



**United States Agency for International Development**

**Banking Supervision Project**



**FINAL REPORT**

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## **MACEDONIAN BANKING PROJECT**

### **INTRODUCTION**

Under the provisions of the Task Order, Booz Allen Hamilton was engaged by the United States Agency for International Development to render technical assistance to the National Bank of the Republic of Macedonia and other Macedonian institutions in the financial sector. This assistance included mainly working with the Supervisory Department of the NBRM, commercial banks, the Deposit Insurance Fund and the professional training of people in those institutions.

The Chief of Party (CoP), H. Peers Brewer, arrived in Skopje in January 2000. The project was scheduled to last through the end of October 2001. Carolyn Brearley of USAID/Skopje, the Project's Technical Officer, however, arranged for the Project to receive additional funding and to extend the tenure through the end of April, 2002. The Task Orders (TOs) remained essentially the same as in the original Orders, with some refinements to assist with the changing needs of the local Macedonian situation. In June 2001, the US Ambassador in Skopje ordered the mandatory evacuation of USAID and USAID project personnel out of Macedonia for security reasons. The CoP of the Macedonia Banking Project (MBP) relocated to a Booz Allen Hamilton office in Zagreb, managing the Project's affairs from that location. The Project Deputy, Mr. Kiril Minoski, continued to maintain contacts with the Project's customer base in Skopje and to advance the tasks they were working on. In this regard, Mr. Minoski did an excellent job as a representative of Booz Allen Hamilton and the Project. The mandatory exile lasted until the end of October 2001. At the end of April 2002, the life of the MBP was extended through July 15, 2002 on an unfunded basis.

### **EXECUTIVE SUMMARY**

The CoP of the Macedonian Banking Project had the personal goal of achieving significant and lasting success in the major TOs governing the project. This was done with respect to: (a) the strengthening and training of bank examiners; (b) strengthening the legislative foundation and the capacities of the Deposit Insurance Fund; (c) converting banks to the use of IAS; and, (d) strengthening the credit risk management and MIS framework of the commercial banks. This success was largely the direct result of the close cooperation between the Project and the staff at the USAID Mission in Skopje.

### **OPERATING ENVIRONMENT**

#### The Macedonian Economy

The general weaknesses of the Macedonian economy have been frequently recorded. These include: high unemployment, widening income inequality, weak social safety nets, uncompetitive export products and a persistent corruption problem. On the more positive side, there is an active underground economy, inflation remains modest, the educational level (at least

in urban areas) is reasonably high and private sector debt is modest compared with many developing countries.

From the perspective of the MBP, the war in Kosovo in 1999 and the ensuing war with the Albanian militants in 2001, compounded economic problems and further retarded economic growth by placing undue pressure on the credit quality of existing loans, which aggravated the already severe problem of non-performing loans in the system's total portfolio.

### The Macedonian Financial Structure

The nation's financial structure is divided into three parts: the National Bank (NBRM), the commercial banks (numbering 22, with 95% of the financial sector assets), and "other" which includes a small and weak insurance industry, pension funds and savings banks. The "savings banks," in Macedonia often are more closely in line with American commercial finance companies than retail savings & mortgage operations. Most customers were in the first two categories.

The Supervisory Department of the NBRM (SD/NBRM) proved to be staffed with exceptionally talented and well-trained people. It is worth noting in this regard that the SD/NBRM benefited from the help of a prior USAID project. It was definitely constructive that the MBP could build on the foundation laid by that project. The "foundation" was not just the technical advice, but also the SD's perception of the quality of the consultants that USAID/Skopje put into the field. The weakness of the SD/NBRM was that the department was young and therefore, consequently short on field experience. This was complicated by the fact that the IMF continually (and often without much thought) pushed the SD to expand their capabilities as a condition for additional funding to Macedonia. Be that as it may, these conditions provided a receptive and capable field for the services of the MBP.

The situation with the commercial banks was less satisfactory. These banks also had the benefit of a prior USAID project. While the project had some fine people and a worthwhile program, the project contractor went bankrupt mid stream, leaving the project without the means to continue in business and to make a lasting impact.

Parenthetically, USAID projects, of course, are in direct competition with projects sponsored by the EU, by European central banks and by Non Government Organizations (NGOs). Foreign aid from the West has been available to the Macedonians for about a decade. The Macedonians, consequently, are fully aware of who is a qualified consultant and what types of projects are important to them. Moreover, they quickly develop a sense of which project can deliver and which cannot. Macedonians seem to prefer to work with USAID because: (a) the Americans are more flexible and more willing to customize the aid to the Macedonian need; (b) the American bureaucracy is much less rigid than the European bureaucracy; (c) Americans are much more inclined to get down to the nitty-gritty of "how to" do a task and then stay the course until it is done; and, (d) the Europeans seem to prefer to give technical advice (e.g. what type of computer meets the specifications for a certain operation) and leave it at that. The bottom line and the pragmatic fact is that the American consulting style works best in the emerging countries.

Therefore, USAID must have the patience and persistency to stay the course if it is important to our national interests.

The commercial banking industry in Macedonia, as in many former socialist countries, continued to carry forward operating legacies of that past regime.

These legacies foremost, had: a lack of credit culture, inadequate accounting, no customer orientation and a poverty of managerial talent. Under the old system, the banks were the medium through which the government distributed funds to the state owned companies. It has been a tremendously difficult road for the banks to culturally move to a Western style of banking. As a consequence, there is a curiously inverted situation where the central bankers are more advanced in their development than most commercial bankers.

Some banks do indeed have good quality management, but even in these cases, the talent is limited in number. These banks are the most promising to work with, but they tend to have an organizational structure that resembles an acute isosceles triangle. Thus, the banks' decision makers are far removed from the market place, decision-making is concentrated at the top and (as a complication) the MIS is usually not adequate. This in turn, means that it is difficult for these managements to maintain sustained contact with a problem until it is solved.

#### The Institutional Framework

While the CoP is unquestionably responsible for the outcome of the project, in truth the project operates within an institutional framework that conditions the probability of that outcome. The MBP was extremely fortunate that it came to Skopje at a time when four of the potentially most important allies were strongly supportive of the project's goals. In particular, the Minister of Finance, Nicola Gruevski, arguably one of the most important cabinet ministers and unarguably the most capable, was strongly oriented toward improving the operating structure and legal foundation of the MBRM and the commercial banking system in Macedonia. In addition, USAID/Skopje had a results oriented view towards getting constructive and sustainable changes made in the financial sector. In particular Steve Gonyea, (Senior Private Sector Officer) Caroline Brearley and Sharon Hester (both Private Sector Officers and Technical Officers) took the time to understand the issues and their complexities in the banking area. They facilitated TO amendments where necessary and were a willing and important part of the calling effort with the customers. In addition, they supported the budget adjustments, which made it possible for the Booz Allen team to address the continually changing needs of the banks, the Supervisory Department and other financial groups. A close working relationship was developed with Mr. Walter Zunic, the World Bank advisor responsible for coverage of the Macedonian SD. Through this relationship Booz Allen Hamilton was able to have a closer understanding of where the SD should be headed and how we could jointly focus our resources to that end. And (d) Booz Allen Hamilton was able to identify and provide three top level STAs (Robert Hefner, Thomas Fitzgerald and Gheorge Campeanu) that were able to make definitive and enduring contributions in their areas in Macedonia.

In conclusion, this institutional support made it inexcusable to fail and improbable to do so.

## THE PROJECT'S MISSION AND STRATEGY

### The Project Mission

While the Macedonian political, economic and financial situation constantly evolved during the life of the MBP, Booz Allen Hamilton used the black and white of the contract Task Orders (TO) as the primary guide to the Project's activity.

The contract states: "The overriding objective of this task order is to develop a strong supervisory capacity at the National Bank of Macedonia in order to promote a strong, risk-based, market oriented banking system." The TO then enumerated eight tasks. While some of the tasks overlapped and some were outmoded by time and circumstance, Booz Allen Hamilton assessed each task and each opportunity for service, which surfaced during the life of the Project by the "overriding objective[s]" of developing a "strong" SD/NBRM and a "sound, risk based market oriented banking system."

### The Project Strategy

When the MBP arrived in Skopje, one of its first undertakings was a survey of the needs and attitudes of the customer base. The CoP interviewed the SD, the Deposit Insurance Fund, eight banks (representing 85% of Macedonian deposits), the IMF/Skopje, the World Bank/Skopje, the Ministry of Finance, other financial sector projects in Skopje and several USAID projects in other Eastern European and FSU jurisdictions.

What Booz Allen Hamilton saw and heard about was a lot of activity but very few sustainable improvements from this activity. This was due to several reasons.

First, the customers were polite but clearly skeptical about the commitment of the consultant. They felt that consultants tended to be driven by their own agenda and not by the needs of the Macedonian agenda. Second, the customers did not like the patronizing approach of the "three day pundits" that came in and out of Petrovic. Skopje is not a grammar school. Third, people who attended the seminars were often too junior in their organization to understand how this information could be effectively used in the corporation. Moreover, these same people lacked the standing or ability to package and present the ideas to those in the organization who could make a difference. Finally, the consultant is by definition an outsider. It is hard for the outsider to know what is going on within the Macedonian institutions because there is very little financial or strategic transparency. The consultant, consequently, is challenged to focus the program in a way that is truly responsive. Yet, many Macedonians evidently do understand what is going on. They understand because they have access to "ozborouvanie," a vast under ground current of chatter that surfaces primarily in close social settings. If the consultant wants to know what is going on, he must drink of the waters "ozborouvanie".

To by-pass these negative factors and create a more participative relationship, the MBP strategy was to: first, initially concentrate on one important customer. That is, the Project would build its credibility with service to that customer. By "ozborouvanie," word would quickly get around. Booz Allen Hamilton selected the SD because of its sophistication and understanding of where it

needed to go. This decision was in part facilitated by: a) the fact that the number one and three banks (representing 445% of assets) were in the process of being taken over by foreign banks; b) the number four bank was in a problem band classification; and, c) the number two bank specifically declined an offer for help. The commercial banks were preoccupied with other problems. Second, use only STAs with years of direct line experience in that business and with very relaxed people skills. No academics need apply. Third, the Project would suggest but not push issues on the Macedonians, since Booz Allen Hamilton was confident that over the life of the Project, these issues would arise among their customers. By letting the customers know early on of Booz Allen Hamilton's willingness to help, when the issues did arise it created a demand-pull for their services, which is a much more favorable condition for the success of a consulting initiative. And fourth, hire a local staff that traveled in the same social circles as the customers Booz Allen Hamilton was trying to serve. Also the CoP would make a direct effort to participate as much as possible in the cultural and social life of the country. By and large, these strategies paid handsome dividends for the MBP.

### **TASK ONE: IT/MIS**

Task One deals with accounting and Information Technology/Management Information Systems (IT/MIS) issues. This was a very complicated TO. The MBP had hoped to have this TO completely resolved by July, 2001, but the mandatory exile postponed the completion date until February, 2002. This TO actually had three component parts: first, streamlining the regulatory reporting process, second, getting banks to use IAS, and third, helping them with IT/MIS issues. Each of these parts involved different analytical and consultative skills.

First, the request of the TO that the Project help streamline the regulatory reporting process actually derived from a mis-assessment of the situation by the people who did the feasibility study for the project. Reportedly, the bankers were upset with the burden of financial reporting which the NB required, thus diverting time from more constructive applications. Two things suggested, however, that this was not a real issue. One, during the CoP's initial surveys of the banks, not one bank raised this as a serious issue unless prompted by the CoP. Two, the CoP got a hold of the list of reports the banks had to supply the NB. Upon reviewing the list, it was evident that all of the reports generated information that the regulators had a right to know – particularly mindful that these reports were used for both supervisory and monetary policy purposes. Ultimately, Booz Allen Hamilton came to the opinion that during the time the people doing the feasibility study for this Project were in the field, the NB had just begun to insist that the banks report balance sheets on an IAS basis in addition to the normal Macedonian accounting basis. This was a cosmetic response of the NB to requests from the WB and the IMF that banks report on an IAS basis. Most banks did not have the remotest idea of what IAS entailed and it is doubtful if at that time the NB itself knew any better. Since the Project's main objective under Task One was getting the banks to use IAS, it was not constructive to ask the NB to drop this reporting requirement. Rather Booz Allen Hamilton asked them to maintain the requirement, while the MBP would then help the banks learn the proper way of setting up, reporting and utilizing IAS accounting.

Second, as mentioned above, this was a perplexing TO in some respects, none more so than in getting the banks to use IAS. During the tenure of the MBP there was also a USAID project, two

actually, devoted to accounting issues and with a primary assignment to advance the use of IAS among all Macedonian corporate entities. The Accounting Project had a very difficult time of it because the topic was highly politicized. The control of accounting in Macedonia, its teaching and enabling legislation was tightly controlled by the university academics. This was a lucrative slice of business that they were not about to relinquish. Booz Allen Hamilton struggled for a way to address this TO. Opportunity, however, did strike. In April 2001 the World Bank mandated the use of IAS accounting for the banks. In March 2001 the NB came to Booz Allen Hamilton, asking to do a study that compared IAS accounting with Macedonian accounting, preparatory to recommending to the Ministry of Finance new legislation regarding the use of IAS. The question was who would do the study, which involved extensive knowledge of IAS and Macedonian accounting and the analytical ability to understand the subtleties of comparing the two systems on theoretical and “applied” levels.

After consulting with the NB and with the Accounting Project, Booz Allen Hamilton identified and hired a local individual who did an outstanding job for Booz Allen Hamilton and the NB. Using this same individual, who had considerable teaching and seminar experience, Booz Allen Hamilton designed an entirely unique course which taught the internal accountants the theory behind IAS, how to set-up the accounts and how to maintain controls through the presentation of the balance sheet, profit and loss statement and cash flow. This course involved about 24 day sessions, some outside of Skopje to spread the travel burden of the bank accountants living outside of Skopje. About 60 different individuals attended, some for special subjects, with about 40 actually receiving graduation certificates.

Also, Robert Reed, CoP of the Accounting Project and Peers Brewer, CoP of the MBP, jointly presented a seminar for bank credit departments showing them what new accounting look they would be getting when their customers shifted to IAS and how this would impact the credit analytical process. About 65 people attended this seminar.

Finally, prior to conversion of the banks to IAS, and while discussions about that were in progress with the WB, IMF, MOF, USAID and NB, the MBP became aware that the Macedonian bank chart of accounts had never been translated into English and none of the Western parties to this discussion knew what the accounts looked like. The MBP, accordingly, with the help of the Accounting Project, hired a translator who specialized in accounting and business issues to do the translation. The translation was made available to all interested parties and Projects. (See Attachment Number 1).

Third, the use of IT/MIS in the banks was also difficult to get going because: (1) the two banks that were bought by foreigners (combined with over 45% of Macedonia’s deposits) were implementing the systems of their new parent bank; (2) several other large banks seemed reluctant, again, to have outsiders get too familiar with the internal conditions of the bank; and, (3) a total change was underway in the payments system, with the banks knowing very little about what stress this change was going to mean to the structure of their own system requirements.

Discussions with banks in another jurisdiction that had IT projects (software), felt that the project did not meet their needs because the banks did not know in the first place what was needed in

terms of MIS to manage their institutions. Normally IT systems are designed based on MIS requirements. Booz Allen Hamilton felt that it was most urgent in the Macedonian bank setting to get versed in MIS. That is, what information did each bank need at each level of seniority to effectively manage the risks inherent in the business? They needed to be shown what happens in the governance process as controls come down by directives from the Board of Directors to senior management to the line officers, and what is the timely return flow of information based on results. In response to this need, the MBP held two major seminars in February and March 2002. One was entitled “Management Information Systems and Credit Risk Management” (see Attachment Number 2) and the other “Treasury Department Risk Management Issues and Solutions in Macedonia” (See Attachment Number 3). The first was given by Peers Brewer and the second, by Gheorghe Campeanu. Both of these seminars were developed specifically with the Macedonian situation in mind. Both dealt with the underlying business practices and included numerous examples of actual MIS reports used in Western banks to show what information was needed in form and substance. Approximately 65 individuals attended each of these seminars. Both seminars led to considerable direct follow-up activity with the banks, including on the Treasury side, a concentrated consulting assignment with the Treasury Department of the Macedonian Development Bank.

## **TASK TWO: BANK REHABILITATION AGENCY AND DEPOSIT INSURANCE FUND**

At the time the MBP arrived in Skopje, the BRA had been legislated to go out of existence. The Bank Rehabilitation Agency (BRA) was founded as a special situation agency. The special situation was that Macedonia’s largest bank, Stopanska Bank was in deep trouble due to poor loan quality. The government owned the bank. This was not an institution that the government wanted to see fail, but no one would buy the bank given its bad credit characteristics. Therefore, a special entity, the BRA, was created to take the bad loans out of the bank to “clean it up” for sale. The BRA, it was hoped, would then sell off the bad loans and recoup part of the funds that the government had to inject into the bank when it withdrew the bad loans.

The CoP visited with Besnik Fetai, the General Manager of the BRA. The portfolio was disappointing. Stopanska Bank had very little credit culture, therefore the loans it generated had little residual values when they went bad, except by chance. The loans that did have a hidden value had been already picked over. The use of a special facility like the BRA has been in use by American banks on a rare basis since the Great Depression. Since the 1990s, this approach has been used in emerging Asian countries with a degree of success. In Macedonia’s case however, the gross amount of these loans was too small to attract the attention of cross border investment bankers (who handled the Asian debts) and Macedonia did not have a country grade and no internal means of buying the bad debts. Therefore, there was little that could be done with the BRA that Mr. Fetai had not done.

In the second area, service to the Deposit Insurance Fund, the timing of Booz Allen Hamilton’s arrival turned out to be particularly favorable. In May 2001, the MOF undertook the task of rewriting the legislation governing the operations of the DIF. The MOF asked the MBP to review the possible modification as contained in Articles 93-107 of the revised Banking Law. In reviewing these sections, Booz Allen Hamilton found several major problems, including a large uncovered FX exposure. The Project made two major and two minor recommendations of which

one of the major and both of the minor recommendations were incorporated into the new legislation.

One of the unique problems of the DIF at this time was that while it was becoming a solid company, few depositors even knew they were covered or to what extent. This was a particularly vexing problem since one of the reasons for having a DIF was to restore confidence of depositors in the banking system. The MBP, consequently funded a web site for the DIF that depositors could access and financed the design and printing of brochures which the banks could place on the counters where the depositors came to transact business.

Lastly, the DIF asked Booz Allen Hamilton in January 2002 to finance a new computer system to replace its antiquated system, which became impossible to do. However, when the MBP came to the end of its contract in July 2002 Booz Allen Hamilton donated to the DIF, with USAID's approval, their office PC and other office equipment. The Macedonian DIF, under the administration of Ms. Lilianja Bozenovska is probably the best such insurance operation in the former socialist countries. The DIF was very receptive to USAID's help. As a consequence, the Fund was significantly strengthened.

### **TASK THREE: THE NATIONAL PAYMENTS SYSTEM**

Task Three involved support for the change of the old payments system (ZPP) to a new, more market oriented system. While the TO envisioned the MBP playing a role in the system design, responsibility for that task was given over by the EU before the MBP was put up for bids. By the time Booz Allen Hamilton arrived in Macedonia, the system design and selection of hardware and software was all completed. The Europeans brought in a payments design expert from the UK, named Robin Reed, who did an excellent job.

At the end of the design phase, however, the European involvement came to an end. The Macedonians put one of their top young men, Dane Krstevski, in charge of the payments conversion. About six months earlier the Booz Allen Hamilton Project tried to hire Krstevski to head their participation in the ZPP conversion. At that point the Governor of the NB matched Booz Allen Hamilton's offer and put Krstevski in charge of the project for the NB. In that regard Booz Allen Hamilton had a decisive influence (although unintended) on the success of the conversion, since Krstevski turned out to be an excellent man for the job.

The conversion saw the old ZPP divided into two parts: the Real Time Gross Settlements (RTGS) part (owned and managed by the NB with Krstevski at the head) and the Clearing House Association (smaller clearings, owned by the commercial banks). Booz Allen Hamilton developed close relationships with both groups. In particular Booz Allen Hamilton counseled Krstevski on the content, pacing and direction of his conversion effort. Kiril Minoski, Deputy Head of the MPB attended all the monthly weekend meetings between the Real Time Gross Settlements and the bankers in the Winter and Spring of 2002. Booz Allen Hamilton's efforts to get more closely involved, however, were not picked up by the RTGS. It should be said, however, that the Macedonians largely did the job by themselves and did it with very few hitches, which is quite remarkable given the size and the timetable of the conversion process. In the Summer and Fall of 2001, however, Mr. Minoski was a member of the Marketing

Subcommittee of the Payments Conversion Task Force. In that position he helped design the conceptual framework for the public educational phase, which the MBP sponsored financially.

With regard to the Clearing House Association, Booz Allen Hamilton met with Goran Anastasovski, the first GM, and Stefece Stefanoski, second GM, on several occasions with proposals to assist their development. In this context Booz Allen Hamilton provided a detailed presentation about the New York Clearing House, how they operated and what services they made available to their member banks.

In April, 2002, Booz Allen Hamilton sponsored and sent two Macedonian Clearing House officers to a regional conference in Minsk of all the clearing houses in Central and Eastern Europe. It was recognized that closer cooperation between these clearing houses is imminent, which Booz Allen Hamilton agreed with.

In a development closely related to the reform of the payments system, in October 2001, Vladimir Milukov, Manager of the newly formed National Payment Card, came to us for consulting help. Through this card (essentially a debit card) the MOF hopes to improve tax collection, reduce corruption and reduce what is a relatively large amount of cash circulating in the system. The MBP rapidly developed a close relationship with the NPC. They were in particular need of advice covering their start-up phase, including: legal relationships with vendors, customer service, software, forms-and-documents, ATM management and similar topics. Since Croatia had itself just gone through such a start-up experience, Booz Allen Hamilton met with the Croatian NPC officials and hired them to come to Skopje to consult directly with the Macedonian NPC. The effort went very well from all perspectives. Subsequently Mr. Minoski helped design the NPC's public relations launch effort, which the Project funded. The NPC is now open and doing business. While one may tend to despair about the rate of change in the Balkans, in point of fact, in Macedonia, a large number of developments have happened in the financial sector, much of it, like the NPC, supported by USAID. Again, this is a good example of the constructive results that can happen when the local USAID unit and the project are alert to emerging trends in the market and join forces to respond.

#### **TASK FOUR: SUPERVISORY DEPARTMENT/NBRM**

Task Four deals with assistance to the Supervisory Department of the NBRM. As noted above, the TO said "the overriding objective of this task order is to develop a strong supervisory capacity at the NB..." As with the DIF, the timing of the Project's arrival in Skopje coincided most fortuitously with the consulting needs of the SD.

In October, 1999, the Macedonian government had entered into an Action Plan with the IMF and the WB regarding a list of activities or goals that they wanted the SD to fulfill during 2000 and 2001. In general, these goals concerned the technical supervisory skills of the SD. The fulfillment of these goals was a conditionality to further funding by the IMF/WB. Each of these goals, accordingly, had a specific time frame. In effect, this time frame put the NB under pressure and gave the MBP the leverage to become a significant factor in the SD's plans.

In January, 2000, shortly after the Booz Allen Hamilton team arrived in Skopje, the CoP met with Dr. Gilgor Bishev, the Deputy Governor of the NB with direct responsibility for the SD. By education and temperament, Bishev was an outstanding man for this position. The purpose of this meeting was to explore the ways that Booz Allen Hamilton could be of assistance to the SD. The outcome of the visit was a letter of January 31, 2000 from Bishev to Mr. Stephen Haynes, Mission Director of USAID/Skopje, which specifically requested help and gave the list of the areas where they needed help. In brief, while they needed help in many areas, the most urgent was for advisors to help with off-site supervision, methodology of supervision and the treatment of problem banks with the on-site training of the examiners in the US with the FDIC, OCC or FRB.

This letter gave the MBP the “franchise” to work directly with the SD and to work with them on issues that were crucial to them. It was also important for the success of the Project that they meet the expectations held by the SD at point. This “expectation” was an important factor in Booz Allen Hamilton’s strategic determination to make the SD the first of their priority customers and to build their own reputation in serving this customer.

Booz Allen Hamilton’s strategy was to find two top, recently retired senior level US bank examiners to come to Skopje on a prolonged assignment. The reason that Booz Allen Hamilton wanted two for a prolonged period was to give the STAs adequate time to know the people in the SD, to come to an understanding of the nuances of the issues that were pressing upon the SD and to have enough time to carefully work with the people on these issues. Booz Allen Hamilton was fairly confident at this point that the SD staff would not have much cognitive trouble with the technical side of these issues, but they really needed the perspective and counsel of seasoned, experienced supervisors for a longer time. Moreover, the SD was at a point where they were beginning to sense that supervision was a profession and that the objectivity and dedication of the SD was important to the integrity of the financial system. In other words, they were coming to see themselves as “special” people, important to the development of Macedonia. Booz Allen Hamilton felt that the reinforcement of this sense of purpose among the SD staff was equally, if not more, as important as their development than the technical assistance Bishev had requested.

To this end, Booz Allen Hamilton identified and secured for us the services of two exceptionally qualified men – Robert Hefner and Thomas Fitzgerald. The chemistry was excellent between these two and the staff at the SD. Things went so well in the Spring of 2000, that Booz Allen Hamilton brought them back for six weeks each in the Fall of 2000. Fitzgerald and Hefner covered a wide range of topics for the SD, including: (1) the use of CAMELS rating; (2) loan and credit concentrations; (3) an off-site supervision manual; (4) credit policies; (5) problem bank diagnosis and management; (6) on-site examination issues, (7) the SD’s organizational structure; (8) a bank governance manual; (9) a review of the examiners powers in the new bank legislation; (10) duties of bank audit committees; (11) dealing with bank management on enforcement issues; (12) steps to comply with BIS Core Principles of Supervision; and, (13) examiner file structures. The scope of the work done by Hefner and Fitzgerald, the quality of the work and the manner in which they shared these skills were the primary determinants of their success. Mr. Vincent Polizatto, a WB advisor, noted in particular the importance of the contribution of these STAs to the development of the SD at this time.

Subsequent to the consulting help from Hefner and Fitzgerald, Booz Allen Hamilton continued to work closely with the SD and other parts of the NBRM, culminating in June 2002 by bringing in the services of a specialist (a former OCC examiner) to bring the SD/NBRM in compliance with the Market Risk provision of the Core Supervisory Principals.

During the two and a half years in Skopje, Booz Allen Hamilton worked very closely with the SD staff. At the end, Booz Allen Hamilton admired their skills and their personal qualities. These people, and they are not alone, are indicative of the best hope of Macedonia. It is important that USAID continues to help and reinforce them whenever needed.

### **TASK FIVE: TRAINING OF MACEDONIANS**

Task Five deals with the continuing education of the examiners and is indivisible from TASK FOUR. It is also a component part of Dr. Bishev's request for help from USAID. The technical details and the funding for the overseas training under this TO was provided by World Learning (WL). WL did an outstanding job in arranging the training and in getting just the right training for the people that Booz Allen Hamilton was sponsoring. Again, success was based on specializing the delivery of the services to the Macedonian unique needs.

Over the two and a half years, Booz Allen sent three groups to the US for three weeks training with the FDIC, OCC, FRB and various State examiners. Each group had five participants and each group had its own special objectives. These were very successful trips for several reasons: one of which was the willingness of the US examiners to include the Macedonian examiners in actual on-side examinations of banks. Once again, Booz Allen Hamilton felt that their technical understanding was very good, but what they needed was the direct experience of working with seasoned professionals in the field. The learning curve was straight up for the Macedonians in all respects.

In June, 2002, as the MBP's mission drew to a close, Ilija Graorkovski, Manager of the SD, told the Booz Allen Hamilton team that the Macedonian Bank had determined the course and character of the SD for many years to come. It was a joy to see the SD develop in the manner that it did.

### **TASK SIX: EXPANSION OF THE SUPERVISORY PROGRAM**

Task Six encourages the MBP to promote the integration of the SD program with other USAID economic reform programs. This was somewhat difficult to achieve because the Macedonian culture is not to stray far from the legislated or designated base. It is a defensive mentality, especially compared to the American corporate mentality, which is to acquire as much turf as possible. The issue was complicated by the fact that the MOF controls all legislation relative to the financial sector and keeps most of the areas like capital markets, insurance and commercial fiancé under their direct control. It is possible that the main reason for this is that the Governor of the NBRM has (as in America) a long tenure. As a consequence the Governor was appointed by a different political party than is now in power. This seems to have been the source of some friction between the MOF and the NB. Notwithstanding this very Macedonian situation, there

were four areas in which Booz Allen Hamilton worked with other USAID projects on themes that involved the SD. These were: money laundering (FSVC), leasing legislation (FSVC), bank internal auditors (KPMG/Accounting) and National Payment Reform [ZPP] (US Treasury Department).

### **TASK SEVEN. REGIONAL LINKAGES OF NBRM**

Task Seven involved developing inter regional linkages between the NB and their counterparts in other countries. In point of fact, personnel from almost all levels of the NB have been going for years to conferences at the Bank for International Settlements, IMF, USAID, EU and all manner of regional conferences. Through these conferences, the Macedonian NB developed close working relationships with other NBs in the region. At one point Booz Allen Hamilton suggested to the NB that they would help them set up a quarterly journal, or even a web-site, for regional bank supervisory or other NB issues, but they felt that the timing was not right for them; meaning that they did not have the staff to take on the long term management of such a task. In February 2002, an opportunity did arise to send SD staff to a USAID sponsored conference in Warsaw on the subject of the resolution of bad debt issued in banks. Given the Macedonian bank experiences, Booz Allen Hamilton thought this was a good opportunity for the Macedonian SD to look at the international players in the field, the types of resolutions and the experiences of other regulatory bodies. Accordingly Booz Allen Hamilton sent two SD staff members to this conference.

### **TASK EIGHT: FAIR ACCESS TO CREDIT AND BARRIERS TO CORRUPTION**

Task Eight deals with promoting broad and fair access to credit, and building barriers to corruption and money laundering. These are immensely important issues and each, in all candor, should be the TO of separate projects. Nevertheless, in 2001 the Financial Service Volunteer Corps (FSVC) and the MBP joined forces to help the MOF draft legislation regarding money laundering. This legislation took some time to finish, but the law did become effective in March 2002. Booz Allen Hamilton's main interest in this legislation was to be sure that the banks' responsibilities with regard to record retention and regulatory notification were clearly indicated.

With regard to broad access to credit, the concept does not exist in the Macedonian bank mentality. The banks are just beginning to develop strategies for expanding credit to the retail sector. Also, although there are more banks than the country needs, there are comparatively few branches, so credit tends to be restricted to corporate and urban centers.

The use of PCs, however, is growing rapidly in Macedonia. The MBP, as a consequence held a seminar on electronic banking, designed to show the Macedonian bankers how to set-up web-sites for their products, how to market credit by electronic banking, how to manage the risks and other steps which would broaden their customer base and make bank services more available on a competitive basis through out the country. Subsequent to the seminar, several banks either revised or set-up new web sites with product descriptions and current pricing of the products (see Attachment Number 5).

## **UNWRITTEN OBLIGATIONS AND OPPORTUNITIES**

In addition to the Task Orders (TO), as the CoP gained contacts and insights in to the Macedonian business system, he was increasingly called upon to share this information and to assist others. This is an essential part of the work even though it is not covered by a TO. Examples of this type of work are: (a) periodic briefings of the Ambassador or other embassy personnel regarding the status of the banking system; (b) briefing meeting for potential investors in Macedonia; (c) briefings with external agencies potentially rating Macedonian debt; (d) monthly briefings with the Minister of Finance; (e) meetings with USAID assessment teams from Washington; (f) consultations with the Macedonian university faculty regarding revisions in their curriculum; (g) review of assessment reports or potential projects for USAID; (h) background meeting with contractors bidding on projects in Macedonia; and, (i) frequent project up-dates with MBP USAID bosses in Skopje.

## **WHERE DOES USAID GO FROM HERE?**

While the MBP has come to an end, Macedonia's need for USAID assistance in the financial sector will continue for many years. Specific areas where help is needed include: (a) the insurance and non-bank financial sector (commercial finance, leasing) is under developed and needs very basic help, (b) the SD/NBRM will need additional help to complete compliance with the Core Principals, such as Market Risk. In other regards, the banking industry itself is entering a period where interest rates and other money market risks will become a more serious factor, which raises the need for additional training of the bank examiners. The same applies to issues regarding the emergence of bank holding companies; and, (c) the commercial banking sector is still not providing the country with the financial leadership or serving as an engine to drive economic growth. This issue needs to be revisited, especially regarding how to solve the existing corpus of bad loans, which seems to be a serious drag on the industry's development (e.g. does Macedonia need a new bank bad debt agency?). The banking industry also needs an independent trade association to carry forward the training of people and represent the industry with authoritative and independent voice before the public and the legislature.

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**“An English Translation of  
the Macedonian Chart of  
Accounts for Banks and  
Savings Houses”**

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**AN ENGLISH TRANSLATION OF  
THE MACEDONIAN  
CHART OF ACCOUNTS  
FOR  
BANKS AND SAVINGS HOUSES**

prepared for  
**THE MACEDONIAN BANKING PROJECT**  
Booz Allen & Hamilton/US AID  
November 2000

**SCHEDULE OF  
SUBLEDGER ACCOUNTS IN THE CHART OF ACCOUNTS OF BANKS  
AND SAVINGS HOUSES**

Explanation of abbreviations:

NB.....National Bank of the Republic of Macedonia

B.....Bank

SH.....Savings House

Type of account

1.....debit

2.....credit

3.....debit/credit

**CLASS 0: FIXED ASSETS AND LOSS**

	NB	B	SH	1
00-INTANGIBLE INVESTMENTS	NB			
000- Expenses for research and development	NB			
0000- Research expenses				
0001- Development expenses				
001- Founding investments				
0010- Investments in studies and research				
0011- Investments in feasibility studies				
0012 - Investments in technical training and specialization of employees				
0013 - Interest costs (related to the founding)				
0014 - Insurance premium costs (related to the founding)				
0019 - Other costs related to the founding of banks and other financial institutions, or other organizational departments				
002 - Goodwill				
0020 - Goodwill value				
003 - Patents, licenses and concessions				
0030 - Investments in acquisitions of patent rights				
0031 - Investments in acquisitions of license rights				
0032 - Investments in acquisitions of concessions				
004 - Other rights				
0040 - Software				
0041 - Design, model and protection marks				
0042 - Lease based rights				
0042 - Long-term leasing rights				
0044 - Rights to operate non-owned assets				
0049 - Other intangible rights				
006 - Advance payments on intangible investments				
007 - Other intangible investments				
008 - Revaluation of intangible investments during the accounting period				
0080 - Revaluation of research and development expenses				

0081 - Revaluation of founding investments				
0082 - Goodwill revaluation				
0083 - Revaluation of patents, licenses and concessions				
0084 - Revaluation of other rights				
009 - Allowance for intangible investments				
0090 - Allowance for expenses for research and development				
0091 - Allowance for founding investments				
0092 - Allowance for goodwill				
0093 - Allowance for patents, licenses and concessions				
0094 - Allowance for other rights				
0099 - Computed amortization during the year				
01 - NATURAL RESOURCES	NB	B	SH	1
010 - Land				
018 - Revaluation of natural resources during the accounting period				
02 - TANGIBLE ASSETS	NB			1
020 - Buildings		B	SH	1
0200 - Concrete, reinforced concrete, stone or brick buildings				
0201 - Metal buildings				
0202 - Buildings made of wood and other materials				
021 - Equipment		B	SH	1
0210 - Machines				
0211 - Means of transportation				
0212 - Telecommunication equipment				
0213 - Special and general tools				
0214 - Heating, ventilation and maintenance equipment				
0215 - Office, plant and other furniture and office equipment				
0216 - Fire equipment and other safety equipment				
0217 - Measurement and control equipment, instruments, tools and appliances				
024 - Other tangible assets		B	SH	1
0240 - Library books				
0241 - Art items				
0249 - Other tangible assets				
025 - Tangible assets in preparation		B	SH	1
0250 - Investment material inventory				
0251 - Investments in process - construction equipment				
0252 - Investments in process - equipment				
026 - Advance payments on tangible assets				
0260 - Cash held for investments				

0261 – Claims based on advance payments for investments			
0262 – Claims based on joint construction of tangible assets			
028 – Revaluation of tangible assets during the accounting period	B	SH	1
0280 – Revaluation of tangible assets in function			
0281 – Revaluation of tangible assets in preparation			
029 – Allowance for tangible assets	B	SH	2
0290 – Allowance for buildings			
0290 – Allowance for equipment			
0294 – Allowance for other tangible assets			
0299 – Computed depreciation of tangible assets during the year			
03 – INVENTORY	NB		1
030 – Materials	B	SH	1
0300 – Office materials			
0301 – Internal forms			
0302 – Sales forms			
0303 – Other materials			
0308 – Cafeteria materials			
0309 – Price deviations			
031 – Small tools on hand	B	SH	1
0310 – Small tools on hand			
0311 – Tires on hand			
0312 – Package on hand			
0313 – Protection and office uniforms and footwear on hand			
032 – Small tools in use	B	SH	1
0320 – Small tools in use			
0321 – Tires in use			
0322 – Package in use			
0323 – Protection and office uniforms and footwear in use			
033 – Allowance for small tools in use	B	SH	2
0331 – Allowance for small tools on hand			
0332 – Allowance for small tools in use			
034 – Tax and administrative value papers with the National Bank	NB		1
035 – Tax and administrative value papers with the Payment Operations Office (ZPP)	NB		1
036 – Tangible assets and other values confiscated on the basis of uncollected receivables	B	SH	1
0361 - Buildings			
0362 – Equipment			
0363 – Furniture, means of transportation etc.			
0364 – Residential buildings and apartments			
0365 – Other tangible items			

0366 – Collateral			
038 – Numismatic collections and inventory of coins for sale	B		1
04 – PLACEMENTS AND ASSETS HELD BASED ON SPECIAL REGULATIONS	NB	SH	1
040 – Assets held for investments	B		1
041 – Compulsory placements for investments	B		1
042 – Loans according to State regulations	B		1
048 – Other placements	B		1
05 – RESERVES	NB		1
050 – Special reserves			
0500 – Special reserves			
0509 – Other special reserves			
06 – LONG-TERM DENAR FINANCIAL INVESTMENTS		PSH SH	1
060 – Investments in non-financial legal entities			
0600 – Investments in non-financial legal entities in securities, with management rights	B		1
0601 – Investments in non-financial legal entities in securities, with management rights, according to the Law for restructuring of companies at a loss			
0602 – Investments in non-financial legal entities in securities – preference shares	B		1
0603 – Investments in non-financial legal entities, in securities – preference shares, in accordance with the Law for restructuring of companies at a loss	B		1
0609 – Other investments in non-financial legal entities	B		1
065 – Investments in banks and other financial institutions	B		1
0650 – Investments in banks and other financial institutions in securities, with management rights			
0651 – Investments in banks and other financial institutions, in securities – preference shares			
0659 – Other investments in banks and other financial institutions			
068 – Investments in banks, financial institutions and other entities abroad, in denars	B		1
0680 – Investments in banks, financial institutions and other entities abroad, in securities with management rights, in denars			
0681 – Investments in banks, financial institutions and other entities abroad, in securities – preference shares			
0689 – Other investments in banks, financial			

institutions and other entities abroad, in denars				
069 - Treasury stock		B		1
<b>07 - ASSETS FOR OTHER PURPOSES AND OTHER ASSETS</b>				
	NB	B	SH	1
070 - Cash for other purposes				
071 - Placements of assets for other purposes				
072 - Assets for joint consumption on housing				
073 - Assets for joint consumption on other needs				
074 - Other assets				
<b>08 - DOUBTFUL AND CONTESTED CLAIMS FROM BUSINESS OPERATIONS</b>				
080 - Doubtful and contested claims based on interest and fees				
0800 - Doubtful and contested claims based on interest from non-financial legal entities	NB	B	SH	1
0801 - Doubtful and contested claims based on interest from the public sector		B		1
0803 - Doubtful and contested claims based on interest on investment operations and exports to Iraq and Kuwait.		B		1
0805 - Doubtful and contested claims based on interest from banks and other financial institutions	NB	B	SH	1
0806 - Doubtful and contested claims based on interest from other clients		B		1
0807 - Doubtful and contested claims based on interest from households		B	SH	1
0808 - Doubtful and contested claims based on interest from foreign entities		B		1
0809 - Doubtful and contested claims based on fees	NB	B	SH	1
081 - Allowance for doubtful and contested claims based on interest and fees				
0810 - Allowance for doubtful and contested claims based on interest from non-financial legal entities	NB	B	SH	2
0811 - Allowance for doubtful and contested claims based on interest from the public sector		B		2
0813 - Allowance for doubtful and contested claims based on interest on investments and exports to Iraq and Kuwait.		B		2
0815 - Allowance for doubtful and contested claims based on interest from banks and other financial institutions	NB	B	SH	2
0816 - Allowance for doubtful and contested claims based on interest from other clients		B		2
0817 - Allowance for doubtful and contested				

claims based on interest from households	B	SH	2
0818 - Allowance for doubtful and contested claims based on interest from foreign entities	B		2
0819 - Allowance for doubtful and contested claims based on fees	NB	B SH	2
082 - Foreign exchange doubtful and contested claims based on interest and fees			
0820 - Foreign exchange doubtful and contested claims based on interest from short-term operations	NB	B	1
0824 - Foreign exchange doubtful and contested claims based on interest from long-term operations	NB	B	1
0828 - Foreign exchange doubtful and contested claims based on fees	NB	B	1
083 - Allowance for foreign exchange doubtful and contested claims based on interest and fees			
0830 - Allowance for foreign exchange doubtful and contested claims based on interest from short-term operations	NB	B	2
0834 - Allowance for foreign exchange doubtful and contested claims based on interest from long-term operations	NB	B	2
0838 - Allowance for foreign exchange doubtful and contested claims based on fees	NB	B	2
084 - Doubtful and contested claims from placements and other claims			
0840 - Doubtful and contested claims from placements and other claims on non-financial legal entities	NB	B SH	1
0841 - Doubtful and contested claims from placements and other claims on the public sector		B	1
0843 - Doubtful and contested claims from placements and other claims on investment operations and exports to Iraq and Kuwait		B	1
0844 - Doubtful and contested claims from placements and other claims on former Yugoslavia		B	1
0845 - Doubtful and contested claims from placements and other claims on banks and other financial institutions	NB	B SH	1
0846 - Doubtful and contested claims from placements and other claims on other clients		B	1
0847 - Doubtful and contested claims from placements and other claims on households		B SH	1
0848 - Doubtful and contested claims from placements and other claims on foreign entities		B	1

085 - Allowance for doubtful and contested claims from placements and other claims				
0850 - Allowance for doubtful and contested claims from placements and other claims on non-financial legal entities	NB	B	SH	2
0851 - Allowance for doubtful and contested claims from placements and other claims on the public sector		B		2
0853 - Allowance for doubtful and contested claims from placements and other claims on investment operations and exports to Iraq and Kuwait		B		2
0854 - Allowance for doubtful and contested claims from placements and other claims on former Yugoslavia		B		2
0855 - Allowance for doubtful and contested claims from placements and other claims on banks and other financial institutions	NB	B	SH	2
0856 - Allowance for doubtful and contested claims from placements and other claims on other clients		B		2
0857 - Allowance for doubtful and contested claims from placements and other claims on households		B	SH	2
0858 - Allowance for doubtful and contested claims from placements and other claims from foreign entities		B		2
086 - Foreign exchange doubtful and contested claims from placements and other claims				
0860 - Foreign exchange doubtful and contested claims from placements and other claims on non-financial legal entities		B		1
0861 - Foreign exchange doubtful and contested claims from placements and other claims on the public sector		B		1
0865 - Foreign exchange doubtful and contested claims from placements and other claims on banks and other financial institutions	NB	B		1
0866 - Foreign exchange doubtful and contested claims from placements and other claims on other clients		B		1
0867 - Foreign exchange doubtful and contested claims from placements and other claims on households		B		1
0868 - Foreign exchange doubtful and contested claims from placements and other claims on foreign entities		B		1
087 - Allowance for foreign exchange doubtful				

and contested claims from placements and other claims

0870 - Allowance for foreign exchange doubtful and contested claims from placements and other claims on non-financial legal entities	B			2
0871 - Allowance for foreign exchange doubtful and contested claims from placements and other claims on the public sector	B			2
0875 - Allowance for foreign exchange doubtful and contested claims from placements and other claims on banks and other financial institutions	NB	B		2
0876 - Allowance for foreign exchange doubtful and contested claims from placements and other claims on other clients	B			2
0877 - Allowance for foreign exchange doubtful and contested claims from placements and other claims on households	B			2
0878 - Allowance for foreign exchange doubtful and contested claims from placements and other claims on foreign entities	B			2
09 - LOSS	NB	B	SH	1
091 - Loss from previous years				
092 - Current year loss				

**CLASS 1: SHORT-TERM CLAIMS, CASH AND DEBIT ACCOUNTS**

**10 - CASH AND CASH EQUIVALENTS**

100 - Giro accounts				
1000 - Giro accounts	NB	B	SH	3
1001 - Temporary account on a giro account	NB	B	SH	3
1002 - Bank account for operations via business units		B	SH	3
1003 - Bank temporary account for operations via business units		B	SH	3
101 - Treasury	NB	B	SH	3
1010 - Treasury				
1011 - Cash in transit				
1013 - Cash-on-hand for petrol vouchers				
1016 - Porto treasury				
102 - National Bank cash				
1020 - Cash in the NBRM vault	NB			1
1022 - Replaced damaged bank notes and coins	NB			1
103 - National Bank cash at the Payment Operations Office (ZPP)	NB			1

104 - National Bank deposits with the Payment Operations Office	NB			1
105 - Gold				
1050 - Monetary gold in the NBRM vault	NB			1
1051 - Gold in vault	NB			1
1052 - Monetary gold deposited abroad	NB			1
1053 - Monetary gold of undetermined value	NB			1
1054 - Gold in bank vault		B		1
1055 - Bank monetary gold deposited abroad		B		1
106 - Other precious metals	NB	B		1
1060 - Other precious metals in vault				
1061 - Other precious metals abroad				
1062 - Other precious metals of undetermined value				
107 - Other metals	NB	B		1
1070 - Other metals in vault				
1071 - Other metals abroad				
1072 - Other metals of undetermined value				
108 - Other Cash equivalents				
1080 - Other cash equivalents of banks and other financial institutions	NB	B	SH	1
1081 - Cash for operations on behalf of and on account of others	NB	B		1
1082 - Cash for operations on behalf of and on account of households				
11 - COMPUTED AND UNCOLLECTED CASH AND CASH EQUIVALENTS				
110 - Current account of ZPP with the National Bank for cash				
1100 - Claims on ZPP for cash issued	NB			1
1101 - Cash payable to ZPP	NB			3
111 - Current account of the National Bank Payment Operations Department with the ZPP	NB			3
1110 - Current account of the Payment Operations Department				
1111 - Non-computed cumulative advise notes for credits				
1112 - Non-computed cumulative advice notes for debits				
1113 - Non-computed cumulative advice notes for credits				
1114 - Non-computed cumulative advice notes for debits				
1115 - Completed telephone and telegraph orders				
1116 - Current temporary account of the Payment Operations Department				

12 - ACCOUNTS RECEIVABLE	NB	B	SH	3
120 - Domestic customers				
121 - Foreign customers				
13 - SECURITIES				
130 - Checks				
1300 - Checks received upon foreign exchange operations		B	SH	1
1301 - Checks received upon short-term operations	NB	B	SH	1
1302 - Checks received upon long-term operations		B	SH	1
1309 - Checks sent for collection payment		B	SH	1
131 - Bills of exchange				
1310 - Bills of exchange from foreign-exchange operations		B	SH	1
1311 - Endorsed short-term bills of exchange		B	SH	1
1312 - Short-term bills of exchange		B	SH	1
1313 - Other short-term bills of exchange		B	SH	1
132 - Bills of exchange for re-discount		B	SH	1
133 - Discounted bills of exchange		B	SH	1
134 - Treasury bills				
1340 - NBRM treasury bills		B		1
1341 - Bank treasury bills		B		1
1342 - Savings Houses treasury bills			SH	1
1349 - Treasury bills of other issuers		B	SH	1
135 - Bonds				
1350 - Government bonds - payment instruments due for collection in one year	NB	B	SH	1
1351 - Government bonds - payment instruments due for collection in over one year		B	SH	1
1352 - Bonds issued by the Agency for Financial Recovery of Banks		B		1
138 - Other securities				
1380 - Commercial bills		B		1
1389 - Other securities		B	SH	1
14 - COMPULSORY DEPOSITS OF OPERATING ASSETS				
141 - Compulsory reserves with the NB				
1410 - Compulsory bank reserves held at the NBRM		B		1
1412 - Compulsory savings house reserves held at the NBRM			SH	1
1413 - Temporary use of savings house compulsory reserves for maintaining daily liquidity			SH	2
1414 - Compulsory reserves of post-office savings house held at the NBRM			PSH	1

1415 - Temporary use of post-office savings house compulsory reserves for maintaining daily liquidity		PSH	1
1416 - Compulsory reserves of banks held at the NBRM at marginal rates	B		1
1417 - Compulsory reserves of savings houses held at the NBRM at marginal rates		SH	1
1418 - Compulsory reserves of post-office savings house held at the NBRM at marginal rates		PSH	1
142 - Deposits with the NB based on special regulations			
1421 - Daily deposit with the NBRM	B	PSH	1
1422 - Deposits with the NBRM based on deposits sold by auction	B	PSH	1
1429 - Deposits with the NBRM on other bases	B	PSH	1

15 - CLAIMS FROM BUSINESS RELATIONS AND COMPUTED AND UNCOLLECTED ASSETS

150 - Interest receivable				
1500 - Interest receivable from non-financial legal entities	NB	B	SH	1
1501 - Interest receivables from the public sector	NB	B		1
1505 - Interest receivable from banks and other financial institutions	NB	B	SH	1
1506 - Interest receivable from other clients		B		1
1507 - Interest receivable from households		B	SH	1
1508 - Interest receivable from foreign entities		B		1
1509 - Interest receivable on loans approved to non-financial legal entities for investment operations and exports to Iraq and Kuwait		B		1
151 - Fees receivable in denars	NB	B	SH	1
1510 - Fees receivable from non-financial legal entities				
1511 - Fees receivable from the public sector				
1515 - Fees receivable from banks and other financial institutions				
1516 - Fees receivable from other clients				
1517 - Fees receivable from households				
1518 - Fees receivable from foreign entities				
152 - Tax and contribution advance payments	NB	B	SH	1
1520 - Service tax advance payments				
1521 - Advance payments on income tax				

and contributions from income				
1529 - Advance payments on other liabilities				
153 - Claims based on over-paid tax and contributions	NB	B	SH	1
1530 - Claims based on over-paid income tax				
1531 - Claims based on over-paid contributions from income				
1532 - Claims based on over-paid service tax				
1533 - Claims based on over-paid other taxes and contributions				
154 - Other claims		PSH	SH	1
1540 - Purchased denar checks	NB	B		1
1541 - Claims on clients for under-paid amount of denars in exchange for foreign currency	NB	B		1
1542 - Treasury deficits	NB	B		1
1543 - Claims based on interest and fees paid on account of others	NB	B		1
1544 - Claims based on paid coupons of bonds issued by third parties	NB	B		1
1545 - Claims based on salaries	NB	B		1
1546 - Claims based on issued security and deposits	NB	B		1
1547 - Claims on banks and post-offices upon operations with households	NB	B		1
1548 - Claims on bank personnel	NB	B		1
1549 - Other claims	NB	B		1
155 - Denar advance payments				
1550 - Advance payments to suppliers	NB	B	SH	1
1551 - Advance payments to authorized banks for purchasing foreign exchange cash	NB			1
1552 - Advance payments to authorized exchange offices for purchasing foreign exchange cash	NB	B	SH	1
1559 - Advance payments for other purposes	NB	B	SH	1
156 - Foreign exchange claims based on interest and fees				
1560 - Foreign interest receivable upon short-term operations	NB	B		1
1561 - Foreign interest receivable upon long-term operations	NB	B		1
1562 - Foreign receivables based on fees	NB	B		1
1569 - Other foreign interest receivable	NB	B		1
157 - Other foreign claims				

1570 - Foreign claims of the bank for operations abroad	NB	B		1
1572 - Foreign claims based on paid interest, commissions and other expenses on account of the Government	NB			1
1573 - Foreign claims based on paid interest, commissions and other expenses on account of other parties	NB	B		1
1574 - Foreign claims based on various relations with foreign clients	NB	B		1
1577 - Claims based on foreign reserves	NB			1
1578 - Claims on the Government based on the regulation of financial relations abroad	NB			1
1579 - Other foreign claims on other bases	NB	B	SH	1
158 - Foreign advance payments	NB	B		1
<b>16 - CLAIMS BASED ON PAYMENTS UPON THE ISSUANCE OF BACKING GUARANTEES FOR SECURITIES AND GUARANTEES</b>				
160 - Denar claims for payments made upon issuance of backing guarantees for securities and guarantees				
1600 - Denar claims on non-financial legal entities for payments made upon issuance of backing guarantees for securities and guarantees		B	SH	1
1601 - Denar claims on public sector for payments made upon issuance of backing guarantees for securities and guarantees		B	SH	1
1605 - Denar claims on banks and other financial institutions for payments made upon issuance of backing guarantees for securities and guarantees		B	SH	1
1606 - Denar claims on other clients for payments made upon issuance of backing guarantees for securities and guarantees		B	SH	1
161 - Foreign claims for payments made upon issuance of backing guarantees for securities and guarantees				
1610 - Foreign claims on non-financial legal entities for payments made upon issuance of backing guarantees for securities and guarantees		B		1
1611 - Foreign claims on the public sector for payments made upon issuance of backing guarantees for securities and guarantees		B		1
1615 - Foreign claims on banks and other	NB	B		1

financial institutions for payments made upon issuance of backing guarantees for securities and guarantees				
17 - INTERNAL ACCOUNTING RELATIONS				
170 - Claims on organizational departments of domestic banks	NB	B	SH	1
171 - Claims on organizational departments of foreign banks				
1710 - Claims on organizational departments of foreign banks		B	PSH	1
1711 - Claims on organizational departments of former Yugoslavia banks		B	PSH	1
19 - DEFERRED EXPENSES				
190 - Interest	NB			1
1900 - Computed interest outstanding from non-financial legal entities		B	SH	1
1901 - Computed interest outstanding from the public sector		B	SH	1
1905 - Computed interest outstanding from banks and other financial institutions		B	SH	1
1906 - Computed interest outstanding from other clients		B	SH	1
1907 - Computed interest outstanding from households		B	SH	1
1908 - Computed interest outstanding from foreign entities		B		1
191 - Foreign exchange differences	NB			1
1910 - Computed foreign exchange loss				
192 - Computed and uncollected receivables from business operations				
1920 - Computed and uncollected claims based on business operations	NB	B	SH	1
1921 - Computed and uncollected claims based on business operations	NB	B	SH	1
193 - Computed and uncollected claims based on operations with households		B	SH	1
1930 - Computed and uncollected claims based on sight deposits				
1931 - Computed and uncollected claims based on short-term deposits				
1932 - Computed and uncollected claims based on long-term deposits				
1933 - Computed and uncollected claims based on short-term loans				
1934 - Computed and uncollected claims based on long-term loans				
1939 - Other computed and uncollected claims				
194 - Unpaid previous year expenses	NB			1

198 - Other deferred expenses

**CLASS 2: SHORT-TERM LIABILITIES AND DEBIT ACCOUNTS**

20 - LIABILITIES FOR TAX, CONTRIBUTIONS AND SALLARIES NB B PSH, SH 2

201 - Liabilities for tax, contributions and other levies B 2

2010 - Tax payable

2011 - Contribution payable

2012 - Payables for other levies

202 - Payables for salaries and salary compensations B 2

2020 - Payables for gross salaries and salary compensations

2021 - Payables for gross salary compensations

203 - Net salaries B 2

204 - Net salary compensations B 2

206 - Contributions from salaries B 2

207 - Payroll tax B 2

208 - Other payables B 2

**21 - LIABILITIES BASED ON ALLOCATION OF INCOME**

210 - Liabilities based on allocation of income NB B SH 2

219 - Non-allocated current year income NB B<sup>3</sup> SH 2

**22 - ACCOUNTS PAYABLE NB PSH, SH 3**

220 - Domestic suppliers B 3

221 - Foreign suppliers B 3

224 - Suppliers of non-invoiced goods and services B 3

**23 - LIABILITIES BASED ON PAYMENT INSTRUMENTS RENDERED**

230 - Checks rendered B SH 2

231 - Bills of exchange rendered NB B SH 2

2310 - Bills rendered upon foreign operations

2311 - Bills rendered upon short-term operations

2312 - Bills rendered upon long-term operations

2319 - Bills rendered on other bases

238 - Other payment instruments rendered B SH 2

**24 - LIABILITIES BASED ON COMPULSORY DEPOSITS**

240- Bank giro-accounts with the NB

2400 - Bank giro-accounts with the NBRM NB 3

2401 - Giro-accounts of savings houses NB 3

2402 - Giro-accounts of post-office savings houses NB 3

241 - Compulsory reserves with NB

2410 - Bank compulsory reserves with NBRM NB 2

2412 - Savings house compulsory reserves with NBRM	NB			2
2413 - Using the savings house compulsory reserves with NBRM	NB			1
2414 - Post-office savings house compulsory reserves with NBRM	NB			2
2415 - Using the post-office savings house compulsory reserves with NBRM	NB			1
2416 - Bank compulsory reserves with NBRM at marginal rates	NB			2
2417 - Savings house compulsory reserves with NBRM at marginal rates	NB			2
2418 - Post-office savings house compulsory reserves with NBRM at marginal rates	NB			2
242 - Liabilities for deposits with NB according to special regulations				
2420 - Reserve fond assets	NB			2
2421 - Bank daily deposits with NBRM	NB			2
2422 - Deposits with NBRM bought from the banks by auction				
<b>25 - LIABILITIES BASED ON BUSINESS OPERATIONS</b>				
250 - Interest payable				
2500 - Interest payable to non-financial legal entities	NB	B	SH	2
2501 - Interest payable to the public sector	NB	B	SH	2
2505 - Interest payable to banks and other financial institutions	NB	B	SH	2
2506 - Interest payable to other clients		B	SH	2
2507 - Interest payable to households		B	SH	2
2508 - Interest payable to foreign entities		B		2
251 - Denar fees payable	NB	B	SH	2
2515 - Fees payable to banks and other financial institutions				
2516 - Fees payable to other clients				
2518 - Fees payable to foreign entities				
253 - Liabilities for under-paid tax and contributions	NB	B	SH	2
2530 - Liabilities for under-paid income tax				
2531 - Liabilities for under-paid contributions from income				
2532 - Liabilities for under-paid service tax				
2533 - Liabilities for other under-paid taxes and contributions				
254 - Other liabilities				
2540 - Liabilities for temporary use of reserve assets for maintaining daily liquidity and discounted bills	NB	B	SH	2
2544 - Liabilities upon unsettled payment	NB			3

operations with the ZPP				
2547 - Liabilities based on foreign reserves	NB			2
2549 - Other liabilities on other bases	NB	B	SH	2
255 - Denar advances received				
2551 - Advances received for the purchase of foreign exchange cash	NB	B	SH	2
2559 - Advances received for other purposes	NB	B	SH	2
256 - Foreign interest and fees payable				
2560 - Foreign interest payable upon short-term operations	NB	B		2
2561 - Foreign interest payable upon long-term operations	NB	B		2
2562 - Foreign fees payable	NB	B		2
2569 - Other foreign interest payable	NB	B	SH	2
257 - Other foreign liabilities				
2571 - Liabilities for issued checks and letters of credit in foreign currency	NB	B		2
2572 - Liabilities for issued checks and letters of credit in hard currency	NB	B		2
2573 - Liabilities for outstanding payments upon collections abroad	NB	B		2
2574 - Liabilities for non-allocated inflows in hard currency	NB	B		2
2576 - Foreign liabilities for temporary payments of foreign and domestic entities on account of investments for founding mixed legal entities	NB	B		2
2577 - Other foreign liabilities to the Government budget	NB			2
2578 - Foreign liabilities to foreign banks on other bases	NB	B		2
2579 - Other foreign liabilities on other bases	NB	B		2
258 - Foreign advance payments	NB	B		2
26 - LIABILITIES FOR PAYMENTS MADE ON THE BASIS OF BACKING GUARANTEES FOR SECURITIES AND GUARANTEES				
260 - Denar liabilities to other banks for payments based on backing guarantees for securities and guarantees		B	SH	2
2600 - Denar liabilities to other banks for payments based on backing guarantees for securities				
2601 - Denar liabilities to other banks for payments based on guarantees				
261 - Foreign liabilities to other banks for payments based on backing guarantees for securities and guarantees		B		2
2610 - Foreign liabilities to other banks for				

payments based on backing guarantees for securities				
2611 - Foreign liabilities to other banks for payments based on guarantees				
27 - INTERNAL ACCOUNTING RELATIONS				
270 - Liabilities to organizational departments of domestic banks	NB	B	SH	2
271 - Liabilities to organizational departments of the bank abroad				
2710 - Liabilities to organizational departments of the bank abroad		B		2
2711 - Liabilities to organizational departments of banks in former Yugoslavia		B		2
29 - DEFERRED CREDITS				
290 - Interest	NB			2
2900 - Computed interest from non-financial legal entities		B	SH	2
2901 - Computed interest from the public sector		B	SH	2
2902 - Computed interest upon discounted bills of exchange		B	SH	2
2905 - Computed interest from banks and other financial institutions		B	SH	2
2906 - Computed interest from other clients		B	SH	2
2907 - Computed interest from households		B	SH	2
2908 - Computed interest from foreign entities		B		2
291 - Exchange rate differences	NB			2
2910 - Computed foreign exchange gains		B	SH	2
292 - Computed and uncollected liabilities from business operations				
2920 - Computed and uncollected liabilities from denar business operations	NB	B	SH	2
2921 - Computed and uncollected liabilities from foreign exchange business operations				
2922 - Computed and uncollected liabilities from interest paid based on short-term foreign deposits abroad	NB			2
293 - Computed and uncollected liabilities from household operations		B	SH	2
2930 - Computed and uncollected liabilities from sight deposits				
2931 - Computed and uncollected liabilities from short-term deposits				
2932 - Computed and uncollected liabilities from long-term deposits				
2933 - Computed and uncollected liabilities from short-term loans				
2934 - Computed and uncollected liabilities				

from long-term loans				
2939 - Other computed and uncollected liabilities				
294 - Surplus of income to be transferred to the following year	NB			2
298 - Other deferred credits	NB	B	SH	2
<b>CLASS 3: FOREIGN ASSETS AND PLACEMENTS</b>				
<b>30 - FOREIGN ASSETS AND SECURITIES</b>				
300 - Foreign exchange - foreign exchange cash	NB	B	SH	2
3000 - Foreign exchange				
3001 - Foreign exchange sent abroad				
3002 - Foreign exchange in transit				
3003 - Foreign exchange abroad				
3009 - Temporary account in foreign treasury				
301 - Checks	NB	B	SH	1
3010 - Foreign exchange checks received in treasury				
3011 - Foreign exchange checks sent for collection abroad				
3012 - Foreign exchange checks sent to domestic banks for cashing				
3013 - Foreign checks received from other banks				
3017 - Checks in hard foreign currency				
3018 - Checks in hard foreign currency sent to NBRM for cashing				
3019 - Temporary account for foreign checks				
307 - Foreign exchange securities	NB	B		1
308 - Other foreign exchange assets				
<b>31 - FOREIGN EXCHANGE CURRENT AND SPECIAL ACCOUNTS</b>				
<b>310 - Foreign exchange current accounts abroad</b>				
3100 - Regular foreign exchange accounts abroad	NB	B		3
3101 - Special foreign exchange accounts abroad	NB	B		1
3102 - Special foreign exchange accounts with international financial institutions	NB	B		1
3108 - Other foreign exchange accounts abroad	NB	B		1
3109 - Other foreign exchange accounts from former Yugoslavia		B		1
<b>311 - Foreign exchange domestic current accounts</b>				
3110 - Foreign exchange current accounts with authorized domestic banks	NB	B	SH	3
3111 - Foreign exchange temporary account with authorized banks	NB	B	SH	3

3118 - Special deposits with NBRM	NB	B	SH	3
3119 - Special deposits with authorized banks	NB	B	SH	3
312 - Clearing current accounts				
3120 - Regular clearing accounts	NB			3
3121 - Special clearing accounts	NB			3
3129 - Other clearing accounts	NB			3
315 - Foreign exchange nostro covered letters of credit and guarantees		B		1
3150 - Foreign exchange nostro covered letters of credit	NB			1
3151 - Foreign exchange nostro letters of credit with special authorization for reimbursement	NB			1
3154 - Foreign exchange nostro covered guarantees	NB			1
316 - Clearing nostro covered letters of credit and guarantees	NB	B		1
318 - Foreign assets for operations on behalf of and on account of others		B		3
319 - Foreign exchange temporary account	NB	B		3
3190 - Foreign exchange temporary account of the bank				
3191 - Foreign exchange temporary account for collections on operations				
3195 - Foreign exchange temporary account for trade balances between imports and exports and payment of import with exported commodities and services				
<b>32 - SHORT-TERM FOREIGN EXCHANGE LOANS</b>				
320 - Claims based on short-term foreign exchange loans to non-financial legal entities				
3200 - Claims based on short-term foreign exchange loans to non-financial legal entities based on foreign credits		B		1
3201 - Claims based on short-term foreign exchange loans to non-financial legal entities based on credit lines		B		1
3202 - Claims based on short-term foreign exchange loans to non-financial legal entities based on deposits		B		1
3208 - Other claims based on short-term foreign exchange loans to non-financial legal entities		B		1
3209 - Past due and outstanding claims based on short-term foreign exchange loans to non-financial legal entities		B		1
321 - Claims based on short-term foreign-exchange loans to the public sector				

3210 – Claims on short-term foreign-exchange loans to the public sector based on foreign credits	B	1
3211 – Claims based on short-term foreign-exchange loans to the public sector based on credit lines	B	1
3212 – Claims based on short-term foreign-exchange loans to the public sector based on deposits	B	1
3218 – Other claims based on short-term foreign-exchange loans to the public sector	B	1
3219 – Past due and outstanding claims based on short-term foreign-exchange loans to the public sector	B	1
325 – Claims based on short-term foreign-exchange loans to banks and other financial institutions		
3251 – Claims based on short-term foreign-exchange loans to banks	B	1
3254 – Claims based on short-term foreign-exchange loans to other financial institutions	B	1
3259 – Past due and outstanding claims based on short-term foreign-exchange loans to banks and other financial institutions	B	1
326 – Claims based on short-term foreign exchange loans to other clients		
3260 – Claims based on short-term foreign exchange loans to other clients based on using foreign credits	B	1
3261 – Claims based on short-term foreign exchange loans to other clients based on credit lines	B	1
3262 – Claims based on short-term foreign exchange loans to other clients based on deposits	B	1
3268 – Other claims based on short-term foreign exchange loans to other clients	B	1
3269 – Past due and outstanding claims based on short-term foreign exchange loans to other clients		
328 – Claims based on short-term foreign exchange loans to foreign entities	NB	
3280 – Claims based on short-term foreign exchange loans to foreign entities based on deposits from residents and non-residents	B	1
3281 – Claims based on short-term foreign exchange loans to other foreign entities based on foreign credits. By nature, this is a debit account and only banks have the right to make		

entries on it			
3289 - Past due and outstanding claims based on short-term foreign exchange loans to foreign entities	B		1
<b>33 - SHORT-TERM PLACEMENTS IN SECURITIES AND OTHER FOREIGN EXCHANGE PLACEMENTS</b>			
330 - Foreign exchange placements in securities to domestic legal entities			
3300 - Foreign exchange placements in securities to domestic legal entities	B		1
3309 - Past due and outstanding claims on short-term foreign exchange placements in securities to domestic legal entities	B		1
331 - Foreign exchange placements in securities to foreign entities	B		1
3310 - Foreign exchange placements in securities to foreign entities	B		1
3319 - Past due and outstanding claims on short-term foreign exchange placements in securities to foreign entities	B		1
332 - Foreign exchange term deposits abroad	B		1
3320 - Short-term foreign exchange term deposits abroad	NB		1
3321 - Short-term foreign exchange deposits according to special regulations	NB		1
334 - Foreign exchange placements in international financial institutions	NB	B	1
3340 - Foreign exchange placements in international financial institutions			
3349 - Past due and outstanding claims on foreign exchange placements in international financial institutions			
335 - Other short-term foreign exchange claims on foreign banks and other financial institutions	NB	B	1
3350 - Other short-term foreign exchange claims on foreign banks and other financial institutions			
3359 - Past due and outstanding claims on short-term foreign-exchange deposits in foreign banks and other financial institutions			
336 - Other foreign exchange placements in the country	NB	B	1
3360 - Other foreign exchange placements in the country			
3369 - Past due and outstanding claims on other foreign exchange placements in the country			
337 - Other foreign exchange placements abroad	NB	B	1

3370 – Other foreign exchange placements abroad			
3379 – Past due and outstanding claims on other short-term foreign exchange placements abroad			
338 – Foreign exchange placements in mixed enterprises abroad	B		1
3380 – Foreign exchange placements in mixed enterprises abroad			
3389 – Past due and outstanding claims on short-term foreign exchange placements in mixed enterprises abroad			
34 – LONG-TERM FOREIGN EXCHANGE LOANS			
340 – Claims based on long-term foreign exchange loans to non-financial legal entities			
3400 – Claims based on long-term foreign exchange loans to non-financial legal entities	B		1
3409 – Past due and outstanding claims based on long-term foreign exchange loans to non-financial legal entities	B		1
341 – Claims based on long-term foreign exchange loans to the public sector			
3410 – Claims based on long-term foreign exchange loans to the public sector	NB	B	1
3419 – Past due and outstanding claims based on long-term foreign exchange loans to the public sector	NB	B	1
345 – Claims based on long-term foreign exchange loans to banks and other financial institutions			
3451 – Claims based on long-term foreign exchange loans to banks and other financial institutions	NB	B	1
3454 – Claims based on long-term foreign exchange loans to banks and other financial institutions for refinancing	NB	B	1
3459 – Past due and outstanding claims based on long-term foreign exchange loans to banks and other financial institutions	NB	B	1
346 – Claims based on long-term foreign exchange loans to other clients			
3460 – Claims based on long-term foreign exchange loans to other clients	B		1
3469 – Past due and outstanding claims based on long-term foreign exchange loans to other clients	B		1
348 – Claims based on long-term foreign exchange loans to foreign entities			
3480 – Claims based on long-term foreign	NB	B	1

exchange loans to foreign entities			
3489 - Past due and outstanding claims based on long-term foreign exchange loans to foreign entities	NB	B	1
<b>35 - LONG-TERM PLACEMENTS IN SECURITIES AND OTHER FOREIGN EXCHANGE PLACEMENTS</b>			
350 - Long-term foreign exchange placements in securities in domestic legal entities			
3500 - Long-term foreign exchange placements in securities in domestic legal entities		B	1
3509 - Past due and outstanding claims based on long-term foreign exchange placements in securities in domestic legal entities		B	1
351 - Long-term foreign exchange placements in securities in foreign entities	NB		
3511 - Long-term foreign exchange placements in securities in foreign entities		B	1
3519 - Past due and outstanding claims on long-term foreign exchange placements in securities in foreign entities		B	1
352 - Foreign exchange term deposits abroad	NB	B	1
3520 - Long-term foreign exchange term deposits abroad			
3521 - Long-term foreign exchange term deposits abroad based on special regulations			
354 - Foreign exchange placements in international financial institutions	NB	B	1
3540 - Foreign exchange placements in international financial institutions			
3549 - Past due and outstanding claims on long-term foreign exchange placements in international financial institutions			
355 - Other foreign exchange placements in foreign banks and other financial institutions	NB	B	1
3550 - Other foreign exchange placements in foreign banks and other financial institutions			
3559 - Past due and outstanding claims on other long-term foreign exchange placements in foreign banks and other financial institutions			
356 - Other foreign exchange placements in the country	NB	B	1
3560 - Other foreign exchange placements in the country			
3569 - Past due and outstanding claims on other long-term foreign exchange placements in the country			
357 - Other foreign exchange placements	NB	B	1

abroad			
3570 - Other foreign exchange placements abroad			
3579 - Past due and outstanding claims on other foreign exchange placements abroad			
358 - Foreign exchange placements in mixed enterprises abroad	NB	B	1
3580 - Foreign exchange placements in mixed enterprises abroad			
3589 - Past due and outstanding claims on foreign exchange placements in mixed enterprises abroad			
<b>36 - CLAIMS BASED ON INTER-BANK FOREIGN EXCHANGE OPERATIONS</b>			
360 - Short-term foreign exchange claims on the National Bank			
3600 - Short-term foreign exchange claims on NBRM		B	1
3609 - Past due and outstanding short-term foreign exchange claims on NBRM		B	1
361 - Short-term foreign exchange claims on departments within the bank			
3610 - Short-term foreign exchange claims on departments within the bank		B	1
3619 - Past due and outstanding short-term foreign exchange claims on departments within the bank		B	1
363 - Short-term foreign exchange claims on banks and bank departments abroad, founded by the bank			
3630 - Short-term foreign claims on banks and bank departments abroad, founded by the bank			
3639 - Past due and outstanding short-term foreign exchange claims on banks and bank departments abroad, founded by the bank			
365 - Long-term foreign exchange claims on the National Bank			
3650 - Long-term foreign exchange claims on NBRM		B	1
3651 - Long-term foreign exchange claims on former Yugoslavia		B	1
3659 - Past due and outstanding long-term foreign exchange claims on NBRM		B	1
366 - Long-term foreign exchange claims on departments within the bank			
3660 - Long-term foreign exchange claims on departments within the bank		B	1
3669 - Past due and outstanding long-term		B	1

foreign exchange claims on departments  
within the bank

368 - Long-term foreign exchange claims on  
banks and bank departments abroad, founded  
by the bank

