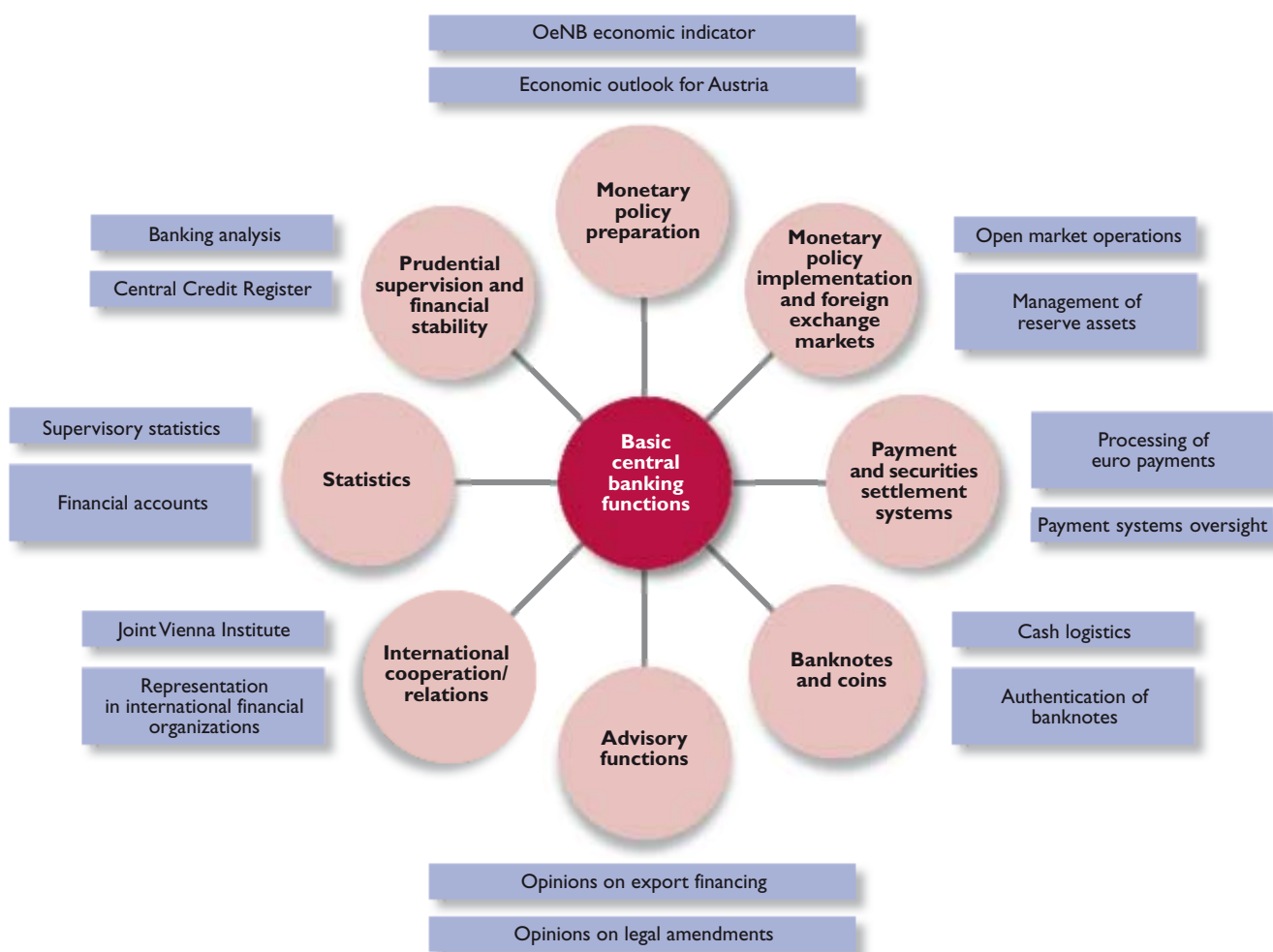
⁸ Source: www.europay.at

3.2 Services

Monetary stability and a healthy financial system are both a sign of and a prerequisite for well-functioning political and economic systems. The ESCB/Eurosystem and the OeNB, as an integral part thereof, have a clear statutory mandate to maintain price stability in the euro area. Moreover, as a central bank, the OeNB is obligated to contribute substantially to maintaining financial stability. The OeNB is also obliged to support the general economic policies (i.e. economic and employment growth) in the European Union and in Austria.

