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This Financial System Stability Assessment paper for **Germany** was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on **October 6, 2003.** The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of **Germany** or the Executive Board of the IMF.

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GERMANY

Financial System Stability Assessment

Prepared by the Monetary and Financial Systems and European I Departments

Approved by Stefan Ingves and Michael Deppler

October 6, 2003

- This Financial System Stability Assessment report is based primarily on work undertaken during two visits to Germany during February and May 2003, as part of the Financial Sector Assessment Program (FSAP). The FSAP findings were discussed with the authorities during the Article IV consultation mission in July 2003.

- The FSAP team comprised Tomás J.T. Baliño (Head), Arne Petersen, Daniel Hardy, Nigel Davies, Matthew Jones, Meral Karasulu, and Silvia Ramirez (all MFD); Jörg Decressin (EU1); Martin Mühleisen (ICM); Richard Britton (formerly UK FSA); Göran Lind (Swedish Riksbank) John Ricketti (Federal Reserve Bank of New York); Daniel Heller (Swiss National Bank); and Gordon Smith (formerly OSFI).

- The core of the German financial system is the large banking sector, which is divided into the private commercial, public, and cooperative "pillars." The insurance sector (including reinsurance) is also large and internationally important. Other nonbank financial institutions, including equity and bond markets, are sophisticated, although the corporate sector's reliance on equity financing has traditionally been limited. The regulatory framework and financial sector supervision are of high quality, although supervision of the reinsurance sector needs to be strengthened.

- The financial system is currently under pressure: in 2002, unusually large loan losses (in part international) have compounded an underlying trend decline in the profitability of German banks. Yet, absent major further shocks, short-term systemic vulnerabilities are manageable. Banks are taking steps to improve profitability, and the public Landesbanken have started the process of adapting to the removal of government guarantees starting in 2005. However, it is unclear whether these steps are sufficient to address the trend decline in profitability. Opening new avenues for restructuring, including through a reduction in legal and other barriers (within or across pillars), would foster consolidation and innovation, and help to address the medium-term issues. The insurance industry also faces difficulties because of the reduction in risk-bearing capacity caused by higher claims, low returns on investments, losses on equity portfolios, and subsequent erosion of capital bases.

- The authors of this report are Messrs. Baliño, Petersen, Hardy, Decressin, Mühleisen, Davies, and Jones, and Ms. Karasulu.

FSAPs are designed to assess the stability of the financial system as a whole and not that of individual institutions. They have been developed to help countries identify and remedy weaknesses in their financial sector structure, thereby enhancing their resilience to macroeconomic shocks and cross-border contagion. FSAPs do not cover risks that are specific to individual institutions such as asset quality, operational or legal risks, or fraud.

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ACRONYMS

AktG	Stock Corporation Act
AML/CFT	Anti-Money Laundering and Countering the Financing of Terrorism
BaFin	Federal Financial Services Supervision Agency
BCP	Basel Committee's Core Principles for Effective Banking Supervision
BVR	Federal Association of German Cooperative Banks
CBF	Clearstream Banking Frankfurt
CESR	Committee of European Securities Regulators
CPSIPS	CPSS Core Principles for Systemically Important Payment Systems
CPSS	Committee on Payment and Settlement Systems
CSD	German Central Securities Depository
DAV	Actuarial Association
DSGV	German Association of Saving Banks
ECB	European Central Bank
EMU	Economic Monetary Union
ESA	Exchange Supervisory Authorities
FATF	OECD Financial Action Task Force on Anti-Money Laundering
FinDAG	Act Establishing the Federal Financial Supervisory Authority
FSAP	Financial Sector Assessment Program
GDV	Insurance industry association
HGB	Commercial Code
IAIS	International Association of Insurance Supervisors
IAS	International Accounting Standards
IOSCO	International Organization of Securities Commissions
KfW	Reconstruction Loan Corporation
KWG	Banking Act
LOLR	Lender of last resort
MFPTC	Code of Good Practices on Transparency in Monetary and Financial Policies
MoF	Ministry of Finance
MTS	German Market System Electronic Trading Platform
OTC	Over-the-counter
SMEs	Small-and-medium sized enterprises
VAG	Insurance Supervision Law
WpHG	Securities Trading Act

I. Summary and Overall Stability Assessment

1. **Germany's financial system came under strong pressure in 2002**. The economic slowdown and unusually large loan losses (in part international) compounded an underlying trend decline in the profitability of the **banking system**; three of the four large commercial banks and two Landesbanken registered significant losses. The **stock market** declined more sharply than elsewhere in the European Union. The **insurance industry** faced difficulties, due to a sharp increase in claims, low returns on investments, and losses on equity portfolios.

2. **The current year may also be difficult for banks, but absent major further shocks, short-term systemic vulnerabilities are manageable**. The subdued economic prospects suggest that further significant loan losses are likely. Nevertheless, banks are taking significant steps to improve their profitability through cost cutting, a sharper focus on core activities, and improved risk pricing—in part prompted by Basel II. The average capitalization level, at 12.9 percent (of risk-weighted assets), remains adequate.

3. **Stress tests of the banking sector did not reduce bank capital-asset ratios below 8 percent, with one minor exception**. A 60 percent increase in credit default probabilities could reduce capital by up to 22 percent for some smaller banks, potentially leaving one bank with a capital asset ratio of 7 percent.

4. **The long-term trend decline in profitability has made all three bank pillars more vulnerable to adverse developments, and needs to be addressed.**[1] The three-pillar system has for many years provided a measure of stability and low-cost banking services. However, the current system is challenged by the persistent decline in profitability (largely attributable to an inability to raise non-interest income to compensate for lower interest margins), increased financing via capital markets, cross border competition, and the potential cost of public sector involvement. While all pillars must enhance their profitability to safeguard financial stability over the medium term, in addition the Landesbanken must adjust to the elimination of public guarantees starting in 2005. This will likely increase their financing costs and—unless vigorous and early action is taken—could erode their already slim profit margins.

5. **Increased flexibility to broaden the restructuring effort would help foster innovation and restore profitability**. The Landesbanken and savings banks are already exploring various alternatives for restructuring, including through mergers and increased consolidation within the pillar. Some Landesbanken have changed their statutes to private law corporations, initially without any change in ownership, an approach that more public sector banks could take to facilitate the eventual tapping of private capital and subsequent reorganization. More generally, a reduction in existing legal and other barriers to restructuring, within or across pillars, would expand the scope of possible market-oriented

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[1] The three pillars consist of private commercial banks, public sector savings banks and Landesbanken, and cooperative banks. There are 13 Landesbanken, which serve as apex organizations for the savings banks and have developed into wholesale banks (including internationally).

solutions, and enhance incentives to develop new, more profitable products. The process will likely take some time, since it requires changes in Länder (federal state) laws.

6. **A combination of measures is needed**. As banking sector consolidation progresses, the phasing-out of the regional limitations on banking would help to preserve competition. Such a move would need to be accompanied by strengthened corporate governance and supervision as banks move into unfamiliar territory. The institutional protection schemes in the public and cooperative pillars have provided an important element of stability, but some changes would facilitate exit of banks and the reduction of excess capacity, and help better handle any possible systemic problems. These changes would entail the introduction of risk-differentiated premiums (as is underway), and a reduction in coverage over time. Reducing public sector involvement in commercial banking—much higher than in comparable economies—should also be considered in due course. Meanwhile, public sector banks should enhance their governance and transparency to allow the public to understand better how they fulfill their public sector mandate.

7. **The main vulnerability facing the insurance industry is the pressure on capital ratios and risk-bearing capacity from poor returns on investments**. For the life insurance sector, the combination of strong competition, low investment returns, and a high proportion of contracts with guaranteed returns has caused many companies to draw down their reserves to meet the unsustainably high returns paid to policyholders. Capital ratios have remained relatively constant for the insurance industry as a whole, while risks have increased through a steady increase in the proportion of investments held in equities and a rise in equity price volatility. These developments have substantially reduced the risk-bearing capacity of the industry, particularly for life companies, and made the sector more vulnerable to shocks. The ownership of major stakes in banking by leaders in the insurance industry also makes the sector more exposed to the performance of the large banking groups. BaFin should use a more sophisticated risk-based assessment of capital adequacy, and, if necessary, require insurance companies to raise capital or curtail new business.

8. **For the German reinsurance industry, the last two years were some of the worst on record**. With 25 percent of the world market, German reinsurance companies are heavily exposed to major catastrophes. While traditionally well-capitalized, the major reinsurers have had to raise capital to absorb recent losses and restore their risk-bearing capacity. However, their impaired investment portfolios reduce their ability to withstand further major surges in claims.

9. **Stress tests of the insurance sector showed some vulnerability, in particular to a further sharp decline in German equity prices**. For life insurance companies, the tests revealed that a 35 percent decline in equity prices could cause one of the nine insurance companies in the sample to breach its solvency requirement. Stress tests of the reinsurance sector performed by the staff indicate the sector should be able to absorb a plausibly severe loss scenario.

10. **Derivatives exposures of internationally active banks have increased, in line with developments in other banking systems but appear manageable**. This reflects in part a wider awareness of credit and market risks and more sophisticated hedging strategies, but partly also regulatory arbitrage and a search for new high yielding products, especially for

Landesbanken. For insurance companies, regulatory limits and reporting requirements on derivative activities have contained exposures at less than 2 percent of investments. Improving system-wide reporting of trends and associated risks in derivatives activities would strengthen transparency and market discipline and enhance market surveillance.

11. **A proposal to securitize high-quality loans** (the "True Sale Initiative") is currently under discussion, with the objective to develop the market for asset-backed securities, help banks reduce their balance sheets, and free up funds for new loans. While the modalities have not yet been fully worked out, the intention is to make it fully commercially based.

12. **Germany has a well-developed and comprehensive system of financial sector regulation and supervision, although the supervision of reinsurers should be urgently enhanced.**[2] BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht) was established in May 2002 as a unified financial services supervisor. BaFin and the Bundesbank cooperate closely in banking supervision, with both participating in on- and off-site work, but with clear legal responsibility assigned to BaFin. In securities and insurance supervision, the role of Länder authorities adds complexity, which is managed appropriately. While the reliance on external auditors for on-site examination in all sectors has worked well, it will be desirable to increase supervisors' ongoing work in this area. The authorities agree and are in the process of hiring additional staff. Staff recommended strengthening of a few banking regulations, in particular those related to reporting of asset quality. Insurance supervision needs further strengthening, and insurance sector data reporting needs to be more timely.

13. **Staff found a high degree of observance of the *Code of Good Practices on Transparency in Monetary and Financial Policies* (*MFP Transparency Code*).**[3] However, the publication of financial soundness indicators needs to be more timely, with their range broadened.

14. **The key recommendations stemming from the FSAP are summarized in Box 1.** Many of the recommendations complement or extend measures already being implemented or considered by the authorities. Staff are aware that, particularly owing to Germany's federal structure, the legal powers to implement these recommendations rest with a number of authorities at various levels. Nevertheless, it is important to pull the various measures together in a comprehensive and coherent framework.

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[2] Anti–Money Laundering and Countering the Financing of Terrorism are being assessed by FATF.

[3] Only financial policy transparency was assessed, since monetary policy transparency was assessed as part of the earlier euro area assessment.

Box 1. Summary of Key Recommendations

Competition and structural development

- Encourage Landesbanken to complete reforms to address the phasing out of public guarantees.
- Begin work on creating the legal framework to reduce barriers to consolidation, within or across pillars, and thereby facilitate market-oriented restructuring.

Transparency

- Strengthen transparency of public banks, including through disclosure of cost estimates of their activities under their public mandate.
- Publish comprehensive quarterly financial soundness indicators (including for derivatives), and further develop and publish a regular financial stability report.

Legal framework, regulation, and supervision

- Extend BaFin's mandate to issue secondary regulations; clarify the relations between the Ministry of Finance and BaFin; and review the Laws on Credit Institutions and on Insurance Supervision to give the supervisory authorities more discretion in setting specific prudential guidelines.
- Strengthen direct supervisory vigilance by increasing the staffing and expertise of banking and insurance supervision to perform more extensive risk-based supervision.
- Continue to refine banking regulations as financial products become more complex by: introducing minimum objective criteria for classifying nonperforming loans (such as a 90-day past due rule) and tightening regulations for the classification of restructured loans to permit more timely monitoring of nonperforming loans; requiring prior notification and approval of intended investments and acquisitions; enhancing monitoring of the financial situation of financial holding groups; strengthening rules to grant and to monitor loans to related parties; and raising standards on the expertise and responsibility of Supervisory Board members.
- Assess capital adequacy of insurance companies with more sophisticated risk-based methods, and, if necessary, require insurance undertakings to raise capital levels or curtail new business. For the life sector, relax the regulations on returns and profit split with policyholders, while enhancing transparency and market conduct regulations.
- Strengthen supervision of the reinsurance sector and anticipate the main elements of the EU Reinsurance Directive and the IAIS standard on reinsurance supervision.
- Accelerate the schedule for the preparation and publication of annual accounts and aggregate statistics for the insurance sector.
- Encourage the observance of the German Corporate Governance Code by mutual insurance companies.
- Strengthen capacity of BaFin and state supervisors to supervise complex securities transactions.

II. Macroeconomic Context and Recent Financial Sector Developments

A. Macroeconomic Background

15. **Following three years of stagnation and a lackluster growth performance over the 1990s, real GDP growth is expected to accelerate beyond its potential only sometime after mid-2004** (Annex, Table 1). Recently, there have been some positive developments. Business and consumer confidence have firmed as global prospects have brightened somewhat and the authorities have unveiled a reform agenda to scale back benefits for the unemployed, loosen labor market regulations, and bring forward tax relief originally programmed for 2005. Low nominal and real interest rates have led to gains on bond

holdings and equity markets have rebounded from their lows earlier in the year. However, the strength of any pick-up in the near term is likely to be held back by the appreciation of the euro over the past year while the effects of tax cuts will be neutralized by fiscal consolidation measures. Consumer price inflation is very low, but the likelihood of sustained price declines looks remote at this stage.

B. Recent Financial Sector Developments

16. **The recent economic slowdown and other shocks have accentuated a long-term trend decline in profitability and have put the German banking system under stress.** German banks in general have suffered a trend decline in profitability because, unlike in other industrial countries, they have not been able to offset narrowing interest rate spreads by increased fee income and financial innovation (see Selected Issues paper). Moreover, bank profitability has been adversely affected by the recent period of slow growth. The end of the stock market "bubble" of the 1990s has reduced the value of their equity holdings and the associated fee earnings. The internationally active banks have also incurred large loan losses and operational losses in investment banking. As a result, three of the four large commercial banks and two of the Landesbanken registered significant losses in 2002. However, first-half 2003 aggregate data for large commercial banks indicate significant improvements in pre-tax profits mainly due to higher profits from trading activities, cost reductions and lower loan loss provisions. The improved performance of Landesbanken in the same period, on the other hand, appears less robust, since it mostly reflects a reduction in loan loss provisions, which may need to be supplemented in the second half of the year.

17. **The insurance industry also faces difficulties.** Published results of insurance companies for 2002 clearly show the effect of depressed equity markets, in which they had invested heavily, and historically low interest rates, with many reporting substantially lower investment income. The financial status of many companies has been severely weakened by a combination of poor investment returns, continuing competitive pressures on margins, and a rise in benefits and claims paid that outweighed rising premium income. Life insurance companies continue to offer high returns to policyholders, some in excess of the rate of return on their underlying investment portfolio. This "negative spread" has contributed to sharply reduced hidden reserves and the consumption of capital. For the reinsurance industry, 2001 and 2002 were some of the worst years on record. Contributing factors were flooding in Europe, additional provisioning for asbestos-related claims in the United States, and the repercussions of September 11. The combination of these factors caused a notable decline in capital buffers, prompting several of the largest reinsurance groups to take steps to increase their capital bases.

18. **Financial markets have been hard hit by the burst of the global equity market bubble, but domestic factors also weakened the stock market**. The DAX suffered a slightly sharper decline than most other markets—losing some 60 percent relative to its peak in 2000 before recovering in the spring of 2003. The Neuer Markt for high-tech stocks had to be closed and was replaced by a new market segment at the Frankfurt stock exchange. Nevertheless, available evidence on the distribution of shareholdings and flows into and out of various financial instruments suggest that investors have stayed in the market.

III. Financial System Overview and Market Infrastructure

A. Financial System Overview

19. **The German financial system is complex and highly diversified.** The core of the system is the banking sector, which accounts for approximately 78 percent of the financial system's gross total assets (Annex, Table 2). Compared with other industrial countries, German enterprises have relied relatively heavily on bank financing (Figure 1). The banking sector consists of three main groups of banks or "pillars": commercial banks, public sector savings banks and Landesbanken, and cooperative banks.[4] The special ownership structures and mandates of the public sector and cooperative banks have effectively precluded cross-pillar mergers.

20. **The second most important class of financial institutions is insurance and pension companies**, which hold around 12 percent of financial system assets. More than half of all households have a life insurance contract, and households have a quarter of their assets invested with insurance companies. Investment companies account for 10 percent of total assets.

21. **Linkages between and within sectors are extensive.** Banks hold about 25 percent of each other's equity (for example, savings banks effectively own large stakes in the Landesbanken), while 10 percent of insurance company equity is in cross-holdings within the industry. Insurance companies hold 5 percent of private bank equity and approximately 15 percent of bank-issued securities, with the larger insurance groups holding significant portions of commercial bank equity. Ownership of insurance companies by the banking system is more limited.

22. **Global financial linkages have increased steadily over the past decades.** German banks' consolidated foreign exposure (around $2.2 trillion as of September 2002) exceeds that of any other country. Foreign banks do not yet have a large retail presence in Germany, but rather compete for the business of major corporations. German companies also play a major role in the international insurance market, and two of the world's largest global insurance and reinsurance companies are domiciled in Germany. Germany's financial markets have become more closely integrated into the global marketplace in recent years, and monetary union is likely to accelerate this process, especially within Europe. German government bonds provide a benchmark for European long-term interest rates.