3680 - Long-term foreign exchange claims on  
banks and bank departments abroad, founded  
by the bank

B 1

3689 - Past due and outstanding long-term  
foreign exchange claims on banks and bank  
departments abroad, founded by the bank

B 1

38 - CLAIMS FROM FOREIGN EXCHANGE OPERATIONS ON  
BEHALF OF AND ON ACCOUNT OTHERS

380 - Claims from foreign exchange operations  
on behalf of and on account of non-financial  
legal entities

3800 - Short-term foreign exchange loans on  
behalf of and on account of non-financial  
legal entities

3801 - Short-term placements in securities  
and other foreign exchange placements on  
behalf of and on account of non-financial  
legal entities

3803 - Other short-term foreign exchange  
claims on behalf of and on account of non-  
financial legal entities

3804 - Long-term foreign exchange loans on  
behalf of and on account of non-financial  
legal entities

3805 - Long-term placements in securities  
and other foreign exchange placements on  
behalf of and on account of non-financial  
legal entities

3807 - Other long-term foreign exchange  
claims on behalf of and on account of non-  
financial legal entities

3808 - Foreign exchange operating costs from  
operations on behalf of and on account of  
non-financial legal entities

381 - Claims from foreign exchange operations  
on behalf of and on account of the public sector

3810 - Short-term foreign exchange loans on  
behalf of and on account of the public sector

3811 - Short-term placements in securities  
and other foreign exchange placements on  
behalf of and on account of the public sector

3813 - Other short-term foreign exchange  
claims on behalf of and on account of the  
public sector

3814 – Long-term foreign exchange loans on behalf of and on account of the public sector  
3815 – Long-term placements in securities and other foreign exchange placements on behalf of and on account of the public sector  
3817 – Other long term foreign exchange claims on behalf of and on account of the public sector  
3818 – Foreign exchange operating costs from operations on behalf of and on account of the public sector  
385 – Claims from foreign exchange operations on behalf of and on account of banks and other financial institutions  
3850 – Short-term foreign exchange loans on behalf of and on account of banks and other financial institutions  
3851 – Short-term placements in securities and other foreign exchange placements on behalf of and on account of banks and other financial institutions  
3853 – Other short-term foreign exchange claims on behalf of and on account of banks and other financial institutions  
3854 – Long-term foreign exchange loans on behalf of and on account of banks and other financial institutions  
3855 – Long-term placements in securities and other foreign exchange placements on behalf of and on account of banks and other financial institutions  
3857 – Other long-term foreign exchange claims on behalf of and on account of banks and other financial institutions  
3858 – Operating costs from operations on behalf of and on account of banks and other financial institutions  
386 – Claims from foreign exchange operations on behalf of and on account of other clients  
3860 – Short-term foreign-exchange loans on behalf of and on account of other clients  
3861 – Short-term placements in securities and other foreign exchange placements on behalf of and on account of other clients  
3863 – Other short-term foreign exchange claims on behalf of and on account of other clients  
3864 – Long-term foreign exchange loans on behalf of and on account of other clients

- 3865 - Long-term placements in securities and other foreign exchange placements on behalf of and on account of other clients
- 3867 - Other long-term foreign exchange claims on behalf of and on account of other clients
- 3868 - Foreign exchange operating costs from operations on behalf of and on account of other clients
- 387 - Claims from foreign exchange operations on behalf of and on account of households
- 3873 - Short-term foreign exchange claims on behalf of and on account of households
- 3877 - Other long-term foreign exchange claims on behalf of and on account of households
- 3878 - Foreign exchange operating costs from operations on behalf of and on account of households
- 388 - Claims from foreign exchange operations on behalf of and on account of foreign entities
- 3880 - Short-term foreign exchange loans on behalf of and on account of foreign entities
- 3881 - Short-term placements in securities and other foreign exchange placements on behalf of and on account of foreign entities
- 3883 - Other short term foreign exchange claims on behalf of and on account of foreign entities
- 3884 - Long-term foreign exchange loans on behalf of and on account of foreign entities
- 3885 - Long-term placements in securities and other foreign exchange placements on behalf of and on account of foreign entities
- 3887 - Other long-term foreign exchange claims on behalf of and on account of foreign entities
- 3888 - Foreign exchange operating costs on behalf of and on account of foreign entities

**CLASS 4: SHORT-TERM PLACEMENTS**

**41 - SHORT-TERM LOANS**

- 410 - Loans to non-financial legal entities
  - 4100 - Short-term loans to non-financial legal entities - public enterprises B SH 1
  - 4101 - Short-term loans to non-financial legal entities - social-ownership enterprises B SH 1
  - 4102 - Short-term loans to non-financial legal entities - private enterprises B SH 1
  - 4108 - Past due and outstanding short-term B 1

loans to non-financial legal entities for investment operations and exports to Iraq and Kuwait				
4109 - Past due and outstanding claims on short-term loans to non-financial legal entities	B	SH	1	
411 - Loans to the public sector				
4110 - Short-term loans to the Government	NB	B	SH	1
4111 - Short-term loans to local self-regulatory units	B			1
4112 - Short-term loans to the Pension and Invalid Insurance Fund	B			1
4113 - Short-term loans to the Health Insurance Fund	B			1
4114 - Short-term loans to the Employment Fund	B			1
4115 - Short-term loans to other State funds, agencies and directories	B			1
4116 - Short-term loans to central government institutes	B			1
4117 - Short-term loans to public sector departments	B			1
4118 - Short-term loans to the State commodity reserves directory	NB	B		1
4119 - Past due and outstanding claims on short-term loans to the public sector	NB	B		1
415 - Loans to banks and other financial institutions				
4151 - Short-term loans to banks	NB	B	SH	1
4152 - Short-term loans to savings houses	B		SH	1
4153 - Short-term loans to insurance companies	B			1
4154 - Short-term loans to other financial institutions	B			1
4159 - Past due and outstanding claims on short-term loans to banks and other financial institutions				
416 - Loans to other clients				
4160 - Short-term loans to other clients - not-for-profit non-financial institutions	B			1
4169 - Past due and outstanding claims on short-term loans to other clients	B			1
417 - Loans to households				
4170 - Short-term consumer loans to households	B	SH		1
4171 - Short-term loans to households for other purposes	B	SH		1
4172 - Short-term loans to individuals running a registered business	B	SH		1
4179 - Past due and outstanding claims on	B	SH		1

short-term loans to households			
418 - Loans to foreign entities	B		1
4180 - Short-term loans to foreign entities	B		1
4189 - Past due and outstanding claims on short-term loans to foreign entities			
42 - OTHER SHORT-TERM LOANS			
425 - Other loans to banks and other financial institutions			
4251 - Other short-term loans to banks	B		1
4252 - Other short-term loans to savings houses	B	SH	1
4253 - Other short-term loans to insurance companies	B		1
4255 - Deposits with other business banks based on auction sales	B		1
4259 - Past due and outstanding claims on other short-term loans to banks and other financial institutions	B	SH	1
43 - SHORT-TERM PLACEMENTS IN SECURITIES			
430 - Placements in securities to non-financial legal entities			
4300 - Short-term placements in securities issued to non-financial legal entities - public enterprises	B	SH	1
4301 - Short-term placements in securities issued to non-financial legal entities - social-ownership enterprises	B	SH	1
4302 - Short-term placements in securities issued to non-financial legal entities - private enterprises	B	SH	1
4309 - Past due and outstanding claims on other short-term placements in securities issued to non-financial legal entities	B	SH	1
431 - Placements in securities to the public sector			
4310 - Short-term placements in securities issued by the Government	B		1
4319 - Past due and outstanding claims on short-term placements in securities to the public sector	B		1
435 - Placements in securities to banks and other financial institutions			
4351 - Short-term placements in securities to banks	B		1
4352 - Short-term placements in securities to savings houses	B	SH	1
4353 - Short-term placements in securities to insurance companies	B		1
4354 - Short-term placements in securities to other financial institutions	B		1

4359 - Past due and outstanding short-term claims on placements in securities to banks and other financial institutions	B	SH	1
436 - Placements in securities to other clients			
4360 - Short-term placements in securities to other clients	B		1
4369 - Past due and outstanding claims on short-term placements in securities to other clients	B		1
44 - SHORT-TERM INVESTMENTS			
445 - Investments in banks and other financial institutions			
4451 - Short-term investments in banks	B		1
4453 - Short-term investments in insurance companies	B		1
4454 - Short-term investments in other financial institutions	B		1
4459 - Past due and outstanding short-term investments in banks and other financial institutions	B		1
448 - Investments in foreign entities	B		1
4480 - Short-term investments in foreign entities			
4489 - Past due and outstanding short-term foreign investments in foreign entities			
46 - SHORT-TERM CLAIMS FROM INTER-BANK OPERATIONS			
460 - Claims based on assets given to bank departments within the bank	B	SH	1
462 - Loans to banks from the primary issue (National Bank)			
4620 - Short-term loans to banks from the primary issue (National Bank)	NB		1
4629 - Past due and outstanding claims based on short-term loans to banks from the primary issue (National Bank)	NB		1
463 - Loans to banks from the primary issue (National Bank) based on securities collateral			
4630 - Short-term loans to banks from the primary issue (National Bank) based on securities collateral	NB		1
4639 - Past due and outstanding claims based on short term loans to banks from the primary issue (National Bank), based on securities collateral	NB		1
464 - Deposits given to banks from the primary issue (National Bank) based on auctions			
4640 - Deposits given to banks from the primary issue (National Bank) based on auctions	NB		1

4649 - Past due and outstanding claims on deposits given to banks from the primary issue (National Bank) based on auctions	NB		1
465 - Short-term loans to banks from the primary issue (National Bank) for disbursement of savings deposits			
4650 - Short-term loans to banks from the primary issue (National Bank) for disbursement of savings deposits	NB		1
4659 - Past due and outstanding claims on short-term loans to banks from the primary issue (National Bank) for disbursement of savings deposits			
468 - Short-term claims based on assets given to banks and bank departments abroad, founded by the bank	NB		1
4680 - Short-term claims based on assets given to banks and bank departments abroad, founded by the bank	B		1
4689 - Past due and outstanding short-term claims based on assets given to banks and bank departments abroad, founded by the bank	B		1
48 - SHORT-TERM CLAIMS BASED ON OPERATIONS ON BEHALF OF AND ON ACCOUNT OF OTHERS	B	SH	1
480 - Claims based on operations on behalf of and on account of non-financial legal entities			
4800 - Short-term loans for operations on behalf of and on account of non-financial legal entities			
4801 - Other short-term loans for operations on behalf of and on account of non-financial legal entities			
4802 - Short-term placements in securities on behalf of and on account of non-financial legal entities			
4803 - Short-term investments, deposits and other short-term placements on behalf of and on account of non-financial legal entities			
4808 - Operating costs on short-term claims based on operations on behalf of and on account of non-financial legal entities			
481 - Claims based on operations on behalf of and on account of the public sector			
4810 - Short-term loans for operations on behalf of and on account of the public sector			
4811 - Other short-term loans for operations on behalf of and on account of the public			

sector

4812 - Short-term placements in securities on behalf of and on account of the public sector

4813 - Short-term investments, deposits and other short-term placements on behalf of and on account of the public sector

4818 - Operating costs on short-term claims based on operations on behalf of and on account of the public sector

485 - Claims based on operations on behalf of and on account of banks and other financial institutions

4850 - Short-term loans for operations on behalf of and on account of banks and other financial institutions

4851 - Other short-term loans for operations on behalf of and on account of banks and other financial institutions

4852 - Short-term placements in securities on behalf of and on account of banks and other financial institutions

4853 - Short-term investments, deposits and other short-term placements on operations on behalf of and on account of banks and other financial institutions

4858 - Operating costs on short-term claims on behalf of and on account of banks and other financial institutions

486 - Claims based on operations on behalf of and on account of other clients

4860 - Short-term loans for operations on behalf of and on account of other clients

4861 - Other short-term loans for operations on behalf of and on account of other clients

4862 - Short-term placements in securities on behalf of and on account of other clients

4863 - Short term investments, deposits and other short-term placements on behalf of and on account of other clients

4868 - Operating costs on short-term claims on behalf of and on account of other clients

487 - Claims based on operations on behalf of and on account of households

4870 - Short-term loans for operations on behalf of and on account of households

4871 - Other short-term loans for operations on behalf of and on account of households

4872 - Short-term placements in securities on behalf of and on account of households

- 4873 - Short-term investments, deposits and other short-term placements on behalf of and on account of households
- 4878 - Operating costs on short-term claims on behalf of and on account of households
- 488 - Claims based on operations on behalf of and on account of foreign entities
- 4880 - Short-term loans for operations on behalf of and on account of foreign entities
- 4881 - Other short-term loans for operations on behalf of and on account of foreign entities
- 4882 - Short-term placements in securities on behalf of and on account of foreign entities
- 4883 - Short term investments, deposits and other short-term placements on behalf of and on account of foreign entities
- 4888 - Operating costs on short-term claims on behalf of and on account of foreign entities

**CLASS 5: LONG-TERM PLACEMENTS**

**51 - LONG-TERM LOANS**

510 - Loans to non-financial legal entities			
5100 - Long-term loans to non-financial legal entities - public enterprises	B	SH	1
5101 - Long-term loans to non-financial legal entities - social-ownership enterprises	B	SH	1
5102 - Long-term loans to non-financial legal entities - private enterprises	B	SH	1
5103 - Long-term loans to non-financial legal entities - private enterprises, from special-purpose government funds	B		1
5104 - Long-term loans to non-financial legal entities from the NEPA program			
5108 - Past due and outstanding long-term loans to non-financial legal entities for investment operations and exports to Iraq and Kuwait	B		1
5109 - Past due and outstanding claims on long-term loans to non-financial legal entities	B	SH	1
511 - Loans to the public sector			
5110 - Long-term loans to the Government	NB		1
5111 - Long-term loans to local self-regulatory units	B		1
5112 - Long-term loans to the Pension and Invalid Insurance Fund	B		1
5113 - Long-term loans to the Health Insurance Fund	B		1
5114 - Long-term loans to the Employment Fund	B		1

5115 - Long-term loans to other State funds, agencies and directories	B			1
5116 - Long-term loans to central government institutions	B			1
5117 - Long-term loans to public sector departments	B			1
5118 - Long-term loans to the State Commodity Reserves Directory	NB	B		1
5119 - Past due and outstanding claims based on long-term loans to the public sector	NB	B		1
515 - Loans to banks and other financial institutions				
5151 - Long-term loans to banks	NB	B	SH	1
5152 - Long-term loans to savings houses		B	SH	1
5153 - Long-term loans to insurance companies		B		1
5154 - Long-term loans to other financial institutions		B		1
5159 - Past due and outstanding claims based on long-term loans to banks and other financial institutions	NB	B	SH	1
516 - Loans to other clients				
5160 - Long-term loans to other clients - not-for-profit non-financial organizations		B		1
5169 - Past due and outstanding claims based on long-term loans to other clients		B		1
517 - Loans to households				
5170 - Long-term loans to households for construction of apartments		B	SH	1
5171 - Long-term loans to households for business facilities		B	SH	1
5172 - Long-term loans to individuals running a registered business		B	SH	1
5173 - Long-term loans to households for other purposes		B	SH	1
5179 - Past due and outstanding claims based on long-term loans to households		B	SH	1
518 - Loans to foreign entities				
5180 - Long-term loans to foreign entities		B		1
5189 - Past due and outstanding claims based on long-term loans to foreign entities		B		1
52 - OTHER LONG-TERM LOANS				
520 - Other long-term loans				
5200 - Other long-term loans		B	SH	1
5209 - Past due and outstanding claims based on other long-term loans		B	SH	1
53 - LONG-TERM PLACEMENTS IN SECURITIES				
530 - Placements in securities to non-financial legal entities				

5300 - Long-term placements in securities to non-financial legal entities - public enterprises	B	SH	1
5301 - Long-term placements in securities to non-financial legal entities - social-ownership enterprises	B	SH	1
5302 - Long-term placements in securities to non-financial legal entities - private enterprises	B	SH	1
5309 - Past due and outstanding claims based on long-term placements in securities to non-financial legal entities	B	SH	1
531 - Placements in securities to the public sector			
5310 - Long-term placements in securities to the Government	B		1
5311 - Long-term placements in securities to local self-regulatory units	B		1
5312 - Long-term placements in securities to the Pension and Invalid Insurance Fund	B		1
5313 - Long-term placements in securities to the Health Insurance Fund	B		1
5313 - Long-term placements in securities to the Employment Fund	B		1
5315 - Long-term placements in securities to other State funds, agencies and directories	B		1
5316 - Long-term placements in securities to the central government institutes	B		1
5317 - Long-term placements in securities to the public sector departments	B		1
5318 - Long-term placements in securities to the State Commodities Reserves Directory	B		1
5319 - Past due and outstanding claims based on long-term placements in securities to the public sector	B		1
535 - Placements in securities to banks and other financial institutions			
5350 - Long-term placements in securities to NBRM	NB		1
5351 - Long-term placements in securities to banks	B		1
5352 - Long-term placements in securities to savings houses	B	SH	1
5353 - Long-term placements in securities to insurance companies	B		1
5354 - Long-term placements in securities to other financial institutions	B		1
5359 - Past due and outstanding claims based on long-term placements in securities to banks	NB	B	SH 1

and other financial institutions			
536 - Placements in securities to other clients			
5360 - Long-term placements in securities to other clients	B		1
5369 - Past due and outstanding claims based on long-term placements in securities to other clients	B		1
54 - LONG-TERM INVESTMENTS			
545 - Investments with banks and other financial institutions			
5451 - Long-term investments with banks	B		1
5453 - Long-term investments with insurance companies	B		1
5454 - Long-term investments with other financial institutions	B		1
5459 - Past due and outstanding claims based on long-term investments with banks and other financial institutions	B		1
548 - Investments with foreign entities	B		1
5480 - Long-term investments with foreign entities			
5489 - Past due and outstanding claims based on long-term investments with foreign entities			
56 - LONG-TERM CLAIMS BASED ON INTER-BANK OPERATIONS			
560 - Claims based on loans to bank departments within the bank	B	SH	1
562 - Loans to banks from the primary issue (National Bank)			
5620 - Long-term loans to banks from the primary issue (National Bank)	NB		1
5629 - Past due and outstanding claims based on long-term loans to banks from the primary issue (National Bank)	NB		1
565 - Other loans to banks from the primary issue (National Bank)			
5650 - Other long-term loans to banks from the primary issue (National Bank)	NB		1
5659 - Past due and outstanding claims based on long-term loans to banks from the primary issue (National Bank)	NB		1
568 - Claims based on loans to banks and bank departments abroad, founded by the bank			
5680 - Long-term claims based on loans to banks and bank departments abroad, founded by the bank	B		1
5689 - Past due and outstanding claims based on long-term loans to banks and bank departments abroad, founded by the bank	B		1
58 - LONG-TERM CLAIMS BASED ON	B	SH	1

OPERATIONS ON BEHALF OF AND ON  
ACCOUNT OF OTHERS

580 - Claims based on operations on behalf of  
and on account of non-financial legal entities

5800 - Long-term loans for operations on  
behalf of and on account of non-financial  
legal entities

5801 - Long-term placements in securities on  
behalf of and on account of non-financial  
legal entities

5802 - Long-term investments, deposits and  
other long-term placements on behalf of and  
on account of non-financial legal entities

5808 - Operating costs based on long-term  
claims on operations on behalf of and on  
account of non-financial legal entities

581 - Claims based on operations on behalf of  
and on account of the public sector

5810 - Long-term loans for operations on  
behalf of and on account of the public sector

5811 - Long-term placements in securities on  
behalf of and on account of the public sector

5812 - Long-term investments, deposits and  
other long-term placements on behalf of and  
on account of the public sector

5818 - Operating costs on long-term claims  
based on operations on behalf of and on  
account of the public sector

585 - Claims based on operations on behalf of  
and on account of banks and other financial  
institutions

5850 - Long-term loans for operations on  
behalf of and on account of banks and other  
financial institutions

5851 - Long-term placements in securities on  
behalf of and on account of banks and other  
financial institutions

5852 - Long-term investments, deposits and  
other long-term placements on behalf of and  
on account of banks and other financial  
institutions

5858 - Operating costs on long-term claims  
based on operations on behalf of and on  
account of banks and other financial  
institutions

586 - Claims based on operations on behalf of  
and on account of other clients

5860 - Long-term loans for operations on  
behalf of and on account of other clients

5861 - Long-term placements in securities on behalf of and on account of other clients

5862 - Long-term investments, deposits and other long-term placements on behalf of and on account of other clients

5868 - Operating costs on long-term claims based on operations on behalf of and on account of other clients

587 - Claims based on operations on behalf of and on account of households

5870 - Long-term loans for operations on behalf of and on account of households

5872 - Long-term investments, deposits and other long-term placements on behalf of and on account of households

5878 - Operating costs on long-term claims based on operations on behalf of and on account of households

588 - Claims based on operations on behalf of and on account of foreign entities

5880 - Long-term loans for operations on behalf of and on account of foreign entities

5881 - Long-term placements in securities on behalf of and on account of foreign entities

5882 - Long-term investments, deposits and other long-term placements on behalf of and on account of foreign entities

5888 - Operating costs on long-term claims based on operations on behalf of and on account of foreign entities

**CLASS 6: REVENUES AND EXPENSES** NB SH 3

**60 - INTEREST ON BORROWINGS AND OTHER ASSETS**

600 - Interest expense paid to non-financial legal entities B 1

6000 - Interest on denar operations

6001 - Interest on foreign exchange operations

601 - Interest expense paid to the public sector B 1

6010 - Interest on denar operations

6011 - Interest on foreign exchange operations

605 - Interest expense paid to banks and other financial institutions B 1

6050 - Interest on denar operations

6051 - Interest on foreign exchange operations

606 - Interest expense paid to other clients B 1

6060 - Interest on denar operations

6061 - Interest on foreign exchange operations		
607 - Interest expense paid to households	B	1
6070 - Interest on denar operations		
6071 - Interest on foreign exchange operations		
608 - Interest expense paid to foreign entities	B	1
6080 - Interest on denar operations		
6081 - Interest on foreign exchange operations		
609 - Deposit insurance premiums	B	1
61 - SERVICE COMMISSION COSTS AND SIMILAR COSTS		
611 - Service commission of banks and other financial institutions	B	1
6110 - For NBRM services		
6111 - For bank services		
6112 - For savings houses services		
6113 - For services of other financial institutions		
615 - ZPP service commission	B	1
617 - Service commission of licensed exchange offices	B	1
618 - Other commissions and other similar service costs of domestic entities	B	1
619 - Service commissions of foreign entities	B	1
6190 - For services of foreign banks		
6191 - For services of foreign development banks		
6192 - For services of other foreign entities		
62 - GENERAL ADMINISTRATION COSTS AND DEPRECIATION		
620 - Salary costs	B	1
621 - Salary compensation costs	B	1
622 - Costs based on collective contracts	B	1
623 - Material and similar costs	B	1
624 - Service costs	B	1
625 - Business travel costs	B	1
627 - Representation, marketing and promotion costs	B	1
628 - Other administrative costs	B	1
629 - Depreciation and depreciation revaluation	B	1
63 - OTHER COSTS AND EXTRAORDINARY EXPENCES		
630 - Costs based on foreign exchange differences	B	1
631 - Costs based on operations with securities	B	1
632 - Costs from past years	B	1
633 - Taxes and revenue contributions	B	1

634 - Costs for cash fines, taxes and court decisions	B	1
635 - Costs for producing tax and administrative value papers	B	1
636 - Costs for printing bank-notes and coins	B	1
637 - Costs for foreign exchange operations	B	1
638 - Other costs	B	1
639 - Extraordinary expenses	B	1
64 - ALLOWANCE, RISK RESERVES AND CAPITAL LOSS		
640 - Allowance for accounts receivable		
641 - Reserves for risks from placements and potential liabilities	B	1
649 - Capital loss	B	1
65 - REVENUES BASED ON CAPITAL INVESTMENTS - REALIZED DIVIDENDS AND CAPITAL GAINS		
650 - Dividend realized from non-financial legal entities		
655 - Dividend realized from banks and other financial institutions	B	2
658 - Dividend realized from banks, financial institutions and other entities abroad	B	2
659 - Capital gain	B	2
66 - INTEREST FROM LOANS AND OTHER PLACEMENTS		
660 - Interest on loans and other placements to non-financial legal entities	B	2
6600 - Interest from denar operations		
6601 - Interest from foreign exchange operations		
6606 - Default interest		
661 - Interest on loans and other placements to the public sector	B	2
6610 - Interest from denar operations		
6611 - Interest from foreign exchange operations		
6616 - Default interest		
665 - Interest on loans to banks and other financial institutions	B	2
6650 - Interest from denar operations		
6651 - Interest from foreign exchange operations		
6656 - Default interest		
666 - Interest on loans and other placements to other clients	B	2
6660 - Interest from denar operations		
6661 - Interest from foreign operations		
6666 - Default interest		

667 - Interest on loans and other placements to households	B	2
6670 - Interest from denar operations		
6671 - Interest from foreign exchange operations		
6676 - Default interest		
668 - Interest on loans and other placements to foreign entities	B	2
6680 - Interest from denar operations		
6681 - Interest on foreign exchange operations		
6686 - Default interest		
67 - REVENUES BASED ON BANKING SERVICES		
670 - Revenues from non-financial legal entities, based on banking services	B	2
6700 - Revenues from non-financial legal entities, based on banking services		
6701 - Revenues from non-financial legal entities, based on banking services, upon foreign exchange operations		
6706 - Default interest on uncollected revenues		
671 - Revenues from the public sector, based on banking services	B	2
6710 - Revenues from the public sector, based on banking services		
6711 - Revenues from the public sector, based on banking services, upon foreign exchange operations		
6716 - Default interest based on uncollected revenues		
675 - Revenues from banks and other financial institutions, based on banking services	B	2
6750 - Revenues based on banking services, from banks and other financial institutions		
6751 - Revenues, from banks and other financial institutions, based on banking services, upon foreign exchange operations		
6756 - Default interest based on uncollected revenues		
676 - Revenues from other clients, based on banking services	B	2
6760 - Revenues from denar operations, based on banking services		
6761 - Revenues from foreign exchange operations, based on banking services		
6766 - Default interest based on uncollected revenues		
677 - Revenues from households, based on		

banking services		
6770 - Revenues from denar operations, based on banking services	B	2
6771 - Revenues from foreign exchange operations, based on banking services		
6776 - Default interest based on uncollected revenues		
678 - Revenues from foreign entities, based on banking services		
6780 - Revenues from denar operations, based on banking services		
6781 - Revenues from foreign exchange operations, based on banking services		
6786 - Default interest based on uncollected revenues		
68 - OTHER REVENUES		
680 - Revenues based on foreign exchange differences	B	2
681 - Revenues based on default interest	NB	2
682 - Revenues from previous years	B	2
683 - Revenues based on doubtful and contested claims	B	2
685 - Revenues based on operations with securities	B	2
687 - Revenues based on foreign exchange operations	B	2
688 - Other revenues	B	2
689 - Extraordinary revenues	B	2
69 - OPERATION RESULTS		
690 - Revenues and expenses difference - pre-tax income	B	2
691 - Taxes, contributions and other income taxes	B	2
692 - Net income - taxed income	B	2
693 - Settling losses from previous years	B	2
694 - Accrual of the founding capital	B	2
695 - Dividends	B	2
696 - Reserves	B	2
697 - Salaries from gains and other purposes	B	2
6970 - Salaries from income		
6971 - For other purposes		
698 - Non-allocated income	B	2
699 - Loss		

#### CLASS 7: SOURCES OF FOREIGN EXCHANGE OPERATING ASSETS

##### 70 - FOREIGN EXCHANGE SIGHT DEPOSITS OF DOMESTIC BANKS AND FOREIGN ENTITIES

700 - Foreign exchange giro-accounts of domestic banks and other financial institutions

7000 - Foreign exchange giro-accounts of domestic banks	NB	B	2
7001 - Foreign exchange giro-accounts of other financial institutions	NB	B	2
7009 - Other deposits of banks and other financial institutions	NB	B	2
701 - Foreign exchange giro-accounts of foreign banks and other financial institutions			
7010 - Foreign exchange giro-accounts of foreign banks	NB	B	2
7011 - Foreign exchange giro-accounts of former Yugoslav banks	NB	B	2
7012 - Foreign exchange giro-accounts of foreign financial institutions	NB	B	2
702 - Foreign exchange accounts of mixed enterprises abroad	NB	B	2
703 - Foreign exchange accounts of banks and bank departments abroad, founded by the bank		B	2
704 - Foreign exchange loro confirmed letters of credit and guarantees	NB	B	2
7040 - Foreign exchange loro confirmed letters of credit			
7041 - Foreign exchange loro confirmed guarantees			
705 - Clearing loro confirmed letters of credit and guarantees	NB	B	2
7050 - Clearing loro confirmed letters of credit			
7051 - Clearing loro confirmed guarantees			
706 - Covers received for checks and letters of credit			
7060 - Covers received for checks and letters of credit in convertible foreign currency	NB	B	2
7061 - Covers received for checks and letters of credit in hard currencies	NB	B	2
708 - Other foreign exchange sight deposits of foreign entities	NB	B	2
7080 - Other foreign exchange sight deposits of foreign entities in convertible foreign currency	NB	B	2
7089 - Other sight deposits of foreign entities in hard currencies	NB	B	2
71 - FOREIGN EXCHANGE SIGHT DEPOSITS OF LEGAL ENTITIES			
710 - Regular foreign exchange accounts of legal entities		B	2
711 - Foreign exchange accounts of legal entities abroad			
7110 - Foreign exchange accounts of legal		B	2

entities abroad, in convertible foreign currency			
7111 - Foreign exchange accounts of legal entities abroad, in hard currencies	B		2
712 - Special foreign exchange accounts of legal entities	B		2
713 - Foreign exchange accounts upon exporting operations of legal entities	B		2
714 - Regular foreign exchange accounts of legal entities - foreign exchange realized on other bases	B		2
715 - Foreign exchange assets of legal entities from gains realized abroad	B		2
716 - Foreign deposits of legal entities			
7160 - Foreign deposits of legal entities with a 90 day limit	B		2
717 - Foreign exchange assets of legal entities from loans abroad	NB	B	2
718 - Foreign exchange assets received from foreign entities on behalf of an investment in joint operations of legal entities	B		2
719 - Other foreign exchange assets of legal entities			
7191 - Other foreign exchange assets of legal entities for transfer abroad	NB	B	2
7192 - Other foreign exchange assets of legal entities for transfers abroad, on behalf of coverage of letters of credit and guarantees	NB	B	2
7199 - Other foreign exchange assets of legal entities	NB	B	2
<b>72 - FOREIGN EXCHANGE SIGHT DEPOSITS OF OTHER CLIENTS</b>			
721 - Foreign exchange accounts of the public sector			
7210 - Foreign exchange accounts of the Government	NB	B	2
7211 - Foreign exchange accounts of local self-regulatory units	B		2
7212 - Foreign exchange accounts of the Pension and Invalid Insurance Fund	B		2
7213 - Foreign exchange accounts of the Health Insurance Fund	B		2
7214 - Foreign exchange accounts of the Employment Fund	B		2
7215 - Foreign exchange accounts of other State funds, agencies and directories	B		2
7216 - Foreign exchange accounts of the central government institutes	B		2
7217 - Foreign exchange accounts of public	B		2

sector departments		
7218 - Foreign exchange accounts of the State Commodity Reserves directory	B	2
726 - Foreign exchange accounts of other clients		
7260 - Foreign exchange accounts of other clients	B	2
727 - Foreign exchange accounts and other sight deposits of households		
7270 - Foreign exchange accounts of households in convertible foreign currency	B	2
7271 - Foreign exchange savings accounts of households in convertible foreign currency	B	2
7278 - Other sight deposits of households in convertible foreign currency	B	2
<b>73 - OTHER SIGHT DEPOSITS AND OTHER FOREIGN EXCHANGE LIABILITIES</b>		
731 - Foreign exchange accounts of foreign consignment warehouses		
7310 - Foreign exchange accounts of foreign consignment warehouses in convertible foreign currency	B	2
7311 - Foreign exchange accounts of foreign consignment warehouses in hard currency	B	2
732 - Foreign exchange assets from loans issued by legal entities	B	2
738 - Other sight deposits and other foreign exchange liabilities	B	2
<b>74 - SHORT-TERM FOREIGN EXCHANGE TERM DEPOSITS</b>		
740 - Foreign exchange term deposits of non- financial legal entities	B	2
7400 - Short-term foreign exchange term deposits of non-financial legal entities up to one month		
7401 - Short-term foreign exchange term deposits of non-financial legal entities up to three months		
7402 - Short-term foreign exchange term deposits of non-financial legal entities up to six months		
7403 - Short-term foreign exchange term deposits of non-financial legal entities over six months		
741 - Foreign exchange term deposits of the public sector	B	2
7410 - Short-term foreign exchange deposits of the public sector up to one month		
7411 - Short-term foreign exchange deposits		

of the public sector up to three months		
7412 Short-term foreign exchange deposits of the public sector up to six months		
7413 - Short-term foreign exchange deposits of the public sector over six months		
745 - Foreign exchange term deposits of banks and other financial institutions		
7450 - Short-term foreign exchange term deposits of banks and other financial institutions up to one month	B	2
7451 - Short-term foreign exchange term deposits of banks and other financial institutions up to three months	B	2
7452 - Short-term foreign exchange term deposits of banks and other financial institutions up to six months	B	2
7453 - Short-term foreign exchange term deposits of banks and other financial institutions over six months	B	2
746 - Foreign exchange term deposits of other clients	B	2
7460 - Short-term foreign exchange term deposits of other clients up to one month		
7461 - Short-term foreign exchange term deposits of other clients up to three months		
7462 - Short-term foreign exchange term deposits of other clients up to six months		
7463 - Short-term foreign exchange term deposits of other clients over six months		
747 - Foreign exchange term deposits of households	B	2
7470 - Short-term foreign exchange term deposits of households up to one month		
7471 - Short-term foreign exchange term deposits of households up to three months		
7472 - Short-term foreign exchange term deposits of households up to six months		
7473 - Short-term foreign exchange term deposits of households over six months		
748 - Foreign exchange term deposits of foreign entities	B	2
7480 - Short-term term deposits of foreign entities in convertible currencies		
75 - LIABILITIES BASED ON SHORT-TERM LOANS AND OTHER FOREIGN EXCHANGE LIABILITIES		
750 - Foreign exchange loans from the National Bank		
7500 - Short-term foreign exchange loans	B	2

from NBRM		
7509 - Past due and outstanding liabilities based on short-term foreign exchange loans from NBRM	B	2
751 - Foreign exchange loans from domestic banks and other financial institutions		
7511 - Short-term foreign exchange loans from domestic banks	B	2
7514 - Short-term foreign exchange loans from other financial institutions	B	2
7519 - Past due and outstanding liabilities based on short-term foreign exchange loans from domestic banks and other financial institutions	B	2
752 - Foreign exchange loans from foreign banks and other financial institutions		
7520 - Short-term foreign exchange loans from foreign banks and other financial institutions on account of others	B	2
7521 - Short-term foreign exchange loans from foreign banks and other financial institutions on account of the bank	B	2
7529 - Past due and outstanding liabilities based on short-term foreign exchange loans from foreign banks and other financial institutions	B	2
753 - Foreign exchange loans from other clients		
7530 - Short-term foreign exchange loans from other clients		
7539 - Past due and outstanding liabilities based on short-term foreign exchange loans from other clients		
754 - Foreign exchange loans from foreign entities	B	2
7540 - Short-term foreign exchange loans from foreign entities	B	2
7549 - Past due and outstanding liabilities based on short-term foreign exchange loans from foreign entities		
755 - Foreign exchange liabilities to bank departments within the bank	B	2
7550 - Short-term foreign exchange liabilities to bank departments within the bank	B	2
7551 - Short-term foreign exchange liabilities to banks departments of former Yugoslavia	B	2
7559 - Past due and outstanding liabilities to bank departments within the bank, based on short-term foreign exchange loans		
756 - Foreign exchange liabilities to foreign		

investors		
7560 - Short-term foreign exchange liabilities to foreign investors	B	2
7569 - Past due and outstanding liabilities to foreign investors, based on short-term foreign exchange loans	B	2
757 - Foreign exchange liabilities to banks and bank departments abroad, founded by the bank		
7570 - Short-term foreign exchange liabilities to banks and bank departments abroad, founded by the bank	B	2
7579 - Past due and outstanding liabilities to banks and bank departments abroad, founded by the bank, based on short-term foreign exchange loans	B	2
758 - Liabilities to foreign entities, based on foreign exchange loans of the National Bank	NB	2
7580 - Short-term liabilities to foreign entities, based on NBRM foreign exchange loans	B	2
7589 - Past due and outstanding liabilities to foreign entities, based on NBRM foreign exchange loans	B	2
<b>76 - LONG-TERM FOREIGN EXCHANGE DEPOSITS</b>		
760 - Foreign exchange deposits of non-financial legal entities	B	2
761 - Foreign exchange deposits of the public sector	B	2
765 - Foreign exchange deposits of banks and other financial institutions	NB	
7651 - Long-term foreign exchange deposits of domestic banks	B	2
7654 - Long-term foreign exchange deposits of other financial institutions	B	2
766 - Foreign exchange deposits of other clients	B	2
767 - Foreign exchange deposits of households	B	2
768 - Foreign exchange deposits of foreign entities	B	2
7680 - Long-term foreign exchange deposits of foreign entities in convertible currencies	NB B	2
7681 - Long-term foreign exchange deposits of foreign entities in hard currencies	NB B	2
<b>77 - LIABILITIES BASED ON LONG-TERM LOANS AND OTHER FOREIGN EXCHANGE LIABILITIES</b>		
770 - Foreign exchange loans from the National Bank		

7700 - Long-term foreign exchange loans from NBRM	B		2
7709 - Past due and outstanding liabilities based on long-term foreign exchange loans from NBRM	B		2
771 - Foreign exchange loans from domestic banks and other financial institutions			
7711 - Long-term foreign exchange loans from domestic banks	NB	B	2
7714 - Long-term foreign exchange loans from other financial institutions		B	2
7719 - Past due and outstanding liabilities based on long-term foreign exchange loans from domestic banks and other financial institutions			
772 - Foreign exchange loans from foreign banks and other financial institutions			
7720 - Long-term foreign exchange loans from foreign banks in convertible currencies	NB	B	2
7721 - Long-term loans in convertible currency from former Yugoslav banks		B	2
7722 - Long-term foreign exchange loans from other financial institutions, in convertible currencies	NB	B	2
7723 - Long-term foreign exchange loans from other financial institutions, in convertible currency from former Yugoslavia		B	2
7724 - Long-term foreign exchange loans from foreign banks in hard currencies	NB	B	2
7725 - Long-term foreign exchange loans from financial institutions in hard currencies	NB	B	2
7726 - Long-term foreign exchange loans from foreign banks and other financial institutions on account of the Government, in hard currencies	NB	B	2
7729 - Past due and outstanding liabilities based on long-term foreign exchange loans from foreign banks and other financial institutions	NB	B	2
773 - Foreign exchange loans from other clients		B	2
7730 - Long-term foreign exchange loans from other clients			
7739 - Past due and outstanding liabilities based on long-term foreign exchange loans from other clients			
774 - Foreign exchange loans from other foreign entities			
7740 - Long-term foreign exchange loans		B	2

from other foreign entities			
7749 – Past due and outstanding liabilities based on long-term foreign exchange loans from other foreign entities	B		2
775 – Foreign exchange liabilities to departments of the bank			
7750 – Long-term foreign exchange liabilities to departments of the bank	B		2
7751 - Long-term foreign exchange liabilities to departments of banks from former Yugoslavia	B		2
7759 – Past due and outstanding liabilities based on long-term foreign exchange loans to departments of the bank	B		2
776 – Foreign exchange liabilities to foreign investors	B		2
777 - Foreign exchange liabilities to banks and departments of banks abroad founded by the banks			
7770 – Long-term foreign exchange liabilities to banks and departments of banks abroad founded by the banks	B		2
7779 – Past due and outstanding foreign exchange liabilities to banks and departments of banks abroad founded by the banks	B		2
778 – Foreign exchange liabilities to foreign entities based on borrowings of the National Bank			
7780 – Long-term foreign exchange liabilities to foreign entities based on borrowings of the NBRM	B		2
7789 – Past due and outstanding foreign exchange liabilities of the NBRM to foreign entities	B		2
78 – LIABILITIES BASED ON FOREIGN EXCHANGE OPERATIONS ON BEHALF OF AND ON ACCOUNT OF OTHERS	B	SH	2
780 – Liabilities based on foreign exchange operations on behalf of and on account of non-financial legal entities			
7800 – Liabilities based on deposits and other foreign exchange sight deposits on behalf of and on account of non-financial legal entities			
7801 – Liabilities based on short-term loans and other foreign exchange liabilities on behalf of and on account of non-financial legal entities			
7802 – Liabilities based on long-term foreign exchange term deposits on behalf of and on			

account of non-financial legal entities  
7803 – Liabilities based on long-term loans  
and other foreign exchange liabilities on  
behalf of and on account of non-financial  
legal entities  
7808 – Revenues based on foreign exchange  
operations on behalf of and on account of  
non-financial legal entities  
781 – Liabilities based on foreign exchange  
operations on behalf of and on account of the  
public sector  
7810 – Liabilities based on foreign exchange  
deposits on behalf of and on account of the  
public sector  
7811 – Liabilities based on short-term loans  
and other foreign exchange liabilities on  
behalf of and on account of the public sector  
7812 – Liabilities based on long-term foreign  
exchange term deposits on behalf of and on  
account of the public sector  
7813 – Liabilities based on long-term loans  
and other foreign exchange liabilities on  
behalf of and on account of the public sector  
7818 – Revenues based on foreign exchange  
operations on behalf of and on account of the  
public sector  
785 – Liabilities based on foreign exchange  
operations on behalf of and on account of banks  
and other financial institutions  
7850 – Liabilities based on deposits and other  
foreign exchange sight deposits on behalf of  
and on account of banks and other financial  
institutions  
7851 – Liabilities based on short-term loans  
and other foreign exchange liabilities on  
behalf of and on account of banks and other  
financial institutions  
7852 – Liabilities based on long-term foreign  
exchange term deposits on behalf of and on  
account of banks and other financial  
institutions  
7853 – Liabilities based on long-term loans  
and other foreign exchange liabilities on  
behalf of and on account of banks and other  
financial institutions  
7858 – Revenues based on foreign exchange  
operations on behalf of and on account of  
banks and other financial institutions  
786 – Liabilities based on foreign exchange

operations on behalf of and on account of other clients

7860 – Liabilities based on deposits and other foreign exchange sight deposits on behalf of and on account of other clients

7861 – Liabilities based on short-term loans and other foreign exchange liabilities on behalf of and on account of other clients

7862 – Liabilities based on long-term foreign exchange term deposits on behalf of and on account of other clients

7863 – Liabilities based on long-term loans and other foreign exchange liabilities on behalf of and on account of other clients

7868 – Revenues based on foreign exchange operations on behalf of and on account of other clients

787 – Liabilities based on foreign exchange operations on behalf of and on account of households

7870 – Liabilities based on deposits and other foreign exchange sight deposits on behalf of and on account of households

7871 – Liabilities based on short-term loans and other foreign exchange liabilities on behalf of and on account of households

7872 – Liabilities based on long-term foreign exchange term deposits on behalf of and on account of households

7873 – Liabilities based on long-term loans and other foreign exchange liabilities on behalf of and on account of households

7878 – Revenues based on foreign-exchange operations on behalf of and on account of households

788 – Liabilities based on foreign exchange operations on behalf of and on account of foreign entities

7880 – Liabilities based on deposits and other foreign exchange sight deposits on behalf of and on account of foreign entities

7881 – Liabilities based on short-term loans and other foreign exchange liabilities on behalf of and on account of foreign entities

7882 – Liabilities based on long-term foreign exchange term deposits on behalf of and on account of foreign entities

7883 – Liabilities based on long-term loans and other liabilities on behalf of and on

account of foreign entities  
 7888 - Revenues based on foreign exchange  
 operations on behalf of and on account of  
 foreign entities

**CLASS 8: SHORT-TERM SOURCES OF  
 OPERATING ASSETS**  
**80 - DEPOSITS ON GIRO-ACCOUNTS AND  
 CURRENT ACCOUNTS**

800 - Giro-accounts of non-financial legal entities				
8000 - Giro-accounts of non-financial legal entities - public enterprises	NB	B		2
8001 - Giro-accounts of non-financial legal entities - social-ownership enterprises	NB	B		2
8002 - Giro-accounts of non-financial legal entities - private enterprises	NB	B		2
8009 - Temporary account on giro-accounts of non-financial legal entities	NB	B		2
801 - Giro-accounts of the public sector				
8010 - Giro-accounts of the Government	NB	B		2
8011 - Giro-accounts of local self-regulatory units	NB	B		2
8012 - Giro-accounts of the Pension and Invalid Insurance Fund	NB	B		2
8013 - Giro-accounts of the Health Insurance Fund	NB	B		2
8014 - Giro-accounts of the Employment Fund	NB	B		2
8015 - Giro-accounts of other State funds, agencies and directories	NB	B		2
8016 - Giro-accounts of the central government institutions	NB	B		2
8017 - Giro-accounts of public sector departments	NB	B		2
8018 - Giro-accounts of the State Commodities Reserves Directory	NB	B		2
804 - Giro-accounts of the State Budget				
8040 - Giro-accounts of the Government Budget	NB	B		2
8041 - Government Stability Fund	NB	B		2
8042 - Government assets from privatization	NB	B		2
8044 - Giro-accounts of the State Budget for regulation of international relations	NB	B		2
805 - Giro-accounts of banks and other financial institutions				
8051 - Giro-accounts of banks	NB	B		2
8052 - Giro-accounts of savings houses	NB	B		2
8053 - Giro-accounts of insurance companies	NB	B		2

8054 - Giro-accounts of other financial institutions	NB	B		2
806 - Giro-accounts of other clients				
8060 - Giro-accounts of other clients	NB	B		2
807 - Giro-accounts and current accounts of households				
8070 - Giro-accounts of households	NB	B	PSH	2
8071 - Current accounts of households		B	PSH	2
8072 - Giro-accounts of citizen associations	NB	B	PSH	2
808 - Giro-accounts and current accounts of foreign entities				
8080 - Giro-accounts of foreign entities	NB	B		2
8081 - Current accounts of foreign entities		B		2
8082 - Special accounts of foreign entities		B		2
809 - Debit balances on current accounts				
8090 - Debit balances on current accounts based on contract		B	PSH	1
8091 - Debit balances on current accounts without contract		B	PSH	1

81 - DEPOSITS ON JOINT CONSUMPTION ACCOUNTS AND OTHER LIMITED DEPOSITS

810 - Joint consumption accounts of non-financial legal entities				
8100 - Joint consumption assets of non-financial legal entities	NB	B		2
8101 - Joint consumption assets for apartment construction of non-financial legal entities	NB	B		2
811 - Joint consumption accounts of the public sector				
8110 - Joint consumption assets of the public sector	NB	B		2
8111 - Joint consumption assets for apartment construction of the public sector	NB	B		2
814 - Limited deposits				
8140 - Limited deposits of non-financial legal entities for settling open letters of credit in the domestic Payment Operations Department	NB	B		2
8141 - Limited deposits of the public sector for settling open letters of credit in the domestic Payment Operations Department	NB	B		2
8145 - Limited deposits of banks and other financial institutions for settling open letters of credit in the domestic Payment Operations Department	NB	B		2
8146 - Limited deposits of other clients for settling open letters of credit in the domestic Payment Operations Department	NB	B		2

8147 – Limited deposits of households for settling open letters of credit in the domestic Payment Operations Department	B		2
8148 – Limited deposits of foreign entities for settling open letters of credit in the domestic Payment Operations Department	B		2
8149 – Limited deposits of the public sector for special purposes	NB	B	2
815 – Joint consumption accounts of banks and other financial institutions			
8150 – Joint consumption assets of banks and other financial institutions	NB	B	2
8151 – Joint consumption assets for apartment construction of banks and other financial institutions	NB	B	2
816 – Joint consumption accounts of other clients			
8160 – Joint consumption assets of other clients	NB	B	2
8161 – Joint consumption assets for apartment construction of other clients	NB	B	2
82 – OTHER SIGHT DEPOSITS			
820 – Other sight deposits of non-financial legal entities			
8204 – Sight deposits of non-financial legal entities for transfers abroad	NB	B	2
8205 - Sight deposits of non-financial legal entities for coverage of letters of credit, guarantees and loans abroad	NB	B	2
8206 - Sight deposits of non-financial legal entities for issuing checks and letters of credit on foreign assets for payments	NB	B	2
8207 - Sight deposits of non-financial legal entities for purchasing foreign currencies	NB	B	2
8208 - Sight deposits of non-financial legal entities with NBRM on the value of imports of certain goods and services and foreign loans	NB	B	2
8209 – Other sight deposits of non-financial legal entities	NB	B	2
821 – Other sight deposits of the public sector	NB	B	2
8214 – Sight deposits of the public sector for transfers abroad			
8215 - Sight deposits of the public sector for covers of letters of credit, guarantees and loans abroad			
8216 - Sight deposits of the public sector for issuing checks and letters of credit on foreign assets for payments			

8217 - Sight deposits of the public sector for purchasing of foreign currencies				
8219 - Other sight deposits of the public sector				
824 - Deposits of the State Budget				
8246 - Budget assets for the disbursement of foreign savings deposits guaranteed by the Government		B		2
825 - Other sight deposits of banks and other financial institutions				
8254 - Sight deposits of banks and other financial institutions for transfers abroad	NB	B		2
8255 - Sight deposits of banks and other financial institutions for covers of letters of credit, guarantees and loans abroad	NB	B		2
8256 - Sight deposits of banks and other financial institutions for issuing checks and letters of credit on foreign assets for payments	NB	B		2
8258 - Other sight deposits of banks and other financial institutions	NB	B		2
826 - Other sight deposits of other clients	NB	B		2
8264 - Sight deposits of other clients for transfers abroad				
8265 - Sight deposits of other clients for covers of letters of credit				
8266 - Sight deposits of other clients for issuing checks and letters of credit on foreign assets for payment				
8267 - Sight deposits of other clients for purchasing foreign currencies				
8269 - Other sight deposits of other clients				
827 - Other sight deposits of households				
8271 - Sight savings deposits of households		B	PSH	2
8279 - Other sight deposits of households		B	PSH	2
828 - Other sight deposits of foreign entities	NB	B		2
83 - SHORT-TERM LIABILITIES ON THE BASIS OF SECURITIES				
830 - Short-term accounts payable to non-financial legal entities on the basis of issued securities				
8300 - Short-term accounts payable to non-financial legal entities on the basis of issued securities, for up to one month		B		2
8301 - Short-term accounts payable to non-financial legal entities on the basis of issued securities, for up to three months		B		2
8302 - Short-term accounts payable to non-financial legal entities on the basis of issued securities, for up to six months		B		2

8303 – Short-term accounts payable to non-financial legal entities, for over six months	B	2
8309 – Past due and outstanding short-term accounts payable to non-financial legal entities on the basis of issued securities	B	2
831 – Accounts payable to the public sector on the basis of issued securities		
8310 – Short-term accounts payable to the public sector on the basis of issued securities, for up to one month	B	2
8311 – Short-term accounts payable to the public sector on the basis of issued securities, for up to three months	B	2
8312 – Short-term accounts payable to the public sector on the basis of issued securities, up to six months	B	2
8313 – Short-term accounts payable to the public sector on the basis of issued securities, for over six months	B	2
8319 – Past due and outstanding short-term accounts payable to the public sector based on issued securities	B	2
835 – Accounts payable to banks and other financial institutions on the basis of issued securities		
8350 – Short-term accounts payable to banks and other financial institutions on the basis of issued treasury bills	NB B	2
8351 - Short-term accounts payable to banks and other financial institutions on the basis of other issued securities	NB B	2
8359 – Past due and outstanding short-term accounts payable to banks and other financial institutions on the basis of issued securities	NB B	2
836 – Accounts payable to other clients on the basis of issued securities		
8360 – Short-term accounts payable to other clients on the basis of issued securities, for up to one month	B	2
8361 - Short-term accounts payable to other clients on the basis of issued securities, for up to three months	B	2
8362 - Short-term accounts payable to other clients on the basis of issued securities, for up to six months	B	2
8363 - Short-term accounts payable to other clients on the basis of issued securities, for over six months	B	2
8369 – Past due and outstanding short-term	B	2

accounts payable to other clients on the basis of issued securities			
837 - Accounts payable to households on the basis of issued securities			
8370 - Short-term accounts payable to households on the basis of issued securities, for up to one month	B	SH	2
8371 - Short-term accounts payable to households on the basis of issued securities, for up to three months	B	SH	2
8372 - Short-term accounts payable to households on the basis of issued securities, for up to six months	B	SH	2
8373 - Short-term accounts payable to households on the basis of issued securities, for over six months	B	SH	2
8379 - Past due and outstanding short-term accounts payable to households on the basis of issued securities	B	SH	2
838 - Accounts payable to foreign entities on the basis of issued securities	B		2
84 - LIABILITIES ON THE BASIS OF SHORT-TERM LOANS			
840 - Accounts payable to non-financial legal entities based on short-term loans	B		2
8400 - Accounts payable to non-financial legal entities based on short-term loans, for up to one month			
8401 - Accounts payable to non-financial legal entities based on short-term loans, for up to three months			
8402 - Accounts payable to non-financial legal entities based on short-term loans, for up to six months			
8403 - Accounts payable to non-financial legal entities based on short-term loans, for over six months			
8409 - Past due and outstanding accounts payable to non-financial legal entities, based on short-term loans			
841 - Accounts payable to the public sector based on short-term loans			
8410 - Accounts payable to the public sector based on short-term loans, for up to one month	B		2
8411 - Accounts payable to the public sector based on short-term loans, for up to three months	B		2
8412 - Accounts payable to the public sector	B		2

based on short-term loans, for up to six months			
8413 - Accounts payable to the public sector based on short-term loans, for over six months	B		2
8419 - Past due and outstanding accounts payable to the public sector based on short-term loans	B		2
845 - Accounts payable to banks and other financial institutions based on short-term loans			
8450 - Accounts payable to NBRM based on short-term loans	B		2
8451 - Accounts payable to banks based on short-term loans	B	SH	2
8452 - Accounts payable to savings houses based on short-term loans	B	SH	2
8453 - Accounts payable to insurance companies, based on short-term loans	B		2
8454 - Accounts payable to other financial institutions based on short-term loans	B		2
8455 - Accounts payable based on short-term deposits from other banks based on auction purchases	B		2
8459 - Past due and outstanding accounts payable to banks and other financial institutions based on short-term loans	B	SH	2
846 - Accounts payable to other clients based on short-term loans	B		2
8460 - Accounts payable to other clients based on short-term loans, for up to one month			
8461 - Accounts payable to other clients based on short-term loans, for up to three months			
8462 - Accounts payable to other clients based on short-term loans, for up to six months			
8463 - Accounts payable to other clients based on short-term loans, for over six months			
8469 - Past due and outstanding accounts payable to other clients based on short-term loans			
848 - Accounts payable to foreign entities based on short-term loans	B		2
85 - LIABILITIES ON THE BASIS OF OTHER SHORT-TERM FUNDS			
850 - Liabilities of non-financial legal entities based on other short-term funds			
8500 - Liabilities of non-financial legal entities based on other short-term funds	B		2

8509 – Past due and outstanding liabilities of non-financial legal entities based on other short-term funds	B	2
851 – Liabilities of the public sector based on other short-term funds		
8510 - Liabilities of the public sector based on other short-term funds	B	2
8519 – Past due and outstanding liabilities of the public sector based on other short-term funds	B	2
855 – Liabilities of banks and other financial institutions based on other short-term funds		
8550 - Liabilities of banks and other financial institutions based on other short-term funds	B	2
8559 – Past due and outstanding liabilities of banks and other financial institutions based on other short-term funds	B	2
856 – Liabilities of other clients for other short-term funds		
8560 - Liabilities of other clients for other short-term funds	B	2
8569 – Past due and outstanding liabilities of other clients for other short-term funds	B	2
858 – Liabilities of foreign entities for other short-term funds		
8580 - Liabilities of foreign entities for other short-term funds	B	2
8589 – Past due and outstanding liabilities of foreign entities for other short-term funds	B	2
86 – SHORT-TERM LIABILITIES FROM INTER-BANK OPERATIONS		
860 – Short-term liabilities based on received assets from departments of the bank	SH	2
8600 – Short-term liabilities based on received assets from departments of the bank	B	2
8609 – Past due and outstanding short-term liabilities based on received assets from departments of the bank	B	2
862 – Liabilities based on short-term loans from the primary issue (National Bank)		
8620 - Liabilities based on short-term loans from the primary issue (National Bank)	B	2
8629 – Past due and outstanding liabilities based on short-term loans from the primary issue (National Bank)	B	2
863 – Liabilities based on short-term loans from the primary issue (National Bank), based on a securities collateral		
8630 - Liabilities based on short-term loans	B	2

from the primary issue (National Bank), based on a securities collateral			
8639 - Past due and outstanding liabilities based on short-term loans from the primary issue (National Bank), based on a securities collateral	B		2
864 - Liabilities based on deposits from the primary issue (National Bank) bought by auction			
8640 - Liabilities based on deposits from the primary issue (National Bank) bought by auction	B	SH	2
8649 - Past due and outstanding liabilities based on deposits from the primary issue (National Bank) bought by auction	B	SH	2
865 - Liabilities based on short-term loans from the primary issue (National Bank) for disbursement of savings deposits			
8650 - Liabilities based on short-term loans from the primary issue (National Bank) for disbursement of savings deposits	B	SH	2
8659 - Past due and outstanding liabilities based on short-term loans from the primary issue (National Bank) for disbursement of savings deposits	B	SH	2
868 - Short-term liabilities based on credits from banks and bank departments abroad, founded by the bank			
87 - TERM DEPOSITS			
870 - Term deposits of non-financial legal entities, for up to one year			
8700 - Term deposits of non-financial legal entities, for up to one month	B		2
8702 - Term deposits of non-financial legal entities, for up to three months	B		2
8703 - Term deposits of non-financial legal entities, for up to six months	B		2
8704 - Term deposits of non-financial legal entities, for over six months	B		2
871 - Term deposits of the public sector for up to one year			
8710 - Term deposits of the public sector, for up to one month	B		2
8712 - Term deposits of the public sector, for up to three months	B		2
8713 - Term deposits of the public sector, for up to six months	B		2
8714 - Term deposits of the public sector, for over six months	B		2

875 – Term deposits of banks and other financial institutions for up to one year			
8750 - Term deposits of the public sector, for up to one month	B		2
8752 - Term deposits of the public sector, for up to three months	B		2
8753 - Term deposits of the public sector, for up to six months	B		2
8754 - Term deposits of the public sector, for over six months	B		2
876 – Term deposits of other clients for up to one year			
8760 - Term deposits of other clients, for up to one month	B		2
8762 - Term deposits of other clients, for up to three months	B		2
8763 - Term deposits of other clients, for up to six months	B		2
8764 - Term deposits of other clients, for over six months	B		2
877 – Term deposits of households for up to one year			
8770 - Term deposits of households, for up to one month	B	SH	2
8772 - Term deposits of households, for up to three months	B	SH	2
8773 - Term deposits of households, for up to six months	B	SH	2
8774 - Term deposits of households, for over six months	B	SH	2
878 – Term deposits of foreign entities for up to one year			
8780 - Term deposits of foreign entities, for up to one month	B		2
8782 - Term deposits of foreign entities, for up to three months	B		2
8783 - Term deposits of foreign entities, for up to six months	B		2
8784 - Term deposits of foreign entities, for over six months	B		2
88 – SHORT-TERM LIABILITIES BASED ON OPERATIONS ON BEHALF OF AND ON ACCOUNT OF OTHERS	B	SH	2
880 – Liabilities based on operations on behalf of and on account of non-financial legal entities			
8800 – Liabilities based on deposited assets and other sight deposits on behalf of and on account of non-financial legal entities			
8801 – Liabilities based on securities issued			

on behalf of and on account of non-financial  
legal entities  
8802 – Loans on behalf of and on account of  
non-financial legal entities  
8803 – Liabilities based on other short-term  
funds on behalf of and on account of non-  
financial legal entities  
8804 – Liabilities based on short-term term  
deposits on behalf of and on account of non-  
financial legal entities  
8808 – Revenues based on short-term  
operations on behalf of and on account of  
non-financial legal entities  
881 – Liabilities based on operations on behalf  
of and on account of the public sector  
8810 – Short-term liabilities based on  
deposited assets and other sight deposits on  
behalf of and on account of the public sector  
8811 – Short-term liabilities based on  
securities issued on behalf of and on account  
of the public sector  
8812 – Liabilities based on short-term loans  
on behalf of and on account of the public  
sector  
8813 – Liabilities based on other short-term  
funds on behalf of and on account of the  
public sector  
8814 – Liabilities based on short-term term  
deposits on behalf of and on account of the  
public sector  
8818 – Revenues based on short-term  
operations on behalf of and on account of the  
public sector  
885 – Liabilities based on operations on behalf  
of and on account of banks and other financial  
institutions  
8850 – Short-term liabilities based on  
deposited assets and other sight deposits on  
behalf of and on account of banks and other  
financial institutions  
8851 – Short-term liabilities based on  
securities issued on behalf of and on account  
of banks and other financial institutions  
8852 – Liabilities based on short-term loans  
on behalf of and on account of banks and  
other financial institutions  
8853 – Liabilities based on other short-term  
funds on behalf of and on account of banks  
and other financial institutions

8854 – Liabilities based on short-term term deposits on behalf of and on account of banks and other financial institutions

8858 – Revenues based on short-term operations on behalf of and on account of banks and other financial institutions

886 – Liabilities based on operations on behalf of and on account of other clients

8860 – Liabilities based on operations on deposited assets and other sight deposits on behalf of and on account of other clients

8861 – Short-term liabilities based on securities issued on behalf of and on account of other clients

8862 – Liabilities based on short-term loans on behalf of and on account of other clients

8863 – Liabilities based on other short-term funds on behalf of and on account of other clients

8864 – Liabilities based on short-term term deposits on behalf of and on account of other clients

8868 – Revenues based on short-term operations on behalf of and on account of other clients

887 – Liabilities based on operations on behalf of and on account of households

8870 – Short-term liabilities based on deposited assets and other sight deposits on behalf of and on account of households

8871 – Short-term liabilities based on securities issued on behalf of and on account of households

8872 – Liabilities based on short-term loans on behalf of and on account of households

8873 – Liabilities based on other short-term funds on behalf of and on account of households

8874 – Liabilities based on short-term term deposits on behalf of and on account of households

8878 – Liabilities based on short-term operations on behalf of and on account of households

888 – Liabilities based on operations on behalf of and on account of foreign entities

8880 – Short-term liabilities based on deposited assets and other sight deposits on behalf of and on account of foreign entities

8881 – Short-term liabilities based on securities issued on behalf of and on account of foreign entities

8882 – Liabilities based on short-term loans on behalf of and on account of foreign entities

8883 - Liabilities based on other short-term funds  
on behalf of and on account of foreign entities

8884 - Liabilities based on short-term term  
deposits on behalf of and on account of foreign  
entities

8888 - Revenues based on short-term operations on  
behalf of and on account of foreign entities

**CLASS 9: CAPITAL, LONG-TERM  
LIABILITIES, PAYABLES TO ASSET  
SOURCES AND OFF-BALANCE ACCOUNTS**

**90 - CAPITAL**

900 - Fixed capital	NB		2
9000 - Fixed assets capital (business fund)			
9001 - Capital from allocation of results			
903 - Founding capital			
9030 - Monetary paid-up capital with management rights	B	SH	2
9031 - Monetary paid-up capital, preferred shares	B	SH	2
9032 - Non-monetary paid-up capital with management rights	B	SH	2
9033 - Non-monetary paid-up capital, preferred shares	B	SH	2
9034 - Treasury stock	B	SH	2
9039 - Annual report increase or decrease of paid- up capital	B	SH	3
904 - Reserve fund			
9040 - Reserve fund of NBRM	NB		2
9041 - Bank reserve fund	B	SH	2
9049 - Annual report increase or decrease of the reserve funds	NB	B	SH 3
905 - Revaluation reserve	NB	B	SH 2
9050 - Revaluation of intangible and tangible investments			
9051 - Depreciation revaluation			
906 - Unallocated income from past years	B	SH	2
9060 - Unallocated income of the banks from past years			
9061 - Unallocated income of savings houses from past years			
907 - Special reserve fund			
9070 - Special reserve for off-balance items	B	SH	1
9071 - Special reserve for receivables based on loans	B	SH	1
9072 - Special reserve for interest receivables	B	SH	1
9073 - Special reserve for other receivables			
9078 - Special reserve exceeding the amount of established potential losses	B	SH	1
9079 - Special reserve temporary account	B	SH	3
909 - Other funds	B	SH	2

9090 – Other bank and savings house funds			
92 – LONG-TERM DEPOSITS			
920 – Deposits of non-financial legal entities			
9200 – Long-term deposits of non-financial legal entities with a special purpose	B		2
9201 - Long-term deposits of non-financial legal entities with no special purpose	B		2
921 – Deposits of the public sector			
9210 – Long-term deposits of the public sector with a special purpose	B		2
9211 - Long-term deposits of the public sector with no special purpose	B		2
9213 - Long-term deposits of the public sector for approval of investment loans to private enterprises	B		2
925 – Deposits of banks and other financial institutions			
9251 – Long term deposits of banks	B		2
9254- Long-term deposits of other financial institutions	B		2
926 – Deposits of other clients			
9260 – Long-term deposits of other clients with a special purpose	B		2
9261 – Long-term deposits of other clients with no special purpose	B		2
927 – Deposits of households			
9270 – Long-term savings deposits of households	B	SH	2
9279 – Other long-term deposits of households	B	SH	2
928 – Deposits of foreign entities			
9280 – Long-term deposits of foreign entities with a special purpose	B		2
9281 – Long-term deposits of foreign entities with no special purpose	B		2
93 – LONG-TERM LIABILITIES BASED ON ISSUED SECURITIES			
930 – Liabilities to non-financial legal entities based on issued securities			
9300 – Long-term payables to non-financial legal entities based on issued securities	B		2
9309 – Past due and outstanding long-term payables to non-financial legal entities based on issued securities	B		2
931 – Liabilities to the public sector based on issued securities			
9310 – Long-term payables to the public sector based on issued securities	B		2
9319 – Past due and outstanding long-term payables to the public sector based on issued securities	B		2
935 – Liabilities to banks and other financial			

institutions based on issued securities		
9351 – Long-term payables to banks based on issued securities	B	2
9354 – Long-term payables to other financial institutions based on issued securities	B	2
9359 – Past due and outstanding long-term payables to banks and other financial institutions based on issued securities	B	2
936 – Liabilities to other clients based on issued securities		
9360 – Long-term payables to other clients based on issued securities	B	2
9369 – Past due and outstanding long-term payables to other clients based on issued securities	B	2
937 – Liabilities to households based on issued securities		
9370 – Long-term payables to households based on issued securities	B	2
9379 – Past due and outstanding long-term payables to households based on issued securities	B	2
938 – Liabilities to foreign entities based on issued securities	B	2
94 – LIABILITIES BASED ON LONG-TERM LOANS		
940 – Liabilities to non-financial legal entities based on long-term loans	B	2
9400 - Liabilities to non-financial legal entities based on long-term loans with a fixed interest rate		
9401 - Liabilities to non-financial legal entities based on long-term loans with a variable interest rate		
9409 – Past due and outstanding liabilities to non-financial legal entities based on long-term loans		
941 – Liabilities to the public sector based on long-term loans	B	2
9410 - Liabilities to the public sector based on long-term loans with a fixed interest rate		
9411 - Liabilities to the public sector based on long-term loans with a variable interest rate		
9419 – Past due and outstanding liabilities to the public sector based on long-term loans		
945 – Liabilities to banks and other financial institutions based on long-term loans		
9450 – Liabilities to NBRM based on long-term loans	B	2
9451 – Liabilities to banks based on long-term loans	B	SH 2
9454 – Liabilities to other financial institutions based on long-term loans	B	SH 2

9459 – Past due and outstanding liabilities to banks and other financial institutions based on long-term loans	B	2
946 – Liabilities to other clients based on long-term loans	B	2
9460 – Liabilities to other clients based on long-term loans with a fixed interest rate		
9461 - Liabilities to other clients based on long-term loans with a variable interest rate		
9469 – Past due and outstanding liabilities to other clients based on long-term loans		
948 – Liabilities to foreign entities based on long-term loans	B	2
9480 – Liabilities to foreign entities based on long-term loans with a fixed interest rate		
9481 - Liabilities to foreign entities based on long-term loans with a variable interest rate		
9489 – Past due and outstanding liabilities to foreign entities based on long-term loans		
95 – LIABILITIES BASED ON OTHER LONG-TERM FUNDS		
950 – Liabilities to non-financial legal entities based on other long-term funds	B	2
9500 - Liabilities to non-financial legal entities based on other long-term funds		
9509 – Past due and outstanding liabilities to non-financial legal entities based on other long-term funds		
951 - Liabilities to the public sector based on other long-term funds	B	2
9510 - Liabilities to the public sector based on other long-term funds		
9519 – Past due and outstanding liabilities to the public sector based on other long-term funds		
955 - Liabilities to banks and other financial institutions based on other long-term funds	B	2
9550 - Liabilities to banks and other financial institutions based on other long-term funds		
9559 – Past due and outstanding liabilities to banks and other financial institutions based on other long-term funds		
956 - Liabilities to other clients based on other long-term funds	B	2
9560 - Liabilities to other clients based on other long-term funds		
9569 – Past due and outstanding liabilities to other clients based on other long-term funds		
958 - Liabilities to foreign entities based on other long-term funds	B	2

9580 - Liabilities to foreign entities based on other long-term funds		
9589 - Past due and outstanding liabilities to foreign entities based on other long-term funds		
96 - LONG-TERM LIABILITIES BASED ON INTER-BANK OPERATIONS		
960 - Long-term liabilities based on credits from departments of the bank within the bank	SH	2
9600 - Long-term liabilities based on credits from departments of the bank within the bank	B	2
9609 - Past due and outstanding long-term liabilities based on credits from departments of the bank within the bank	B	2
962 - Liabilities based on long-term loans from the primary issue (National Bank) for credits for special purposes		
9620 - Liabilities based on long-term loans from the primary issue (National Bank) for credits for special purposes	B	2
9629 - Past due and outstanding liabilities based on long-term loans from the primary issue (National Bank) for credits for special purposes	B	2
963 - Liabilities based on long-term loans in denar counter-value of foreign loans received from the National bank		
9630 - Liabilities based on long-term loans in denar counter-value of foreign loans received from NBRM	B	2
9639 - Past due and outstanding liabilities based on long-term loans in denar counter-value of foreign loans received from the National bank	B	2
965 - Liabilities based on other long-term loans from the primary issue (National Bank)		
9650 - Liabilities based on other long-term loans from the primary issue (National Bank)	B	2
9659 - Past due and outstanding liabilities based on other long-term loans from the primary issue (National Bank)	B	2
968 - Long-term liabilities based on credits from banks and departments of the bank abroad, founded by the bank	B	2
9680 - Long-term liabilities based on credits from banks and departments of the bank abroad, founded by the bank		
9689 - Past due and outstanding liabilities based on long-term credits from banks and departments of the bank abroad, founded by the bank		
97 - OTHER LONG-TERM LIABILITIES AND SOURCES OF OFF-BALANCE ASSETS		