This statutory mandate translates into numerous basic functions for the OeNB, as defined and classified by the Eurosystem. The fulfillment of each basic function requires a subset of products, as represented in the OeNB's product portfolio. The chart below outlines the basic central bank functions as defined by the Eurosystem and presents some of the OeNB's related products. While this presentation does not claim to be exhaustive, it does provide insight into the broad range of OeNB products and services.

Basic Central Banking Functions and Selected OeNB Products



The ongoing high degree of trust in the OeNB, among other things, is indicative of how successfully it fulfills its mandate. At the end of 2006, a survey indicated that 79% of Austrians had a high degree of trust in their central bank; the same survey also reported high scores for the OeNB's products, most of which the OeNB provides free of charge.⁸

With its broad range of products and services, the OeNB caters to many target groups. The development of selected OeNB services in 2006 is presented in more detail below.

Price Stability as a Driving Force of the Economy

The primary objective of the ESCB/Eurosystem is to ensure price stability in the euro area. For the Eurosystem, price stability means that the annual rise in consumer prices (HICP) in the euro area should be below but close to 2% over the medium term. A stable currency safeguards the purchasing power of incomes, protects savings from losing value and makes corporate financial planning of investment and borrowing easier. With its monetary policy strategy and its interest rate policy decisions, the Eurosystem has succeeded in maintaining stable prices since the beginning of monetary union in 1999 notwithstanding several international supply shocks. Accordingly, euro area inflation averaged 2.1% from 1999 through 2006. By comparison, inflation came to an average of 1.7% in Austria in the same period. Professional preparation of material for monetary policy decisions is key to representing Austrian interests in monetary policymaking and requires numerous forecasts and studies to be drawn up at the OeNB.

Data and Analyses as a Customer Service

The OeNB is responsible for drawing up numerous financial sector statistics in Austria; as such, it has a wide range of data at its disposal. It continuously observes changes in the financial markets and is thus well placed to identify systemic risks early and to take appropriate countermeasures. Furthermore, the OeNB compiles statistics such as the financial accounts or external trade statistics, e.g. the balance of payments and the International Investment Position. The OeNB and Statistics Austria cooperate closely on balance of payments statistics, which were put on a completely new footing in 2006. The OeNB taps many channels to provide the results of its statistical work free of charge, e.g. conferences, congresses, meetings, workshops, seminars, business fairs, a broad range of publications, and the Internet.

Comprehensive Information on Basel II

In cooperation with the business community, the OeNB has been providing comprehensive information focused on Basel II for years. In 2006, this information was rounded out by a handbook entitled "Rating-Kennzahlen – 24 Branchen im Vergleich" (Rating indicators – a comparison of 24 sectors; German only) produced in cooperation with the Austrian Federal Economic Chamber, the Chamber of Professional Accountants and Tax Advisors, and the Economics Ministry. This handbook, which is available free of charge, has already been distributed throughout Austria to around 8,000 public accountants and credit rating analysts as well as rating advisers specializing on Basel II, to 5,000 management consultants specializing on Basel II, and to bank employees and entrepreneurs in business lines requiring the application of the Basel II framework. New releases of the handbook tailored to individual sectors – e.g. industry and trade, retailing, tourism, transportation, and information and consulting services – are scheduled.

⁸ As documented by the confidence index compiled on a quarterly basis by an external polling institute.



OeNB Brussels Representative Office at the Forefront of EU Developments

One key task of the OeNB's representative offices is to keep abreast of international developments and to provide local partners with up-to-date information. The importance of the Brussels location, for instance, is growing steadily. Total employment at the EU institutions and the Permanent Representations of Member States located in Brussels has already risen to some 45,000. An additional 30,000 lobbyists in Brussels seek to directly influence opinion and policymaking at the European Union level. Especially in the first half of 2006, when Austria assumed the EU presidency, on-the-spot sourcing, processing and forwarding of information by the OeNB's Representative Office in Brussels proved very valuable. Information sourcing is facilitated by tight informal networks, e.g. the Brussels NCB Network, which was founded by the Brussels Representative Office of the OeNB and which connects numerous representations of other national central banks in Brussels. The organization of a large number of events, such as the High-Ranking Panel Discussion at the Permanent Representation of Austria to the EU in Brussels allows issues of special interest for Austria to be even more effectively discussed and communicated at the international level.

In Touch with the Austrian Public

A good example of the high standards the OeNB sets in performing services for the public is its strong customer orientation in handling the exchange of schilling banknotes for euro. In 2006, for example, the euro bus tour through Austria again provided many Austrians with the opportunity to exchange their remaining schillings for euro and to obtain information on the euro and its security features. During the summer months of 2006, an average of ATS 860,473 were exchanged for euro free of charge at each stop, bringing the total amount of schillings collected at 72 stops to some ATS 62 million. At 566, the number of euro bus customers per stop reached an all-time high in 2006.