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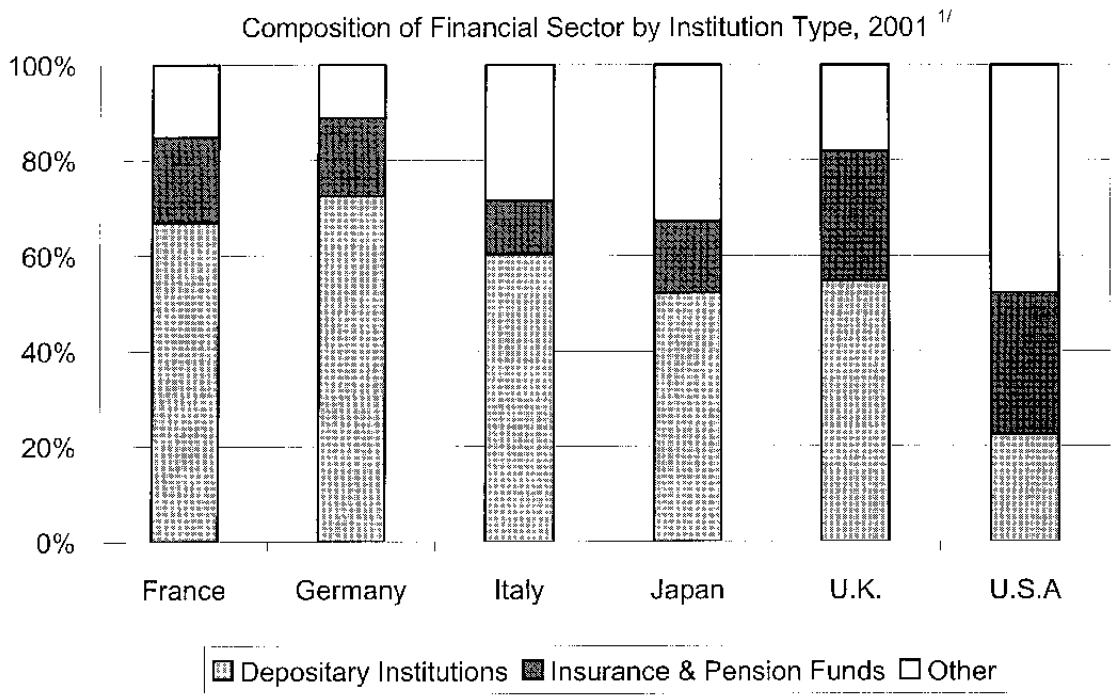
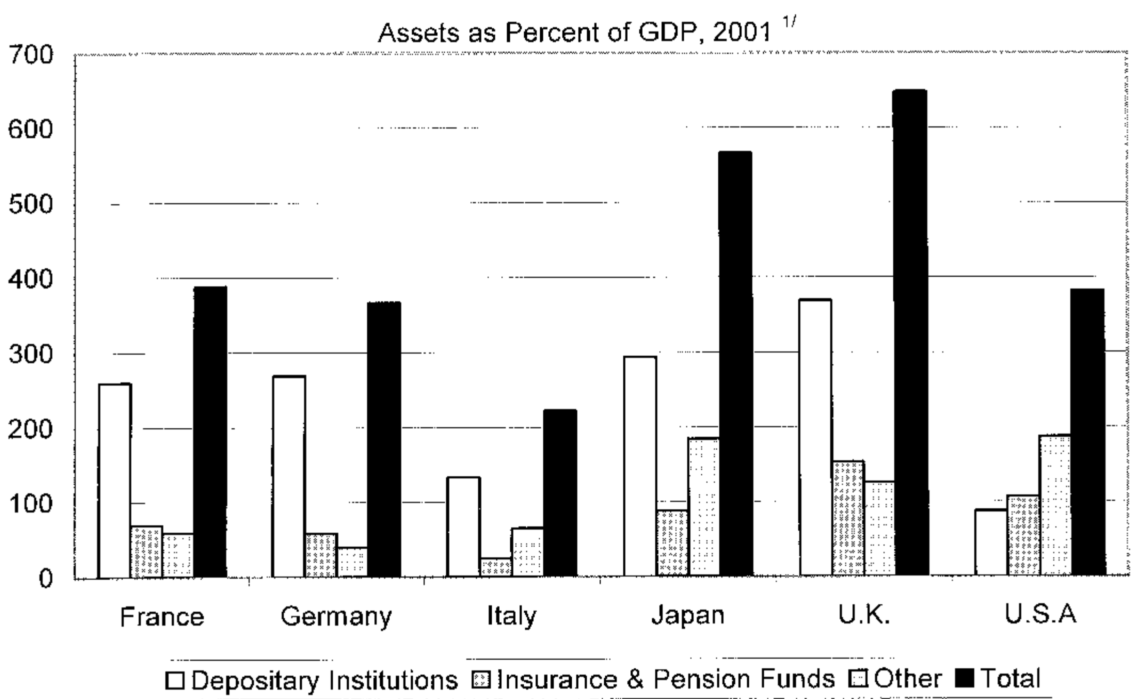
[4] Mortgage banks and building and loan societies also operate in all three pillars, and the public pillar includes a number of regional development banks.

Figure 1. Germany: International Comparison of Financial System Structure





Source: Bank of Japan, Eurostat, Federal Reserve Board, National Statistics UK.

1/ Data for France are for 2000.

B. Money Markets and Systemic Liquidity Issues

23. **The Economic and Monetary Union (EMU) has integrated the money markets of euro-area member countries** to such a degree that it is no longer possible to view national markets in isolation. The uncollateralized market is fully integrated. Narrow bid-ask spreads confirm the liquidity of the market. The collateralized and securitized segments are gradually becoming more integrated and gaining in importance, although some legislative differences still need to be ironed out.

24. **Liquidity management is carried out through the Eurosystem, to which the Bundesbank belongs.** Monetary policy instruments include open market operations, standing (deposit and marginal lending) facilities, and a 2 percent minimum reserve requirement. The interbank market functions smoothly, as evidenced by the rarity of instances where both standing facilities were simultaneously accessed. During the period 1999–2002, the European Central Bank (ECB) carried out only seven fine-tuning operations, two relating to September 11, 2001, and two to the cash changeover in 2002.

C. Payment and Settlements System

25. **The payment system is functioning well and does not give rise to any systemic vulnerabilities.** The systemically important real-time gross settlement system, RTGS-plus, is operated by the Bundesbank and provides connection to the European TARGET system. The detailed assessment of the CPSS Core Principles for Systemically Important Payment Systems found those Core Principles fully observed.

26. **The operation and oversight of securities settlement systems also meet high standards.** Only one technical concern was identified: for Clearstream Banking Frankfurt (CBF) the batch settlement process involves netting the cash leg without requiring collateral to guarantee settlement. The introduction of a prefunding requirement for the largest settlement batch, planned for November 2003, would eliminate most, but not all, of the current unwinding risk.

D. Accounting, Audit, and Corporate Governance

27. **Germany has taken steps to enhance accounting and auditing practices and to align corporate governance with best international practices.** As in the European Union as a whole, international accounting standards (IAS) will be introduced for the consolidated accounts of listed companies from 2005. As in other countries, there have been a few high-profile failures of large companies that have raised concerns over corporate governance in these companies. In response, the government introduced a strengthened corporate governance code for listed companies in 2002. While the code is voluntary, listed companies are required to certify whether they conform fully, or, if not, explain why. Also, as part of the authorities' 10-point program to improve investor protection and corporate integrity, the role of auditors and their oversight is being reinforced, and an independent institution will be set up to monitor compliance with applicable accounting rules.

IV. Legal Framework, Regulatory Oversight, and Problem Resolution

A. BaFin's Role and Legal Framework

28. **The German legal framework governing the financial sector is well developed.** Financial sector laws are rather detailed. Granting the supervisory authorities more discretion in revising implementing regulations would facilitate more flexible responses to new developments.

29. **BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht) is Germany's unitary financial services supervisor**. It was formed on May 1, 2002 out of the three supervisory bodies that had been responsible for supervision of the banking, insurance, and securities industries respectively. The Bundesbank and BaFin closely cooperate in banking supervision. The management of BaFin is currently harmonizing working practices, and seeking to exploit the advantages of being a unitary supervisor. It has already set up an informal system of communication between supervisors of different sectors, and is setting up a section for the supervision of conglomerates.

30. **In the area of banking supervision, BaFin works closely with the Bundesbank.** The Bundesbank is especially active and experienced in collecting and analyzing bank data and conducting on-site supervision. Cooperation between the two institutions is based on a memorandum of understanding and appears to work smoothly

31. **BaFin is subject to the legal and supervisory control of the Ministry of Finance (MoF), and thereby fulfills the constitutional requirement to be answerable to parliament, but it is a functionally and organizationally independent body**. The MoF could in principle issue instructions to BaFin on a range of organizational and other matters, and is the "supreme official authority" for the BaFin management. Also, while the power to issue secondary regulations in most cases has been delegated to BaFin, this is not so in all cases. In practice, the MoF refrains from giving instructions to BaFin and does not interfere in supervisory matters regarding individual institutions. BaFin and market participants support this assessment. BaFin's operations are paid for by the supervised institutions, which distances BaFin from the political process. However, the weight of supervised institutions on the Administrative Council (10 out of 21 members) could raise concerns that industry interests receive too much weight.

32. **All sectoral standards assessments comment on the heavy reliance on external auditors for on-site inspection, and the desirability of the supervisor becoming more involved**. While reliance on external auditors appears to have worked well, it will be desirable for supervisors to increase their ongoing direct on-site work. The authorities agree that this will become necessary in the context of the Basel II Capital Accord. To this end, the number of supervisory staff will need to be expanded and their skills kept updated.

33. **Germany's observance of FATF Principles for Anti–Money Laundering and Combating the Financing of Terrorism (AML/CFT) is being assessed by FATF** according to the agreed methodology approved by the Boards of the Fund and the Bank and as part of the 12-month pilot program. Field work has been completed and the ROSC from the FATF assessment will be circulated to the Board once it is final, likely in time for the

Board meeting to conclude the 2003 Article IV consultation. The staff will provide a short update to the Board prior to the Board meeting on the status of the FATF assessment including, if available, a short summary of the FATF findings.

B. Transparency

34. **While BaFin and the Bundesbank received generally high marks for their observance of the IMF Code of Good Practices on Transparency in Monetary and Financial Policies, the availability and timeliness of financial soundness indicators are relatively weak**. The Bundesbank and the BaFin should publish relevant statistics, focusing mainly on credit institutions and insurance companies, and including, at a minimum, core indicators of asset quality, capital adequacy, earnings and profitability, and liquidity. It may be useful to publish more statistics on off-balance sheet activities of financial institutions, including notional amounts, market replacement values, and bilaterally netted credit exposures. It would also be helpful to consider publishing regularly a financial stability review, which has been found valuable in an increasing number of countries. The transparency of public sector banks should be upgraded to that of listed banks.

C. Deposit Insurance, Institutional Protection, and Bank Resolution

35. **The system of deposit insurance, the institutional protection for public sector banks and the cooperative banks, and procedures for resolving banks that are in difficulty are designed to maintain a very high level of public confidence in the banking system, but also incurs long-term costs**. Almost no depositors have lost money in a German bank in the post-war period, and there have been very few outright bank failures. By the same token, exit is slowed, and the protection system reinforces the existing structure of the banking sector.

36. **Deposit insurance provides high coverage for depositors**. The private sector banks are covered by a mandatory scheme and in addition operate a voluntary scheme, which insures each depositor for up to 30 percent of a bank's capital. The savings banks, Landesbanken, and cooperative banks belong to schemes that protect the institutions themselves (rather than just depositors). The ability of the latter institutional protection schemes to withstand a major crisis is uncertain, given that contribution rates are subject to a ceiling.

37. **Problem banks are normally dealt with through a merger with a stronger institution and a change in senior bank management**. Often the relevant bank association takes the lead, with the authorities playing a facilitating and coordinating role. The cooperative sector is a case in point: the rapid decline in the number of cooperative banks (from over 2,000 at end-1999 to under 1,500 at end-2002) has been achieved through mergers rather than liquidations. Reportedly, about 10 percent of these mergers were undertaken to save institutions that were in serious financial difficulties.

38. **This "quiet" approach to bank resolution and the institutional protection schemes covering much of the banking system underpin investor confidence and may be cost-effective in individual cases, but may also slow structural change and the shedding of excess capacity**. Shedding capacity through the wholesale liquidation of failed

institutions is rare, and for many mergers immediate layoffs and branch closings are limited. At the same time, the public sector scheme ultimately represents a contingent liability for the German public, even toward nonresidents and large financial institutions. Reliance on mergers and contributions from existing banks cannot be expected to cope with a major banking crisis.

39. **Mechanisms are in place to provide emergency lender-of-last-resort (LOLR) assistance to an illiquid but solvent institution**. Under the Eurosystem, LOLR assistance is primarily a national responsibility; the burden of costs and risks is at the national level. Any potential liquidity impact of such assistance would have to be managed in a way consistent with the maintenance of the unified monetary policy stance.[5] At the national level, the German authorities consider it impractical to predetermine detailed rules for the provision of temporary liquidity in the event of a systemic crisis. The Liquidity Consortium Bank (Liko-Bank) has the ability to handle possible liquidity shortages in individual banks; no German credit institution has resorted to Liko-Bank during the past five years.

V. Banking System Challenges and Prospects

40. **The German banking system has endured exceptional strains recently, but its underlying strength has prevented systemic difficulties**. The system faces specific short-term vulnerabilities, largely connected with the continued slow growth of the German economy, but over a longer horizon reversing banks' chronic low and declining profitability is the major challenge. External events, notably the two agreements with the European Commission on ending government guarantees for public sector banks and the introduction of Basel II, may act as useful catalysts toward a more efficient, flexible, and robust banking system. Many needed reforms are the responsibility of individual private financial institutions, but the authorities on all levels should facilitate the process of adapting the public sector banks to the evolving environment.

A. Short-Term Stability

Banking system resilience and aggregate risk factors

41. **The German banking system is resilient, but relevant indicators show some deterioration.** The capitalization level at 12.9 percent of risk-weighted assets remains adequate, although it is lower than in comparable European countries (Annex, Table 3). Data for end-2002 indicate a further increase in nonperforming loans to 4.9 percent of banks' loan portfolio from 4.2 percent in 1999. This (and the ratio of NPLs net of provisions relative to capital) appears relatively high for an industrialized country, although data are not strictly comparable across countries. The system as a whole has consistently registered profits. While several major banks made losses in 2002, much of the banking system saw only a modest drop in profits despite persistently difficult conditions. Available evidence suggests that the

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[5] The Bundesbank and other monetary and banking authorities have recently agreed on a Memorandum of Understanding (MoU) on high-level principles of cooperation and information sharing in crisis management.

aggregate supply of credit has shifted somewhat and become more risk-sensitive—which is a positive development— but there is no indication of a credit crunch.

42. **The current year will be difficult also, but absent further major shocks, systemic difficulties appear unlikely**. The continued domestic economic weakness will probably result in another year with a high number of bankruptcies that will impact on banks' portfolios. Slow growth in Germany is likely to affect also other revenue and expense components. Although the exceptional needs for loan loss provisioning may have been largely overcome, this is not assured; and it is also too early to tell whether the turnaround registered by some of the large banks in the first half of 2003 is permanent. A renewed slowdown in the United States or elsewhere in Europe would not only directly affect international operations of German financial institutions, but could have a major impact on domestic credit quality.

43. **Certain sectors remain problematic**. Financing of real estate construction has been a large and growing part of banks' domestic loan portfolio. Real estate prices have declined modestly from a peak in the early 1990s to a trough in the late 1990s (though regional variations are large). Therefore, there is little concern about the existence of a real estate price bubble. However many commercial properties leased for long periods and high rents shortly after reunification may now be becoming vacant, and may cause some regional difficulties. The tourism and airline industries are going through a difficult period, but exposure to these sectors is not significant for the German banking system as a whole.

44. **Continued weakness in global financial markets would affect the internationally active and wholesale banks in Germany**. Although their equity holdings are now a modest share of their total assets, this important source of fee income may remain depressed for some time.

45. **Derivatives exposures of the internationally active German commercial banks and Landesbanken have been on the rise, in line with developments in other banking systems**. The increase seems to reflect a wider awareness of credit and market risks, and also a search for higher yielding assets and some regulatory arbitrage. Despite competent supervision of individual institutions active in the market, a lack of comprehensive and consistent data limit system-wide assessment of trends and associated risks. A limited survey conducted by BaFin suggests that net positions in credit derivatives are generally small, and even reported gross, notional amounts are modest relative to the total balance sheet size of the institutions involved. Future growth of the market would require continued vigilance by the supervisor.

Stress test results

46. **The stress testing conducted as part of the FSAP exercise covered a sample of German banks representing about 40 percent of industry assets.** [6] The design of the stress

[6] The exercise covered 18 banks for market risks and 22 banks for credit risk. The selection of the participating banks was based on their systemic importance and by the criteria used for reporting to the Quantitative Impact Study 3 of the Basel committee.

tests was decided in consultation and cooperation with IMF staff and carried out by the participating institutions and the German authorities, based on end-2002 balance sheets. The severity of the shocks for credit risk and market risk was based on historical events, where shocks of the magnitude considered happened about once every 18 to 30 years. In addition various macroeconomic scenarios were tested. Consolidated results (including various statistics on the dispersion of results) were reported to IMF staff for two groups of banks: (i) large, internationally active banks; and (ii) smaller regional banks and credit cooperatives.

47. **The impact of the stress test scenarios, if taken out of capital, would not reduce bank capital-asset ratios below 8 percent, with the exception of one small bank.** For credit risk, the biggest impact of the scenarios considered was observed from a 60 percent increase in credit default probabilities above their end-2002 levels, potentially reducing capital by up to 22 percent for some smaller banks and leaving one small bank with a capital asset ratio of slightly less than 8 percent (Annex, Table 4). This scenario could also reduce capital by up to 18 percent for some large, internationally active banks, but their capital asset ratios would all remain above 8 percent. For market risk, the largest impact was observed from a world-wide crash in equity prices of 30 percent, potentially causing a reduction in capital ratios for internationally active banks of 2¾ percentage points, without pushing their capital asset ratios below 8 percent. Landesbanken and smaller savings banks and credit cooperatives were most sensitive to interest rate risk, with an upward shift in the yield curve Germany, the United States, and Japan potentially causing losses as large as 12 percent of regulatory capital, but again would not lower capital asset ratios below 8 percent.