970 – Liabilities for produced bank notes and coins	NB			2
971 – Liabilities based on current accounts of the Payment Operations Dept. of the National Bank with the Payment Operations Office (ZPP)	NB			2
972 – Sources of assets for joint consumption for housing needs	NB	B	SH	2
973 – Sources of assets for joint consumption for other needs	NB	B	SH	2
974 – Sources of other assets				
975 – Liabilities based on yielded assets		B		2
978 – Other long-term liabilities				
9784 – Long-term liabilities for produced tax and administrative value papers				
98 – LONG-TERM LIABILITIES BASED ON OPERATIONS ON BEHALF OF AND ON ACCOUNT OF OTHERS	NB	B	SH	2
980 – Liabilities based on operations on behalf of and on account of non-financial legal entities				
9800 – Liabilities based on long-term deposits on behalf of and on account of non-financial legal entities				
9801 – Long-term liabilities based on securities issued on behalf of and on account of non-financial legal entities				
9802 – Liabilities based on long-term loans on behalf of and on account of non-financial legal entities				
9803 – Other long-term liabilities on behalf of and on account of non-financial legal entities				
9808 – Revenues based on long-term operations on behalf of and on account of non-financial legal entities				
981 – Liabilities based on operations on behalf of and on account of the public sector				
9810 – Liabilities based on long-term deposits on behalf of and on account of the public sector				
9811 – Long-term liabilities based on securities issued on behalf of and on account of the public sector				
9812 – Liabilities based on long-term loans on behalf of and on account of the public sector				
9813 – Other long-term liabilities on behalf of and on account of the public sector				
9818 – Revenues based on long-term operations on behalf of and on account of the public sector				
985 – Liabilities based on operations on behalf of and on account of banks and other financial institutions				

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**“Management Information  
System and Credit Risk  
Management”**

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MANAGEMENT INFORMATION SYSTEM  
AND  
CREDIT RISK MANAGEMENT

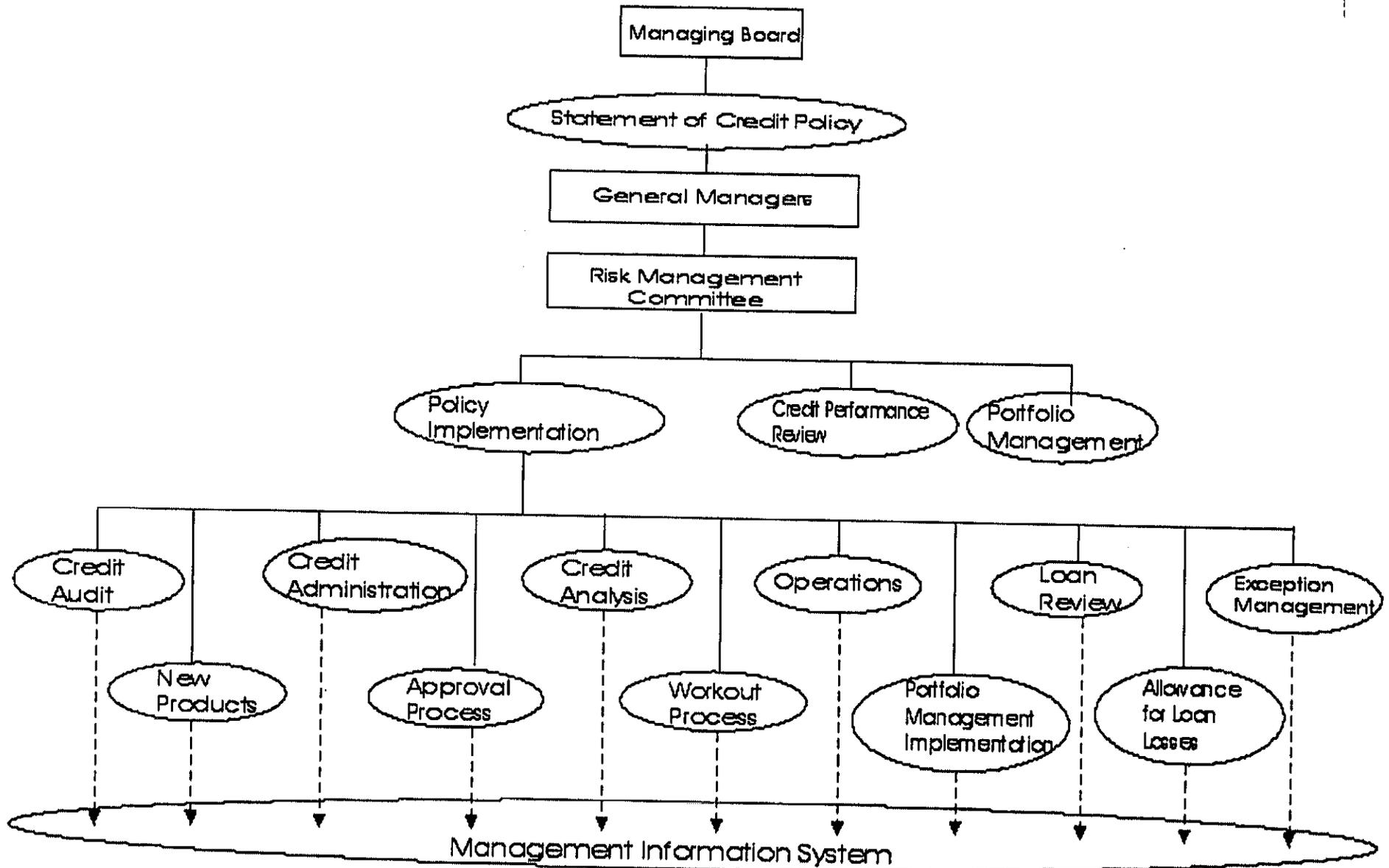
APRIL 16 & 17, 2002



H PEERS BREWER  
CHIEF OF PARTY  
MACEDONIAN BANKING PROJECT

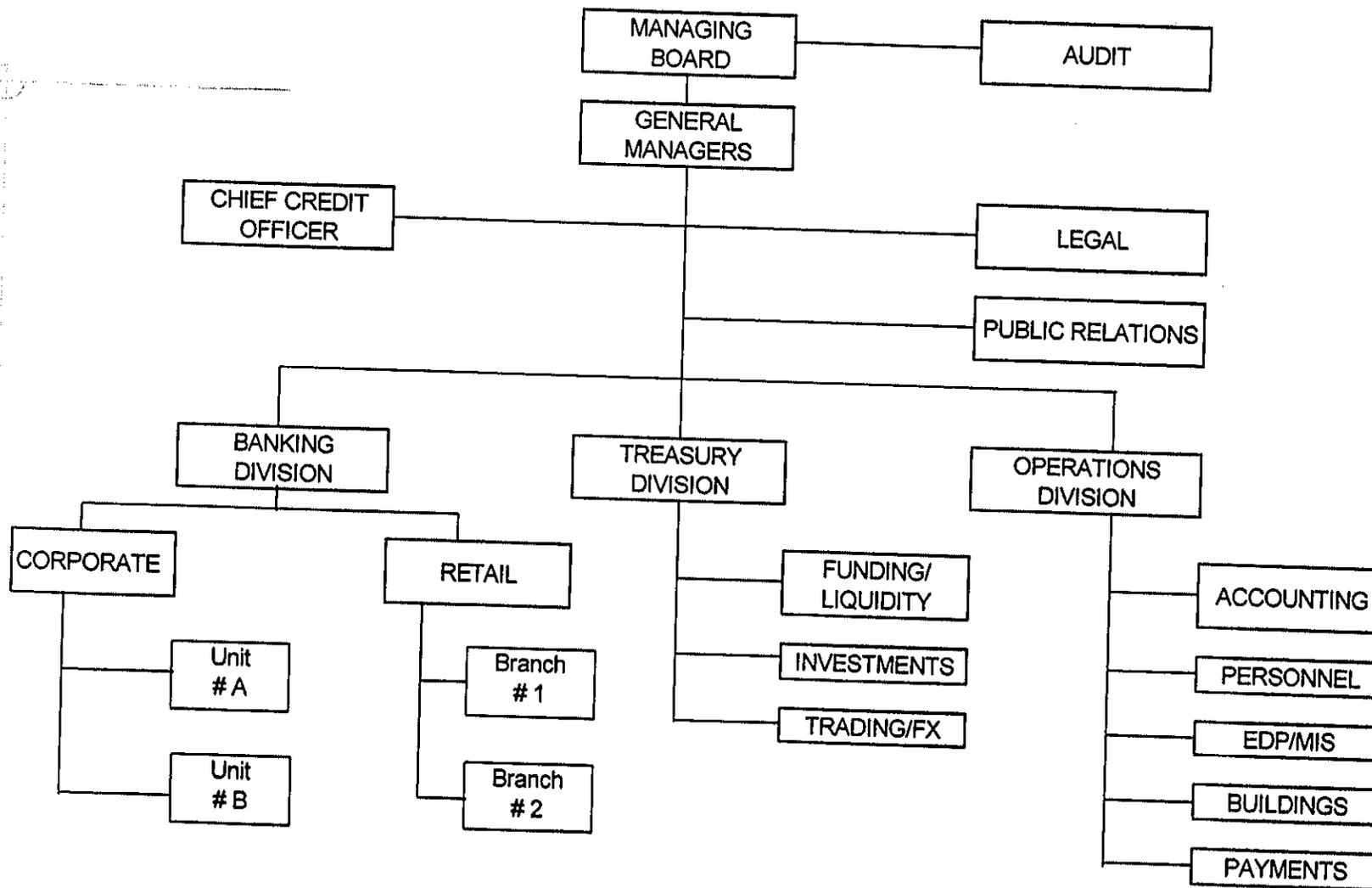
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# FUNCTIONS OF CREDIT RISK MANAGEMENT

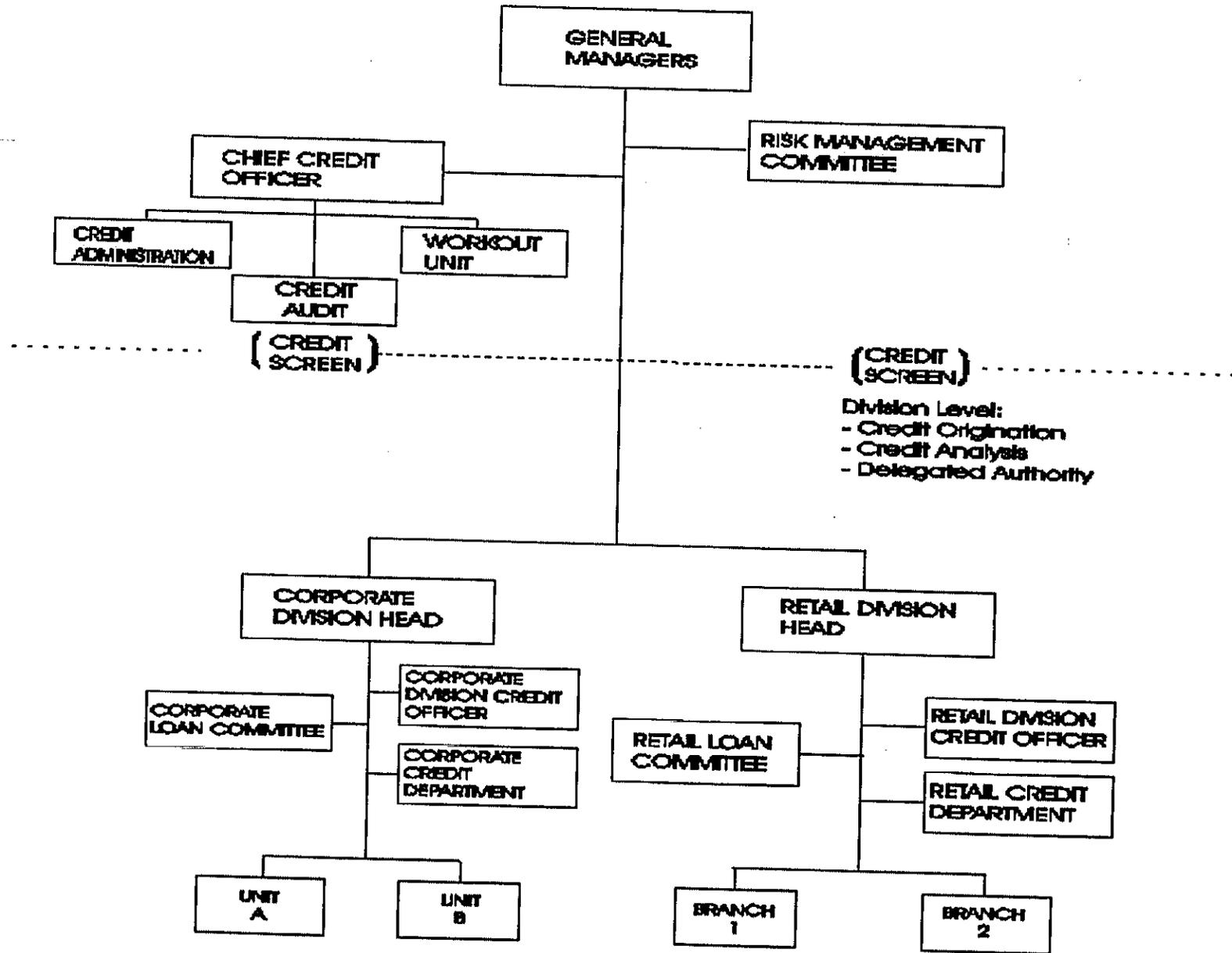


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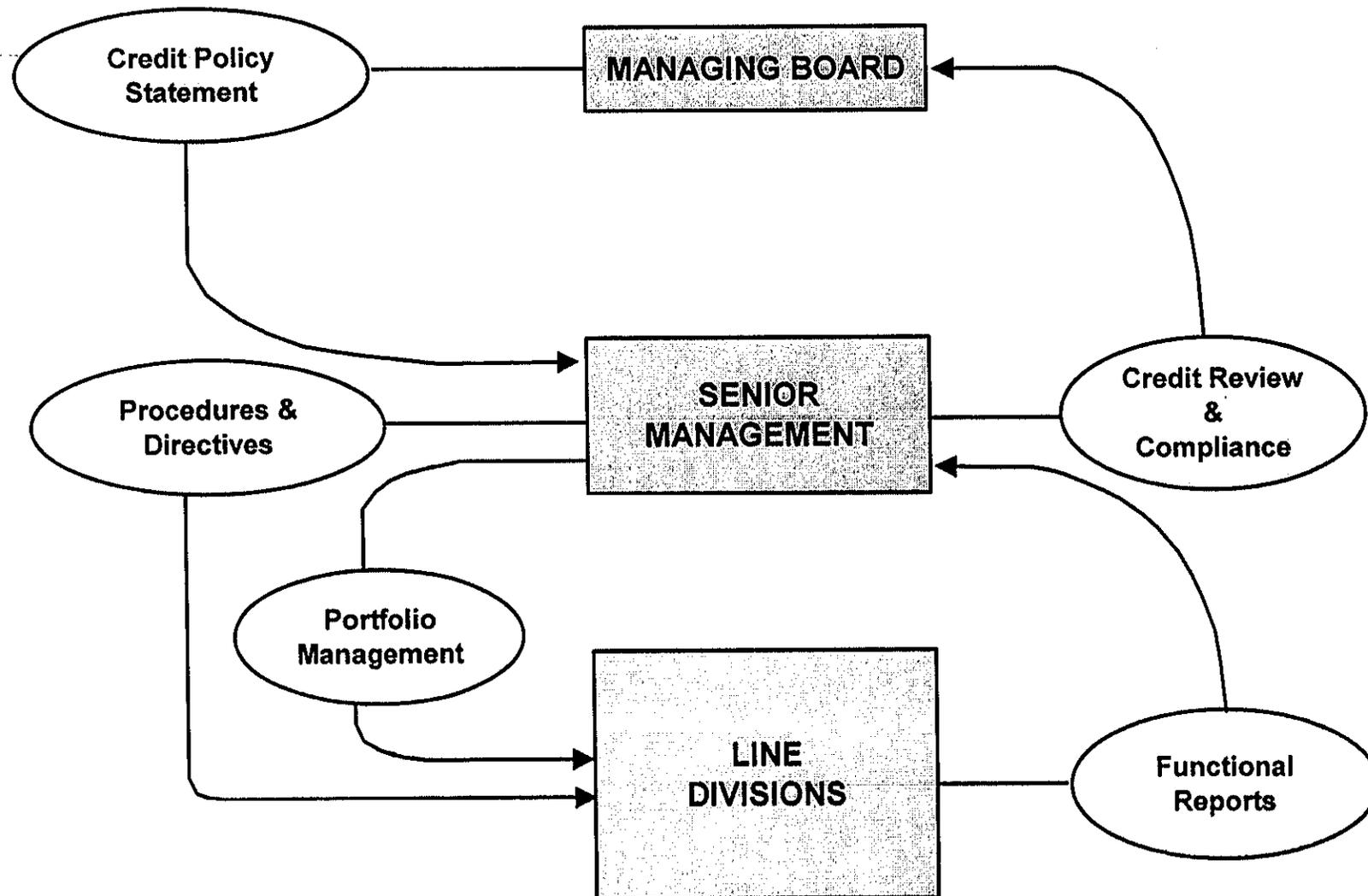
# LOKALNA BANKA ORGANIZATIONAL CHART



# LOKALNA BANKA CREDIT ORGANIZATION CHART



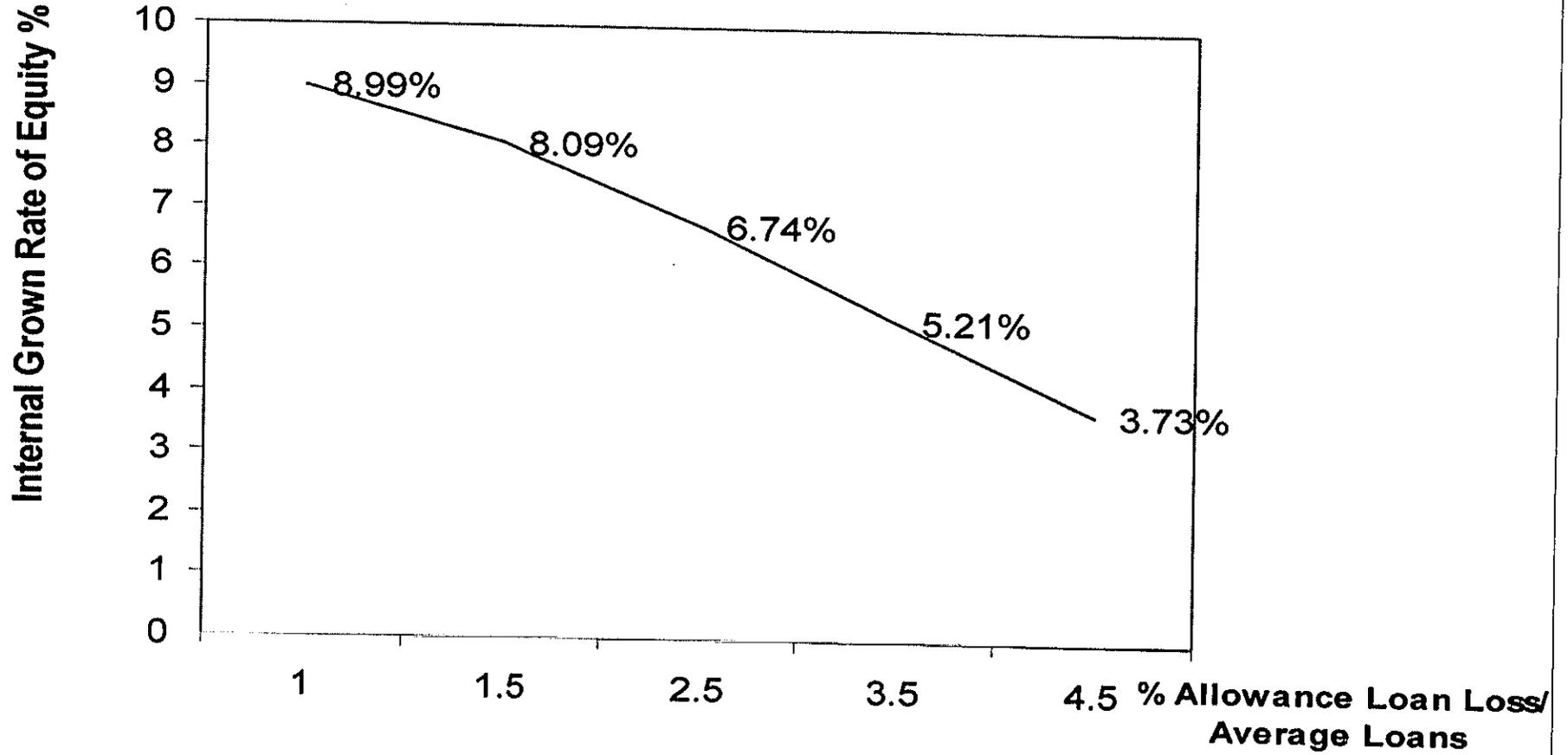
# MANAGEMENT INFORMATION SYSTEM FLOW OF INFORMATION



# CREDIT RISK

POOR CREDIT QUALITY IS THE MOST  
COMMON CAUSE OF BANK FAILURE OR  
WEAKNESS

# EFFECT OF CREDIT LOSSES ON PRIMERTA BANK



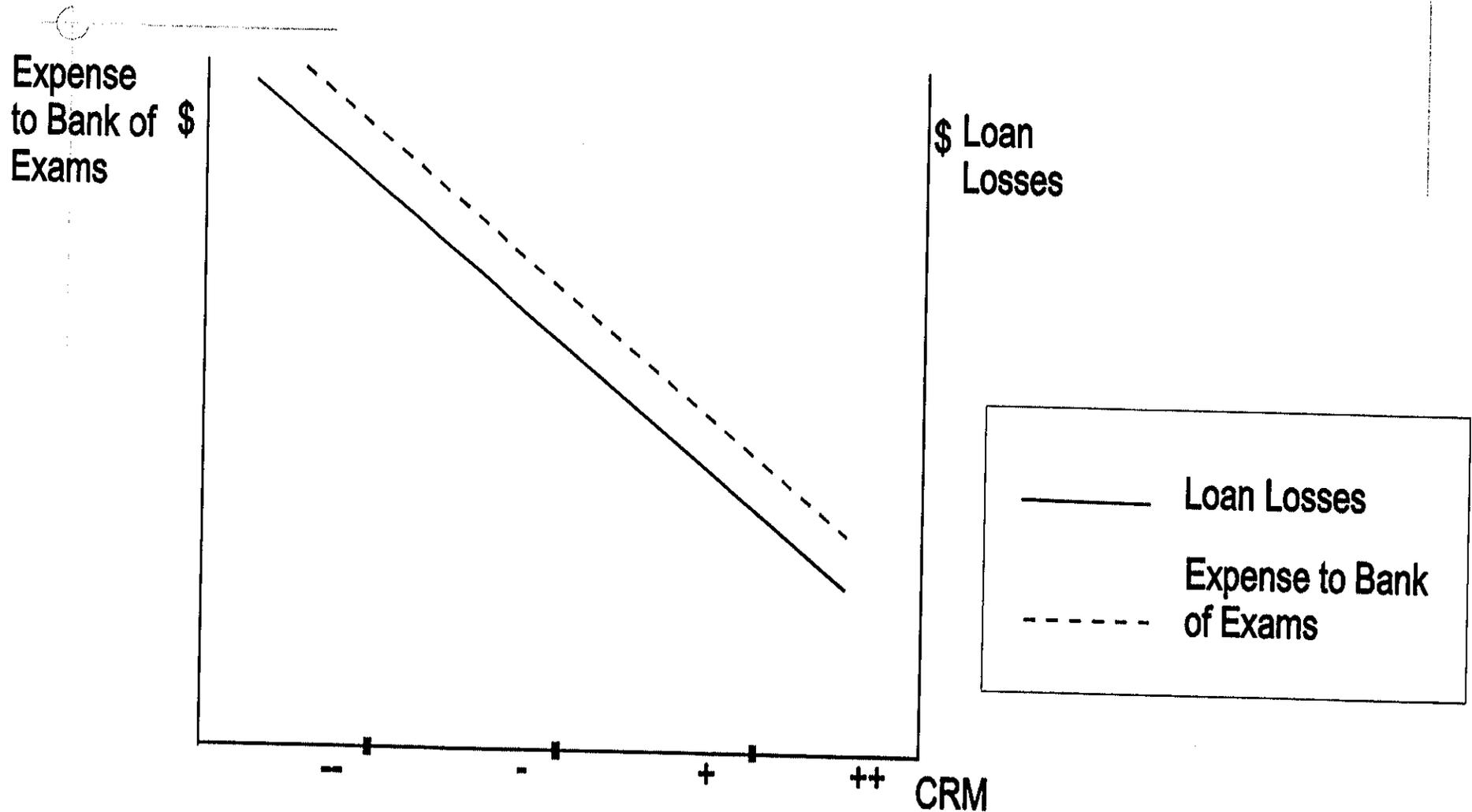
# CREDIT RISK MANAGEMENT

## BANK EXAMINERS PERSPECTIVE

- ◆ OBJECTIVE (MEANING “NOT SUBJECTIVE”)
- ◆ CONSISTENTLY APPLIED
- ◆ CROSS FUNCTIONAL INTEGRITY
- ◆ REPORTING CHAIN: (1) CLARITY, (2) TIMELY, (3) APPROPRIATE RECIPIENT
- ◆ CONSISTENCY WITH STRATEGIC PLAN & BUDGET
- ◆ QUANTIFICATION OF CREDIT POLICY GOALS
- ◆ CAN MANAGEMENT IDENTIFY & CORRECT EMERGING PROBLEMS IN THE LOAN PORTFOLIO?

# BANK EXAMINERS PLAN

THEIR PERCEPTION OF CRM OFTEN SETS THE TONE & INTENSITY OF EXAMINATION



# RISK MANAGEMENT COMMITTEE CREDIT TASKS

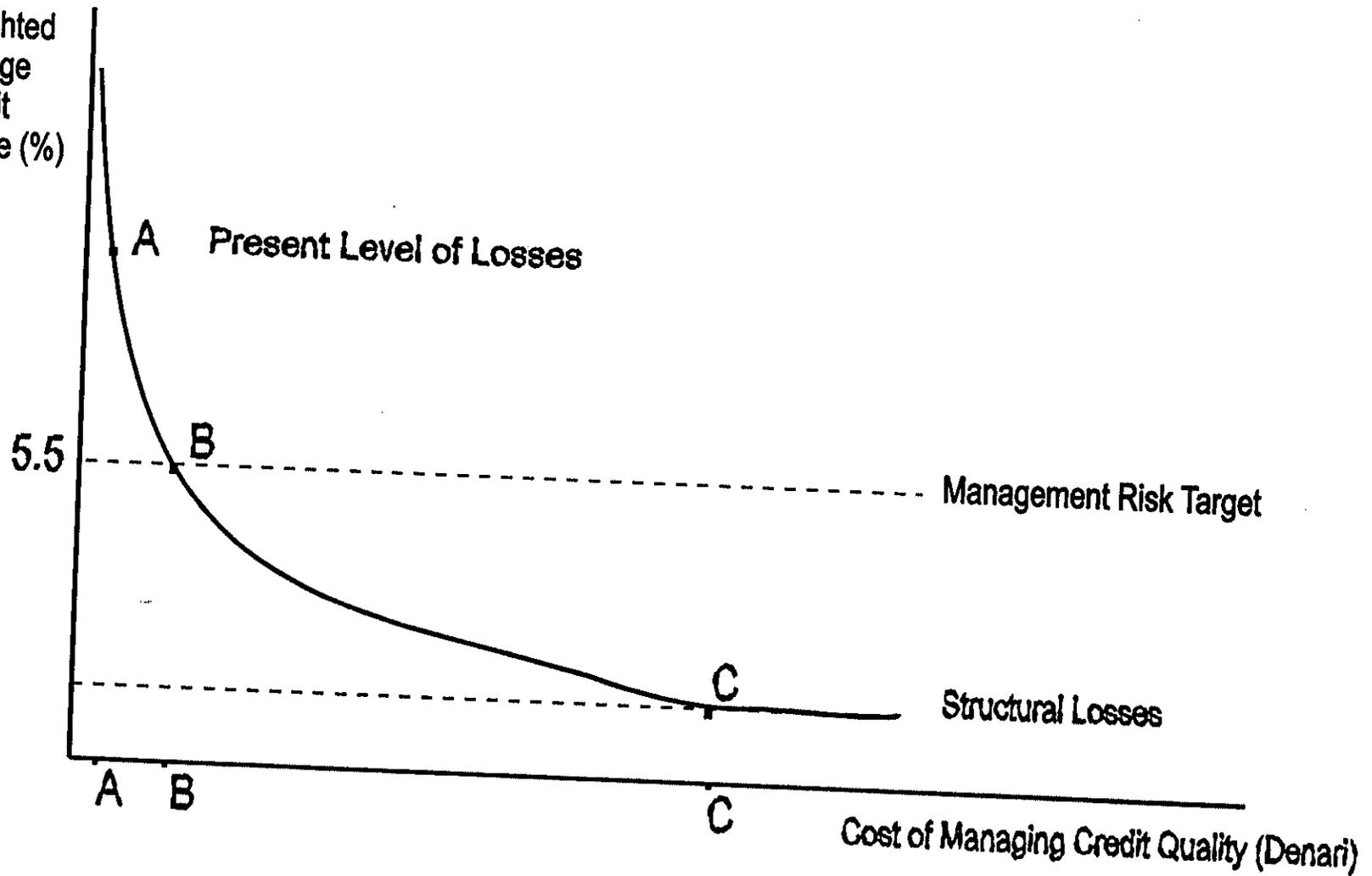
- ◆ IMPLEMENT STRATEGIC POLICY
- ◆ PORTFOLIO MANAGEMENT
- ◆ MONTHLY REVIEW OF:
  - NEW LOANS
  - PROBLEM LOANS
  - EXCEPTIONS REPORT
  - ALLOWANCE FOR LOAN LOSS REPORT
  - WORKOUT UNIT REPORT
  - CREDIT PORTFOLIO PROFILE
  - LOAN APPROVAL AUTHORITY
- ◆ MONTHLY STATUS & TRENDS

# DUTIES OF CHIEF CREDIT OFFICER

- ◆ THE CCO IS THE MAIN CONDUIT OF IMPLEMENTATION OF MANAGING BOARD STATEMENT OF CREDIT POLICY.
- ◆ CCO ADVISES AND COORDINATES THE BOARD, RMC AND DIVISIONAL LOAM COMMITTEES ON CREDIT RISK MANAGEMENT, METHODOLOGY AND PROCEDURES.
- ◆ THE CREDIT ADMINISTRATION DEPARTMENT, WORKOUT UNIT AND CREDIT AUDIT REPORT DIRECTLY TO THE CCO.
- ◆ THE CCO IS RESPONSIBLE FOR DETERMINING THE CREDIT APPROVAL PATHS AND APPROVING LENDING AUTHORITIES FOR DIVISION HEADS AND DIVISIONAL CREDIT OFFICERS.
- ◆ THE CCO IS RESPONSIBLE FOR MAINTAINING SUFFICIENT RESOURCE ALLOCATION IN THE BANK TO SUPPORT A STRONG CREDIT CULTURE
- ◆ THE CCO DEFINES PARAMETERS OF EXCEPTIONS MANAGEMENT, REPORTING STRUCTURE AND REMEDIAL ACTION

# COST OF MANAGING CREDIT QUALITY

Weighted  
Average  
Credit  
Grade (%)



# CREDIT ADMINISTRATION

## CA OFFICER REPORTS TO CCO

### DUTIES:

- ◆ PREPARES AND DISTRIBUTES CREDIT MANUAL
- ◆ MANAGES CREDIT MANAGEMENT INFORMATION SYSTEM
- ◆ MANAGES CREDIT EDUCATION PROGRAM
- ◆ MANAGES LOAN REVIEW SCHEDULE AND GRADE MIGRATION REPORT
- ◆ HANDLES CREDIT METHODOLOGY ISSUES
- ◆ PREPARES EXCEPTION SITUATIONS FOR CCO & GM ACTION
- ◆ DIRECTS POST MORTEM ANALYSIS
- ◆ LIAISON WITH EXAMINERS AND DIVISIONS

# CREDIT MANUAL WHAT DOES IT INCLUDE?

- ◆ POLICY & PROCEDURES
- ◆ CREDIT RISK ORIGINATION
- ◆ CREDIT RISK MANAGEMENT
- ◆ CREDIT PRODUCTS
- ◆ SPECIAL CREDITS
- ◆ LEGAL & REGULATORY ISSUES
- ◆ MASTER INDEX

# ADD TO CREDIT MANUAL

## ◆ CREDIT ANALYSIS AND TERMS CURRENT TOPICS

- PORTFOLIO MANAGEMENT
- INDUSTRY LEVEL ANALYSIS
- ECONOMIC OUTLOOK
- WORKOUT UNIT RECOMMENDATIONS FOR  
LOAN STRUCTURING & TERMS (FEEDBACK  
FROM CURRENT WORKOUT PROBLEMS)

# CREDIT MANUAL

- ◆ KEY FOR AUTHORITATIVE DISTRIBUTION OF POLICY, DIRECTIVES, PROCEDURES & DESCRIPTIONS
- ◆ MUST BE UP-DATED
- ◆ CREDIT ADMINISTRATION MUST KEEP RECORDS OF:
  - AUTHORIZATION OF CHANGE
  - ALL MANUAL CHANGES FROM BEGINNING
  - DATES OF DISTRIBUTIONS & RECIPIENTS

# CREDIT MANAGEMENT INFORMATION SYSTEM

COORDINATES REPORT DESIGN &  
DISTRIBUTION WITH OPERATIONS  
DIVISION

# CREDIT EDUCATION

- ◆ PREPARES SCHEDULE OF CREDIT ORIENTED TRAINING COURSES
- ◆ EXAMPLES:
  - BASIC CREDIT ANALYSIS
  - ADVANCED CREDIT ANALYSIS
  - IMPROVEMENTS IN MIS
  - IMPACT OF IAS CHANGES ON CREDIT QUALITY
  - OUTLOOK FOR ECONOMY FOR BALANCE OF THIS YEAR AND NEXT
- ◆ THE CREDIT ADMINISTRATOR KEEPS RECORDS OF ALL COURSES AND NAMES OF THOSE WHO ATTEND.

# CREDIT AUDIT

- ◆ THE CREDIT ADMINISTRATOR MANAGES THE CREDIT AUDIT ON BEHALF OF THE CCO & THE RMC
- ◆ THE PURPOSE OF THE AUDIT IS TO TEST THE QUALITY & COMPLIANCE OF THE CREDIT WORK AT THE DIVISIONAL AND LINE LEVELS
- ◆ THE AUDIT IS INDEPENDENT OF AND IN ADDITION TO ANY INTERNAL OR EXTERNAL BANK AUDITS OR ANY EXAMINATIONS BY THE SUPERVISORY AUTHORITIES

# CREDIT METHODOLOGY

- ◆ THE METHODOLOGY OF CRM CHANGES CONTINUALLY
- ◆ THIS CHANGE IS OFTEN DRIVEN BY ACADEMIC, REGULATORY OR COMMERCIAL INTERESTS
- ◆ THE CREDIT ADMINISTRATOR MONITORS THESE DEVELOPMENTS & MAKE RECOMMENDATIONS TO THE CCO REGARDING CHANGES

# APPROVAL SHEET

- ◆ THE APPROVAL SHEET IS A SUMMARY OF THE LOAN DEAL
- ◆ THE APPROVAL SHEET CONTAINS A BRIEF DESCRIPTION OF THE CUSTOMER, OF THE PURPOSE AND AMOUNT OF THE CREDIT AND THE NECESSARY AUTHORIZED SIGNATURERS
- ◆ PRIOR TO THE RELEASE OF FUNDS TO THE CUSTOMER, THE CREDIT ADMINISTRATOR OR THE ADMINISTRATOR AT THE DIVISIONAL LOAN COMMITTEE CHECKS THE APPROVAL SHEET FOR COMPLETENESS AND AUTHORIZATION

# POST MORTEM ANALYSIS

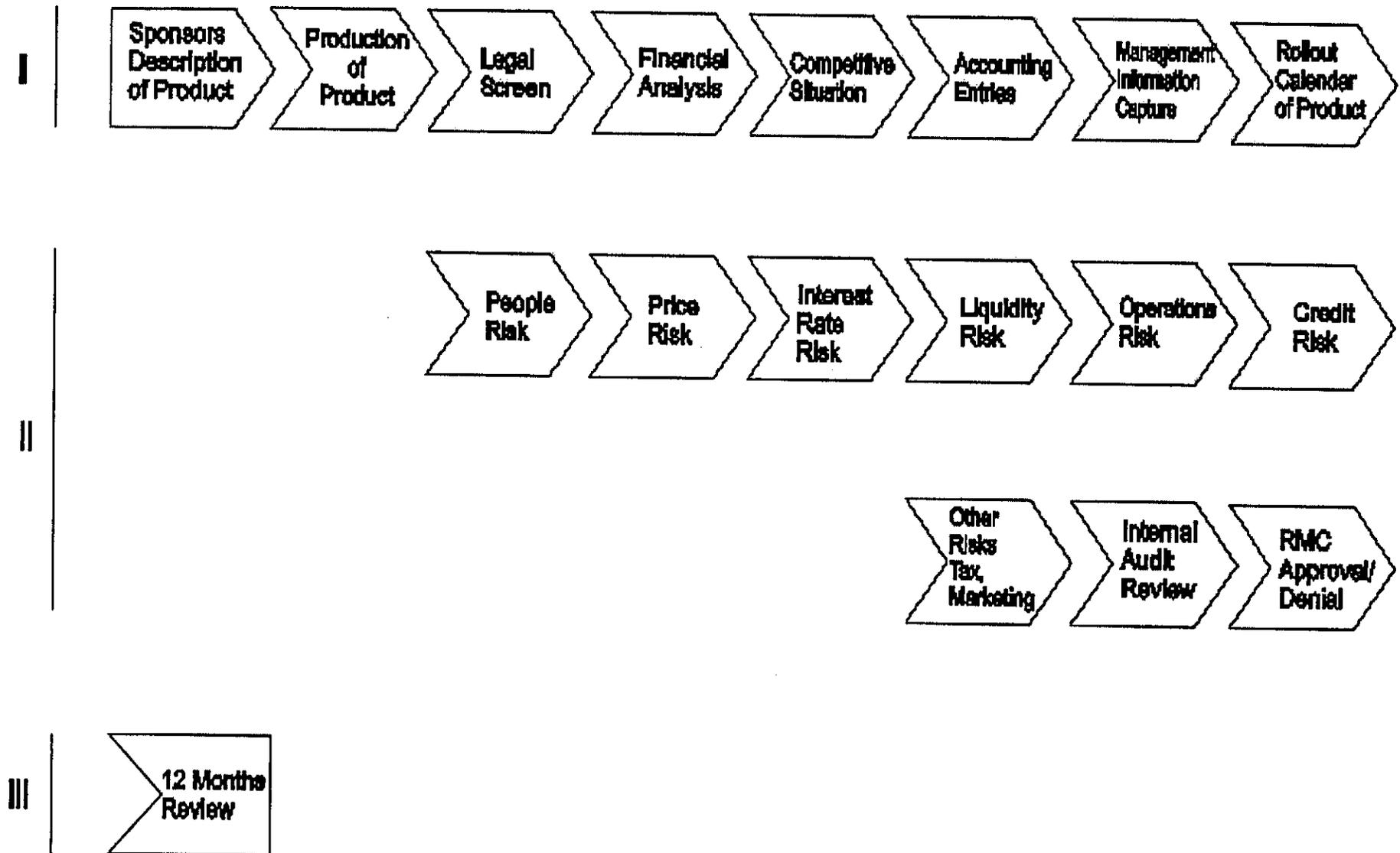
- ◆ THE CA MANAGES A POST MORTEM ANALYSIS OF CREDITS THAT WENT BAD OR WHOSE GRADE SIGNIFICANTLY MIGRATED TO A LOWER LEVEL
- ◆ THE PURPOSE IS TO DETECT AND CORRECT WEAKNESS IN THE BANKS CRM – NOT TO MAKE SCAPE GOAT OUT OF THE LOAN OFFICER
- ◆ THE STEPS ARE:
  1. CIRCULATE A QUESTIONNAIRE TO A WIDE RANGE OF PEOPLE INVOLVED IN MAKING EACH LOAN
  2. GATHER AND ANALYZE QUESTIONNAIRES
  3. DEVISE AND IMPLEMENT CORRECTIVE ACTION

# LIAISON WITH EXAMINERS AND DIVISIONS

- ◆ UNDER THE DIRECTION OF THE CCO, THE CREDIT ADMINISTRATOR LIAISONS WITH THE EXAMINERS AND DIVISIONS CONCERNING CREDIT MATTERS
- ◆ THE ADMINISTRATOR SHOULD KEEP DETAILED RECORDS OF DIVISIONAL STEPS TO CORRECT DEFICIENCIES CITED BY THE EXAMINERS

# NEW PRODUCT APPROVAL PATH

PHASE



# NEW PRODUCT APPROVAL GUIDELINE

- ◆ PROMOTES TIMELY ASSESSMENT
- ◆ ENSURES CONSISTENT APPROACH TO REVIEW
- ◆ OPPORTUNITY TO UNDERSTAND AND ASSESS RISK PRIOR TO INTRODUCTION
- ◆ ESTABLISHES ACCOUNTABILITY AND RESPONSIBILITY
- ◆ OFFERS EXIT STRATEGY

# NEW PRODUCT RESPONSIBILITY

◆ PHASE I            SPONSOR-LINE UNIT  
RESPONSIBLE FOR PRODUCT

◆ PHASE II ASSESSMENT COMMITTEE

- LEGAL
- ACCOUNTING
- TREASURY
- OPERATIONS
- MARKETING
- BANK DIVISION HEADS
- INTERNAL AUDIT
- RMC

◆ PHASE III            CONTINUE OR EXIT

- SPONSOR
- RMC

# NEW PRODUCT APPROVAL FINANCIAL ANALYSIS

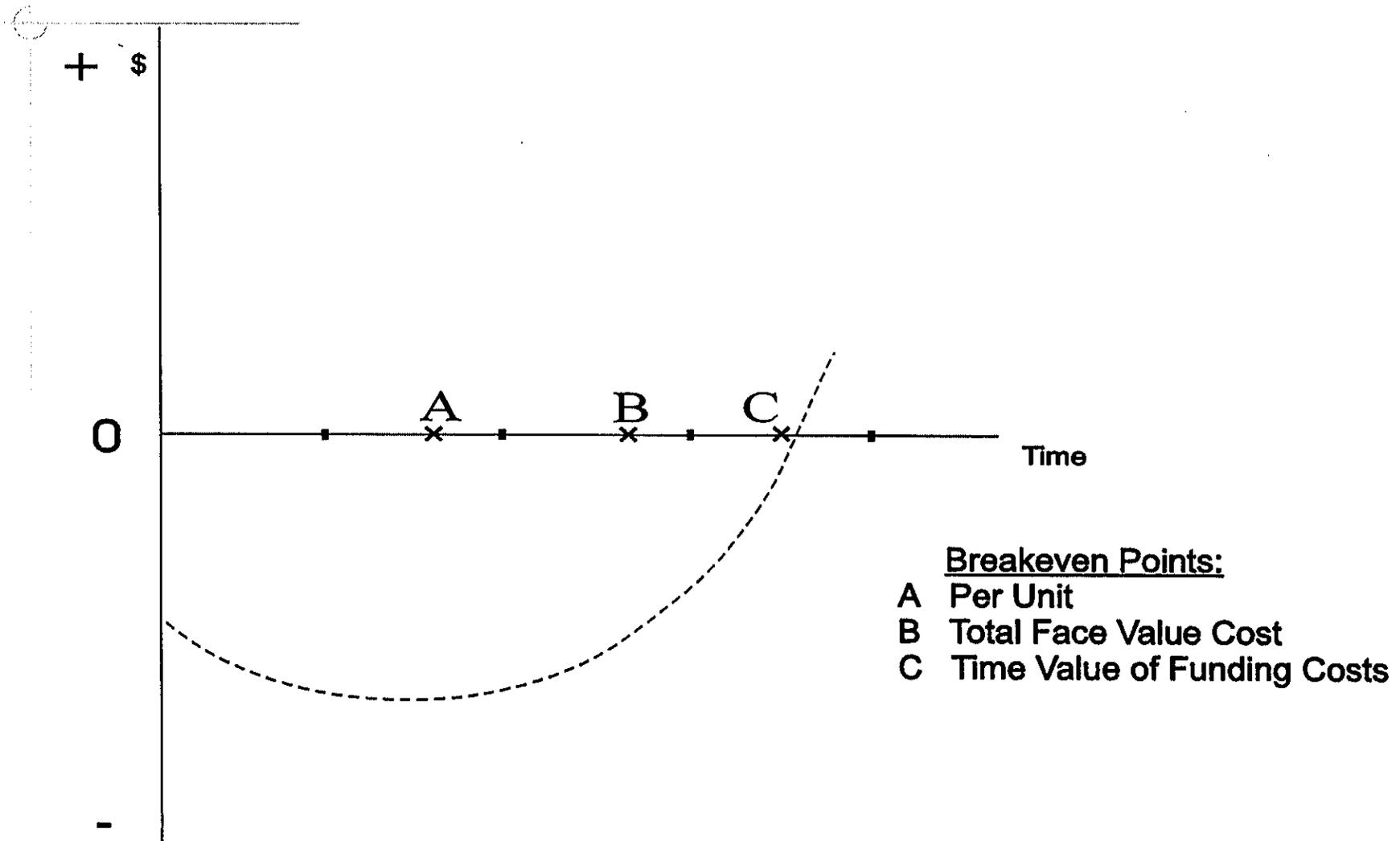
## 1. FINANCIAL PROJECTIONS

- A. START-UP PHASE
- B. ON GOING – 5 YEAR
- C. STRESS TESTING
- D. COST ANALYSIS BY DEPARTMENT

## 2. PRODUCT INVESTMENT RETURNS

- A. ROI, ROE, ROA
- B. BREAKEVEN ANALYSIS

# NEW PRODUCT APPROVAL BREAKEVEN ANALYSIS



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# NEW PRODUCT APPROVAL CREDIT RISK

- ◆ TEST NEW PRODUCT AGAINST EACH OF THE OTHER CREDIT FUNCTIONS, E.G: WORKOUT, CREDIT ANALYSIS.
- ◆ DETERMINE WHAT EFFECT PRODUCT HAS ON STEP 6 (PURPOSE AND TERMS) IN GRADING PROCESS
- ◆ INCLUDE WRITE UP IN THE PRODUCT SECTION OF CREDIT MANUAL

# NEW PRODUCT APPROVAL MANAGEMENT INFORMATION

A NEW PRODUCT IS ASSIGNED A CHART-OF-ACCOUNT CODE. THIS ENABLES THE PRODUCT MANAGER AND THE CREDIT ADMINISTRATOR TO EXTRACT VOLUME ACTIVITY AND TRENDS ALONG WITH UNITS ORIGINATING BUSINESS, PRICING AND COMPARISONS WITH PRIOR PERIODS.

# CREDIT APPROVAL PATH

- ◆ THE CAP IS THE ROUTE TAKEN BETWEEN THE POINT A CUSTOMER REQUESTS A LOAN AND THE POINT WHEN THE REQUEST IS APPROVED OR DENIED
- ◆ THE CRP IS THE PRINCIPAL STEP TO SECURE A SOUND CREDIT PORTFOLIO AND CULTURE

# CREDIT APPROVAL PATH CONSIDERATIONS

- ◆ THE CREDIT ADMINISTRATION OFFICER, SETS THE APPROVAL PATH, BUT COMPLICATIONS ARE OFTEN PRESENT. THESE REPRESENT VARIATIONS ON THE "SAMPLE", THESE MUST ALSO BE COVERED IN THE CREDIT MANUAL OR BE TREATED AS "EXCEPTION" ITEMS.
- ◆ EXAMPLES: WHAT IF THE AMOUNT OF CREDIT REQUESTED EXCEEDS THE AUTHORITY OF THE TOP DIVISIONAL OFFICERS?
- ◆ WHAT IF THE CUSTOMER WITH HDQs IN SKOPJE, HAS A SUBSIDIARY IN BITOLA. THE SUBSIDIARY BANKS AT THE BANK'S BRANCH IN BITOLA. THE SUBSIDIARY WANTS A LOAN. HOW DOES THE BANK COORDINATE THE GRADING OF THE CREDITS IN SKOPJE AND BITOLA? HOW DOES IT CONTROL THE FAMILY LEVEL CREDIT LIMITS?

# CREDIT APPROVAL PATH SAMPLE APPROVAL

Description	Customer	Account Officer	Unit B Head	Corporate Credit Department	Corporate Division Head	Corporate Division Credit Officer	Corporate Loan Committee	Credit Administrator
1. Customer asks AO for a two year loan of 500,000 AO has VP rank	●	●						
2. AO informs UH. They together determine if customer fits in Bank Credit guidelines			●					
3. If yes AO ask customer for financial & other documentation	●	●						
4. Upon receipt of data, AO does credit analysis and gives grade of 4	●	●						
5. AO sends credit analysis to CCD for review. CCD lowers grade to 5			●	●				
6. AO consults credit approval grid. Takes proposal to CDO for dual signature				●	●			
7. The CDO agrees. They agree on terms, take loan to CMC						●	●	
8. CLC reviews for compliance with divisional credit procedures. If CLC agrees AO officially notifies customer of terms	●	●						
9. When customer signs agreement and operations notifies AO that collateral is secure, AO sends New Loan Report to CA.								●

# CORPORATE DIVISION CREDIT SIGNING RANGES

	Maximum
Assistant Secretary (AS)	\$ 25,000
Assistance Vice President (AVP)	\$ 200,000
Vice President/Unit Head (VP)	\$ 500,000
Corporate Division Credit Officer (CDO)	\$ 1,000,000
Senior Vice President/Division Head (SVP)	\$ 1,000,000
Chief Credit Officer (CCO)	\$ 2,000,000
General Manager (GM)	\$ 2,000,000
Risk Management Committee (RMC)	Exceptions

Note: Maximum refers to total amount of credit outstanding (the sum of committed but unused lines, outstanding and off balance sheet exposure, not the amount of credit request under review.)

Approved RMC Oct, 10, 2001

# CORPORATE DIVISION CREDIT APPROVAL GRID

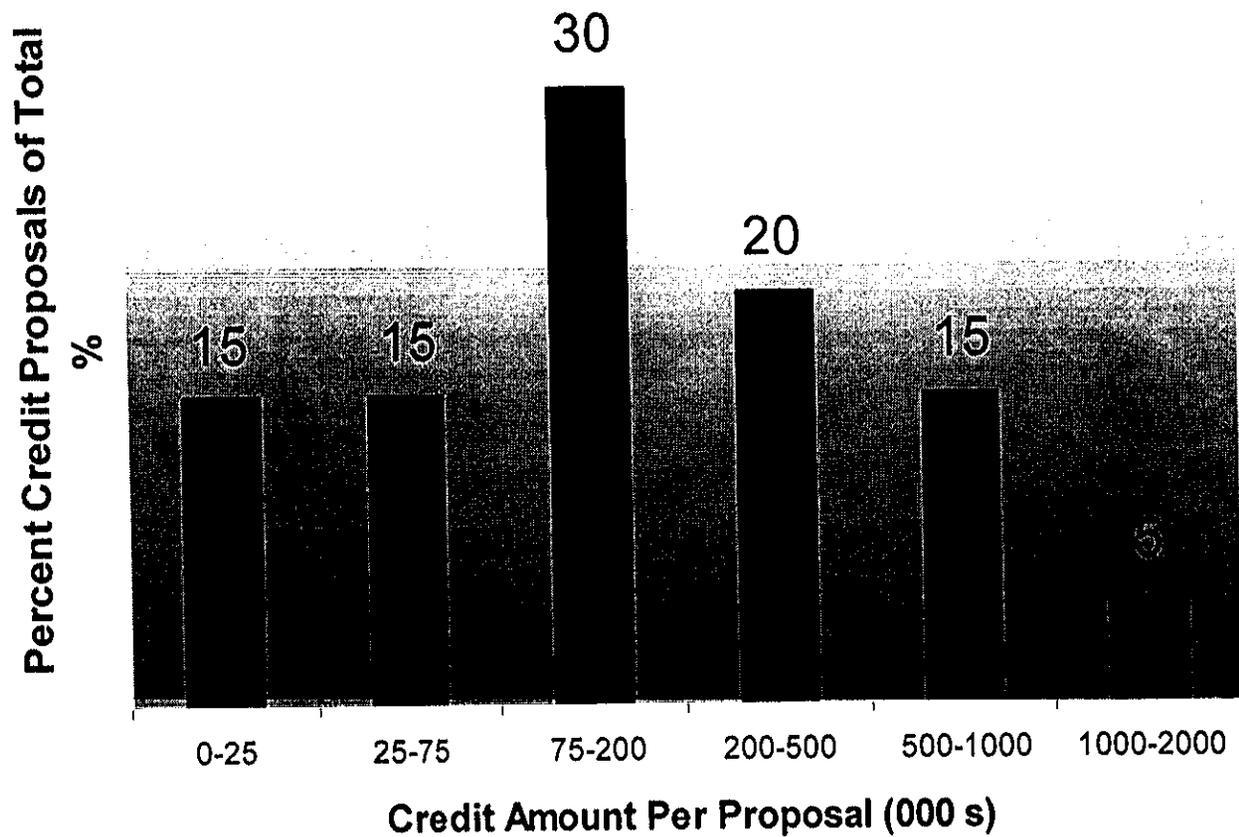
Authorization Grade	0 25000	- 25000 75000	75000 -200000	200000 -500000	500000 1000000	1000000 2000000
1	AS/VP	AVP/VP	AVP/VP	VP/CDO	SVP/CDO	CCO/GM
2	AS/VP	AVP/VP	AVP/VP	VP/CDO	SVP/CDO	CCO/GM
3	AS/VP	AVP/VP	AVP/VP	VP/CDO	SVP/CDO	CCO/GM
4	AVP/VP	AVP/VP	VP/SVP	VP/CDO	SVP/CDO	CCO/GM
5	AVP/VP	VP/SVP	VP/SVP	VP/CDO	SVP/CCO	CCO/GM
6	VP/SVP	VP/SVP	VP/SVP	SVP/CCO	CCO/GM	CCO/GM
7	VP/SVP	VP/SVP	SVP/CCO	CCO/GM	CCO/GM	CCO/GM
8	WOC/SVP	WOC/SVP	WOC/CCO	WOC/CCO/ GM	WOC/CCO/ GM	WOC/CCO/ GM
9	WOC/SVP	WOC/SVP	WOC/CCO	WOC/CCO/ GM	WOC/CCO/ GM	WOC/CCO/ GM
10	WOC/SVP	WOC/SVP	WOC/CCO	WOC/CCO/ GM	WOC/CCO/ GM	WOC/CCO/ GM

Note: Credit responsibility remains with originating officer and unit

Approved: RMC Oct. 10, 2001

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# CORPORATE DIVISION FACTORS IN GRID ARCHITECTURE DISTRIBUTION OF CREDIT PROPOSALS BY SIZE



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# LOAN REVIEW

- ◆ LOANS OFTEN HAVE MATURITIES OF 2-7 YEARS. IN SUCH CASES THE LOANS ARE REVIEWED PERIODICALLY, THAT IS TO SAY THE CREDIT ANALYSIS IS UPDATED, THE COLLATERAL AND THE AGREEMENT TERMS ARE REVIEWED
- ◆ THESE REVIEWS ENABLE MANAGEMENT TO SPOT TRENDS IN THE QUALITY OF THE PORTFOLIO, PARTICULARLY THE ADVERSE MIGRATION OF GRADES. THE PURPOSE IS TO ENABLE THE BANK TO ADJUST THE ALLOWANCE FOR LOAN LOSSES AND TAKE CORRECTIVE ACTIONS

# LOAN REVIEW SCHEDULE

THE LOAN REVIEW SCHEDULE DEPENDS ON THE CREDIT GRADE.

<u>GRADE</u>	<u>FREQUENCY OF REVIEW</u>
1-4	12 MONTHS
5-6	6 MONTHS
7	3 MONTHS
8-10	MONTHLY*

\*REPORT FROM WORKOUT GROUP

THE REVIEWS ARE PREPARED BY ACCOUNT OFFICER AND PRESENTED TO THE LOAN COMMITTEE OF RECORD AND ACTED UPON. THE AO NOTIFIES THE CREDIT ADMINISTRATOR THAT REVIEW TOOK PLACE AS SCHEDULED AND OF ANY CHANGE IN THE GRADE. AO ALSO NOTIFIES IF REVIEW IS DELAYED AND WHY

## LOAN REVIEW CONTENT

THE CONTENT AND METHODOLOGY OF THE CREDIT ANALYSIS ARE THE SAME AS THE INITIAL REVIEW. DATA, TRENDS AND PROJECTIONS ARE UPDATED BASED ON RECENT FINANCIAL STATEMENTS AND DISCUSSIONS WITH MANAGEMENT

# LOAN REVIEW: ADVERSE MIGRATION

October 1, 2002

NEW CREDITS APRIL 1991 – MARCH 2002 ADVERSE MIGRATION OF CREDIT GRADES

Original Grade

# of Credits

Migration to:

	1	2	3	4	5	6	7	Total
	3	5	25	40	59	55	10	197
2								0
3		1						1
4			2					2
5				5				5
6				2	8			10
7					3	10		13
8					2	6	5	13
9						2	1	3
10					1	1	1	3
Migration/ # Credits	0/3	1/5	2/25	7/40	14/59	19/55	7/10	50/197
Double Migration/ # Credits	0/3	0/5	0/25	2/40	6/59	9/55	2/10	19/197

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# OPERATIONS

OPERATIONS COVERS THREE MAIN AREAS WITH REGARD TO CRM

1. Support for CRM Management Information System
2. Collateral Management
3. Document Protection

IN LARGE BANKS, OPERATIONS MAY BE A SEPARATE UNIT UNDER THE DIRECT MANAGEMENT OF A LINE DIVISION. IN SMALLER BANKS OPERATIONS IS A STAND ALONE UNIT SERVING SEVERAL DIVISIONS

# OPERATIONS MANAGEMENT INFORMATION SYSTEM

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OPERATIONS INTERACTS WITH THE  
CREDIT ADMINISTRATOR TO PROVIDE  
INFORMATION TECHNOLOGY TO  
SUPPORT CRM MIS PROGRAMS.

- DATA CAPTURE
- SYSTEM INTEGRITY (ACCURACY & CONFIDENTIALITY)
- REPORT PRODUCTION AND DISTRIBUTION

# OPERATIONS COLLATERAL MANAGEMENT

- ◆ OPERATIONS IS RESPONSIBLE FOR SECURELY MAINTAINING CONTROL OF CERTAIN LOAN COLLATERAL ENTRUSTED TO ITS CARE:
  - ◆ DOCUMENTATION THAT THE BORROWER IS LEGALLY ENTITLED TO OFFER THE COLLATERAL
  - ◆ DOCUMENTATION WHICH GIVES THE BANK THE RIGHT TO SELL THE COLLATERAL IN THE EVENT OF A DEFAULT
  - ◆ APPRAISAL OF THE COLLATERAL ON A REGULAR BASIS BY QUALIFIED PEOPLE
  - ◆ INSURANCE ON THE COLLATERAL
  - ◆ REGULAR INSPECTION OF THE COLLATERAL
  - ◆ VAULT RETENTION OF CERTAIN ITEMS OF COLLATERAL, E.G. JEWELRY
  - ◆ AGREEMENTS WITH TREASURY DEPARTMENT TO MANAGE NEGOTIABLE COLLATERAL
  - ◆ MONTHLY ACTIVITY REPORTS TO THE LENDING OFFICER

# OPERATIONS DOCUMENT PROTECTION

OPERATIONS MUST PROVIDE SECURE  
AREAS AT DIVISIONAL AND BRANCH  
LOCATIONS FOR CONFIDENTIAL CREDIT  
FILES

# WORKOUT PROCESS

- ◆ THE “WORKOUT PROCESS” IS WAY A BANK MANAGES PROBLEM LOANS AND LOANS TO COMPANIES IN RECEIVERSHIP.
- ◆ THE BANK’S INTERESTS ARE BEST SERVED IF THE MANAGERIAL RESPONSIBILITY FOR PROBLEM LOANS IS TRANSFERRED FROM THE ACCOUNT OFFICER TO A WORKOUT UNIT.
- ◆ THE WORKOUT UNIT REPORTS TO THE CCO.
- ◆ THE WORKOUT UNIT IS STAFFED WITH SPECIALIST IN DEALING WITH DISTRESSED COMPANIES.

# WORKOUT PROCESS

## ◆ BENEFITS OF WORKOUT UNIT

- WU IS MORE OBJECTIVE IN VIEWING ALTERNATIVES
- EXPERIENCE IN DEVELOPING STRATEGIES TO RETURN CUSTOMER TO OPERATING HEALTH
- FREES OFFICER'S TIME FOR WORKING ON GOOD ACCOUNTS AND DEVELOPING NEW BUSINESS
- REDUCES CHARGE OFFS AND INCREASES RECOVERIES
- DEALINGS WITH WORKOUT ISSUE ARE UNIFORM AND CENTRALLY LOCATED TO FACILITATE RMC OVERSIGHT

# WORKOUT PROCESS

## WHEN IS TRANSFER MADE?

NEED DEFINITE OBJECTIVE STANDARD, E.G: WHEN LOAN REGRADED TO A 9 (SUBSTANDARD) OR 10 (DOUBTFUL) OR LOSS ASSETS

BUT WORKOUT UNIT SHOULD BE CONSULTED FOR SUGGESTIONS TO STRENGTHEN BANK POSITION WHEN CREDIT GRADE MIGRATES TO A 7 OR 8 OR APPEARS HEADED IN THAT DIRECTION.

THE LOAN OFFICER IS OFTEN RELUCTANT TO TRANSFER THE LOAN, THEREFORE DEFINITE STANDARDS SHOULD BE SET.

LOAN OFFICER OFTEN REMAINS IN CONSULTATION WITH WU AFTER TRANSFER

# WORKOUT PROCESS

- ◆ WORKOUT UNIT STAFFING IS HIGHLY SENSITIVE TO THE ECONOMIC CYCLE AND WILL FLUCTUATE ACCORDINGLY.
- ◆ THE PERMANENT STAFF, HOWEVER, HAS SPECIAL CHARACTERISTICS:
  - ❖ EXTENSIVE LINE EXPERIENCE AND KNOWLEDGE OF BANK'S PERSONALITIES, BUSINESS AND CULTURE
  - ❖ EXPERIENCE IN SELLING SUB PAR DEBT INTO THE CAPITAL MARKETS
  - ❖ SPECIAL EXPERTISE IN VULNERABLE INDUSTRIES
  - ❖ LEGAL TALENT SPECIALIZING IN RECEIVERSHIP

# EXCEPTIONS MANAGEMENT

- ◆ IT IS IMPOSSIBLE FOR MANAGEMENT TO ANTICIPATE ALL EVENTUALITIES IN A POLICY STATEMENT. IF THEY TRIED THE STATEMENT WOULD BE TOO AWKWARD TO BE USEFUL
- ◆ IN THE NORMAL COURSE OF BUSINESS, EXCEPTIONS TO POLICY DO OCCUR. SOME OF THESE EXCEPTIONS ARE ACCIDENTAL AND SOME INTENTIONAL. THE INTENTIONAL EXCEPTIONS MAY REFLECT:
  - FRAUD, E.G.: CREDIT IS GRANTED TO A FICTIONAL COMPANY
  - UNDERWRITING, E.G.: A LOAN IS MADE TO FACILITATE THE CONSTRUCTION OF A PARKING GARAGE AT PETROVEC AIRPORT. THE POLICY STATE NO LOANS FOR CONSTRUCTION PURPOSES
  - BUSINESS CIRCUMSTANCES, E.G.: TWO BORROWING CUSTOMERS OF BANK MERGE, COMBINE EXPOSURE EXCEEDS 10% LIMIT

# EXCEPTIONS MANAGEMENT

- ◆ THE CCO IS RESPONSIBLE FOR MANAGING THE EXCEPTION PROBLEM INCLUDING:

DEFINITION

REPORT CONTENT & DISTRIBUTION

REMEDIAL ACTION

TRACKING SYSTEM FOR FOLLOW THROUGH

# EXCEPTION MANAGEMENT REPORT CONTENT

- ◆ WHILE MANY EXCEPTIONS CAN BE MANAGED AT DIVISIONAL LEVEL, ALL OCCURRENCES MUST BE REPORTED TO THE RMC. THIS BECAUSE THE AGGREGATION OF EXCEPTIONS MAY INDICATE SHIFTS IN THE BANK'S CREDIT CULTURE OR PORTFOLIO RISKS. THUS, THE RMC IS IN BETTER POSITION TO INITIATE CORRECTIVE ACTION, E.G.: BETTER TRAINING OF EMPLOYEES, CLEARER DIRECTIVES, IMPROVED MIS, LARGER INTERNAL AUDIT STAFF, ETC.
- ◆ AT THE BOARD LEVEL, THE REPORT SHOULD INDICATE:
  1. WHY THE POLICY WAS NOT FOLLOWED
  2. THE TIMELESS OF THE DETECTION
  3. EXPOSURE OF THE BANK AND
  4. THE REMEDIAL ACTION

# CREDIT AUDIT

- ◆ THE CREDIT AUDIT IS THE RMC OWN AUDIT TEAM, INDEPENDENT OF THE DIRECTOR'S AUDIT COMMITTEE, INTERNAL AUDITORS EXTERNAL AUDITORS AND BANK EXAMINERS
- ◆ THE CA IS DESIGNED TO INSURE COMPLIANCE WITH THE BANK'S CREDIT POLICY AND PROCEDURES AND TO CORRECT ANY DEFICIENCIES
- ◆ THE CA APPROACH TO CONTROL IS PARTICULARLY USEFUL IN BANKS WITH MULTIPLE LENDING UNITS

# PORTFOLIO MANAGEMENT

- ◆ PORTFOLIO MANAGEMENT IS MANAGEMENT OF THE BANK'S TOTAL CREDIT EXPOSURE: COMMITTED BUT UNUSED, OUTSTANDING AND OFF-BALANCE SHEET
- ◆ CAN APPROACH PM TWO WAYS: BOTTOM UP AND TOP DOWN. MOST OF OUR DISCUSSION REFERS TO A BOTTOM UP APPROACH. AT THIS POINT, HOWEVER WE ARE TAKING A TOP DOWN APPROACH

# PORTFOLIO MANAGEMENT

## ◆ PM MANAGES CONCENTRATIONS OF RISK IN THE TOTAL PORTFOLIO, BY:

- LOAN TYPES, E.G: RE, COMMERCIAL
- INDUSTRY, E.G.: COMPUTERS; COAL
- GEOGRAPHICAL AREA, E.G.: BROOKLYN, IRAN
- POSITIVE CO-VARIANCES, E.G.: INFLATION, UNEMPLOYMENT
- CREDIT GRADE

## ◆ THE MANAGEMENT TOOLS:

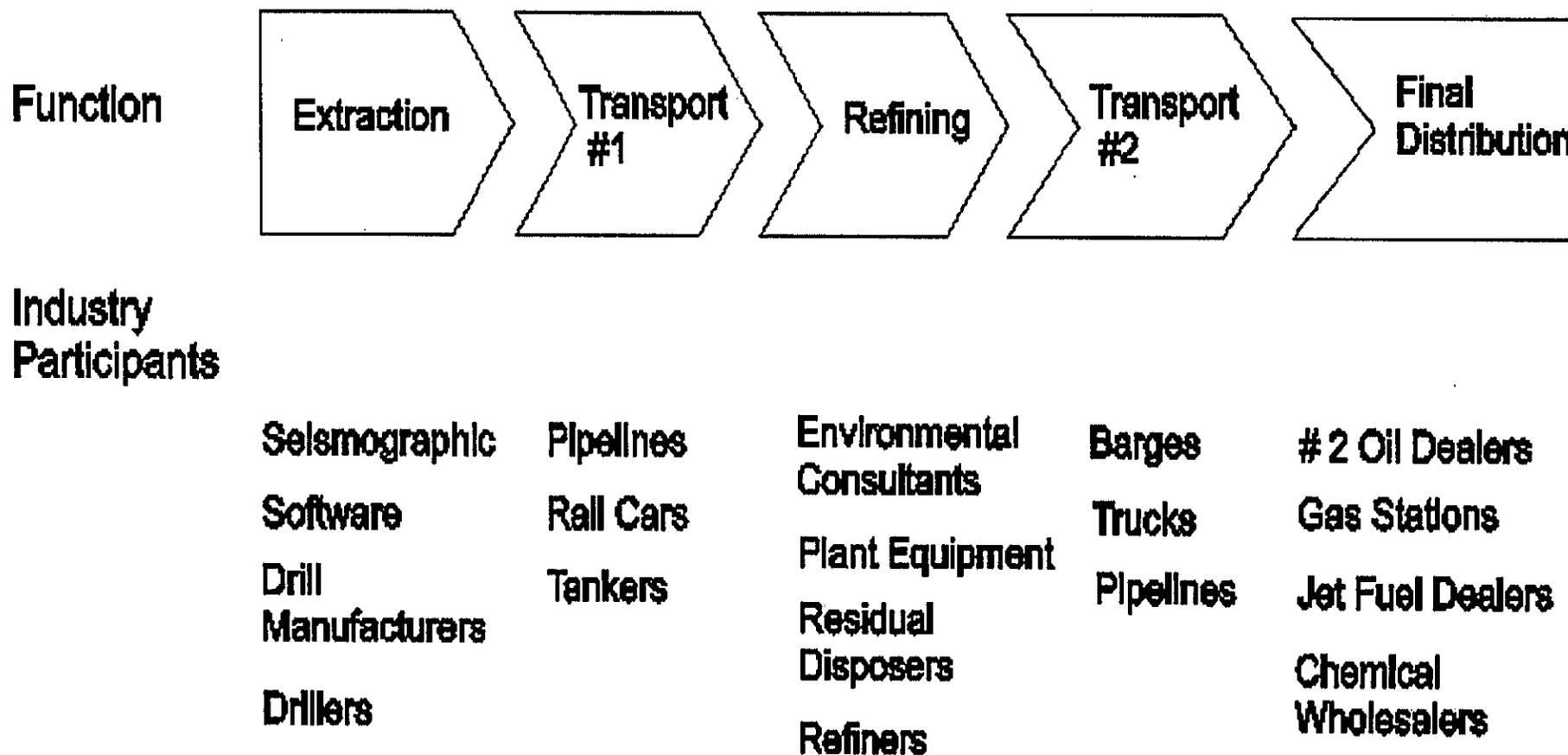
- INTERNAL REALLOCATION
  - ◆ REDUCE EXPOSURE
  - ◆ INCREASE BORROWING BASE
- SALE OF ASSETS
- CREDIT DERIVATIVES

## ◆ NEED SOPHISTICATED MIS – “SLICE & DICE” ABILITY

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# PORTFOLIO MANAGEMENT POSITIVE COVARIANCE

## DISAGGREGATION OF THE OIL INDUSTRY



# PORTFOLIO MANAGEMENT POSITIVE COVARIANCE INSTRUCTIONS TO LOAN OFFICERS\*

CODE	INDUSTRY (CODE)	% PORTFOLIO	INSTRUCTION TO LOAN OFFICERS
<b>GREEN</b>	Seismographic (4&4)	0.1 %	1. Increase Marketing Efforts in this Area
	Oil Field Software (206)	0.0 %	2. Attend Bank Seminar on Oil Production Marketing and Credit
	Drill Manufacturers (462)	0.2 %	Analysis
	Drillers (463)	0.8 %	3. Targets: Improve Tier Relationships in Existing Drillers
	Environmental Consultants (902)	0.0 %	Drill Manufacturers and Refinery Plant Equipment
	Plant Equipment (455)	1.0 %	
	<b>Total</b>	<b>2.1 %</b>	
<b>YELLOW</b>	Pipelines (763)	1.2 %	1. Continue most relationships with existing customers. Add only customers with grade of 5 or better. Reduce tier 3 and 4 customer's
	Railcars (750)	0.1 %	
	Tankers (711)	1.4 %	
	Barges (715)	0.1 %	
	Trucks (782)	0.4 %	
	Residual Disposers (804)	0.0 %	
	Refiners (406)	4.3 %	
	Chemical Wholesalers (399)	1.2 %	
	<b>Total</b>	<b>8.7 %</b>	
	# 2 Oil Dealers (401)	1.1 %	1. Reduce exposure to this area for all companies with lower grade than 5 and/or with tier 3 and 4 standing.
	Gas Stations (430)	2.0 %	
	Jet Fuel Dealers (490)	1.3 %	
	<b>Total</b>	<b>4.4 %</b>	
<b>GRAND TOTAL</b>		<b>15.2 %</b>	2. Consider M&A financing for Dealers that will have tier 1 and 2 standing and where bank will have lead relationship

\* Analysis based on opinion that that situation in Middle East will remain volatile and price of oil will rise to \$ 36/barrel

Distributed:  
2-Apr-02

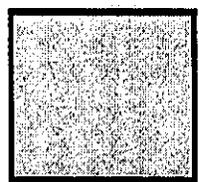
# CREDIT PORTFOLIO CONCENTRATION BY INDUSTRY GRADES

% OF TOTAL  
BANKING EXPOSURES

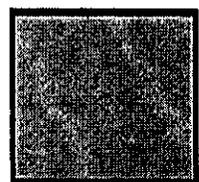
0-15  
15-20  
20-25  
25+

	Personal Loans Manufacturing of Machinery	Computers Retail Textile	
Construction			
		Food Industry	
		Chemical	
	7	6	3-5
			1-2

INDUSTRY GRADE



INCREASE



REDUCE

# ALLOWANCE FOR LOAN LOSSES TECHNIQUE

- ◆ THE BASIC TECHNIQUES FOR ESTIMATING ALL IS TO DEVISE "POOLS" WITHIN THE CREDIT PORTFOLIO, DETERMINE THE HISTORICAL LOSS RATIOS FOR EACH POOL AND APPLY THAT RATIO TO CURRENT EXPOSURE. VERY POOR CREDITS, SUCH AS 9 AND 10 ARE ESTIMATED ON A CASE-BY-CASE BASIS
- ◆ THE POOL MIGHT BE DETERMINED BY GRADE, TYPE OF LOAN, INDUSTRY, GEOGRAPHY, ETC. THE INGENUITY IN DETERMINING POOL IS LIMITED BY MIS CAPACITY

# ALLOWANCE FOR LOAN LOSSES

- ◆ EVERY BANK MUST HAVE A SYSTEM FOR REGULARLY REVIEWING THE ADEQUACY OF THE ALL.
- ◆ THROUGH THE ALL PROCESS MANAGEMENT ANTICIPATES AND ESTIMATES CREDIT LOSSES INHERENT IN THE CREDIT PORTFOLIO AND PROVIDES FOR THESE LOSSES BY A CHARGE AGAINST CURRENT EARNINGS
- ◆ THE CHALLENGE TO MANAGEMENT IS:
  1. TO DEVELOP A SOUND TECHNIQUE FOR ESTIMATING ALL
  2. TO HAVE A MIS THAT GENERATES THE APPROPRIATE DATA AND
  3. TO PROPERLY DOCUMENT THE PROCESS

# ALLOWANCE FOR LOAN LOSSES EXAMINERS

- ◆ EXAMINERS USUALLY WANT TO KNOW
  - 1) ARE AMOUNTS REASONABLE
  - 2) IS MIS ADEQUATE TO DETECT TRENDS , AND
  - 3) ARE CASE-BY-CASE ESTIMATES ARE DOCUMENTED
- ◆ IF SIGNIFICANT CHANGES OCCUR IN ALL FROM ONE YEAR TO THE NEXT, THE EXAMINERS ARE CURIOUS WHY THE CHANGE WAS NOT DETECTED EARLIER

# ALLOWANCE FOR LOAN LOSSES POOL METHOD BASED ON CREDIT GRADE

(MKD 000s)

Grade	Credit Volume	% Distribution	Allowance Loan Losses	
			% (1)	MKD
1	0	0.00 %	0.10 %	0
2	0	0.00 %	0.13 %	0
3	206,760	15.65 %	0.18 %	372
4	281,800	21.33 %	0.29 %	817
5	258,710	19.58 %	0.4 %	1035
6	262,220	19.85 %	0.65 %	1704
7	188,680	14.28 %	1.05 %	1980
8	114,555	8.67 %	2.21 %	2532
9	5,000	0.38 %	-	4010 (2)
10	3,250	0.25 %	-	2905 (2)
<b>Total</b>	<b>1,320,975</b>	<b>100.00 %</b>		<b>15355</b>

Average Credit Grade = 5.25

(1) Historic ALL % by credit grade

(2) From Workout Unit on per loan basis

# ALLOWANCE FOR LOAN LOSSES INCORPORATING INDUSTRY VARIANCE ON HISTORIC POOL METHOD

## GRADE 6 USED AS AN EXAMPLE

IN THIS EXAMPLE, THERE ARE FOUR INDUSTRIES REPRESENTED AMONG ALL ALL THE COMPANIES. EACH INDIVIDUAL CREDIT IS GRADED A "6" HOWEVER THE BANK'S MIS REVEALS THAT EACH INDUSTRY NORMALLY HAS A LOSS EXPERIENCE HIGHER OR LOWER THAN THE HISTORIC 0.65 % FOR GRADE 6. MANAGEMENT WANT TO ADJUST THE HISTORIC CALCULATION OF 1,704 TO RECOGNIZE AND CHANGING INDUSTRY DISTRIBUTION IN THE GRADE 6 CLASS.