40 Years of Research Promotion

For 40 years, the OeNB has been supporting Austrian researchers with substantial funding through its Anniversary Fund for the Promotion of Scientific Research and Teaching. Up to and including 2006, the OeNB provided funding for more than 8,600 projects totaling over EUR 681 million, supporting scientific projects in basic research and up to 2003 also in applied research.

The OeNB has provided an additional EUR 225 million in the framework of the National Foundation for Research, Technology and Development (National Foundation) since 2004. The National Foundation provides a sound and reliable basis for the sustainable, strategic long-term financing of Austrian research initiatives independently of public finances. Its efforts are targeted particularly at supporting interdisciplinary research projects which generate long-term benefits. The provision of sustainable financing for such initiatives contributes to visibly positioning and internationalizing Austrian excellence in research and innovation.

List of Indicators

Indicators	Definition
Human Capital	
Staff structure	
Full-time equivalent staff (year-end)	Staff employed at the OeNB at the end of the reporting year (in full-time equivalents), also referred to as headcount
Fluctuation rate (%)	Number of staff members who left the service of the OeNB (excluding retirements) relative to total number of staff
University graduates (%)	Share of university graduates in headcount at year-end
Flexible working arrangements	
Part-time employees (%)	Number of staff members with a part-time contract relative to total number of staff
Staff in teleworking scheme (%)	Number of staff members with a teleworking contract relative to total number of staff
Staff on sabbatical	Staff members who go on sabbatical relinquish part of their pay for a specific period. In return, during this period they may take time off (e.g. to pursue personal training and further education interests and the like) for a period of three or six months
Diversity management	
Women (%)	Share of women in headcount at year-end
Women in specialist positions (%)	Specialist position: For highly specialized employees, the OeNB not only offers the possibility to pursue a classical career in management, but also to opt for a specialist career which exclusively concentrates on technical expertise and coordination tasks. Indicator: Number of women in specialist positions relative to total number of specialist positions at year-end
Women in management positions (%)	Number of women in management positions relative to total number of management positions at year-end
Knowledge acquisition	
Training days per employee (annual average)	Number of days dedicated to training and education relative to average headcount
Training participation rate (%)	Number of staff who took part in at least one internal and/or external training and education course in the reporting year relative to average headcount
Cost of training and education per employee (EUR)	Expenses for training and education (including travel expenses) relative to average headcount
Number of completed and certified training courses (in-service)	Number of staff members who, on their own initiative and mostly outside working hours, completed doctoral programs, postgraduate programs or specialized courses in the reporting year
Number of internal job rotations	Number of staff members who worked in an organizational unit other than their own
Number of working visits to national and international organizations	Number of staff members who worked at the ECB, other NCBs, EU institutions, the IMF, the OECD or with ministries or OeNB subsidiaries for at least one month
Knowledge transfer	
Number of employees with external teaching assignments	Number of staff members who have teaching assignments at universities, technical colleges and/or other academic institutions
Number of (co)supervised master's theses/dissertations	Number of master's theses/dissertations at Austrian and other universities and technical colleges (co)supervised by OeNB staff members
Number of interns from technical colleges	Number of interns from technical colleges at the OeNB during the reporting year
Structural Capital	
Management structure	
Staff-to-manager ratio	Number of staff members relative to number of management staff at all levels
Number of product managers	Number of product managers responsible for one or more OeNB products
Number of process managers	Number of process managers responsible for one or more OeNB processes
Decentralized structure	
Number of representative and branch offices	Number of additional OeNB sites
Infrastructure	
Number of IT applications	Number of standard IT applications and in-house software solutions
Number of internal service level agreements	An internal service level agreement that provides information about the content and provision of internal services
Number of OeNB help desk queries (including case status logs)	Number of queries processed by the OeNB's IT hotline
Availability of the ARTIS payment system (%)	Operating time during which the ARTIS payment system was available
Error-free payment transactions (%)	Number of error-free payment transactions relative to total number of payment transactions
Environmental protection and quality assurance	
Number of certified areas	Number of internal areas certified by a recognized certification authority
Number of environmental auditors	Number of staff members assessing the effectiveness of the OeNB's environmental management system according to EMAS standards
Number of quality auditors	Number of staff members assessing the effectiveness of the OeNB's quality management system according to ISO 9001 standards