48. **An assessment of the effect on the banking system of various adverse macroeconomic scenarios found only a modest impact**. The scenarios envisaged a correction of structural imbalances in the U.S. economy, a confidence shock in Germany in 2003/4, protracted weakness in the German economy, or a war in the Middle East. Under these scenarios, the maximum loss in real GDP amounted to less than one percentage point in one year. If taken out of capital, the impact on the banking system would be small. Additional macroeconomic scenarios were carried out by staff to simulate the effect on real GDP of a 20 percent appreciation of the euro relative to the U.S. dollar—as occurred over the six months through May 2003—while assuming unchanged interest rates; and of the effect of a 1 percentage point increase in interest rates. Although these scenarios generated higher cumulative losses in GDP (from 0.7 percent in year one to 3.1 percent in four years) they too showed only a modest impact on bank capital, due to the estimated low sensitivity of default rates to GDP. These macroeconomic scenarios may not capture fully the effects of possible shocks under current conditions. Following three years of stagnating activity, a scenario of falling prices must also be considered. Modest price declines over a few quarters are unlikely to inflict significant damage to the financial system. However, persistent deflation—which is thought to be a remote possibility at this stage—is likely to entail a combination of individual shocks, for example, a sharp increase in credit risk and falling equity prices. While the effects of persistent deflation on activity and the financial system cannot be readily simulated with the available data and models, the magnitude of these shocks would have to be larger than a combination of the individual shocks considered under the market and credit risk stress tests to push capital-asset ratios well below 8 percent. Nonetheless, risks remain that a combination of large shocks could reinforce each other and pose a major challenge to the financial system.

B. Medium-Term Challenges

49. **Notwithstanding the above assessment, the underlying decline in banks' profitability needs to be addressed, lest it impinge on financial stability over the medium term**. This negative trend affects all parts of the banking system to some degree (Figure 2). The decline reflects mainly lower revenues, since German banks have not been as successful as their peers in enhancing fee income to compensate for declining interest margins; costs appear broadly in line with other European countries. Strong competition, with the savings banks effectively setting a maximum interest rate on retail lending, has contributed to the low net interest income. A number of institutional characteristics, which have served well to maintain stability and favor bank clients, have also introduced rigidities into the system. At issue is how to maintain the advantages of stability, low cost to the customer, and ease of access to banking, while reversing the persistently declining profitability and reducing the potential fiscal costs of public sector involvement.

50. **The need for reform has been accelerated by external regulatory events, notably the agreements with the EU to phase out government guarantees for commercial activity by public sector banks from 2005**. The end of the government guarantee will affect particularly the Landesbanken. Absent any compensatory measures, the phase-out of public guarantees in mid-2005 would eliminate a major part of the profit margin of the Landesbanken,[7] since a corresponding reduction in their credit ratings would raise their cost of funding in the wholesale markets on which they rely. To avoid downgradings, the Landesbanken will need to raise revenue or cut costs during the remaining grace period in order to remain competitive. Since several are now only marginally profitable (ROA is about 0.1 percent on average), a substantial improvement in cost or revenue efficiency will be needed. The direct effect on the savings banks should be limited because very few tap the capital market. However, many Landesbanken are partly owned by savings bank associations, and all are related through the joint liability scheme. Hence, savings banks (and the municipalities that are responsible for them) have a strong incentive to ensure that reform of the Landesbanken succeeds.

51. **Cooperatives and commercial banks will also need to improve their performance**. Considerable scope for efficiency gains may be available to many credit institutions, particularly within the cooperative sector, where a large reduction in the number of institutions has been projected by the cooperatives themselves. The large commercial banks must raise their return on equity to a level comparable to that of their rivals abroad in order to continue to attract capital. The elimination of the guarantees for the Landesbanken may bring few direct benefits to commercial banks in the very competitive and internationally oriented activities in which they specialize.

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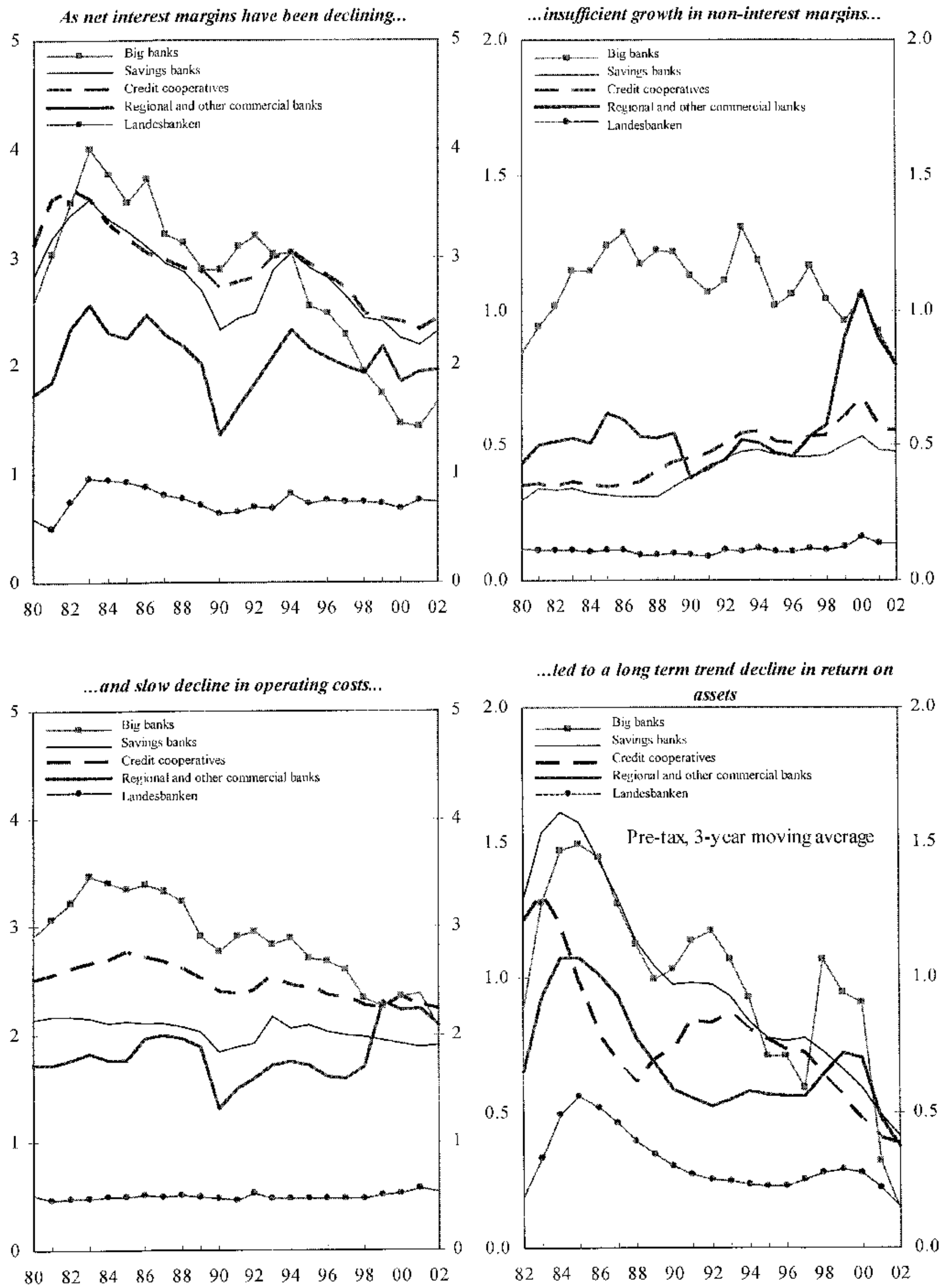
[7] The effect would be gradual because of grandfathering of existing liabilities, while new liabilities would not be guaranteed.

Figure 2. Germany: Selected Indicators of Bank Profitability
(as percent of total assets, unless otherwise indicated)



Source: Deutsche Bundesbank.

Recent measures

52. **Many banks across all pillars have recognized the need for action, although it is too early to say which strategies will be most successful.** A number of Landesbanken are implementing various forms of restructuring, including through closer linkages across Länder or with the savings banks (for example, to seek a common credit rating), separating their commercial from their public mandate activities, and by allowing for the possible introduction of private capital. Two large private banks have recently been merged, and other mergers are contemplated, while one large bank joined a financial grouping with the leading insurance company. Consolidation among the smaller banks, and especially the cooperative banks, remains rapid. The cooperative sector has gone farthest in consolidating its wholesale, back office, and ancillary institutions such as its housing bank and its insurance subsidiary. There have also been regional experiments with consolidation of some back office functions and securities settlement systems between savings and cooperative banks.

53. **Banks have made progress in cutting costs and improving risk pricing.** The year 2002 saw significant declines in staffing in some major institutions, and they and others report plans for further cut-backs. Some banks, including Landesbanken, are also scaling back and refocusing their more ambitious foreign operations. Several banks have reduced their balance sheets by selling off assets. These trends have reportedly continued so far in 2003. A wide range of banks reportedly have raised their risk sensitivity—prompted in part by the prospect of the Basel II capitalization rules—which has led to wider average interest rate spreads and the dispersion of lending rates. Indeed, Basel II is now generally welcomed by German banking institutions, many of whom expect a reduction in their capital requirement due to the large share of small loans in their portfolio.[8] Many banks, including also many small cooperative and savings banks, reportedly intend to make use of the internal ratings-based approach, which is viewed as administratively costly but worthwhile as a means to facilitate better risk pricing.

54. **A new initiative to securitize high quality loans is currently under discussion.** The objective is to develop the market for asset-backed securities while helping banks diversify their funding sources. The initial volume is expected to be moderate but could reach €50 billion in a few years (less than 2 percent of loans to nonbanks). While the modalities have not yet been fully developed, intentions are to make the securitization fully commercially based; it will be structured as a true sale, and banks would retain the lower tranche on their books. The state-owned Kreditanstalt fur Wideraufbau (KfW) would use its expertise and status as "honest broker" between the banks involved from all three pillars to help develop the market. To be commercially attractive, the scheme requires that special-purpose vehicles be treated on equal terms with banks in respect to a transaction tax (Gewerbesteuer), which is not applied to banks; legislative changes to this end are expected later this year. This is likely to be a welcome innovation in the financial landscape.

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[8] In the current draft of the Basel II rules, loans under €1 million are treated as consumer loans, which receive a low risk weighting.

Additional steps

55. **Restructuring the Landesbanken is urgent, given their systemic importance, and the changes from 2005**. The restructuring of Landesbanken is also important for the savings banks, given their close links, including through the institutional protection scheme. This restructuring has proved a focal point for considerations regarding the advantages and disadvantages of the three pillar system over the medium term.

56. **Increased flexibility is needed to broaden the scope for adjustment, including through a reduction of existing legal and other impediments to the introduction of new ownership structures and consolidation, within or across pillars**. The complexity of the German financial system makes it impossible to define a single best bank model. This makes flexibility and full use of market signals valuable in finding the business solution that best fits each situation. It is encouraging that, for example, some Landesbanken have changed their status to private law corporations. This approach should be pursued more generally by public sector banks, which would also be in line with the generally successful approach taken in other countries (e.g., Italy and Austria). Cooperative banks might also wish to explore the merit of transforming themselves into regular shareholding companies. Such steps would not require any immediate change in ownership, but would make it easier to mobilize additional capital should this be needed (e.g., in a crisis or for expanding their business). Furthermore, it would permit market signals to play a stronger role in monitoring the performance of the sector and increase incentives to innovate and to achieve an adequate return on capital. It would also facilitate an acceleration of consolidation. The associated political process could well be time-consuming, since individual Länder laws will need to be changed to achieve this.

57. **Greater flexibility for market-based structural adjustment would be facilitated by changes in the institutional protection schemes for public sector banks to ease both entry and exit**. Protection of sophisticated creditors, such as financial institutions, should be limited in order to increase market discipline. Such a limitation would be consistent with savings banks' public mandate; currently, local savings banks have a contingent liability for wholesale business conducted by Landesbanken around the world. A narrower form of coverage would be the final aim, although this will be hard to achieve given the sensitivities involved. Allowing members to withdraw from an institutional protection scheme would be desirable, since the contingent liability for other institutions could discourage the attraction of private capital. The envisaged introduction of risk-based contributions to the savings bank scheme (as already done by the cooperative banks) is to be welcomed.

58. **The elimination of impediments to the adoption of flexible solutions should be accompanied by phasing out the regional limitations on banking.**[9] In this way, competition would be preserved as consolidation progresses, and successful strategies could be replicated more rapidly. This would need to be complemented with strengthened corporate governance and supervision as banks move into less familiar territory.

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[9] The operation of each savings bank is limited by law to a specific region. Cooperative banks have agreed on a regional market allocation among themselves.

59. **The authorities should consider in due course reducing public sector involvement in commercial banking, which far exceeds that in comparable economies.** Public sector banks have played an important role in Germany's economic history, including during the rebuilding of the economy after World War II. However, the benefits of public ownership currently can be achieved with more narrowly targeted state involvement. Furthermore, the Landesbanken play an ever smaller role in financing small and medium-sized enterprises (SMEs): today only some 20 percent of their total loans are to domestic nonfinancial enterprises, with the equivalent of half of that amount going to foreign companies. The behavior of savings banks is similar to that of the smaller commercial banks or cooperative banks. Yet, public ownership brings with it an undefined contingent liability toward institutions that make little or no direct contribution to the budgets of the responsible authorities. The magnitude of the potential cost to the public purse is illustrated by some recent cases where the responsible authorities had to inject significant amounts of capital. Therefore, public sector banks should become much more transparent, to allow the public to understand how they fulfill their public sector mandate, and to facilitate the discussion of restructuring strategies.

Supervisory issues

60. **Overall, Germany has a strong framework for conducting banking supervision.** Nevertheless, some weaknesses remain, which affect supervisors' ability to act promptly. The heavy reliance on external auditors to conduct on-site supervision carries the risk that supervisors will not always have full and timely information on important developments in supervised institutions (except in the case of the larger banks, where supervision is more continuous).[10] Similarly, while the annual audit may ensure appropriate loan classification, minimum objective criteria for the classification of assets (such as a 90-day past-due rule) should be considered to permit better reporting during the year. Also, the rules requiring banks to notify supervisors of intended acquisitions and investments, which may pose risks, are inadequate. The same applies to the reporting and classification of restructured loans. In addition, the formal framework—such as using peer reviews or a set of quantified early warning indicators—to provide risk assessments, should be further developed to guard against supervisory forbearance in demanding corrective action. Further, the relevant laws should be modified to permit BaFin to gain direct supervisory access to nonconsolidated subsidiaries. Also, loopholes in the current rules for loans and other transactions between the bank and its related and connected parties, through which the institution may be abused, should be closed.

61. **The general legal "minimum rules" should be supplemented with regulations that enable BaFin to act flexibly and take more into account the characteristics of**

[10] The auditor must report without delay to BaFin and the Bundesbank facts learned in the course of the audit that might warrant qualification or withholding of audit certification, jeopardize the existence of the institution or seriously impact the bank's development, or which indicate that managers have seriously infringed the law. However, the auditor may detect a problem long after its germination, and problems that may be minor from the viewpoint of one bank, but are system-wide, are not captured.

different categories of banks. Although BaFin intends to operate in this manner, the legal framework sometimes unduly restrains the scope for differentiation. Corporate governance in credit institutions needs to be strengthened, inter alia, by increasing the required expertise of Supervisory Boards in order to allow them to take a more active part in overseeing bank policy in such areas as credit management.

VI. Other Financial Sector Vulnerabilities and Regulatory Issues

A. Insurance Sector

Short-term vulnerabilities

62. **The main vulnerability facing all sectors of the insurance industry is the pressure on capital ratios and risk-bearing capacity from the poor performance of investment portfolios.** Despite a recent surge in equity prices from their lows earlier this year, equity valuations remain below 50 percent of their peak in 2000, and interest rates have reached historic lows. As a result, returns on the investment portfolios of insurance companies reached a seven-year low in 2002. The life insurance sector is particularly affected, since around a half of their in-force business has guaranteed rates of return, which limits their ability to respond flexibly in a low-return environment. Competitive pressures have forced many life companies to continue paying returns to policyholders well in excess of the return on their investment portfolios, depleting their reserves. Capital ratios have remained relatively constant for the insurance industry as a whole, at the time of a steady increase in the proportion of investments held in equities and a rise in equity price volatility. These developments have substantially reduced the risk-bearing capacity of the industry, particularly for life companies. BaFin should continue to monitor the financial condition of all insurance companies, but using a more sophisticated risk-based assessment of capital adequacy. If necessary, BaFin should be prepared to require the most affected companies to raise capital to levels commensurate with the riskiness of their operations, or curtail new business.

63. **Forbearance on asset valuations may have bought some time for insurance companies to adjust their portfolios, but may also have delayed much-needed consolidation.** Changes made in 2001 to section 341b of the Commercial Code enabled many insurance companies to value equities at long-term "realizable" values and avoid recognizing losses in market value on their equities portfolios in their annual accounts for 2001 and 2002. As a result, equities purchased at or near the peak of prices may require substantial write-downs at the end of 2003, if prices remain at or below current levels. Forbearance of this type can delay the necessary consolidation of the industry by protecting weaker firms that pursued riskier investment profiles, and at the same time it reduces the clarity of financial statements for market participants and the public. The authorities' intention not to change the asset valuation treatment of equities any further is welcome.

64. **Some insurance groups face additional challenges from their ownership of major portions of commercial banks, which could reduce investment income and perhaps require additional capital injections if the banking sector continues to underperform.** The direct vulnerability of the banking system to continued weaknesses in the insurance sector is more limited, because of less extensive ownership linkages from banks to insurers.

65. **The weakened financial status of many insurance companies makes the industry (and especially reinsurers) particularly vulnerable to a sudden surge in claims.** With a 25 percent share of the world market, German reinsurance companies were heavily exposed to an unusual confluence of major worldwide catastrophes and other adverse events in 2001–2002. The ability of the reinsurance and property/casualty sectors to withstand additional events is reduced due to these shocks and their impaired investment portfolios. A weakened reinsurance sector also poses risks to other insurance companies in Germany and elsewhere that rely on them.

66. **Stress tests of the insurance sector showed some vulnerability, in particular to a further sharp decline in equity prices.** The stress tests were performed by a sample of nine insurance companies in the life and property and casualty sectors using end-2002 balance sheets. For life insurance companies, a 35 percent decline in equity prices would cause losses in investment portfolios of up to 6 percent, causing one of the 9 insurance companies in the sample to breach its solvency requirement. A 10 percent decline in bond values would cause losses of up to 2 percent of investments for one company. For property and casualty insurers, the 35 percent decline in equity prices would cause losses of up to 18 percent of investments. Stress tests performed by staff on the reinsurance sector suggest that the risk-bearing capacity has improved in the wake of the recent recovery in asset prices and capital increases. The sector should be able to absorb a substantial increase in asbestosis reserves and three major natural disasters of the scale of Hurricane Andrew. However, the risk-bearing capacity of the sector is unlikely to improve beyond this level until investment portfolios make further substantial improvements.