INDUSTRY	% GRADE 6	MKK	Industry Loss Expectance / 0.65	Adjusted ALL %	Adjusted ALL MKD
CONSTRUCTION	35	91,777	140	0.91	835
CHEMICALS	10	26,222	97	0.63	165
MANUFACTURING	22	57,688	90	0.59	340
RETAIL	33	86,533	105	0.68	588
<b>TOTAL</b>	<b>100</b>	<b>262,220</b>		<b>0.73</b>	<b>1928</b>

# ALLOWANCE FOR LOAN LOSSES FORMULA APPROACH

**ALL= PROBABILITY A LOAN DEFAULTS  
X LOSS RATIO WHEN DEFAULT OCCURS  
X AMOUNT OF LOAN OUTSTANDING  
AT TIME OF DEFAULT**

**THE SECOND TERM (LOSS RATIO) OF THE  
EQUATION IS VERY DIFFICULT TO PREDICT.  
CONSEQUENTLY BANKS PREFER TO USE THE  
HISTORIC LOSS RATIO**

# MANAGEMENT INFORMATION SYSTEM

FINANCIAL REPORTING SYSTEM ARE DESIGNED PRIMARLY FOR EXTERNAL CONSUMPTION WHILE THE MIS IS MORE INTERNALLY ORIENTED, DESIGNED TO HELP COMPANIES BETTER MANAGE THEIR BUSINESS

HISTORICLY BANK MIS WERE NEVER AS GOOD AS THOSE IN THE MANUFACTURING SECTOR. IN THE LAST DECADE BANKS HAVE IMPROVED THEIR MIS DUE TO:

- GLOBALIZATION OF CUSTOM BASE
- INCREASE IN NUMBER OF PRODUCTS
- PRESSURE FOR IMPROVED PROFITABILITY
- INCREASED VOLATILITY OF INTEREST RATES
- RECURRENT MAJOR BAD LOAN PROBLEMS
- THE SPEED, MEMORY AND LOW COST OF COMPUTERS
- REGULATORY PRESSURES

CONSEQUENTLY MACEDONIAN BANKS ARE COMING INTO THE CURRENT BANKING WORLD WHERE THEY NOT ONLY HAVE TO ACQUIRE THE TRADITIONAL WESTERN BANK SKILLS, BUT MUST MATCH THE MIS SKILLS ALSO

# MANAGEMENT INFORMATION SYSTEM CHARACTERISTIC

- ◆ MIS IS MORE INCLUSIVE OF INFORMATION THAN FINANCIAL INFORMATION SYSTEMS, E.G.: GAAP, IAS, MIS IS DESIGNED TO HELP BANK MANAGEMENT BETTER:
  - IDENTIFY RISK
  - MANAGE RISK
  - DISTRIBUTE INFORMATION IN THE ORGANIZATION
- ◆ MIS GIVES MANAGEMENT ADDITIONAL TOOLS TO ARTICULATE, MEASURE AND ACHIEVE STRATEGIC GOALS. A BANK WITHOUT A STRONG MIS IS CONSEQUENTLY AT A SERIOUS DISADVANTAGE TO A BANK THAT DOES
- ◆ SINCE EACH BANK DEVELOPS ITS OWN MIS, THERE TENDS TO BE A VARIETY OF SYSTEMS. BUT WHATEVER THE VARIETY, EACH MIS MUST HAVE A PATH OF RECONCILIATION TO THE GENERAL LEDGER ARCHITECTURE OF THE BANK, PARTICULARLY AT THE TRANSACTION FILE OR REFERENCE FILE LEVELS.

# MANAGEMENT INFORMATION SYSTEMS MORE CHARACTERISTICS

- ◆ MIS NEEDS SOME DEGREE OF IT INFRASTRUCTURE, BUT THIS IS NOT THE MAIN ASPECT THE MAIN ASPECT IS DESIGN OF THE SYSTEM. WHAT DOES MANAGEMENT WANT TO CONTROL AND WHAT INFORMATION IS NEEDED TO DO THAT?
- ◆ THE DESIGN AND DEVELOPMENT OF A MIS SHOULD BUILD ON THE BANK'S ESTABLISHED EDP (ELECTRONIC DATA PROCESSING) INFRASTRUCTURE. SEVERAL USEFUL, INEXPENSIVE SOFTWARE PROGRAMS ARE AVAILABLE, ESPECIALLY IN SUCH MODULAR AREAS AS INTEREST RATE GAP ANALYSIS AND CREDIT ANALYSIS
- ◆ MIS NEEDS AN EXPLICIT STATEMENT OF POLICY, A DEDICATED STAFF AND A REALISTIC BUDGET. THE CCO IS RESPONSIBLE FOR GETTING FUNDS IN THE BUDGET.

# MANAGEMENT INFORMATION SYSTEM EVEN MORE CHARACTERISTICS

- ◆ A SOUND MIS HAS THE FOLLOWING
  - ACCURACY
  - CONSISTENCY
  - CURRENT INFORMATION
  - ENOUGH INFORMATION TO MAKE DECISION
  - CONFIDENTIALITY
- ◆ EMPLOYEE MUST BE TRAINED IN THE USE OF THE MIS. WORKING MANUALS MUST BE PREPARED, INCLUDING A REPORT INVENTORY
- ◆ THE CREDIT AUDIT TEAM SHOULD TEST THE FLOW-THROUGH OF DATA FROM ENTRY TO REPORT
- ◆ WHEN WE BUILD A MIS WHAT WE ESSENTIALLY DO IS TO MAKE A MODEL OF THE MAJOR PARTS OF THE BANK, FRAGMENT THOSE PARTS INTO FUNCTIONAL UNITS AND DECIDE WHAT INFORMATION WE HAVE TO COLLECT FROM EACH UNIT TO UNDERSTAND WHAT GOING ON AND WHO SHOULD RECEIVE THE REPORTS

# CREDIT ANALYSIS BACKGROUND

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- ◆ CREDIT ANALYSIS IS THE HEART OF CREDIT RISK MANAGEMENT
- ◆ THE GRADING OF A CREDIT RISK IS THE HEART OF CREDIT ANALYSIS

# CREDIT ANALYSIS BACKGROUND

- ◆ CREDIT ANALYSIS BEGAN AS A SEPARATE PROCEDURE OR DEPARTMENT IN BANKS AROUND 1910, AS BANKS STARTED TO DEVELOPING BUSINESS FROM BEYOND THEIR IMMEDIATE NEIGHBORHOODS
- ◆ IN THE 1950s & 1960s WITH THE HUGE GROWTH IN CORPORATE PENSION BUSINESS THERE WAS INCREASED DEMAND FOR MORE GRADINGS OF CORPORATE BONDS & COMMERCIAL PAPER BY EXTERNAL RATING AGENCIES (MOODY, S&P), AT THE SAME TIME CORPORATE TREASURERS BECAME MUCH MORE SOPHISTICATED, DEMANDING EXTERNAL RATING OF THEIR BANK'S DEPOSITS, BONDS & OTHER LIABILITIES

# CREDIT ANALYSIS MORE BECKGROUND

- ◆ BY THE MID 1960s BANKS REALIZED THAT IN ORDER TO STRENGTHEN THEIR OWN PROFITABILITY AND RATINGS THEY HAD TO MANAGE THEIR OWN INTERNAL RISK BETTER. THE GRADING TECHNIQUES OF THE EXTERNAL RATING AGENCIES PROVIDED THE MODEL
- ◆ THE SHIFT IN SUPERVISORY ORIENTATION IN THE EARLY 1990s FROM RISK DETECTION TO RISK MANAGEMENT ALSO FOCUSED THEIR ATTENTION ON THE BANK'S CREDIT GRADING PROCESS.

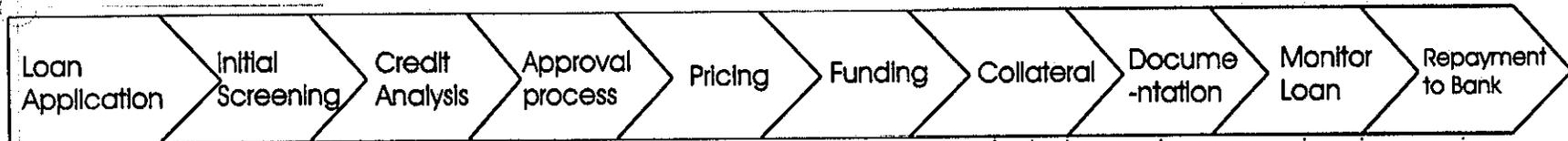
## CREDIT ANALYSIS

" ... the OCC considers accurate classification of credit among its top supervisory priorities"

Comptroller's Handbook page 1

# THE PROCESS OF MAKING A LOAN THE RISK FACTOR

FUNCTION :



RISK TYPE :\*

CREDIT

Loss of principal and accrued Interest

Does not match risk of loan

Poor quality

Credit deteriorates

MARKET

Value declines

LIQUIDITY

Maturity mismatch and/ or funding premium mismatch

Late payments

OPERATIONAL

No clear title

Failure to collect relevant documents

Failure to get current financials or to enforce covenants

\* Selected risks

# CREDIT ANALYSIS

## HOW BANKS USE CREDIT GRADES

- ◆ MEASURING CONDITION OF BANK
- ◆ PRICING OF LOANS
- ◆ ALLOWANCE FOR LOAN LOSSES
- ◆ DETERMINING CAPITAL ADEQUACY
- ◆ MEASURING CUSTOMER PROFITABILITY
- ◆ EFFICIENT USE OF EQUITY
- ◆ SETTING FREQUENCY OF LOAN REVIEW
- ◆ TOP DOWN PORTFOLIO MANAGEMENT
- ◆ OFFICER COMPENSATION
- ◆ MEETING SUPERVISORY STANDARDS

# CREDIT ANALYSIS GRADING ISSUES

- ◆ IN THE BANK THE GRADING PROCESS MUST BE FULLY UNDERSTOOD, CONSTANTLY APPLIED AND RELEVANT TO THE RISKS INHERENT IN THE BUSINESS
- ◆ THIS MEANS THERE MUST BE ON-GOING EDUCATION OF THE STAFF AND REVIEW OF THE METHODOLOGY OF CRM

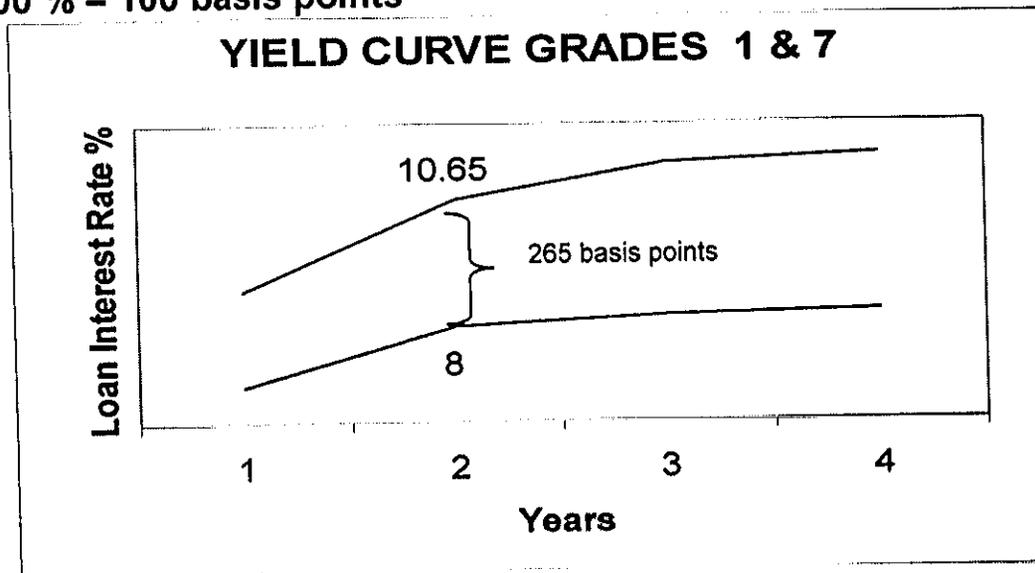
# CREDIT ANALYSIS

## CREDIT GRADE AND THE YIELD CURVE

Loan with 2 year maturity:

<u>Credit Grade</u>	<u>Loan Interest Rate</u>	<u>Grade Basis Point Spread *</u>
1	8.00 %	-
2	8.15 %	.15 %
3	8.35 %	.20 %
4	8.65 %	.30 %
5	9.05 %	.40 %
6	9.65 %	.60 %
7	10.65 %	1.00 %

\* 1.00 % = 100 basis points



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# CREDIT ANALYSIS

## THE CREDIT MODEL

- ◆ EACH BANK HAS ITS OWN MODEL FOR MANAGING CREDIT RISK. AMONG THESE MODELS THERE IS GREAT DIVERSITY OF APPROACH. THERE IS NO SINGLE MODEL THAT IS APPROPRIATE FOR ALL BANKS
- ◆ MODEL ARCHITECTURE IS CONTINUALLY UNDERGOING CHANGE

# CREDIT ANALYSIS

## MAIN TYPES OF CREDIT MODELS

<b><u>MODEL TYPE</u></b>	<b><u>CHARACTERISTICS</u></b>
I. SUBJECTIVE (EXPERT OPINION)	<ul style="list-style-type: none"> <li>◆ BASED ON REVIEWERS PERSONAL JUDGEMENT</li> <li>◆ LOW LEVEL OF QUANTIFICATION</li> <li>◆ VERY INCONSISTENT</li> <li>◆ POOR TRANSFER OF SKILL</li> </ul>
II. STRUCTURED	<ul style="list-style-type: none"> <li>◆ STEPS-BY-STEPS PROCESS</li> <li>◆ DEFINED CALIBRATION OF RISK</li> <li>◆ MIXTURE OF STATISTICAL &amp; QUALITY FACTORS</li> <li>◆ COVERS BROAD RANGE OF RISKS</li> <li>◆ BOTTOM UP ORIENTATION</li> </ul>
III. MATHEMATICAL	<ul style="list-style-type: none"> <li>◆ VERY HEAVILY DEPENDENT ON MODEL BUILDING SKILLS</li> <li>◆ DECISION BASE ON STATISTICAL ZONES</li> <li>◆ LIMITED INTERVENTION TO RECONGNIZE SPECIAL SITUATIONS</li> <li>◆ BEST FOR HIGH VOLUME, LOW VALUE CREDITS</li> <li>◆ BOTTOM UP ORIENTATION</li> </ul>

# CREDIT ANALYSIS COMPONENTS OF A MODEL

◆ GRADE LADDER	<ul style="list-style-type: none"><li>◆ What are the characteristics of each grade?</li><li>◆ How many grades are needed?</li></ul>
◆ SELECTING A GRADE	<ul style="list-style-type: none"><li>◆ Who selects the grade?</li><li>◆ What is the process?</li><li>◆ What data is needed?</li></ul>
◆ LEGITIMACY OF MODEL	<ul style="list-style-type: none"><li>◆ Is the model accurate enough to identify real world conditions?</li><li>◆ Who and what determines the legitimacy?</li><li>◆ What is the model stability?</li></ul>

# CREDIT ANALYSIS BOTTOM UP MODEL

- ◆ SHOULD HAVE VERY STRONG MIS
- ◆ SHOULD HAVE ENOUGH GRADES TO GIVE A CLEAR PICTURE OF DIFFERENT LEVELS OF RISK

# CREDIT ANALYSIS

## TIME HORIZON

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- ◆ HOW LONG DO BANKS EXPECT THEIR CREDIT GRADES TO BE VALID?
  - MOST BANKS SAY THEY WORK ON ONE YEAR HORIZONS
  - SOME SAY FOR THE LIFE OF THE LOAN, E.G.: 2 OR 4 OR 7 YEARS

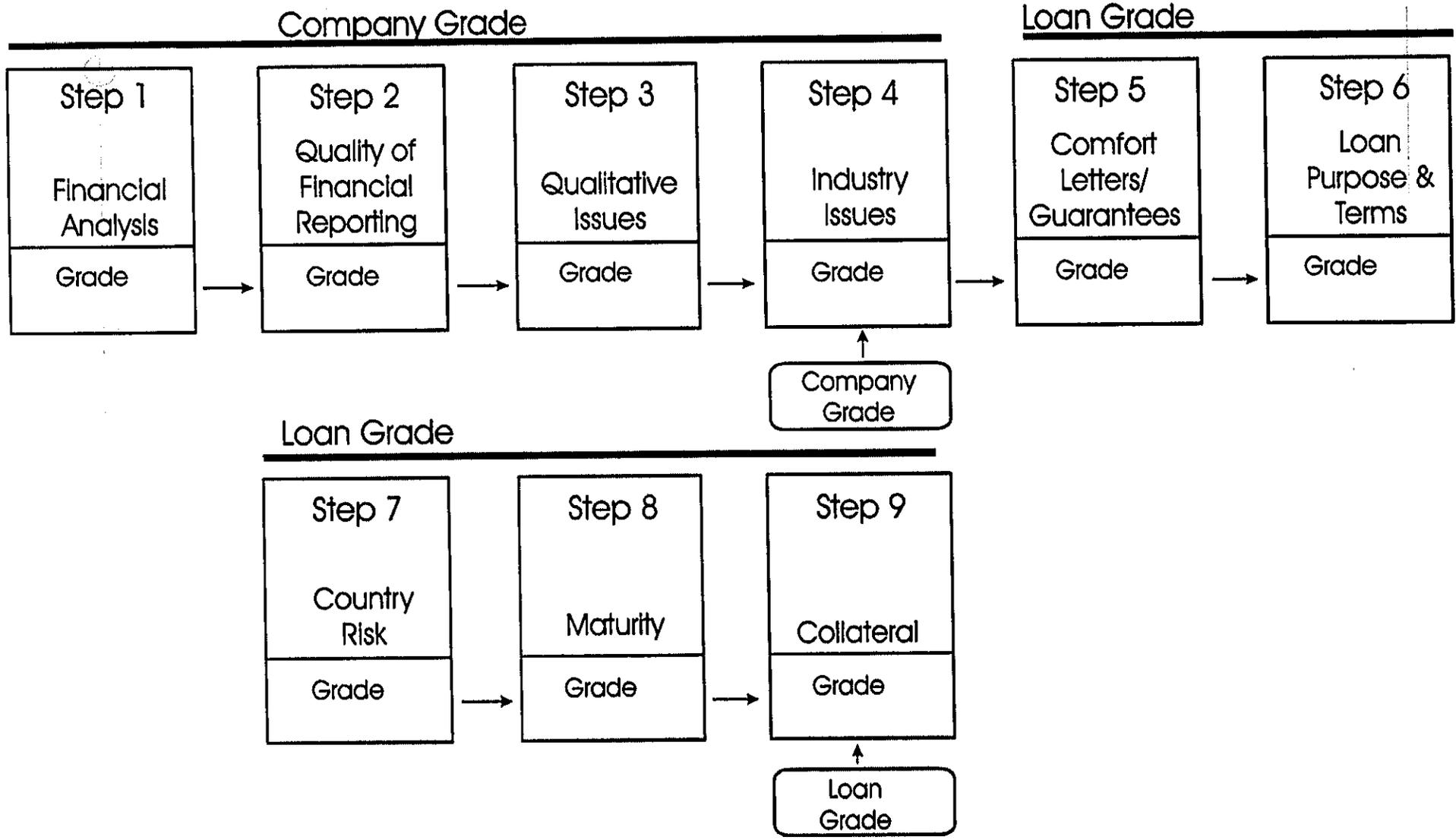
# CREDIT ANALYSIS

## MORE ON TIME HORIZON

ANOTHER WAY OF LOOKING AT IT:

- ◆ DURING THE GRADING PROCESS SOME BANKS ARE ORIENTED TO A "POINT-IN-TIME" (IN WHICH CASE GRADE CHANGES WOULD BE EXPECTED OVER THE LIFE ON THE LOAN), WHILE OTHER BANKS RATE "THROUGH THE BUSINESS CYCLE" (WITH THE EXPECTATION OF FEW GRADE CHANGES)
- ◆ BUT THIS DISTINCTION IS MORE ARTIFICIAL THAN REAL, SINCE "POINT-IN-TIME" BANKS INCORPORATE LONG TERM FINANCIAL PROJECTIONS AND TRENDS AND "THROUGH THE BUSINESS CYCLE" BANKS REDO THEIR GRADES AS CIRCUMSTANCES DICTATE.

# GRADING CREDITS



# CREDIT ANALYSIS

## GRADING CREDITS

- ◆ NOTE DISTINCTION BETWEEN COMPANY GRADE AND LOAN GRADE (SOMETIMES CALLED THE FACILITY GRADE)
- ◆ THE LOAN GRADE IS THE COMPANY GRADE ADJUSTED FOR SPECIAL CHARACTERISTICS OF THE LOAN
- ◆ EACH CUSTOMER HAS ONE COMPANY GRADE BUT AS MANY DIFFERENT LOAN GRADES AS IT HAS LOANS WITH THE BANK
- ◆ THE LOAN GRADE IS THE OPERATIVE GRADE USED BY THE BANK TO MEASURE RISK

# COMPANY GRADE RANGE

<b><u>CREDIT GRADE</u></b>	<b><u>COMPARATIVE AGENCY RATING</u></b>
1	AAA-AA-
2	AA-A-
3	A+-BBB+
4	BBB+-BBB
5	BBB-BBB-
6	BBB-BB-
7	B
8	C
9	D
10	D

# **XYZ BANK CREDIT CONTROL SHEET**

The Credit Control Sheet is a basic part of each borrower's credit file. It is designed to give the loan officer, auditor, risk manager, examiner or any authorized person a quick and accurate view of the bank's entire credit position with the borrower.

Among the information included on the Credit Control Sheet is:

The borrower's name

The industry code

The current and former company credit grades

The parent/owner's name

For each loan the amount at risk and the loan grade

For each financial statement, the name of the accountant and the qualifications mentioned in his opinions

Based on this information, XYZ Bank's information technology system can provide a history of the accountant's work which will help the credit officer determine the effect of the accounting quality on the company credit grade

## **THE ACCOUNTANT'S RECORD WITH XYZ BANK**

- **Names of the bank customers using this accountant's services**
- **The volume of the credit outstanding represented by that accountant and the percent of the Bank's total outstanding**
- **The accountant's industry concentration**
- **The accountant's relationship with credits that default**
- **The weighted average company grades represented by that accountant**
- **History of credit grade migration**
- **History of financial qualifications**

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**“Treasury Department Risk  
Management and Solutions  
in Macedonia”**

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# TREASURY DEPARTMENT RISK MANAGEMENT ISSUES AND SOLUTIONS IN MACEDONIA

Gheorghe Campeanu

March 27, 28, 29, 2002



MACEDONIAN BANKING PROJECT  
H. PEERS BREWER, CHIEF OF THE PARTY  
KIRIL MINOSKI, DEPUTY PROJECT MANAGER

BOOZ | ALLEN | HAMILTON  
US AGENCY FOR INTERNATIONAL DEVELOPMENT - USAID

FORWARD FUNDING

Daily Telex Format

3

DAILY OPEN POSITION REPORT

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Forward Rate as at: \_\_\_\_\_ From \_\_\_\_\_ Branch

Currency Title

Period	Net Long	Net Short	Rate
1 Month			
2 Months			
3 Months			
4 Months			
5 Months			
6 Months			
7 Months			
8 Months			
9 Months			
10 Months			
11 Months			
12 Months			



# Appendix A

Daily Telex Format

#/X

Open Position Report from \_\_\_\_\_ as at \_\_\_\_\_

(8)

(29)

Currency Title	Currency Amount 000's Overbought	Indigenous Currency 000's Equivalent	Currency Amount 000's Oversold	Indigenous Currency 000's Equivalent
		Total.		Total
		Net :		Net :

Appendices <sup>REPORTS</sup>  
 Appendix of ~~Reports~~ Required FROM TREASURY

(B)

(29)

From Dealing Rooms:

Return	Frequency
A Open Position — Telex Format	Daily
B Forward Forward Return	Weekly
C Forward Exchange Exposure Analysis	Weekly
D Unmarried Return — Telex Format	Daily
E Unmarried Return — Maturity Analysis	Monthly
F Indigenous Money Book — Maturity Analysis	Monthly
G Placing Limits Utilisations — Summary	Monthly
H Outstanding Forward Exchange Commitments	Monthly
I Brokerage Paid	Monthly
J Income from Foreign Exchange and Money Market Operations	Monthly

Last Business Day

## MONITORING AND CONTROL

The TP will be marked-to-market daily with P/L reflected in income.

Treasury Support will monitor and control all activity relating to proprietary position taking. Treasury Support maintains procedures defining their monitoring and reporting responsibilities and will immediately report any deviation from established Trading Limits to the Treasurer, the Controller, the Chief Internal Auditor, the Deputy CEO, and the CEO.

The CEO, or his deputy, may approve the continuation of the deviation from limits.

The risk point position limit schedule will be periodically reviewed and updated as warranted by Treasury Support which also has the responsibility of monitoring adherence to limits.

Daily and periodic reports showing positions and P&L will be provided to the Treasurer, Controller, Deputy CEO and, CEO. Auditing will receive copies of these reports at its request.

The Investment Committee of the Board will be regularly informed on this activity.

## AUDIT

Auditing will review and sign-off on all TP procedures. Periodic audits will be performed to evaluate the adequacy of the system of management controls, financial and accounting controls and reports, operating systems, and procedures.

## ALLOWABLE TRADING INSTRUMENTS ✓

- Any marketable security approved for purchase by the securities investment portfolio.
- Procedures governing the purchase of "BBB" rated securities for trading purposes will follow procedures governing the purchase of "BBB" rated short term loan participations/CP vis a vis the approval process and allowable credits, except that,
  - BBB rated paper must be rated at least Baa2/BBB and have no negative outlook from a leading rating agency (all others require Credit Committee approval).
  - Limit is \$10MM in total per issuer
  - Limit is \$10MM for issues up to 5 years
  - Limit is \$ 5MM for issues from 5.1 year to 10 years
  - Limit is \$ 3MM for issues longer than 10 years
  - Maximum holding period for such BBB trading securities is 2 weeks. Approval must be obtained from at least two members of the Credit Committee to hold for a longer period.
- In addition, up to \$5 million maximum of "BB" rated corporate bonds of up to 10 years may be held. Prior to purchase such names must be approved by a member of the Credit Committee. Holding period guidelines are the same as those covering "BBB" names.
- T-Bond Futures and T-Bond Options on Futures
- 10 Year T-Note Futures and 10 Year T-Note Options on Futures
- 5 Year T-Note Futures and 5 Year T-Note Options on Futures
- 2 Year T-Note Futures and 2 Year T-Note Options on Futures
- 90 Day Eurodollar Futures and 90 Day Eurodollar Options on Futures
- Foreign Currency Futures and Foreign Currency Options on Futures
- OTC options on the above instruments.

## NETTING OF POSITIONS ✓

A position in an instrument representing one maturity sector of the yield curve cannot be netted-out against an opposing position in an instrument representing another maturity sector of the yield curve. Instead, individual positions from different maturity sectors of the yield curve segments must be aggregated without regard to sign (long vs short) and the resulting exposures must be maintained within the total risk-point position limit system.

Opposing positions in two or more instruments representing the same maturity sector of the yield curve can be netted. This netting of related instruments will be accomplished through the delta of the appropriate financial contract.

Should losses in any given month reach the relevant monthly loss limit, no additions to existing positions can be made nor any net new positions taken without receiving the approval of the CEO or, in his absence, his deputy.

Should cumulative calendar year proprietary trading losses reach \$600,000, increases in exposure are not permitted until the activity has been reviewed with Senior Management and the Investment Committee of the Board.

#### ALLOWABLE TRADING STRATEGIES

- Outright long or short in cash instruments, futures/options/CAPS/FLOORS/SWAPS.
- Trades which attempt to benefit from perceived market mis-pricing opportunities (ie. temporarily selling an on-the-run issue and buying a nearby off-the-run issue).
- Yield curve, barbell, and butterfly trades.
- LONG (buy) IMPLIED VOLATILITY. This strategy carries limited risk since the maximum loss is defined by the premium paid away to purchase the option.
- SHORT (sell) IMPLIED VOLATILITY. This strategy carries a higher level of risk but is still less risky than naked directional position taking. This strategy is the most non-directional. Its' primary objective is to maintain a delta neutral position while keeping a portion (or all) of the premium received as time (theta) passes (the option premium suffers time decay).
- Combination of the above. In a combination of the long and short implied volatility trades, the strategy is to sell some options in order to receive some premium. This premium is utilized to finance the premium paid away on the options purchased. This strategy represents a relatively low risk opportunity to participate in overbought/oversold markets.

The TP may hold interest rate CAPS/FLOORS, interest rate SWAPS, repurchase agreements and reverse repurchase agreements up to amounts specified in the minutes of either the Bank Investment Committee or Asset/Liability Committee meetings.

#### TRADING RESTRICTIONS

- Initiation of futures positions is limited to futures contract delivery months of not more than 18 months forward (excluding the current month).
- Exchange traded option positions are limited to the nearest six option contract delivery months.
- Maximum expiration for trading position OTC options is 1 year.
- No new positions can be established after New York trading hours.
- Existing positions may be reduced or closed at any time.

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## TRADING PORTFOLIO GUIDELINES and PROCEDURES

A Trading Portfolio (TP) will be maintained to 1) accommodate purchases/sales of securities by customers and 2) generate trading profits for the Bank. All activities in this regard will be conducted by the Treasury Department as approved by the Bank Investment Committee, Senior Management and the Board of Directors.

### AGENCY TRANSACTIONS

For agency transactions, the purchase of both U.S. dollar and foreign denominated securities on behalf and by order of customers is permitted. To facilitate this activity the trading account may purchase and hold non-U.S. debt instruments provided the following guidelines are satisfied;

- The country in which the debt security is issued has received Board approval for trade finance or other related exposure, and;
- The credit risk of the debt security is that of a Board approved bank, and;
- There is un-utilized room remaining under both the relevant bank and country limit, with exceptions facilitated as per Board approved procedures, and;

GLOBAL

For holding individual banks prior to receiving Board approval, in addition to the above:

- The Credit Committee is to be advised of, and approve, the transaction prior to its execution, and;
- A memorandum from the Credit Committee, acknowledging the transaction, is to be forwarded to Treasury Support as soon as is practical.

A list of dealers utilized for this activity will be submitted to the Bank Investment Committee for review on a semi-annual basis.

### PROPRIETARY TRADING

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### FFIEC SUITABILITY TEST FOR CMO's

Prior to the purchase of any CMO, Treasury Management must confirm that the issue does not qualify as a "high risk security". Treasury Support, no less frequently than annually must re-confirm that the issue does not qualify as a "high risk security". To determine this, each CMO must be subjected to, and pass, the FFIEC "High Risk Security Test" (HRST). In order to qualify as a non-high risk security, the CMO must simultaneously pass three individual tests as described below;

- 1) The average life must not exceed 10 years.
- 2) The average life:
  - a) cannot extend by more than four years when subjected to an immediate and sustained parallel shift in the yield curve of plus 300 BP, or
  - b) cannot shorten by more than six years when subjected to an immediate and sustained parallel shift in the yield curve of minus 300 BP.
- 3) The estimated price cannot change by more than 17% as a result of an immediate and sustained parallel shift in the yield curve of +/- 300 BP.

In general, Floating Rate CMO's are not subject to the average life and average life sensitivity tests (but are subject to the price sensitivity test) described above if they bear a rate of interest that, at time of purchase or at a subsequent testing date, is below the contractual cap on the instrument.

Only those CMOs designated as non-high risk at time of purchase may be placed in the HTM portfolio. Documentation supporting the fact that a CMO is not a high risk security is to be made a part of the security file.

When applying the above tests, all of the underlying assumptions (including prepayment assumptions) for the underlying collateral must be documented as reasonable. As such, whenever possible, the median prepayment assumptions of several major dealers will be utilized. If a different prepayment assumption is used, the reasons must also be documented.

For all purchases of CMOs, a prospectus supplement will be obtained as soon as possible and retained in the file.

## YIELDS ON FLOATING RATE INSTRUMENTS

Will be commensurate with existing market conditions at time of purchase.

## QUALITY OF INVESTMENTS

To minimize credit and liquidity risk, investments for the HTM and AFS portfolios should be restricted to high quality instruments with exceptions as delineated below. To ensure this, the following guidelines are established:

Investments in all approved types of securities must carry a minimum "A" rating from at least one major rating agency, with the following exceptions:

- U.S. Treasury and Federal Agency obligations, which are not rated.
- With approval of the CEO, up to \$120 million may be invested in "BBB" rated Senior Bank Holding Company and/or "A" rated Subordinated BHC instruments as specifically approved by the Board of Directors, or a committee thereof, and/or "A" rated Subordinated ABS.
  - Investments in subordinated debt of bank holding companies is permitted provided:
    - 1) there is un-utilized approved credit exposure remaining under the respective bank credit limit,
    - 2) that the yield is a minimum of 10 BPs above that which can be obtained at the senior level,
    - 3) the subordinated debt carries a minimum rating of "A" from one of the major rating agencies at time of purchase and,
    - 4) the final maturity of the debt is less than seven (7) years.
  - Investments in Subordinated ABS is permitted provided:
    - 1) the issue is rated at least "A" by one of the four major rating agencies and,
    - 2) has a maximum maturity/average life of five years.
- The purchase of "BBB" rated corporate obligations (includes BHC) is authorized. "BBB" rated credits must first receive the approval of the Credit Committee. Unutilized lines must be reaffirmed every 90 days.
  - Amount/Maturity Limit = \$70 million for up to 60 months;  
\$15 million sub-limit for up to 72 months.
  - Maximum Exposure Limit = \$5 million per issuer.
- Investments can be made only in securities traded by at least two primary dealers with the exception of 144A/Private Placements which in any event cannot exceed 15% of total portfolio holdings and must be rated "A" or better by at least one of the four major rating agencies.
- Investments in securities issued by Banks are allowed only if the name has been approved by the Board of Directors, or committee thereof. In addition, a separate approval list is required for Bank investments with remaining lives "over-one-year".
- Investments in obligations issued by foreign governments or foreign entities must be within and consistent with, the approved Country Risk Guidelines.

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3. Up to \$50 million notional may be invested in Convertible Asset Swaps involving U.S. corporate names that meet all other investment guidelines. This limit is separate from exposure to Israeli related convertible asset swap packages on the books of International Lending since those are approved via the Credit Committee.

#### OTHER TRANSACTIONS

ALCO has authorized Treasury Management to utilize the following financial instruments to: enhance Bank income, hedge the Bank's Investment Portfolio, hedge the Bank's position, hedge the cost of deposit products, hedge other specific transactions (see Appendix ig-B, Derivative Product Counter-party Guidelines):

- > Repurchase and Reverse Repurchase Agreements (\$50 million limit per transaction).
- > FHLB Advances (\$50 million limit per transaction)
- > Interest Rate Swaps (\$35 million limit per transaction)
- > Interest Rate & Foreign Exchange Futures and Options (\$35 million per transaction).
- > Other index related options as necessary, i.e. CAPS/FLOORS/PUTS/CALLS (\$35 million per transaction).

Transactions larger than listed above require approval of the CEO or the Chief Risk Manager or the Head of Private Banking. In addition, strategic hedging strategies, program size and cost limits will be established and contained in appropriate meeting minutes.

#### PROHIBITED INVESTMENTS

!!!  
The purchase of the following mortgage derivative products is not permitted without the prior approval of Management and the Investment Committee of the Board of Directors:

- > I/Os;
- > P/Os;
- > Residuals;
- > Inverse I/Os;
- > Inverse P/Os;
- > Inverse Floating Rate CMOs;
- > any CMO tranche failing the FFIEC suitability test at time of purchase.

If approved, such instruments cannot be carried in the HTM portfolio.

In addition, the purchase of any security or security type which deviates substantially in its investment characteristics from those currently held in the portfolio must be specifically approved by the CEO and Investment Committee of the Board.

#### MATURITIES

The Current Maximum Allowable Average Life for the Entire Fixed Rate Portfolio  
Is Not To Exceed 3.5 Years.

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⑦  
②⑧

The following set of overall investment guidelines are established (EXCLUDE CP HOLDINGS):

I. Portfolio Distribution by Risk Weight ✓

0% - 20% risk weight = minimum 40% of total portfolio holdings.

100% risk weight = maximum 60% of total portfolio holdings.

II. Portfolio Distribution by Maturity/Repricing Timeframe ✓

under 1 year = minimum 25% of total portfolio holdings.

over 5 year = maximum 25% of total portfolio holdings.

III. Portfolio Distribution by Key Asset Categories ✓

**Treasury and Agency Debentures** = minimum 10% of total portfolio holdings.

**Mortgage related** = maximum 60% of total portfolio holdings including specific limits of:

- > Agency MBS = 60% of total portfolio holdings.
- > Agency CMOs = 60% of total portfolio holdings.
- > "AAA" rated Senior Whole Loan CMOs (WLCMO) = \$75 million.
- > "AAA" rated Home Equity Loan ABS (HEL) = \$120 million.
- > "A" rated subordinated WLCMO and/or HEL = \$35 million sub-limit within the above.
- > "AA" rated CMBS = \$30 million

**Corporate Debt** = maximum 33% of total holdings

**Asset Backed Securities** = "AAA" rated; max 33% of total portfolio holdings with a 15% of total portfolio holdings sub-limit for any one category (i.e. Credit Card, Auto, HEL, etc.), a \$50 million sub-limit for "AA" rated CLO/CBO and a \$120 million "A" rated sub-limit for subordinated pieces.

OTHER INVESTMENT AUTHORIZATIONS

1. A well diversified \$50 million investment program was approved in October 1999 which includes:
  - \* "BBB" rated ABS;
  - \* "A" rated CLO;
  - \* up to 10 year "BBB" rated Corporate
  - \* Bank Trust Preferred.
2. A well diversified \$100 million Un-funded Portfolio of Credit Derivatives is authorized to generate fee income. Under this program we sell default protection on investment grade U.S. bank and corporate credits to acceptable counterparties, in exchange for a fee. In the event of a credit default we wire notional value to the counterparty and receive a senior, unsecured bond or loan in exchange. Maximum tenor is 3 years per credit. All other exposure guidelines apply. Standard ISDA documentation will govern these transactions.

Management realizes that, concerning an issuer on which we have sold protection to a counterparty, if the issuer defaults the counterparty will deliver and BLUSA will be obligated to receive a below investment grade instrument. Management believes the risks of such an occurrence is mitigated by the design of the program as it places limits on the term of the protection sold, the ratings to investment grade issuers and single issuer exposures. In addition, as of July 24, 2001, agreements relating to selling of default protection must have either no mention of restructuring or may cite Modified Restructuring per the May 11, 2001 Restructuring Supplement to the 1999 ISDA Credit Derivative Definitions. The receipt of any referenced obligation will be booked into the AFS portfolio.

## INVESTMENT POLICY AUTHORITY

The policies of the investment function are approved and supervised by the Board of Directors through its Investment Committee in accordance with law, and are carried out by the Asset/Liability Committee (ALCO), through its Investment Committee. The ALCO Investment Committee includes the Treasurer, Deputy CEO, Chief Lending Officer, International Division Executive and his Deputy, Domestic Division Head and Manager of the BSU. The ALCO Investment Committee meets monthly to review portfolio activity and compliance with policies. Maturity limits and asset concentrations are set by this committee in coordination with ALCO and in accordance with approved guidelines. Internal control and supervisory review is provided by Treasury Support and the Accounting Department.

## INVESTMENT AUTHORITY

All investing should be done in a manner consistent with these guidelines and the decisions of the ALCO and Investment Committee. Authority to commit the Bank to individual purchase or sale transactions is as follows:

### 1) U.S. Gov't Securities (includes Federal Agency, Agency MBS and Agency Backed CMO's)

Treasurer - up to \$35 Million

President - up to \$50 Million

### 2) All Other Approved Securities

Treasurer - up to the limits specified on Page ig-8 of these guidelines,

President - up to \$15 Million

All purchases and sales are included in a report submitted monthly to the Investment Committee members and the Investment Committee of the Board of Directors when it meets.

## COMPOSITION OF THE INVESTMENT PORTFOLIO

Investments may only be made in the following debt instruments:

- > U.S. Treasury and Federal Agency debt,
- > Securities backed by obligations of the U.S. Government or its agencies,
- > Mortgage Securities (including U.S. Agency MBS, U.S. Agency backed CMO's, Whole Loan CMO's, Home Equity Loan ABS and CMBS),
- > Municipal bonds,
- > Obligations of utilities and corporations,
- > Structured Notes (see Appendix ig-A)
- > Asset Backed Securities,
- > Bank C/Ds, acceptances, and notes within approved bank and country limits,
- > Obligations of selected Foreign Governments, within approved country limits.
- > Subordinated Investment Grade Securities within approved limits.

As a general rule, we will not purchase non-U.S. dollar investments. If made, the foreign exchange exposure will be fully hedged.

portfolio is carried on the financial statements at amortized cost.

Only those securities which management has a positive intent and ability to hold to maturity may be placed in the HTM portfolio. Sales or transfers out of the HTM portfolio must be rare and are allowed only in response to the following circumstances:

- > a major acquisition/divestiture;
- > a change in the tax status of a security;
- > a significant deterioration of credit quality;
- > a change in regulatory requirements which significantly modifies what constitutes a permissible investment or maximum level of investment, or that significantly increases either regulatory capital requirements or risk-based capital weights;
- > certain other circumstances that are isolated, nonrecurring and unusual.
- > HTM securities may be sold prior to maturity when they are close to maturity (about 3 months) or when at least 85% of the original investment principal has been returned.

HTM securities cannot be transferred or sold solely in response to changes in market interest rates, prepayment rates, economic conditions, business strategy, asset/liability management goals, or liquidity needs.

The purpose of the AFS portfolio is to provide the Bank with a secondary source of liquidity and to provide a stable source of earnings. AFS securities may be sold prior to maturity. The AFS portfolio is carried at current market value on an aggregate portfolio basis with adjustments debited or credited directly to equity.

The Trading portfolio consists of those securities and financial instruments held for resale to customers or to accommodate the Bank's proprietary trading activities. The Trading portfolio is carried at market value with changes debited or credited to profit and loss.

Policies covering securities Available For Sale and Held To Maturity and are set forth in the paragraphs immediately following and are referred to as "Investment Policies".

**Separate policies and guidelines governing proprietary trading activities are included in a subsequent section entitled "TRADING PORTFOLIO GUIDELINES AND PROCEDURES".**

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## INVESTMENT PORTFOLIO GUIDELINES

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### OBJECTIVES OF THE INVESTMENT PORTFOLIO

The purpose of the Securities Investment Portfolio is first; to provide a secondary source of liquidity and second; to earn an adequate return.

### INVESTMENT PORTFOLIO PHILOSOPHY CONCERNING SECURITIES AVAILABLE FOR SALE, "HELD TO MATURITY", and "TRADING"

It has been the Bank's strategy to maintain a significant portion of total assets in investment grade securities. This enhances liquidity.

High levels of liquidity are maintained by investing in direct U.S. Government and Agency obligations and mortgage securities backed by U.S. Agency collateral. These securities are of the highest credit quality and represent an important source of liquidity, which can be realized either by sale or through the use of repurchase agreements.

In compliance with Statement 115 of the Financial Accounting Standard Board, the Bank's portfolio of securities is designated into three separate components: "Available For Sale" (AFS); "Held To Maturity" (HTM); and "Trading".

Currently, management has decided to designate 100% of investment securities as AFS (management may change this strategy). Management believes this is a prudent strategy to meet liquidity needs and allow for the effective management of our interest rate risk profile. The percentage allocated to each portfolio is reviewed on an ongoing basis by management and the Investment Committee of the Board on behalf of the full Board of Directors. Changes are made as circumstances warrant.

Other than Collateralized Mortgage Obligations (CMOs) which fail the FFIEC "High Risk Security Test" at time of purchase (and other types of securities specifically mentioned on page ig-5 under "Prohibited Investments"), management has not designated into which portfolio specific security types must be placed. As such, the designation of a new investment security to either the AFS, HTM or Trading portfolio is made at the time of purchase.

When desirable, management believes that placing mortgage related securities in the HTM portfolio is a prudent strategy. We purchase mortgage securities primarily for their liquidity, high credit quality, and repo eligibility. The need to liquidate them at a future date as a result of credit quality deterioration is deemed remote. In addition, because the bid/offer spread on CMO's is wider than for comparable quality assets, we are usually reluctant to offer them for sale. Since mortgage securities produce a monthly stream of cash flows, reinvestment opportunities are available without the need to liquidate.

When securities are maintained in the HTM portfolio they are available for pledging purposes as required by law or regulation, or as collateral for short-term borrowing for liquidity purposes (repurchase agreements). The HTM

## PROCEDURES FOR CUSTOMER FOREIGN EXCHANGE ORDERS

BLUSA accepts foreign exchange orders from customers of \_\_\_\_\_ and \_\_\_\_\_ All such customers of BLUSA or BLITA are pre-approved to deal directly with the Dealing Room. Below are the procedures to be followed by Treasury Management when handling open (not executed) orders.

### The "FX OPEN ORDER'S" FORM

Open orders are entered by the trader on the "FX OPEN ORDER'S" form (attachment A) when the order is received indicating the customer giving the order, the institution with which the order is given, trader, and time the order was left and how long it is good for.

If an order is not executed during New York trading hours it will be placed in the market in our name for \_\_\_\_\_ customers and nostro trades, or in \_\_\_\_\_ name for \_\_\_\_\_ customer orders.

If the order is placed for BLITA customers:

- > It must be placed with \_\_\_\_\_ Bank (or any other agreed upon financial institution) in the name of \_\_\_\_\_
- > A BLOOMBERG message must also be sent to the designated area within (attachment B) detailing the particulars of the orders placed in their name.
- > Trader must advise \_\_\_\_\_ of the corresponding forward date in which spot deals will be "pushed" upon execution.

At the end of each day, one FX trader will sign off on the "FX OPEN ORDER'S" form after insuring that all orders have been placed into the market and the appropriate messages sent.

The "FX OPEN ORDER'S" form will be maintained for 1 month.

## TRADING PRACTICES

**OFF PREMISES/OFF HOURS TRADING** – Any change in a stop-loss or take-profit order from off-premises locations or during non-regular New York banking hours must be left with one predetermined bank. The following morning the transactions must be entered into Opics with a note to indicate that the deal was done outside of normal trading environment.

The establishment of new FX positions during off-hours can only be made if, during regular trading hours, a limit order to establish a position and a corresponding stop-loss order, is placed at the same time. The position is subject to the overnight/ weekend position limits.

Positions may be closed from off premises/off hours.

**OFF-MARKET RATES/HISTORICAL RATE ROLLOVERS** - As a matter of policy the use of off-market exchange rates is prohibited. The CEO must approve any exception to this policy.

**ERRORS** - When an error is discovered it must be reported immediately to the Treasurer/Chief Dealer. If the loss is determined to be less than \$25,000 and the position is within limits, the Treasurer/Chief Dealer has discretion whether to close the position or not. If it is determined that the error will result in a loss greater than \$25,000 or that the position is above the limit, the error must also be reported to the Controller and the CEO so that an exit strategy can be agreed upon.

## BROKERED FOREIGN EXCHANGE TRANSACTIONS

The trading room does not currently engage in foreign exchange transactions through brokers. However, if a trade through the broker market is executed the following guidelines would apply.

**NAME SUBSTITUTIONS** - In the traditional broker foreign exchange market, the names of the institutions placing bids or offers are not revealed until a transaction's size and exchange rate are agreed upon, and then only to the counterparties. Should one of the counterparties turn out to be unacceptable to the other, they might agree to the substitution of a new counterparty between them.

Name substitution in spot transactions is an acceptable practice provided:

- > both counterparties receive the name of an acceptable counterparty within a reasonable amount of time and,
- > the clearing bank is in full knowledge of the trade.

**BROKER POINTS** - Broker "points" are sometimes used as a mechanism to permit a disputed broker transaction to be completed while deferring settlement of the difference (measured in points) until those points were settled in another trade. In other instances this practice came to involve the arranging of proportionately advantages or disadvantages future trades, the unrecorded extension of credit between counterparties, and all of the problems associated with unrecorded transactions. It is the banks' policy to prohibit the use of broker points.

**RESOLUTION OF DISPUTES** - When disputes arise or differences occur, there are acceptable procedures for compensation:

- > Differences should be referred to the Controller for resolution.
- > All compensation should take the form either of payment in cash or adjustment to brokerage bills. The settlement of differences should be even-handed, allowing for compensation to go both ways.
- > All such transactions should be fully documented.

➤ FX Derivatives (NDF's, Futures, Options)

a) NDF's (non deliverable forwards) – The use of NDF's is only authorized to accommodate customer needs. Due to the nature of the NDF market, Nostro trading in NDF's is prohibited.

b) FX Futures – Exchange traded FX futures contracts are authorized and subject to the same position and loss limits as cash market FX transactions.

c) Fx Options – Trading in OTC and exchange traded FX options is authorized and subject to the same position and loss limits as cash FX transactions on a delta weighted basis. FX options may be used as a hedge against an already existing position. The hedge versus the position must be mark to market daily.

Customers trading in FX options, using BLUSA as the counterparty, may only deal in OTC options.

SUPPORTING DOCUMENTS, REPORTING AND CONTROLS

- Foreign exchange trading activity can only be conducted with approved banks and financial institutions and within approved credit limits.
- Foreign exchange transactions must be entered into Opics immediately upon execution.
- In addition to ongoing intraday updates on trading positions and P/L from the traders, the Treasurer, Treasury Support and the trader can view online through Opics, the following information:
  - Outstanding positions
  - P & L for the day, prior day, month to date, and year to date.
  - Maturity gap report
- Treasury Support will immediately check the accuracy of the information on Opics based on its own accounting records and from independent sources and will ensure that FX Nostro Trading Positions are within these approved guidelines.
- Treasury Support will confirm details of the FX deal with the counterparty.
- Treasury Support will monitor the exposure versus limits for customers authorized to deal directly with the Money Desk.
- Should Treasury Support discover any discrepancies in any position or report, they will immediately inform the Treasurer/Chief Dealer, and the Controller.
- Should Treasury Support discover any irregularities in any position or report, they will immediately inform Audit, Treasurer/Chief Dealer, and the Controller.
- Position and profit/loss reports will be forwarded to the CEO.

FX position limits include FX banknote, spot, forward, futures and options (delta weighted) positions up to 1 year:

- Maximum Intraday Position*	U.S. \$7,500,000
- Maximum Overnight or Weekend Position	U.S. \$4,000,000
- Maximum Loss Per Day**	U.S. \$ 30,000
- Maximum Loss Per Month	U.S. \$ 50,000
- Maximum Loss Per calendar year	U.S. \$ 200,000

\* US\$ equivalent, as calculated by Opics, when two non-\$ currencies are utilized.

\*\* Using stop-loss orders

- **Net Position by Currency:** This is the difference between all long and all short positions in each foreign currency. Included in the long positions are assets (e.g. currency on hand and in banks, foreign currency loans, etc.) as well as spot and forward contracts to buy dollars versus exchange. Short positions consist of liabilities (e.g. foreign currency time deposits) and spot and forward contracts to sell dollars versus exchange.

A) INTRADAY NET POSITION\*:

In the aggregate, the net intraday long or short position limit in all foreign currency is 7,500,000 USD equivalent.

B) INTERDAY NET POSITION\*

In the aggregate, the net overnight or weekend position limit in all foreign currency is 4,000,000 USD equivalent.

\* When requested by the Treasurer, exceptions to these Foreign Currency Position Limits may be approved as follows:

<b>International Division Executive</b>	
Intraday	\$7,500,000 to 10,000,000
Overnight/Weekend	\$4,000,000 to 7,500,000

<b>Chief Executive Officer</b>	
Intraday	over \$10,000,000
Overnight/Weekend	over \$ 7,500,000

- **Position Maturities by Currency:** Although the net position for any one currency may be nil, unmatched maturities of assets and liabilities creates exposure to interest rate fluctuations. This "maturity gap" exposure is negligible when compared to outright currency exposure. Accordingly, it is our policy to utilize maturity gap exposures to enhance returns within manageable risk. The following limits apply to "maturity gaps" between buy and sell positions by currency:

- Maturity Gap Over \$10,000,000: shall not exceed one month.
- Maturity Gap Over \$5,000,000 to \$10,000,000: shall not exceed three months.
- Maturity Gap Over \$1,000,000 to \$5,000,000: shall not exceed six months.
- Maturity Gap up to \$1,000,000: shall not exceed 1 year.

transactions are specified in the C.A.M. (05.03.01-02) and the Foreign Currency Transactions Agreement.

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1. **SPOT TRANSACTIONS** - can be concluded only against good available funds on trade date.
2. **FORWARD TRANSACTIONS** - can be concluded either against the required cash collateral per C.A.M. (05.03.01-02), or by allocating a portion of the unused approved line of credit in lieu of the collateral. This allocation has to be confirmed in a document signed by two account officers, to Treasury Support for each transaction.

Treasury Support will monitor the positions and mark them to market daily. Should the collateral requirement fall by 20%, then Treasury Support will notify the account officer, and/or supervisor who will be responsible for making a cash margin call, or allocate, in lieu of the same, an additional portion of the unused line of credit. If replenishment is not made, and the margin declines an additional 30%, then the contract will be closed.

On maturity of forward contracts, the customers must meet the same requirement as in the case of spot contracts, i.e. good funds on settlement date. Alternatively, customers must liquidate the contracts, and settle the difference with the Bank.

➤ Confirmations

All Foreign Exchange transactions will be confirmed by Treasury Support in writing directly to the customers.

If stop loss/profit taking orders are given on behalf of customers, written confirmation from the account officer must be maintained in the appropriate file.

**DEFINITION OF RESPONSIBILITIES**

FX trading activity is carried out under the direct authority of the Treasurer and supervised by him/her and any other Treasury Management Department FX manager designated by the Treasurer. These managers must be kept informed of trading positions, market movements and P/L on an ongoing basis. In addition, as detailed below, certain positions may be taken only with the direct approval of the International Division Executive or the C.E.O.

➤ Trading Authorities

The Treasurer shall have the authority to approve and execute foreign exchange banknote, spot, forward, futures and option transactions within these guidelines and to delegate such authorities.

➤ Foreign Currency Position Limits

Positions in all major foreign currencies are permitted.

## Chapter 2 Dealers Practice

- 1 No Dealer (or persons involved in dealing operations) shall enter into any foreign exchange, foreign currency option, financial futures, or foreign currency deposit transaction in his/her own name unless the specific deal has the prior approval of the Unit Manager or, in the event of his absence, his Deputy.
- 2 Treasury Managers and Dealers are expressly forbidden to have the power to be Authorised Signatories on the Bank's behalf or to be granted either a joint or several Power of Attorney to act for the Bank in an 'overseas' centre.
- 3 Under no circumstances should Treasury Managers or Dealers have custody of or access to a Unit's test keys/cypher codes.
- 4 At all times a strict division is to be observed between dealing and the related settlement/accountancy procedures. Whilst Dealers should give guidance and assistance, where necessary, to their operational colleagues in the area of transmitting, verifying and implementing related settlement instructions, and provide close co-operation to enable the requirements of both this Manual and local regulatory authorities to be met, they will not pass any entries or enter into any formal correspondence relating to such deals by telex or letter.
- 5 Dealers will not decide upon, or in any way exercise control over, accounting procedures in their Units with the exception of where local regulations impose a personal responsibility upon a Dealer, for instance in the shape of a formal return to a Central Bank or local Monetary Authority.
- 6 All money market and foreign exchange deal entered into by Dealers are to be transacted at current market rates including the extension of forward contracts. Approaches made by Corporates to extend at historical rates should be referred to GM-TD. Any firm approaches to Dealing Units to trade at 'artificial rates' received from other banks should be turned aside and the salient details reported immediately to GM-TD so that action may be taken as required. Besides the ethical considerations involved, such transactions would, undoubtedly, result in adverse comment or action from the relevant regulatory body and/or taxation authority.
- 7 It is not Bank policy to act as an intermediary between a buyer or seller or depositor or lender where one of the parties names proves 'unacceptable' to the other. Therefore, should any such proposition be received by Dealers, for instance from Brokers, a deal must not be entered into and GM-TD should be informed immediately. It may be that special circumstances pertain and in such instances approval must first be obtained from GM-TD before any deal is entered into. However, if the name offered for washing is of the NBAD Group, then this can be accepted in case of need.
- 8 All approaches/propositions upon which a Dealer is requested to act/comment and which includes the use of financial instruments that are unfamiliar or new to the local market should be reported to either the GM-TD or his authorised deputy.
- 9 The London Code of Conduct (applicable to London (City) Office, but to be read by all Units.)

All dealing staff are required to read and abide by the "London Code of Conduct" as issued by the Bank of England on 7th July 1987. Any breach of this Code by a member of staff will be regarded as a matter of utmost gravity. (See attachment to "side letter")

SHORT TERM ADVANCE CUSTOMERS AS OF AUGUST 1, 1996

BORROWER	LINE	MATURITY	SPREAD	REVIEW	MAX TENOR
Airtouch Communications, Inc.	10000	01-Jul-97	0.125	01-Jun-97	3 MONTHS
Amerada Hess Corporation	5000	24-Jun-97	0.15	24-May-97	3 MONTHS
American Stores	10000	03-Jun-97	0.15	03-May-97	3 MONTHS
Apache Corporation	5000	24-Jun-97	0.1875	24-May-97	3 MONTHS
Ashland Inc.	10000	12-Feb-97	0.15	12-Jan-97	6 MONTHS
Baker Hughes, Inc. or Subs.	10000	01-Apr-97	0.125	01-Mar-97	6 MONTHS
Cabot Corporation	10000	06-May-97	0.15	06-Apr-97	3 MONTHS
Chesapeake Corporation	5000	03-Jun-97	0.15	03-May-97	3 MONTHS
Dacwo Int'l (America corp)	10000	09-Oct-96	0.4375	09-Sep-96	180 DAYS
Diamond Shamrock	10000	18-Sep-96	0.125	18-Aug-96	2 MONTHS
Ethyl Corporation	5000	16-Oct-96	0.15	16-Sep-96	3 MONTHS
FMCC Corporation	10000	04-Mar-97	0.15	04-Feb-97	3 MONTHS
Georgia Power Company	20000	01-Apr-97	0.125	01-Mar-97	6 MONTHS
Goulds Pumps	5000	17-Jun-97	0.15	17-May-97	3 MONTHS
Harris Corporation	10000	23-Oct-96	0.125	23-Sep-96	3 MONTHS
Hyundai Group	5000	22-Jul-97	0.375	22-Jun-97	6 MONTHS
International Paper	10000	26-Sep-96	0.15	26-Aug-96	3 MONTHS
Kansas City Southern Industries, Inc.	10000	23-Apr-97	0.15	23-Mar-97	3 MONTHS
McDermott Incorporated	10000	08-Jan-97	0.375	31-May-96	3 MONTHS
Northern Indiana	10000	16-Oct-96	0.125	16-Sep-96	3 MONTHS
Pacific Telecom	5000	15-Jul-97	0.15	15-Jun-97	3 MONTHS
Pep Boys - Mannic, Moe & Jack	5000	18-Mar-97	0.15	18-Feb-97	3 MONTHS
PSI Energy	10000	13-May-97	0.125	13-Apr-97	3 MONTHS
Puget Sound Power & Light	10000	06-May-97	0.125	06-Apr-97	3 MONTHS
Rayonier Inc.	10000	13-May-97	0.125	13-Apr-97	3 MONTHS
Samsung America Inc.	10000	13-May-97	0.375	13-Apr-97	6 MONTHS
Sonat Inc.	10000	26-Sep-96	0.125	26-Aug-96	3 MONTHS
Sunkyong America Inc.	7000	31-Aug-96	0.425	31-Jul-96	6 MONTHS
Tandy Corporation	10000	05-Feb-97	0.125	05-Jan-97	3 MONTHS
Textron, Inc &/or Subsidiaries	15000	19-Feb-97	0.15	19-Jan-97	6 MONTHS
Universal	10000	06-May-97	0.125	06-Apr-97	30 DAYS
Utilicorp United Inc.	10000	20-Aug-96	0.15	20-Jul-96	3 MONTHS
York International Corp.	10000	11-Sep-96	0.15	11-Aug-96	3 MONTHS

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ADIB must monitor performance and market reputation

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The line can be a sub-limit of a facility. It is the responsibility of the account officer and his/her supervisor to monitor the same.

In such instances, proper written authorization is to be obtained by the account officer from the customer indicating personnel authorized to act on behalf of the account.

Treasury Management is authorized to conduct transactions directly with the customer upon notification that a Foreign Exchange line has been approved.

Applicable limits are entered into OPICS by Treasury Support and checked by the trader prior to executing a transaction with the client. After a deal is concluded the appropriate account officer will be notified, by phone, by Treasury Support, followed by a copy of the original written confirmation of each transaction.

The aggregate amount of total foreign exchange exposure outstanding with a customer can not exceed the size of the customers approved Foreign Currency line. Exceptions must receive appropriate account officer or committee approvals.

Foreign Currency lines will be approved for a period of one year, to be reaffirmed semi-annually.

It is the responsibility of the originating officer, and/or department head to notify the Treasury Management Department of any interim termination or amendments to the original agreements.

Treasury Support will compile, every six months, a master list of customers with active foreign exchange lines, and will submit the same to the respective departments for review. On a monthly basis, Treasury Support will submit a list of open contracts to the respective lending areas.

2. **CASES WHERE SPECIAL EXPERTISE IS REQUIRED, MAKING DIRECT CUSTOMER CONTACT WITH THE FOREIGN EXCHANGE UNIT NECESSARY.**

Contracts may be concluded directly with a customer based on the prior approval of the account officer and his/her supervisor for each transaction.

In such cases, proper lending authority must be obtained. Verbal authorization must be confirmed in writing the same day, indicating the proper credit approval, whether against collateral, or under a line of credit.

➤ Collateralization of Foreign Exchange Transactions

Foreign exchange transactions involve the inherent risk that a given customer will not be able to perform in accordance with contractual arrangements. In the case of **spot transactions**, the customer may fail to deliver one side of the contract thus exposing the bank to the full amount of the transaction. In the case of **forward contracts**, a customer's failure prior to settlement exposes the bank to the market fluctuations that occur between transaction date and forced liquidation date. Of course, maturing forward contracts that are settled through actual delivery, have the same risk characteristics as the spot contracts.

To protect the bank against these risks, the coverage requirements for foreign exchange

# FOREIGN EXCHANGE GUIDELINES

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## OVERALL POLICY STATEMENT

Bank engages in foreign exchange (FX) transactions to generate profits by servicing customers and correspondents as well as from independent nostro trading. Our policy authorizes the taking of foreign currency nostro positions to enhance income from changes in their value. It is our policy to manage non-US dollar currency spot and forward gaps, both in amount and maturity period, within defined limits.

## TRADING GUIDELINES

The purpose of these guidelines is to ensure that FX trading activity is done prudently without exposing the Bank to undefined risk.

## TRANSACTIONS WITH BANKS AND FINANCIAL INSTITUTIONS

Foreign exchange dealing will only be made with banks that have an approved credit limit. Trading limits for these banks are established in cooperation between the Correspondent Banking Unit and Treasury Management, and coordinated with the Head Office and approved annually by the Board of Directors of

Exposure versus limit reports are updated automatically in the Opics FX system upon deal entry.

Transactions with banks not included on the above credit limit report require pre-approval of the credit committee, such approval to include an exposure limit.

## TRANSACTIONS WITH CUSTOMERS

### > Authorization for Foreign Exchange Transactions

Customer transactions should be based on established relationships and should generally be conducted through the department responsible for the relationship.

Within approved lending authorities, a memorandum outlining the foreign currency facility available to a customer must be made part of the credit file with a copy to Treasury Management and Treasury Support. Customers should not deal directly with the Foreign Exchange Unit of Treasury Management with the exception of the following:

1. **DEALINGS OF WELL ESTABLISHED AND CREDITWORTHY CUSTOMERS INVOLVED IN LARGE AND FREQUENT TRANSACTIONS.**

Accounts will have Foreign Currency lines. approved by two lending officers, one of whom must have authority for such approval. or appropriate committee approval.

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LOAN DRAWDOWN/REPAYMENT INFO SHEET



TYPE TRANS :  
CODE:

DATE:		LOAN #:	
CUSTOMER NUMBER:			
CUSTOMER NAME:			
ADDRESS:			
FACILITY:			
DRAWN CURRENCY:	U.S. DOLLAR	FUNDING AMT:	
VALUE DATE:		BOOKING UNIT:	
ROLLOVER DATE:		# OF DAYS:	
FINAL MATURITY:		# OF DAYS:	
NOTE RATE:			
SPREAD:			
BASE RATE:			
INTEREST BASIS:	360		
INTEREST PERIOD:	OTHER		
RATE SET BY:			
RATE BASED ON:			
ORIGINAL COMMITMENT:		INT. DUE	
LESS: OUTSTANDING BAL. (-)		FEES (+)	
LESS: THIS DRAWDOWN (-)		PREN DUE (+)	
PLUS: THIS REPAYMENT (+)			
UNDRAWN COMMITMENT		TOTAL DUE	

INSTRUCTIONS:

PAY #: | RECEIVE #:

PRINCIPAL REPAYMENT SCHEDULE

IN FULL AT MATURITY (Y/N):  
EQUAL INSTALL OF:

BEGINNING:  
FREQUENCY:

OTHER REPAYMENT:

OTHER: INTEREST DUE:

APPROVAL:

(S) (20)

## Guidelines for Short Term Loan and Commercial Paper Program

- VS
1. A Master Participation Agreement must be in place between VS and the seller of loans. The Bank's Investment Committee must first approve a seller of loans. A seller of Commercial Paper (CP) must be a bank with an internally approved credit line or a primary security dealer.
  2. Aggregate program size limit is \$750 million of which the entire amount may be in either CP or loans.
  3. The rating used to document the file for the purchase of a loan participation will be the loan rating. If there is no loan rating, the Bank may use either a senior unsecured bond rating or the obligor rating provided that the loan purchased is on the same terms as the bond. The rating used to document the purchase of CP will be the CP rating.
  4. Companies rated by more than one of the four major rating agencies or who have both short and long term ratings: all ratings must be in the permitted category.
  5. The minimum rating for short-term loan borrowers or CP issuers (henceforth referred to as "borrowers") must be Baa3 for the long term and/or A3, or its equivalent for the short term.
  6. A short term loan borrower or CP issuer whose rating is on negative watch or negative outlook is prohibited if either the short or long term rating by either Moody's or S&P is in the lowest permitted category as detailed above.
  7. Maximum exposure to a single borrower rated a minimum of BBB+/Baa1 and/or A2/P2 is \$15 million: If any of the ratings is lower, the maximum exposure is \$10 million.
  8. If buying for the VS group, the maximum exposure to the group is \$25 million. The net exposure to VS can not exceed \$15 million.
  9. VS exposure limit to REIT's is \$50 million.
  10. If an Altman Health score is available on Bloomberg, and the issuers Altman Health score is a "C", then the short term rating must be at least A2/P2 and the maturity must not exceed 1 month.
  11. Treasury Management is authorized to purchase loans and CP with maturity not in excess of 6 months. With the approval of one member of the Bank's Credit Committee, the maximum maturity may be extended to 12 months.
  12. With approval of individual credits by two members of the Bank's Credit Committee, up to \$50 million in loans and CP may have a maturity between three and six months provided each borrower has a minimum senior unsecured rating of Baa2 or its equivalent and/or A2 or its equivalent and a stable or better outlook.
  13. No more than 50% of the outstanding aggregate dollar value of loans and CP will have a remaining term to maturity greater than one month.
  13. Loan Offering tickets or CP purchase orders will have two signatures, one being that of the trader initiating the transaction and the other being that of an authorized Treasury Management Unit Officer at least at the level of First Vice President or member of the Bank's Credit Committee.

