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International Monetary Fund

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FOREWARD

The Donor Community and the Government of Bosnia and Herzegovina (BiH) reached a political agreement at the Madrid Conference in December of 1998 on the necessity to completely transform the existing Payment Bureaus. The transformation envisioned would remove all the functional activities currently performed by Payment Bureaus and relocate these functions into the proper public or private institutions where they would more properly support a free market economic system. The Payment Bureaus were recognized as institution created to facilitate control and resources allocation under a centrally planned economic system. In a free market environment the policies and procedures of these Bureaus create obstacles which discourage normal business activity.

The International Advisory Group for Payment Bureaus and Payments System Transformation (IAG) was formed by the Donor Community to assist the Government of BiH undertake this transformation of the Payment Bureaus by providing advice, technical assistance and financial resources. As a first step in the process the IAG commissioned a Functional Analysis for the purpose of identifying all functions performed by the Payment Bureaus and to design a strategic plan for an orderly transformation process. The Analysis is contained in this report.

The study was prepared under the direction and supervision of Dr. Mike E. Sarhan, Director of USAID/BiH Economic Restructuring Office (ERO). The team performing the Study was organized by Dr. David Whitehead, Resident Macroeconomic Advisor and lead by Dr. Alan Pearson. The team members included Alex Korns, George Smith, and Erkan Inan. Also contributing directly to the Functional Analysis were Mike Crook from CAFAO and Len Fernelius and Ilona Castro from the World Bank. This Analysis draws heavily on previous studies of the Payment Bureaus by the IMF, The World Bank and USAID. All members of the IAG are also recognized for their valuable insights and suggestions as this work progressed. Finally, many thanks are offered to the Government officials who are supporting the transformation process and to the officials of the three Payment Bureaus who provided access to their institutions and who made valuable contribution to this Analysis.

LIST OF ACRONYMS

ADPC	Automatic Data Processing Centers
BiH	Bosnia and Herzegovina
CAFAO	Customs and Fiscal Assistance Office
CBBH	The Central Bank of BiH
CD	Compact Disc
CPB	Central Profit Bank
DM	Deutsche Mark
EC	European Commission
EITS	Electronic Interbank Transfer System
EU	European Union
FBiH	Federation of BiH
FBA	Federation Banking Agency
FCA	Federation Customs Administration
FIS	The Federation BiH Institute of Statistics
FP	Financial Police
FRY	The Federal Republic of Yugoslavia
FTA	Federation Tax Administration
GB	Gigabytes
GDP	Gross Domestic Product
GI	Generalni Izvjestaj, a general report for statistical purposes
HD	Hard Disk
HRK	Croatian Kuna
IAG	International Advisory Group
IMF	International Monetary Fund
INV	Investment form required for national accounts
IT	Information Technology
KM	Konvertibilna Marka
KNJ 1	PB month end reports
LAN	Local Area Network
MAE	Monetary and Exchange
PB	Payment Bureaus
PC	Personal Computer
PIC	The Peace Implementation Council
PO	Payment Order
PTT	Post Office
RS	Republika Srpska
SDK	Sluzba Drustvenog Knjigovodstva, the former Yugoslav Social Bookkeeping Agency or Payment Bureau
SI	Institute of Statistics
SNA	System of National Accounts
SPP	Sluzba za platni promet, the RS Payment Bureau
SWIFT	Society for World Wide Financial Transmission
TA	Tax Administration
TIN	Tax Identification Numbers
US	The United States of America

USAID
ZAP
ZPP

The United States Agency for International Development
Zavod za platni promet, the Croat majority areas Payment Bureau
Zavod za platni promet, the Bosniak majority areas Payment
Bureau

Transformation of Payment Bureaus in Bosnia Herzegovina: Functional Analysis and Strategic Implementation Plan

1. EXECUTIVE SUMMARY

This report follows initial work conducted by the United States Agency for International Development (USAID) detailing obstacles to development and a strategy for orderly transformation of the Payment Bureaus (PBs) in Bosnia and Herzegovina (BiH). This report includes the results of analyses carried out by USAID, the World Bank, and the European Commission-(EC) funded Customs and Fiscal Assistance Office (CAFAO). The objective was to conduct an analysis of the basic functions performed by the Bureaus and to develop a strategic implementation plan for the elimination of each Bureau.