Indicators	Definition
Procurement	
Catalogue orders as a percentage of total orders	Number of orders automatically generated using the e-procurement catalogue relative to the total number of orders placed
Number of calls for tender	Number of calls for tender published pursuant to the Federal Procurement Act (value exceeding EUR 60,000)
OeNB group	
Number of subsidiaries in payment systems services	Number of companies in which the OeNB holds shares and which are active in the cash and cashless payments segments (see also Annual Report)
Relational Capital	
Cooperation and networks	
Number of days on which the OeNB hosted events	Number of days on which the OeNB organized and hosted events (meetings, conferences)
Number of days on which the OeNB hosted international events	Number of days on which the OeNB organized and hosted events (meetings, conferences) with international participants
Number of national bodies with OeNB representatives	Committees and working groups of national organizations whose meetings OeNB representatives attended
Number of international bodies with OeNB representatives	Committees, working groups and task forces of e.g. the ESCB/Eurosystem, EU, IMF, BIS, OECD or of other international organizations whose meetings OeNB representatives attended
Number of technical assistance activities	Number of activities during which the OeNB provided expert technical assistance to other NCBs outside the Eurosystem
Number of information visits to the OeNB	Number of visits to the OeNB aimed at exchanging experience with NCB experts
Number of lectures delivered by OeNB staff	Number of lectures delivered by OeNB staff for external audiences at in-house or external events
Number of cash authentication training courses	Number of cash authentication training courses held by OeNB staff for external audiences
Publications and public relations	
Number of OeNB publications	Number of printed OeNB publications
Number of papers published in specialist journals by OeNB staff	Number of nonrefereed contributions published by OeNB staff in specialist journals
Number of scientific papers published in refereed journals by OeNB staff	Number of contributions published by OeNB staff (authors or coauthors) in scientific journals (e.g. Journal of Money, Credit and Banking, etc.) refereed by anonymous referees (peer reviewed journals) and in conference proceedings refereed by anonymous referees (refereed conference proceedings)
Number of press releases	Number of press releases distributed to media representatives
Number of press conferences	Number of events organized for media representatives
Number of inquiries to OeNB hotlines	Number of inquiries answered by OeNB hotlines (general hotline and statistics hotline)
Confidence index (%)	Results of an opinion poll on public confidence in a specific institution (results: fourth quarter of the reporting year); source: IFES, commissioned by the OeNB
Image index (%)	This indicator comprises three individual indices: relevance, confidence and efficiency indices, which are weighted and combined to form the image indicator; a value of between 5.50 and 10 signals success
Internet-based communications	
Number of page impressions on the OeNB website (daily average)	Number of web pages accessed exclusive of references to images, style sheets or script files
Number of visits to the OeNB website (daily average)	Number of users who successfully accessed pages on the OeNB website during a specific period; a user may access several pages during a visit
Number of newsletter subscriptions	Number of subscriptions to OeNB newsletters (econ.newsletter and Basel II Newsletter)
Innovation Capital	
Innovation	
Staff resources utilized for innovative projects (%)	Staff utilized for innovative projects relative to total staff
Internal R&D expenditure (EUR 1,000)	Research and development expenditure as defined by Statistics Austria
Number of research cooperation projects with external partners	Research cooperation projects serve to study scientific issues; scientific institutions, universities and the research departments of other NCBs are typical partners for research cooperation projects
Number of research visits	Visits of at least three months at other NCBs or scientific institutions, mainly for research purposes
Number of opinions prepared on economic research promotion	Opinions prepared by OeNB staff on projects submitted to the OeNB's Anniversary Fund, on applications for loans under the European Recovery Program (ERP) and on applications for changes to ERP loans
Idea management	
Number of submissions to the staff suggestion scheme	Suggestions submitted by staff to improve the efficiency and effectiveness of the organization as a whole

Abbreviations

ARTIS	Austrian Real Time Interbank Settlement
ATS	Austrian schilling
BIS	Bank for International Settlements
CESEE	Central, Eastern and Southeastern Europe
CMS	Counterfeit Monitoring System
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
EMAS	Eco-Management and Audit Scheme
ESCB	European System of Central Banks
EU	European Union
EUR	euro
Eurostat	Statistical Office of the European Communities
FDI	Foreign Direct Investment
GSA	GELDSERVICE AUSTRIA Logistik für Wertgestionierung und Transportkoordination G.m.b.H.
IFES	Institut für empirische Sozialforschung
IMF	International Monetary Fund
JVI	Joint Vienna Institute
NCB	national central bank
OeBS	Oesterreichische Banknoten- und Sicherheitsdruck GmbH
OECD	Organisation for Economic Co-operation and Development
OeNB	Oesterreichische Nationalbank
R&D	research and development