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### Source of Funds

Abu Dhabi Investment Authority-Abu Dh	open
Arab Bank PLC	10
Bank of New York-NY	25
Banque Brussel Lambert-NY	10
Bayerische Landesbank-NY	10
Bayerische Vereinsbank-NY	24
CHASE - NY	10
CITIBANK-NY	15
Commerzbank-NY, GCI	<del>10</del>
Corestate Bank Int'l-NY	10
Credito Italiano-NY	5
Finans Bank-Istanbul	5
First National Bank of Boston-Boston	10
Instituto Bancario San Paolo di Torino-N	5
Midland Bank-NY	10
MITSUBISHI BANK LTD.-NY	30
MORGAN-NY	open
National Bank of Abu Dhabi-Giza	open
National Bank of Abu Dhabi-Head Office	open
National Bank of Abu Dhabi-London	open
National Bank of Abu Dhabi-Port Said	open
Republic - NY	25
Royal Bank of Canada-London	10
Standard Chartered-NY	10
UBS-NY	15

AIB Interbank Relationship Update

25 February, 2000

Page 2

- ③  
②⑤
- 5) Deutsche Bank. We have been borrowing from them regularly, and the offers are competitive and always available.
  - 6) Commerzbank. AIB has not seen an offer in a few months.
  - 7) Bayerische Vereinsbank. Used to make a good amount available to AIB but line was cancelled after their merger a couple of years back.
  - 8) UBS AG. Has declined to show us offers in almost 2 years. This is probably a situation that can be easily corrected with a little help from NBAD-H.O.
  - 9) Midland Bank. The line was cancelled after the H.S.B.C. takeover.
  - 10) BBL. Line cancelled after I.N.G. takeover.
  - 11) Mitsubishi Ltd. Line cancelled after merged with B.O.T.
  - 12) Standard Chartered Bank. Has not showed us an offer in a couple of years.
  - 13) Republic National Bank. Was never open to showing us offers. and now has been taken over by H.S.B.C..
  - 14) Arab Bank PLC. Is friendly towards us and lent us money over year-end.
  - 15) GeneraleBank. Was a steady source of funds for AIB, but is no longer a bank in the U.S., since the Fortis takeover.

Qamber, I hope this brief description of the current funding picture for AIB is useful to you. Please do not hesitate to let me know if you need anything else, or how we should coordinate with H.O., correspondent banking area to rectify some of these adverse changes.

Best regards,



cc HOTIB  
EVP - AIB



③  
②⑤

---

**Date:** 25 February, 2000

**To:**  
Head of International Banking  
Fax: 011 9712 668726

**From:**  
Senior Vice President & Treasurer

**Subject:**

If you did not receive all pages indicated, please call Goma Mohammed at (202) 842-7931  
Return Fax#: (202) 842-7955

Total Pages: 2

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Following up on our recent telephone conversation on this topic, I am listing below a few comments on some of AIB's interbank funding sources:

- 1) JP Morgan. We have had no relationship at any level with them, since they sold their clearing to H.S.B.C. as they had taken a much dimmer view of the need/desire to have bilateral funding contact with us.
- 2) Chase Manhattan. They are in the process of reinstating the interbank lines for us, but the pricing of their offers could still be a problem. We do, however, have a very profitable relationship with Chase Securities Inc., and their US\$ and Securities clearing operations offer competent and friendly service.
- 3) Citibank. Their offers are still expensive, and we use them only as last resort. But their funding desk will always have offers, which gives us extra liquidity when needed.
- 4) Bank of New York. Used to be one of our most reliable local short-dates funding sources. Lately, things have changed a bit, as offers are not always available or too expensive. This could be a reflection of their current gap position, or maybe it indicates a change of heart towards the relationship, which is strictly a funds borrowing one for AIB at this point.

①

②4

COUNTRY	LIMIT	GLOBAL	ILEAD OFFICE	LONDON	WSH
Qatar	30	0	25	5	0
Saudi Arabia	180	0	180	0	0
Singapore	2000	0	1900	100	0
South Africa	15	0	15	0	0
Spain	100	0	80	20	0
Sweden	100	0	75	25	0
Switzerland	500	0	400	90	10
Taiwan	0	0	0	0	0
UAE	UNLIMITED				
UK	2000	0	1200	700	100
USA	1500	0	1000	400	100

*[Signature]*  
**Head of Treasury &  
 Investment Banking**

24<sup>th</sup> October, 2000

count/

24

COUNTRY	LIMIT	GLOBAL	HEAD OFFICE	LONDON	WSH
Australia	50	0	50	0	0
Austria	150	0	125	25	0
Bahrain	3000 300	0	3000 230	0 50	0 20
Belgium	250	0	150	100	0
Canada	100	0	25	25	50
Denmark	150	0	135	15	0
Egypt	100	0	100	0	0
Finland	30	0	30	0	0
France	1000	0	500	500	0
Germany	500	0	500	0	0
Ireland	25	0	0	25	0
Italy	300	0	260	40	0
Japan	750	0	725	25	0
Kuwait	45	0	45	0	0
Luxembourg	50	0	50	0	0
Malaysia	20	0	20	0	0
Netherlands	200	0	160	40	10
New Zealand	10	0	10	0	0
Norway	10	0	0	10	0
Oman	45	0	45	0	0

GAP LIMIT

③

②④

CURRENCY: USD

PERIOD	GLOBAL LIMIT	HO	LONDON	WASHINGTON	EGYPT
UPTO 1 MONTH	2450	2170	130	140	10
1 MONTH	2450	2170	130	140	10
2 MONTH	2030	1770	120	130	10
3 MONTH	1700	1470	100	120	10
4 MONTH	1460	1270	90	95	5
5 MONTH	1100	940	80	75	5
6 MONTH	1000	860	70	65	5
7 MONTH	900	780	60	58	2
8 MONTH	800	700	50	48	2
9 MONTH	680	600	40	38	2
10 MONTH	600	540	30	28	2
11 MONTH	500	450	25	23	2
12 MONTH	390	350	20	18	2
OVER 1 YEAR	100	100	0	0	0

- Deutschemark Futures Contracts

200 open (+ or -)

200 spread basis

- Bunderepublik Futures Contracts

100 open (+ or-)

-o0o-

7th May 1991.

24

Money Market Limits

(3)

Gap Limits

(24)

5% gapping in twelve month terms applied to each separate indigenous and Eurocurrency books - as per Treasury Manual calculations - no change.

Bank Placement Limits

Not to exceed US dollars one billion over customer deposits (all UAE/Bah) at any time - no change.

FRA's

Deal within money market gap limits on a 5% risk-weighting. Maximum net 15% of individual counterparty limit.

Placements limited to branches and ADIB (\$ millions)

ADIB	\$400	Khartoum	5
Egypt	\$ 20	Muscat	15

Futures Trading

- Interest Rate Futures Contracts
  - 500 open (+ or -)                      reversion to previous limits
  - 500 spread basis                      "                      "                      "
- Treasury Bill Futures Contracts
  - 100 open (+ or -)
  - 100 spread basis
- Treasury Bond Options Contracts
  - 50 open call / put
  - 50 spread basis
- Treasury Bond Futures Contracts
  - 50 open
  - Unlimited hedging
- Short Sterling Futures Contracts
  - 40 open (+ or -)

(8)  
(24)

Head Office Proposed Trading Limits

Foreign Exchange

UAE Dirham	\$ 1,250,000,000	Open	No change
Saudi Riyal	\$ 250,000,000	Open	No change

Individual Currencies (in \$ millions except where stated)

<u>Overnight</u>			<u>Daylight</u>		
<u>OB</u>		<u>OS</u>	<u>OB</u>		<u>OS</u>
25		25	50		50
10 Stg		10 Stg	50 Stg		50 Stg
25		25	50		50
15		15	25		25
10		10	10		10
			DMK		
			STG		
			YEN		
			SFR		
			Other		

Total daylight position net of all currencies US \$50 million  
Net overnight position US \$25 million

Gold

+ 200 ozs for branch covering  
+ 200 ozs for trading purposes

Forward Foreign Exchange

\$25 million in any one currency in twelve month terms subject to maximum aggregate \$100 million.

Currency Options (\$ millions)

	<u>Call</u>	<u>Put</u>
Net open position	15	15
Agg. spread all currencies	30	30

Foreign Exchange Futures

Currently \$5 mio taken from net open position. Increase to \$15 mio sought separately to previous sub-allocation.

7  
23

<HELP> for explanation, <MENU> for similar functions. DG48 Comdty EDS  
ENTER ALL VALUES AND HIT <GO>.

**IMM EURODOLLAR FUTURES ANALYSIS**

3/30/00	Valuation	7-day	1-mth	2-mth	3-mth	4-mth	5-mth	6-mth	9-mth	1year
<b>LIBOR RATES</b>		6.139	6.133	6.189	6.29	6.37	6.449	6.53	6.78	6.97
<b>SWAP RATES</b>		2Y 7.169	3Y 7.252	4Y 7.312	5Y 7.287	7Y 7.313	10Y 7.343			

**FUTURES 1 <GO> for convexity bias analysis**

Contract:	Jun00	Sep00	Dec00	Mar01	Jun01	Sep01	Dec01	Mar02	Jun02	Sep02
Price	93.350	93.065	92.850	92.775	92.695	92.675	92.635	92.700	92.720	92.740
Rate <sup>ovx-adj</sup> <sub>Y/N</sub>	6.650	6.935	7.150	7.225	7.305	7.325	7.365	7.300	7.280	7.260
Fut Valuatn	6/21	9/20	12/20	3/21	6/20	9/19	12/19	3/20	6/19	9/18
Days	83	174	265	356	447	538	629	720	811	902

**YIELD CURVES**

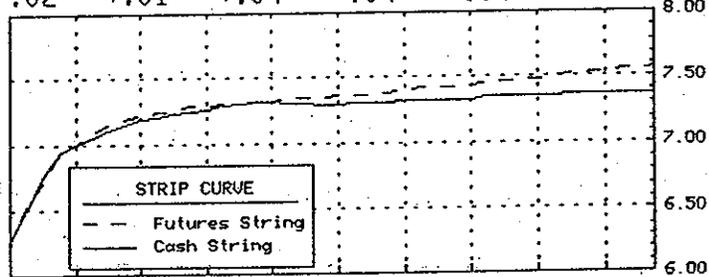
				1.0YR		1.5YR		2.0YR		2.5YR
Cash String	6.264	6.509	6.758	6.953	7.002	7.060	7.115	7.167	7.195	7.218
Fut String	6.264	6.516	6.735	6.932	7.016	7.095	7.154	7.203	7.233	7.258
Spread	+0.00	+0.01	-0.02	-0.02	+0.01	+0.04	+0.04	+0.04	+0.04	+0.04

**FORWARD ANALYSIS**

LIBOR Fwd	6.64	7.01	7.17
Futures	6.65	6.93	7.15
Spread	-.01	+0.08	+0.02

Futures daytype: actual/360  
Strip yield: < 1 yr: actual/360  
Strip/Coupn: > 1 yr: bond equiv

Freq S Daytype ACT/ACT



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Princeton: 609-279-3000 Singapore: 226-3000 Sydney: 2-9777-8686 Tokyo: 3-3201-8900 Sao Paulo: 11-3048-4500  
1646-66-0 30-Mar-00 16:20:55



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23

Delayed monitoring enabled

DG48 Comdty EDSR

n <Page> to scroll contracts, n <Go> for history, 98 <Go> to save defaults

**IMM EURODOLLAR SYNTHETIC FORWARD RATES**

16:20	Date	Days	IMM	Last	Rate <sup>3M</sup>	6-Mo	1-Yr	2-Yr	18-Mo	7-Yr	10-Yr
Spot strip	79	Front		93.7525	6.2425	6.553	6.957	7.211	7.108	7.434	7.580
1)	6/21/00	91	EDM0	93.3500s	6.6500	6.851	7.177	7.327	7.267	7.475	7.611
2)	9/20/00	91	EDU0	93.0650s	6.9950	7.105	7.350	7.409	7.390	7.509	
3)	12/20/00	91	EDZ0	92.8500s	7.1500	7.253	7.453	7.451	7.453	7.534	
4)	3/21/01	91	EDH1	92.7750s	7.2250	7.332	7.510	7.469	7.475	7.554	
5)	6/20/01	91	EDM1	92.6950s	7.3050	7.383	7.530	7.470	7.481	7.570	
6)	9/19/01	91	EDU1	92.6750s	7.3250	7.413	7.523	7.460	7.480	7.584	
7)	12/19/01	91	EDZ1	92.6350s	7.3650	7.400	7.506	7.449	7.463	7.599	
8)	3/20/02	91	EDH2	92.7000s	7.3000	7.357	7.487	7.440	7.440	7.615	
9)	6/19/02	91	EDM2	92.7200s	7.2800	7.337	7.469	7.433	7.429		Exchanges:
10)	9/18/02	91	EDU2	92.7400s	7.2600	7.344	7.456	7.433			IMM, SMX
11)	12/18/02	91	EDZ2	92.7050s	7.2950	7.329	7.449	7.439			FRA and Bond yld
12)	3/19/03	91	EDH3	92.7700s	7.2300	7.296	7.449	7.449			Daytype ACT/ACT
13)	6/18/03	91	EDM3	92.7700s	7.2300	7.299	7.454	7.464			Frequency \$
14)	9/17/03	91	EDU3	92.7650s	7.2350	7.332	7.468	7.482			m-mkt yield

Start	End	days	years	Front	stub	Back	stub	Bond yield	ACT/360
4/ 3/00	6/20/01	443	1.21	6.25%	79 days	7.31%	0 days	7.019	7.092
4/ 3/00	6/19/02	807	2.21	6.25%	79 days	7.28%	0 days	7.236	7.586
4/ 3/00	7/ 1/00	89	0.24	6.25%	79 days	6.60%	10 days	6.442	6.297
4/ 3/00	8/ 1/00	120	0.33	6.25%	79 days	6.62%	41 days	6.535	6.406
4/ 3/00	9/ 1/00	151	0.41	6.25%	79 days	6.64%	72 days	6.590	6.477

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 1646-66-0 30-Mar-00 16:19:38



214

# APPENDIX 9

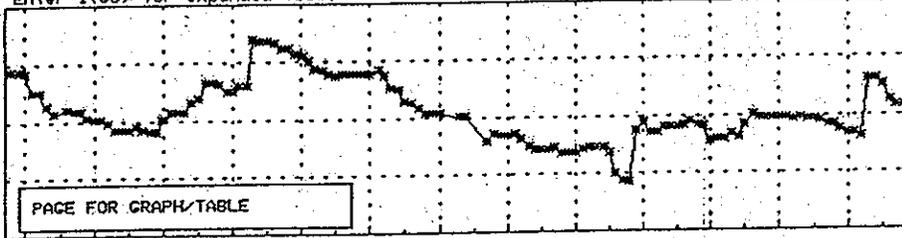
7  
23

## 1 YEAR LIBOR - PRIME SPREAD

<HELP> for explanation, <MENU> for similar functions. DG48 Corp HS  
 USE (HDF) TO MODIFY YOUR HISTORICAL DEFAULTS  
**HISTORICAL YIELD SPREAD** PAGE 1 OF 7  
 SELL LIBOR-USD FIX 12 MONTH Ask (6.960 )  
 BUY PRIME USA Mid (9.000 )

RANGE 9/29/99 TO 3/29/00	SELL BUY
PERIOD 0 (D-W-M-Q-Y)	TIME FRAME (N=NY, F=NY 9-3, L=LONDON, T=TOKYO)
SPREAD Y P=PRICE OR E=P/E	VALUE C C (O=OPEN, H=HIGH, L=LOW, C=CLOSE)
YIELD C CONV/SEMI-ANN/ANN	MARKET A M (B=BID, A=ASK, M=MID)

Enter 1<GO> for expanded view.



Enter 2<GO> for expanded view.

STATISTICS	
MEAN (AVE)	202.63
MEDIAN	199.63
SDev	13.5837
OFF AVE BPS	1.3661
OFF AVE SDev	.1006
PERCENTILE	62.7

PAGE FOR GRAPH/TABLE

15 29 12NOV 26 10DEC 24 7JAN00 21 4FEB 18 3MAR 17

SUMMARY		OCCURRENCES	
CURRENT	204	171.00 TO	183.60 3= 2.4%
AVERAGE	202.63	183.60 TO	196.20 43=34.1%
OFF AVE	1.3661	196.20 TO	208.80 42=33.3%
HIGHEST	234 ON 11/17/99	208.80 TO	221.40 27=21.4%
LOWEST	171 ON 2/ 2/00	221.40 TO	234.00 11= 8.7%

NORM U-CAL: VALUATION (BUY) (SELL) 0 25 50 75 100  
 Copyright 1999 BLOOMBERG L.P. Frankfurt: 169-920410 Hong Kong: 2-977-6000 London: 171-330-7500 New York: 212-318-2000  
 Princeton: 609-279-3000 Singapore: 226-3000 Sydney: 2-9777-8686 Tokyo: 3-3201-8900 Sao Paulo: 11-3048-4300  
 1646-66-1 29-Mar-00 8:14:19



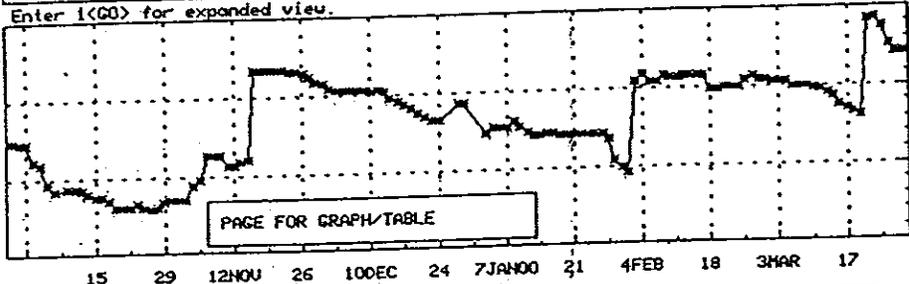
APPENDIX 8

23

6 MONTHS LIBOR - PRIME SPREAD

<HELP> for explanation, <MENU> for similar functions. DG48 Corp HS  
 USE (HDF) TO MODIFY YOUR HISTORICAL DEFAULTS  
**HISTORICAL YIELD SPREAD** PAGE 1 OF 7  
 SELL LIBOR-USD FIX 6 MONTH. Ask (6.520 )  
 BUY PRIME USA Mid (9.000 )

RANGE 9/29/99 TO 3/29/00	SELL BUY
PERIOD D (D-W-M-Q-Y)	TIME FRAME (N=NY, F=NY 9-3, L=LONDON, T=TOKYO)
SPREAD Y P=PRICE OR E=P/E	VALUE C C (O=OPEN, H=HIGH, L=LOW, C=CLOSE)
YIELD C CONV/SEMI-ANN/ANN	MARKET A M (B=BID, A=ASK, M=MID)



Enter 2(GO) for expanded view.

STATISTICS	
MEAN (AVE)	232.85
MEDIAN	239
SDev	11.369
OFF AVE BPS	15.1503
OFF AVE SDev	1.3328
PERCENTILE	95.24

SUMMARY		OCCURRENCES	
CURRENT	248	211.00 TO 220.10	24=19.0%
AVERAGE	232.85	220.10 TO 229.20	27=21.4%
OFF AVE	15.1503	229.20 TO 238.30	20=15.9%
HIGHEST	256.5 ON 3/23/00	238.30 TO 247.40	49=38.9%
LOWEST	211 ON 10/27/99	247.40 TO 256.50	6= 4.8%

NORM U-CAL: VALUATION (BUY 1) (SELL 1)  
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 Princeton: 609-279-3000 Singapore: 226-3000 Sydney: 2-9777-8686 Tokyo: 3-3201-8900 Sao Paulo: 11-3048-1500  
 1646-66-1 29-Mar-00 7:50:59



APPENDIX 7

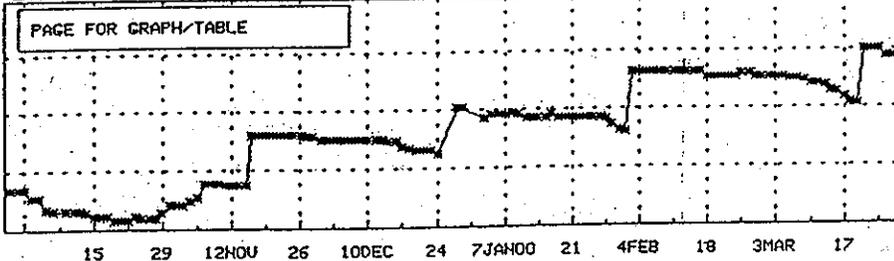
23

3 MONTH LIBOR - PRIME SPREAD

<HELP> for explanation, <MENU> for similar functions. DG48 Corp HS  
 USE (HDF) TO MODIFY YOUR HISTORICAL DEFAULTS  
**HISTORICAL YIELD SPREAD** PAGE 1 OF 7  
 SELL LIBOR:USD FIX 3 MONTH Ask (6.280 )  
 BUY PRIME USA Mid (9.000 )

RANGE 9/29/99 TO 3/29/00	SELL BUY
PERIOD 0 (D-W-M-Q-Y)	TIME FRAME (N=NY, F=NY 9-3, L=LONDON, T=TOKYO)
SPREAD Y P=PRICE OR E=P/E	VALUE C C (O=OPEN, H=HIGH, L=LOW, C=CLOSE)
YIELD C CONV/SEMI-ANN/ANN	MARKET A M (B=BID, A=ASK, M=MID)

Enter 1(GO) for expanded view.



300 Enter 2(GO) for expanded view.

STATISTICS	
MEAN (AVE)	240.14
MEDIAN	240.44
SDev	21.2585
OFF AVE BPS	31.8641
OFF AVE SDev	1.4989
PERCENTILE	95.24

SUMMARY		OCCURRENCES	
CURRENT	272	202.75 TO	217.28 27=21.4%
AVERAGE	240.14	217.28 TO	231.80 8= 6.3%
OFF AVE	31.8641	231.80 TO	246.33 42=33.3%
HIGHEST	275.38 ON 3/22/00	246.33 TO	260.85 17=13.5%
LOWEST	202.75 ON 10/21/99	260.85 TO	275.38 32=25.4%

NORM U-CAL: VALUATION (BUY) (SELL) 0 25 50 75 100  
 Copyright 1999 BLOOMBERG L.P. Frankfurt: 69-920410 Hong Kong: 2-977-6000 London: 171-330-7500 New York: 212-318-2000  
 Princeton: 609-279-3000 Singapore: 226-3000 Sydney: 2-977-8686 Tokyo: 3-3201-8900 Sao Paulo: 11-3048-4500  
 1646-66-1 29-Mar-00 8:09:40



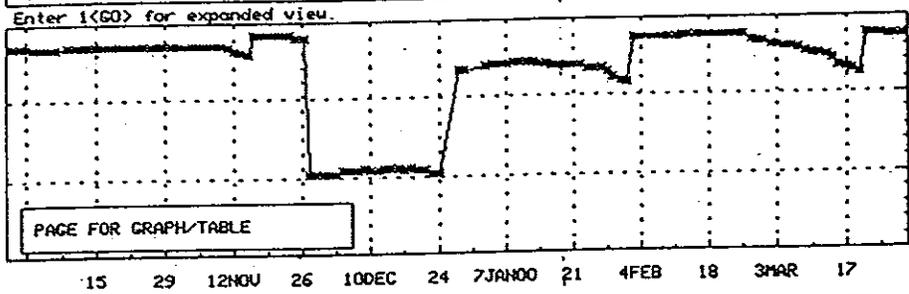
APPENDIX 6

23

1 MONTH LIBOR - PRIME SPREAD

<HELP> for explanation, <MENU> for similar functions. DG48 Corp HS  
 USE (HDF) TO MODIFY YOUR HISTORICAL DEFAULTS  
**HISTORICAL YIELD SPREAD** PAGE 1 OF 7  
 SELL LIBOR-USD FIX 1 MONTH Ask (6.133 )  
 BUY PRIME USA Mid (9.000 )

RANGE 9/29/99 TO 3/29/00  
 PERIOD 0 (D-W-M-Q-Y)  
 SPREAD Y P=PRICE OR E=P/E  
 YIELD C CONV/SEMI-ANN/ANN  
 TIME FRAME (N=NY, F=NY 9-3, L=LONDON, T=TOKYO)  
 VALUE C C (O=OPEN, H=HIGH, L=LOW, C=CLOSE)  
 MARKET A M (B=BID, A=ASK, M=MID)



Enter 2(GO) for expanded view.

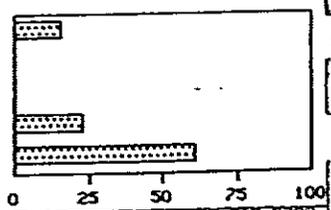
STATISTICS	
MEAN (AVE)	267.77
MEDIAN	282.5
SDev	29.1662
OFF AVE BPS	18.9828
OFF AVE SDev	.6501
PERCENTILE	80.95

SUMMARY

CURRENT	286.75
AVERAGE	267.77
OFF AVE	18.9828
HIGHEST	291.13 ON 11/22/99
LOWEST	201 ON 12/24/99

OCCURRENCES

201.00 TO 219.03	20=15.9%
219.03 TO 237.05	= .0%
237.05 TO 255.08	= .0%
255.08 TO 273.10	29=23.0%
273.10 TO 291.13	77=61.1%



NORM U-CAL: VALUATION (BUY) (SELL)  
 Copyright 1999 BLOOMBERG L.P. Frankfurt: 69-920-110 Hong Kong: 2-977-6000 London: 171-330-7500 New York: 212-318-2000  
 Princeton: 609-279-3000 Singapore: 226-3000 Sydney: 2-9777-8686 Tokyo: 3-3201-8900 Sao Paulo: 11-3048-4500  
 1646-66-1 29-Mar-00 8:19:26



APPENDIX 5

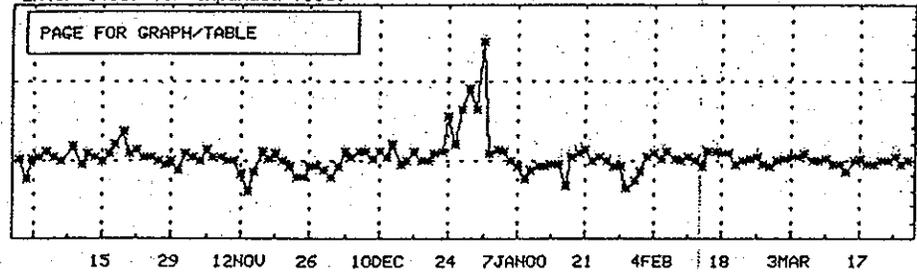
7  
23

FED FUNDS - PRIME SPREAD

<HELP> for explanation, <MENU> for similar functions. DG48 Corp HS  
 USE (HDF) TO MODIFY YOUR HISTORICAL DEFAULTS  
**HISTORICAL YIELD SPREAD** PAGE 1 OF 7  
 SELL FED EFFECTIVE Mid (6.020 )  
 BUY PRIME USA Mid (9.000 )

RANGE <b>9/29/99</b> TO <b>3/28/00</b>	SELL BUY
PERIOD <b>0</b> (D-W-M-Q-Y)	TIME FRAME (N=NY, F=NY 9-3, L=LONDON, T=TOKYO)
SPREAD Y P=PRICE OR E=P/E	VALUE <b>C</b> (O=OPEN, H=HIGH, L=LOW, C=CLOSE)
YIELD <b>C</b> CONV/SEMI-ANN/ANN	MARKET <b>M M</b> (B=BID, A=ASK, M=MID)

Enter 1<GO> for expanded view.



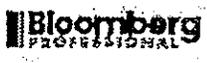
Enter 2<GO> for expanded view.

STATISTICS	
MEAN (AVE)	301.48
MEDIAN	299
SDev	20.9129
OFF AVE BPS	-3.4806
OFF AVE SDev	-.1664
PERCENTILE	40.31

SUMMARY		OCCURRENCES	
LAST	298	261.00 TO	299.00 71=55.0%
AVERAGE	301.48	299.00 TO	337.00 53=41.1%
OFF AVE	-3.4806	337.00 TO	375.00 3= 2.3%
HIGHEST	451 ON 12/31/99	375.00 TO	413.00 1= .8%
LOWEST	261 ON 11/15/99	413.00 TO	451.00 1= .8%

NORM U-CAL: VALUATION (BUY  1) (SELL  1) 0 25 50 75 100

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 Princeton: 609-279-3000 Singapore: 226-3000 Sydney: 2-9777-8686 Tokyo: 3-3201-8900 Sao Paulo: 11-3048-4500  
 1646-66-1 29-Mar-00 9:03:45



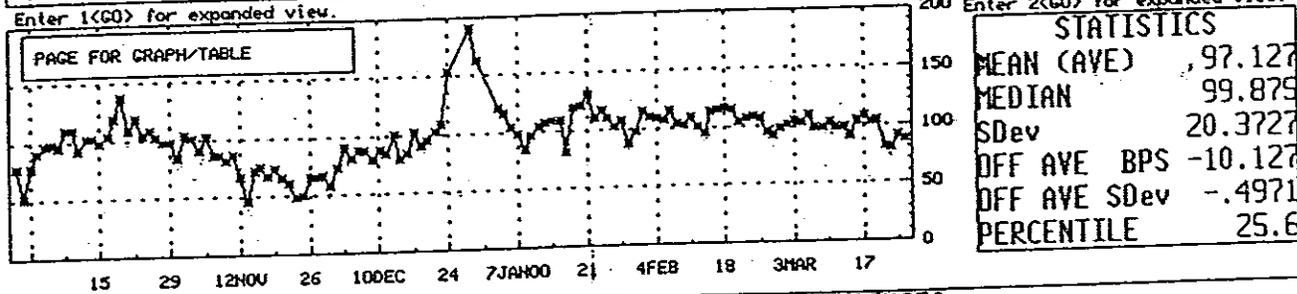
APPENDIX 4

23

FED FUNDS - 1YR LIBOR SPREAD

<HELP> for explanation, <MENU> for similar functions. DG48 Corp HS  
 Screen Printed  
**HISTORICAL YIELD SPREAD** PAGE 1 OF 7  
 SELL FED EFFECTIVE Mid (6.070 )  
 BUY LIBOR-USD FIX 12 MONTH Ask (6.960 )

RANGE 9/29/99 TO 3/27/00 TIME FRAME (N=NY, F=NY 9-3, L=LONDON, T=TOKYO)  
 PERIOD 0 (D-W-M-Q-Y) VALUE C (O=OPEN, H=HIGH, L=LOW, C=CLOSE)  
 SPREAD Y P=PRICE OR E=P/E MARKET M A (B=BID, A=ASK, M=MID)  
 YIELD C CONV/SEMI-ANN/ANN



SUMMARY		OCCURRENCES		
LAST	87	46.25 TO	74.80	15=12.0%
AVERAGE	97.127	74.80 TO	103.35	62=49.6%
OFF AVE	-10.127	103.35 TO	131.90	44=35.2%
HIGHEST	189 ON 12/29/99	131.90 TO	160.45	2= 1.6%
LOWEST	46.25 ON 11/15/99	160.45 TO	189.00	2= 1.6%

NORM U-CAL: VALUATION (BUY X 1) (SELL X 1)  
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 1646-66-1 29-Mar-00 8:13:36



APPENDIX 3

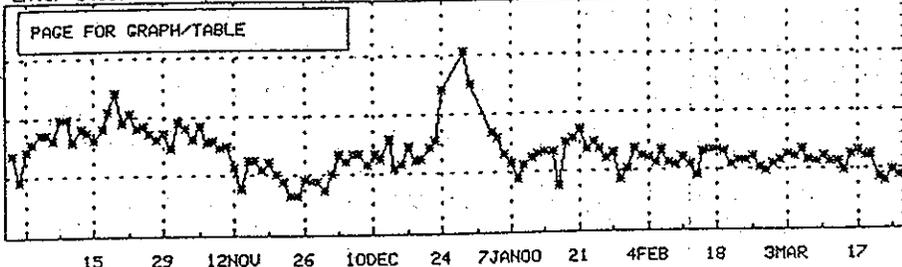
23

FED FUNDS - 6m LIBOR SPREAD

<HELP> for explanation, <MENU> for similar functions. DG48 Corp HS  
 USE (HDF) TO MODIFY YOUR HISTORICAL DEFAULTS  
**HISTORICAL YIELD SPREAD** PAGE 1 OF 7  
 SELL FED EFFECTIVE Mid (6.070 )  
 BUY LIBOR-USD FIX 6 MONTH Ask (6.520 )

RANGE 9/29/99 TO 3/27/00	SELL BUY
PERIOD 0 (D-W-M-Q-Y)	TIME FRAME (N=NY, F=NY 9-3, L=LONDON, T=TOKYO)
SPREAD Y P=PRICE OR E=P/E	VALUE 0 C (O=OPEN, H=HIGH, L=LOW, C=CLOSE)
YIELD C CONV/SEMI-ANN/ANN	MARKET M A (B=BID, A=ASK, M=MID)

Enter 1<GO> for expanded view.



200 Enter 2<GO> for expanded view.

STATISTICS	
MEAN (AVE)	67.2735
MEDIAN	64
SDev	19.2595
OFF AVE BPS	-24.024
OFF AVE SDev	-1.247
PERCENTILE	6.4

SUMMARY		OCCURRENCES	
LAST	43.25	31.63 TO	55.70 30=24.0%
AVERAGE	67.2735	55.70 TO	79.78 68=54.4%
OFF AVE	-24.024	79.78 TO	103.85 22=17.6%
HIGHEST	152 ON 12/29/99	103.85 TO	127.93 4= 3.2%
LOWEST	31.625 ON 11/24/99	127.93 TO	152.00 1= .8%

NORM U-CAL: VALUATION (BUY 3 1) (SELL 3 1) 0 25 50 75 100  
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 Princeton: 609-279-3000 Singapore: 226-3000 Sydney: 2-9777-8686 Tokyo: 3-3201-8900 Sao Paulo: 11-3048-4500  
 1646-66-1 29-Mar-00 7:52:41



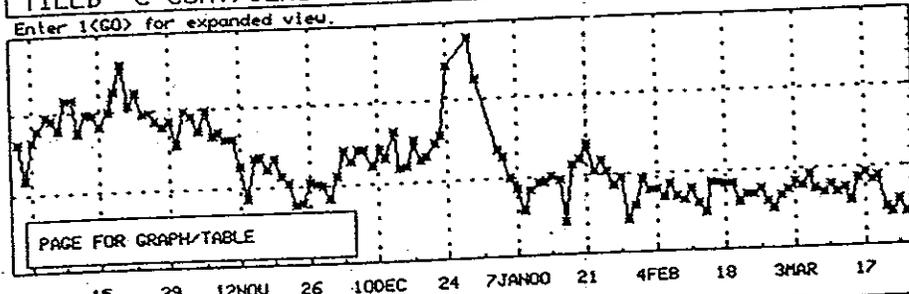
23

APPENDIX 2

FED TENDERS - 3M LIBOR SPREAD

<HELP> for explanation, <MENU> for similar functions. DG48 Corp HS  
 USE (HDF) TO MODIFY YOUR HISTORICAL DEFAULTS  
**HISTORICAL YIELD SPREAD** PAGE 1 OF 7  
 SELL FED EFFECTIVE Mid (6.070)  
 BUY LIBOR-USD FIX 3 MONTH Ask (6.280)

RANGE 9/29/99 TO 3/27/00  
 PERIOD D (D-W-M-Q-Y)  
 SPREAD Y P=PRICE OR E=P/E  
 YIELD C CONV/SEMI-ANN/ANN  
 TIME FRAME (N=NY, F=NY 9-3, L=LONDON, T=TOKYO)  
 VALUE C (O=OPEN, H=HIGH, L=LOW, C=CLOSE)  
 MARKET M A (B=BID, A=ASK, M=MID)

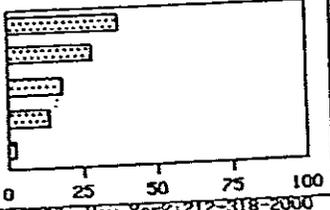


Enter 2(GO) for expanded view.

STATISTICS	
MEAN (AVE)	60.388
MEDIAN	54.129
SDev	26.8853
OFF AVE BPS	-39.388
OFF AVE SDev	-1.469
PERCENTILE	2.4

SUMMARY	
LAST	21
AVERAGE	60.388
OFF AVE	-39.388
HIGHEST	139.37 ON 12/29/99
LOWEST	20.5 ON 1/18/00

OCCURRENCES		
20.50 TO	44.27	47=37.6%
44.27 TO	68.05	35=28.0%
68.05 TO	91.82	23=18.4%
91.82 TO	115.60	17=13.6%
115.60 TO	139.37	3=2.4%



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 Princeton: 609-279-3000 Singapore: 226-3000 Sydney: 2-9777-8686 Tokyo: 3-3201-8900 Sao Paulo: 11-3048-4500  
 1646-66-1 29-Mar-00 7:56:53



APPENDIX

1

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FOMC

DG48n M-Mkt FOMC

### FOMC ANNOUNCEMENT DATES

Historical Change In Monetary Policy and Yield Curve Reaction							
2000 FOMC Schedule of Meetings				1999 FOMC Schedule of Meetings			
Announcement	Fed Fund Rate	Fed Bias	Time	Announcement	Fed Fund Rate	Fed Bias	Time
Start of 2000	5.50%	Neutral	****	Start of 1999	4.75%	*****	****
Feb 02 2000	5.75%	Inflation	2:15	Feb 03 1999	4.75%	Neutral	2:15
Mar 21 2000	6.00%	Inflation	2:15	Mar 30 1999	4.75%	Neutral	2:15
May 16 2000	-----	---	--	May 18 1999	4.75%	Tightening	2:15
June 28 2000	-----	---	--	Jun 30 1999	5.00%	Neutral	2:15
Aug 22 2000	-----	---	--	Aug 24 1999	5.25%	Neutral	2:15
Oct 03 2000	-----	---	--	Oct 05 1999	5.25%	Tightening	2:15
Nov 15 2000	-----	---	--	Nov 16 1999	5.50%	Neutral	2:15
Dec 19 2000	-----	---	--	Dec 21 1999	5.50%	Neutral	2:15

#### 20) US Treasuries Daily Yield Curve Changes

#### FOMC Schedule and Full Text Release

- 21) 1996-2000 RELEASES
- 22) CHANGE IN MONETARY POLICY 1994-1998
- 23) FED FUNDS RATE CHANGES 1985-1993
- 24) FEDERAL RESERVE <FOMC> WEB SITE
- 25) NI FED - ALL FED NEWS
- 26) FEDERAL RESERVE <GO>
- 27) FED BIAS CHART W/ DISCOUNT RATE
- 28) FEDU - TOP FED NEWS

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 Princeton: 609-279-3000 Singapore: 226-3000 Sydney: 2-977-8686 Tokyo: 3-3201-8900 Sao Paulo: 11-3048-4500  
 1646-66-1 29-Mar-00 8:27:10



AIB's Current Funding Analysis  
28 March, 2000  
Page Two

23

A brief examination of funding spreads (appendixes 2-4) underlines the trend of compressing spreads, which becomes even more ominous, considering the likely aggressive shift in the Fed policy making method in a very short time span. The logical inference is that AIB should either substantially increase consumer loans spreads over Libor, or refrain from offering 6 months and 1 year Libor adjustable rates, resorting to 3 months Libor resets (which would be a more managing risk, albeit not highly attractive). If this compromise would not be appealing to our clients, we believe that a better alternative is actually available, namely, by changing the index from Libor to prime.

A good look at the obvious implications suggested by interbank-prime spreads (appendix 5-9) leads us to believe that prime appears the most desirable index to adopt. This choice can stabilize funding cost pressures, and risk management, and, at the same time offer our preferred customers more palatable rates. The following practical application supports this approach. A Libor indexed consumer loan at, let's say, 150 b.p. spread would yield 8.02 pct. (6 months Libor) and 8.48 pct. (1 year Libor). The obvious risk is that by June 28, the 6 months Libor loan base rate could easily be bellow funding cost, and by August 22, same could happen with the 1 year Libor loan. By offering prime-100/125 b.p. loans, the rates will be more attractive for the Bank's clients, and AIB Treasury would be in a position to secure 150 b.p. spread over the funding cost, even under rapidly altering monetary policy constraints, or when/if the short-term yield curve will drastically invert towards the end of the cycle.

Please be so kind to afford us of your thoughts on the matter. Your feedback will be greatly appreciated.

Attachments

224

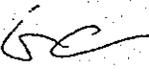


23

## INTEROFFICE MEMORANDUM

Date : 29 March, 2000

To :  
Executive Vice President  
  
Vice President, Marketing Officer

From : Gheorghe Campeanu  
Treasurer & SVP 

Subject : Current Funding Analysis

---

AIB Treasury's funding function is based on solid and expert analyses and forecasting of the interest rates environment germane to the Bank's business universe! It is imperative that Treasury offers alternative solutions when major changes in the interest rates environment require a more flexible assets/liabilities strategy.

During the last few months, macroeconomic realities, U.S. credit market developments and monetary policy implications have seriously altered the interest rates outlook. We have cautioned that under the circumstances, the F.O.M.C. members will probably be forced to abandon their gradualist monetary policy stance, and adopt a more aggressive posture and resort to 50 b.p. rates hike increments. At this juncture, chances for such a shift in method appear better than even, and (see appendix I) the possibility of an aggregate 75-100 b.p. rates increase through late summer is looming large. Fed funds futures and the Euro futures strip suggest implied forward rates not far below those levels.

AIB should continue to execute its ambitious business plan and to offer high quality service to the Bank's customers, while at the same time insuring that its profit margins are insulated from the adverse funding effects inflicted by a very rapid rise in rates.

We would like to suggest that, while the funding activity is basically limited to the fed funds - 3 months Libor sector (heavily tilted to 7-30 days maturities), AIB has definitely more flexibility in choosing the pricing indexes on the assets side (individual consumer loans, in particular).

3

INC.

23

TO: James P. Steele DEPT: M.D. & President  
FROM: Gheorghe Campeanu DEPT: Treasurer  
SUBJECT: Funding Needs DATE: 27 July 1992

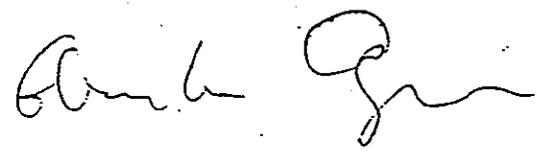
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Based on the ADIB Balance Sheet of July 24, 1992. funded assets totalled US\$ 379 million. (excluding securities on repo), out of which loans represented US\$ 311 million.

We have currently outstanding borrowings from NBAD, H.O. a total of US\$ 233 million.

As ADIB is at present running substantially under budget in outstanding loans, if the bank were to reach its budget targets of 500 million dollars in loans within this year, a simple computation indicates that our funding needs from Head Office would rise to around US\$ 500 million (we discounted current outstanding borrowings from ADIA, Intelsat, etc. which are not available most of the times).

Yours,



INC.

23

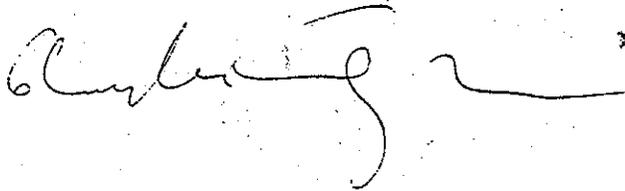
TO: DEPT: M.D. & President  
FROM: Gheorghe Campeanu DEPT: Treasurer  
SUBJECT: Interest Rates Forecast DATE: 21 July 1992

---

In response to HIB's memo dated July 15, regarding CCC guarantees, I would like to offer my view on future interest rates (specifically the 3 and 6 months LIBOR universe).

- Second half of 1992 3 1/4 - 3 1/2 pct
- First half of 1993 3 1/2 - 4.0 pct
- Mid 1993 - Mid 1994 4.0 - 4 1/2 pct
- Mid 1994 - Mid 1996 4 1/2 - 5 1/2 pct

Always the more conservative. I believe the above forecast may be erring a bit on the high side.



TREASURY RATE INPUT SHEET

DATE: 22 (3)

*Corp* 3 RATE BASE RATE CODES

BASE RATE CODE	DESCRIPTION	RATE	
01	ADIR PRIME	_____	
02	Q/M COST	_____	
03	FED EFF. RATE	_____	FOR VALUE _____
04	1 MONTH LIBOR	_____	
05	Q/M FED FUNDS	_____	
06	BOOK COST	_____	
07	ADIR CALL RATE	_____	OR RATE _____

PREPARED BY: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

ENTERED BY: \_\_\_\_\_

*RETAIL* BASE RATE CODES

BASE RATE CODE	DESCRIPTION	RATE	
01	ADIR PRIME	_____	
02	Q/M COST	_____	
03	FED EFF. RATE	_____	FOR VALUE _____
04	1 MONTH LIBOR	_____	
05	Q/M FED FUNDS	_____	
06	BOOK COST	_____	
07	ADIR CALL RATE	_____	

ENTERED BY: \_\_\_\_\_

FORM AGIS408 14 SEP 88

REASURY RATE REPORT

DATE:

22 6

O/N FED FUNDS

O/N GOV RPS

COMMERCIAL PAPER

DOMESTIC CD'S

US T-BILLS

3 MONTHS

6 MONTHS

1 YEAR

1 MONTH

2 MONTHS

3 MONTHS

6 MONTHS

1 MONTH

2 MONTHS

3 MONTHS

6 MONTHS

US T-NOTES

2 YEARS

5 YEARS

7 YEARS

10 YEARS

30 YEARS

LIBOR

ADIB

1 MONTH

2 MONTHS

3 MONTHS

6 MONTHS

1 YEAR

OTHER RATES

ADIB COST OF FUNDS

ADIB CALL RATE

FED EFFECTIVE RATE

PROCUREMENT

OFFICE RATE (EPO)

PRIME 8.25 ADIB PRIME 8.25 BROKER LOAN 7.00 DISCOUNT RATE 5.00

EXCHANGE RATES

GOLD AM

	MARKET	CUSTOMER	MARKET	CUSTOMER
STG			CAO	
DMK			ITL	
SNF				
YEN				
OH	3.6725	.2723		
SR	3.7500	.2667		
BD	.3770	2.6525		
HLG	1.5530	.6440		
FF				
KWD	.2875	3.3613		

COMMENTARY

-Overnight Fed Funds opened at  
and closed at on  
-Eurodollar rates

(5) (2)

DAILY STATUS REPORT  
ACCOUNTING DIVISION

CLOSE OF BUSINESS: 7/31/00

I. INCOME STATEMENT FOR THE CURRENT MONTH TO DATE:

	7/31/00	7/28/00	NET CHANGE
<b>INCOME</b>			
Net Interest Income:	476,101	429,776	46,325
Fees:	200,119	184,879	15,240
Recoveries:	0	0	0
Foreign Exchange Income:	979	1,048	(69)
<b>EXPENSE</b>			
Operating Expense:	74,654	73,534	1,120
Staff Cost:	112,840	112,840	0
Performance Award/Bonus:	10,000	10,000	0
Depreciation/Operational Costs:	5,739	5,739	0
Handling charges:	6,690	6,690	0
Management Charges:	32,167	32,167	0
Taxes:	15,000	10,000	5,000
Provision for BBD:	0	0	0
<b>NET INCOME</b>	\$ 420,109	\$ 364,733	55,376

(1) (2)

Consolidated Average Balance Sheet  
(000's Omitted)  
31/07/00 Through 31/07/00

ASSETS:		LIABILITIES:	
A0100 Cash	215	L340D Demand Deposits	
A0200 Federal Reserve Bank	1,112	L35DD Government	22,411
A03DB Due from Banks		L36DD Other Emirates & Federal	6,160
A04DB Banks - Nostro	105	L37DD Other Governments	31
A05DB Banks - Time	0	L38DD Public Sector	18
A06DB Interbranch	0	L39DD Private Sector	686
A07DB HO Treasury	46	L40DD Total Demand Deposits ✓	29,305
A08DB Total Due From Banks	151	L41CA Call Accounts	
A0900 Federal Funds Sold	0	L42CA Government	703
A10FR Floating Rate Notes		L43CA Private Sector	1,363
A11FR FRNs - Banks	53,895	L44CA Margin Accounts	252
A12FR FRNs - Others	52,992	L45CA Total Call Accounts	2,318
A13FR Total Floating Rate Notes	116,887	L46DT Deposits - Time	
A14LN Loans		L47DT Head Office	157,000
A15LN Banks	34,089	L48DT Banks	20,000
A16LN Government	1,941	L49DT ADIA	0
A17LN Corporate	140,383	L50DT Government	0
A18LN Commercial Real Estate	1,606	L51DT Private Sector	515
A19LN Personal	135	L52DT Interbranch	66,091
A20LN Personal Real Estate	1,504	L53DT Total Time Deposits	243,606
A21LN Overdraft - Government	6,112	L5400 Federal Funds Purchased	0
A22LN Overdraft - Corporate	10	L5500 Accrued Interest Payable	781
A23LN Overdraft - Individual	0	L5600 Acceptances	406
A24LN Bills Discounted	915	L5700 Other Liabilities	817
A25LN Total Loans	186,696	L5800 TOTAL LIABILITIES	277,234
A2600 Allowance for Loan Loss	(7,512)		
A2700 Non-Performing Loans	9,796	CAPITAL:	
A2800 Accrued Interest Receivable	1,351	CS900 Capital Stock	20,000
A2900 Premises & Equipment	93	CS080 Capital Surplus	30,000
A3000 Customer Liab. on Acceptance	406	CS100 Unrealized Loss Securities	0
A3100 Real Estate Owned	0	CS200 Retained Earnings	(17,136)
A3200 Other Assets	403	CS300 Total Shareholders Equity	32,864
A3300 TOTAL ASSETS	310,098		
		TOTAL LIABILITIES & SHAREHOLDERS EQUITY	310,098
		L/C CONTINGENT LIABILITIES & RISK PARTICIPATIONS	639,666

20

LIS-#	R/O DATE	CYC	NOTE RATE	SPREAD RATE	BASE RATE	FIN. MAT. DATE	OUTSTANDING	Days Mat
<b>TOTAL FRN PORTFOLIO</b>							\$116,991,543.02	29
<b>TOTAL LIBOR &amp; FRN PORTFOLIO</b>							\$298,292,072.25	33
<b>N/A PORTFOLIO</b>							\$9,795,738.20	100
96004-006	PAPILLION ISL TRUST (P-2)	N/A	8/31/00	30	11.50000	8/31/00	\$1,395,738.20	31
761-234	DAEWOO INTL. CORP	N/A	11/20/00	182	9.75000	11/20/00	\$8,400,000.00	112
<b>TOTAL N/A PORTFOLIO</b>							\$9,795,738.20	100

*NON-PERFORMING LOANS*

~~Dollar weighted average maturity days for loan portfolio~~

4

LIS-#			R/O DATE	CYC	NOTE RATE	SPREAD RATE	BASE RATE	FIN. MAT. DATE	OUTSTANDING	Days Mat.
99077-3	HANA BANK	BANK	1/16/01	183	9.16400	2.2500	6.914	1/4/04		
TBA-31	NBAD-TALAAAT HARB	L/C	1/19/01	247	9.03608	1.0000	8.03608	8/1/03	\$3,000,000.00	1
TBA-32	NBAD-TALAAAT HARB	L/C	3/27/01	250	9.08203	1.0000	8.08203	3/27/01	\$359,525.31	1
									\$393,476.70	239

TOTAL LIBOR PORTFOLIO 7.25161 0.5765 6.6751 \$181,300,529.23

FRN PORTFOLIO-Banks

27754	J.P. Morgan & Co. inc.	FRN	8/1/00	29	6.79500	0.1500	6.645	4/1/04	\$10,000,000.00	
27774	Citicorp	FRN	8/14/00	33	6.78000	0.1500	6.63	11/12/02	\$5,000,000.00	14
27642	Chase Manhattan Corp.	FRN	8/14/00	91	6.87000	0.1500	6.72	2/13/03	\$5,000,000.00	1
27641	BankOne Corp FRN	FRN	8/15/00	92	6.84500	0.1250	6.72	5/15/01	\$5,000,000.00	1
27790	US Bank NA -Minn	FRN	8/16/00	28	6.78000	0.1500	6.63	12/18/02	\$5,000,000.00	16
27719	Wells Fargo Co. FRN	FRN	9/15/00	92	7.01000	0.2000	6.81	9/15/01	\$5,000,000.00	40
7012	Bank of America FRN [S3.1 CED]	FRN	9/20/00	91	7.00188	0.2400	6.76188	5/25/01	\$3,100,000.00	51
27735	Bank of America FRN	FRN	9/20/00	91	7.00188	0.2400	6.76188	5/25/01	\$1,900,000.00	51
27743	Bank America Corp	FRN	9/25/00	91	6.83500	0.0625	6.7725	3/24/03	\$5,000,000.00	56
27785	Fleet Boston Financial	FRN	10/14/00	94	6.88125	0.1500	6.73125	7/14/03	\$5,000,000.00	75
27729	Midland Bank PLC	FRN	12/19/00	185	7.10000	0.1000	7	6/29/49	\$2,000,000.00	141
27784	Barclays' Bank Ltd.	FRN	1/16/01	186	7.09750	0.1875	6.91	7/29/49	\$2,000,000.00	168

TOTAL FRN PORTFOLIO-Banks 6.87705 0.1521 6.725 \$54,000,000.00

FRN PORTFOLIO-Others (CORPORATE)

12691-373	Ashland Inc.	FRN	8/14/00	91	7.32000	0.6000	6.72	2/14/03	\$20,000,000.00	14
30610-01	TRANSOCEAN SEDCO FOREX	CORP	8/24/00	43	7.24500	0.8000	6.445	5/24/03	\$12,499,743.02	24
TBA-02	Universal Corporation	CORP	8/30/00	92	7.77750	0.9500	6.8275	2/28/03	\$10,000,000.00	30
97037-13	Ford Motor Credit	CORP	9/15/00	92	7.01000	0.2000	6.81	12/20/02	\$5,000,000.00	46
0019-01	GOODYEAR TIRE & RUBBER	CORP	9/15/00	59	7.46020	0.8000	6.6602	5/13/03	\$10,000,000.00	46
99074-03	Maine Investment Limited	FRN	9/18/00	91	7.46500	0.7500	6.715	12/17/04	\$5,491,800.00	49

TOTAL FRN PORTFOLIO-Others 7.38804 0.7083 6.680 \$62,991,543.02

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LIS-#			R/O DATE	CYC	NOTE RATE	SPREAD RATE	BASE RATE	FIN. MAT. DATE	OUTSTANDING	Days Mat.
9200-101	NIPSCO	CORP	8/4/00	29	6.76000	0.1250	6.635	8/4/00	\$10,000,000.00	4
99072-42	WESTINGHOUSE ELECTRIC	CORP	8/4/00	30	7.25000	0.6000	6.65	12/13/02	\$1,250,000.00	4
97058-148	WASTE MANAGEMENT	CORP	8/9/00	30	7.68750	1.0000	6.6875	8/7/02	\$375,000.00	9
30996-30	COASTAL CORPORATION	CORP	8/10/00	27	6.85000	0.2000	6.65	8/10/00	\$5,000,000.00	10
97058-149	WASTE MANAGEMENT	CORP	8/14/00	31	7.62875	1.0000	6.62875	8/7/02	\$780,000.00	14
99072-43	WESTINGHOUSE ELECTRIC	CORP	8/14/00	31	7.23000	0.6000	6.63	12/13/02	\$500,000.00	14
TBA-06	DELTA AIRLINES, INC.	CORP	8/15/00	92	7.59500	0.8750	6.72	3/22/01	\$18,000,000.00	15
TBA-06	BRAZOS OFFICE HOLDINGS	CORP	8/17/00	31	6.98750	0.3000	6.6875	5/14/02	\$20,000,000.00	17
97058-150	WASTE MANAGEMENT	CORP	8/18/00	30	7.68750	1.0000	6.6875	8/7/02	\$100,000.00	18
99052-45	COMPUWARE CORPORATION	CORP	8/21/00	32	7.87500	1.2500	6.625	8/1/03	\$500,000.00	21
95450-71	MERIT REALTY	BANK	8/21/00	32	7.13000	0.5000	6.63	1/19/06	\$31,111,711.00	21
97058-152	WASTE MANAGEMENT	CORP	8/21/00	32	7.68750	1.0000	6.6875	8/7/02	\$150,000.00	21
99072-44	WESTINGHOUSE ELECTRIC	CORP	8/21/00	31	7.23000	0.6000	6.63	12/13/02	\$4,000,000.00	21
97075-156	CONNECTIV INC.	CORP	8/24/00	31	6.95500	0.3250	6.63	2/3/03	\$1,500,000.00	24
95041-86	PUGET SOUND	CORP	8/24/00	27	6.77000	0.1500	6.62	8/24/00	\$10,000,000.00	24
50116-88	Samco	CRE	8/24/00	31	7.87500	1.2544	6.62063	10/23/19	\$140,523.09	24
30371-3	OCCIDENTAL PERMIAN LTD.	CORP	8/25/00	60	7.69875	1.0000	6.69875	4/17/05	\$3,390,928.73	25
99072-45	WESTINGHOUSE ELECTRIC	CORP	8/25/00	30	7.22000	0.6000	6.62	12/13/02	\$4,000,000.00	25
99072-46	WESTINGHOUSE ELECTRIC	CORP	8/29/00	32	7.22000	0.6000	6.62	12/13/02	\$750,000.00	29
96073-45	COS-MAR CO. (int. 115132.34)	CORP	8/31/00	31	6.74500	0.1250	6.62	8/29/01	\$10,000,000.00	31
98050-52	GEORGIA PACIFIC	CORP	8/31/00	31	6.87000	0.2500	6.62	9/29/00	\$10,000,000.00	31
004-08	SOUTHERN ENERGY, INC.	CORP	8/31/00	31	7.49500	0.8750	6.62	10/20/00	\$10,000,000.00	31
99052-32	COMPUWARE CORPORATION	CORP	9/15/00	184	7.62500	1.2500	6.375	8/1/03	\$444,444.44	46
99052-33	COMPUWARE CORPORATION	CORP	9/20/00	184	7.62500	1.2500	6.375	8/1/03	\$1,611,111.11	51
30371-4	OCCIDENTAL PERMIAN LTD.	CORP	9/26/00	92	7.77250	1.0000	6.7725	4/17/05	\$3,045,356.37	57
894-56	REPUBLIC OF TURKEY	GOVT	10/10/00	181	7.13500	0.6250	6.51	10/1/01	\$525,000.05	71
99052-36	COMPUWARE CORPORATION	CORP	10/24/00	183	7.81250	1.2500	6.5625	8/1/03	\$555,555.56	85
30371-3	OCCIDENTAL PERMIAN LTD.	CORP	10/26/00	92	7.71375	1.0000	6.71375	4/17/05	\$3,110,151.19	87
82-64	KINGDOM OF MOROCCO	GOVT	11/9/00	181	7.75000	0.8125	6.9375	1/2/09	\$1,362,849.22	101
99052-39	COMPUWARE CORPORATION	CORP	11/13/00	185	8.18750	1.2500	6.9375	8/1/03	\$111,111.11	105
99052-41	COMPUWARE CORPORATION	CORP	11/30/00	184	8.31250	1.2500	7.0625	8/1/03	\$833,333.33	122
TBA-02	WILLIAMS COMPANY	CORP	12/14/00	183	8.00000	1.0000	7	4/7/03	\$3,750,000.00	136
99052-44	COMPUWARE CORPORATION	CORP	12/19/00	183	8.18750	1.2500	6.9375	8/1/03	\$444,444.44	141
TBA-03	WILLIAMS COMPANY	CORP	12/27/00	184	7.94000	1.0000	6.94	4/7/03	\$2,500,000.00	149
9219-17	Gov't of Egypt (118,153.84-63,475.48)	GOVT	1/3/01	184	5.42500	0.3750	5.05	1/2/00	\$54,678.36	156
TBA-04	WILLIAMS COMPANY	CORP	1/12/01	184	7.90000	1.0000	6.9	7/12/03	\$3,750,000.00	165

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\$181,300,529.23 6.675% 0.58% 7.25161 TOTAL LOAN and SPREAD  
 \$62,991,543.02 6.680% 0.71% 7.38804 TOTAL FRN and SPREAD 0.70833

BOOK COST 6.629  
 LIBOR-1 MO. 6.6206  
 DATE: 31-Jul-00

LOAN REPORT

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LIS-#			R/O DATE	CYC	FINAL			FIN. MAT. DATE	OUTSTANDING
					NOTE RATE	SPREAD RATE	BASE RATE		
30200-69	Abed, Obaid Humaid Bin	P	8/1/00	31	8.37500	1.7544	6.62063	3/8/02	\$10,775.70
31165-89	Abdulrahman, Hassan	PRE	8/1/00	30	8.12500	1.5044	6.62063	9/1/04	\$179,228.11
31557-69	Ahmed, Ibrahim A.	P	8/1/00	31	7.6250	1.0044	6.62063	4/1/02	\$716.01
30834-69	Al Alawi, Ahmed Ali Hassan	P	8/1/00	31	7.7500	1.1294	6.62063	7/1/03	\$16,016.29
32048-69	Al Hameli, Abdulla	P	8/1/00	31	8.0000	1.3794	6.62063	4/1/02	\$11,490.17
30763-69	Al Junaibi, Hamoud Abdulla	P	8/1/00	31	7.0000	0.3794	6.62063	7/1/03	\$17,816.00
31940-89	Al Mazrooci, Salem	PRE	8/1/00	31	7.75000	1.1294	6.62063	8/1/12	\$377,809.69
30594-89	Al Mchairbi, Mohammed	PRE	8/1/00	0	8.12500	1.5044	6.62063	3/1/05	\$167,793.91
31487-69	Al Muhari, Eissa	P	8/1/00	31	8.00000	1.3794	6.62063	7/1/01	\$12,060.97
30219-69	Al Naqbi, Ali Salem	P	8/1/00	31	8.25000	1.6294	6.62063	7/1/01	\$2,129.73
31003-69	Al Suwaidi, Mohamed H.	P	8/1/00	31	8.50000	1.8794	6.62063	1/1/00	\$3,734.84
31717-89	Alzaabi, Saeed Rashed O. Saif	PRE	8/1/00	31	7.75000	1.1294	6.62063	11/1/04	\$146,849.66
46252-89	Camel-Toueg, Karim	PRE	8/1/00	31	7.75000	1.1294	6.62063	11/1/19	\$119,909.37
50394-88	Cathedral Tower	CRE	8/1/00	31	6.37500	-0.2456	6.62063	8/1/29	\$153,833.07
50848-88	Cranstal Woodbridge	CRE	8/1/00	31	10.50000	3.8794	6.62063	5/2/00	\$492,130.13
50027-88	EMB. UAE MILITARY ATTACHE	CRE	8/1/00	31	8.00000	1.3794	6.62063	1/1/30	\$250,000.00
30139-69	Fuad, Hisham Nasrat	P	8/1/00	31	8.0000	1.3794	6.62063	7/1/03	\$1,515.80
51632-69	Hamad H Al -Habsi	P	8/1/00	31	7.0000	0.3794	6.62063	7/1/03	\$18,783.44
50278-90	Hegazy, Ibrahim	PRE	8/1/00	31	7.00000	0.3794	6.62063	3/1/02	\$17,125.00
50278-89	Hegazy, Ibrahim	PRE	8/1/00	31	7.37500	0.7544	6.62063	8/1/02	\$21,325.66
31067-88	LIBERTY WORLDWIDE	CRE	8/1/00	31	7.25000	0.6294	6.62063	12/1/03	\$437,510.02
50429-69	Mahmood Baligh Salwa Aida	P	8/1/00	31	8.0000	1.3794	6.62063	10/1/02	\$14,097.61
30530-69	Mohamed Al Qubaisi	P	8/1/00	31	8.5000	1.8794	6.62063	7/1/04	\$16,500.00
31888-69	Morgan, Klair Wahib	P	8/1/00	31	7.75000	1.1294	6.62063	9/1/02	\$9,721.97
50376-89	Moussa, Fateen	PRE	8/1/00	31	7.75000	1.1294	6.62063	11/1/18	\$124,644.10
60089-BH	NBAD-Maim Branch	L/C	8/1/00	1	9.50000	9.5000	Hegazy, Ilt	8/1/00	\$162,202.08
50090-89	Noor, Dahir & Yousef Shukri	PRE	8/1/00	1	7.75000	1.1294	6.62063	10/1/02	\$31,059.51
31708-89	Rashed Al Hajeri	PRE	8/1/00	1	7.75000	1.1294	6.62063	7/1/13	\$322,121.93
50116-88	Samco	CRE	8/1/00	1	7.75000	1.1294	6.62063	11/1/19	\$137,428.45
99072-47	WESTINGHOUSE ELECTRIC	CORP	8/1/00	4	9.50000	2.8710	6.629	12/13/02	\$250,000.00
95023-353	UTILICORP UNITED	CORP	8/2/00	14	6.83000	0.1500	6.68	8/2/00	\$10,000,000.00
017-01	COASTAL CORPORATION	CORP	8/3/00	90	6.82500	0.2250	6.68	6/26/01	\$375,000.00

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G A P L I M I T S

Following EC sanction for new gap limits the following global and allocated limits have been proposed in a way to give greater control on a fixed limit system. That is, the 5% method has been removed totally and the completion of returns will be on a net cumulative inflow and outflow basis to include all money market positions as well as forward foreign exchange all on a per currency basis, all expressed in U S dollars bar U K sterling which is expressed in Pounds

Period	Global	U.S. DOLLARS			
		WORLDWIDE	GRAND	FINANCIAL	RETAIN
Up to 1 M	1.500	1.250	130	110	10
1 month	1.500	1.250	130	110	10
2 "	1.400	1.170	120	100	10
3 "	1.300	1.100	100	90	10
4 "	1.200	1.020	90	85	5
5 "	1.100	940	80	75	5
6 "	1.000	860	70	65	5
7 "	900	780	60	58	2
8 "	800	700	50	48	2
9 "	700	620	40	38	2
10 "	600	540	30	28	2
11 "	500	450	25	23	2
12 "	400	360	20	18	2
Over 1 Year	50	50	-	-	-
<b>TOTAL CUMULATIVE</b>	<b>1.500</b>	<b>1.250</b>	<b>130</b>	<b>110</b>	<b>10</b>

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U K STERLING

Period	Global	TREASURY	PORTFOLIO
Up to 1 M	250	150	100
1 Month	200	125	75
2 "	175	110	65
3 "	150	100	50
4 "	135	90	45
5 "	120	80	40
6 "	100	65	35
7 - 12	50	30	20

TOTAL CUMULATIVE 250 150 100

\*ORGP03A1\*

Cleared Balance GAP Limits Report  
Bank Wide

31 Jul 00

ASSETS

LIABILITIES

GAP/BREAK EVEN PT.

Libor Loans		FRNA		Prime/DFB/FFS/Nostro		Asset Total		Date	FFP/REPO/TD/DDA		GAP	
AMT	RATE	AMT	RATE	AMT	RATE	AMT	RATE		AMT	RATE	AMT	RATE
\$0.556	7.81%					\$0.556	7.81%	24/10/00			\$0.556	7.81%
\$3.110	7.71%					\$3.110	7.71%	26/10/00			\$3.110	7.71%
\$4.191	7.65%	\$5.000	6.88%			\$9.191	7.23%	TOTAL MONTH 3	\$5.000	6.74%	\$4.191	7.82%
\$1.363	7.75%					\$1.363	7.75%	09/11/00			\$1.363	7.75%
\$0.111	8.19%					\$0.111	8.19%	13/11/00	\$5.000	6.77%	(\$4.889)	6.74%
\$0.833	8.31%					\$0.833	8.31%	30/11/00			\$0.833	8.11%
\$2.307	7.97%					\$2.307	7.97%	TOTAL MONTH 4	\$5.000	6.77%	(\$2.693)	5.74%
\$3.750	8.00%					\$3.750	8.00%	14/12/00			\$3.750	8.00%
\$0.444	8.19%	\$2.000	7.10%			\$2.444	7.30%	19/12/00			\$2.444	7.30%
\$2.500	7.94%					\$2.500	7.94%	27/12/00			\$2.500	7.94%
\$6.694	7.99%	\$2.000	7.10%			\$8.694	7.79%	TOTAL MONTH 5			\$8.694	7.79%
\$0.118	5.43%					\$0.118	5.43%	03/01/01			\$0.118	5.43%
\$3.750	7.90%					\$3.750	7.90%	12/01/01			\$3.750	7.90%
\$3.000	9.16%	\$2.000	7.10%			\$5.000	8.34%	16/01/01			\$5.000	8.34%
\$0.360	9.04%					\$0.360	9.04%	19/01/01			\$0.360	9.04%
\$7.228	8.44%	\$2.000	7.10%			\$9.228	8.15%	TOTAL MONTH 6			\$9.228	8.15%
\$0.393	9.08%					\$0.393	9.08%	27/03/01			\$0.393	9.08%
\$0.393	9.08%					\$0.393	9.08%	TOTAL MONTH 8			\$0.393	9.08%
\$180.737	7.24%	\$116.992	7.17%	\$19.992	0.79%	\$317.720	6.81%	GRAND TOTAL	\$108.094	6.04%	\$9.627	11.14%

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\*GRGP03A1\*

Cleared Balance GAP Limits Report  
Bank Wide

31-Jul-00

ASSETS

LIABILITIES

GAP/BREAK EVEN PT.

Libor Loans		FRNs		Prime/DFB/FFS/Mostro		Asset Total		Date	FFP/REPO/TD/DDA		GAP	
AMT	RATE	AMT	RATE	AMT	RATE	AMT	RATE		AMT	RATE	AMT	RATE
\$2.771	7.90%	\$10.000	6.80%	\$19.742	0.68%	\$32.513	3.17%	01/08/00	\$87.579	4.58%	(\$55.066)	5.41%
\$10.000	6.83%					\$10.000	6.83%	02/08/00	\$0.011	5.00%	\$9.989	6.83%
\$0.375	6.83%					\$0.375	6.83%	03/08/00			\$0.375	6.83%
\$11.250	6.81%					\$11.250	6.81%	04/08/00			\$11.250	6.81%
\$0.011	8.38%					\$0.011	8.38%	05/08/00			\$0.011	8.38%
\$0.375	7.69%					\$0.375	7.69%	09/08/00	\$45.000	6.63%	(\$44.625)	6.62%
\$5.000	6.85%					\$5.000	6.85%	10/08/00			\$5.000	6.85%
\$1.280	7.17%	\$10.000	7.16%			\$11.280	7.17%	14/08/00	\$45.000	6.63%	(\$13.720)	5.39%
\$18.002	7.60%	\$5.000	6.85%			\$23.002	7.43%	15/08/00	\$62.000	6.61%	(\$38.998)	6.13%
		\$5.000	6.78%			\$5.000	6.78%	16/08/00			\$5.000	6.78%
\$20.000	6.99%					\$20.000	6.99%	17/08/00	\$35.000	6.63%	(\$15.000)	6.15%
\$0.100	7.69%					\$0.100	7.69%	18/08/00	\$10.000	6.63%	(\$9.900)	6.62%
\$35.762	7.15%					\$35.762	7.15%	21/08/00			\$35.762	7.15%
\$0.001	7.63%					\$0.001	7.63%	22/08/00			\$0.001	7.63%
\$0.141	7.88%					\$0.141	7.88%	23/08/00			\$0.141	7.88%
\$11.500	6.79%	\$12.500	7.45%			\$24.000	7.13%	24/08/00	\$13.000	6.60%	\$11.000	7.76%
\$7.391	7.44%					\$7.391	7.44%	25/08/00			\$7.391	7.44%
\$0.750	7.22%					\$0.750	7.22%	29/08/00			\$0.750	7.22%
		\$10.000	7.78%			\$10.000	7.78%	30/08/00			\$10.000	7.78%
\$30.115	7.04%					\$30.115	7.04%	31/08/00	\$0.122	5.50%	\$29.993	7.04%
\$154.822	7.11%	\$72.500	7.19%	\$19.742	0.68%	\$247.064	6.62%	TOTAL MONTH 1	\$297.712	6.02%	(\$50.648)	3.09%
								08/09/00	\$0.030	5.50%	(\$0.030)	5.50%
\$0.444	7.63%	\$20.000	7.24%			\$20.444	7.24%	15/09/00			\$20.444	7.24%
		\$5.492	7.47%			\$5.492	7.47%	18/09/00			\$5.492	7.47%
\$1.611	7.63%	\$5.000	7.00%			\$6.611	7.15%	20/09/00			\$6.611	7.15%
		\$5.000	6.84%			\$5.000	6.83%	25/09/00			\$5.000	6.83%
\$3.045	7.77%					\$3.045	7.77%	26/09/00	\$0.009	5.50%	\$3.037	7.78%
				\$0.250	9.50%	\$0.250	9.50%	29/09/00	\$0.343	5.25%	(\$0.343)	5.25%
\$5.101	7.71%	\$35.492	7.18%	\$0.250	9.50%	\$40.843	7.26%	02/10/00			\$0.250	9.50%
								TOTAL MONTH 2	\$0.382	5.28%	\$40.461	7.28%
\$0.525	7.14%					\$0.525	7.14%	10/10/00			\$0.525	7.14%
		\$5.000	6.88%			\$5.000	6.88%	16/10/00			\$5.000	6.88%
								20/10/00	\$5.000	6.74%	(\$5.000)	6.74%

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\*GRGP03A1\*

Cleared Balance GAP Limits Report  
Treasury Department

31-Jul-00

ASSETS						LIABILITIES		GAP/BREAK EVEN PT.				
Libor Loans		FRNs		Prime/DFB/FFS/Nostro		Asset Total		Date	FFP/REPO/TD/DDA		GAP	
AMT	RATE	AMT	RATE	AMT	RATE	AMT	RATE		AMT	RATE	AMT	RATE
\$0.556	6.56%					\$0.556	6.56%	24/10/00			\$0.556	6.56%
\$3.110	6.71%					\$3.110	6.71%	26/10/00			\$3.110	6.71%
\$4.191	6.67%	\$5.000	6.73%			\$9.191	6.70%	TOTAL MONTH 3	\$5.000	6.74%	\$4.191	6.66%
\$1.363	6.94%					\$1.363	6.94%	09/11/00			\$1.363	6.94%
\$0.111	6.94%					\$0.111	6.94%	13/11/00	\$5.000	6.77%	(\$4.889)	6.77%
\$0.833	7.06%					\$0.833	7.06%	30/11/00			\$0.833	7.06%
\$2.307	6.98%					\$2.307	6.98%	TOTAL MONTH 4	\$5.000	6.77%	(\$2.693)	6.59%
\$3.750	7.00%					\$3.750	7.00%	14/12/00			\$3.750	7.00%
\$0.444	6.94%	\$2.000	7.00%			\$2.444	6.99%	19/12/00			\$2.444	6.99%
\$2.500	6.94%					\$2.500	6.94%	27/12/00			\$2.500	6.94%
\$6.694	6.97%	\$2.000	7.00%			\$8.694	6.98%	TOTAL MONTH 5			\$8.694	6.98%
\$0.118	5.05%					\$0.118	5.05%	03/01/01			\$0.118	5.05%
\$3.750	6.90%					\$3.750	6.90%	12/01/01			\$3.750	6.90%
\$3.000	6.91%	\$2.000	6.91%			\$5.000	6.91%	16/01/01			\$5.000	6.91%
\$0.160	8.04%					\$0.160	8.04%	19/01/01			\$0.160	8.04%
\$7.228	6.93%	\$2.000	6.91%			\$9.228	6.93%	TOTAL MONTH 6			\$9.228	6.93%
\$0.393	8.08%					\$0.393	8.08%	27/03/01			\$0.393	8.08%
\$0.393	8.08%					\$0.393	8.08%	TOTAL MONTH 8			\$0.393	8.08%
\$180.737	6.69%	\$116.992	6.72%	\$19.992	6.63%	\$317.720	6.70%	(GRAND TOTAL)	\$108.094	6.63%	\$9.627	8.83%

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\*GRGP03A1\*

Cleared Balance GAP Limits Report  
Treasury Department

31-Jul-00

ASSETS

LIABILITIES

GAP/BREAK EVEN FT.