Medium-term vulnerabilities

67. **Medium-term vulnerabilities arise from structural rigidities in the life sector in the provision of with-profits life insurance products, combined with the challenge of strong competitive pressures and dispersed market shares.** Around 50 percent of life insurance products sold in Germany are profit participation policies where, with guaranteed rates of return by law, policyholders receive at least 90 percent of the attributable profits (provided the solvency of the insurer is not jeopardized).[11] These constraints are not strictly binding, but they set a floor from which competition between companies begins and limit the flexibility of companies to respond to an environment of low returns on investments. As a consequence:

- Competitive pressures have caused rates of return paid to exceed present investment yields for some companies, forcing them to draw on their reserves, which is unsustainable in the longer term. Changing the law to reduce the maximum technical

[11] Attributable profits are the excess of net investment yields over guaranteed returns. For policies written before July 1994, attributable profits also include underwriting gains.

interest rate for mathematical provisions, as envisaged for 2004, should give firms additional flexibility to help restore their capital positions.[12]

- The high proportion of attributable profits that must be disbursed to policyholders reduces the flexibility to restore their capital and risk-bearing capacity above the minimum solvency margin after periods of stress, and may discourage new investment in the sector. The regulations governing with-profits products should therefore be relaxed. This would allow the life and pensions sector to attract and retain additional capital to meet the increased volatility of investment portfolios and the likely growth in the demand for retirement products. A more flexible environment will also enable a greater diversity of products, with different risks and rewards.

- Market conduct regulations should be enhanced to ensure that consumers are adequately informed of the risks, both at the point of sale and throughout the life of the investment.

68. **The main German insurance groups face challenges arising from the systemic importance of reinsurers in conglomerates**. By their nature, reinsurance companies are exposed to sudden spikes in liabilities (e.g., from large catastrophes), and thus require higher levels of capitalization and liquidity. Good corporate governance practices and risk management skills are essential for managing the complex risks arising in such groups. This is particularly important in Germany, given the heavy reliance of domestic primary insurers on reinsurance provided by German companies, and given the size and importance of the German reinsurance industry to the world market. These vulnerabilities have already materialized with the failure of a large German reinsurer, which ultimately affected other insurers in the group through direct losses, reputation effects, and reduced access to capital. Conglomerate supervision is under development as part of the integration of supervisory functions under BaFin. This would make it easier for BaFin to pay particular attention to the amount and type of capital available to insurance groups and to their internal structures in order to ensure that possible intra-group contagion (especially that coming from a reinsurer) is containable.

Supervisory issues

69. **A review of Germany's observance of the IAIS Core Principles reveals a high level of observance, consistent with international best practices**. Areas where enhancements could be made include the following:

- The supervision of reinsurers by BaFin is more limited in scope than that applied to other types of insurance companies. As the proposed EU Reinsurance Directive is some years away, new legislation should be finalized and implemented as soon as possible; BaFin should swiftly enhance the supervision of these systemically important companies.

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[12] In practice the maximum technical interest rate used for calculating mathematical provisions against profit participation policies acts as a de facto minimum rate for companies in setting their guaranteed rate of return.

- More responsibility for the drafting and promulgation of regulations (in consultation with all interested parties) should be devolved to BaFin.
- BaFin needs additional resources. This would help to reduce the high turnover of staff, facilitate meeting BaFin's own inspection goals, and help to develop a more sophisticated risk-based approach to supervision, placing more emphasis on the evaluation of underlying processes.
- BaFin should possess more powers (in collaboration with the relevant ministry) to issue regulations on corporate governance and internal controls in all insurance undertakings (including mutuals).

B. Capital Markets

Vulnerabilities

70. **Recent experience underscores the volatility of sentiment in equity markets, and the extent to which developments abroad can impact on the German financial system.** Past declines in German equity prices have already affected German capital markets. Not only was the "Neuer Markt" closed, but in addition, a number of potential stock issuers abandoned plans to go to market. Moreover some investment banks and ancillary service providers have scaled back operations in Frankfurt. Furthermore, owing to the significant synchronization of real economic cycles with the United States and the substantial amount of cross-border exposures through securities holdings and loan books, shocks in foreign markets are quickly transmitted into the domestic arena, particularly the equity market.

71. **Nonetheless, most of the ingredients for a deepening of the equity market are still in place.** Parts of the substantial cash positions built up during the downturn have flown back into equities relatively quickly, fuelling the strong response of the DAX to improvements in global market sentiments since February. The Frankfurt stock exchange is one of the top three exchanges in Europe, and its trading infrastructure is widely seen as one of the best worldwide. Most important, German companies—especially the important SME sector—will need to build a significantly stronger equity base in order to secure continued financing. Meanwhile, managing Germany's demographic change may require a buildup of equity holdings by pension schemes.

72. **Corporate bond issuance has grown strongly in recent years, but is still mostly undertaken abroad through subsidiaries, which on-lend short-term funds to the domestic parent.** Domestic issues typically contain equity elements (i.e., convertible bonds) that make them attractive to a domestic retail clientele; much of the recent domestic issuance is accounted for by a few large companies. In order to facilitate access to investor capital and strengthen competition in the domestic financial markets, a review of tax and other provisions that could impede the deepening of the nonbank corporate bond market seems desirable. Yield spreads between comparable bonds from German and other European issuers have shrunk substantially, and are expected to narrow further as the remaining obstacles to cross-border trading—mainly of a legal, tax-related, and institutional nature—are reduced. This will be advantageous for domestic bond investors, but German issuers need to strengthen or at least maintain their competitiveness as their advantage of placing bonds in a

country with a major international currency (formerly the German mark) is now being shared with other competitors.

73. **As regards bond market risks, German investors appear to have offloaded some foreign holdings over the past few years.** Although foreign bond portfolios remain substantial, they are concentrated in industrialized countries, and default risks are likely to be moderate. Emerging market economies account for a relatively small share (around 5 percent) of the overall portfolio, but exposures to some individual countries have likely remained fairly large (in excess of $1 billion). Overall, however, losses from foreign bond holdings in recent years seem to have been relatively small.

74. **The small size of many SMEs precludes access to equity or bond markets, implying that bank financing will continue to be the most important funding source for most of these companies.** As banks are managing credit risks more actively, suitable instruments for securitizing and trading SME exposures will need to be found. At present, trade in credit exposures is generally limited to large listed entities, and the securitization of loans even to larger SMEs remains expensive and organizationally complex. The government has accorded high priority to promoting securitization, including through the "true sale" initiative with the participation of KfW. In addition, the savings and cooperative bank sectors have been experimenting with securitization mechanisms.

Supervisory issues

75. **Securities regulation is of a high standard.** This is despite the fact that some special characteristics of the German legal system make implementation difficult and require the authorities to come up with ingenious solutions to achieve their regulatory objectives. Moreover, the MoF maintains a high standard in identifying and eliminating outstanding weaknesses in securities markets regulation, as represented in the authorities' 10 Point Program.

76. **Notwithstanding the overall positive conclusion, several recommendations can be made.** The resources and staffing of the regulatory bodies of the Länder and their day-to-day supervision of exchange operators will have to keep up with the growing complexity of markets, the range of new products (e.g., energy futures in Leipzig), and the competitive pressures to which exchange operators are subject. As regards the Securities Directorate of BaFin, the authorities are rightly moving to increase BaFin's direct supervision. This may require raising both the numbers and skills of its inspectors, and possibly their salaries. Other recommendations concern improved disclosure to investors in prospectuses and collective investment schemes, and on the reliance placed on collective investment scheme operators to monitor the sales practices of the unlicensed firms that market their schemes.

OBSERVANCE OF FINANCIAL SECTOR STANDARDS AND CODES: SUMMARY ASSESSMENTS

This appendix contains summary assessments of Germany's observance of six international standards and codes applicable to the financial sector. The assessments have helped to identify the extent to which the regulatory and supervisory framework in Germany is adequate to address the potential risks in the financial system, as well as the strength of the underlying regulatory governance practices and market foundations, and the functioning of market infrastructure. The assessments have provided the basis for making recommendations for further strengthening the institutional, legislative and regulatory aspects of the German financial stability framework.

The assessments were undertaken as part of the FSAP mission work undertaken during February and May–June 2003 by a IMF team led by Mr. Tomás Baliño, with Mr. Arne Petersen as Deputy Mission Chief. The FSAP assessors are as follows: Messrs. Göran Lind (Sveriges Riksbank, Sweden) and John Ricketti (Federal Reserve Bank of New York) for the *Basel Core Principles for Effective Banking Supervision*; Richard Britton (Formerly UK FSA) for the *IOSCO Objectives and Principles of Securities Regulation*; Gordon Smith (Formerly of OSFI) and Nigel Davies(IMF) for the *IAIS Insurance Core Principles*; Daniel Heller (Swiss National Bank) for the *Core Principles for Systemically Important Payment Systems* and for the *IOSCO-CPSS Recommendations for Securities Settlement Systems*; Ms. Meral Karasulu (IMF) with sectoral experts, for the *IMF Code of Good Practices on Transparency in Monetary and Financial Policies*.

FATF is assessing Germany's observance of FATF's Principles for Anti-Money Laundering and Combating the Financing of Terrorism (AML/CFT). A summary assessment will be forwarded separately to the Executive Board when completed, likely before the Executive Board meeting.

The assessments were preceded by self-assessments undertaken by German authorities, which were evaluated during the FSAP, by focusing on actual practices and verified through discussion with German authorities, market participants, and industry associations.

Germany's observance of international financial sector standards and codes is very strong, though in each area certain aspects were identified where further improvements would be desirable. The German authorities are aware of the areas that need further reforms and are in the process of addressing them.

Basel Core Principles

A. General

1. The assessment of the Basel Core Principles for Effective Banking Supervision was conducted during February 2003 onsite in Germany. The BCP assessment took part within the framework of the FSAP for Germany. In a follow-up mission in May 2003, various BCP-related issues were further discussed with the authorities.

2. The assessment is based on several sources: (i) a self-assessment by the German authorities; (ii) detailed interviews with staff from the Federal Financial Supervisory Authority (Bundesanstalt für Finansdienstleistungsaufsicht, BaFin) and the Bundesbank; (iii) laws, regulations and other documentation on the supervisory framework and on the structure and development of the German financial sector; (iv) meetings with the Ministry of Finance (MoF), the Ministry of Justice; and the auditing profession; and (v) meetings with the banking industry in the form of the various banking associations as well as with individual institutions representing different categories of banks. The assessors benefited from the full cooperation of the German authorities and received all necessary information.

B. Institutional and Macroprudential Setting, Market Structure Overview

3. The German financial system is dominated by the banking sector, which as of end-2002 comprised 2,365 banks with total assets of €6.4 trillion (over 300 percent of 2002 GDP).[13] The banking sector in turn is made up of three pillars, namely, the private commercial banks, the public sector savings banks and Landesbanken, and the cooperative banking network. The private commercial bank subsector, which holds less than 30 percent of system-wide assets, is relatively concentrated due to the size of the four largest, internationally active banks. This subsector also includes a number of subsidiaries of foreign banks that play an important role in certain markets, notably investment banking. The public sector banks, most of which are effectively owned by state and municipal governments, are divided between 499 Sparkassen (savings banks), which are retail banks, and the 12 Landesbanken, which serve as apex organizations for the Sparkassen and mostly act as international wholesale banks. The cooperative banks number 1,489, although the sector has been consolidating rapidly, and are linked to two apex banks that in many ways are similar to the Landesbanken. Mortgage banks and building and loan associations also operate in all three pillars, and the public pillar includes a number of national and regional development banks.

4. The three pillars are separated by financial structure, legal status and governance systems, but in various combinations they compete against one another in individual markets. Each pillar is supported by a system of regional and federal associations, which, *inter alia,* provide deposit or institutional protection, and monitor the financial condition of their members.

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[13] The insurance sector is the other main component of the system. There are important ownership linkages between the sectors, often via holding companies.

5. The system is on average adequately capitalized; the overall risk-weighted capital ratio (CAR) is estimated at 12.9 percent in 2002. However, the capitalization ratio has been supported by slow growth and, most recently, a reduction in risk-weighted assets. An estimated 4.9 percent of loans were nonperforming at end-2002. Furthermore, difficult trading conditions have brought to the fore the poor profitability displayed by most German banks, which seems to be in part attributable to structural factors affecting both revenue and cost performance; in 2002 the average ROA was only 0.1 percent, and ROE was 2.0 percent.

C. General Preconditions for Effective Banking Supervision

6. The **legal framework** for the banking sector is comprehensive and regularly updated. The judicial system is efficient. There are no indications of political or industry interference in the ongoing supervision of the credit institutions by the responsible authority, the BaFin.

7. The **auditing and accounting** rules applicable to banks generally comply with international standards. The German accounting rules (HGB) comply with the relevant EU Directive. However, there are some differences between HGB and international accounting standards (IAS). HGB provides for hidden reserves, and under certain circumstances accepts valuation of financial instruments within the category of fixed assets at levels above the prevailing market rate, and deviates from IAS in the accounting treatment for tax deferrals and pension funds. While hidden reserves reduce transparency, the conservative treatment does not impair the banks' financial condition. Further harmonization will be achieved in 2005 when it is expected that the whole EU-area will implement IAS for listed companies for their consolidated accounts.

8. The structure of **deposit insurance** schemes is complex. Private banks must participate in a scheme adhering to the European Directive on minimum requirements for deposit insurance of 90 percent of a depositor's deposits, but no more than €20,000 per depositor per bank, but most also belong to a voluntary scheme with more generous coverage. The separate schemes for savings banks and Landesbanken, and cooperative banks serve also to protect against the failure of the individual bank.

9. There is a legal framework for the **liquidation or restructuring** of credit institutions. However, in almost all cases, the resolution of problem banks is being sought within the banking system itself, in fact within the specific banking subsector.

D. Main Findings

10. The supervision of banks ("credit institutions") in Germany is based on a comprehensive system of laws, regulations and other documentation, and implemented with appropriate institutional capacity. The BaFin licenses and is the responsible supervisor of licensed institutions. The BaFin and the Bundesbank (central bank) cooperate closely in the supervision of banks. Supervision relies heavily on the use of external auditors for on-site supervision and the related identification and validation of supervisory information.

- **Objectives, Autonomy, Powers, and Resources (CP 1)**. The framework for the supervision of banks is robust. As explicitly stated in the Banking Act (KWG), the BaFin has the overriding responsibility in supervising banks. In its ongoing supervision, the BaFin is assisted by the Bundesbank. The role of the Bundesbank in this respect is laid out in the law and further explained in a bilateral agreement between the two authorities, and focuses on analytic matters, such as compiling and processing prudential reports, and performing audits. The Bundesbank has no supervisory powers and may not take any supervisory decisions in relation to banks. The BaFin was established in 2002 to consolidate the supervision of banks, insurance companies, securities trading and investment firms, which were previously supervised by different agencies. According to law, BaFin is independent in its supervisory operations, albeit accountable to the MoF. The assessment notes some issues where the scope of the role of the MoF is unclear, for instance its mandate to issue instructions to the BaFin, and the requirement that the BaFin must consult the MoF in matters of internal procedures. Furthermore, although there are clear criteria for the dismissal of the BaFin President, it is not clear whether he can be transferred to positions of equal or higher rank against his will. The BaFin has, so far, been substantially understaffed, but there has been a rapid increase recently in recruiting and the BaFin is now generally able to fulfill its supervisory duties. The assessors judge, and this is corroborated by statements from market participants, that the BaFin staff is competent and has integrity.

- **Licensing and Structure (CPs 2–5)**. There are clear definitions for banks ("credit institutions") and for the various subcategories of banks, such as savings banks and cooperative banks. All credit institutions must be licensed and supervised and the permissible banking activities are defined (CP 2). The conditions for licensing banks are comprehensive, and must be fulfilled also during ongoing supervision (CP 3). The rules for notifying the authorities of intended acquisitions of qualifying participating interests in credit institutions follow international best practices, and the authorities have different measures available if they disapprove of a change in ownership status (CP 4). Compliance with CP 5 on the prenotification of acquisitions and investments is inadequate and the authorities are encouraged to implement rules for prenotification and information, respectively, for significant or risky acquisitions so that the BaFin can judge whether the acquisition is suitable for the bank concerned.

- **Prudential Regulations and Requirements (CPs 6–15)**. Germany complies with the international standards on bank capital (CP 6), credit policies (CP 7), and large exposures (CP 9). On loss evaluation and loan-loss provisioning (CP 8), the authorities are encouraged to strengthen definitions and reporting requirements of non-performing and restructured loans in order to improve the analysis of loan quality. On CP 10 on lending to related parties, the authorities are encouraged to implement additional measures to ensure that banks are not abused by connected and related parties, for example, by setting up dedicated units in banks to manage, monitor and report on such loans and to close loopholes whereby certain connected parties may engage in self dealing. On country risk, CP 11, the revised Country Risk Regulation introducing more detailed and more frequent reporting of banks' positions entered into effect on August 15, 2003. On CP 12, market risks, the present rules and supervisory implementation represent international best practices. On CP 13, other risks, the authorities are encouraged to introduce Guidance papers (or similar) to ensure that banks have appropriate risk management practices and systems in relation to their size, complexity, and risk profile for liquidity, overall interest rate, and operational risks. On CP 14 on internal controls, the authorities should require that the internal audit function report directly to the Advisory Board and not to the Management board. The assessors found that Germany fully adheres to the international standards for mitigating money laundering in banks (CP 15).

- **Methods of Ongoing Supervision (CPs16–20).** CP 16 deals with the conduct of on-site and off-site supervision. While the assessors find that the present system is broadly satisfactory, the supervisors need to be better positioned to provide more proactive supervision since they may sometimes only learn about negative developments in banks at a late stage. More active involvement in on-site supervision by the BaFin and the Bundesbank, which is already planned following a further increase in the supervisory staff, will lead to more direct contacts with the supervised entities and thus to enhanced insights into the current activities of banks and immediate prospects. On off-site reporting requirements, CP 18, the authorities are recommended to implement, as they are currently working to develop, a structured framework for peer review, early warning indicators or similar analyses of prudential and other bank data, including qualitative information. Concerning CP 20 on consolidated supervision, the authorities are recommended to broaden the scope of group-wide supervision to include non-consolidated entities and holding companies.

- **Information Requirement (CP 21).** Germany adheres to international standards.