The review concentrated on the activities of Payment Bureaus in Bosniak majority areas of the Federation of Bosnia-Herzegovina (FBiH) (Zavod za Platni Promet--ZPP), and then extrapolated findings to the Payment Bureau in Croat-majority areas of FBiH (Zavod za Platni Promet -- ZAP) and to the Republika Srpska (RS) Payment Bureau (Sluzba za Platni Promet -- SPP). In general, findings about the ZPP were closely applicable to the ZAP, but it was found that there are some significant differences in the operations of the SPP. Furthermore, review of the SPP cannot be completed until Deloitte and Touche complete and the RS Government adopts the Framework for Separation of Payment Bureau Functions from the Razvojna Banka's Commercial Banking Activities in the Republika Srpska. The Razvojna Banka is the RS Development Bank.

In carrying out the functional analysis it became clear that some functions that appeared relevant to the transfer of services from the Bureaus, in fact required reform unrelated to the PBs elimination process as such. Accordingly, the team identified (1) functions that could be transferred as they stand, (2) functions that could be transferred and either reformed or enhanced as the PBs are eliminated, and, (3) functions which could be phased out because they are no longer applicable in a market-based economy. A number of the statistical and information activities carried out by the PBs fall into the third category.

KEY FINDINGS

- ◆ The Payment Bureaus act predominantly as processing organizations and in this context do not provide other services (that is services outside an efficient payments process) to their clients to any great degree. The deposit requirements and cash holding practices of the ZPP and ZAP have been confirmed in the field and are fundamentally related to legal requirements placed on the Bureaus by the Tax Administration. However, the SPP has discontinued these practices and, therefore, presents a qualitatively different approach to providing payment services.
- ◆ The major issues in eliminating the Payment Bureaus involves preparing commercial banks to carry out payment processes and allowing these banks to take over some of the activities here to for performed by the Payment Bureaus.
- ◆ Contrary to our initial assumptions, the analysis suggests that substantially fewer staff than currently employed by the Bureaus would be required by the public and private institutions that take over current PB functions, with the possible exception of the banking sector where

payment transaction volumes may generate a need for additional staff. However our analysis was only an initial attempt to outline the situation. As treatment of bureau staff will be a key issue in the elimination process, considerable attention, and further assistance, will be required. The Strategic Implementation Plan identifies this, and notes that assistance to retraining and placement of staff should be substantial.

- ◆ The current information technology (IT) environment of the PBs varies, with the ZAP and ZPP using outdated applications and the SPP appearing to be more advanced.

The Strategic Implementation Plan for elimination of the PBs builds on the detailed findings regarding the functional areas. In summary, these are:

Payments and Clearing System

The Payments and Clearing System had already been well documented by successive International Monetary Fund (IMF) Missions, and the policy framework for establishing a private clearinghouse is well set out. The major activities to be undertaken include finalizing the legal framework (already well underway), changing the fee structure utilized by the current PBs and developing the appropriate electronic mechanism within both the banks and the to-be-established clearinghouse.

Government Services

The Payment Bureaus provide a range of data to the Tax and Customs Administrations and this must be reviewed and where necessary legislation developed to ensure the commercial banking sector will provide the necessary information. At the same time, the complex tax account codes can be reviewed and simplified, in conjunction with the establishment of a Treasury General Ledger in the Ministry of Finance. Treasury services to the Ministry of Finance are limited to elementary cash management. Therefore, development of a Treasury System is not driven by elimination of the PBs but by the requirement to establish sound financial management within government. Again, the opportunity is present to simplify the account structure and to establish a Treasury Single Account in a selected bank(s).