Libor Loans		FRNs		Prime/DFB/FFS/Nostro		Asset Total		Date	FFP/REPO/TD/DDA		GAP	
AMT	RATE	AMT	RATE	AMT	RATE	AMT	RATE		AMT	RATE	AMT	RATE
\$2.771	7.08%	\$10.000	6.65%	\$19.742	6.63%	\$32.513	6.67%	01/08/00	\$87.579	6.64%	(\$55,066)	6.63%
\$10.000	6.68%					\$10.000	6.68%	02/08/00	\$0.011	5.00%	(\$9,989)	6.68%
\$0.375	6.60%					\$0.375	6.60%	03/08/00			\$0.375	6.60%
\$11.250	6.64%					\$11.250	6.64%	04/08/00			\$11.250	6.64%
\$0.011	6.62%					\$0.011	6.62%	05/08/00			\$0.011	6.62%
\$0.375	6.69%					\$0.375	6.69%	09/08/00	\$45,000	6.63%	(\$44,625)	6.62%
\$5.000	6.65%					\$5.000	6.65%	10/08/00			\$5,000	6.65%
\$1,280	6.63%	\$30,000	6.71%			\$31,280	6.70%	14/08/00	\$45,000	6.63%	(\$13,720)	6.45%
\$18,002	6.72%	\$5,000	6.72%			\$23,002	6.72%	15/08/00	\$62,000	6.61%	(\$38,998)	6.55%
		\$5,000	6.63%			\$5,000	6.63%	16/08/00			\$5,000	6.63%
\$20,000	6.69%					\$20,000	6.69%	17/08/00	\$35,000	6.63%	(\$15,000)	6.55%
\$0.100	6.69%					\$0.100	6.69%	18/08/00	\$10,000	6.63%	(\$9,900)	6.63%
\$35,762	6.63%					\$35,762	6.63%	21/08/00			\$35,762	6.63%
\$0.001	6.62%					\$0.001	6.62%	22/08/00			\$0.001	6.62%
\$0.141	6.62%					\$0.141	6.62%	23/08/00			\$0.141	6.62%
\$11,500	6.62%	\$12,500	6.65%			\$24,000	6.63%	24/08/00	\$13,000	6.60%	\$11,000	6.67%
\$7,391	6.66%					\$7,391	6.66%	25/08/00			\$7,391	6.66%
\$0,750	6.62%					\$0,750	6.62%	29/08/00			\$0,750	6.62%
		\$10,000	6.83%			\$10,000	6.83%	30/08/00			\$10,000	6.83%
\$30,115	6.62%					\$30,115	6.62%	31/08/00	\$0,122	5.50%	\$29,993	6.62%
\$154,822	6.66%	\$72,500	6.70%	\$19,742	6.63%	\$247,064	6.67%	TOTAL MONTH 1	\$297,712	6.63%	(\$50,648)	6.43%
								08/09/00	\$0,030	5.50%	(\$0,030)	5.50%
\$0,444	6.38%	\$20,000	6.74%			\$20,444	6.73%	15/09/00			\$20,444	6.73%
		\$5,492	6.72%			\$5,492	6.72%	18/09/00			\$5,492	6.72%
\$1,611	6.38%	\$5,000	6.76%			\$6,611	6.67%	20/09/00			\$6,611	6.67%
		\$5,000	6.77%			\$5,000	6.77%	25/09/00			\$5,000	6.77%
\$3,045	6.77%					\$3,045	6.77%	26/09/00	\$0,009	5.50%	\$3,037	6.78%
								29/09/00	\$0,343	5.25%	(\$0,343)	5.25%
				\$0,250	6.62%	\$0,250	6.62%	02/10/00			\$0,250	6.62%
\$5,101	6.61%	\$35,492	6.74%	\$0,250	6.62%	\$40,843	6.72%	TOTAL MONTH 2	\$0,382	5.28%	\$40,461	6.74%
\$0,525	6.51%					\$0,525	6.51%	10/10/00			\$0,525	6.51%
		\$5,000	6.73%			\$5,000	6.73%	16/10/00			\$5,000	6.73%
								3/10/00	000	5.74%	\$5,000	6.73%

18

2

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17

31-Jul-00  
ALL OTHER TD

TIME DEPOSIT - FINAL

NAME	MM OF USD	Maturity Date	Day	Rate	arith.	group arith	group \$	daily rate	group arith	group \$	time bucket		
S.M. Khalifa	\$0.0109	31-Jul	2-Aug	2	5.000%	0.00	0.00	0.0109	5.000%	0.00	0.0109	5.000%	1
NBAD-HO	\$45.0000	31-Jul	9-Aug	9	6.625%	2.98	2.98	45.0000	6.625%				
NBAD-HO	\$45.0000	31-Jul	14-Aug	14	6.625%	2.98	2.98	45.0000	6.625%	5.96	90.0000	6.625%	2 w
Deutsche-NY	\$10.0000	31-Jul	15-Aug	15	6.610%	0.66			0.000%				
NBAD-Ldn	\$20.0000	31-Jul	15-Aug	15	6.600%	1.32			0.000%				
NBAD-HO	\$32.0000	31-Jul	15-Aug	15	6.625%	2.12	4.10	62.0000	6.615%				
NBAD-HO	\$35.0000	31-Jul	17-Aug	17	6.630%	2.32	2.32	35.0000	6.630%				
NBAD-Ldn	\$10.0000	31-Jul	18-Aug	18	6.630%	0.66	0.66	10.0000	6.630%	7.08	107.0000	6.621%	3 w
NBAD-Ldn	\$13.0000	31-Jul	24-Aug	24	6.600%	0.86	0.86	13.0000	6.600%				
R. K. Awadalla	\$0.1222	31-Jul	31-Aug	31	5.500%	0.01	0.01	0.1222	5.500%	0.86	13.1222	6.590%	4 w
Shehata/Said	\$0.0304	31-Jul	8-Sep	39	5.500%	0.00	0.00	0.0304	5.500%				
Saad/Seif	\$0.0088	31-Jul	26-Sep	57	5.500%	0.00	0.00	0.0088	5.500%				
Mohiedin/Medani	\$0.3428	31-Jul	29-Sep	60	5.250%	0.02	0.02	0.3428	5.250%	0.02	0.3819	5.276%	Se
Arab Bk PLC-NY	\$5.0000	31-Jul	20-Oct	81	6.740%	0.34	0.34	5.0000	6.740%	0.34	5.0000	6.740%	C
Arab Bank-NY	\$5.0000	31-Jul	13-Nov	105	6.770%	0.34	0.34	5.0000	6.770%	0.34	5.0000	6.770%	N
<b>TOTAL:</b>	<b>\$220.5150</b>			<b>18</b>	<b>6.624%</b>	<b>14.61</b>	<b>14.61</b>	<b>220.5150</b>		<b>14.61</b>	<b>220.5150</b>	<b>6.624%</b>	

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31-Jul-00

TIME DEPOSIT - FINAL

	USD	Rate	Days	
SPOT	\$0.00	0.000%	0	
OVERNIGHT	\$18.60	6.688%	1	
ALL OTHER TD	\$220.51	6.624%	18	
<b>O/N &amp; ALL OTHERS</b>	<b>\$239.11</b>	<b>6.629%</b>	<b>17</b>	<b>--dollar wtd avg. mat. day</b>
SPOT & ALL OTHERS	\$220.51	6.624%	18	
SPOT, O/N, ALL OTHERS	\$239.11	6.629%	17	

SPOT TRANSACTIONS

NAME	USD	Start Date	Maturity Date	Day	Rate	arith.	group arith	group S	group rate	Bucket
	\$0.0000	1-Aug	1-Aug	0	0.000%	0.00			0.000%	
	\$0.0000	1-Aug	1-Aug	0	0.000%	0.00			0.000%	
	\$0.0000	1-Aug	1-Aug	0	0.000%	0.00			0.000%	
	\$0.0000	1-Aug	1-Aug	0	0.000%	0.00			0.000%	
	\$0.0000	1-Aug	1-Aug	0	0.000%	0.00			0.000%	
	\$0.0000	1-Aug	1-Aug	0	0.000%	0.00			0.000%	
	\$0.0000	1-Aug	1-Aug	0	0.000%	0.00			0.000%	
	\$0.0000	1-Aug	1-Aug	0	0.000%	0.00			0.000%	
	\$0.0000	1-Aug	1-Aug	0	0.000%	0.00			0.000%	
TOTAL:	\$0.0000				0.000%	0.00				

OVERNIGHT

NBAD-Ldn	\$18.6000	31-Jul	1-Aug	1	6.688%	1.24			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
	\$0.0000	31-Jul	31-Jul	0	0.000%	0.00			0.000%	
O/N TOTAL	\$18.6000			1	6.688%	1.24				

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*FUNCTIONING* FORWARD BALANCES AS OF

(17) (F)

*BANK  
ACTIVITY*

27-Feb-02

Fed settlement day

FOMC

*RESERVES*

notes

CUM. BAL.

Date	Day	<i>BANK ACTIVITY</i>	<i>RESERVES</i>	notes	CUM. BAL.
27-Feb	Wed	4,617	(1,500,000)		(\$1,495,383)
28-Feb	Thu	2,177,818	(1,508,145)		(\$825,710)
1-Mar	Fri	(40,044,924)	(1,496,920)		(\$42,367,555)
4-Mar	Mon	(30,038,426)	(1,500,000)		(\$73,905,981)
5-Mar	Tue		(1,500,000)		(\$75,405,981)
<del>6-Mar</del>	<del>Wed</del>	(75,107,878)	(1,500,000)		(\$152,013,859)
7-Mar	Thu		(1,500,000)		(\$153,513,859)
8-Mar	Fri	(30,023,567)	(1,500,000)		(\$185,037,426)
11-Mar	Mon	37,260			(\$185,000,166)
12-Mar	Tue	7,739			(\$184,992,427)
13-Mar	Wed				(\$184,992,427)
14-Mar	Thu	10,128			(\$184,982,299)
15-Mar	Fri	(24,849,050)			(\$209,831,349)

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## LOCAL CASE STUDIES DISCUSSION

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## SHORT TERM LIQUIDITY MANAGEMENT APPENDICES

### appendix

17. Forward cash flows predictions
18. Gap report
19. Gap limits
20. Assets report
21. Daily balance sheet and income statement
22. Rate sheets
23. Funding analysis memos
24. Limits: trading limits memo, gap limits country limits
25. Interbank funding sources analysis
26. Loan participation: guidelines, form, limits
27. General trading guidelines
28. Specific trading guidelines: foreign exchange, investment, securities trading
29. Treasury reports forms

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### TRADING ACTIVITIES POLICIES AND PROCEDURES

- **TRADE TICKETS FLOW:** trader – position clerk – treasurer – back-office
- **TRANSACTION PROCESSING GUIDANCE:** ticket (trader)– trading sheets (trader)- posting NOSTRO trade sheets in each correspondent account (position clerk) – back-office reconciliation (position clerk) - treasury reports (trader, treasurer)
- **ESTABLISH TRADING LIMITS:** country, type of market, type of instrument, nominal/notional credit exposure, open positions, stop-loss, minimum spread.
- \* **TRADING ACTIVITY GUIDELINES:** money market, foreign exchange and securities

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### PREPARING AND FILING REPORTS

- **STRUCTURAL BALANCE SHEET REPORTS:** FOR INTERNAL TREASURY USE (GAP, FUNDING SOURCES, AVERAGE SPREADS, HISTORICAL RATES, ETC.)
- **TREASURY ACTIVITIES REPORTS:** COMPLETED AND FILED REGULARLY
  - 1) **INTRADAY REPORTS:** TRADE SHEETS, FUNDING POSITION SHEET, INTRA-DAY OPEN POSITION REPORTS
  - 2) **DAILY REPORTS:** TRADING TURNOVER, OPEN POSITIONS, REEVALUATION, PROFIT/LOSS, CLOSING FUNDING POSITION, FOLLOWING DAY FUNDING PROJECTIONS, LIMITS UTILIZATION, SETTLEMENT PROBLEMS
  - 3) **MONTHLY REPORTS:** PROFIT/LOSS, LIMITS UTILIZATION, BROKERAGE EXPENSE, GAP, FORWARD ACTIVITY, LONG-TERM ASSETS, LARGE CUSTOMER FLOWS

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## **POLICIES AND PROCEDURES FOR TREASURY OPERATIONS**

- **GENERAL PRACTICES GUIDE**
- **TRADING ACTIVITIES PROCEDURES**
- **PREPARING AND FILING REPORTS**

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## **GENERAL PRACTICES GUIDE FOR TREASURY OPERATIONS**

- **PROHIBITS CONFLICTS OF INTEREST**
- **STRICT SEGREGATION OF DUTIES BETWEEN FRONT AND BACK-OFFICE**
- **FULL COMPLIANCE WITH ALL TRADING LIMITS**
- **TRADING AT PREVAILING MARKET RATES/PRICES**
- **FORBIDS ACTING AS INTERMEDIARY**
- **PROFESSIONAL CODE OF CONDUCT**

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- **CORPORATE ACCOUNT OFFICERS:** coordinate cash-management of corporate clients accounts and the impact on bank's funding position
- **CREDIT DEPARTMENT:** obtain information about any adverse credit developments affecting bank's clients and their ability to make scheduled payments.
- **DOMESTIC BRANCHES NETWORK ACTIVITY**

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#### **CLOSING DAILY FUNDING POSITION**

- \* **RECONCILE ALL FUNDING INVESTMENT AND TRADING POSITIONS**
- \* **SHORT-FUNDED POSITION**
- \* **EXCESS FUNDS POSITION**
- \* **SETTLEMENT AND REPORTS**

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- **CAPITAL MARKETS DESK:** higher level of managing liquidity, interest rate and market risks; devises longer term funding and investment/trading strategies; sources out and proposes new products; uses financial derivatives for hedging and yield-enhancing purposes; trades fixed income securities.
- **POSITION CLERKS DESK:** keeps track of all transactions, monitors intra-day and settlement positions, coordinates and reconciles balances with back-office, records all trades, double checks trading tickets and calculations, keeps treasurer informed of all major funds movements and open positions.

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## **MONITORING CHANGES IN ASSETS AND LIABILITIES IMPACT ON DAILY LIQUIDITY**

**Treasury staff will have constant communications with the other departments**

**Trading/investment transactions impact on funding position**

**BACK-OFFICE:** verify status of all major payments/receivables; find out of any unexpected large debits/credits; reconcile front-office intra-day funding position assessment with back-office's independent calculations 3-4 times/day

**SECURITIES CUSTODY/SETTLEMENTS AREA:** verify all delivery - payment items in timely manner consistent with cut-off time constraints

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• **MONEY MARKETS DESK:** will execute interbank funding/trading transactions dictated by the bank's balance sheet posture. Money markets traders will have to identify the most economically sound method to cover any funds shortage, depending on the asset class it needs to finance

- *domestic and foreign currency deposits*
- *direct dealing, money brokers*
- *contingency plans* to correct inefficiencies or adverse market conditions
- *limits:* nominal credit limits, country limits, market limits, gap limits,

*sources of funds:* money markets, issuing negotiable bank instruments (CD's, BA's, CP, notes), corporate and retail deposits (daily cut-off time),

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- *currency swaps, repos, assets sale, using funds from reserve and other compensating balance accounts, discount window (Lombard credit), bank's capital (discussion on charges for use and return on capital).*

- *monitoring interbank access and liquidity*
- *offsetting excess liquidity:* interbank placing, purchase short-term negotiable instruments (CD's, BA's, T-bills, short coupons, etc.), reverse repo
- *loan participations*

• **FOREIGN EXCHANGE DESK:** authority to manage bank's foreign exchange liquidity and to trade on behalf of its customers; may also have mandate to enter proprietary trading (limits, policies and procedures)

**CORPORATE DESK:** constant contact with bank's institutional clients, acting as transaction intermediaries between clients and treasury trading desks.

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### DAILY RATE SHEETS

- RATES CIRCULATED TO OTHER DEPARTMENTS FOR USE AS BASE RATE IN SETTING UP PRICING FOR ALL NEW TRANSACTIONS
- RATES REPORT FOR INPUT AND UPDATE BANK'S DATA SYSTEM FOR RESETTING LOAN RATES, RE-EVALUATION OF BANK'S HOLDINGS AND OPEN POSITIONS

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### DAILY LIQUIDITY AND STRUCTURE OF FUNDING OPERATIONS

Funding discrepancies are offset throughout the day, but circumstances may differ:

- *business-as-usual* – when funding is accomplished under normal circumstances
- *temporary institutional liquidity constraints* – when the bank would encounter a certain amount of difficulty in accessing its regular funding sources
- *systemic liquidity pressure* – seasonal factors, major credit crisis, etc.

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## OPENING FUNDING POSITION

- RECONCILE CLOSING/OPENING NOSTRO BALANCES
- FORWARD CASH FLOWS FORECAST (NEAR-TERM PROJECTIONS)
- GAP REPORT (LIMITS, AVERAGE YIELDS, MATURITY RANGES)
- LOAN REPORT (ROLLOVER ASSETS, OTHER FUNDED TRANSACTIONS)
- TRANSACTIONAL INFORMATION FROM OVERNIGHT COMMUNICATIONS

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## ADDITIONAL FUNDING REQUIREMENTS

ANALYZE BALANCE SHEET AND INCOME STATEMENT REPORTS  
TRADING AND INVESTMENT ACTIVITIES IN TREASURY  
CALCULATE LATEST DATA FOR RESERVE REQUIREMENTS AND OTHER  
COMPENSATING BALANCE ACCOUNTS  
COMMUNICATE WITH OTHER RELEVANT DEPARTMENTS TO ASSESS LEVEL OF  
BANK'S NEW TRANSACTIONS  
CONTACT RETAIL BANKING DIVISION TO ASCERTAIN VOLUME OF CONSUMER  
LOANS AND RETAIL DEPOSITS BASE IN THE BRANCH NETWORK

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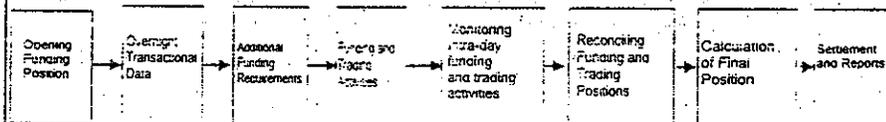
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## DAILY FUNDING OPERATIONS

- DETERMINING OPENING FUNDING POSITION
- CALCULATE ADDITIONAL FUNDING NEEDS
- GENERATE AND CIRCULATE DAILY RATE SHEETS
- DAILY LIQUIDITY AND STRUCTURE OF FUNDING OPERATIONS
- MONITORING CHANGES IN BANK'S ASSETS AND LIABILITIES; IMPACT ON DAILY LIQUIDITY
- CLOSING DAILY FUNDING POSITION

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## DAILY FUNDING OPERATIONS FLOW CHART



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- DAILY FUNDING OPERATIONS
- POLICIES AND PROCEDURES FOR TREASURY OPERATIONS

How is the treasury mechanism structured along its responsibilities and functions?

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### TREASURY DEPARTMENT ORGANIZATION CHART

TREASURY DEPARTMENT  
 MANAGER

POSITION  
 TITLES

CHIEF OFFICER CASH MANAGER	CHIEF OFFICER FOREIGN EXCHANGE	CHIEF OFFICER INVESTMENT AND CAPITAL MARKETS	CHIEF OFFICER CORP. RATE DESK
DOMESTIC FUNDING LIABILITY	FOREIGN CURRENCY CUSTOMER ORDERS	INVESTMENT PORTFOLIO	CORPORATE DEPOSITS
FOREIGN CURRENCY DEPOSITS	CAPITAL MARKET PROSPECTUS RATING	SECURITIES SPECULATIVE TRADING	CORPORATE FOREIGN CURRENCIES REQUESTS
INTEREST RATES SPECULATIVE ACTIVITY		CAPITAL MARKETS AND DERIVATIVES HEDGING AND TRADING	CORPORATE SECURITIES AND CAPITAL MARKETS REQUESTS

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## SHORT-TERM LIQUIDITY MANAGEMENT

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### SHORT-TERM LIQUIDITY MANAGEMENT

Treasury department has the obligation to employ all necessary means at its disposal for managing the entire bank's cash flows, in a manner which is consistent with the institution's policies and procedures; treasury staff has the mission of ensuring the successful execution of the organization's business plan by providing continuous and efficient funding of the bank's assets. This treasury function has the added dimension of maintaining and enhancing overall profitability, as any financial institution needs to maximize its return on assets in order to compete for market share, expand or even survive in a global economy.

How does the actual funding mechanism respond to these ambitious goals?

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Offices: (a) The Office of Chase for this Transaction is London  
(b) The Office of Counterparty for this Transaction is Curacao

Modifications to Agreement: None

Each party has entered into this Swap Transaction solely in reliance on its own judgement. Neither party has any fiduciary obligation to the other party relating to this Swap Transaction. In addition, neither party has held itself out as advising, or has held out any of its employees or agents as having the authority to advise, the other party as to whether or not the other party should enter into this Swap Transaction, any subsequent actions relating to this Swap Transaction or any other matters relating to this Swap Transaction. Neither party shall have any responsibility or liability whatsoever in respect of any advice of this nature given, or views expressed, by it or any of such persons to the other party relating to this Swap Transaction, whether or not such advice is given or such views are expressed at the request of the other party.

Please confirm that the foregoing correctly sets forth the terms and conditions of our agreement by responding within ten (10) Business Days by returning by fax an executed copy of this Confirmation to the attention of Documentation Section in Brooklyn, USA (fax no. 718 242 9263; telephone no. 718 242 7340).

Yours faithfully  
For The Chase Manhattan Bank

By: B. S. Barlow  
Name: Bernadine Barlow  
Title: Operations Officer

We hereby signify our agreement to the above  
for and on behalf of

By: .....

Name: .....

Title: .....

Date: .....

Ref No: 143132MR

Fixed Amount:	JPY 51,150,000 on each Fixed Amount Payer Payment Date
Floating Amounts:	
Calculation Amount:	USD 9,759,664
Floating Rate Payer:	Chase
Floating Rate Payer Payment Dates:	20 March, 20 June, 20 September and 20 December in each year commencing 20 March 1998 to and including the Termination Date, subject to adjustment in accordance with the Modified Following Business Day Convention
Floating Rate Curve:	USD-LIBOR-BBA
Designated Maturity:	Three months provided however that the Floating Rate in respect of the initial Calculation Period shall be determined by Linear Interpolation
Floating Rate Payer Day Count Fraction:	Actual/360
Spread:	Plus 0.16 per cent
Compounding:	Inapplicable
Reset Dates:	The first day of each Calculation Period
Initial Exchange:	Inapplicable
Final Exchange:	Inapplicable
Business Days:	Tokyo, London and New York
Calculation Agent:	Chase
Legal and Out-of-Pocket Expenses:	For each party's own account
Governing Law:	In accordance with the laws of the State of New York without reference to choice of law doctrine
Payment Basis:	Gross payments
Account Details:	
Chase Payment Instructions:	JPY The Chase Manhattan Bank, Tokyo A/c The Chase Manhattan Bank, London Under reference: Swap LH 143132  USD The Chase Manhattan Bank, New York A/c The Chase Manhattan Bank, London Under reference: Swap LH 143132
Counterparty Payment Instructions:	Please advise
Chase Reference Number:	LH 143132

125 London Wall  
London  
EC3Y 5AJ

Direct Line: 0171 777 4282  
Fax: 0171 777 4735  
Switchboard: 0171 777 2000

As of 28 January 1998

Fax Number: 00 1 202 842 7955

For the attention of Gheorghe Campeanu

Cross Currency Swap Confirmation  
Reference Number: LF 143332

Dear Madame,

The purpose of this letter agreement (the 'Confirmation') is to confirm the terms and conditions of the transaction entered into between us on the Trade Date specified below (the 'Transaction').

This confirmation constitutes a 'Confirmation' as referred to in the ISDA Interest Rate and Currency Exchange Agreement specified below. The definitions and provisions contained in the 1991 ISDA Definitions (as published by the International Swap Dealers Association, Inc. (now known as the International Swaps and Derivatives Association, Inc.)), (the 'Definitions') are incorporated into this Confirmation. In the event of any inconsistency between the Definitions and provisions and this Confirmation, this Confirmation will govern.

This Confirmation supplements, forms part of, and is subject to, the ISDA Interest Rate and Currency Exchange Agreement dated as of 11 February 1988 as amended and supplemented from time to time (the 'Agreement'), between \_\_\_\_\_ and \_\_\_\_\_ Inc ('Counterparty'). All provisions contained in the Agreement govern this Confirmation except as expressly modified below.

The terms of the Transaction to which this Confirmation relates are as follows:

Calculation Amounts: JPY 1,100,000,000  
USD 9,739,664

Trade Date: 17 January 1998

Effective Date: 2 February 1998

Termination Date: 30 June 2000, subject to adjustment in accordance with the Following Business Day Convention

Fixed Amounts:

Calculation Amount: JPY 1,100,000,000

Fixed Amount Payer: Counterparty

Fixed Amount Payer Payment Dates: 20 June in each year commencing on 20 June 1998 to and including the Termination Date, subject to adjustment in accordance with the Following Business Day Convention

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<Page> For More Information On This Security.

DG37 Corp D E S

IBM CORP

SECURITY DISPLAY  
IBM 5 08/22/00 NOT PRICED

PAGE 1/3

SECURITY INFORMATION	
CPN FREQ	ANNUAL
CPN TYPE	FIXED
MTY/REFUND TYP	NORMAL
CALC TYP ( 1)	STREET CONVENTION
DAY COUNT ( 3)	ACT/365
MARKET ISS	SAMURAI
COUNTRY/CURR	USA /JPY
COLLATERAL TYP	BONDS
AGGR AMT ISS	50,000,000 (M) *
AGGR AMT OUT	50,000,000 (M) *
MIN PC/INC	500,000/ 500,000
PAR AMT	500,000.00
LEADMGR/UWRTR	DAIWA SECS
EXCHANGE	NOT LISTED

ISSUER INFORMATION	
SERIES: 3RG	NAME IBM CORP
	TYPE INDUSTRIAL
IDENTIFICATION #'s	
JAPAN# 20031153	REDEMPTION INFO
MLNUM 99999	MATURITY DT 8/22/
	REFUNDING DT
	NEXT CALL DT
	WORKOUT DT 8/22/ 0
	RISK FACTOR 2.4504
ISSUANCE INFO	
ANNOUNCE DT 1/31/97	RATINGS
1ST SETTLE DT 2/24/97	MOODY A1
1ST CPN DT 8/22/97	S & P NR
INT ACCRUE DT 2/24/97	COMP A1 MI NA
PRICE @ ISSUE 100	JBRI NA
	NIS NA
	JCR NA

NOTES HAVE PROSPECTUS, \*AGGREGATE AMT FOR ALL FORMS  
CPN PD IN ¥; PRIN PD IN US\$ (¥121.80=US\$1). SHORT 1ST CPN. FITCH RATING:AA-

Bloomberg-all rights reserved. Frankfurt:69-920410 Hong Kong:2-521-3000 London:171-330-7500 New York:212-318-2000  
Princeton:609-279-3000 Singapore:226-3000 Sydney:2-9777-8600 Tokyo:3-3201-8900 Sao Paulo:11-3048-4500  
G189-564-0 09-Jan-98 10:06:38

JAN 8, 1998

Log No.

37673

Distribution List

TO: GHEORGHE CAMPEANU

FAX #

FROM:

TEL # 552-7160

RE: IBM CORP ASSET SWAP

CHASE SECURITIES INC. IS PLEASED TO OFFER ADIB THE FOLLOWING  
ASSET SWAP:

NOTE: IBM CORP SENIOR EURO NOTE  
5% YEN 8/22/00

AMOUNT: \$10MM WORTH OF YEN

SWAPED TO: USD 3 MONTH LIBOR + 16BP  
ALL YEN FLOWS ARE SWAPPED INTO DOLLARS

PRICE: PAR W/O ACCRUED

COUNTERPARTY: CHASE MANHATTAN BANK

LIBOR: TELERATE 3750

THIS OFFER IS SUBJECT TO AVAILABILITY AND MARKET  
CONDITIONS.

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**FACSIMILE COVER LETTER**

---

**Date:** 9 January, 1998

**To:** Head of Treasury  
FAX: 011 9712 672234

**From:** Gheorghe Campeanu  
Senior Vice President and Treasurer

**Subject:** Assets Swap

If you did not receive all pages indicated, please call Goma Mohammed at (202) 842-7931  
Return Fax#: (202) 842-7955

**Total Pages: 3**

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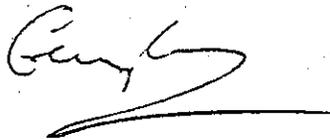
Happy New Year! I hope 1998 will be a good year for all of us.

I am sending details regarding an assets swap with Chase. Please have your people look into it so we can avoid diverging opinions on the value of this deal, when you sign off on our application to be forwarded to CE. Details are as follows:

- US \$10M worth of IBM, 5% , 8/22/00
- Yen Samurai bond to be swapped to USD . 3 months Libor - 16 b.p.
- All Cash Flows will be in USD for AIB.

Please see attachments. Awaiting your response.

Regards,



**CONFIDENTIALITY CLAUSE:** This facsimile is intended only for the person or entity to which it is addressed and may contain information that is privileged, confidential, or otherwise protected from disclosure. Dissemination, distribution, or copying of this facsimile or the information herein by anyone other than the intended recipient is prohibited. If you have received this facsimile in error, please notify us immediately by telephone and return the facsimile by mail.

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\* Put, Call, Cap, Floor purchased - Multiply the notional amount by a percentage (see below) plus the replacement value (mark to market) of the derivative product.

REMAINING YEARS TO MATURITY	% TO APPLY
7	20%
6	15%
5	10%
4	7%
3	5%
2	3%
1	2%

For example: 3 year Call with notional amount of \$25 million and premium of 50 BP (\$375,000).  
- Apply (\$25 million \* .05) + \$375,000 = \$1,625,000 against the line.

Treasury Support will monitor all derivative contract positions against credit lines and limits.

\* Cross Currency Swaps: Apply additional 25% of the notional value of the swap to the normal interest rate swap exposure requirement as detailed above.

For example - 5 year Fixed Euro/Floating USD Swap with notional value of \$10 mil.

Apply (\$10mm x 25%) = \$2,500,000 for cross currency swap exposure  
Plus (\$10mm x 5%)(square root of remaining term) = \$1,118,000 for basis risk exposure  
TOTAL EXPOSURE = \$3,618,000 against the line.

loc

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## DERIVATIVE PRODUCT COUNTERPART GUIDELINES

- > Derivative contract (Swaps, FRA's, Calls, Puts, Caps, Floors) counterparties may be:
  - Banks and financial institutions for which approved derivative lines have been established
  - Banks with approved over-one-year security lines, to the extent of the unutilized portion those lines.
- > Master International Swap Dealers Association agreement will be executed with each trading counterparty.
- > Strategic balance sheet transactions require approval of the ALCO and must be included in the minutes of the meeting.
- > Individual asset swap portfolio transactions, provided they meet all other investment portfolio guidelines, do not require individual approval of ALCO.
- > Maximum term for derivative contracts is seven (7) years. Derivative contracts longer than seven (7) years require approval of the Credit Committee.

### ALLOCATION OF CREDIT EXPOSURE

The determination of credit exposure against derivative contract counterparties is not an exact science. The methodologies which the Bank utilizes are listed below:

- \* **Floating/Floating (basis) Interest Rate Swaps** - Apply 5% of the notional amount of the Swap against the line.

For example: Floating/Floating Swap with a notional amount of \$25 million.

- Apply (\$25 million \* .05) = \$1,250,000 against the line.

- \* **Fixed/Floating Interest Rate Swaps** - Apply 5% of the notional amount multiplied by the square root of the remaining term of the Swap.

For example: 5 year Fixed/Floating Swap with a notional amount of \$25 million.

- Apply (\$25 million \* .05) \* 2.236 = \$2,795,000 against the line.

B) As far as primary FRN issues go, the sizes mentioned would not usually make much difference. Of course, undersubscribed or very small issues could sometimes bring about placing inducements. Also, in the case of primary Euronotes, the topic of seasoned vs. unseasoned, in terms of investment limitations, needs to be carefully considered for ADIB (not necessarily so for NBAD.)

SECONDARY OFFERS

<u>ISSUER</u>	<u>FINAL</u>			<u>DOMESTIC /</u>			<u>RATINGS</u>
	<u>MATURITY</u>	<u>COUPON</u>	<u>OFFER</u>	<u>CALL</u>	<u>CAP</u>	<u>EURO</u>	
NATIONSBANK	7/99	3L - 15 bp	3L + 18 bp			Dom	A2
NATIONSBANK	7/00	3L + 20 bp	3L + 19 bp			Dom	A2
NATIONSBANK	1/01	3L + 19 bp	3L + 19bp			Dom	A2
BANKAMERICA	9/00	3L + 10 bp	3L + 14 bp			Euro	A2
BANKAMERICA	5/00	3L + 20 bp	3L + 11 bp	PAR 6/98		Dom	A2
CITICORP	5/00	3L + 18.75 bp	3L + 16 bp	PAR 5/98		Euro	A1
CITICORP	11/00	3L + 25 bp	3L + 20 bp			Dom	A1
CITICORP	5/01	3L + 40 bp	3L + 37.5 bp		9.4%	Dom	A1
WELLS FARGO	11/99	3L + 45 bp	3L + 42 bp		10%	Dom	A2
BANKERS TRUST	3/00	3L - 25 bp	3L - 16 bp	PAR 3/97		Euro	A2
BANKERS TRUST	2/01	3L + 20 bp	3L + 22 bp	PAR 2/99		Euro	A2
CHEMICAL	7/00	3L + 18 bp	3L + 14 bp	PAR 7/98		Dom	A
FIRST CHICAGO	6/00	3L + 19 bp	3L + 16 bp	PAR 6/98		Dom	A1
FLEET FINC'L	5/98	3L + 10 bp	3L + 13 bp			Dom	N/A
MBNA BANK	10/99	3L + 25 bp	3L + 22 bp			Dom	A2

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- 4) Would US\$ denominated issues of foreign banks / financial institutions be part of our search for FRNs, or should we limit our domain to Yankee F.R.C.D.s only? Sometimes top Canadian, French, Swedish, Austrian, or Italian banks issue more attractive FRN's / FRCD's in US\$.
- 5) Is the final maturity range two to five years, or can it be extended for the sake of enhanced spreads?

Since applications have to be submitted on a case-by-case basis to Head Office, I have asked J.P. Morgan to provide a grid of LIBOR spreads related to credit ratings and maturities for secondary market guidance.

		<u>Three years</u>	<u>Four Years</u>	<u>Five Years</u>
<u>DOMESTIC US\$ FRN's</u>	AAA	5	10	12.5
	AA	10	15	18
	A	15	20	22
	BBB	25	30	35
<u>EUROS FRN's</u>	AAA	-5	-2	Flat
	AA	2	4	4
	A	15	18	20
	BBB	20	25	30

In response to HIB's January 29, 1996 memo, we totally concur. As for his questions:

- A) We are providing a list of secondary market offers. Markets trade, customarily, in multiples of US\$ 5 million blocks.

TO: Managing Director and President

FROM: Gheorghe Campeanu  
Vice President & Treasurer *GC*

SUBJECT: F.R.N.s

DATE: 29 January 1996

---

Following HIB's January 21, 1996 memo as well as my "fact finding" project regarding the current F.R.N.s market circumstances, a few points need to be clarified.

1. Generally speaking, the U.S. banking sector performed very well during the last couple of years. At the same time, investors' appetite for bank of bank holding company F.R.N.s appear to have increased. As a result, most spreads have narrowed, and the only way to attain enhanced yields is to accept either structured notes models or caps. Another method would be through synthetic assets, by executing currency / interest rates swaps when fixed coupon notes trade somewhat less efficiently and a short-spanned window of opportunity presents itself. Should ADIB make the effort to pursue such paths toward acquiring assets, or only straight ("plain vanilla") F.R.N.s, constitute our universe?
- 2) If swaps are allowed, we believe Bankers' Trust would be of great help to ADIB. Could Head Office reinstate interbank DPL / FX / FWD limits for Bankers' Trust?
- 3) Should we narrow our search scope down to only U.S. money center banks and top 20 bracket, or could we set our sights on smaller good U.S. names? Also, as far as credit ratings are concerned, how aggressive can we be? We are assuming that only senior debt applies.



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DATE: April 11, 2000

TO: Executive Vice-President

FROM: Gheorghe Campeanu  
Senior Vice President & Treasurer

RE: short-term assets needs

AIB has successfully accomplished the restructuring of its balance sheet maturity structure, and it has currently more than 80 % of assets in the medium-term range. That will ensure a stable core of profitable investments at undoubtedly superior spreads. As much as we are pleased and view these developments as a highly desirable and an unqualified success, this positive outcome presents our Bank with a thorny dilemma. While we all concur that the more lucrative returns available in the longer-term corporate sector deserve the main thrust of our business efforts, the picture is unfortunately complicated by the predicament of our funding liquidity needs, as well as the unfavorable regulatory stricture of the Curacao monetary authorities. It is, consequently, quite clear that the Bank has little choice in this matter and needs to dedicate some of its focus to the short-term sector in spite of the obviously diminished spreads. We believe that the solution to this pressing need could be found in two asset classes.

1. Short-term loan participation limits – Given the focus on obtaining H.O. approvals mainly for longer-term assets it has been a while since any credit work effort was directed toward the less attractive loan participations. In this interim, the list of such facilities available to AIB has become somewhat obsolete and needs some refreshing attention. In our pursuit geared toward alleviating the short-term assets drought we obtained from the two banks that are still distributing these financial products ( Chase and Toronto Dominion ) lists of corporate names that are active in the market and would possibly fit our investment criteria. We attach herewith those lists for your consideration of the merits and feasibility of these credits.
2. CD purchasing program. – Another potential venue which could substantially loosen AIB's liquidity constraints while, at the same time, offering a good source of additional income, would be the inception of a well designed and precisely regulated program of purchasing major banks' (domestic/yankee) CD's. Such a program, if approved, will have to be governed by precise guidance from H.O.T.B in terms of bank limits (DPL suballocations), maturity range and size. What we are proposing is a portfolio of maximum \$ 75 million, with maturities between 6 and 12 months and consisting of such instruments issued by any of the following banks: Deutsche Bank, Commerzbank, Bayerische Landesbank, West Deutsche Landesbank, Royal Bank of Canada, Bank of Nova Scotia, Banque Nationale de Paris, Societe Generale, J.P. Morgan and Chase Manhattan

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Bank. We believe that these bank limits should be \$ 10 million each. The CD market is quite liquid and we have good contacts with some of the more reputable dealers

By establishing this new access to short-term assets, AIB could give its Treasury the opportunity to take advantage of interest rates trends and yield-curve changes that could only be beneficial to the bank in terms of enhanced profitability, while adding a measure of liquidity control. This opportunity should not be interpreted as a license for active position trading, but rather be approached with restraint and discipline.

Please advise.

cc: HOTIB/HIB



13

DATE: April 11, 2000  
TO: Executive Vice-President  
FROM: Gheorghe Campeanu  
Senior Vice President & Treasurer  
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FRN PURCHASE PROGRAMME PROPOSAL

09 October, 1998

Page 2

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As the availability of particular names and issues is difficult to pin down during volatile markets, we would like to request approval to purchase FRN's at the above mentioned spreads (subject to availability) as follows:

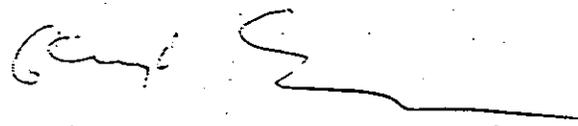
<u>Issuer</u>	<u>Amount</u>	<u>Maturity</u>
JP Morgan	\$10 Million	2-5 Years
Bank of New York	\$10 Million	2-5 Years
Chase Manhattan	\$10 Million	2-5 Years
Bank America/Nations Bank	\$10 Million	2-5 Years
Citigroup	\$5 Million	2-5 Years
BankBoston	\$5 Million	2-5 Years
Bankers Trust	\$5 Million	2-5 Years
BancOne/First Chicago MBD	\$5 Million	2-5 Years

All bank paper should be either in the form of senior holding company FRN's or bank notes (which, incidentally, is the better credit risk). In addition, we would like to request approval to purchase corporate senior FRN's at similar spreads (if available) for the following:

<u>Issuer</u>	<u>Amount</u>	<u>Maturity</u>
GMAC	\$10 Million	2-5 Years
Chrysler Corp. (Financial)	\$10 Million	2-5 Years
IBM	\$10 Million	2-5 Years
Ford Motor Company (Credit)	\$10 Million	2-5 Years

Your valued and timely input will be greatly appreciated.

Regards,



cc Terence D. Allen, HTIB

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INTEROFFICE MEMORANDUM

Date : 09 October, 1998

To : EVP  
SVP

From : Gheorghe Campeanu, SVP & Treasury

Subject : **FRN PURCHASING PROGRAMME PROPOSAL**

The macroeconomic dimensions of the recent financial markets turmoil and the subsequent implosion of asset values worldwide, have produced enormous portfolio dislocations with far reaching side-effect implications. This calls for a serious examinations of the risk/reward ratios and the windows of opportunity opened by the "flight to quality" panic that followed the Russia financial crisis and its aftermath in the US capital markets.

We believe (and H.O.T.I.B. agreed with our analysis during his recent visit in the US) that the extreme market psychology has created a window of opportunity for AIB to increase its corporate FRN holdings at greatly improved yields.

The explosion in the swap spreads coupled with the relentless pursuit of the US Treasury bonds "safe haven" and the subsequent free fall in their yields, created havoc in the corporate bonds market, where "quality spreads" widened rapidly to levels not seen since the early 90's.

As the interest rates environment uncertainties continue to greatly impede on the short-term corporate loans sector, the opportunity to acquire medium-term FRN's would perfectly fit both AIB's risk profile and its assets/liabilities structure. And since our business universe consists mainly of the high investment grade US corporations, we believe strongly that the risk/reward ratio at these new spreads would actually lower the credit risk.

The following matrix illustrates our case, for single A rated companies spreads over LIBOR:

	<u>2 Years</u>	<u>3 Years</u>	<u>5 Years</u>
Before July 1998	4-6 bp	6-8 bp	8-11 bp
Current	23-25 bp	30-35 bp	45-50 bp

(12) ~~12~~

Page 2

Rory, this is not a hindsight analysis. as our interest rates forecast has been all along accurate in both direction and magnitude of the trend.

All these being said, the programmes were feasible and could have offered assets with a much higher credit quality than short term loans. while the banks in question were of the strongest European and Canadian quality.

Best regards.

A handwritten signature in black ink, appearing to be 'G. G. G.' followed by a long horizontal flourish.

(12)   
INC.

TO: DEPT: HIB,  
FROM: Gheorghe Campeanu DEPT: Treasury,  
SUBJECT: Floating Rate C.D. Purchase Programme DATE: 4 October 1991

---

Dear Rory,

This is an inventory, if you will, of missed opportunities within this year, with a direct impact to the Bank's bottom line (see attached correspondence).

- 1) My memo dated February 28, 1991 proposed the purchase of a simple floating rate domestic C.D., which even at the lowest spread, with no enhancement from gap funding would have realized a profit of \$75,000.00 for an 18 months holding period.
- 2) As the window of opportunity for straight line floaters vanished, I followed up with another memo on July 3, 1991 which proposed a more complex C.D. programme (inverse floaters) which had a more ambitious gain target. If ADIB were to purchase a total of \$100 million dollars divided for the two simpler structures, we could now have assets that (just looking at the yields available at the time) would carry the following margins:
  - a) The UBS Securities LIBOR indexed structure for 1 year at 7.82% (which if reset today would be 10.6275%) could have given an average spread advantage of more than 200 basis points which would translate into at least \$1,000,000 gain for \$50 million one year holding.
  - b) The Bankers Trust Securities Fed funds indexed structure would have carried a 6.75% coupon, and would reset now around 8%. Were ADIB to purchase \$50 million with an average spread of minimum 125 basis points, the profit could have been at least around \$625,000 for one year holding.

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## Investments of residents in securities abroad

### Article 14

Residents may subscribe, pay and trade with securities abroad solely through authorized participants in the securities market (hereinafter: authorized participant).

The authorized participant must regularly report to the National Bank of the Republic of Macedonia on all investments of residents in securities abroad, as well as the subsequent changes of these investments, including the alienation thereof.

Residents other than authorized banks cannot purchase securities abroad.

The authorized banks may for their own account and on their behalf purchase and sell securities abroad.

The right of paragraph 4 of this Article refers to the securities issued or guaranteed by the Governments of the states members of the OECD and by international financial institutions.

The right of paragraph 4 of this Article also refers to other securities with investment rating assessed by at least one internationally recognized rating agency.

The criteria for the investment rating shall be determined by the National Bank of the Republic of Macedonia.

Notwithstanding paragraph 4 of this Article investment funds, registered in the Republic of Macedonia, may purchase their own share documents abroad in accordance to the regulation which determines the operation of the investment funds.

## Issuance and introduction of foreign currency securities in the Republic of Macedonia

### Article 15

Issuance and introduction of foreign securities in the Republic of Macedonia shall be permitted only with approval by the Securities Commission.

The Securities Commission shall prescribe the conditions and the methods under which the approval for the realization of the transaction of this Article can be acquired.

Issuance and introduction of foreign debt securities, with maturity more than 3 years, in the Republic of Macedonia is not allowed.

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TO: DEPT: Managing Director & President -- ADIB  
FROM: Gheorghe Campeanu DEPT: Treasurer -- ADIB  
SUBJECT: Car Loans Portfolio Funding DATE: 24 July 1992

---

In response to questions raised by Ron Morris concerning ADIB's ability to profitably fund a car loans portfolio (see his memos dated June 25 and July 19), I believe said assets to be lucrative ones from Treasury's point of view.

Funding assets with a 300 basis point spread over the Prime rate will always be profitable.

- o Should the bank assign capital to match the car loans, we would have a most efficient and rather simple solution.
- o If is to fund in Money Markets, based on the following monthly average historical spreads since January 1988:
  - A) O/N Fed Funds - Prime 225 b.p.
  - B) 3 Months Libor - Prime 195 b.p.
  - C) 6 Months Libor - Prime 182 b.p.

I can safely find funding risks acceptable.

In a rising interest rates environment, the moving averages of the funding costs will not exceed the moving averages of the portfolio, (i.e., an average life of approximately 18 months will always be funded in a worst case scenario at Prime).

In addition, by using FRAs and short-term Swaps as a general strategy for the entire array of ADIB assets, the car loans portfolio returns would also be hedged/enhanced.

Best regards.



/lhc

ALCO members weighed carefully all the relevant developments in the corporate debt markets, and decided to leave most business targets at the levels of the previous monthly cycle. After reviewing the utilization and results of the funding gap activity in Treasury, Committee members were satisfied that limits were complied with, and issued guidance for the month of August. With the possibility that the traditional summer slowdown in business activity could force the Bank to run marginally lower volumes, members agreed that total assets will not average in excess of USD 315 million, and that Treasury should manage a funding gap of average assets of 37-38 days vs. average liabilities of 14-16 days, at an added spread of at least 7-8 b.p. (maximum allowed by the flat yield curve). Based on the projection models, and expectations of continued strength in fee income, the monthly results in August should range from N.I.I. of USD 460 K and net profits of USD 410K (with no Fed tightening) and N.I.I. USD 390K and net profit of USD 345K (if Fed raises rates by 25 b.p.)

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TO: ALCO MEETING FILE  
Meeting Held on August 4, 2000 for the Month of July, 2000

PRESENT:

Assets And Income Analysis And Projections

On July 31, 2000 AIB's balance sheet stood at USD 310 million, ending a monthly cycle with a daily total assets average of USD 316.5 million (just above projections). With all measures of the Bank's activity readings at/or above target, the monthly results reached record levels. The assets/liability averages of 37 days vs. 17 days. Treasury added spread of 7 b.p., very strong fee income and no unforeseen expenses, combined to produce N.I.I. of USD 476K and total net profit (including equity) of USD 420K.

Following the Fed's decision to leave interest rates unchanged at the late June F.O.M.C. meeting, U.S. financial markets seem to have settled into a rather comfortable state of equilibrium, characterized by modest gains in fixed income prices, and somewhat listless price action in equities (except NASDAQ, which lost 7 pct. in July). Crude oil prices tapered off as did most commodities, while the USD advanced against most major currencies. The future of interest rates and Fed policy guessing game was focused mainly on the dichotomy between gains in productivity and the correlation with incipient signs of a soft landing of U.S. economy. As easing consumers demand appeared to be restraining price pressures, more sectors and regions of the economy reported a more moderate expansion pace, thus reinforcing the belief of most market economists and investors, that the Central Bank will not alter its monetary restraint at the August 22 F.O.M.C. meeting. The only major obstacle was the continuing strain in the labor market and its impact on future inflationary tendencies. The ensuing fixed income strategy lead to a reversal in the slope of the yield curve for short and intermediate maturities, while the long bond remained solidly below the 5 pct. mark.

cont.

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Page 2

to this conclusion, short and intermediate notes and corporate bonds gained ground, thus recovering some of the severe yield-curve inversion seen lately. The U.S. Treasury debt instruments/yields in the 2-30 years range steepened more than 20 b.p., while the more significant 5-30 years segment showed a 32 b.p. correction. In the short-end sector the yield curve remained quite flat.

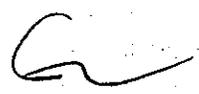
ALCO members reviewed and approved the utilization and results of the funding gap in the Treasury department, and made recommendation for the business activity during the month of July. Given the traditional summer slowdown in the corporate calendar, the committee members approved a slightly lower balance sheet, but agreed that given the current A/L maturity structure, increased profit margins and continued strong fee income, this month should bring in higher profits. Thus, with average daily assets of USD 310-315 million, a Treasury added spread of 6-7 b.p., and average assets of 36-38 days vs. average liabilities of 18-20 days, N.I.I. should grow to USD 440-450K, and net profit could surpass USD 370K.

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TO: ALCO MEETING FILE

Meeting Held on July 10, 2000 for the Month of June, 2000

PRESENT:



Assets And Income Analysis And Projections

AIB's balance sheet registered a high USD 338 million on June 30, 2000, thus ending a month that witnessed the assets expansion mandated at the end of the previous cycle. With the total assets daily average of USD 328.3 million, and a heavily biased maturity range in the medium term floating rate sector, the Bank enjoyed a very profitable month. In spite of a difficult funding period, when Treasury needed to secure the total bank spread in the face of an inverted yield curve and quarter-end cost pressures, the A/L mix and P/L projections came in on target, at a net Treasury added spread of only 1.3 b.p. However, due to the new wider margin assets, low expenses, and strong fee income, N.I.I. was a strong USD 409K while net profit (including equity) stood a respectable USD 334K.

June continued the string of turbulent monthly cycles in the U.S. equities, as the old/new economy divergence reared its head again. Blue chips and S&P stock prices declined 15%, while tech stocks (as measured by NASDAQ) gained 10%. But beyond the corporate projections and price valuation scenarios, the U.S. financial markets seemed to change course, as most participants concluded that the case for an imminent monetary policy tightening was losing ground.

As Chairman Greenspan appeared to signal a lull in Fed's aggressive trend of applying a blunt instrument as a method to achieve a soft landing, more and more fixed income investors started to look past inflation to future slower economic growth in the U.S. GDP inflation measures notwithstanding, recent economic statistics seem to support the view that the Central Bank sees no urgency to raise rates again very soon. In response

**ASSET/ LIABILITY RISK MANAGEMENT APPENDICES**

**appendix**

9. ALCO meetings notes (minutes)
10. Car loans portfolio memo
11. Low on foreign exchange operations article 14  
(investment in foreign securities)
12. Risk/reward investment memo
13. Short vs. long term assets memo
14. Credit ratings vs. spreads memo
15. Derivatives credit limits
16. Assets swap example document and confirmation

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**Asset swap example**

A real life example from my days as treasurer and asset/liability risk manager. We had been looking to acquire a \$10 million of a very strong credit, namely IBM senior notes, with no longer than 3 years maturity, and which have fixed rates which once converted to floating, can earn at least 3M LIBOR + 12.5 basis points. In spite of our efforts, all available notes denominated in US\$ had either longer than 3 yrs maturities, or yielded less than the required spread over the index.

My job included a capital markets dimension which enabled the risk manager to acquire approved credits at enhanced yields by also searching opportunities involving synthetic assets created through simultaneous interest and cross-currency swaps. We identified an IBM bond, which had been issued in Yen denomination, had a 5% rate maturing in less than 3 years but would pay at maturity in US\$. However, it was in a currency which my bank was not interested to be exposed to, in spite of the fact that the JPY/USD exchange rate of the final maturity payment had been fixed at the outset at 121.80.

I found a bank dealer (Chase) who was willing to offer the bond to us as a total package, where my bank was buying a face value equal to Yen 1,100,000,000, but we were paying \$9,739,664 (USD equivalent at the fixed exchange rate). At the same time, we bought from Chase, a swap to the bond maturity. It was calculated for a notional amount of \$9,739,664, and will pay us USD 3M LIBOR + 16 bp against our paying the fixed Yen bond interest cash flows to Chase. This was possible because the cross-currency swap arbitrage was trading at swap points which would allow higher spreads over LIBOR, than the straight USD interest-rate swaps.

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	Buyer (USD fixed payer)	Seller (USD floating payer)
Bond purchase	takes bond delivery	- Y 1,100,000,000
Purchase (USD side)	-\$9,739,664	\$9,739,664
Fixed payment	- 5% (Yen)	+ 5% (Yen)
Floating payment	+ 3M LIBOR +16bp(USD)	- 3M LIBOR +16bp(USD)
Maturity	+ \$9,739,664 (from asset swap seller)	-\$9,739,664 (paid back to swap buyer)
		+Y 1,100,000,000 (bond redemption proceeds from swap buyer)

This assets swap created a synthetic asset which was not directly available in the marketplace, when a desired corporate credit, for certain maturity and returns and with cash flows exchanged in a prescribed currency was custom tailored for those needs.

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1) **Fixed vs. floating swap**

A bank has a \$30 million five-year fixed rate loan asset with a semiannual interest payment schedule at 6.50%, which is funded with \$30 million of short-term money markets deposits (LIBOR). The bank is faced with a balance sheet gap, running the risk that a rise in short-term interest rate can cause the cost of its liabilities to rise above the yield of the long-term asset, thus creating a negative spread. The bank can use a fixed-for-floating interest rate swap to achieve a closer funding match between the interest income and expense. So the bank will look to enter a swap, agreeing to pay a fixed rate with a semiannual payment schedule (hopefully same dates as the loan) for the 5 year period, and for a notional amount of \$30 million. In exchange, the swap counterparty will agree to pay 3 month LIBOR to the bank at pre-determined times (hopefully matching same dates). If the fixed rate of the swap is 6.0%. let's see how the cash flow exchange will resolve the bank's problem:

Bank payments	Outflow	Inflow	Net flow
Fixed Rate	- 6.0 % (swap fixed)	+6.50 (asset rate)	+ 50 bp
Floating rate	- 3M LIBOR (cost of funds)	- 3 M LIBOR (swap float)	0
<b>TOTAL NET</b>			<b>+ 50 bp</b>

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## ASSET SWAPS

Are transactions in which interest rate swaps are used by portfolio managers to create "*synthetic assets*", better suited for their profit targets, funding cost and risk profile. "Synthetic assets" are basically financial instruments which combine an underlying fixed rate asset (bonds, loans, etc.) with an interest rate swap, in order to control interest rate risk, in the same currency or in different currencies. Converting interest rates can be accomplished two ways:

- purchasing a long-term fixed rate asset and then entering into a fixed-for-floating swap with a separate counterparty to create the "synthetic asset"
- purchasing the "synthetic asset" as a package from the same entity, which presumes exchange of principal at the beginning and the end of the transaction.

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A) Swap points table

Maturity	Swap price	Gov. yield curve	Swap point	MMKT
2 yrs	40-43	6.25	6.68	6.73
3 yrs	45-48	6.50	6.98	7.05
4 yrs	47-50	6.65	7.15	7.21
5 yrs	49-53	6.71	7.24	7.30

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B) Risk management swap is an effective hedging technique providing companies with means to manage the interest rate exposure to their existing assets and liabilities.

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Using FRA"s presents quite a few advantages:

- lower cost to capital
- lower credit risk (notional vs. nominal – percentages)
- lower legal risk (telex confirmation in official document format)
- no funding cost
- liabilities maturity extension (increases liquidity access)
- funding in adverse conditions (bank liquidity crisis, negative yield curve)
- hedging portfolio holdings re-evaluated below purchase price, when selling is not desirable

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## INTEREST RATE SWAPS

**DEFINITION:** Over-the-counter derivative contracts in which two parties agree to *exchange future interest rate cash flows* calculated for a notional principal amount at pre-determined *settlement date* and according to and agreed-on *formula*. The formula defines cash flows from two different interest rates, for one or more notional amounts, which could be in the same currency or in different currencies.

Swaps have great advantages as well, offering more effective methods to manage interest rate and market risks.

Swaps are priced as very efficient credit measurement against a *benchmark yield curve*, usually the government debt instruments (see credit sensitive yield curves in the Risk Management section). The prices are expressed in spreads relative to the rate of the same maturity government bond (swap points).

Swap agreements are: (ISDA, BBAIRS) – confirmations, documents

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EXAMPLE: Buyer A wishes to buy a 6 months FRA which settles 6 months forward, from seller B. They trade on March 29, 2002 at the rate of 6%. Settlement date is obviously Sept. 29, 2002, for which 6 months LIBOR is set at 6.50% on Sept. 27, for a period from Sept. 29, 2002 to March 29, 2003. They decide to write a contract for a notional amount of US\$ 10,000,000.

L = 6.50 R = 6.00 D = 183 B = 360 A = 10,000,000 and

$$S = \frac{(6.50 - 6.00) \times 183 \times 10,000,000}{(360 \times 100) + (6.50 \times 183)} = \$ 24,603.72 \text{ (calculated on Sep. 27 and paid on Sep. 29)}$$

Seller (bank B) will pay the settlement amount to the buyer (bank A)

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EXAMPLE: for a bank which wants to protect itself against rising rates in the 3 months LIBOR in 6 months time, will have to buy a contract, which is quoted as (6x9) FRA; if the bank would also like protection for the 3 months LIBOR but this time in 4 months time, it will have to look for prices of the (4x7) FRA. The most traded FRA's are for the 3 and 6 months LIBOR's so the tables should look like this:

TIME TO SETTLE FRA's	3 M US LIBOR FRA's	6 M US LIBOR
1 month	1x4	.1x7
2 months	2x5	2x8
3 months	3x6	3x9
-	-	-
6 months	6x9	6x12

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Let's see what happens when the tobacco producer sells 1000 Sept. 15 tobacco futures

**TOBACCO FUTURE CONTRACT**

Size: 1 ton Price increment: 0.01 (expressed as 1 point)

Maturity: Sept. 15

Producer's hedge (against declining price)

Position	Amount	Purchase price	Cost	Settl. price	Cost	Futures P/L
Seller	1,000	15.35	15,350	14.20	14,200	1,150
Buyer	1,000	15.35	15,350	14.20	14,200	(1,150)

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Now, let's look at the results of the price hedging used by the cigarette company, when it buys 1000 tobacco futures  
Cigarette company hedge (against rising price)

Position	Amount	Purchase price	Cost	Settl. Price	Cost	Futures P/L
Buyer	1,000	16.25	16,250	18.75	18,750	2,500
Seller	1,000	16.25	16,250	18.75	18,750	(2,500)

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## FORWARD RATE AGREEMENTS

**DEFINITION:** FRA's are over-the-counter contracts for cash payments at maturity, based on a market future spot interest rate (*reference rate*) at a pre-specified forward interest rate (*contract rate*) applied to a *notional principal amount* and paid at a pre-determined date (*settlement date*). This contract is actually one for exchanging *only interest rate differentials* on settlement day, without any exchange of principal at the inception of the contract. The FRA market is largely dominated by commercial banks, and the contracts are standard documents according to universally accepted rules (FRABBA, ISDA)

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### Calculation of settlement amount and examples

The settlement amount is calculated by using the following variables:

S = settlement amount (rate differential)  
L = spot 'reference' rate (LIBOR)  
R = forward 'contract' rate (set at the beginning)  
D = no. of days in the contract period  
A = contract amount (notional principal)  
B = no. of days used for the interest accrual calculations for the currency in which FRA is denominated (usually 360, but for STG and other currencies, it would be 365)

by using the following formula:

- 1) When L (spot rate) is higher than R (contract rate):

$$S = \frac{(L - R) \times D \times A}{(B \times 100) + (L \times D)}$$

- 2) When R is higher than L, the formula becomes:

$$S = \frac{(R - L) \times D \times A}{(B \times 100) + (L \times D)}$$

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## FUTURES

Were designed as arrangements to protect against *commodities* future price fluctuations. Historically they were first implemented as hedging instruments for *agricultural products*, but later on futures were used for all other commodities (metals, energy, etc.). From our perspective, the development of *financial futures* is more important, as we have now future contracts for *equities, interest rate and currencies* (among many others).

Each type of future contract is designed in standard form and size, it trades in specific price increments, and it is usually traded on a futures exchange, where trading, payment and settlement of these contracts are strictly regulated.

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**EXAMPLE:** A tobacco producer wants protection for his crop, which he has a contractual obligation to sell and deliver to a cigarette company on Sept. 15. He wants to protect against a possible price decline before delivery date. So he will actually try to sell his crop forward, before delivery date, by selling tobacco futures at a price that is in line with his profit margin requirements.

On the other hand, most cigarette companies want to hedge against tobacco price increases, so they would probably want to buy forward at a price that fits its business plan.

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1) INVESTMENT

- RISK/REWARD VIEW : RECOMMENDS MOST PROFITABLE AND LIQUID ASSETS AS A MEANS TO REACH PROFIT MARGINS (CREDIT AND MARKET LIMITS)
- RECOMMEND INVESTMENT PORTFOLIO ALOCATIONS:

a) SHORT-TERM vs. LONG-TERM ASSETS (YIELD CURVE SPREAD TRADES)

b) FIXED vs. FLOATING RATE ASSETS

c) GOVERNMENT vs. CORPORATE

d) CREDIT RATINGS MIX (TOTAL PORTFOLIO SPREAD)

- ADVISE MANAGEMENT OF YIELD/PRICE ENHANCEMENT OPPORTUNITIES TO REPLACE PORTFOLIO HOLDINGS
- PROPOSE NEW INSTRUMENTS

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FINANCIAL DERIVATIVES

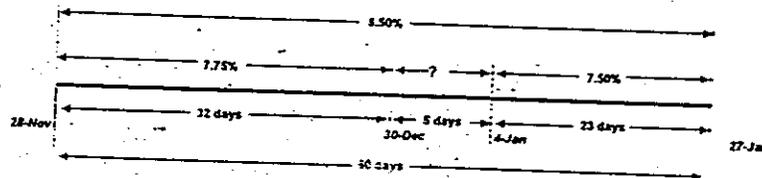
• **DEFINITION:** Derivative instruments are agreements/contracts between two or more parties, to exchange future cash flows generated by an underlying commodity or financial instrument, at a predetermined point in time (maturity or delivery date) and price (rate), without an actual exchange of principal. The point is to obtain protection against future adverse price fluctuations for a certain period of time, without using significant financial resources. Since these agreements are not reflected directly on the balance sheet, they are also known as "off-balance-sheet instruments". Notional vs. nominal principal amount.

Financial markets have developed many types of derivatives, and they trade in great volume and are usually extremely liquid. The advantages of using such financial instruments are many, but from a bank's point of view, the funding cost is the most attractive. As there is no exchange of principal, there is no actual cost of funds for entering into a derivative contract.

- 1) Futures    2) Forward Rate Agreements (FRA'S)    3) Swaps

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**QUARTER-END FUNDING CALCULATIONS**



Term period (Nov. 28 – Jan. 27)	60 days	Term rate	8.5%
Head period (Nov. 28 – Dec.30)	32 days	Head rate	7.75%
Turn period (Dec. 30 – Jan: 4)	5 days	Turn rate	?
Tail period (Jan. 4 – Jan. 27)	23 days	Tail rate	7.50%

Turn rate 17.9%

Having any three of these rates will help calculate the fourth (very useful tool)

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- MAKES SPECIFIC RECOMMENDATIONS FOR THE DIRECTION AND MAGNITUDE OF THE FUNDING GAP, BASED ON ITS MONETARY POLICY AND INTEREST RATES FORECASTS
- POSITIVE/NEGATIVE YIELD CURVE EFFECT ON FUNDING COST
- USE OF BANK'S CAPITAL AS FUNDING SOURCE (ALLOCATION OF COST AMONG VARIOUS DEPARTMENTS)
- ALLOCATION OF FUNDING SOURCES AND COSTS FOR VARIOUS ASSETS CLASSES IN CORRELATION WITH THEIR MARKET/LIQUIDITY RISK PROFILES
- USE OF DERIVATIVES TO CONTROL COST OF FUNDS (FRA'S, SWAPS)

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**TREASURY FUNDING AND INVESTMENT TACTICS**

**1) FUNDING**

- EVALUATES LIABILITIES LIQUIDITY AND ACCESS TO VARIOUS FUNDING SOURCES (INVENTORY OF INTERBANK AND CORPORATE FUNDING LINES)
- RUNS RISK SCENARIOS AND EVALUATES FUNDING COST TARGETS CONSISTENT WITH REQUIRED LEVEL OF NET INTEREST INCOME

**BREAK-EVEN COST**

Assets:	31 days	at 8.5%	
First funding period:	17 days	at 8.3%	
Break-even funding:	14 days	?	8.743%

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**ASSETS AND INCOME PROJECTIONS**

Total Assets	Assets Rate	22 d Funding	9 d Funding	Total Profit
\$325 million	6.85%	6.04%	5.07%	\$222,000
\$325 million	6.85%	6.1%	5.28%	\$191,000
\$300 million	6.85%	6.04%	5.07%	\$204,000
\$300 million	6.85%	6.1%	5.28%	\$177,000

ANALYZES FUNDING YIELD CURVE AND MAKES TACTICAL ADJUSTMENT RECOMMENDATIONS (SEASONAL FUNDING PRESSURES)

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## **COMPOSITION OF A.L.C.O.**

**Size and composition may differ from one bank to another, but it will include managers of the most relevant profit centers and the risk control mechanism of the organization**

- **C.E.O.**
- **C.F.O.**
- **HEAD OF TREASURY**
- **HEAD OF BANKING DIVISION**
- **HEAD OF CREDIT**
- **CHIEF ECONOMIST**
- **COMPLIANCE OFFICER**

**COMMITTEE MEETS REGULARLY AT THE BEGINNING OF EACH MONTH**

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## **TREASURY A/L RISK MANAGEMENT FUNCTIONS**

- **REPORTS ON FUNDING & TRADING RESULTS**
- **ECONOMIC RESEARCH AND FORECASTING**
- **FUNDING LIQUIDITY ASSESSMENTS AND RECOMMENDATIONS**
- **RUN RISK SCENARIOS USING SIMULATION MODELS**
- **EVALUATE AND UPDATE BALANCE SHEET ASSUMPTIONS**

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## **A.L.C.O.**

- **EVOLUTION OF ALCO**
- **COMPOSITION**
- **TREASURY DEPARTMENT ASSET/LIABILITY RISK MANAGEMENT FUNCTIONS**

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## **EVOLUTION OF ALCO**

- **CHOICE OF ASSETS AND LIABILITIES**
- **ASSET DRIVEN BANKS**
- **LIABILITY DRIVEN BANKS**
- **NEED TO COORDINATE ACTIVITIES**
- **FUNCTIONS**
- **EXAMINE PAST PERFORMANCE**
- **ESTABLISH BALANCE SHEET AND PROFIT TARGETS**
- **FORMULATE STRATEGY AND TACTICS TO REACH TARGETS ( SHORT-TERM vs. LONG-TERM GOALS)**
- **MANAGE INTEREST RATE, MARKET AND LIQUIDITY RISKS**

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# ASSET / LIABILITIES RISK MANAGEMENT

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- ASSET/LIABILITY COMMITTEE (ALCO)
- TREASURY ACTIVITIES
- FINANCIAL DERIVATIVES

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Ms. WHITE stated that, "DAIWA was indicted today, not only because its former officer, Toshihide Iguchi, committed serious crimes, but because, as charged in the Indictment, DAIWA and a number of its highest senior officials themselves committed crimes as they attempted to cover-up other crimes. The message to the financial community from today's indictment should be clear and unambiguous: law enforcement will not tolerate financial institutions who unlawfully attempt to mislead regulatory authorities and coverup criminal misconduct by their employees. The law requires, and law enforcement expects, that all companies will abide by the law, all regulatory requirements, and the highest standards of corporate citizenship."

If convicted on the criminal charges filed today, DAIWA faces maximum fines under the federal Sentencing Guidelines exceeding \$1 billion.

The Federal Reserve Board, the New York State Banking Department, and the Federal Deposit Insurance Corporation will be announcing today that they have taken remedial action against DAIWA and the Daiwa Bank Trust Company, a United States subsidiary of DAIWA, requiring the termination of the bank's operations in the United States by February 2, 1996.

DAIWA is a Japanese bank headquartered in Osaka, Japan. DAIWA is one of Japan's largest commercial banks and maintains branches around the world, including offices in New York and 10 other states in the United States. The DAIWA BANK TRUST COMPANY is a United States subsidiary of DAIWA, headquartered in Manhattan. DAIWA's office in New York is located at 666 Fifth Avenue.

Also this afternoon, a criminal complaint was filed charging MASAHIRO TSUDA, a former General Manager of DAIWA's New York Branch, with one count of conspiracy to deceive the Federal Reserve Board by concealing the \$1.1 billion loss, making false statements to the Federal Reserve Board and making false entries in the books and records of DAIWA; and one count of misprision of a felony. TSUDA will be presented later on the complaint before United States Magistrate NINA GERSHON.

Ms. WHITE praised the efforts of the Federal Bureau of Investigation for their extraordinary efforts in conducting the investigation of this matter. She also said that the investigation of DAIWA, The Daiwa Bank Trust Company, and individuals who are or were employed by DAIWA is continuing.

Assistant United States Attorneys REID M. FIGEL, Chief of the Securities and Commodities Task Force, ANDREA LIKWORNIK, and MICHAEL SIMONS are handling the prosecution.

The charges contained in the Indictment are merely accusations and the defendant is presumed innocent unless and until proven guilty.