- **Powers of Supervisors (CP 22).** The supervisors have a broad range of remedial measures at their disposal to counter weaknesses in banks, and they use these measures frequently. There is an implicit presumption in the legislation that adequate remedial action be taken promptly, taking the specific circumstances into account. However, in order to further strengthen the power of the BaFin in this regard, the authorities are encouraged to make this presumption more explicit, while maintaining scope to use discretion.

- **Cross-Border Banking (CPs 23–25).** On CP 24, host country supervision, the authorities are recommended to amend the law so that the supervisor may refuse to license German banks' subsidiaries and branches located in countries where the supervisory authority is inadequate or unwilling to cooperate, or share information with the German authorities.

Recommended Action Plan to Improve Observance of the Basel Core Principles

Reference Principle	Recommended Action
CP 1(2) Independence	Clarify scope of political powers in relation to BaFin.
CP 5 Investment criteria	Strengthen rules for prenotification of acquisitions.
CP 8	Strengthen definitions and reporting requirements of nonperforming and restructured loans.
CP 10 Connected and related lending	Strengthen rules to grant and to monitor loans to related parties.
CP 13 Other risks	Issue guidance rules for sound practices for liquidity, interest rate, and operational risks.
CP 16 On-Site and Off-Site supervision	Implement measures to ensure proactive identification and treatment of weaknesses in institutions.
CP 18 Off-Site supervision	Establish a structured framework for systemized analysis.
CP 20 Consolidated supervision	Widen scope of group-wide supervision to include nonconsolidated entities and holding companies
CP 22 Remedial measures	Introduce explicit rules to ensure prompt corrective action, in particular in severe cases.
CP 24 Host country supervision	Amend legislation so that BaFin may refuse licensing branches when home country supervisory cooperation cannot be guaranteed.

E. Authorities' Response

11. The German authorities found that the BCP assessment in general gives a fair representation of banking regulation and supervision in Germany. However, in a few cases they found that the assessments are overly strict and do not adequately take into account the specific German practices and traditions. Moreover, they stressed that some of the above recommendations could give a misleading impression, since the underlying principles to which they referred had been assessed as fully implemented.

12. Responding to the IMF's suggestion with regard to the relationship between the Ministry of Finance and the BaFin (CP1), the Ministry of Finance plans to lay down the criteria of its legal and supervisory control (Fach- und Rechtsaufsicht; § 2 FinDAG) in written form.

13. As concerns banks' investments and acquisitions (CP 5), by law, German banks' may not (without permit from the BaFin) invest in more than 15 percent of own funds in any individual company and not more than 60 percent of own funds in aggregate. For investments resulting in a qualifying participation in a domestic financial institution, a BaFin permit is always required. Although there is no requirement for banks to notify the BaFin of investments below these thresholds, such investments will be examined in the annual audits of the banks. According to the KWG, Section 25a, the managers of a bank are responsible that there are adequate systems to handle and monitor any risks of the banks, which includes acquisitions and investments. Should the auditor find that investments have been made in contradiction to Section 25a, the managers are collectively accountable for this. Given these instruments to limit risks, the authorities believe that the assessment of "materially non-compliant" is not justified.

14. Regarding loss evaluation and loan loss provisioning (CP 8) the authorities believe that current practice, relying on a detailed loan by loan assessment in the context of the annual external audit is appropriate. Moreover, they note that there is no international consensus on the use of objective criteria such as a 90 day overdue rule so that today the respective ratios are not comparable on an international level. Thus, they would not move to adopt such a rule unless it emerged as an international consensus, in the context of Basel II.

15. Bank lending to affiliated parties (CP10) normally requires a decision of the management board, in which the beneficiary may not vote. It also requires the concurrence of the bank's supervisory board. The annual audits will examine that loans to affiliated parties are granted in line with the rules, for instance, that they are on market terms, and the management board is accountable for any deviations. Hence, the authorities believe that there is adequate protection against abuse.

16. The German authorities do not agree with the IMF's suggestion that they should require the internal auditor to report directly to the supervisory board and not to the management board (CP 14). The IMF's position does not comply with the German basic approach stating that the internal audit function is an essential controlling tool for the bank's management. The IMF's suggestion would therefore imply a change of reporting lines that is not considered useful. According to the "Minimum Requirements for the Internal Audit Function of Credit Institutions," the internal auditor has to report directly to the supervisory board only in the case of serious findings and if management does not inform the supervisory board or does not decide to take appropriate measures.

17. The German authorities do not see a need for a direct supervision of financial holding companies at the moment (CP 20). Even if financial holding companies as such are not subject to banking supervision, BaFin has direct access to financial holding companies in their function as head of financial holding groups. With regard to the financial situation of the group, it should be noted that the financial holding is explicitly included in the group-wide monitoring.

18. On remedial action against bank problems (CP22), the assessors acknowledge that the German supervisors possess ample means to address weaknesses in banks and that they use them in practice. The only criticism from the assessors is that there are no explicit rules forcing the supervisors to take corrective action within a limited time frame in certain situations of severe bank problems. However, there is a general legal obligation and a strong corresponding expectation that actions by the German public authorities must be timely, adequate, and proportionate. Should the BaFin, for example, unduly delay actions, this would not only be open for criticism, but could also render the respective supervisory measures illegal or represent a breach of the duty of office. In addition, the authorities believe that overly prescriptive rules could be counterproductive because they would reduce the room and incentives for taking discretionary decisions, which are better adapted to the specific circumstances, especially as the correct use of discretion is determined by general rules and legal limits.

IAIS Insurance Core Principles

A. General

19. This assessment examines Germany's observance of the International Association of Insurance Supervisors (IAIS) *Insurance Core Principles*. The assessment involved the review of an extensive self assessment prepared by the Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht or BaFin), comparison with the Core Principles and the Core Principles Methodology, and a review relevant laws governing the insurance sector in Germany. In addition, through the period of February 5–18, 2003, a series of meetings and discussions were held in Germany with officials from the BaFin, the Ministry of Finance (MoF), the insurance industry association (Gesamtverband der Deutschen Versicherungswirtschaft - GDV), the actuaries association (Deutsche Aktuarvereinigung – DAV), private insurance companies, auditors, banks, and other financial institutions. The supervisory staff at the BaFin cooperated fully with the assessment, providing answers to an extensive questionnaire, preparing the self assessment against the IAIS Core Principles, meeting additional requests for information, and being available for a wide variety of meetings.

B. Institutional and Macroprudential Setting—Overview

20. In 2002 there were 1825 insurance companies operating in Germany. There were 690 insurance companies under federal supervision, including 133 life insurance companies, 56 private health insurance companies, 265 property and casualty companies, 46 reinsurers, and 190 pension and funeral expenses companies. By legal form stock companies account for 72 percent of premium income, mutual insurance companies 21 percent, institutions under public law 6 percent, and the branches of foreign companies 1 percent. The insurance companies not under federal supervision are small insurance companies that are supervised by the states. These companies operate in only one state and in aggregate represent about 2 percent of the market.

21. The German life and non-life insurance and reinsurance sector is large (with total assets equivalent to about two thirds of GDP), and includes a number of companies of international importance. In terms of premium volumes, Germany ranks fourth in the world in 2001, with about five percent of the global market. In terms of insurance density (premiums per capita), Germany ranks sixteenth in the world, with a premiums to GDP ratio of around 6½ percent.

22. Much of the life insurance business is concerned with savings and annuities, with approximately half of in-force business being endowment insurance. Endowment insurance covers a set of specified risks (such as death) for a contracted period, at the end of which the sum assured is paid back to the policyholder along with all the bonuses accumulated during the term of the policy. Most endowment policies in Germany require policyholders to pay a regular premium, in exchange for a guaranteed rate of return plus a bonus each year that is linked to the profits and investment performance of the insurer. In practice, the maximum technical interest rate used for calculating mathematical provisions against each policy acts as a minimum rate for companies in setting their guarantees, above which companies compete on returns (the amount of additional future returns, i.e., profit participation, is based

on expectations and not guaranteed). The sharp decline in equity markets during 2001 and 2002 has reduced the investment yields of companies that are invested in equities, and this has impinged on their ability to satisfy the profit participation without consuming hidden reserves.

23. German insurance companies have benefited from a generally very stable macroeconomic environment. However, overall economic growth over the last decade has been weak, despite the impetus provided by reunification early in the 1990s, and from mid-2000 the economy entered into a prolonged "growth recession." This period coincided with a world-wide slump in equity prices, which was especially pronounced in Germany; German insurance companies were adversely affected through the fall in the value of their equity holdings.

24. The German insurance industry continues to experience difficult times, from a combination of a sharp increase in claims across a broad range of business lines and historically low returns on investments. For the largest insurers, 2002 was one of their worst years in decades. This was mainly because of their exposure to asbestos related claims in their U.S. reinsurance business, coupled with the weak performance of major German banks, in which they hold substantial equity positions. The property and casualty sector was particularly affected by increased claims against asbestos and director and officer liability claims in the wake of major corporate scandals in the United States, as well as payouts associated with flood damage insurance in Germany. The sector is, however, reinsured, and the peak effects of these claims manifest themselves in the reinsurance sector. All insurance companies faced sharply lower profits arising from low returns on fixed income securities and equity holdings due to the decline in the stock market and the low interest rate environment.

C. General Preconditions for Effective Insurance Supervision

25. The supervision of insurance companies in Germany is based on the EU Directives and German insurance law, ordinances, codes and circulars. The legal requirements governing insurance companies originate in both company law and insurance law. Those parts of the requirements that originate in company law only apply to stock companies, partly to mutual companies, and not to insurance companies established under public law. In Germany, the supervision of insurance falls under the jurisdiction of the BaFin and the MoF. The principal legislation for the supervision of insurance is the Insurance Supervision Law. The supervision of reinsurers is more limited in scope than that applied to direct writers. The legal structure in Germany operates effectively, and the supervisor is able to place reliance on general corporate laws, specifically the Stock Corporation Act or Aktiengesetz – AktG and the Commercial Code or Handelsgesetzbuch, HGB.

26. The auditing and accounting professions in Germany are well developed and follow best international practices. The auditing and accounting rules applicable to insurance companies generally comply with international standards. Further harmonization will be achieved in 2005 when the whole EU area will implement IAS. At present there are some deviations between the German rules and the IAS, such as on "hidden reserves," pension funds, and tax deferrals. Adoption of IAS may increase the level of volatility in reported results, which could lead to a rise in the cost of capital. The actuarial profession is large and

well-developed in Germany, with the actuarial association (DAV) reporting over 2000 professional members.

D. Main Findings

27. The supervisory process in Germany can be characterized as a rule-based system that enforces a significant amount of conservatism and legal requirements. The accounting and actuarial conventions are conservative and for the most part the companies are limited in the amount of risk that they can assume. The requirements of BaFin regarding internal controls and risk management systems are forcing companies to improve on their internal processes, but a good portion of the industry and BaFin have yet to fully implement best international practices regarding methodologies and processes of good risk management.

- **Organization of an Insurance Supervisor (CP 1)**. BaFin is currently understaffed (partly as a result of the employee losses that occurred when they moved to Bonn) and unable to supervise to the level of their own expectations. For example, their intention is to inspect insurance companies at least every three years. They are, however, not able to do so, and most of the non-problem companies are on a de-facto 10-year cycle. BaFin needs additional resources to attract, train, and retain suitably qualified and experienced staff. Additional resources will permit the development of a more sophisticated risk-based approach to supervision, placing more emphasis on the evaluation of underlying processes. A cornerstone of effective supervision is the independence of the supervisor from political interference, whether perceived or actual. To achieve this independence requires the ability to issue legally binding instruments and decisions, which is questionable in some areas of insurance supervision. BaFin is able to discharge its day-to-day supervisory responsibilities without undue influence from any external party or agency, but would benefit from more responsibility for the drafting and promulgation of regulations (in consultation with all interested parties).

- **Corporate Governance (CP 4)**. BaFin should possess more powers (in collaboration with the relevant ministry) to issue regulations on corporate governance and internal controls in all insurance undertakings (including mutuals).

- **Reinsurance (CP 10)**. The supervision of reinsurers by BaFin is more limited in scope than that applied to other types of insurance companies. It is BaFin's stated policy to move to full supervision of these companies on transposition of the proposed EU Reinsurance Directive, which will be some years away. Later in 2003, the IAIS will adopt a standard for the supervision of reinsurers and an updated set of Insurance Core Principles which will apply to reinsurers. Against this background, BaFin is urged to swiftly enhance the supervision of these systemically important companies, without waiting for the EU Directive.

- **Market Conduct (CP 11)**. There is also room for improvement in ensuring that market conduct issues are better handled at the point of sale when the agent is actually selling the product. This is particularly relevant with respect to unit-linked products, which may not be suitable for all customers (from a risk tolerance perspective) and which may be sold on the basis of unrealistic expectations.

- **Inspection (CP13).** The inspection process could be improved by reducing the extended periods between inspections for most companies and by further developing a more sophisticated risk based approach to supervision. Such an approach would ensure that the company has sufficient systems, processes, expertise and controls to adequately quantify, monitor, and manage important risks. It would also ensure that the company has the financial capacity to absorb these risks.

Recommended Action Plan to Improve Observance of IAIS Insurance Core Principles

Reference Principle	Recommended Action
CP1. Organization of an Insurance Supervisor	• More clearly define the balance between independence and accountability, and the demarcation of regulatory responsibilities between BaFin and MoF. A better procedure should include regular periodic reporting to MoF on the discharge of responsibilities under the empowering legislation, with the MoF devolving responsibility for the drafting and promulgation of regulations (in consultation with all interested parties) to BaFin. • Ensure complete operational independence, including sufficient financial resources to attract, train and retain suitably qualified and experienced staff.
CP4. Corporate Governance and Internal Controls	• Extend the scope of the Corporate Governance Code to mutual insurance companies under BaFin's jurisdiction. • Provide BaFin with legal authority to impose specific internal control and corporate governance provisions for insurance undertakings.
CP10. Reinsurance	• Implement a system of risk-based supervision for all reinsurance companies.
CP11. Market Conduct	• Ensure adequate supervision of market conduct issues at point of sale and beyond.
CP 13. Inspection	• Ensure implementation of timely on-site inspection program for all insurance undertakings. • Further develop a risk-based approach to supervision.

D. Authorities' Response to the Assessment

28. The authorities were in broad agreement with the assessment. On Principle 1, and the issue of independence, the authorities took note of the fact that the Core Principles on banking, insurance and securities have different wordings and may be interpreted in different ways, and insisted that the overarching legislation (Grundgesetz and Gesetz über die Bundesanstalt für Finanzdienstleistungsaufsicht) applies equally to all three sectors. Where the federal administration does not act directly but by special statutory bodies, the Grundgesetz (Basic Law) requires the legal and supervisory control (Fach - und Rechtsaufsicht) of the statutory body by the federal administration. Furthermore, the Basic Law requires that decisions by the executive branch must not be taken by bodies outside of parliamentary control. For BaFin, this control is guaranteed via the legal and supervisory control by the MoF, which in turn is controlled by the Bundestag. The authorities understand the term "legal control" to mean that the MoF has to assure compliance with material law, while "supervisory control" aims to secure the effectiveness of the fulfillment of tasks, which

implies that supervisors must be accountable to the public (to parliament through MoF) for their supervisory actions. The authorities stressed that BaFin is operationally fully independent. They also noted that the three former supervisory offices that form the basis of BaFin's three directorates have different legal backgrounds, cultures, and traditions, and it will be a task for the near future to reconsider current practices, to align cultures, and to gain the desired synergies from the creation of a unitary supervisory authority.

29. As regards Principles 1 and 13, BaFin is recruiting highly qualified new staff at present. The authorities are therefore optimistic that with the additional staff BaFin will be able to ensure that on-site inspections are carried out in shorter intervals. Within the framework of Solvency II, internal minimum requirements with regard to internal risk models of insurance undertakings are to be elaborated as soon as possible.

30. In relation to reinsurance supervision, the authorities indicated that they will urge the EU to put work in this area on the fast track. However, so far they do not believe it appropriate for Germany to introduce new rules in this area until the EU has adopted a common position. In the light of new developments (the final proposal for a reinsurance directive will probably be delayed) MoF has decided to introduce the requirement of authorization of reinsurance undertakings, including solvency requirements. A draft will be proposed to the legislator in due course. With the envisaged legislation a decisive step towards full compliance with IAIS draft principles and standards on supervision of reinsurers will be taken.

31. As regards Principle 11 (market conduct), the authorities agreed that sometimes it may happen that consumers are sold products that do not meet their requirements or that unrealistic expectations about product profitability are created. However, they pointed out that Article 36 of the Directive 2002/83/EC concerning life assurance of November 3, 2002 determines the minimum information a consumer must receive before he concludes a unit-linked life insurance contract. Germany has transposed these regulations into the annex to the VAG, part D, sections I and II. In accordance with sub-section 3 of this provision, the Member State may require the insurance undertaking to furnish additional information only "if it is necessary for a proper understanding by the policyholder of the essential elements of the commitment." The authorities stated that further regulations concerning consumer information are incompatible with EC law.

IOSCO Objectives and Principles of Securities Regulation

A. General

32. The assessment of the IOSCO Objectives and Principles of Securities Regulation was conducted during February 2003, onsite in Germany, within the framework of the FSAP for Germany. The assessment used for reference the February 2002 version of the Objectives and Principles of Securities Regulation and a Guidance Note issued by the IMF and World Bank.

33. The assessment focuses on the powers and capabilities of the various responsible regulatory bodies. It is based on several sources: (i) a self-assessment by the German authorities; (ii) detailed interviews with staff from the responsible regulatory agencies; (iii) relevant laws, regulations and other documentation; and (iv) meetings with the Ministry

of Finance, the Bundesbank, market participants, trade associations, research institutes and the operator of the Frankfurt Stock Exchange and Eurex, Deutsche Borse AG. The assessors benefited from the full cooperation of the German authorities and received all necessary information.

34. In the Federal Republic of Germany, regulation of securities (and derivatives) markets and the financial intermediaries active in them is undertaken by several statutory authorities. This assessment concentrates on two authorities: the Federal Financial Supervisory Authority (BaFin), responsible for the regulation of financial intermediaries and the monitoring of market transactions throughout the Federal Republic; and the Exchange Supervisory Authority (ESA) of Hesse which is responsible for supervising the dominant stock and derivatives exchanges in Germany, both of which are located in Frankfurt.