Accounting and Related Services

The services provided by the Payment Bureaus to enterprises consist of basic banking services. The PBs do not provide accounting services as normally defined in relation to financial reporting and management. In this sense, there is no loss of service to enterprises with the termination of the PBs. The Bureaus do conduct some elementary checking with regard to tax payments by enterprises (particularly for payroll taxes and contributions). These should be conducted by the appropriate authorities following transfer, which will require strengthening of the Tax Administration to conduct what is, in essence, its proper function.

Statistics and Information Services

The statistical information services provided by the Payment Bureaus are largely independent of the payments process and derive from collection activities carried out on the side and based on the powers of the Bureaus to require compliance with requests. The collection process can be simplified and divested to the appropriate agency (e.g., the Tax Administration or Institute of Statistics). In addition, many of the forms collected appear to serve no useful purpose and can be discontinued, simplifying the transfer process.

Information Technology Issues

Currently, both the ZPP and ZAP operate relatively outmoded equipment and application software processes. In this sense, transfer of either existing equipment or software to a to-be-established clearinghouse would not be appropriate. Replacement equipment being acquired by the two Bureaus may change this, but it is unlikely that operating systems will be updated in time to be of value for current operations. They would have some transfer/salvage value. The SPP is better placed in terms of hardware and application software and the assets may have some transfer value.

Organization and Human Resource Issues

In total, the Payment Bureaus employ a staff of some 2,760 workers. With the exception of possible transfer to the banking sector to accompany the transfer of payment transaction volumes, little need has been identified for staff transfers to other agencies. Therefore, the human resources issue may relate largely to retraining existing staff for other employment opportunities, possibly in the financial sector, and exploring donors/PB compensation packages.

In addition to the functional activities described above, the analysis teams identified a number of activities that must be undertaken in advance of implementation of the strategic plan. These include finalizing the Internal Payments System Law and establishing a Governing Board to oversee the Elimination Strategic Plan, and the development and implementation of wide-ranging information and education campaigns. The latter is particularly important to ensure dissemination of accurate information on the elimination plan, which will not only affect staff and agencies, but also the banking community, the government and the general public.

STRATEGIC IMPLEMENTATION PLAN AND TECHNICAL ASSISTANCE REQUIREMENTS

The Strategic Implementation Plan identifies, as prerequisites, the need to conduct a financial verification of the accounts and assets of the Payment Bureaus, revision of the Bureaus' fee structure and, in the case of the ZPP and ZAP, elimination of the cash depositing requirement. Once the above activities are completed and the Tax Administration is satisfied it can monitor tax liabilities and the commercial banks have been certified for payment processing only then will banks be allowed to initiate, risk-free "on us" transactions and moderate risk bilateral transactions. These transactions initially should be limited to private activities and not involve the government.

Once a Treasury System is established at the Ministries of Finance, and the account structure simplified, government transactions can be introduced using a selected government bank account or accounts.

Following successful operation of the limited risk payment transactions, and the development and operations of a private clearinghouse have been completed, full multilateral clearing and settlement activities can be introduced. At this point it will be possible to liquidate the Payment Bureaus.

The implementation plan identifies requirements for substantial technical assistance in developing a clearinghouse function and training in the private banking sector, strengthening the

Tax Administrations, establishing a full treasury system within the Ministries of Finance and developing capabilities within the Institute of Statistics. While some of this assistance is already ongoing, the plan calls for specific additional assistance and identifies potential donors. In addition, development of a human resources strategy to train and re-deploy existing staff will be critical, this is identified in both the plan and the technical assistance requirements. Rapid mobilization of the assistance will be critical in ensuring that the ambitious timing of December 2000 for the elimination of the Payment Bureaus is achieved.