95-155

Approved: /s/MICHAEL A. SIMONS, ANDREA M. LIKWORNIK  
Assistant United States Attorneys

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From the 'Lectric Law Library's stacks  
Press Release Announcing Criminal Indictment Of Daiwa Bank, 11/2/95

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PRESS RELEASE ANNOUNCING CRIMINAL INDICTMENT OF DAIWA BANK, 11/2/95

United States Attorney  
Southern District of New York

FOR IMMEDIATE RELEASE      CONTACT: MARVIN SMILON  
NOVEMBER 2, 1995      (212) 791-1937

PRESS RELEASE

MARY JO WHITE, the United States Attorney for the Southern District of New York, and JAMES K. KALLSTOM, Assistant Director in Charge of the FBI's New York Office, announced today that a 24-count indictment has been filed in Manhattan federal court against THE DAIWA BANK, LTD. ("DAIWA"). DAIWA is charged with conspiracy, mail and wire fraud, obstructing an examination of a financial institution, falsification of bank records, and misprision of felonies by failing to disclose federal crimes.

The charges arise out of the unauthorized sale of securities from DAIWA's custody account, including the sale of more than \$375 million in customer securities, by Toshihide Iguchi, a former Executive Vice President at the New York Branch, which were used to cover trading losses incurred by Iguchi; Iguchi's attempts to cover-up those losses and unauthorized sales, which by 1995 had grown to more than \$1.1 billion; and DAIWA'S attempts to continue the cover-up after learning of Iguchi's illegal conduct; and DAIWA's alleged repeated attempts, dating back to at least 1988, to obstruct the Board of Governors of the Federal Reserve System and the New York State Banking Department.

According to the Indictment, DAIWA learned in mid-July 1995 that Iguchi had lost more than \$1.1 billion through unauthorized trading in United States government securities, and the sale of securities belonging to DAIWA's customers to conceal those losses. Rather than disclose IGUCHI'S 8 crimes to law enforcement authorities, as DAIWA was required by law to do, DAIWA allegedly attempted to conceal the losses and missing securities by, among other things: making extensive false entries in its books and records to hide the losses and preclude law enforcement action in the United States; removing the records of these crimes from DAIWA'S New York offices and secreting them in the apartment of the manager of DAIWA'S New York Branch; sending false account information to its customers; filing a false report with the Federal Reserve Board; and otherwise attempting to prevent law enforcement officials from discovering these crimes.

The charges against DAIWA in the Indictment that relate to the cover-up after DAIWA learned of Iguchi's activities include: a charge that DAIWA, acting through senior DAIWA officials, both in Japan and New York, conspired to defraud the Federal Reserve Board, to make false statements to the Federal Reserve Board, and to falsify DAIWA'S books and records to prevent discovery of the \$1.1 billion trading loss; misprision of felonies based on DAIWA'S failure to report and affirmative concealment of federal crimes; and several counts of falsifying bank books and records. The Indictment also charges DAIWA in four counts of mail and wire fraud with defrauding DAIWA'S customers in connection with the unauthorized sale of \$377 million in customer securities by Iguchi; and multiple counts of falsifying books and records arising out of Iguchi's efforts at covering-up his trading losses.

DAIWA is also accused in the Indictment with conspiring to defraud the Federal Reserve Board between 1988 and 1995 by providing false information about the location and supervision of its traders. The indictment alleges that DAIWA temporarily relocated traders from one location to another and disguised a trading room as a storage room prior to a bank examination in order to deceive banking authorities. DAIWA is also charged with one count of obstructing an examination of a financial institution in connection with that conduct.

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THE CASE OF ALLFIRST AND JOHN RUSNAK'S \$691 MILLION CURRENCY TRADING LOSSES

This is a very recent case, and its details are still sketchy. We thought that following future revelations and developments in this case could be both educational and fascinating for any banker with dealings in treasury functions.

In brief, in early February, Allied Irish Bank made a startling announcement concerning the uncovering of the fact that one of its foreign currency traders in their Baltimore subsidiary, Allfirst, had amassed about \$750 million in foreign exchange trading losses during the previous year.

Later on, as things started to become a little more apparent, a first investigation revealed that these losses were a bit less drastic, "only" \$691 million, but that they have been mounting for a period of five years. In effect, John Rusnak had been engaging in unauthorized trading as well as a complex cover-up, a in order to abscond his losses. He allegedly created fictitious documentation and falsified accounting records to hide a large number of bogus currency option contracts which were designed to cover his staggering trading losses.

A lot of the facts are still unknown and will be analyzed by an investigation conducted under the guidance of Eugene Ludwig, a former U.S. Comptroller of the Currency hired by Allied Irish Bank. The conclusions will be made public and strong corrective measures should be expected.

At this time, amidst much speculation, a couple of facts are clear:

- Allied Irish gave Allfirst a virtual free hand in managing most of its operations, including proprietary trading.
- Since last May the bank was deemed to be operating in a "safe and sound" manner (satisfactory condition) by the state examiners, questions were raised about their level of competence. It is a widely accepted fact that many of the examiners are not technically proficient and well trained to analyze currency trading matters. They have a checklist of what to look for, and they assume that banks operate with a given degree of honesty. If everything just "looks OK", they finish up their list checking and leave. It takes a good 3 to 5 years to properly educate and fully train a good examiner, and most of those sent to perform most bank audits are usually junior staff.
- In his options trading, Rusnak used "primary brokers" accounts with several banks, chiefly Bank of America and Citibank. This not only allowed him to conduct such currency options trading under the radar screen, using the dealers' name, but from Allfirst's erroneous bookkeeping perspective, he could report dozens of trades with one dealer as one trade only (netting). This accounting lapse in judgment on the part of the bank, made it a lot easier for Rusnak to falsify option contracts, as he only needed to produce one contract for all his trades with an individual dealer.

7

Against U.S. state and federal regulations which require banks to give immediate notification of any criminal behavior, it took Daiwa until September 18 to inform the authorities, prompting speculation of collusion and possible conspiracy to obstruct American laws and regulatory constraints. The fact that in late July, Daiwa had filed a statement of the branch condition with Federal Reserve, which did not reflect Iguchi's losses, did not dilute the impression that bank's senior management in Tokyo and New York conspired to conceal the losses.

Iguchi was released by the bank in July, but only fired on September 26, two days after being arrested by the FBI. He was indicted on charges of bank fraud, forgery, embezzlement and misapplying of bank's funds. He pleaded guilty on all counts and went to jail for a very long sentence.

- On October 2, the Federal Reserve Bank and New York State Banking Dept. issued a temporary cease-and-desist order against Daiwa, focusing on unsafe and unsound banking condition, failure to institute appropriate risk management procedures as well as for knowingly submitting false reports.
- On November 2, the Fed, FDIC, NY State Banking Dept. and other state regulators decided to order Daiwa to close its U.S. banking operations.
- Also on November 2, the U.S. Attorney's Office announced that a grand jury had issued a 24-count criminal indictment against Daiwa, and against its former general manager of the New York branch, for conspiracy to defraud the Federal Reserve Bank, for making false reports and for engaging in a series of deceptive and unlawful financial and accounting transactions ( SEE COPY OF INDICTMENT)

It is quite clear that the same cardinal rule regarding the segregation of front and back-office was practically suspended in this case, opening a wide door for unauthorized and illegal trading, which had catastrophic consequences. Only Daiwa's size and depth saved it from Barings' fate. At the same time, Daiwa's supervisory and risk management incompetence, coupled with its complicity and deception exhibited at the senior management level, underline the need to implement and enforce preventive means for containing operations and organizational risks.

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**DAIWA BANK'S US TREASURY BONDS \$ 1.1 BILLION TRADING LOSS**

The case of Toshihide Iguchi at Daiwa Bank's New York office produced similarly staggering trading losses, under somewhat comparable circumstances, but also a few differences with the Nick Leeson case.

- these losses were amassed during an amazing 11 years period, during which 30.000 unauthorized trades were executed.
- bonds are much less complex instruments, which should have made the earlier detection of trading irregularities a lot easier.
- internal bank auditing and regulatory supervision in Japan are proverbially lax

**Brief sequence of events summary**

Toshihide Iguchi was the trusted head of U.S. Treasury bonds trading at Daiwa Bank in New York. He had joined the bank in the late 70's and spent eight years handling back-office paperwork for the bond trading. He was promoted to trader in 1984, but given the small size of the operation, he remained in charge of keeping the books. Almost from the beginning he lost an estimated \$ 200,000 in trading, and allegedly devised an illegal scheme to conceal and recuperate the loss. His method was quite simple: whenever he lost money in a proprietary trade, Iguchi withdrew and sold bonds held in Daiwa's own accounts or those of its customers, and forged back-office documents to make these trades look like authorized transactions. He continued along this path of deception, but as his trading style became bolder and bolder, the losses were accelerating at a dizzying pace. From the relatively modest beginnings, Iguchi's style developed into a dangerously brazen betting, to the point that he traded as much as \$500 million worth of bonds in a single day. His phony bookkeeping continued, and he managed to carry on undetected for an amazing 11 years. Internal bank auditors and regulators missed on catching any of his unauthorized trades or forgery. As an illustration of how easy it was for Iguchi to escape scrutiny, the following incident is very telling. According to the Japanese Ministry of Finance, all bond trading was only authorized in the bank's midtown offices. However, Iguchi and his traders were conducting business in a downtown Manhattan location. When they found out about an imminent audit, before the examiners showed up, they turned the lights off in the trading room and stacked a lot of card boxes to make it look like a storage area. None of the auditors bothered to inspect the premises thoroughly enough and the trading continued. As Iguchi's trading volume increased manifold, he needed to falsify an ever-increasing number of documents in order to keep his positions and losses hidden. But in 1993 Daiwa decided to split the bond-trading and record-keeping functions, thus impeding on Iguchi's ability to conceal his illegal activity. And still, he remained undiscovered for almost two more years. Meanwhile, his losses ballooned to as much as \$1.1 billion, which may give anybody pause, considering that for 11 years this trader managed to lose on average \$100 million/year, or \$273.000/day without being exposed. Finally, under enormous stress, on July 13, 1995 he wrote a self-incriminating letter to Daiwa's president in Tokyo, detailing all his unauthorized dealings and illegal activities.

- b) credit risk - the implication of the very large amount of funds remitted to Singapore for meeting vast "genuine" client margin calls was lost on senior management. They never questioned why Barings was lending more than US\$ 500 million to trade risky futures. They did not seem to really have an idea who these clients were, and they had set no individual margin call limits per client.
- c) market risk - as Barings had no independent auditing of Leeson's reports, they could not check their accuracy, and based on false data, ALCO's gauging of market exposure of the open positions was totally inaccurate (garbage in/garbage out)
- d) limits - Barings did not impose any gross limits on Leeson's proprietary trading, as they had been misled to believe that there was little directional market risk in arbitrage positions which were supposedly closed-out at the end of each day. However, even under those circumstances, gross position limits are a must, as settlement and basis risk when prices in markets don't move in tandem, affecting the hedge positions, can create significant liquidity and funding problems.

5) *Lack of supervision* - while Leeson had lots of supervisors, the reporting lines were vague and confusing and, as a result, nobody exercised real control over his activity.

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should have been quite clear that something was awfully wrong with the trading activity in Singapore. There was, in fact, a wide gap between fact and fantasy, or between reality and the way Leeson was recording and reporting trades to his superiors.

Things were so bad, that Barings was actually its own counterparty in quite a few of these disastrous Trades, as Leeson was buying from one hand and selling to the other, between #88888 and some of the bank's legitimate trading accounts. Thus, Barings had some very large open positions at a time when market risk was soaring, resulting in catastrophic losses. Leeson never reported details of the Error Account to treasury or risk management officers in London. Before the end of February, the margin calls and losses were so overwhelming, that Leeson ran away, and the bank was faced with unavoidable bankruptcy procedures. On February 27, 1995, one of the oldest and prestigious financial institutions was forced to ask for protection from creditors, as losses were reaching US\$ 1.3 billion. A few weeks later, after more than 200 years, Barings ceased to exist as it was purchased by ING, the giant Dutch financial group. The senior management and its auditors were subsequently faced with numerous law suits by regulators, shareholders, creditors and the Asian exchanges on which Nick Leeson traded while breaking local laws.

#### Lessons to be learned

By violating almost all basic risk management recommendations, Barings failed to institute a proper managerial control system, and ultimately did not catch on to Leeson on time. Senior management became responsible for significant flaws in the following areas:

- 1) *Segregation of front and back-office* - by breaking a cardinal rule of any trading operation: it allowed Leeson to settle his own trades, by putting him in charge of both the dealing desk and back-office. Abusing his position, Leeson suppressed information on account # 88888 and mislead senior management, causing the collapse of the bank.
- 2) *Senior management involvement* - by having a very superficial knowledge and understanding of the markets Leeson was authorized to trade on. Without the proper level of analytical skills, it was very easy for management to be misled into believing that a trader can generate huge profits, and become less inclined to seriously probe and audit such a "successful" operation. Considering the huge amounts of cash Barings had to borrow to meet margin demands, senior managers were negligent in their duties.
- 3) *Adequate capital* - as we have already seen, there was a serious disproportion between Barings' reported capital and its borrowings related to Leeson's trading. An institution needs to have sufficient capital to **withstand the impact of adverse markets** on its open trading positions, and to have enough money to **afford keeping the positions going**. Misinformed by Leeson, Barings thought that they were funding and paying margins for hedged positions, when in reality those funds were for significantly at-risk open ones. This put the bank's **capital** in a very precarious bind which lead to **insolvency**.
- 4) *Poor control procedures* - at several levels:
  - a) **funding** - without a functional system to reconcile uses of funds, Barings did not require Leeson to distinguish between the margins of proprietary and customer trades. London was simply and automatically remitting all the requested cash transfers Leeson asked for, without checking the accuracy of his supporting data.

## BARINGS BROTHERS' COLLAPSE DUE TO NICK LEESON'S TRADING

The examination of the chain of events leading to the collapse of Barings, Britain's oldest merchant bank, will underline some serious lessons to be learned about the great danger posed by laxity in risk management and control.

In essence, Barings folded because it *could not meet the enormous margin call payments and trading losses*, incurred in its name by a rogue trader, Nick Leeson.

### Brief sequence of events summary

According to various investigations, Nick Leeson was supposed to trade futures and options only as arbitrage, or on behalf of the bank's clients. As an *arbitrage* trading activity, the bank's positions should not have been exposed to great market risk, since they were *supposed to be hedged*. Leeson only had a mandate to buy/sell contracts on the *Osaka exchange* and to *offset* those transactions by selling/buying them back on the *Singapore exchange*. The only open (naked) options positions were to be assumed on behalf of clients.

However, Leeson decided to neglect those instructions, and actually instead of selling contracts in Singapore, he was actually buying them, amassing enormous unauthorized long positions. He managed to do that in his dual capacity of head trader and manager of back-office and settlements area. The long positions were hidden into the infamous Error Account # 88888, where he was booking all the losses deriving from the open long positions, while at the same time reporting profits in the Barings trading accounts which appeared as transactions counterparties of #88888. He was also creating fictitious customer trades to boost the profits in the bank's accounts. Having a supervisory capacity in back-office, he instructed staff to change contracts prices and break trades into smaller sizes, to create extra profits on the trading accounts, while making his activity even more difficult to detect. At the same time, as manager of settlements, he was requesting large cash transfers from senior management in London and Tokyo, on the pretense of margin calls for the bank's clients positions. The magnitude of the open positions accumulated by Leeson towards the end, on both exchanges and other Asian financial markets, was astounding:

- US\$ 20 billion worth of Japanese Government Bonds
- US\$ 7 billion in Nikkei 225 index futures
- US\$ 6.68 billion in Nikkei 225 put/call options

Leeson decided in late 1994 and early 1995, to take positions according to his views on the Japanese equity and bonds markets. Immediately after the catastrophic Kobe earthquake on January 17, those positions became untenable as markets plummeted. Leeson continued to increase his long positions, and started to ask for cash transfers to meet margin calls. Management, satisfied that those were margins for hedged positions (unexposed to directional market risk), complied with the requests, and sent a total of US\$ 835 million during January and February 1995. Most of these funds were borrowed. We won't spend time on the complexity of the transactions, but will note that the enormity of this position and its unlimited risk potential should have alerted the bank's senior management and its risk management. This was even more surprising considering that *Barings' capital was less than \$620 million*, which was in stark contrast with the US\$835 million it was asked to borrow and transfer. So, it

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confirmed mutually so that the details will be conveyed accurately?

(3) Does your unit have the rule or the procedure requiring that the details of deals exceeding a designated amount be confirmed with the customer within the same day?

(4) Are the Confirmations of forward contracts collected from customers without delay?

(5) Are the telephone conversations recorded properly as per the Telephone Recording Procedure? Is the record of tape recording made properly and the recorded tapes stored adequately, in accordance with the Procedure?

(6) Does your dual control and double checking system function properly? The dual checking function performed by the back office is none the more important, however systematized the deal control may be with the help of the Reuters dealing system and FXAT.

(7) Do all the departments recognize the significance of exchange position recognition report, including those where exchange position is not usually recorded, in addition to the Forex & treasury? Are study sessions held on the exchange position recognition?

(8) Are meetings held between the Forex & treasury and the accounting and other departments, on the exchange position recognition related to remittance of General Expenses payments, transfer to allowance for non-performing loans, and other operations at term-end account settlements in a currency other than the functional currency?

(9) Market-related operational incidents are often related to holidays of staffs in charge and transfer of duties before the staff retirement. Are duties transferred properly before long holidays and retirements? Are the important transfers reported to the Dept. head (or the Management, if necessary)?

(10) Are the requirements of reconciliation, double-checking and other fundamental operations observed strictly?

### 3 Conclusion

Market-related operational incidents often affect the P/L by large amount. Should there be any, please report them immediately to the Management and to the Head Office Division in charge in accordance with the procedures, in addition to the immediate responses. Your immediate report to the Head Office is indispensable, especially when the amount is 1 million Yen or exceeds the equivalent of 1 million, as such incidents must be reported to the local authorities in Japan within the strict time limit.

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Outline: The dealer was inputting an inter-bank forward contract of US\$250,000.00 in the FXAT (Dealing support System) system but erroneously input the amount as US\$500,000.00. The required confirmation process within the same day was overlooked. The back office also overlooked their checking requirement between the Reuters dealing system and the FXAT. On the value date, the counterpart bank informed of the amount error. The amount was corrected but the deal resulted in the recording of exchange loss.

Key points:

Does the front office reconfirm the details of the deals designated in the Individual Units Procedure such as those exceeding the amount limit, before the end of the same day?

The back office still has the important role of double checking even if the deals are controlled by the Reuters dealing system, FXAT or any other system. Does the back office conduct effective double checking of the amount, the choice of sale/purchase and other important information?

**(4) Report of exchange position recognition overlooked / General Expenses payments in non-functional currency**

Outline: The Unit is paying office rent in US\$ which is not the local functional currency. An aggregate amount of US\$1.2 million once at a time every year. The general affairs dept., who was making the General Expenses payments, was not recognizing the exchange position and therefore did not send the position recognition report of US\$. On the following day, the Forex & treasury dept. discovered the omission of the position recognition. The omission resulted in a large exchange loss because of the drastic fluctuation of the exchange market.

Key points:

General Expenses payments in foreign currency or transfer to allowance for non-performing loans in a non-functional currency by general affairs and accounting departments, which usually do not have the position recognition, need to be handled carefully as they are likely to develop into operational incidents.

Are study sessions being held on the reporting of exchange position recognition and the internal procedures?

**(5) Non-delivery of bonds at security lending / violation of Individual Units Procedure**

Outline: The Unit is investing in the security lending whereby bonds of customers are delivered to other foreign-capital banks and the proceeds are invested in the market to gain profits. A staff lost the instruction sheet for the delivery of bonds, and did not check the delivery of all the bonds to be delivered using the list. Due to the non-delivery of bonds, the unit was unable to receive funds from the foreign-capital bank and was obliged to obtain funding from the market, which meant an additional funding cost. (The other staff in charge was on holiday and the staff, who was about to retire the office, was involved in the delivery overlooking.)

Key points:

Are the requirements of reconciliation, checking etc. strictly observed?

Are the settlements, bonds deliveries and other transactions in large amount being double-checked by clerical and managerial staffs?

**2 Key Points of Preventing Market-Related Operational Incidents**

CHECK LIST

Overseas units are requested to review their internal system, with the following check points as reference.

(1) Does every staff observe the basic requirement of repeating the details of forward contracts, leave orders and other market-related operation, such as the sale/purchase choice, amount and value date?

(2) When the JCD or other section receives a customer request, to be conveyed to the dealers, are the details of the request

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**OVERSEAS OPERATIONS NEWS****056- Prevention of Market-  
Related Operational incidents**

There have recently been an increasing number of market-related operational incidents caused by the incorrect choice between buying and selling, inadequate/lack of verbal confirmation of the amount, and lack of other fundamental operations requirements. Market-related operational incidents carry the risk of recording large losses depending on the market fluctuations. This issue of Overseas Operations News features example cases of market-related operational incidents, together with the key points of enhancing the control system against the incidents. Overseas units are requested to discuss the issue at OCC meetings and other occasions reminding every staff of the significance of their prevention.

**1 Example Cases****(1) Incorrect choice between buying and selling / non-confirmation of customer request by repeating**

**Outline:** A customer intended to transfer funds from the account in US\$ to the account in Yen, and requested a forward contract between the sale of Yen and the purchase of US\$(bank side). The Account Officer confirmed on the phone the transaction as a reverse transfer, from the account in Yen to the account in US\$, without repeating the details of the deal. The customer returned the Confirmation later with the signature but presented a complaint on the value date stating that the requested transaction was the sale of Yen and the purchase of US\$(bank side). The unit checked the recorded conversation and discovered that the customers complaint was right and that the confirmation by the Account Officer was incorrect. In the end, the deal was reversed and corrected as per customer request, and the Unit recorded exchange loss.

 **Key points:**

Do the staffs in charge repeat the sale/purchase selection, amount, due date and other basic but important information to confirm the details of the request?

Are telephone conversations recorded properly in accordance with the Telephone Recording Procedure?

**(2) Amount error / inadequate internal confirmation of amount**

**Outline:** An Account Officer of JCD received a request for a deal between the purchase of US\$100,000.00 and the sale of the local currency. The Account Officer conveyed the request but the dealer mistook it for a deal of US\$120,000.00. The deal was done in the incorrect amount, without confirming the amount with the Account Officer. Upon receipt of the Confirmation, the customer complained about the incorrect amount. The deal was corrected but resulted in the recording of exchange loss.

 **Key point**

Are the choice between sale and purchase, amount, value date, currency and other details of deals thoroughly confirmed when conveying the instructions from Account Officers and other customer recipients to the dealers?

Certain overseas units have a rule in their Individual Units Procedure requiring the reconfirmation of the deal details with the customer by a staff of the front or back office whenever the deal is in a large amount. This requirement is effective for the prevention of incidents.

**(3) Amount error / inadequate double checking between the front and the back offices**

**EXPOSURES - SINGLE ISSUER LIMITS:** (book value is to be utilized)

- U.S. Government and Federal Agencies - None.
- Other Sovereign Debt - up to the respective un-utilized country limit.
- Corporate - \$16 million to one obligor having a minimum rating of "A" at time of purchase from at least one major rating agency.
- "BBB" Rated Corporate - \$5 million.
- "AAA" ABS (credit cards, auto, whole loan, home equity, etc.) - \$26 million to one corporate entity establishing ABS Trusts.
- "A" Rated Subordinated ABS - \$5 million to any one Trust.
- Corporate Finance Security Portfolio - \$5 million to any one obligor.
- "A" Rated Subordinated BHC Debt - \$5 million to any one obligor.

**EXPOSURES - SINGLE ISSUE LIMITS:** In those cases where the single issuer limit is greater than the single issue limit, purchases of a single issue up to a price of 110% of par is permitted. Exposure will be measured at book value.

FOR EXAMPLE: The issuer limit for "A" rated corporate bonds is \$16 million while the single issue limit is \$10 million. In this case, \$10 million par value of a single issue up to a price of 110% is permitted, creating an exposure of \$11 million (still within the total issuer limit). Any additional purchases for the same issuer should be on a face amount and at such price that the total book value of all holdings of the issuer does not exceed the single issuer limit.

- U.S. Government and Agency (includes MBS and Agency Backed CMO's) - \$35 million.
- Other Sovereign Debt - up to the respective un-utilized country limit.
- Corporate Bond or MTN ("A" rated) - \$10 million.
- "BBB" Corporate Bond or MTN - \$5 million.
- "A" rated Subordinated BHC Debt & Subordinated ABS - \$5 million.
- "AAA" rated ABS & Senior Residential Whole Loan Securities - \$15 million.
- "AAA" rated Home Equity Loan ABS - up to \$10 million.
- "A" rated Residential Whole Loan Securities & Home Equity Loan ABS - \$5 mil.
- "AA" rated CLO/CBO - \$7.5 million with Emerging Market CLO's requiring the approval of two Investment Committee members

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**Headquarters for the Americas**  
**CREDIT RISK MANAGEMENT DEPARTMENT**

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To: TOA, CDA, IBAD, CPG  
From: Credit Risk Management Department  
Date: January 24, 2002  
Re: **Policy and Procedure for Wall Street Credit Overline Exceptions**

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It is Bank policy that no trades will be done unless prior credit approval has been obtained.

When entering a trade into Wall Street, the system will check for available credit line. If the system identifies the trade as exceeding the available credit line pre-settlement amount, settlement amount, approved tenor or credit line expiration date, a dialogue box will appear on screen with the message:

"Enter the Credit Overline Reason"

with a blank text box to be completed. At this point the trader must obtain credit approval or approval confirmation prior to trading.

Credit approval may be obtained verbally or in writing (including fax and email) from an appropriate credit officer. Alternatively, if credit approval exists but is not recognized by the Wall Street system, verbal confirmation must be obtained from CRMOD that a Decision Memo provides credit approval for the existing exposure and the overline trade(s).

Once credit approval or approval confirmation has been obtained, type in the blank text box the name of the credit officer or CRMOD officer from whom approval was obtained. For example:

"F. Santora, CRMOD"

OR

"J. Moran, CDA"

Once the text has been completed, click OK on the dialogue box to continue entering the trade.

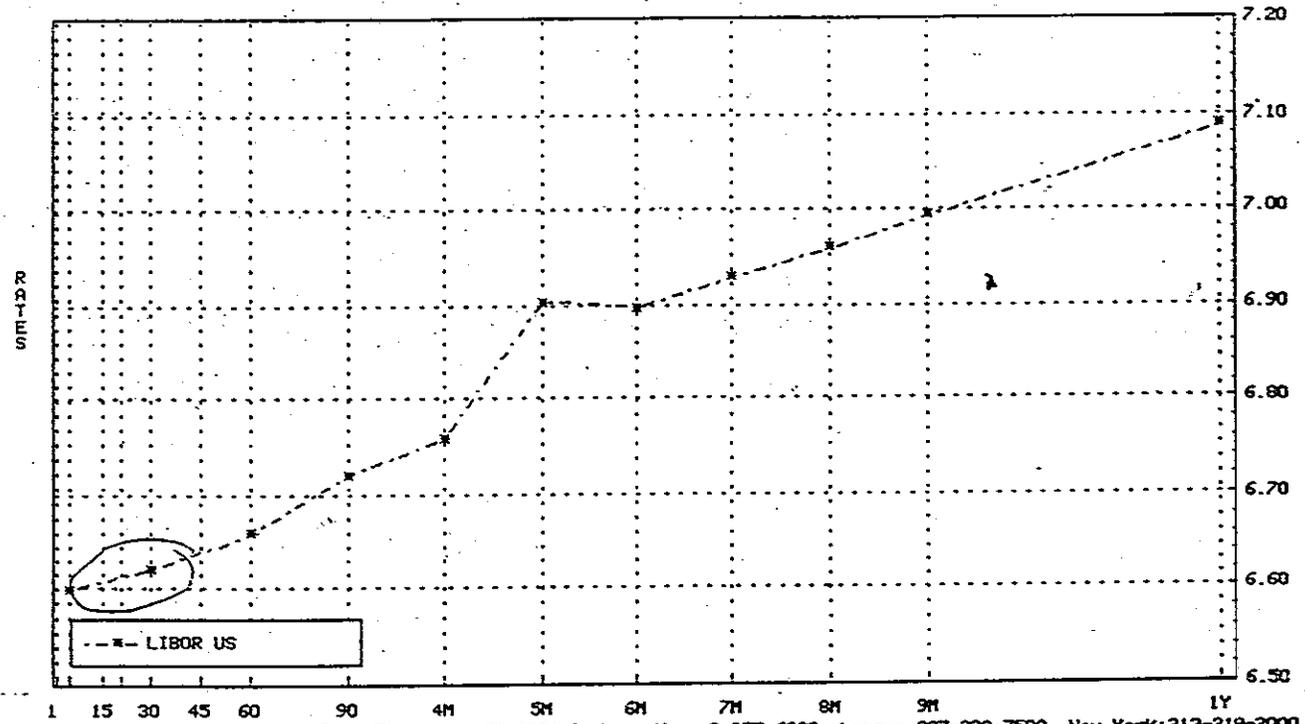
APPENDIX 4

CURRENT U.S. DOLLAR SHORT-TERM DEPOS YIELD CURVE

<HELP> for explanation.  
Hit <PAGE> for more info or <MENU> for list of curves.  
DATE 8/1/2000

DG48 M-Mkt MMCV  
Y=Yield D=Discont Page 1/2

SINGLE MARKET CURVES YIELD



Copyright 2000 BLOOMBERG L.P. Frankfurt: 69-920410 Hong Kong: 2-977-6000 London: 207-330-7500 New York: 212-318-2000  
Princeton: 609-279-3000 Singapore: 226-3000 Sydney: 2-9777-8686 Tokyo: 3-3201-8900 Sao Paulo: 11-3048-4500  
1646-65-1 01-Aug-00 15:00:59



For proprietary trading, the Trading Portfolio is permitted to deal in all security and financial contracts allowed for the Investment Portfolio. Management will provide periodic reports on trading activity to the Investment Committee of the Board. The guidelines and limits presented below cover proprietary trading activities in cash instruments as well as exchange traded futures and options and over-the-counter (OTC) options. Management recognizes the risk in proprietary trading.

**DEFINITIONS OF RESPONSIBILITIES**

Trading positions taken for our account within authorized limits may be initiated by Trading personnel who have been authorized to trade by Management and the Board. Tickets will have two signatures, one must be the trader initiating the trade and the second being that of a Trading Room officer who is senior to the trader initiating the trade.

Trading activity is carried out by designated Trading Room staff, under the direct supervision of the Treasurer who will continually be kept informed of trading positions and market movements.

The Treasurer or, in his absence, his designee is required to inform the CEO or his designee immediately of any significant developments in market exposure or trading activity.

**POSITION and LOSS CONTAINMENT LIMITS**

<u>Maturity</u>	<u>Change in Price For a 1 BP Change In Yield Per \$Mil</u>	<u>Risk Points Per \$Mil</u>	<u>Maximum Risk For Treasury Trading Dept Intraday/Overnrt</u>	<u>Maximum Position For Trading Dept Intraday/Overnrt</u>
3 mo.	\$ 25.00	.25	50 / 30	\$200.0 mil / \$120.0 mil
6 mo.	50.00	.50	75 / 45	150.0 mil / 90.0 mil
12 mo.	100.00	1.00	100 / 60	100.0 mil / 60.0 mil
2 yr.	185.00	1.85	150 / 90	81.1 mil / 48.6 mil
3 yr.	290.00	2.90	150 / 90	51.7 mil / 31.0 mil
4 yr.	375.00	3.75	150 / 90	40.0 mil / 24.0 mil
5 yr.	440.00	4.40	150 / 90	34.1 mil / 20.4 mil
7 yr.	620.00	6.20	150 / 90	24.1 mil / 14.5 mil
10 yr.	790.00	7.90	150 / 90	18.9 mil / 11.3 mil
30 yr.	1,600.00	16.00	150 / 90	9.3 mil / 5.6 mil

The Controller will review the above table on a quarterly basis to assure the accuracy of the dollar value equivalent of a 1 basis point change in yield.

The CEO has the following authorities: Intraday = 200 points; Overnight = 150 points.

The table above is subject to the following limits which utilize the US T-bond contract as its base;

- Monthly loss limit: = \$100,000
- Position limit: Intraday = 93 BFE<sup>A</sup> contracts, Overnight = 56 BFE contracts
- Premium sold limit: = \$175,000
- Risk point limit in Absence of Treasurer: Intraday = 90, Overnight = 50

BFE<sup>A</sup> = Bond Futures Equivalent

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**CONSOLIDATED INCOME STATEMENT  
FOR THE MONTH OF JULY 2000**

(000'S OMITTED)

TREASURY DIV.      BANKING DIV.

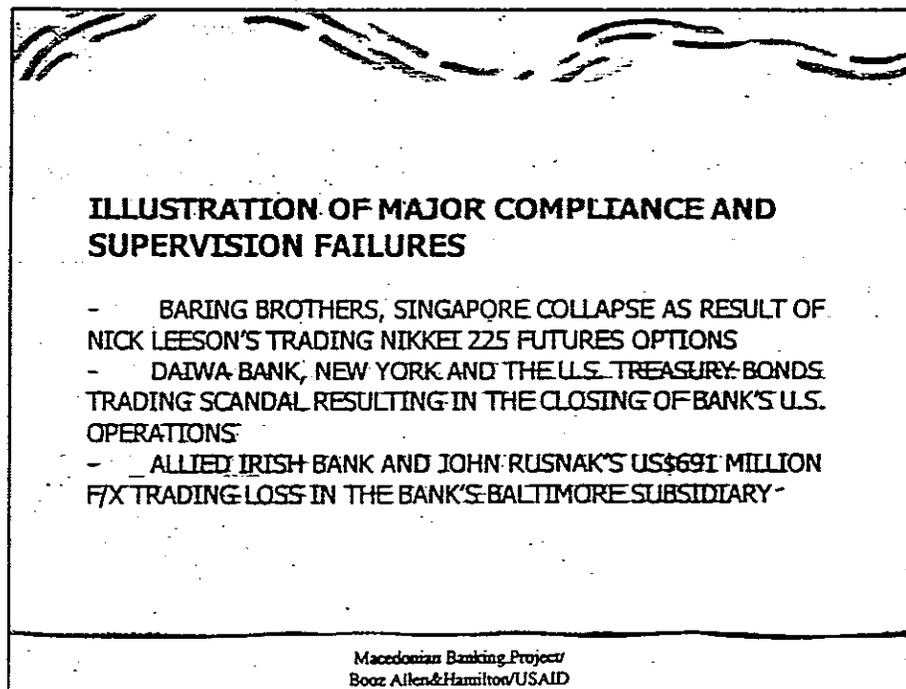
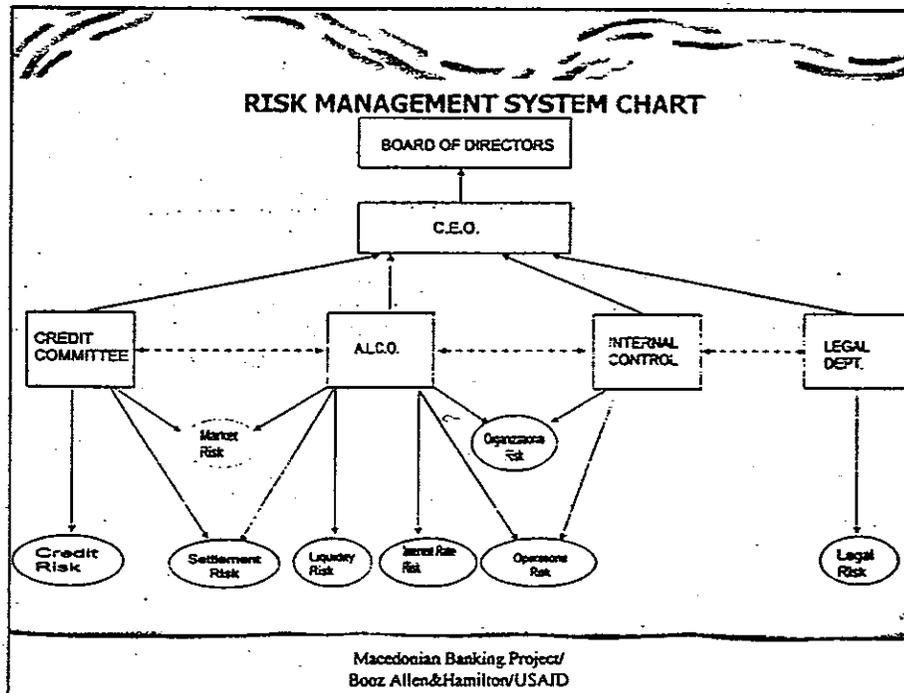
	TREASURY DIV.	BANKING DIV.	CONSOLIDATED	BUDGET	VARIANCE	%
<b>Interest Income:</b>						
Loans	\$81	\$1,150	\$1,231	\$1,737	(\$506)	-29%
Interbank placings	0	0	0	0	0	N/A
Related placings	95	1	1	0	1	N/A
Federal funds sold	6	0	6	12	(6)	-50%
Floating rate instruments	18	650	668	296	372	126%
<b>Total interest income</b>	<b>\$200</b>	<b>\$1,801</b>	<b>\$1,906</b>	<b>\$2,045</b>	<b>(\$139)</b>	<b>-7%</b>
<b>Interest Expense:</b>						
Interbank takings	\$94	\$0	\$94	\$0	\$94	N/A
Related takings	17	1,391	1,313	1,631	(318)	-19%
Federal funds purchased	12	0	12	14	(2)	-14%
Other call & time deposits	0	11	11	6	5	83%
<b>Total interest expense</b>	<b>123</b>	<b>1,402</b>	<b>1,430</b>	<b>1,651</b>	<b>(221)</b>	<b>-13%</b>
<b>Net interest income</b>	<b>\$77</b>	<b>\$399</b>	<b>\$476</b>	<b>\$394</b>	<b>\$82</b>	<b>21%</b>
<b>Other operating income (losses):</b>						
Letters of Credit/Reimbursement	\$16	\$0	\$16	\$27	(\$11)	-41%
Standby Letters of Credit	20	64	84	20	64	320%
Front-End/Commitment	0	71	71	55	16	29%
Risk Participation/Acceptance	0	24	24	13	11	85%
Operations	3	2	5	6	(1)	-17%
Foreign-Exchange	1	0	1	0	1	N/A
<b>Total other operating income</b>	<b>40</b>	<b>161</b>	<b>201</b>	<b>121</b>	<b>80</b>	<b>65%</b>
<b>Gross Income</b>	<b>\$117</b>	<b>\$560</b>	<b>\$677</b>	<b>\$515</b>	<b>\$162</b>	<b>31%</b>
<b>Operating expenses:</b>						
General Expenses	\$186	\$1	\$187	\$207	(\$20)	-10%
Depreciation & Amortization	6	0	6	7	(1)	-14%
Performance Reward/Bonus	10	0	10	12	(2)	-17%
Operational Losses	0	0	0	0	0	N/A
Commissions	6	1	7	4	3	75%
<b>Total operating expense</b>	<b>208</b>	<b>2</b>	<b>210</b>	<b>230</b>	<b>(20)</b>	<b>-9%</b>
<b>Operating Profit/(Loss)</b>	<b>(\$91)</b>	<b>\$558</b>	<b>\$467</b>	<b>\$285</b>	<b>\$182</b>	<b>64%</b>
<b>P/L Adjustments:</b>						
Interest in Suspense	\$0	\$0	\$0	\$0	\$0	N/A
Prior Year W/O Recovery	0	0	0	270	(270)	-100%
<b>Total P/L Adjustments</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$270</b>	<b>(\$270)</b>	<b>-100%</b>
<b>Profit Before Provisions</b>	<b>(\$91)</b>	<b>\$558</b>	<b>\$467</b>	<b>\$555</b>	<b>(\$88)</b>	<b>-16%</b>
<b>Provisions:</b>						
Loan Loss	\$0	\$0	\$0	\$29	(\$29)	-100%
Mgmt Fee	32	0	\$32	28	4	14%
Taxes	10	5	15	16	(1)	-6%
<b>Total Provisions</b>	<b>42</b>	<b>5</b>	<b>47</b>	<b>73</b>	<b>(26)</b>	<b>-36%</b>
<b>Net Income (Loss)</b>	<b>(\$133)</b>	<b>\$553</b>	<b>\$420</b>	<b>\$482</b>	<b>(\$62)</b>	<b>-13%</b>

## **RISK MANAGEMENT APPENDICES**

### **appendix**

- 1. Monthly consolidated income statement**
- 2. Value of 1 basis point – position limits**
- 3. US dollar short – term yield curve**
- 4. Credit risk document**
- 5. Investment grade guidelines**
- 6. Operational risk document**
- 7. Cases of compliance and supervision failure**
  - Barings Brothers
  - Daiwa Bank
  - Allied Irish Bank
- 8. Copy of the official criminal indictment of Daiwa Bank**

Macedonian Banking Project/  
Booz Allen&Hamilton/USAID



## ORGANIZATIONAL RISK

- **DEFINITION:** Risk posed to bank's earnings, capital or its very survival, by the failure of senior management to construct and implement a functional risk management system, which delegates specific authority, establishes limits and enforces strict compliance.

Macedonian Banking Project  
Booz Allen&Hamilton/USAID

## FUNDAMENTAL QUESTIONS FOR SENIOR MANAGEMENT AND HEADS OF TREASURY:

- 1) Are trading limits in place and are they strictly observed?
- 2) Investment vs. proprietary trading activity?
- 3) Is there an effective segregation of responsibilities and reporting between dealing room and back-office?
- 4) Is there an effective and reliable audit trail?
- 5) How knowledgeable are the members of senior management in terms of fully understanding the nature and depth risk exposure the bank assumes through its funding, investment and trading operations?

Macedonian Banking Project  
Booz Allen&Hamilton/USAID

## OPERATIONS RISK

- **DEFINITION:** Is the risk to earnings and capital posed by losses deriving from non-compliance, errors, incompetence or negligence in the performance of daily banking operations.
- **BANKING AREAS AFFECTED**
  - FRONT-OFFICE (DEALING ROOM): TRADING LOSSES
  - BACK-OFFICE (TRADE PROCESSING, PAYMENTS, ACCOUNTING, CUSTODY/SETTLEMENT, RISK MANAGEMENT, ETC.): COSTLY ERRORS, BAD INPUTS
  - MANAGEMENT INFORMATION SYSTEMS: FLAWED OR INEFFICIENT SYSTEMS

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- **FRONT AND BACK-OFFICE PARADOXICAL RELATIONSHIP:** INTRINSICALLY CONNECTED BY A COMMON GOAL, IN SPITE OF THE DIFFERENT SET OF PRIORITIES BUT **NEED TO BE STRICTLY SEGREGATED FUNCTIONS!**
  - FRONT-OFFICE: INITIATES TRADES AND OPEN POSITIONS, MANAGES MARKET, INTEREST RATE, LIQUIDITY RISKS
  - BACK-OFFICE: RECORDS TRADES, MAKES PAYMENTS, PERFORMS SECURITIES CUSTODY/SETTLEMENT, PROVIDES INTERNAL CONTROL

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- **LEVEL OF SETTLEMENT RISK:**
  - institutional risk (risk to bank's capital – BCCI case, when settlement exposure exceeds the total equity)
  - systemic risk ( central banks, BIS)

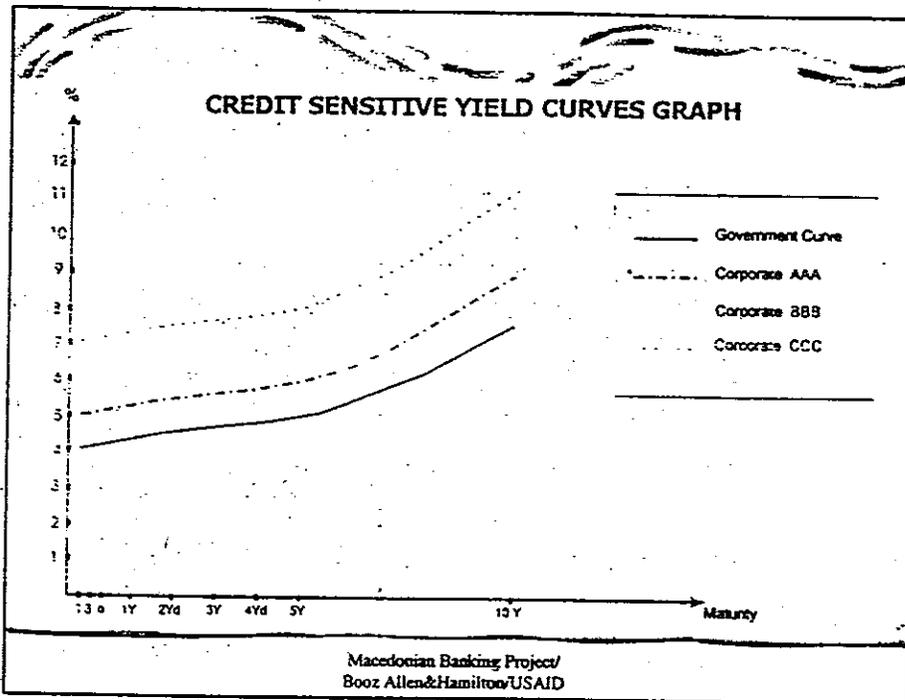
**SETTLEMENT RISK LIMITS:** Have to be considered like all other global credit exposure limits, across the bank's departments and products

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## LEGAL RISK

- **DEFINITION:** Is the potential risk to earnings and capital as a direct result of the many laws and regulatory guidelines a bank has to comply with in its wide range of business endeavors. In addition, most banking activities and financial products require proper documentation. The potential cost in punitive legal/regulatory against a bank's non-compliance or misinterpretations of the law can be crippling. At the same time, the cost of legal representation can be quite significant and can greatly affect major executive decisions for resolving complicated legal matters.

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### SETTLEMENT RISK

- **DEFINITION:** This is the risk of significant loss when an institution meets its payment obligation under a contract (either an advance of funds or securities) before its counterparty meets their counterpayment or delivery obligation.  
Settlement payment failures can be caused by:
  - operational errors (most common) ; overdraft charges discussion
  - counterparty default (most serious)
  - unusual liquidity constraints in the market
- **MULTIPLE RISK EXPOSURE:** It involves **credit, liquidity, legal risks.**  
It affects many areas of the bank:
  - funding
  - trading
  - payments department
  - credit

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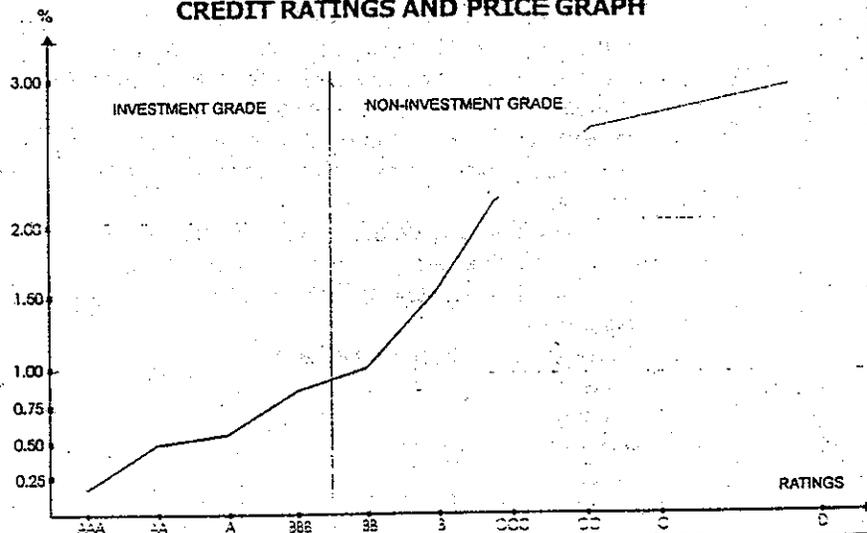
RATINGS ARE THE BASIS ON WHICH FINANCIAL MARKETS PRICE AND TRADE DEBT INSTRUMENTS. BANKS USE RATINGS TO CORRELATE THE CREDIT RISK WITH THE RATES OF THEIR LOANS. THIS MEANS THAT THERE SHOULD BE A DIRECT CORRELATION BETWEEN THE AMOUNT OF RISK AND THE RETURN ON ASSETS.

FINANCIAL MARKETS EXPRESS THAT RISK/REWARD NEED AS A SPREAD TO AN UNIVERSALLY ACCEPTED BENCHMARK (INDEX OR RATE). IN MOST CASES, THE MOST COMMON BASIS FOR COMPARISON IS THE COUNTRY'S GOVERNMENT DEBT RATES (GOV'T OR TREASURY BILLS, NOTES OR BONDS). BANKS MAY MEASURE RETURN AS A SPREAD OVER THEIR COST OF FUNDS, USUALLY EXPRESSED IN RELATIONSHIP WITH **LIBOR**.

AN EXAMPLE OF RATINGS SCALE WOULD GO FROM **AAA - AA - A - BBB - BB - B - CCC - CC - C** ..... TO CREDIT DEFAULT. ANY FINANCIAL INSTITUTION SHOULD DEFINE THEIR CREDIT RISK UNIVERSE AS INVESTMENT GRADE . HOW LOW ON THE RATINGS SCALE IS LENDING RISK ACCEPTABLE FOR THE BANK?

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### CREDIT RATINGS AND PRICE GRAPH



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- **CREDIT ANALYSIS** focuses in a few directions and measures credit worthiness from data available in public financial statements:
  - domestic vs. foreign debt (see **country limits**)
  - government vs. private sector ( see **credit sensitive yield curves**)
  - corporate vs. retail:
- 1) **CORPORATE** credits are specifically analyzed looking at the various economic sectors (performed by credit dept. staff):
  - **Industrial** : types of industries maybe less appealing to some banks
  - **Agricultural**: of particular interest in Macedonia
  - **Services**: financial, healthcare, transportation, tourism, entertainment, education
- 2) **RETAIL** credits are usually issued at branch level mainly in two categories:
  - **Collateralized** loans like mortgages, car loans, etc.
  - **Uncollateralized** loans like personal loans, student loans, etc.

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## CREDIT RATINGS

TOOL USED TO QUANTIFY CREDIT EXPOSURE BY ASSIGNING A MEASURE OF PROBABILITY FOR DEFAULT TO A CERTAIN BORROWER. IN THAT SENSE, WE ARE LOOKING AT A SCALE OF POTENTIAL PAYMENT FAILURE WHERE THE HIGHER RATINGS WILL BE GIVEN TO THE LEAST LIKELY TO DEFAULT ENTITIES, WHILE THE LOWER ONES WILL GO TO THE HIGHER RISK DEBT. RATINGS CAN BE THE RESULT OF IN-HOUSE CREDIT RISK MANAGEMENT, BUT IN THE DEVELOPED COUNTRIES MOST CREDIT ANALYSTS RELY ALMOST ENTIRELY ON THE INDEPENDENT RATING AGENCIES LIKE **MOODY'S**, **STANDARD & POOR**, **FITCH**.

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- **FUNDING LIQUIDITY:**
  - **SHORT-TERM LIQUIDITY MANAGEMENT:** TACTICAL AND COORDINATED IN TREASURY (SEE NEXT DAY'S TOPIC)
  - **ASSET/LIABILITY LIQUIDITY MANAGEMENT:** MORE STRATEGIC IN NATURE, DESIGNED BY A.L.C.O. AND EXECUTED IN TREASURY (SEE THIRD DAY'S TOPIC).
- **MARKET LIQUIDITY RISK:** REFERS TO THE RISK OF BEING UNABLE TO DIVEST OF CERTAIN ASSETS OR CLOSE OUT OPEN POSITIONS QUICKLY ENOUGH AND SUBSTANTIALLY ENOUGH AT REASONABLE PRICES, WITHOUT INCURRING MASSIVE LOSSES.
  - **CONSTANT MARKET MONITORING**
  - **LIMITS**
  - **HEDGING**
  - **PERIODICAL REVIEW OF PROFITABILITY OF MARKETS/INSTRUMENTS**
  - **ACCURATE OPEN POSITION RE-EVALUATION (MARK-TO-MARKET)**

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## CREDIT RISK

- **DEFINITION:** The risk of economic loss from the failure of an obligor to perform according to the terms and conditions of a contract or agreement (principal or/and accrued interest payment defaults). It is managed by decisions based on the recommendations made by the **CREDIT COMMITTEE** as a result of the work performed by the credit analysts. The tool for managing such risk is the **credit limit** which provides mandatory exposure as far as:
  - **total nominal exposure** as a global credit facility
  - **maximum maturity**
  - **minimum profit margin** (using market indices or bank's cost of funds as base rate)

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• **MARKET RISK MEASUREMENT METHODS:** NOMINAL EXPOSURE MEASUREMENTS (PERCENTAGE OF CAPITAL); SENSITIVITY MEASURES (VALUE OF 1 bp, DURATION, PRICE VOLATILITY); SCENARIO SIMULATIONS; VALUE-AT-RISK OR V.A.R. (ESTIMATES MAXIMUM LOSS IN A GIVEN TIME INTERVAL AT A SEPCIFIC LEVEL OF PROBABILITY); STRESS TESTING (STATISTICAL TESTS ASSUMING EXTREME ADVERSE MARKET CHANGES).

• **LIMITS:** NOMINAL/NOTIONAL CREDIT EXPOSURE LIMITS; NET/GROSS TRADING POSITIONS; STOP-LOSS; AGGREGATE GAP LIMITS; ILLIQUID MARKETS; PRICE VOLATILITY, ETC.

**RISK IS MANAGED BY COORDINATED ACTIONS OF ALCO AND THE CREDIT COMMITTEE**

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## LIQUIDITY RISK

**DEFINITION:** The exposure of the organization's earnings and capital to the potential inability to meet its obligations and commitments on time, without incurring unacceptable losses.

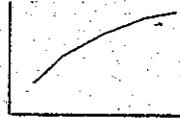
• **AREAS OF LIQUIDITY RISK:**

- **FUNDING LIQUIDITY** - LIABILITIES LIQUIDITY

- **MARKET LIQUIDITY** - ASSETS LIQUIDITY

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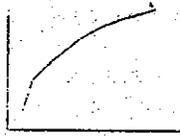
## TYPES OF YIELD CURVES



POZITIVE YIELD CURVE

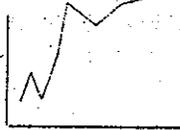


NEGATIVE YIELD CURVE (INVERTED)



STEEP CURVE

FLAT CURVE



FUNDING PRESSURE  
POINT CURVE



CYCLICAL CURVE

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## MARKET RISK

- **DEFINITION:** The risk of adverse impact on a bank's financial condition as a result of potential price changes in the market value of its holdings (investment portfolio, open trading positions, funding gap, property, etc.)
- **RISK FACTORS:** INTEREST RATES, FOREIGN EXCHANGE RATES, EQUITY PRICES, COMMODITY PRICES, REAL ESTATE PRICES

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**INTEREST RATE RISK AND NET INTEREST INCOME (N.I.I.)**

MATURITY	1-3 MOS	4-6 MOS	7-9 MOS	1 YEAR	2 YEARS	3 YEARS
INT. INCOME	8.5%	8.75%	9.0%	9.5%	10.25%	11.0%
INT. EXPENSE	8.25%	8.4%	8.5%	8.8%	9.4%	10.0%
PROJECTED NET INT. INC.	.25	.35	.50	.70	.85	1.00
N.I.I. SCENARIOS IF:						
COST OF FUNDS UP .25%	0	.10	.25	.45	.60	.75
COST OF FUNDS UP .50%	(.25)	(.15)	0	.20	.35	.50
COST OF FUNDS LOWER .30%	.55	.65	.80	1.00	1.15	1.30

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**YIELD CURVE ANALYSIS**

**YIELD CURVE: GRAPHIC REPRESENTATION OF THE PREVAILING INTEREST RATES FOR A GIVEN MATURITY RANGE IN A SPECIFIC MARKET, FINANCIAL INSTRUMENT OR INDEX (SEE ATTACHED US\$ LIBOR YILED CURVE GRAPH).**

**SHAPE AND ANGLE OF YILED CURVES ARE USEFUL INDICATORS OF INFALTIONARY EXPECTATIONS AND FUTURE RATE MOVEMENTS.**

**1) SHAPE**

**- POSITIVE CURVE: WHEN THE INTEREST RATES AND MATURITIES ARE IN A DIRECT CORRELATION, WHERE LONG-TERM RATES ARE HIGHER THAN SHORT-TERM ONES. GENERALLY MORE COMMON, AND SIGNIFIES THAT MARKETS EXPECT SHORT-TERM RATES TO MOVE HIGHER IN TIME.**

**- NEGATIVE CURVE (INVERTED): WHEN THE OPPOSITE HAPPENS, AND SHORT-TERM RATES ARE HIGHER THAN THE LONGER ONES, AS MARKETS EXPECT SHORT-TERM RATES TO DECLINE (USUALLY MORE DIFFICULT FOR FUNDING ACTIVITY).**

**SOMETIMES PORTIONS OF THE SAME CURVE CAN BETEMPORARILY INVERTED, AS SPECIAL MARKET CONDITIONS DICTATE DISPROPORTIONATE RATES FOR CERTAIN MATURITIES.**

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• **MANAGEMENT OVERSIGHT FUNCTION:**  
 - DESIGNATE RESPONSIBILITY AND AUTHORITY TO MONITOR INTEREST RATE EXPOSURE  
 - DEFINE BANK'S RISK PROFILE IN LINE WITH BALANCE SHEET AND PROFIT TARGETS  
 - ISSUE BANK'S STRATEGIC DIRECTION AND RISK TOLERANCE: LIMITS  
 - MONITOR IMPLEMENTATION AND COMPLIANCE

**INTEREST RATES AND TIME VALUE OF MONEY**

**A) TIME VALUE OF 1 BASIS POINT OR .01%**

FOR MKD 1,000,000 THE VALUE OF 1 bp VARIES IN TIME AS FOLLOWS:

30 DAYS	60 DAYS	90 DAYS	180 DAYS	270 DAYS	1 YEAR
8.3333	16.6666	25.0	50.0	75.0	100.0

FOR MKD 200 MILLION WITH 90 DAYS EXPOSURES, 20 bp CHANGE IN INTEREST RATES AMOUNTS TO MKD 100,000 GAIN/LOSS (200x25x20)

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**B) COMPOUNDED YIELDS AND RELATIVE COST**

RATE	DAILY	WEEKLY	MONTHLY	QUARTELY	SEMIANNUAL	ANNUAL
10%	10,52%	10,50%	10,47%	10,38%	10,25%	10%

IF WE HAVE A 1YEAR ASSET WITH 10.5% RATE PAYING AT MATURITY. IF FUNDING IS EXECUTED AT 10% NOMINAL RATE, THE AMOUNT OF ACTUAL N.I.I. DEPENDS ON THE FREQUENCY OF INTEREST PAYMENTS FOR THE LIABILITY SIDE (RELATIVE FUNDING COST). WHILE AT FIRST GLANCE IT LOOKS THAT N.I.I. IS .5%, IN REALITY THE MARGIN IS SUBSTANTIALLY LOWER, IF NOT OUTRIGHT NEGATIVE.

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## INTEREST RATE RISK

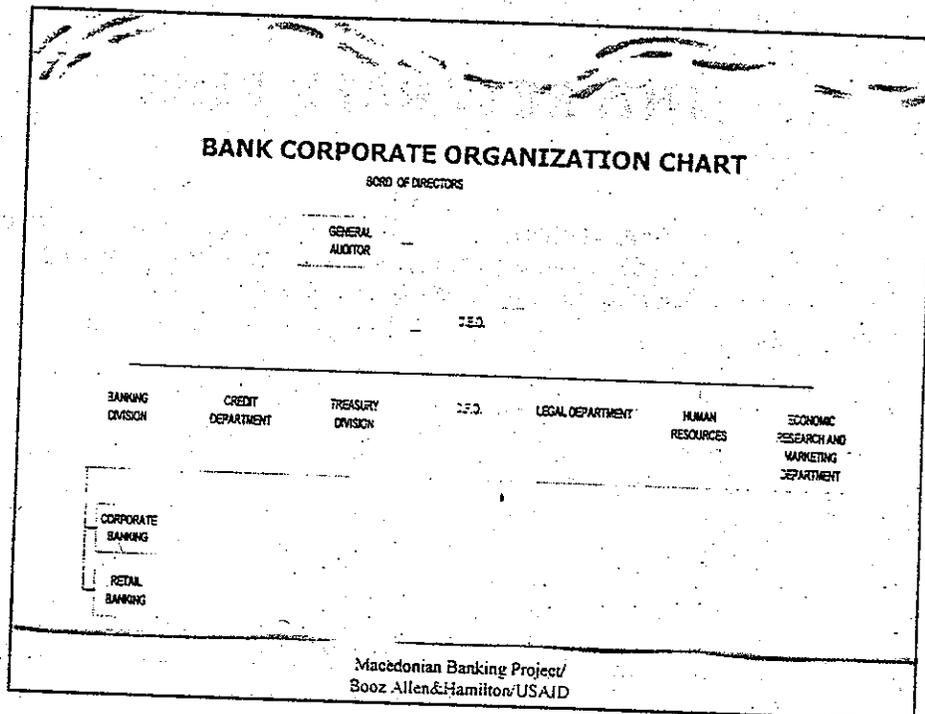
- **DEFINITION:** The risk to earnings and capital arising from adverse movement of interest rates, thus greatly impacting managing liquidity for both bank's assets and liabilities.

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### • AREAS AFFECTED:

- NET INTEREST INCOME
- MARKET VALUE OF HOLDINGS
- LOAN PRICING AND FEES, COSUMER BANKING RATES
- OFF-BALANCE-SHEET INDEXED ASSETS (LIBOR, PRIME)

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- ### TYPES OF RISK
- ✓ INTEREST RATE RISK
  - ✓ MARKET RISK
  - ✓ LIQUIDITY RISK
  - ✓ CREDIT RISK
  - ✓ SETTLEMENT RISK
  - ✓ LEGAL RISK
  - ✓ OPERATIONS RISK
  - ✓ ORGANIZATIONAL RISK
- Macedonian Banking Project/  
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TREASURY DEPARTMENT RISK MANAGEMENT  
ISSUES AND SOLUTIONS IN MACEDONIA

Gheorghe Campeanu  
March 27, 28, 29, 2002

Macedonian Banking Project  
Booz Allen&Hamilton/USAID

**RISK MANAGEMENT**

Macedonian Banking Project  
Booz Allen&Hamilton/USAID

government issued instruments is the lowest one and banks always try to obtain better returns by placing excess funds in the money markets. Conversely, using the central bank discount window (Lombard credit) is the least desirable method to cover short funding positions, as it is not provided automatically by the central bank, and comes with the added obligation to restore liquidity elsewhere which may restrict some of the bank's normal business activity.

After carefully considering your observations and comments, as well as some of our findings, we thought that it will be useful to concentrate on how risk management and liquidity concerns are being addressed by banks elsewhere, in the hope that you will find ways to apply those methods to solving some (if not all) of your most difficult problems. These are the three major topics of our seminar:

- 1) Banking Organization's Risk Management Functions.
- 2) Asset/Liability Risk Management System
- 3) Short-Term Liquidity Management

As the seminar presentation unfolds, we hope to make progress by having members of our audience contribute with comments, questions and even suggestions which could bring forth some of their own professional experience. After all, the idea was to provide you all with a forum meant to facilitate problem solving, or at least, the beginning of a dialogue in that sense.

common concerns and recurrent problems for all of you. Let me list here topics that appeared to be most critical:

- domestic liquidity management is severely hindered by the absence of an effective and active MKD interbank market
- local capital markets are not yet developed, so bank treasurers don't have any choices for investing excess funds
- conversely, without the benefit of well-functioning capital markets, banks, government institutions and corporations don't have vital access to liquidity through issuing fixed-income instruments (CD's, BA's, CP, notes and bonds) so intrinsic to obtain funding for business expansion, debt restructuring, etc.
- most corporate and consumer loans appear to fall behind the principal repayment schedule, thus automatically converting short-term bank credit exposure to much longer tenors (interest rate and liquidity risk, affects asset/liability risk management); banks have to attach floating rates to almost every such loan.
- difficulties stemming from the NBRM reserve requirements and f/x position ranges (interbank could help)
- insufficient supply of the only available investment vehicle, NBRM issued T/Bills, which seem to have no secondary market to speak of, hence no repo opportunity for extra liquidity
- total lack of financial derivative products to assist in liquidity management and hedging market and interest rate risk.
- the negative impact of the economic slowdown in the wake of last year's national crisis.
- general mistrust of the public in the viability of the banking system (see moratorium 10 years ago) compounded by the negative effect of the vast black market (underground economy)

From our own observations, we could also make the following remarks:

- the treasury department structure seems to be somewhat at variance with how most bank treasuries are set up elsewhere; in the fact that some Macedonian banks maintain foreign currency authority separate from and outside of the jurisdiction of the treasury manager.
- in more than one instance, back-office functions, like payments and settlements, appeared to have established reporting lines to the head of treasury
- the lack of viable domestic capital markets, including the government's reluctance to issue bonds, does not bode well for the near future of the Macedonian fiscal and monetary policy, which will negatively impact on the overall economic growth; it will also impede on the bank's ability to identify alternative means to offset funding imbalances.
- the need for an independent bankers' professional association, which should become an instrument for educating members, advancing the industry standards, pressing for regulatory and legal relaxation conducive for business expansion and establishing some form of official market generally accepted practices and procedures.
- AS THE LOCAL BANKING SYSTEM WILL ENTER A MORE NORMAL PHASE OF THE BUSINESS DEVELOPMENT, COMPETITION WILL INCREASE AND THE VERY HIGH INTEREST RATE MARGINS WILL NO LONGER BE POSSIBLE. BANKS WILL NEED TO FIND OTHER WAYS TO MAINTAIN AND MAXIMIZE PROFITS.
- It is in many ways up to the treasury department of each bank to actively contribute to the emergence and development of the local interbank market. In a normal economy the yields of the

## MBP – TREASURY FUNCTIONS SEMINAR

MARCH 27-29, 2002 - SKOPJE

*Prepared by Gheorghe Campeanu for H. Peers Brewer, Chief of Party- Booz, Allen & Hamilton/USAID*

In the aftermath of the fall of communism, and as a result of the globalization of world's economy, newly independent Eastern-European countries have realized that their only course of action which could lead them on the path toward economic prosperity, is to align their national economies with those of the West. That would be accomplished by joining the EU, which in turn would require opening up their markets to foreign investors, adopting universally acceptable regulatory and accounting methods, revising their legal systems and privatizing their economies. The recent donors conference was a sign that there is a perception in the West that things in Macedonia are going to normalize, which will refocus the attention from the political front of solving the national crisis to the business development front of restructuring the national economy.

One of the crucially important economic sectors, which could provide much needed support for such an ambitious project, is the banking system. The government and the business community in each country share equally in the desire to have a healthy and successful financial sector, which provides the "blood stream" for nation building, economic growth and development. Macedonia makes no exception, as it is striving to find its way to sustained economic progress. But the need to proceed is quite urgent, and the window of opportunity is not very long, which is why the implementation of rapid changes in the banking system should be viewed as a national priority.

**In this context, and based on the experience accumulated in the developed countries, the place of the treasury function in the execution of any banking organization's business plan has been elevated to the top. Treasury departments are the virtual "front line" in each banking organization's strategy to maintain its competitive advantage, expand its market share and reach profit targets. Without a well-run and profitable treasury division, no bank can successfully compete in the increasingly difficult financial markets. To accomplish its expansion plans, the bank's senior management will have to provide a lot of support to its treasury staff. Treasury jobs are usually the most prestigious and lucrative positions, and it is considered a great chance to be selected to work in that department.**

A discussion regarding the current state of affairs in your banking system, with an emphasis on treasury functions, seemed justified at this point. This was the basis for, and the context in which MBP chose to conduct a survey of Macedonian banks' treasury managers two months ago, as a way to find how such a seminar would be useful to you all. We wanted to make a list of your main concerns regarding the present phase in the development and modernizing of Macedonian banking activities, and how you define the need to see things improving. What are the obstacles and difficulties that treasury departments encounter in their everyday effort to execute their respective financial institution's business plan? Unfortunately we could not meet everybody during that very brief visit to Skopje, but we believe that many of the issues raised by some of your colleagues in the course of those discussions, represent

# FOREIGN EXCHANGE OPEN POSITION REPORT

## EXAMPLE

Page no. 1    Branch: 01    27 Feb 2002 User: TM

Position Overview

Portfolio : ME    [\*] Exclude

No:	CCY Pair	Position (000's)	Total PL position (000's)	6,980			Average Rate	11,423			FY
				Net PL	Spot Pos (000's)	CTR pos (000's)		Spot P/L	FWD Pos (000's)	CTR POS (000's)	
1	USD/ATS	0	0	0	0	0	.0000	0	0	0	
2	USD/AUD	-46	89	142	-59	114	.5138	194	13	-25	
3	USD/BEF	0	0	0	0	0	.0000	0	0	0	
4	USD/BRL	0	0	0	0	0	1.9579	0	0	0	
5	USD/CAD	-90	145	-15	5	-7	1.6083	1	-95	152	
6	USD/CHF	-12	20	25	-47	80	1.7085	99	35	-60	
7	USD/DEM	3	-7	-7	3	-7	2.2637	-7	0	0	
8	USD/DKK	-9	74	17	-9	74	8.6005	17	0	0	
9	USD/ESP	0	0	0	0	0	.0000	0	0	0	
10	USD/EUR	35	-35	4,574	960	-1,106	.8683	2,712	-925	1,071	
11	USD/FIM	0	0	0	0	0	6.8813	0	0	0	
12	USD/GBP	-102	72	309	44	-31	1.4164	-125	-146	103	
13	USD/HKD	-16	127	27	-16	127	7.8120	27	0	0	
14	USD/IEP	0	0	0	0	0	.0000	0	0	0	
15	USD/ILS	-25	118	590	-25	118	4.7196	590	0	0	
16	USD/INR	0	11	0	0	11	48.7008	0	0	0	
17	USD/ITL	-1	1,814	2	-1	1,814	2,241.0526	2	0	0	
18	USD/JPY	-51	6,944	701	-2,954	397,553	134.5968	7,299	2,903	-390,609	
19	USD/MXN	-8	78	480	-8	78	9.6407	480	0	0	
20	USD/NLG	1	-1	-1	1	-1	2.5506	-1	0	0	
21	USD/NOK	-12	103	50	-12	103	8.9427	50	0	0	
22	USD/SEK	-17	174	12	-17	174	10.5025	12	0	0	
23	USD/SGD	-7	13	75	-7	13	1.8561	75	0	0	
24	USD/XEU	0	0	0	0	0	.0000	0	0	0	

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FOREIGN EXCHANGE PROFIT/LOSS REPORT

Page no. 1 Branch: 01 27 Feb 2002 User: TM

P/L Overview (by trader)

No:	Trader	Total P/L	Today P/L	Yesterday P/L	MTD P/L	YTD P/L
1	0010	6,828	-20	43	1,031	3,412
2	1970		0	198	220	220
3	2033		15	0	1,150	3,236
4	2044		0	0	1,781	2,505
5	2066	384		551	1,039	3,373
6	2101		0	0	0	12
7	2105		0	150	2,141	2,984
8	4006		-11	23	-27	98
9	5002		490	37	6,660	36,437
10	5004		361	-158	12,746	15,212
11	FX	5,761		22,937	91,308	23,339
12	ME	-152		-2,076	6,304	-24,186
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# Appendix J

3  
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## Suggested Telex format for Advice of Income from Foreign Exchange and Money Market Operations

Income Earned by \_\_\_\_\_ For the period \_\_\_\_\_

Money Market (Gross)	Forex (Gross)	Total (Gross)
XXX	XXX	XXX

Total Brokerage Paid for the Quarter Ending \_\_\_\_\_

Money Market	Forex	Total
XXX	XXX	XXX

**Note :**

- 1) Gross Income to be advised on a monthly basis expressed in Indigenous Currency.
- 2) Brokerage paid to be advised on a quarterly basis as at month-ends March, June, September and December.
- 3) As at end-quarters a comparison should be made between income earned to that planned and comment made as to any significant budget variances.



REPORT

Appendix H

Monthly ~~Format~~ Format

Date of Return

Outstanding Forward Exchange Commitments

Dealing Party	Allocated Limit	Total Utilisations

N.B. Returns to be made in units of the master currency as stipulated, other currencies to be converted at current rates of exchange. Figures to reflect commitments as at the last business day of the month.

Treasury Manager's Signature .....