B. Capital Market and Structural Overview

35. Capital markets in Germany are large and generally sophisticated, although certain segments are less well developed, and the financial sector as a whole is dominated by the banks. By far the most important stock exchange is in Frankfurt, but a regional exchange infrastructure exists for niche products (Stuttgart, for example, is the center for the market in covered warrants). Around 30 percent of trading activity in equities takes place over-the-counter (OTC). Most bond activity—mainly trading in German government bonds (Bunds)—also takes place in the OTC market, with a growing proportion believed to be traded though commercially provided electronic trading platforms such as MTS. There is also a small "grey capital market" in which a variety of products are offered by unlicensed individuals, often in the form of "participations" and with no requirement to issue a prospectus.

36. German retail investors continue to have an appetite for risk, although recent conditions have been difficult. The initial success of the Neuer Markt in the 1990s, the privatizations of major German companies, and the current demand for covered warrants may suggest a deepening of the "equity culture." However, the DAX share price index has fallen substantially from its peak, and the Neuer Markt was closed. Nonetheless, the number of individuals holding shares and/or mutual funds (which are important) has stabilized at about 11.5 million (close to 15 percent of the total population) at end-2002.

C. Regulatory Structure and Practices

37. The law governing the structure of securities regulation in Germany makes a distinction between the licensing and regulation of market intermediaries, and the regulation of stock and derivatives exchanges. The first function is carried out by BaFin, the newly unified financial sector supervisory agency, which also monitors all securities and financial derivatives trading in Germany for market manipulation and insider dealing.

38. Regulation of stock and derivatives exchanges (to which has recently been added alternative trading systems) is the responsibility of the Länder. Each relevant Land with a stock or derivatives exchange has an Exchange Supervisory Authority (ESA) which approves and supervises the local exchanges, their members when trading on the exchange, and trading and settlement which takes place by means of the facilities of those exchanges. Market

intermediaries whose sole business is the broking of collective investment schemes are also licensed and regulated at the Land and not the federal level.

39. Clearing and settlement is subject to its own safe custody legislation. The German Central Securities Depository (CSD) is operated by Clearstream Banking Frankfurt AG, part of the Deutsche Borse AG group. As a bank, it is supervised by BaFin in cooperation with the Bundesbank. Clearing and settlement of derivatives transactions is handled by Eurex Clearing, which operates as a central counterparty, a role it is in the process of extending to the cash equity market. Clearsteam was reviewed separately for compliance with the CPSS/IOSCO Recommendations for Securities Settlement.

D. General Preconditions for Effective Securities Regulation

40. The general preconditions for effective securities regulation in German are largely met. Oversight over enforcement of accounting standards could be enhanced; a process has been initiated to this end. The legal system generally supports regulators in their decision making and enforcement work, although sometimes it appears to complicate efficient and timely regulation. The bankruptcy law appears to be comprehensive and effective.

E. Main Findings

41. The standard of securities regulations in Germany is very high. However, some refinements are possible; the inclusion of a recommendation related to a particular principle does not imply that that principle is not fully observed.

- **Principles Relating to the Regulator (1-5)**. The key issue in the assessment was the relationship between BaFin, the ESAs of the Länder, and the responsible Länder ministries of federal ministries. The fact that ESAs are part of Länder ministries of economics or finance raised concerns regarding their independence. Staff noted some potential issues in the relationship between the Federal Ministry of Finance and BaFin surrounding the appointment and dismissal of the President and some residual powers of the Ministry to intervene in setting BaFin's internal procedures[14].

  At the Land level, although in the time available staff could not carry out a detailed review, it did examine staffing levels. The structure of exchange supervision and the allocation of powers are currently being debated. In this connection, staff observe that divided responsibilities can, in times of stress, give rise to gaps in supervision.

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[14] Although the theme of this comment is consistent through each of the other assessments (of Basel Core Principles and IAIS Principles), the focus of each is slightly different, which reflects different emphases in the construction of the Principles and the guidance give to assessors. It also arises from the practical reality of the relationship between each Directorate of BaFin and the Ministry as it emerged in discussions with BaFin staff and through reviews of the sector specific legislation which governs the operation of that relationship.

- **Principles of Self-regulation (6-7).** There are no self-regulatory organizations in the securities markets in Germany. Regulation of market intermediaries is carried out by BaFin, the statutory regulator. The German exchanges are entities of public law and are part of the indirect state administration of the Länder, acting solely in the public interest and according to the principles of public law, the operating companies, such as Deutsche Borse AG, are in the commercial private sector.

- **Principles for the Enforcement of Securities Regulation (8-10).** BaFin and the Exchange Supervisory Authorities have a comprehensive range of enforcement powers, and have a demonstrable record in key areas such as insider trading where its referrals to the public prosecutors have a good success rate. In day-to-day supervision, there is a heavy reliance on reports prepared by external auditors appointed by the licensees. BaFin staff does not normally undertake routine inspections themselves. Although this approach is relatively unusual, the assessment found no evidence that it results in inadequate standards of supervision.

- **Principles for Cooperation in Regulation (11-13).** Cooperation between authorities is a well-established practice, and is mandated in the general administrative law as well as in the Banking Act, Securities Trading Act and the Exchange Act. BaFin is empowered to act on behalf of the state authorities in international matters; the exchanges are also permitted to exchange information with foreign exchanges. Constraints on sharing information conform to international norms. BaFin has signed numerous memoranda of understanding (MoUs) with foreign regulatory authorities and the Committee of European Securities Regulators. Informal mechanisms may also be used to exchange information.

- **Principles for Issuers (14-16).** New takeover legislation largely embodies international best practice on the provision of information to the shareholders of a target company, and the price regime (notably, that an offer must be at least as high as the price paid by the bidder in the preceding three months). New legal obligations on the disclosure of significant shareholdings, starting at 5 percent, and share dealings by management, supervisory board members, and their immediate families provide added protection. Battles for corporate control are not left entirely to shareholders: the supervisory board of the target company (on which employees typically have significant representation) can permit managements' attempt to frustrate a bid.

- **Principles for Collective Investment Schemes (17-20).** The supervision of collective investment schemes and their operators is generally of a high standard. The authorities intend to review legislation on the powers of the Länder to regulate brokers of collective investment schemes in order to enhance investor protection.

- **Principles for Market Intermediaries (21-24).** The supervisory system has generally fully adequate powers in this area. However, matters related to these principles illustrate how the German legal system can sometimes complicate the operations of the regulator: BaFin can, in practice, issue guidelines only on how it interprets the relevant law, which is normally sufficient, for example, for BaFin to issue administrative fines for non-compliance. When the law either does not contemplate a new situation or public law does not apply, such as the contractual details of the firm/client relationship that are the province of civil law, BaFin has to depend on the willingness of trade associations, for example, to impose voluntary codes of practice on their members.

- **Principles for the Secondary Market (25-30).** The ESAs have established detailed and nondiscriminatory criteria for the approval of an exchange. These criteria are available on request for an applicant seeking to set up an exchange.

Recommended Action Plan to Improve Observance of the IOSCO Objectives and Principles of Securities Regulation

Reference Principle	Recommended Action
The regulator (P1-5)	P1. The Finance Ministry and BaFin to bring the 'grey market' under effective supervision. P1. The Finance Ministry to review the current distribution of responsibilities for exchange supervision between BaFin and the Länder.
	P2. The Finance Ministry to clarify and narrowly define its power to give instructions to the President of BaFin.
	P3. States to review the staffing of the ESAs to establish whether the numbers and expertise of staff employed and the funds available to them for IT etc are sufficient to properly monitor the exchanges and their members having regard to current market trends.
	P3. States to review the powers of the ESAs to effectively supervise exchanges, members and operators to identify and correct weaknesses.
	P3. The Finance Ministry to transfer to BaFin more power to set fees.
	P5. ESAs to make staff reporting of personal transactions mandatory.
Enforcement of Securities Regulation (P 8–10)	P10 BaFin to significantly increase the number of audits with participation by its staff or Bundesbank staff.
Issuers (P 14–16)	P14. BaFin/ESAs to consider offering additional guidance on the materiality provisions in prospectus requirements.
	P16. The Finance Ministry to proceed with its intention to strengthen the function of auditors and to give BaFin the power to reject the auditor proposed by any listed company.
Principles for Collective Investment Schemes (P 17–20)	P19. BaFin to consider offering additional guidance on the disclosure of material information relating to the fund, the operator, or its management.
Principles for the Secondary Market (P 25–30)	P25. ESAs and exchanges to set up formal procedures for new product approval.
	P26. ESAs that do not regularly monitor the actual performance of the operator of their exchange to do so.

F. Authorities' Response

42. The authorities provided a detailed response to the assessment which dealt primarily with the issue of the independence of BaFin, and made a number of more detailed comments. Staff have accepted some of those comments and modified the text accordingly.

43. On the issue of independence (IOSCO Principle 2), the authorities explained that, where the federal administration does not act directly but by special statutory bodies, the German Basic Law (Grundgesetz) requires the legal and supervisory control (Fach - und Rechtsaufsicht) of the statutory body by the federal administration. Furthermore, the Basic Law requires that decisions by the executive branch must not be taken by bodies outside of parliamentary control. For BaFin, this control is guaranteed via the legal and supervisory control by the MoF, which in turn is controlled by the Bundestag. The authorities understand the term "legal control" to mean that the MoF has to assure compliance with material law, while "supervisory control" aims to secure the effectiveness of the fulfillment of tasks, which implies that supervisors must be accountable to the public (to parliament through MoF) for their supervisory actions. As regards the ESAs, these authorities are part of the respective Länder Ministries of Economics or Finance, which are ultimately controlled by the Länder parliaments.

44. The authorities state that BaFin is operationally independent, as required by IOSCO Principle 2, in that the MoF refrains from giving instructions to BaFin regarding the ongoing operational functions or interfering in supervisory measures against individual institutions. However, in monitoring BaFin's compliance with the law and ensuring the suitability of its administrative actions, the MoF has to check complaints and petitions by customers, investors, shareholders and institutions against BaFin addressed to it.

45. On Principle 14, the authorities have observed that Germany has fully implemented all EU prospectus directives (now combined in Directive 2001/34/EC).

46. On Principle 19, the authorities questioned staff's recommendation that there be an explicit requirement that CIS operators disclose material legal proceedings in any prospectus. It is claimed that this is not a requirement of IOSCO or any international standard, and that there is a general requirement in place in Germany under the Investment Company Act for CIS to disclose materially relevant information. However, IOSCO makes a clear connection between disclosure by issuers generally and disclosure by CIS, and therefore in Germany (where issuers are specifically required to make such disclosures) it is appropriate to recommend consistency of treatment between the two groups.

Payment and Securities Settlement Systems

I. Payment systems

A. General

47. Germany has highly developed modern payment systems that are suitable to meet the needs of its banking system. Historically, the Bundesbank has played a leading role as operator of wholesale as well as of retail payment systems. $RTGS^{plus}$ is currently the only systemically important payment system in Germany.

48. Preparation of the report has been greatly facilitated by a thorough self-assessment of $RTGS^{plus}$ by the Bundesbank, the provision of all necessary documentation, and the ready cooperation of the authorities.

B. Institutional and Market Structure

49. RTGS^{plus} is the real-time gross settlement system that is owned and operated by the Bundesbank. Due to its importance in the interbank payment market, it is the only systemically important payment system in Germany. The system enables the electronic exchange of credit transfers denominated in euro between two RTGS^{plus} participants with immediate settlement in central bank money. The system also operates as the national TARGET component.[15] As of February 2003, 74 banks participated directly in RTGS^{plus} and around 8,500 banks can be reached indirectly in RTGS^{plus}. RTGS^{plus} has a volume share of nearly 50 percent of all domestic and cross-border payments in the TARGET system.

50. In addition to the payment systems of the Bundesbank, private sector giro networks are operated by (most) commercial banks, savings banks and cooperative banks. These networks mostly settle retail transactions. Cross-network payments are exchanged and cleared either bilaterally or via the Bundesbank.

C. Main Findings

- **Legal Foundation (CP I)**. The Bundesbank Act and other German legislation, the Protocol on the Statute of the European System of Central Banks and contractual agreements provide the legal foundation for RTGS^{plus}. The business relationship between financial institutions and the Bundesbank is based on German civil law.

  The German Insolvency Code guarantees the protection of payment orders beyond the date on which insolvency proceedings are initiated. There is no zero-hour rule. In addition, the Insolvency Code addresses netting according to the Settlement Finality Directive.

- **Understanding and Management of Risks (CPs II-III)**. A detailed description of the system design, the timetable for daily payment processing and the liquidity risk management procedures readily available to participants. Participants are kept fully informed.

  A number of admission tests have to be completed before authorization is given for participation in RTGS^{plus} to ensure that new participants are adequately equipped. Since there is no delay between a payment's acceptance by the system for settlement and its final settlement, the payee does not incur any credit risk. There is also no credit risk for the Bundesbank because it provides credit only on a collateralized basis. Participants can easily alter the state and the location of a queued payment and have real-time access to all relevant settlement data.

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[15] TARGET (Trans-European Automated Real-time Gross Settlement Express Transfer) is the system that links the national RTGS systems of the European Union and the EPM of the ECB.

- **Settlement (CPs IV–VI).** RTGS^{plus} is a real-time gross settlement system. Final settlement is always provided as soon as RTGS^{plus} has accepted a payment. The settlement asset is central bank money.

- **Security and Operational Reliability, and Contingency Arrangements (CP VII).** RTGS^{plus} has been designed as a high-availability, secure payment system, using a variety of organizational as well as technical measures, including, for example, standards for the maximal downtime of the system and secondary site features.

- **Efficiency and Practicality of the System (CP VIII).** RTGS^{plus} operates on the basis of cost recovery. The investments are written off at standardized rates. The operating capital is remunerated. RTGS^{plus} was developed in close cooperation between the Bundesbank and the banking industry. Hence, it can be assumed that the system meets the needs of the participants. The queues are relatively small in RTGS^{plus}; usually less than 5 percent of the total value settled on an average day is queued. Liquidity in RTGS^{plus} is relatively high by international standards, as the current reserve requirement regime prevents the average bank from reaping the full benefits of the sophisticated settlement algorithms of RTGS^{plus}.

- **Criteria for Participation (CP IX).** The RTGS^{plus} terms and conditions provide for both direct and indirect participation in accordance with TARGET Guidelines.

- **Governance of the Payment System (CP X).** The Bundesbank is the owner and operator of the RTGS^{plus} system. In the Bundesbank, one department is responsible for all questions concerning RTGS^{plus} processing and development, supported by an advisory committee. The Audit Department provides the Executive Board, as the supreme RTGS^{plus} management level, with an objective and independent estimate of the RTGS^{plus} status in terms of security, cost-effectiveness and orderliness. The oversight of the payment system is carried out by a section of the Central Office Department of Payments which has no functional or staffing involvement in the development and operation of RTGS^{plus}.

D. Central Bank Responsibilities in Applying the CPs

Objectives. The Bundesbank Act provides the Bundesbank with a role as operator and overseer of payment and clearing systems. The role of the Bundesbank in payment system operations and oversight is fully disclosed and published.

Oversight. The governance structure of the relevant units of the Bundesbank ensures the adequate oversight of the RTGS^{plus}. In the area of payment system oversight, the relationship between financial agencies is publicly disclosed in a variety of legislative acts and regulations.

Cooperation. The Bundesbank, as a member of the Eurosystem, is party to a Memorandum of Understanding (MoU) on cooperation and information sharing between payment system overseers and banking supervisors in Stage Three of the Economic and Monetary Union. In the area of risk analysis of IT applications and systems, the Bundesbank cooperates with the Federal Office for Information Security (BSI). At the international level the Bundesbank is also a member of the Committee on Payment and Settlement Systems (CPSS) at the Bank for International Settlements.

Recommended Actions to Improve Observance of CPSS Core Principles and Central Bank Responsibilities in Applying the CPs

Reference principle	Recommended action
CP VII	The disaster site for RTGS^{plus} is located relatively closely to the primary site. The Bundesbank should investigate the options of having a disaster site in a more distant location.
Efficiency and practicality of the system	
CP VIII	Due to current reserve requirements and the banks' intentional decision to inject more liquidity than the system needs, the average bank does not reap the full benefits of the sophisticated settlement algorithms of RTGS^{plus}. Based on the good availability of data on the settlement process of RTGS^{plus}, the Bundesbank should perform a study on how the system would perform under lower reserve requirements.
Central Bank Responsibilities in applying the CPs	
Responsibilities A-D	The Bundesbank might want to consider publishing a policy paper on its role and objective in the payment system. Such a publication would be a summary of a number of already published articles and statements. Most G-10 central banks have recently published such policy papers.

E. Authorities' Response

51. The authorities were in broad agreement with the assessment.

II. Securities Settlement Systems

A. General

52. This assessment covers the compliance of Clearstream Banking AG Frankfurt (CBF) with the CPSS-IOSCO recommendations for securities settlement systems (RSSS). The assessment benefited greatly from the extensive and thorough written input that the Bundesbank provided, the open, collegial and competent cooperation of the Bundesbank staff, and discussions at Deutsche Börse AG and with commercial banks.

53. Some issues relating to the functioning of the EUREX derivatives clearing house were addressed as part of the FSAP. Because CPSS-IOSCO is only now developing recommendations on central counterpart organizations such as EUREX, EUREX will not be discussed further in this summary assessment.

B. Institutional and Market Structure

54. CBF is Germany's central securities depository (CSD). It received the permission from BaFin's predecessor to operate a bank in 1949. The Deutsche Börse AG operates the Frankfurt Stock Exchange and the Eurex Exchange and owns all shares of CBF as well as those of the international CSD Clearstream Banking SA Luxembourg. CBF outsources its information technology processing and data center services, including its domestic and international collective safe custody business, to Deutsche Börse Systems AG, which is a subsidiary of Deutsche Börse AG. CBF also outsources the processing of its international noncollective safe custody processing and the related information technology processing and development to Clearstream Services.

55. Ownership of securities is transferred by book entry in the case of instruments in collective safe custody, or by physical delivery of the certificates in question. All business transacted on stock exchanges, whether on the floor or via the electronic trading system of Deutsche Börse AG (XETRA), is automatically forwarded for processing at CBF.

56. In 2001, CBF cleared 105 million transactions. It had 422 members, of which 321 were banks (279 domestic, 62 foreign). 41 members were broker/dealers (26 domestic, 15 foreign).