2. PAYMENTS AND CLEARING SYSTEM

BACKGROUND

The present payments system in BiH grew out of the Yugoslav Service for Social Bookkeeping (SDK). The SDK was designed to maximize government control in a centrally planned economy. Each successor Payment Bureau in BiH has had an effective monopoly over domestic non-cash payments in the area it serves. In order to make a domestic non-cash payment, a person, whether natural or legal, must have positive balances in a GIRO account with the regional payment bureau office to which it is assigned. Bank customers transfer deposits into the GIRO account from commercial bank accounts on the basis of payment orders. The GIRO accounts in the PBs have zero balance at the beginning and the end of the day. Cash is the primary mode of payment and the payment order is the primary mode of non-cash payment. The public does not use checks as payment instruments. The use of plastic (credit or cash) cards in BiH is mostly limited to a few hotels and tourists. Payment flows between the categories of buyers and sellers with the general purposes for each are depicted in Chart A - Functional Characteristics. Payment flows within a single PB, and between the other two PBs which are now settled electronically on the Central Bank of Bosnia-Herzegovina's (CBBH) books, are shown in Chart B - BiH Payments System. This basic information is needed to support understanding of the following detailed functional analysis.

ANALYTICAL APPROACH

For the sake of efficiency, the functional analysis of the payments and clearing functions is limited to the presentation of new information provided by the Payment Bureaus after the last analysis in October 1998. Payment Bureau operations in the two entities (at the three units--ZPP, ZAP and SPP) have been intensively studied by the IMF since its first mission in October 1996. On four subsequent missions, the level of analysis probed successively deeper into PB operational activities¹. This report will briefly summarize the Rother compilation and explain certain features of existing functional Payments System relationships as background information. This analysis concentrates instead on complementing the strategic plan already adopted by the National Payments Council of BiH by filling in with more detail the outline of urgent activities forecast for the next 3-4 months, with a view to the extremely tight deadline for completing PB reform.

In performing the functional analysis, the teams conducted interviews with the staff of the three Payment Bureaus (Sarajevo, Mostar, and Banja Luka). Also, a focus-group discussion with officers from 6 commercial banks was held to elicit views about their interest in, and technological capacity for, participating in the transformation of the PBs. Finally, the analysis included a review of the new information provided in " Guidelines for Payment Bureau Operations", the Payment Bureau, Main Office, Belgrade, May 11, 1995. An overview of this review is presented in Annex 1.

¹ A comprehensive review of previous MAE work is contained in "Bosnia and Herzegovina - Payment and its Development", compiled by Philip C. Rother, Monetary and Exchange Affairs Department, International Monetary Fund, August, 1998.

Chart A
Functional
Characteristics of
Payment Flows
(Payment Order-Credit
Transfers)