(B)  
(29)

# Appendix G

8

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## Monthly Summary of Placing Limits and Utilisations

For the month of \_\_\_\_\_ from \_\_\_\_\_ Branch

Name	Limit	Utilisation

Treasury Manager's Signature \_\_\_\_\_

DOMESTIC GAP

REPORT  
Monthly ~~Format~~ Format

Appendix F

(29)

(29)

Money Book ~~Format~~ as at \_\_\_\_\_

Branch \_\_\_\_\_

Liabilities

Assets

Volume	Rate	Product	Maturity Bands	Volume	Rate	Product
C/A			Call & O/N	C/A		
Vostro				Vostro		
Call				Call		
O/N				O/N		
				Cash		
			1 Month			
			2 Months			
			3 Months			
			4 Months			
			5 Months			
			6 Months			
			7 Months			
			8 Months			
			9 Months			
			10 Months			
			11 Months			
			12 Months			
			1 year & over specify date			
Capital						

Yield on Assets	=	Yield on Assets with Capital	=
Less : Average Cost of Funds	=	Less : Average Cost of Funds	=
Average Profit	=	Average Profit	=

Treasury Manager

**Deposits :**

The total of all deposits taken/created on a maturity breakdown basis, together with the average rate paid on these funds if possible.

**Placings :**

The total of all monies lent/swapped on a maturity basis, together with the average rate if possible.

N.B. From the above it can be seen that arbitrage deals should be included.

**Net of Placings/Deposits :**

This is the difference between deposits and placings on a monthly basis.

**Net Forward Purchase/Sales :**

Once again, that is a net figure of all forward purchases and sales; more specifically forwards related to interest arbitrage deals must be included.

**Net of Financial Futures Interest Rate Contracts :**

This is, again a net figure of all outstanding future contracts on a maturity basis.

**Overall Position :**

This represents the overall unmarried position and is taken forward on a month by month basis, and taken forward for calculation of the 5% Rule as in Appendix E.

For the purposes of this return, which is relative to interest rate sensitivity, the amounts of interest are excluded from all calculations.

3

29

# Note re Appendix E

OPEN

## Overriding Limitation Placed on the ~~US\$~~ Position — 5% Rule

The unmarried position of each unit is calculated by H.O. Treasury using the information provided on a monthly basis (format attached).

Imbalances within the total book are broken down in 12 months periods and, with regard to the first 12 months, products are worked on a month by month basis (ie. — an imbalance of \$2M for six months would be similar to \$1M for 12 months).

The total sterling equivalent for call/overnight money is divided by 4 to give a figure in one month terms — as all call money should be of less than one week maturity (a four week month is assumed).

A risk weighting is given by multiplying the above totals by the number of months to maturity. The net total product (over-lent + or over-lodged —) is then divided by 12 to give a figure in 12 months terms which is then expressed as a percentage of total deposits (total deposits converted into sterling) and should not exceed 5%:

### Example

Eq £M	US\$	£	Total	(-) Over-Lodged	(+) Over-Lent
Overnight — 4	— 54.6	— 24.2	— 78.8	19.7	
3 Months x 3	+ 9.8	+ 7.4	+ 17.2		51.6
5 Months x 5	— 0.3	+ 0.1	— 0.2	1.0	
2 Years x 24	+ 0.9	—	+ 0.9		21.6

### Total

$$\text{Position in 12 months terms: } 73.2 - 20.7 = \frac{52.5}{12} = + 4.375$$

### Deposits (Eq £M's)

US\$ 498.300  
£ 127.500

Total 625.800

$$\text{Unmarried Position} = \frac{+ 4.375 \times 100}{625.800} = 0.7\% \text{ Over-Lent}$$

### Note Re :- Appendix E — Monthly Unmarried Return

When Filing in this return the following guidelines should be observed :-

(3)

(29)

Appendix E

FIX FORWARDS

OPEN POSITION MONTHLY REPORT

3  
29

~~Unwarranted Monthly Report~~ Format  
~~Report~~ Deposits/Placings and Interest/Arbitrage SWAPS as at

Currency In  
000's

Branch

Period	Deposits		Placings		Placings/ Deposits	Net of Forward Purchase/ Sales	Net of Financial Future Int Rate Contracts	Overall Position
	Volume	%	Volume	%				
Call/O/N								
1 Month								
2 Months								
3 Months								
4 Months								
5 Months								
6 Months								
7 Months								
8 Months								
9 Months								
10 Months								
11 Months								
12 Months								
Over 1 Year Please Specify Maturity								

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**“National Payment Card  
Presentation in  
Macedonian”**

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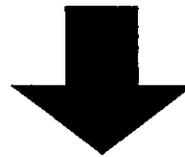
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National Payment Card Presentation in Macdonian



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# Vaŝite barawa



■ Izработка na Komunikaciska strategija koja vo ramki na zaцртаната динамика и рокови, niz razli~ni fazi ke se postigne

1.- одредено ниво на свесност, на ŝироката јавност за појавувawето на НПК.

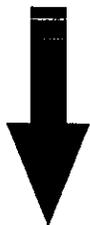
2.- gradewe на konzistentna komunikaciska kampaва koja ke gi iskoristi многу значајните моменти и настани кои што се поволни за градењето на имиџот на НПК.

3.- gradewe на korporativen imix на NPK.

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# Momentalna sestojba

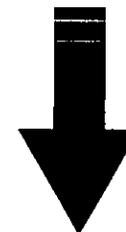
Tradicionalen na~in na  
pla}awe,  
~ekovi i gotovina



Ograni~en broj na  
trgovci podgotveni da  
prifatat novi predizvici i  
tehnologii

Zona pomeju kade  
NPK mo`e da se  
pozicionira i osvoi  
pogolem broj na  
korisnici

Konkurencija me"u poznatite  
svetski kreditni karti~ki



Poedini prod`ni mesto  
preoptovareni so terminali (Skopje).  
Seu{te nema eden bankomat i  
posterminal  
za site karti~ki

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# Komu ja upatuvame porakata

- ✓ Celoto naselenie na RM.
- ✓ Vraboteni vo dr`avnata administracija na RM
- ✓ Учесници во НПК мрежа, трговци
- ✓ Деловни банки и меѓународни финансиски институции, идни потенцијални сопственици на АД Национална Платежна Картичка

# Konkurencija na kreditnite karti~ki

Nacionalna Plate`na  
Karti~ka ..

~~VS~~

Visa, Diners, Mastercard...

Tie }e mo`e da funkcioniraat paralelno bidej}i infrastrukturata na NPK vo idnina pretendira da gi poddr`uva i internacionalnite karti~ki

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# Predizvici

So pravilna komunikacijska strategija  
sopstvenicite na NPK da se ~uvstvuvaat:



- ..gordi
- ..informirani
- ..slobodni
- ..nagrađeni
- ..sakani
- ..samouvereni
- ..pripa|aat na grupa  
(dosetlivi)

# Komunikacijska strategija

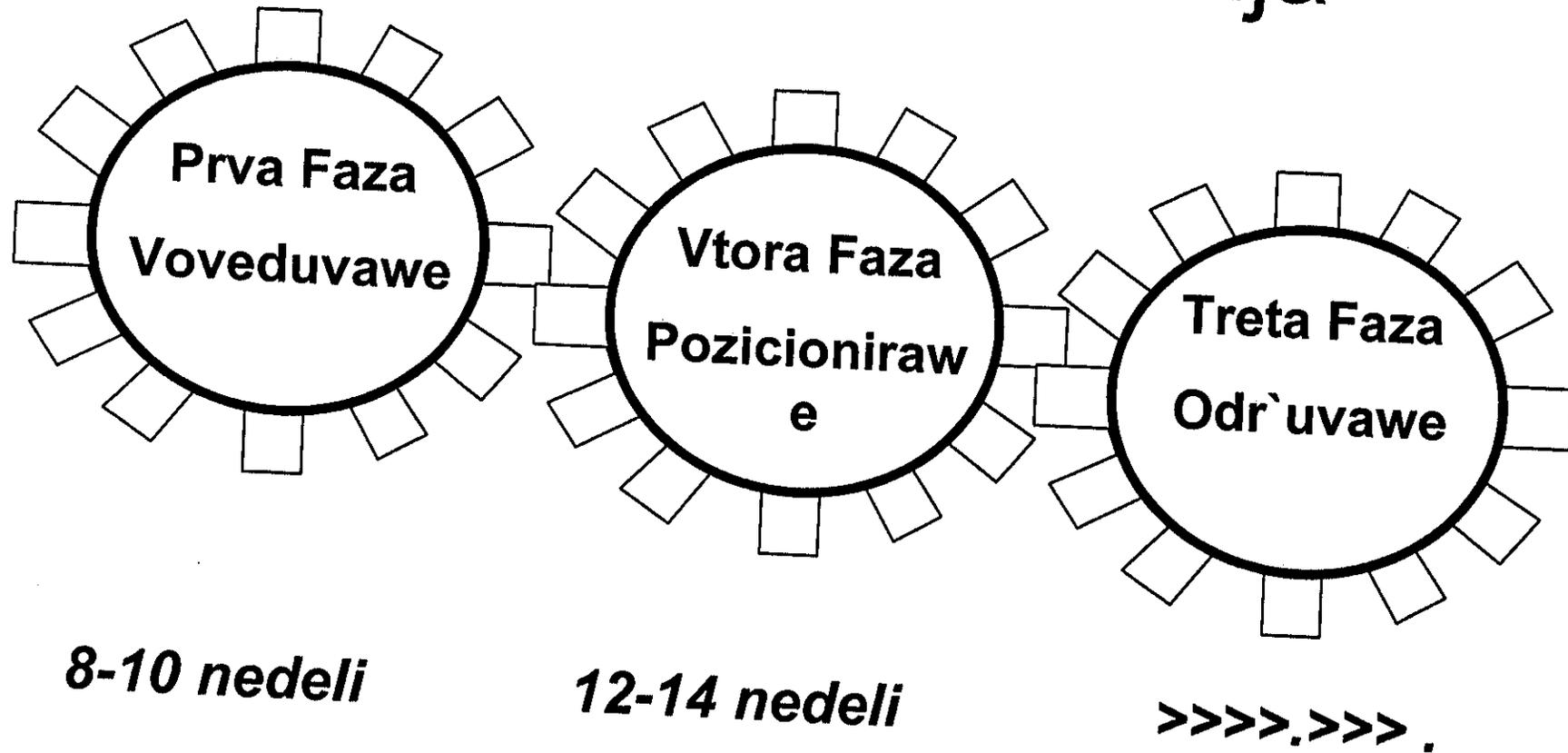
Na racionalno nivo komunikacijska strategija je bide informirawe deka so NPK se doblj`uvame do novite svetski tekovi na finansiskoto rabotewe plate`ni procesi. Na mnogu ednostaven na~in }e se komunicira, koj, kako i kade mo`e da se koristi karti~kata. NPK gi poseduva i site tehni~ko-tehnolo{ki kvaliteti na poznatite marki na kreditni karti~ki.

Na emocionalno nivo komunikacijska strategija je bide na potencialnite korisnici i delovni partneri da im se objasni deka NPK je bide NA[A doma{na karti~ka, no deka vie ste (informirani, doselivi, gordi..), no vo istovreme NPK ima i golema upotrebna vrednost.

# Taktika na komunikacija

1. Prva faza voveduvawe na karti~kata informativna-**awareness** kampawa
2. Vtora faza pozicionirawe - imix kampawa
3. Treta faza - odr`uvawe  
Osvojuvawe na pogolem pzaren del i zgolemuvawe na lojalnosta

# Fazi na komunikacija



**Brend pozicija**

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# I-faza "awareness" kampawa

## BIG BENG

Кампања na mediumi so maksimalen ri~i  
rejting.

Lansiraweto na NPK

Na {irokata javnost preku ednostavni komunikaciski modeli }e se  
pretstavi samiot proizvod karti~kata.

- TV spot
- Print
- Bilbordi ( 3D i obi~ni)
- PR
- Nastan

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# II-faza imix kampawa

So uspe{no lansirawe na karti~kata i so nejjino pozicionirawe kako "na{a karti~ka", na{a plata vo vtorata faza pokraj koristewe na site mediumski sredstva TV, Radio, Print, }e se usmerime i na potesna celna grupa, na idnite potencijalni korisnici preku koristewe na : lokalni mediumi,direkten marketing (bro{uri, flaeri).

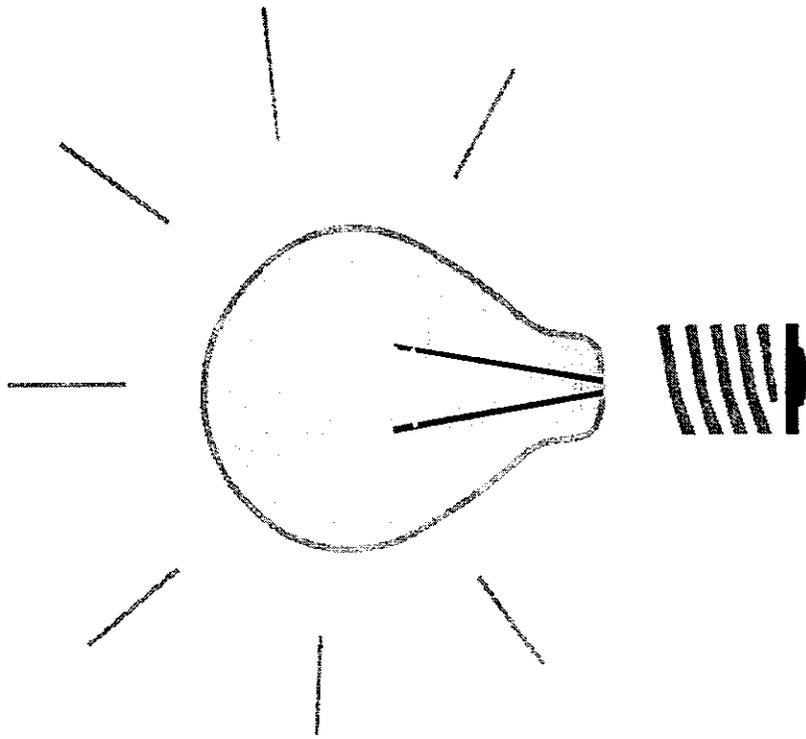
Intenzivna mediumska kampaња по лансирањето на картичката. Koja NPK ќе ja stavi vo glavata i srcata na site potencijalni korisnici

# III-faza odr`uvawe

Pozicioniraweto na NPK i ekonomskata i pazarna logika ke nametnat potreba vo fazata na odr`uvawe da se rabotat takti~ki kampawi ( proda`ni, kampawi za zgolemuwawe na lojalnosta, kobrendirawe i sl.). Site tie od komunikaciski aspekt ke mora da bidat vo ramki na strate{kata pozicija na NPK postavena so imix kampawata.

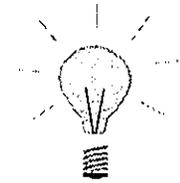
Sredstva za komunikacija ATL i BTL, ke bidat selektirani vrz baza na potrebata na takti~kite kampawi.

# Kreativni rešenija



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# Kreativni re{enija



## PRVA FAZA

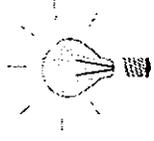
НПК е физички доказ дека сме дел од модерниот свет, каде што функционира безгототвинското плаќање...

„Пластиката“ - тоа е нашата плата, нашите пари, нашиот живот.

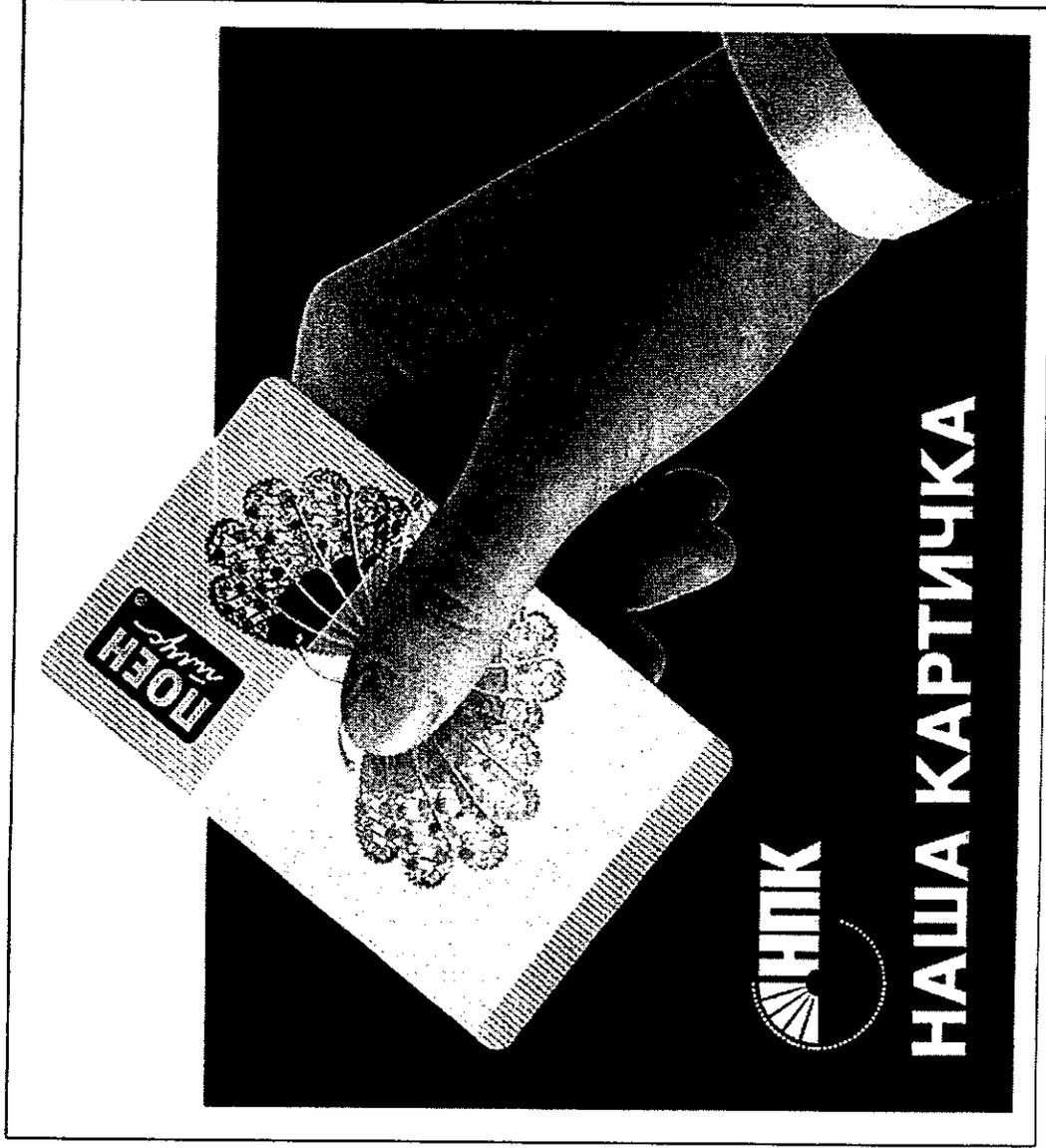
**Da ja zamenime hartijata so plastika**

**NPK,. NAJA karti~ka.**

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# Bilbord



НАША КАРТИЧКА

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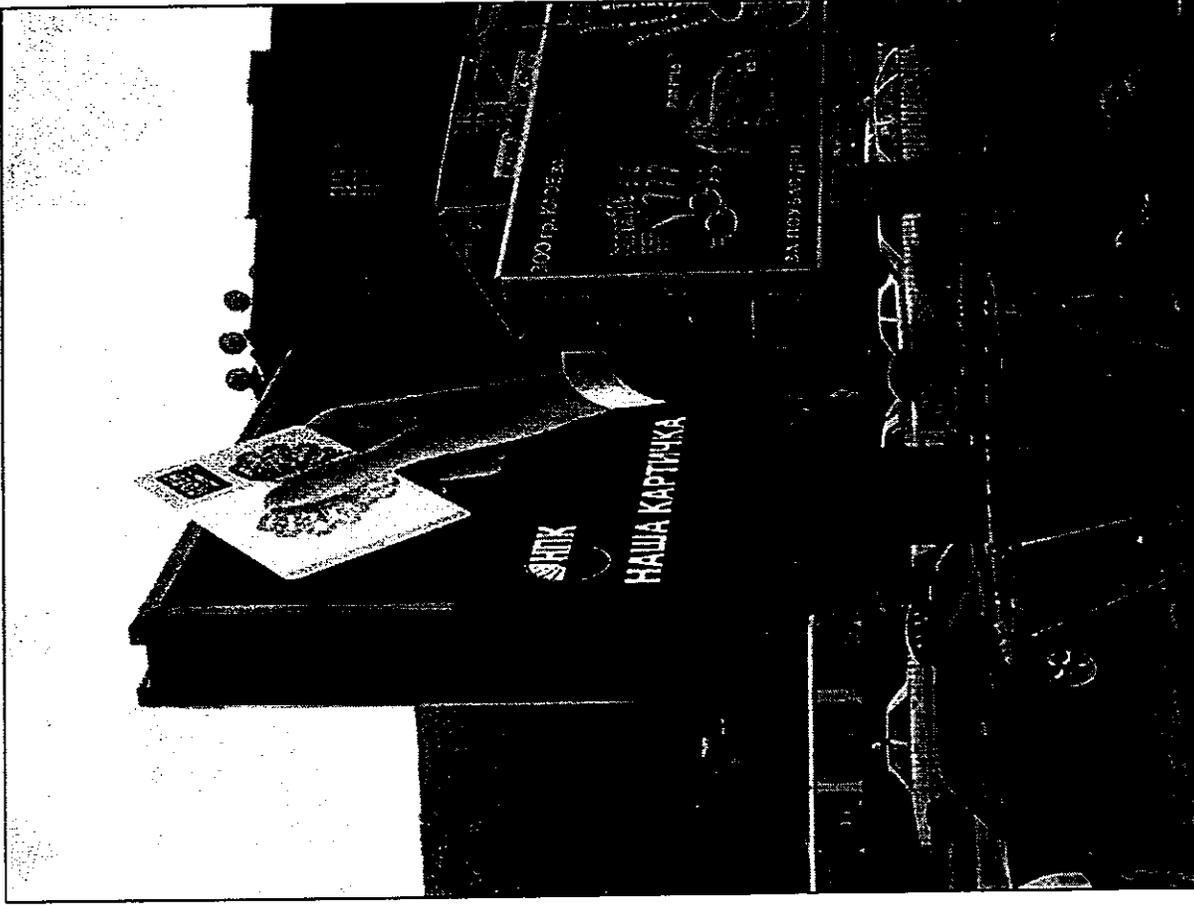
3D  
billboard



1

357

# 3D billboard



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# Mediska strategija

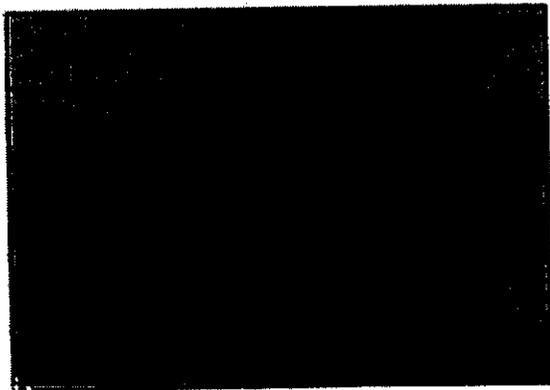
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## PRVA FAZA

- Vo mediumskoto pokrivawe dominantni sredstva za komunikacija }e bidat TV (MTV, A1 i Sitel) i 3D bilbordi (4 na lokaciji vo Skopje i 6 vo slednite gradovi: Tetovo, Ohrid, Kumanovo, Bitola, Strumica i Prilep).

Spot od 30 sek.

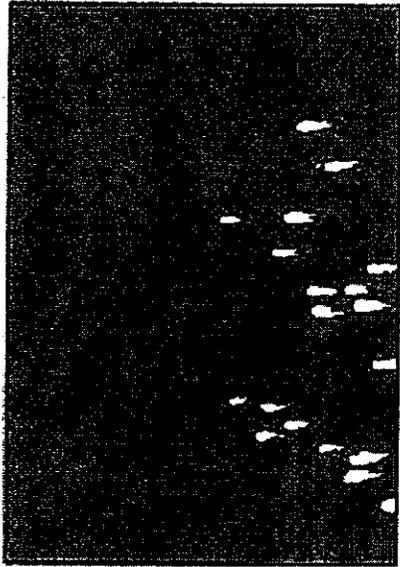


1. ЗЕЛЕНА ПОЛЈАНА, НА КОЈА НАЈМАРКАНТНА Е  
ЗЕЛЕНАТА ПРЕКРАСНАТА БОЈА НА ТРЕВАТА. ПО-  
ЛЈАНАТА Е ПРАЗНА, БЕЗ ЛУЃЕ.

АУДИО:  
НИЗ ЦЕЛИОТ СПОТ СЕ СЛУША УБАВА ТИВКА МУЗИКА  
И ЗВУЦИ ОД ДВИЖЕЊАТА...



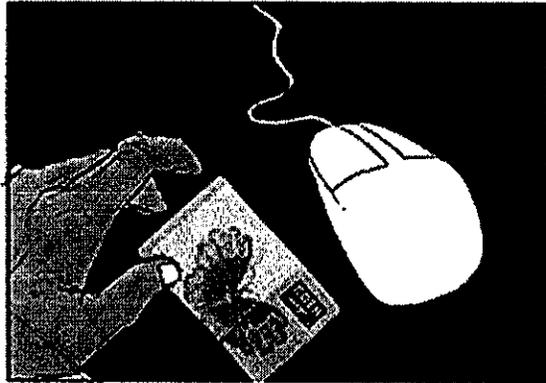
2. ВО КАДАРОТ НА ЗЕЛЕНАТА ПОЛЈАНА ПОЧНУВААТ ДА  
ВЛЕГУВААТ ЛУЃЕ. ОБЛЕЧЕНИ СЕ ВО КАРАКТЕРИСТИЧНА  
ОБЛЕКА НА СОПСТВЕНАТА ПРОФЕСИЈА. БОЈАТА НА  
ОБЛЕКАТА Е ДЕЛ ОД БОЈТЕ НА КАРТИЧКАТА.



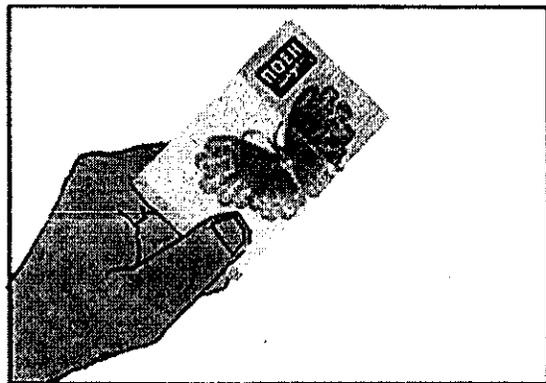
3. ВО КАДАРОТ ИМА СЕ ПОВЕЌЕ ПУТЕ. КАДАРОТ СЕ ШИРИ.  
МИЛИОНИ ПУТЕ НА ПОЛЈАНАТА СЕ ДВИЖАТ. СЕ МЕСТАТ.  
ЈА ФОРМИРААТ КАРТИКАТА.....



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4. КАДАРОТ СЕ ОТВАРА...СЕ ГЛЕДА ДЕКА ВСУШНОСТ ПОЛЈАНАТА Е „MOUSE PAD“, КОЈ СЕ НАОГА НА МАСА, А ЛУЃЕТО ЈА ФОРМИРАЛЕ КАРТИЧКАТА ВРЗ „MOUSE PAD“-ОТ.

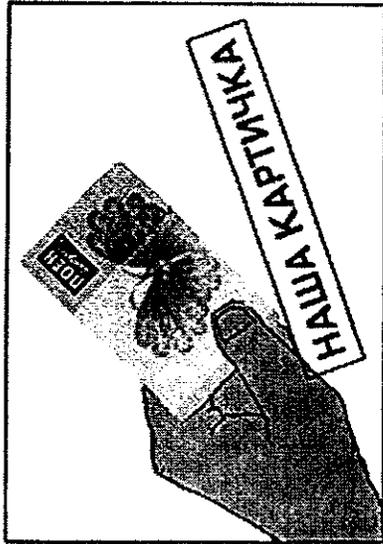


5. ЕДНА РАКА МИНУВА НИЗ ПРОСТОРОТ...ЈА ЗЕМА КАРТИЧКАТА ОД „MOUSE PAD“-ОТ. И ЈА ПОДИГА... СТОП КАДАР ОД КАРТИЧКАТА И РАКАТА.

ТЕЛОП:  
НАША КАРТИЧКА!  
НАЦИОНАЛНА ПЛАТЕЖНА КАРТИЧКА !

АУДИО:  
НАША КАРТИЧКА  
НАЦИОНАЛНА ПЛАТЕЖНА КАРТИЧКА !

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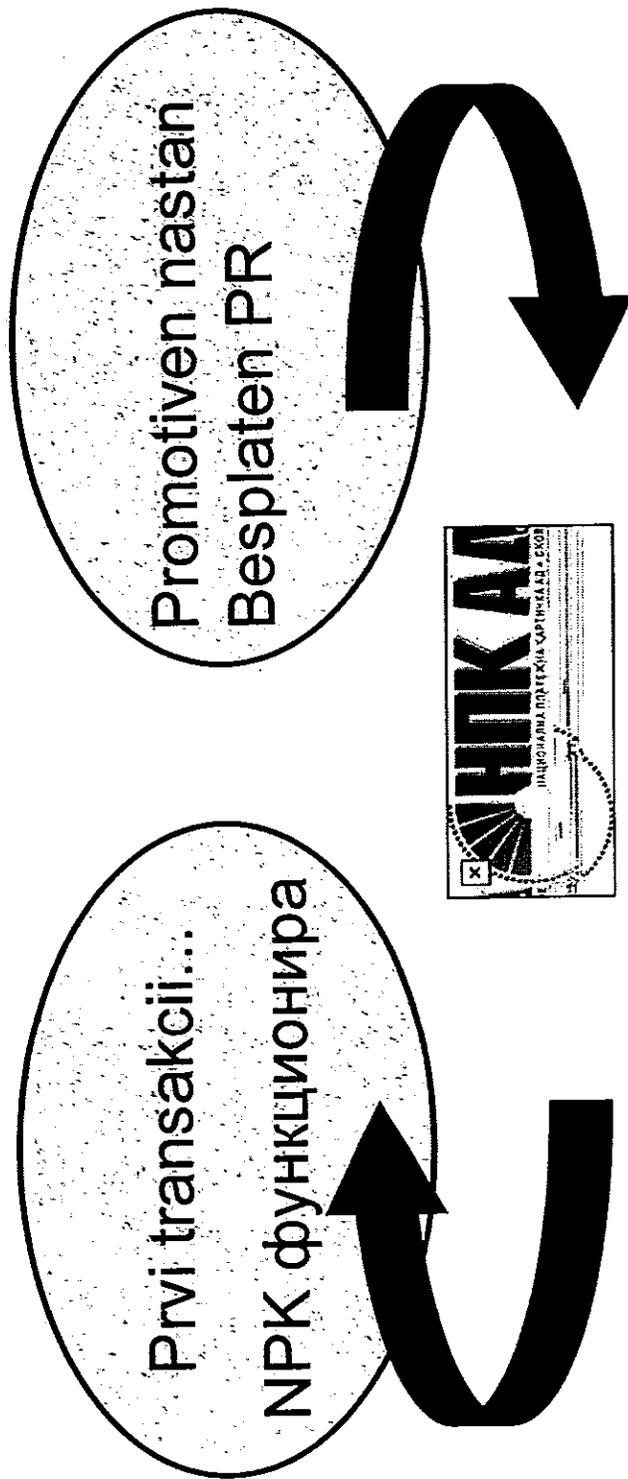
5. НА КАДАРОТ, УДИРА ПЕЧАТ, ВО ЕДЕНАГОЛ, НА КОЈ  
ПИШУВА, НАША КАРТИЧКА.

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# PR strategija

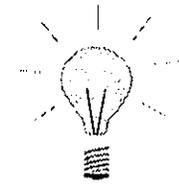
- Treba da se koristat site PR sredstva :
  - Pres konferencija
  - Sponzorstvo/programing
  - Advertorijali i drug platen PR
  - Gradewe na dobri odnosi so mediumite
  - Redovni brifinzi za novinarite

# 1-ВИ АВГУСТ 2002



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# Kreativni re{enija



## VTORA FAZA

*Em Национална, em Платежна....*

Иако според сите карактеристики може да се спореди со светски процесинг центри, НПК е родена тука во Македонија, нам ни припаѓа и „proa|a секаде“: во продавници, бутици, кај забарот, кај козметичарот, во кафеани...

*Proa|a sekade*

*NPK-na{a karti~ka*

# DM do biznis i finansiski establi{ment

-Direct mail do klientite i site  
zainteresirani(bro{uri/flaeri)

-Direkten marketing prezentacija i delewe na  
edukativni materijali na lokaciji na poveke  
partnerski kompanii (Mobimak, Vero, Tineks)

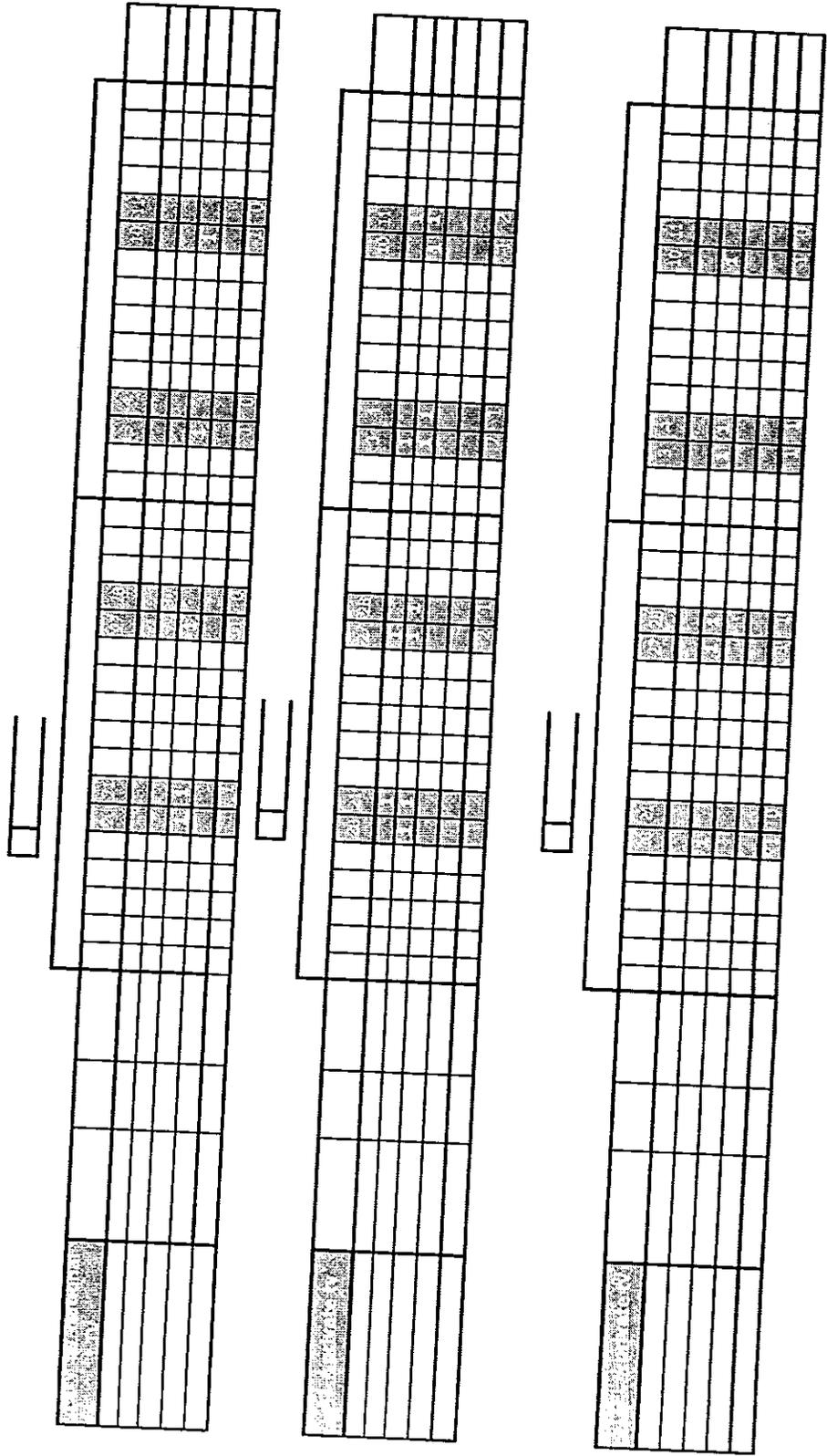
-Veb sajt - interakcija

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## Drugi BTL proekti

- Konferencija i seminar, za site zainteresirani eksperti od oblata na trgovijata, finansiite (mediumska pokrienost, besplaten PR)
- Predavawa na na{i eksperti na srodni seminari i konferencii
- PR nastani kade }e se dodeluvaat nagradi na najdobrite korisnici na NPK

# Mediumsko pokrivawe



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# Pregled na planirani aktivnosti

NPK Activity grid 2002												
Activity timing	Juli			August					September			
w/c	29	30	31	31	32	33	34	35	36	37	38	39
<b>ATL campaing</b>												
TV campaing												
Radio												
Press												
Outdoor												
<b>BTL campaing</b>												
PR (brifings, advertorials)												
Event												
Press conference												
Sponsorship												
Web site												
Promotions												
DM(Flyers, broshures)												
Seminars												

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# **“E-Banking in Macedonia”**

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# **E-BANKING IN MACEDONIA**

**Dr Elias M. Awad**

**November 30, 2000**

**MACEDONIAN BANKING PROJECT  
H. PEERS BREWER, CHIEF OF PARTY**

**BOOZ ALLEN & HAMILTON  
US AGENCY FOR INTERNATIONAL DEVELOPMENT**

## **E-BANKING IN MACEDONIA**

**NOVEMBER 30, 2000**

### **PROGRAM SCHEDULE**

**9:00 – 16:00**

- 9:00 Welcome of guests and introduction of Dr. Elias Awad
- 9:05 E-Banking Opening Remarks
- 9:30 Macedonian Internet Banking
- 10:30 Coffee Break
- 10:45 Launching the E-Banking Business &  
E-Payments Systems
- 13:00 Lunch Break
- 14:00 E-Banking Security
- 15:15 Coffee Break
- 15:30 Concluding Remarks and Questions

**Dr. Elias M. Awad** is a bank information technology specialist, trainer, and human resources professional in banking with more than 32 years of diagnostic experience in commercial and central banking. His specialties include: e-banking and e-commerce in banking, diagnosis of bank information, technology infrastructure, electronic banking evaluation, networking technology assessment, and organizational restructuring.

In addition to extensive consulting experience in the United States and Eastern Europe, Dr. Awad has had a distinguished academic career. He is currently a senior faculty member at the University of Virginia. His latest book, entitled "Electronic Commerce: From Vision to Fulfillment", will be published by Prentice-Hall in 2001. The subject matter of this book is the design and implementation procedures and issues in electronic banking on the internet.

## E-BANKING

### *MACEDONIAN BANKERS SEMINAR*

November 30, 2000

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## WHAT IS E-BANKING?

- Providing services (retail & small value) via electronic channels
- E-services include:
  - Deposit taking
  - Lending
  - Account management
  - Financial advice
  - Electronic Bill payment
  - Electronic money

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## E-BANKING BENEFITS

- Expand markets for deposit taking and credit extension activities
- Offer new products and services
- Strengthen competitive position
- Reduce operational costs
- Increase access to Bank for consumers

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**HOW  
CONNECTIONS/ACCESSES  
ARE MADE?**

- Closed Nets:
  - P.O.S
  - ATMs
  - Phone
  - PCs
  - Smart Card
  - Electronic Money (debit card)
  - Digital Cash (stored value product)
  - Single Purpose Product (phone cards)
- Open Nets—Internet Banking

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**RISKS**

- Employees—unauthorized access; new employees
- Customers—misuse of cards
- Obsolete technology/service provider risk
- Poor system design/system breakdown
- Reliance on outsourcing
- Reputational Risks
- Legal risks—customer disclosures/privacy problems
- Credit risks—default of borrowers
- Liquidity risks

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**MANAGING RISKS**

- Assessing risks
- Controlling risks
- Monitoring risks

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## INTERNET BANKING: WHAT IS IT?

- Use of the Internet as a remote delivery channel for banking services
- Services include:
  - Balance inquiry & funds transfer
  - Electronic bill payment/presentation
  - Credit applications
  - New account set-up
  - Cash management
  - Insurance

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## INTERESTING STATISTICS

- At the beginning of 2000, only 9 U.S. chartered banks were Internet only
- 1364 (54.2 %) of national banks had Web sites
- Most of the Web sites were category I or II
- 541 (21%) of national banks had transactional Web sites
- Under half of all national banks (46.2%) have no plans to offer Internet banking
- 93 million U.S. households have a banking relationship; only a minority would do online banking

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## Competing with Internet Banking



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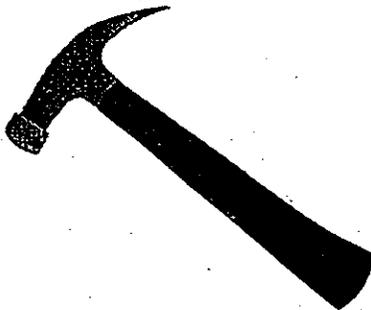
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## Business Drivers



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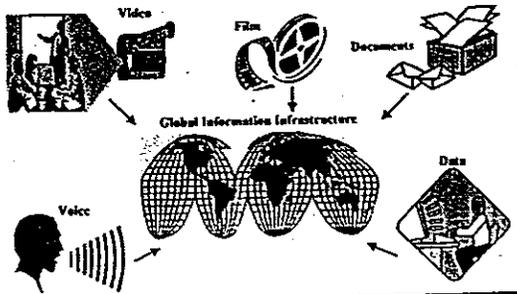
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## Driver #1: Digital Convergence

The conversion, processing, movement of all media in binary



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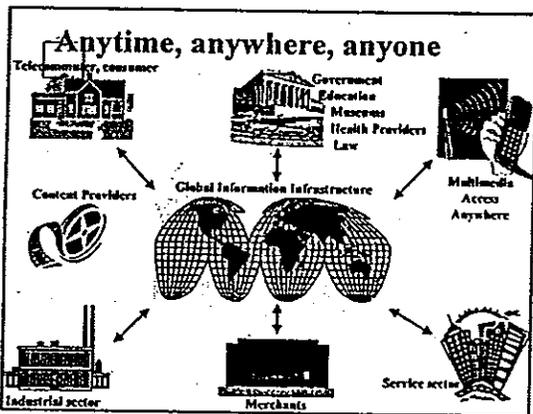
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**▼ Driver #2: Changes in Organizational Models**

- Empowerment of front-line workers (e.g., tellers)
- Outsourcing & downsizing of large banks
- Partnering
- Cross-functional business processes

*All require better linkages and communications between relevant parties*

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**▼ Driver #3: Increasing Pressure on Costs & Margins**

- Global competitors
- Proliferation of commodity-like products and services

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▼ Driver #4: Demands for Customized Products & Services

- *Customers* --collective powers for:
  - higher performance/quality/customization
  - Convenience, access, choice, comfort
- *Mass customization*— banks must develop the capability to deliver customized services on a mass market scale
- Those unwilling or unable to meet this challenge will ultimately lose out

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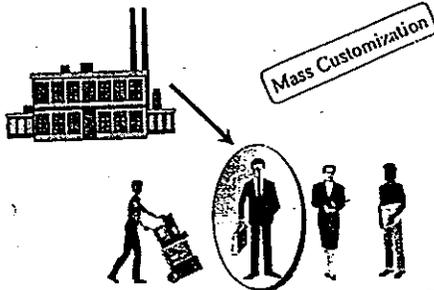
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▼ Driver #5: Demand for Customized Products & Services



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▼ Driver #6: Cycle Time Reduction

- *Speed* is an advantage, and becoming a matter of survival in e-banking
- Banks that cannot deliver information, products, and services in shortened cycle times will be at a significant competitive disadvantage



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▼ Some Quick Fire Operating Definitions:  
EFT, EDI, and Web-Based Systems




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▼ A Quick Fire Operating Definition

"Electronic banking is the ability to conduct business via electronic networks such as the Internet and the World Wide Web. Although e-Banking is based on the principles of Electronic Data Interchange (EDI), it goes far beyond EDI in that it aims at supporting the complete external banking process."



"External" stress  
in this definition

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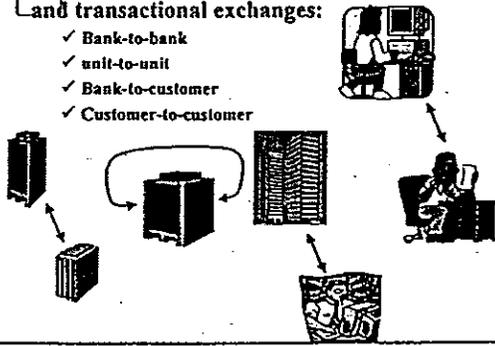
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e-Banking involves various informational and transactional exchanges:

- ✓ Bank-to-bank
- ✓ unit-to-unit
- ✓ Bank-to-customer
- ✓ Customer-to-customer




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**e-Banking involves various technological-human modes of exchange:**

1. computer-working-alone to computer-working-alone (little or no human intervention)
2. computer-working-alone to person-at-computer
3. person-at-computer to person-at-computer

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**e-banking involves various media:**

1. Data, as in exchanges of purchase orders and invoices
2. Text, as in email within and between banks
3. Web pages (text, graphics, images, video, audio)
4. Internet-telephony
5. Internet-desktop video (point-to-point)

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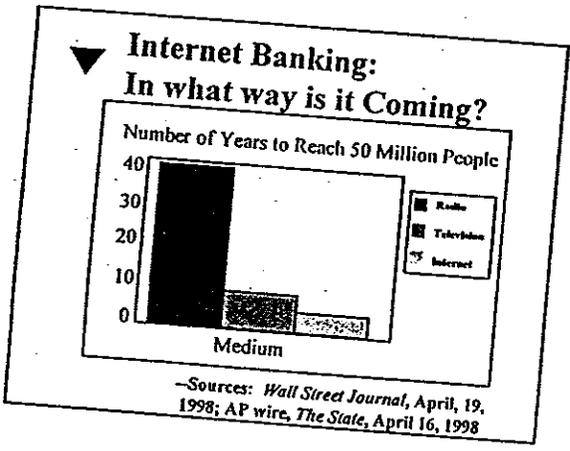
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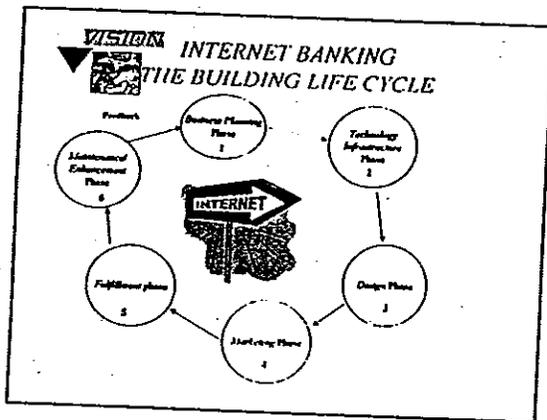
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- ENABLING YOUR E-COMMERCE STORE**
- *Build* your storefront
  - *Set up* a merchant account to accept credit cards
  - *Register* the connection agency to activate the site
  - *Integrate* your storefront with the Merchant Connection Kit (MCK)
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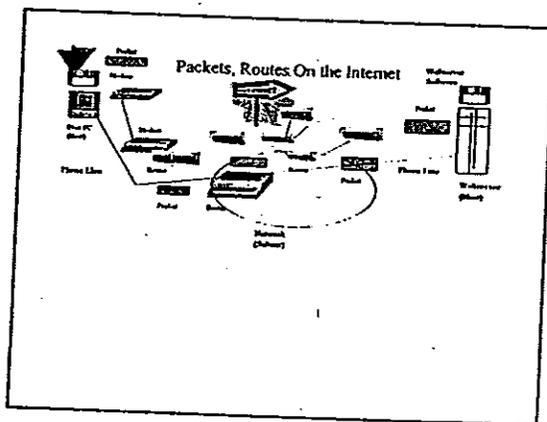
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▼ ABOUT THE WEB SITE

- Presence
  - A www on biz-card
  - Complexity: low, cheap (virtually free)
  - Value: low, but better than no presence
  - Tech: office, FrontPage
  - Features: Static content (co. mission, locations, pictures, directions)

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▼ About the Website (Cont'd)

- *Pleasing*
  - Features: dynamic content (weather, sports, stocks)
  - Looks good, generic value
- *Personalized*
  - Developing relationships--pull technology
- *Purchase*
  - Shopping cart, security

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▼ About the Website (cont'd)

- *Process*
  - Integrate within and outside of company
- *Partnered*
  - Integrate with suppliers, partners, customers, and possibly competitors

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▼ **Web Site Criteria**

- Color scheme/general layout
- Professionalism
- Type and shape of icons
- Page content
- Services offered
- Primary focus
- Ancillaries
- Category in relation to bank size
- Speed
- Consistency
- Personalization
- Security
- Scalability

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▼ *The Color of Money*

- Banks are trust-based institutions
- Based on [www.colorvoodoo.com](http://www.colorvoodoo.com), research has found that blue symbolizes trust, conservative, security, etc.
- We expected to find a high presence of blue
- We found both blue, green as well as random combination of colors
- Layout varies throughout different sites depending on the professionalism

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▼ *Professionalism*

- Color usage
  - [www.oldpoint.com](http://www.oldpoint.com)
- Content layout
- Use of graphics and animation
  - [www.bankpnb.com](http://www.bankpnb.com)
- Ease of navigation
- Organized usage of icons

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▽ *Iconoclastic "icons"*

- Type and shape
  - Rectangles, circles, triangles
- Rectangles symbolize order, logic, and security.
- We found mostly rectangles and some circles, which represent connection and community
- Pull-down menu and combo boxes
  - [www.bankofamerica.com](http://www.bankofamerica.com)

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▽ *Page Content*

- Clutter?
- Heavy on text?
- Balance between text and white space
- We found clutter and heavy text on small scale bank Web site and better page content on larger bank Web site

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▽ *Services Offered*

- We expected to find:
  - information on common services in all sites
  - advanced features belong to larger banks
- We found just that.

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### Primary Focus

- Not explicitly stated
- For some sites, it was implicit in their content
- Only category V had clear focus: convenience for on-line account transaction

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### Ancillaries

- Links to do things like evaluate your current mortgage loan or "do you qualify for a loan?"
- Surprised to find that not only large but small bank offered such services
  - E.g. [www.centralvabank.com/](http://www.centralvabank.com/)

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### Category

- *Category I* - who we are—banking hours, etc.
- *Category II* - heavy on data collection, electronic catalog, etc.
- *Category III* - high interactive and handles business transactions
- *Category IV* - multimedia, work-flow related, video audio, etc
- *Category V* - promotes individualization and has a sophisticated delivery platform
- Most bank Web sites are Category I and II

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▼ *Speed*

- How quickly one can get from one page to another
  - Ease of navigation
- Navigational bars are present on most large bank Web sites
- Speedy transition from one page to another

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▼ *Consistency*

- Pattern of regularity to the way the site pages are put together
- Consistency maintained throughout Web sites

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▼ *Personalization*

- Use of Cookies
- Acknowledge specific user
- No personalization found in most bank sites

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### *Security*

- Security features on
  - Loan applications
  - Personal information
  - Account access
- Most loan applications are secure
- Applications for qualifications for loans were not secure

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### *Scalability/Ease of Maintenance*

- How easy is it to:
  - Maintain the site?
  - Upgrade the site
- Negative correlation between size of bank and ease of maintenance
- Positive correlation between size and ease of upgrading

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### *Whole Enchilada*

Criterion	Average	Range
Color/Layout	3.3	1-5
Icons	3.2	1-5
Page Content	3.7	1-5
Services	3.3	1-5
Primary Focus	2.6	1-5
Auxiliaries	2.6	1-5
Category	3.1	1-5
Professionalism	3.2	1-5
Speed	3.3	1-5
Consistency	4.1	1-5
Personalization	1.8	1-3
Security	2.3	1-5
Scalability/Maintenance	4.2	1-5

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**SUMMARY**

- *U.S. Banks Are Highly Fragmented*
  - The Good, the Bad, and the Ugly
- *The best sites emphasized personal service and customization along with trust - the backbone of banking*
- *Web site - an accurate portrayal of bank size*
- *Practice of banks is not easy to change*
  - Most banks slow catching up with Internet banking trend
  - Rural customers are less likely to use the Internet
  - Most Web sites geared towards getting customers in local branches not providing online services

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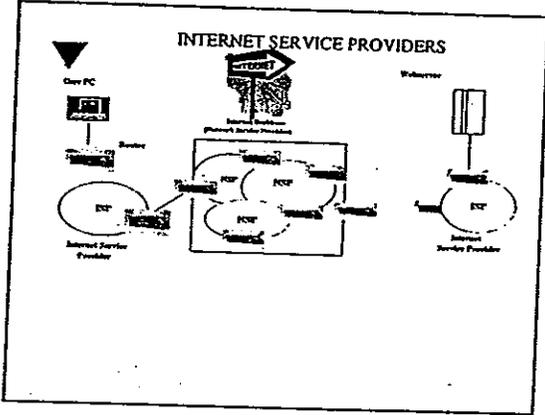
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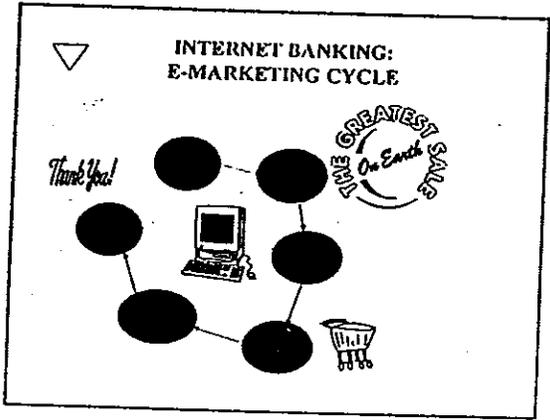
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▼ *PUSH/PULL STRATEGY*

- *Push* to share
- *Pull* to partner

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▼ *Cryptography and Security*

- Requirements for secure transactions/messages:
  - *Privacy*: Q: How can I be sure no one in the bank knows about this?
  - *Authentication*: Q: Am I dealing with a legal entity? Customer legal?
  - *Integrity*: Q: Will supplier get paid in full?
  - *Non repudiation*: Q: Any evidence of loan payment? Do we have a binding loan?

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▼ *Cryptography--the Basics*

- *Plaintext*: Ordinary message
- *Ciphertext*: A scrambled message produced by an encryption algorithm
- *Decryption algorithm*: used by the receiver to recover plaintext from the ciphertext

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▼ *Cryptography (cont'd)*

- Key: Additional piece of input data. It is secret, even though many people may know the algorithm

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▼ **Types of Cryptographic Algorithm**

- Secret Key Cryptography: Encryption and decryption operations use same key (used symmetrically)
- Public Key Cryptography: Encryption and decryption operations use related but different keys (asymmetrical)

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▼ **Secret Key (Symmetric) Cryptography**

- Plaintext is encrypted using a key, resulting in a ciphertext
- Ciphertext is sent to the recipient who decrypts message using same key
- Same key must be known to both parties
- Best-known secret key system is DES(Data Encryption Standard)

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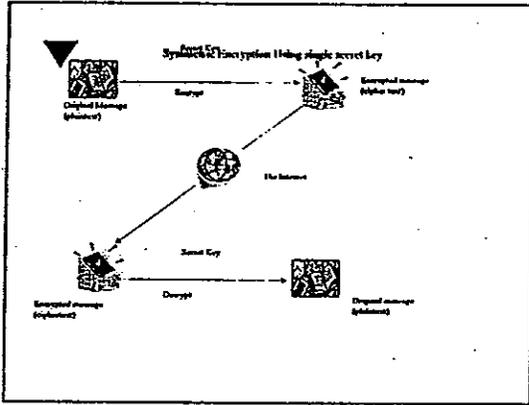
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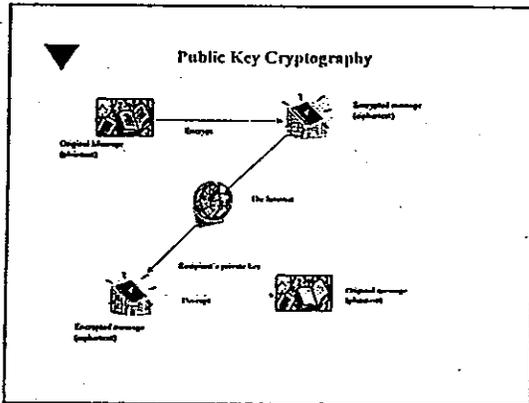
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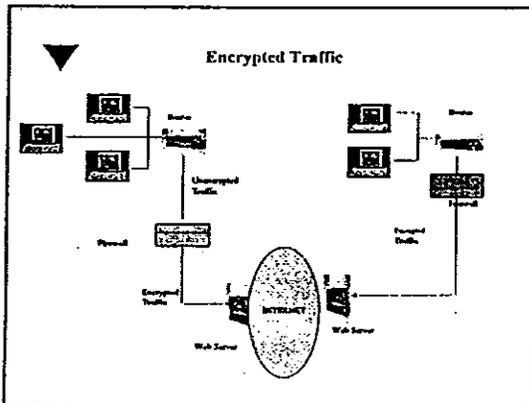
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▼ *Cryptosystem Strength*

- *Exhaustive search* (brute force attack—trying every possible key)
- *Key length* — measured in bits. Data Encryption Standard (DES) has 56-bit key. This means  $2^{56}$  or 72.1K trillion combinations.
- Since performance of PCs at constant cost doubles every 18 mos., computational cost of attacking a cipher increases exponentially faster than cost of improving its strength

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▼ *Key Length*

- Common recommendation is a min. of 75-bit keys for today's security and 90-bit keys for information to be kept secure for 20 years.
- These figures are for symmetric cryptosystems such as DES.

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▼ *Key Lifetime*

- *Proper lifetime of a key = (f of the value of items encrypted, # of items encrypted, and lifetime of items encrypted)*
- *Changing keys limits amount of information revealed if a particular key is found. E.g. if the encryption keys are changed every month, then only one month's worth of info. is disclosed if a key is disclosed.*

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**E-PAYMENTS  
MACEDONIAN BANKERS  
SEMINAR**

*November 30, 2000*

**E-PAYMENTS**

- Unique features of cash
  - Convenience
  - Wide acceptance
  - Anonymity
  - No hidden costs of use
  - No audit trail

**E-MONEY**

- Credit cards
- Smart cards
- Debit cards
- EFT
- ACH
- Digital cash—contains information that makes it possible to identify the person wh withdrew the money from the bank---audit trail and is tracknble

## CHARACTERISTICS OF E-MONEY

- *Identified and online*—e.g credit card/debit card, making deposits
- *Identified and offline*—e.g purchasing by check, postal money order, traveler checks
- *Anonymous and online*—e.g cash payments, ATM
- *Anonymous and offline*—e.g making deposits via ATM, using credit card with offline merchant

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## MONEY (ACID) PROPERTIES

- *Atomicity*—transaction must occur completely
- *Consistency*—all parties must agree to the exchange
- *Isolation*—each trans. Must be independent of any other transaction
- *Durability*—e.g reversing charges in the case of a mistake

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## INTERNET-BASED PAYMENTS

- Nontechnical properties:
  - Acceptability
  - Ease of integration into the total network environment
  - Customer base—must be enough users to justify investment
  - Ease of use
  - Ease of access—customers don't like to wait

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## ELECTRONIC TRANSACTION SYSTEMS

- CyberCash—typical sales transaction:
  - Customer places an order via Web site
  - Customer verifies info. & clicks “Pay” button
  - CyberCash server:
    - receives packet
    - moves trans. Behind its firewall and off the Internet
    - unwraps packet within hardware-based crypto box
    - reformats transaction and forwards it to merchant's bank
    - Merchant bank forwards the authorization request to issuing bank via card association
    - Decision sent back to CyberCash
    - CyberCash transmit approval/denial code back to merchant

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## SECURE ELECTRONIC TRANSACTIONS (SET)

- Primary goals:
  - Confidentiality
  - Integrity
  - Authentication
  - Interoperability across network providers

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## SET Procedure

- Customer orders a product via Web site
- Web site sends order which activate customer's SET wallet
- This triggers payment request back to merchant's SET module
- Merchant transmit authorization payment request to acquiring bank via SET payment gateway
- Gateway connects to cus issuing bank for approval
- Gateway sends “payment OK” to merchant
- Merchant sends electronic receipt to customer's wallet

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## ELECTRONIC PAYMENT MEDIA

- Trusted third party
- Notational fund transfer-related type—VISA/Mastercard's SET-based transaction
- Digital cash or electronic money—serial numbers representing actual money are encrypted to destination and converted to real money
- Digital cash leaves no audit trail
  - Open an a/c with bank that handles e-cash
- Credit cards—leave audit trail
- Debit cards
- Smart cards

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## The e-Wallet

- Secure way of carrying currency electronically
- Procedure:
  - Decide on the online site you want to shop
  - Download a wallet to desktop
  - Fill out personal info.—e.g credit card number, name/address, etc.
  - When ready to buy, click on wallet button
  - Billing information is automatically filled out

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## PROS AND CONS OF E-PAYMENT

- PROS
  - U.S market for e-payment predicted to increase to 20 million
  - Vast reduction of paper
  - Elimination of errors associated with manual bill payment
  - Trend toward aggregation of bill payment
- CONS
  - 50 % of the 130 million U.S adults who use the Internet do not want to receive their bills over the Net.
  - High fees—Check-Free makes \$4 per use per month; banks charge \$5 to \$8 per month

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EFT and ACH

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## LAUNCHING INTERNET BANKING

MACEDONIAN BANKERS SEMINAR  
NOVEMBER 30, 2000

### The building life cycle

- Planning and strategizing—Vision
- Deciding on the infrastructure
- Design—Building the Web site
- Marketing—Advertising the site
- Maintaining and growing the business

### Strategizing Reality

- Evaluate your bank's position and the competition
- Devise a mission statement
- Decide on the objectives
- Strategizing boils down to three areas:
  - Vision
  - Resources—people, money, and staying power
  - Culture

## Strategizing (cont'd)

- Key questions to consider:
  - Who will buy your products or services?
  - How familiar are you with the Internet?
  - Are you planning to be a short-term? Long term?
  - Who are your competitors?
  - How will you present your services?
  - How will you manage and process transactions?
  - How will you handle unexpected change?

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## Specific Goals re. Planning

- Create & maintain a competitive edge
- Reduce operational costs
- Improve customer satisfaction
- Find new market for products or services
- Improve relationships with business partners
- Create distribution channels
- Improve supply-chain management (SCM)

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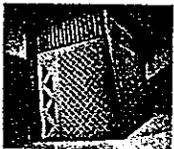
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## Hardware, Software, Security & Setup Phase



- What hardware to buy?
- How fast should it be?
- What about quality, reliability & integrity of hardware?
- What about bandwidth?
- What about the ISP?

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### Hardware (cont'd)

- Needed software
  - File transfer protocol (FTP) to transfer files to and from remote computers
  - E-mail to receive and send messages to anyone, anywhere, anytime on the Internet
  - A WWW browser (e.g. Netscape or Microsoft browser)
  - Serial Line Interface Protocol (SLIP)—a program that interfaces a modem to the Internet

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### Security Considerations

- Control access to the Web server
- Update server software and encoding security measures to ensure server-Web site integrity
- Use firewalls to protect the merchant's internal network
- Monitor the traffic and detect irregularities in time to minimize damage

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### Security Considerations (Cont'd)

- Assign Web security to a qualified Webmaster
- Security sockets layer (SSL) and encryption
- Enable SSL
- How to get SSL?
  - you need a digital ID (authentication certificate) from a trusted 3<sup>rd</sup> party source (e.g. CyberCash) to vouch for your identity

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### The Design Phase

- The focus is on designing the Web site
- The Web storefront
  - Able to find bank services quickly—8-second rule
  - Process customer requests quickly & send securely especially loan applications
  - Generate a summary of customer requests & produce a printable receipt

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### Locating a site developer

- What bank sites has the designer developed?
- What design features, logo design, or animation the designer offer?
- Visit the shop or one of operational sites.
- What services does he/she offer?

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### Web site design considerations

- User control and freedom
- Consistency and standards
- Recognition rather than recall
- Aesthetic design
- Recovery from error
- Help desk

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### The Marketing Phase

- Provide good service
- Advertise
- Know the customer
- Secure the account/loan, etc.
- Produce the customized service
- Follow up on customer satisfaction

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### Maintenance and enhancement

- Manage the Web site
- Stay on course—ensure Web site usability
- Managing customer feedback
  - Set up FAQs.
  - Make sure information is easy and quick to access.
  - Visitors are short-tempered when it comes to download time.
-  Avoid unnecessarily large images or bandwidth hogging elements
- Answer e-mail. It is fast and easy.
- Support multiple languages.

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**E-SECURITY**

Macedonian Bankers Seminar  
November 30, 2000

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**THREATS TO E-SECURITY:**

- ◆ Fraud
- ◆ Theft
- ◆ Disruption of service
- ◆ Loss of customer confidence
- ◆ Biggest risks
  - credit card handling
  - e-mail information



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**Paper-based vs e-commerce attributes**

- ◆ Signed paper documents vs digital signature
- ◆ Person-to-person vs electronic
- ◆ Merchant-customer face-to-face vs face-to-face absent



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## Security Concerns

- ◆ *Confidentiality*—encryption
- ◆ *Authentication*—are you who you say you are?
- ◆ *Integrity*—data and information remains uncorrupted and uncorruptable
- ◆ *Access control*—restrict use of a resource to pre-authorized principals
- ◆ *Non-repudiation*—ensure that a principal cannot deny sending the message
- ◆ *Firewalls*—filter between a firm's network and the Internet

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## Design Process

- ◆ Adopt reasonable security policy. Upgrade when necessary
- ◆ Consider Web security needs—how much security?
- ◆ Design the security environment
- ◆ Police the security perimeter—firewalls, authentication, VPNs (virtual private network), intrusion detection devices
- ◆ Authorize and monitor the security system

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## Kinds of threats or crimes

- ◆ *Physically-related*—stolen credit card records, vandalism
- ◆ *Order-related*—someone using someone else's credit card
- ◆ *Electronically-related*
  - Sniffing e-mail information
  - Cyberpunks intercepting and decoding communication between merchant and customer
  - Defacing Web sites

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## Client/Server Security Threats

- ◆ Client computer attacks:
  - Unsolicited mail, forced advertisement reading, anonymous messages
  - Deliberate corruption of files—from Melissa to WORM
  - Rifling stored information
- ◆ Server security threats:
  - Path of least resistance is always path of choice
  - Web server with a port-active—password sniffing



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## The Privacy Factor

- ◆ Lack of a comprehensive policy
- ◆ Surfers' distrust of sites
- ◆ Growing fear of spam
- ◆ Surfers' alternatives

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## Types of Virus

- ◆ *File* virus attacks executable files
- ◆ *Boot* virus attacks the boot sectors of the hard drive and the diskettes
- ◆ *Macro* virus exploits the macro commands in software applications like WORD
- ◆ 80% of viruses are macro viruses
- ◆ *Companion* virus infects COM files, then infects EXE files when it is running. Easy to detect.
- ◆ *Overwrite* virus destroys the file it infects by copying itself to that file. Easy to detect

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### Signals of Having A Virus

- ◆ Hard disk light is turned on
- ◆ Hard disk does not work
- ◆ Diskette drive reads from diskette but does not record data on it
- ◆ Message from anti-virus package that you have been infected 
- ◆ COM and EXE files larger than normal

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### Promoting e-Commerce Security

- ◆ *Passwords—1<sup>st</sup> basic principle*
  - Include at least 1 capital letter and 1 lower-case letter in password
  - Mix numbers with letters. No short passwords
  - No passwords near your birthday, last name, spouse's name, too obvious name, too well-known name, or too common name
  - No dictionary names
  - Change passwords often
  - Disable passwords of departing employees

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### Watching For the Credit Card Thief

- ◆ Customer who
  - Places large order regardless of size, style, or price
  - Places large order and wants it shipped overnight
  - Places orders via diff. e-mail addresses
  - Live in one state places an order to be shipped to a different address, using a credit card issued by a bank located somewhere else
  - Int'lly places huge order and wants it shipped overnight
  - Minor uses parents card to place large order

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## FIREWALLS



- ◆ *Default deny*
  - blocks all traffic except ones explicitly allowed by firewall administrator
- ◆ *Default permit*
  - allows all traffic except ones explicitly blocked by firewall administrator

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## Specific Features In Firewall Design

- ◆ Security policy dictates firewall design, not vice versa
- ◆ Every firewall should support "default deny"
- ◆ Filtering ability (deny, permit), depending on dept.
- ◆ Scalability—responding to network changing environment
- ◆ Authentication—allow deny/permit privileges to be individualized
- ◆ Identify potentially dangerous services and disable them
- ◆ Effective audit logs

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## ENCRYPTION

- ◆ Mathematical procedure to scramble data.
- ◆ Algorithm converts intended data into an encoded message using a key for decoding the message
- ◆ Key is a series of electronic signals stored on the PC's hard disk or transmitted as blips of data over transmission lines based on industry standards.

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## Cryptography and Security

- ◆ Requirements for secure transactions/messages:
  - Privacy:** Q: How can I ensure no one in the local area knows about this?
  - Authentication:** Q: Am I dealing with a legal entity? Customer legal?
  - Integrity:** Q: Will supplier get paid in full?
  - Non repudiation:** Q: Any evidence of payment? Do we have a binding deal?

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## Cryptography--the Basics

- ◆ **Plaintext:** Ordinary message
- ◆ **Ciphertext:** A scrambled message produced by an encryption algorithm
- ◆ **Decryption algorithm:** used by the receiver to recover plaintext from the ciphertext

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## Cryptography (cont'd)

- ◆ **Key:** Additional piece of input data. It is secret, even though many people may know the algorithm

### Types of Cryptographic Algorithm

**Secret Key Cryptography:** Encryption and decryption operations use same key (used symmetrically)

**Public Key Cryptography:** Encryption and decryption operations use related but different keys (asymmetrical)

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## Secret Key (Symmetric) Cryptography

- ◆ *Plaintext* is encrypted using a key, resulting in a ciphertext
- ◆ *Ciphertext* is sent to the recipient who decrypts message using same key
- ◆ Same key must be known to both parties
- ◆ Best-known secret key system is DES(Data Encryption Standard)

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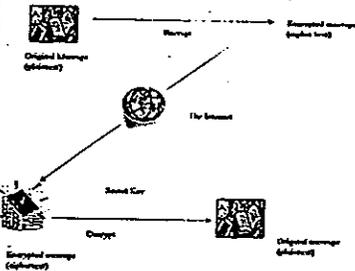
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## Symmetric Encryption Using Single Secret Key



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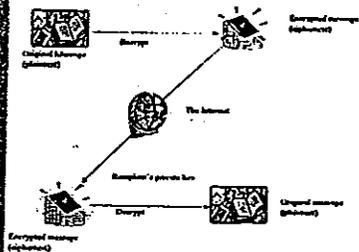
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## Public Key Cryptography



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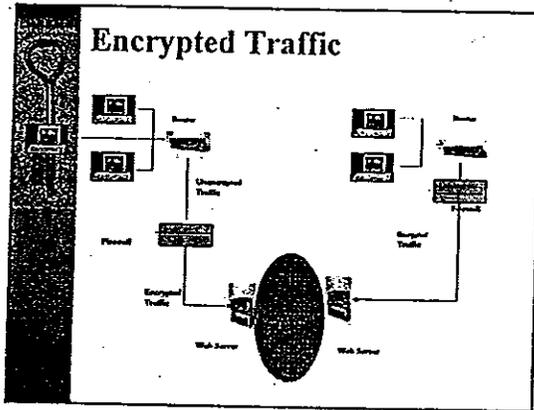
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### Cryptosystem Strength

- ◆ Exhaustive search (brute force attack—trying every possible key)
- ◆ *Key length* is measured in bits. Data Encryption Standard (DES) has 56-bit key. This means  $2$  to  $56^{\text{th}}$  power or 72.1K trillion combinations.
- ◆ Computational cost of attacking a cipher increases exponentially faster than cost of improving its strength

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### Key Length

- ◆ Common recommendation is a min. of 75-bit keys for today's security and 90-bit keys for info. To be kept secure for 20 years.
- ◆ These figures are for symmetric cryptosystems such as DES

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**Key Lifetime**

- ◆ Proper lifetime of a key = (f of the value of items encrypted, # of items encrypted, and lifetime of items encrypted)
- ◆ Changing keys limits amount of information revealed if a particular key is found. E.g. if the encryption keys are changed every month, then only one month's worth of info. is disclosed if a key is disclosed.

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**KEY MANAGEMENT**

- ◆ From generation to termination, a key life cycle includes:
  - Key generation and registration
  - Key distribution
  - Key backup/recovery/escrow
  - Key revocation and destruction

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