C. Main Findings

- **Legal Risk (recommendation 1)**. All laws and regulations governing the trading and settlement of securities are publicly available. They can be found mostly in the Safe Custody Act, the Federal Securities Administration Act, the German Civil Code and the Insolvency Code. CBF general terms and conditions are clear and readily available. Customers' assets are adequately protected against insolvency of custodians and intermediaries. Netting arrangements are recognized in the German Insolvency Code. Close-out of pending financial transactions is also ensured. Securities lending is governed and recognized by the German Banking Act and the Civil Code where it is mentioned explicitly as being within the scope of the provision. Finality of settlement is safeguarded by the absence of any retroactive effects of the opening of the insolvency proceedings. Delivery versus payment (DVP) is part of the general legal framework in relation to all two-sided transactions.

- **Pre-settlement Risk (recommendations 2–5)**. Confirmation of exchange-traded transactions is done by stock exchanges' systems. Therefore, all exchange-traded transactions are confirmed automatically on the trade date. The situation is the same for OTC transactions. Instructions received by CBF contain only the agreed settlement date—not the trading date, since the minimum requirements for the trading activities of credit institutions prescribe that transactions have to be confirmed immediately.

  Settlement instructions arising from exchanged-traded transactions are matched between participants prior to settlement together with the trade confirmation. CBF itself performs the matching for OTC trades entered into its systems. Matching is only required for DVP transactions, but not for free-of-payment transactions.

According to the general terms and conditions of German stock exchanges, all transactions have to be settled on T+2. OTC transactions are typically settled on T + 2 or T + 3. Concerning both exchange and OTC transactions between 3 percent and 5 percent of transactions on average fail to settle on the agreed settlement date.

Deutsche Börse Group has implemented a Central Counterparty (CCP) for clearing equity transactions in March 2003.

Facilities for securities lending are in place and are used. Lending can be activated, for instance by using an automated lending facility of CBF who acts as agent. Regarding this lending facility equities, bonds and similar securities are eligible. The facility can be used by all customers. Also, other facilities are available on a bilateral basis between market participants acting either as agent or as principal.

- **Settlement Risk (recommendations 6–10).** Only securities of some public issuers (e.g., Federal Government, Länder Governments) can be issued in a dematerialized form. Securities of other issuers have to be represented by a physical instrument (at least a global note) to be eligible for the book entry clearing in the CSD. Private sector issues are documented by physical certificates. Private issuers can issue either individual and/or global certificates. Both can be deposited with the CSD and thus be immobilized. The CSD then reflects the amount of global and single certificates held in its vault in its booking system. Approximately 98 to 99 percent of the securities held in custody with CBF are immobilized. There is no indication of how many physical securities are held by commercial banks. Transfer of securities is carried out by book-entry. Physical deliveries are uncommon.

  CBF generally settles transactions on the basis of DVP. CBF offers a batch/designated- time and a real-time mode. In the batch mode the securities transfers are arranged in advance (provisional bookings) but only become final, from a legal point of view, once the CBF cash settlement procedure has been successfully concluded. Payments are processed via accounts with the Deutsche Bundesbank. Three batch modes are run per day. The real-time settlement (RTS) is available throughout the working day.

  RTS operates on the basis of DVP model 1. The batch processes are in between DVP model 2 and model 3: the securities are processed on a gross basis and are conditional (i.e., provisional and not final) on the net cash amount being settled subsequently.

  If a participant fails to fulfill its cash settlement obligation because of temporary liquidity problems, CBF may, in individual cases, grant the participant a bridge loan to cover the shortfall, provided that adequate collateral is provided. There are, however, no real-time risk controls in place to cover the default of the largest net debtor. In practice, the party at fault is given some additional time to come up with the necessary funds. This implies that the finality of all the transactions in the same batch run will be delayed.

Domestic securities settle in books of the Bundesbank, i.e., in central bank money. International securities settle in the books of CBF. The settlement asset at CBF carries little credit risk since CBF is supervised by BaFin and extends credit only in relation with the settlement process and only against sufficient collateral.

- **Operational Risk (recommendation 11).** CBF is subject to banking supervision and thus has to meet the organizational requirements of BaFin. CBF operations rely on information systems and facilities in Frankfurt and in Luxembourg contracted to Deutsche Börse Systems (DBS) in Frankfurt and Clearstream Services (CS) in Luxembourg by way of specific agreements. These agreements include disaster recovery plans and backup facilities.

  CBF has a business continuity plan which contains information, guidelines and procedures which are compiled, developed and maintained for use in the event of an emergency or disaster. It comprises a formal crisis management process, emergency response procedures, business unit, IT and facilities recovery plans. The plan is complemented by preventive measures to strengthen and secure the day-to-day operations.

  The CBF backup facility is located several kilometers from the primary site. Redundant backup equipment exists. A second remote data centre provides synchronous backup to the primary centre and houses the backup equipment. In addition to this real-time data duplication, data is also kept off-line on back-up copies in a secure location. Furthermore, CBF provides networked backup office space for all mission critical staff.

  The internal controls are annually audited according to an international standard and the respective report is available to external parties. The contingency plans are tested regularly. A full business continuity test involving the mission-critical organization and IT contingency infrastructure is performed once a year. Separate data center recovery tests are performed once a year.

  Business continuity tests have demonstrated that CBF would be able to recover mission-critical functions within one to four hours. The system or data center recovery time has been tested to be about one hour.

- **Custody Risk (recommendation 12).** The consumers' securities are well protected by the Safe Custody Act. Hence, banks make little use of segregated accounts with the German CSD (or any other sub-custodian), but prefer "omnibus accounts." Banks ensure segregation in their own books.

  In international custody business, CBF and banks seek protection for their customers against the insolvency of a foreign custodian to the same extent as in domestic business. CBF participants can check their account balances continuously in an online system. Custodian banks are obliged by law to regularly reconcile the custody accounts of their customers with their participant accounts in the CSD.

Custody business is defined as banking business. Thus, custodians (CBF and banks) are subject to banking supervision, which comprises internal and external audit. The regular external audit of banking business has to include a specific auditing of the credit institution's safe custody books and the outcome has to be included into a specific separate safe custody report to both the BaFin and Bundesbank. BaFin has issued a complementary regulation with regard to the mandatory content of the external audit.

- **Other Issues (recommendations 13–19).** CBF is a pro-profit company which is owned by Deutsche Börse AG, which in turn is a listed company on the Frankfurt Stock Exchange. CBF has the legal status of a stock corporation, and is a specialized bank with a full banking license. Like every joint stock company, CBF has a board of directors (Geschäftsleitung), a supervisory board (Aufsichtsrat) and the shareholders' meeting (Aktionärsversammlung). CBF provides extensive information on its website on its decision making bodies.

  CBF closely cooperates with public supervisory authorities and users. This takes place on the one hand as a part of the regulatory relationships with supervisory authorities. On the other hand, the users can influence the decision-making process via participation in several committees.

  The access rules are disclosed to all potential applicants in the general terms and business conditions. The access rules are objective and stipulate that applicants of CBF can only be credit institutions, financial service institutions, public law entities which provide comparable services, foreign depositories, national and international securities clearing institutions, and international and supranational organizations which provide financial services. The rules for the termination of the business relationship between CBF and a customer are also clearly defined.

Recommended Actions to Improve Observance of CPSS-IOSCO Recommendations for Securities Settlement Systems

Reference principle	Recommended action
Settlement risk	In batch settlement processes of CBF there still is an inherent unwinding risk since there are no ex ante collateral requirements or limits. CBF has concrete plans to eliminate this unwinding risk in its night-time and day-time processing. As a first step in the migration process, the introduction of a pre-funding requirement for the largest settlement batch (night-time processing) will eliminate the unwinding risk for that batch process by November 2003. However, for an interim period, the unwinding risk for the two daylight batch processes remains. It is recommended that this interim period be as short as possible.

D. Authorities' Response

57. The authorities were in broad agreement with the assessment.

TRANSPARENCY IN MONETARY AND FINANCIAL POLICIES[16]

I. FINANCIAL POLICIES

A. General

58. The Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht–BaFin), which was established in 2002 as a public sector agency, has regulatory and supervision authority over credit and financial services institutions, securities trading and insurance companies. Although functionally and organizationally separate from the Ministry of Finance (MoF), the BaFin is subject to the legal and supervisory control of the MoF, which is required to ensure that BaFin executes its tasks in accordance with the law and in an effective and adequate way. The institutional framework of the BaFin is defined in the Act Establishing the Federal Financial Supervisory Authority (Gesetz über die Bundesanstalt für Finanzdienstleistungsaufsicht—FinDAG), while the regulatory framework and BaFin's broad objectives are defined by the Banking Act (Gesetz über das Kreditwesen—KWG), the Securities Trading Act (Gesetz über den Wertpapierhandel—WpHG) and the Insurance Supervision Law (Versicherungsaufsichtsgesetz—VAG).

B. Main Findings

- **Open Process for Formulating and Reporting of Financial Policies**. The BaFin does not have a consistent disclosure policy on domestic and international procedures for information sharing and consultation with other financial agencies. This is mostly due to the structure of the BaFin, which recently merged different supervisory functions regulated under different laws and regulations.

- **Public Availability of Information on Financial Policies**. The range of published data and their publication frequency fall short of providing a timely overview of financial stability indicators—especially for the credit institutions—that is commensurate with the size and systemic importance of the German financial sector. There are substantial sectoral differences in the public reporting of aggregate data, partly due to different legal frameworks that underlie the supervision of different segments of the financial sector, and strict secrecy laws.

  The BaFin publishes annual data on its supervisory activities in its annual reports. Insurance statistics, including aggregate balance sheets, earnings, and reserve positions of insurance companies, are published on an annual basis. The Bundesbank publishes monthly data on aggregate balance sheets by type of monetary financial institution. Its Monthly Bulletin contains statistical material as well as essays on the latest developments in the banking sector. Once a year, an essay on the performance of credit institutions is included in the Monthly Bulletin.

[16] Because of Germany's participation in the European Monetary Union, transparency in monetary policy was not assessed as part of this FSAP.

Germany has both statutory and voluntary deposit insurance guarantees schemes. These schemes are managed by the Federal Association of German banks and the Federal Association of German Public Banks. Information on the nature and the operating procedures of the statutory protection schemes is publicly disclosed in law, and funding procedures are published in the Federal Law Gazette. Savings banks and credit cooperatives have their own institutional protection schemes administered by their respective federal associations. The Federal Association of German Cooperative Banks (BVR) publishes the operating procedures of its protection scheme on its webpage, but a similar publication is not available for the safeguarding scheme of the German Association of Saving Banks (DSGV). None of the schemes publish audited financial statements.

- **Accountability and Assurance of Integrity by Financial Agencies**. The budgets of the BaFin for 2002 and 2003 are publicly disclosed on its website, but so far it has not published any audited execution reports of the budgets.

  The BaFin is in the process of establishing its internal governance procedures. It has only recently established an internal audit department which reports directly to the President. The existence of this section is publicly disclosed in the organization chart of the BaFin, available on its webpage.

Recommended Plan of Actions to Improve Observance of IMF's MFP Transparency Code Practices—Financial Policies

Reference Practice	Recommended Action
VI. Open Process for Formulating and Reporting of Financial Policies	The BaFin started the process of developing a consistent policy on disclosure by creating a dedicated section on "Bilateral meetings and technical consultation, Memoranda of Understanding." These steps should continue and encourage, among other things, more disclosure on the cooperation between the BaFin and the supervisory agencies of the Länder.
VII. Public Availability of Information on Financial Policies	The Bundesbank should consider publishing timely financial stability indicators for credit institutions (e.g. asset quality, capital adequacy, earnings, profitability and liquidity) on an aggregate basis consistent with the secrecy laws. The consolidated annual report of the BaFin provides an opportunity to publish financial stability indicators for the other segments of the financial sector covered in this publication. The financial statements and audited annual reports of statutory deposit protection schemes, as well as the schemes of the BVR and the DSGV should be published. The BaFin should continue encouraging the voluntary schemes to follow suit.
VIII. Accountability and Assurance of Integrity by Financial Agencies	The steps taken by the BaFin to establish its internal audit function should continue. Ideally, the internal audit should report to the Administrative Council. When internal governance procedures are established they should be published (e.g. on its webpage). The audited execution reports of the budget should be published.

C. Authorities' Response

59. The authorities agreed with the positive overall assessment. Regarding public availability of information, the BaFin noted that it does not have the legal power to instruct the deposit protection schemes to publish their financial statements and audited annual reports. According to Section 10 of the Deposit Guarantee and Investor Compensation Act, the mandatory deposit protection schemes have to submit their annual reports to the BaFin. The BaFin plans to extend its legal powers to request public disclosure of these annual reports. Information about the voluntary schemes on the other hand is submitted to the BaFin on a voluntary basis only. For the time being the BaFin has no legal powers to require the voluntary schemes to submit information to the BaFin or to request the publication of such reports.

60. The BaFin is in the process of establishing its internal audit department and defining its functions and organizational structure. The BaFin plans to publish the internal governance procedures on its web-site, once they are finalized.

61. The BaFin plans to publish its audited budget execution reports on its website starting with the 2002 report.

II. Transparency of Payment System Oversight

A. General

62. Under the Bundesbank Act, the Bundesbank has the authority to arrange for the execution of domestic and cross-border payments and is responsible for the stability of payment and clearing systems. The Bundesbank has always been processing payment transactions, following a German tradition, both in the retail and wholesale area. Currently, it is operating the retail system RPS for credit transfers, checks and direct debits. In November 2001, RTGS^{plus}, a real-time gross settlement system operated and owned by the Bundesbank, replaced Euro Access Frankfurt (EAF) and Euro Link System (ELS). To ensure a smooth transition to RTGS^{plus}, ELS will continue providing access to large-value transactions until the end of 2004.

B. Main Findings

- **Accountability and Assurance of Integrity by Payment Systems Oversight Agencies**. The Bundesbank has an internal audit department which has recently developed an internal audit charter. The charter has been approved by the Executive Board of the Bundesbank in 2002 and was disseminated internally to the department heads and, since the beginning of April, is published internally on the intranet. However, there is no public disclosure of these procedures. In addition, the Bundesbank has established a Code of Conduct for staff transactions, which deals with the private business activities of Bundesbank staff members in securities and derivatives only. This Code of Conduct is not publicly disclosed, but published in the intranet of the Bundesbank webpage.

Recommended Actions to Improve Observance of IMF Monetary and Financial Policies Transparency Code Practices—Payment System Oversight

Reference Principle	Recommended action
VIII. Accountability and Assurance of Integrity by Financial Agencies	• The Bundesbank should provide information on its internal governance procedures and other internal audit arrangements, including internal rules and standards of conduct, for example, in a separate document on staff accountability made available to the general public on its website.

F. Authorities' Response

63. The authorities were in broad agreement with the assessment.

Table 1. Germany: Selected Economic and Social Indicators

	1997	1998	1999	2000	2001	2002	2003 1/
Real economy (change in percent)							
Real GDP	1.4	2.0	2.0	2.9	0.8	0.2	0.0
Total domestic demand	0.6	2.4	2.8	1.8	-0.8	-1.6	1.0
CPI (average)	1.5	0.6	0.6	1.4	1.9	1.3	1.0
Standardized unemployment rate (in percent)	9.6	9.1	8.4	7.8	7.9	8.6	9.5
Gross national saving (percent of GDP)	21.3	21.5	20.7	20.8	19.8	20.5	20.9
Gross domestic investment (percent of GDP)	21.5	21.8	21.6	21.9	19.6	18.0	18.8
Public finance (percent of GDP) 2/							
General government balance	-2.7	-2.2	-1.5	1.3	-2.8	-3.5	-3.9
General government structural balance	-1.9	-1.6	-1.1	-1.7	-2.5	-2.5	-1.8
General government gross debt	61.0	60.9	61.2	60.2	59.5	60.8	63.3
Money and credit (end of year, percent change) 3/							
Credit to private sector 4/	6.2	8.4	5.8	5.8	3.2	0.9	1.3
M3 4/	4.6	7.6	7.2	-1.1	6.0	...	7.7
Total credit to non-MFIs	7.6	6.8	6.5	4.9	3.4	-0.2	-0.3
Loans	7.8	7.3	9.6	4.9	3.5	-0.2	-0.3
Lending: Mortgages secured by residential real estate 5/	...	7.5	29.9	6.7	2.7	2.5	...
Lending: Other real estate related 5/	...	6.7	-4.5	-2.2	1.0	-1.3	...
Lending to employees and other individuals: Housing loans 5/	...	7.2	24.6	4.2	3.1	3.0	...
Lending to employees and other individuals: Installment credit	...	7.9	-0.5	2.8	1.9	3.3	...
Lending to electrical and optical equipment, telecom, computers, and R&D	2.6	6.4	3.4	4.5	1.8	-5.2	...
Lending to construction sector	1.4	1.2	5.6	1.7	-0.4	-4.9	...
Lending to other real estate enterprises	10.3	7.9	6.5	7.1	5.3	2.3	...
Interest rates (percent) 6/							
Money market rate	3.3	3.5	3.0	4.4	4.3	3.3	2.5
Government bond yield	5.7	4.6	4.5	5.3	4.8	4.8	4.0
External sector (percent of GDP)							
Trade balance	3.0	3.2	2.9	2.6	4.3	5.7	5.3
Current account balance	-0.4	-0.6	-1.1	-1.4	0.0	2.3	2.4
Gross official reserves (billions of US dollars, end of period)	77.5	84.2	93.5	87.3	82.3	89.1	...
Central bank short-term foreign liabilities 7/	8.7	8.2	6.2	6.6	8.7	9.0	...
Financial markets indicators							
Change in stock market index (percent, end of period) 8/	47.1	17.7	39.1	-7.5	-19.8	-43.9	-16.2
Change in DEU stock market index (percent, eop) for banks 9/	75.9	-11.0	33.6	-0.3	-25.4	-49.9	-52.7
Change in global stock market index (percent, eop) for banks 9/	13.2	4.4	2.4	2.4	-13.6	-8.5	-11.8
Financial sector risk indicators							
Share of real estate sector in loans to nonfinancial sector (in percent) 10/	16.9	16.9	35.4	35.0	34.6	35.4	...
Number of insolvencies of enterprises and individuals 11/	1,283	1,341	1,316	1,549	2,041	3,010	...
Volume of loans to insolvent borrowers (in billions of euro) 11/	11.0	6.1	5.5	7.7	10.9	22.2	...
Exchange rate							
Euro per U.S. dollar (annual average) 12/	0.88	0.89	0.94	1.08	1.12	1.06	0.87
Nominal effective rate (1990=100) 13/	103.8	104.1	102.0	97.8	98.5	99.5	103.7
Real effective rate (1990=100) 13/ 14/	113.3	110.4	107.0	100.8	100.0	100.1	103.2

Sources: Deutsche Bundesbank; Eurostat; IMF, International Financial Statistics; and IMF, WEO Spring 2003.

1/ Staff estimates and projections, if not otherwise indicated.
2/ For 2000, includes the proceeds from the sale of mobile phone licenses (UMTS) of €50.8 billion (2.5 percent of GDP). The proceeds were used to buy back public debt; the buyback was phased over 2000 and 2001.
3/ From 1999 onward data reflect Germany's contribution to M3 of the euro area. Data for M3 are not shown for 2002 because of a series break.
4/ Data for 2003 refer to a change from July 2002 to July 2003.
5/ 1999 growth due to low mortgage interest rates and expiration of special depreciation allowances in eastern Germany.
6/ Data for 2003 refer to August.
7/ Remaining maturities of one year or less.
8/ DAX 30 stock market index.
9/ DataStream indices; includes German bank stocks.
10/ Share of housing loans in percent of total lending to nonfinancial sector.
11/ Insolvencies of only those included in the credit register with loans of greater than €1.5 million
12/ As of September 29, 2003.
13/ Data for 2003 refer to August.
14/ Based on relative normalized unit labor cost in manufacturing.

Table 2. Germany: Financial System Structure, 1998–2002
(In billions of euro and percentage)

	Dec-98			Dec-99			Dec-00			Dec-01			Oct-02		
	Number	Assets Euro	Percent of total assets	Number	Assets Euro	Percent of total assets	Number	Assets Euro	Percent of total assets	Number	Assets Euro	Percent of total assets	Number	Assets Euro	Percent of total assets
Private depository institutions	3,246	5,139	79.4	2,999	5,741	78.4	2,740	6,148	78.5	2,521	6,386	78.5	2,373	6,400	78.3
Commercial banks	328	1,296	20.0	290	1,447	19.8	294	1,704	21.8	279	1,790	22.0	274	1,793	21.9
Of which															
Big banks	3	562	8.7	4	825	11.3	4	970	12.4	4	1,027	12.6	4	1,043	12.8
Regional and other banks	241	634	9.8	199	517	7.1	200	613	7.8	195	633	7.8	187	643	7.9
Branches of foreign banks	84	100	1.5	87	105	1.4	90	121	1.5	80	130	1.6	83	108	1.3
Landesbanken	13	940	14.5	13	1,145	15.6	13	1,223	15.6	13	1,269	15.6	14	1,322	16.2
Savings banks	594	910	14.1	578	925	12.6	562	954	12.2	537	986	12.1	522	976	11.9
Regional institutions of credit cooperatives	4	201	3.1	4	214	2.9	4	227	2.9	2	216	2.7	2	195	2.4
Credit cooperatives	2,256	520	8.0	2,035	534	7.3	1,792	534	6.8	1,619	552	6.8	1,494	551	6.7
Mortgage banks	33	795	12.3	32	830	11.3	31	892	11.4	28	922	11.3	25	886	10.8
Banks with special functions	18	477	7.4	14	498	6.8	13	461	5.9	14	493	6.1	14	515	6.3
Building and loan associations 1/	34	...	...	33	146	2.0	31	154	2.0	29	158	1.9	28	160	2.0
Insurance companies 2/	684	751	11.6	683	817	11.2	666	873	11.1	650	943	11.6	705	1,013	12.4
Life	123	462	7.1	123	505	6.9	123	540	6.9	120	570	7.0	134	596	7.3
Nonlife	271	91	1.4	271	94	1.3	260	96	1.2	254	100	1.2	262	107	1.3
Other	290	197	3.1	289	218	3.0	283	237	3.0	276	273	3.4	309	311	3.8
Investment funds 3/	805	579	9.0	915	762	10.4	1,019	812	10.4	1,112	801	9.9	1,141	761	9.3
Money market funds	39	18	0.3	36	22	0.3	39	20	0.3	46	34	0.4	42	40	0.5
Pension investment mutual funds	31	0	0.0	43	2	0.0	45	3	0.0	47	3	0.0	49	2	0.0
Securities-based funds	718	513	7.9	818	683	9.3	915	733	9.4	997	697	8.6	1,026	635	7.8
Open end real estate funds	17	47	0.7	18	56	0.8	20	55	0.7	22	68	0.8	24	85	1.0
Total financial system	4,735	6,469	100.0	4,597	7,321	100.0	4,425	7,833	100.00	4,283	8,131	100.0	4,219	8,174	100.0
Memorandum items:															
Majority foreign-owned banks	72	126	2.0	61	123	1.7	56	130	1.7	53	168	2.1	49	276	3.4
Foreign banks	156	227	3.5	148	228	3.1	146	251	3.2	133	297	3.7	132	384	4.7

Sources: BaFin; Deutsche Bundesbank; and staff estimates.

1/ Assets are not included in Bundesbank statistics until 1999.
2/ Number of insurance companies by legal status. Total assets as of September 2002.
3/ Total assets for pension investment mutual funds, net total assets for all other categories.

Table 3. Germany: Financial Soundness Indicators for the Banking Sector, 1998–2003
(In percent, unless otherwise indicated)

	Dec-98	Dec-99	Dec-00	Dec-01	Dec-02	Mar-03
Capital Adequacy						
Regulatory capital to risk-weighted assets for all banks	11.4	11.5	11.7	12.0	12.7	12.9
Commercial Banks	11.9	12.4	13.0	13.6	14.4	14.3
Big banks	11.3	12.4	13.0	13.9	14.9	14.4
Branches of foreign banks	27.3	22.7	30.4	32.2	30.9	30.2
Landesbanken	10.5	10.5	10.7	11.3	12.7	13.4
Saving banks	10.9	10.9	10.7	10.8	11.2	11.3
Credit cooperatives	11.0	11.2	11.2	11.1	11.0	11.0
Regulatory Tier I capital to risk-weighted assets for all banks 1/	7.4	7.6	7.7	8.0	8.6	8.8
Commercial Banks	8.0	8.5	8.9	9.6	10.4	10.4
Big banks	7.3	8.3	8.8	9.5	10.2	10.0
Branches of foreign banks	26.5	21.9	29.2	30.8	29.3	...
Landesbanken	6.1	6.2	6.2	6.6	7.9	8.4
Saving banks	7.0	7.0	7.0	7.1	7.3	7.3
Credit cooperatives	7.2	7.3	7.4	7.5	7.6	7.6
Asset composition and quality 2/						
Sectoral distribution of loans to total loans						
Loans to households for all banks	27.3	28.3	27.2	26.1	26.4	...
Commercial banks	24.8	25.7	22.5	20.7	21.3	...
Big banks	24.0	21.6	18.3	15.9	16.2	...
Branches of foreign banks	0.5	0.8	1.4	0.7	0.5	...
Landesbanken	...	...	...	...	...	...
Saving banks	61.5	64.3	64.1	63.1	63.7	...
Credit cooperatives	63.8	67.1	68.7	67.6	69.1	...
Loans to nonfinancial corporations for all banks	17.6	16.9	16.6	16.1	15.8	...
Commercial banks	19.5	18.2	15.9	14.2	13.9	...
Big banks	17.7	17.3	14.2	12.0	11.6	...
Branches of foreign banks	2.3	0.6	1.5	1.6	2.3	...
Landesbanken	17.1	17.1	17.4	17.6	16.6	...
Saving banks	19.8	18.3	19.1	19.4	19.7	...
Credit cooperatives	15.2	13.5	14.1	13.9	14.1	...
FX loans to total loans for all banks	3.1	2.7	2.8	2.9	3.0	...
NPLs to gross loans	4.5	4.2	4.7	4.6	4.9	...
Commercial Banks	5.1	5.0	5.5	5.1	...	...
Big banks	4.2	4.0	4.6	3.8	...	...
Branches of foreign banks	1.4	4.6	3.6	4.6	...	...
Landesbanken	2.8	2.5	2.7	2.8	...	...
Saving banks	6.1	5.7	5.6	5.9	...	...
Credit cooperatives	6.5	6.4	6.9	7.2	...	...
NPLs net of provisions to capital	42.2	39.2	44.7	46.1	47.3	...
Commercial Banks	38.1	37.2	39.6	49.8	...	...
Big banks	33.4	31.2	31.1	36.6	...	...
Branches of foreign banks	5.3	36.4	33.8	48.1	...	...
Landesbanken	32.5	26.0	29.6	27.9	...	...
Saving banks	56.4	51.6	49.2	52.2	...	...
Credit cooperatives	47.8	49.7	51.9	53.7	...	...
Spread between highest and lowest interbank rates (in basis points) 3/	47.0	19.0	20.0	10.0	20.0	15.0
Earnings and profitability						
ROA for all banks	0.3	0.2	0.2	0.1	0.1	...
Commercial Banks	0.5	0.2	0.3	0.2	0.0	...
Big banks	0.6	0.2	0.2	0.2	-0.1	...
Branches of foreign banks	0.1	0.2	0.3	0.2	0.1	...
Landesbanken	0.1	0.1	0.1	0.1	0.0	...
Saving banks	0.2	0.2	0.2	0.2	0.2	...
Credit cooperatives	0.2	0.2	0.2	0.2	0.2	...
ROE for all banks	8.5	5.4	5.3	4.2	2.0	...
Commercial Banks	12.9	5.5	6.7	4.1	-0.3	...
Big banks	16.0	5.0	6.0	5.4	-3.4	...
Branches of foreign banks	2.8	6.2	9.0	4.8	2.5	...
Landesbanken	4.5	4.7	4.2	3.3	1.4	...
Saving banks	5.9	5.5	5.0	4.5	4.1	...
Credit cooperatives	4.9	4.4	4.0	4.1	4.1	...
Interest income to gross income for all banks	66.5	64.3	57.9	59.4	62.2	...
Commercial Banks	55.8	51.9	43.9	46.1	49.6	...
Big banks	55.8	48.1	38.7	39.2	46.5	...
Branches of foreign banks	38.8	40.3	38.1	57.3	58.1	...
Landesbanken	60.4	65.7	60.1	62.8	63.9	...
Saving banks	75.5	74.3	72.4	71.2	72.2	...
Credit cooperatives	76.1	73.9	72.5	73.0	74.6	...

Table 3. Germany: Financial Soundness Indicators for the Banking Sector, 1998–2003
(In percent, unless otherwise indicated)

	Dec-98	Dec-99	Dec-00	Dec-01	Dec-02	Mar-03
Trading and fee income to total income for all banks	20.3	21.9	25.9	22.9	19.7	...
Commercial Banks	27.9	30.8	36.4	32.8	26.7	...
Big banks	29.8	33.7	40.9	38.2	27.8	...
Branches of foreign banks	49.2	51.9	49.3	36.0	33.6	...
Landesbanken	17.5	14.5	18.6	15.2	15.9	
Saving banks	16.0	16.3	17.5	15.6	14.7	...
Credit cooperatives	17.0	18.6	20.4	17.4	16.8	...
Non-interest expenses to gross income for all banks	57.1	59.0	58.8	60.9	57.0	...
Commercial Banks	59.2	62.6	61.3	64.8	60.9	...
Big banks	60.5	62.7	62.4	65.4	57.5	...
Branches of foreign banks	74.8	73.3	71.2	55.2	57.6	...
Landesbanken	39.5	46.5	46.7	48.4	47.1	...
Saving banks	61.5	60.3	61.8	61.7	59.4	...
Credit cooperatives	70.1	68.5	70.8	71.7	68.2	...
Personnel expenses to non-interest expenses for all banks	39.0	37.6	37.3	34.8	...	...
Commercial Banks	35.4	35.4	36.2	32.3	...	...
Big banks	41.1	36.8	39.5	35.7	...	...
Branches of foreign banks	20.7	23.5	20.9	32.4	...	...
Landesbanken	28.2	29.9	30.4	26.8	...	...
Saving banks	48.3	44.6	45.0	43.5	...	...
Credit cooperatives	47.8	45.2	44.2	45.2	...	...
Liquidity						
Liquid assets to total short-term liabilities for all banks 4/	...	...	1.4	1.4	1.4	...
Commercial Banks	...	...	1.2	1.2	1.2	...
Big banks	...	...	...	...	...	...
Branches of foreign banks	...	...	...	...	...	...
Landesbanken	...	...	1.3	1.3	1.3	...
Saving banks	...	...	2.3	2.4	2.3	...
Credit cooperatives	...	...	2.0	2.1	2.2	...
Customer deposits to total (non-interbank) loans for all banks	65.3	66.3	65.0	66.5	67.6	...
Commercial Banks	58.6	67.4	64.4	68.5	70.5	...
Big banks	68.3	59.6	59.6	63.9	63.7	...
Branches of foreign banks	28.8	30.2	21.5	26.3	35.2	...
Landesbanken	44.5	52.9	53.9	54.3	52.7	...
Saving banks	94.6	92.5	88.7	91.1	91.2	...
Credit cooperatives	108.3	106.6	102.5	105.4	105.6	...
Sensitivity to market risk						
Net open positions in foreign exchange to capital for all banks	5.2	6.6	7.4	10.8	6.1	5.9
Commercial Banks	8.7	6.2	5.2	4.0	2.2	2.8
Big banks	6.6	5.0	4.7	3.3	1.2	2.5
Branches of foreign banks 2/	3.0	8.2	4.8	22.3	1.8	...
Landesbanken	8.4	9.5	11.4	10.8	12.8	11.3
Saving banks	3.3	4.8	6.0	5.7	5.1	5.0
Credit cooperatives	1.0	10.5	13.6	12.6	12.2	11.8
Net open positions in equities to capital for all banks 5/	1.4	1.9	1.6	1.2	0.9	0.7
Commercial Banks	3.1	3.8	2.7	2.4	1.5	1.2
Big banks	3.1	3.9	2.6	2.6	1.8	1.3
Branches of foreign banks	...	...	...	...	...	...
Landesbanken	0.7	1.3	1.6	1.2	1.3	1.2
Saving banks	0.8	0.8	0.8	0.3	0.2	0.1
Credit cooperatives	0.2	0.1	0.0	0.0	0.0	0.0
Interconnectedness						
Ratio of commercial bank loans to total loans	30.9	30.0	30.0	29.3	28.8	...
Commercial Banks	35.0	33.6	31.6	29.1	27.8	...
Big banks	39.2	38.4	35.0	31.1	28.3	...
Branches of foreign banks	21.7	22.4	23.4	24.6	28.9	...
Landesbanken	22.7	22.9	23.4	23.5	22.5	...
Saving banks	41.6	41.4	42.2	42.2	42.1	...
Credit cooperatives	39.8	39.0	39.8	39.0	39.0	...

Source: Deutsche Bundesbank; IFS; and staff estimates.

1/ According to Capital Adequacy Regulation, Principle 1.
2/ Data estimate as of December 2002.
3/ Spread between highest and lowest three-month market rates as reported by Frankfurt banks.
4/ Prudential supervision liquidity ratio. Data not available before July 1, 2000.
5/ Capital as defined in German accounting rules for balance sheet.

Table 4. Summary of Bank Stress Test Results

Scenario/Risk Considered	Size of Shocks			Group 1/	Approx. Hist. Freq 2/	Max Impact 3/	Worst CAR 4/
I. Interest Rate Risk	**EU**	**US**	**JPY**				
	(short; medium; long; in basis points)						
1 Positive tilt in term structure	110;60;40	100;50;30	100;40;30	I	1:25Yr	-2.6	13.0
				II	1:25Yr	-9.1	8.3
2 Upward parallel shift in term structure	70;70;70	65;65;65	60;60;60	I	1:25Yr	-1.8	13.1
				II	1:25Yr	-11.8	8.0
3 Peak in medium-term interest rates	0;30;0	0;25;0	0;20;0	I	1:25Yr	-1.1	13.1
				II	1:25Yr	-3.5	8.8
4 Negative tilt in term structure	-110;-60;-40	-100;-40;-30	0;-20;-15	I	1:25Yr	0.3	13.3
				II	1:25Yr	-1.1	9.0
5 Downward parallel shift In term structure	-70;-70;-70	-40;-40;-40	0;0;0	I	1:25Yr	-1.2	13.1
				II	1:25Yr	-0.9	9.0
6 Dip in medium term interest rates	0;-30;0	0;-25;0	0;-10;0	I	1:25Yr	0.0	13.3
				II	1:25Yr	-0.2	9.1
II. Foreign Currency Risk							
1 Euro/USD Appreciation	15 percent			I	1:22Yr	-2.1	13.0
				II	1:22Yr	-1.9	8.9
2 Euro/ USD Depreciation	15 percent			I	1:22Yr	-1.9	13.1
				II	1:22Yr	-3.7	8.8
III. Equity/Volatility Risk							
1 Global Equity Market Crash	30 percent decline in world equity indices			I	1:30Yr	-20.4	10.6
				II	1:30Yr	-7.0	8.5
2 Volatility Risks	25 percent incr. in equity volatility			I	--	-0.2	13.3
	35 percent increase in interest rate vol.			II	--	-0.3	9.1
	30 percent increase in fx vol.						
IV. Credit Risk							
Scenario 1	30 percent increase in default probability			I	--	-10.0	12.0
				II	--	-11.7	8.0
Scenario 2	60 percent increase in default probability			I	1:18Yr	-17.5	11.0
				II	1:18Yr	-21.9	7.1

V. Liquidity Risk

Scenario	Size of Shocks	Liquid. Ratio	Base	Scen. 1	Scen. 2
Scenario 1: Asset Illiquidity	Bonds: -10 %; Equity: -30%	Comm. Banks	1.3	1.2	1.2
Scenario 2: Deposit Withdrawals	Increase in withdrawal rate: bank deposits by 40 percent, customer deposits by 10 percent.	Savings Banks	2.4	2.3	2.1
		Land Banks	1.3	1.3	1.3
		Credit Coops	2.2	2.1	1.9
		Regional	1.3	1.3	1.1
		Mortgage	1.3	1.3	1.3

Source: Deutsche Bundesbank, and staff estimates.

1/ Group I included six internationally active banks that participated in QIS 3. Group II included inter alia some savings and some cooperative banks, as well as some Landesbanken. The sample of Group II banks for interest rate risk and foreign exchange rate risk was different from the sample of banks for the credit risk component, with only one overlap between the two groups.

2/ Staff estimates of approximate time observed (historically) between incidents of comparable magnitude.

3/ Largest negative impact as a percent of regulatory capital.

4/ Lowest capital asset ratio (CAR) after shock, for Group I and Group II banks, assuming maximum impact occurs to bank with lowest CAR.