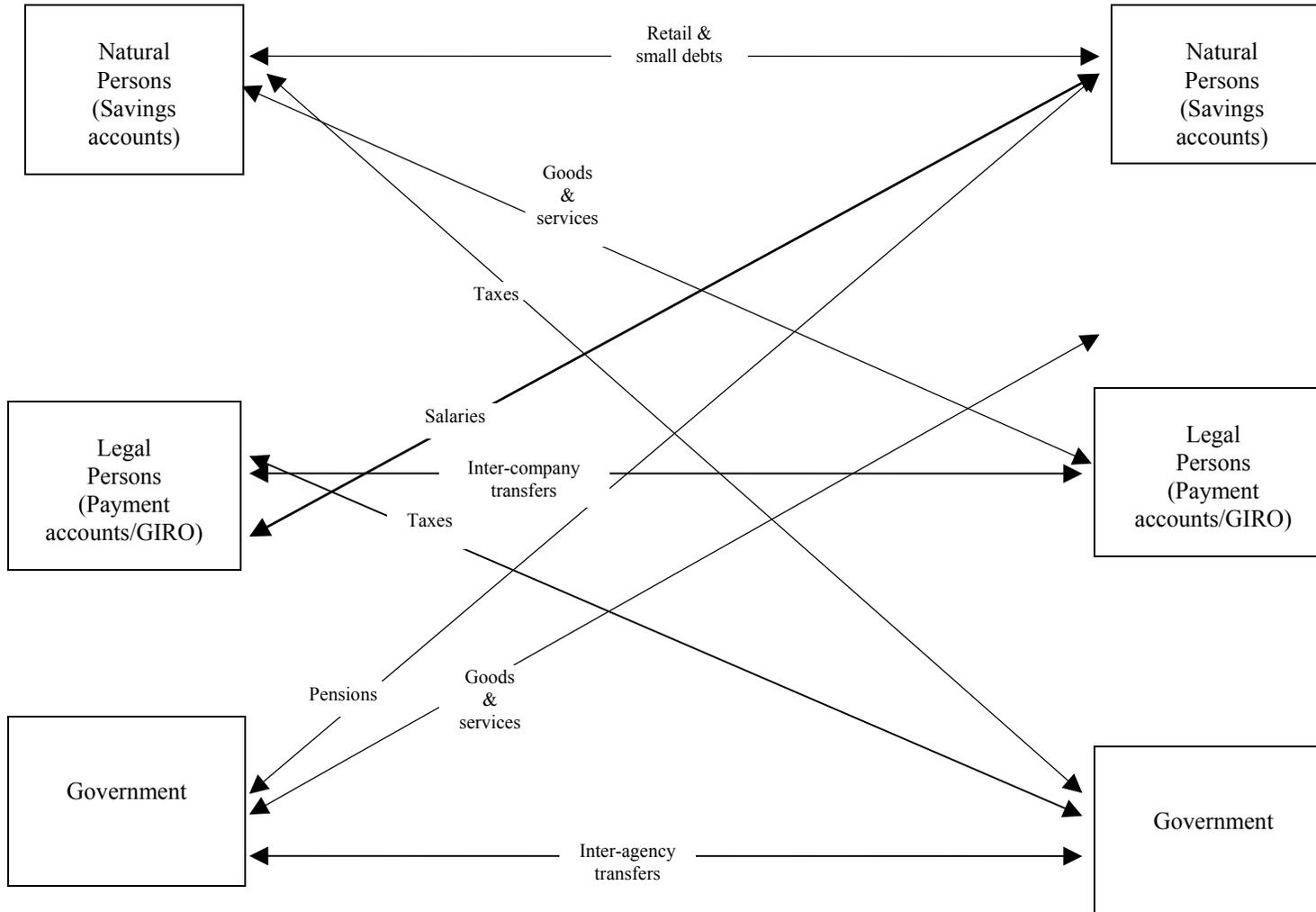
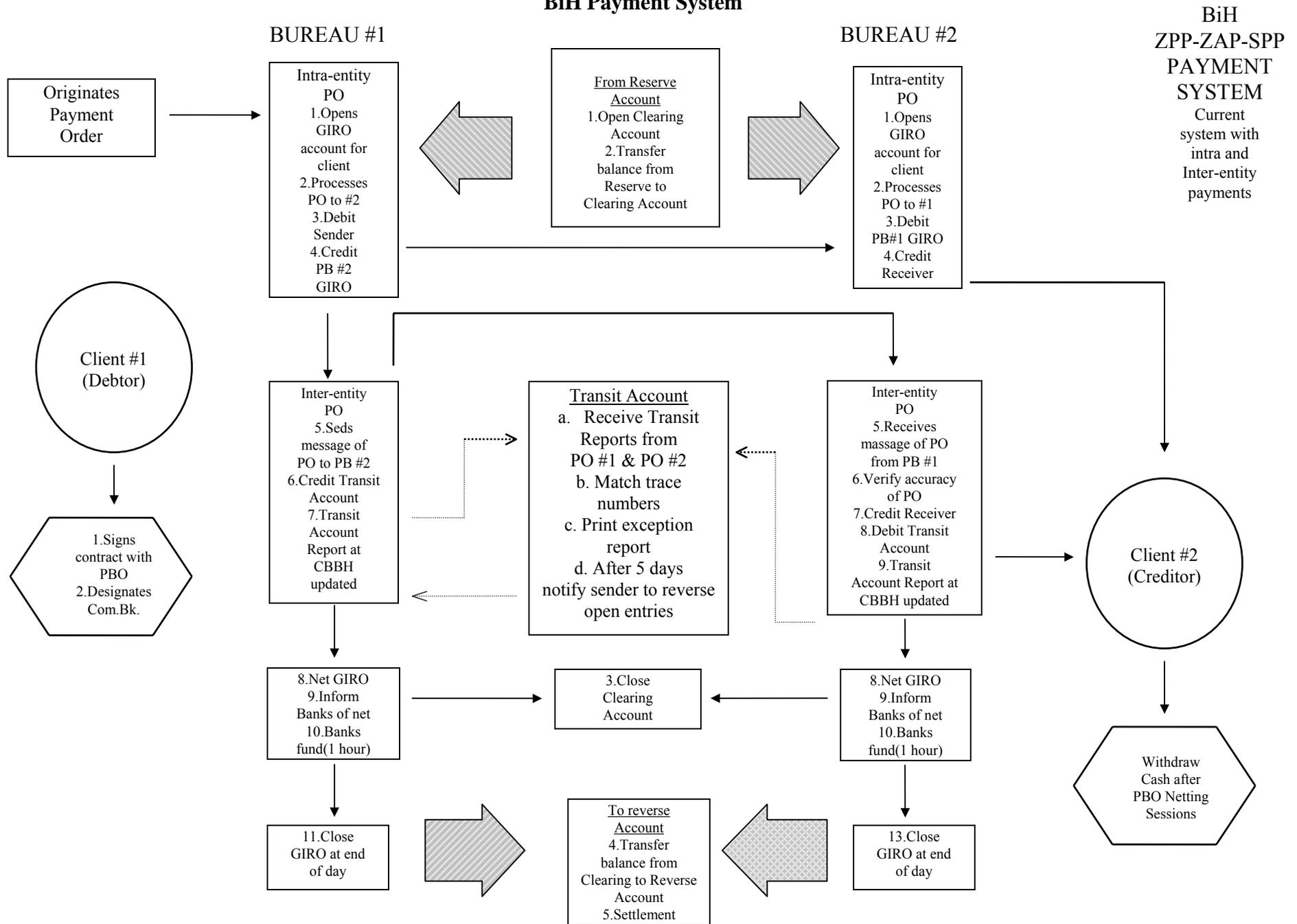


Chart B BiH Payment System



TRANSFORMATION APPROACH

The international community, including the IMF, recommended that BiH develop and adopt a payments structure similar to those found in developed market economies, in which commercial banks provide domestic payment services by dealing directly with their depositors.

This includes transferring their customers' deposits (a) directly to the banks of the payees with immediate settlement via the bank's reserve account balances for large value or priority payments, or by (b) clearing payment instructions through a clearinghouse with deferred settlement for small value retail type transactions. Transformation of the existing system must be undertaken in a way that does not disrupt ongoing economic and financial activities, or the flow of vital data and information. The functional attributes of the PBs and the private sector as providers of services are shown in Table 1 - Current Arrangements (non-competitive) and Table 2 - Post-Transition Arrangements (competitive). The second table also shows the CBBH's electronic high value/priority payments service, and the small value/retail clearinghouse service under private sector ownership. Not shown, but important nevertheless, is that in the new environment the CBBH may use the facilities of the service providers who succeed the PBs in supplying new currency, retiring worn-out currency and vault storage, which are legitimate central bank functions.

KEY FINDINGS

The devolution of Payment Bureau functions to the private sector and reform of its processes were mandated by the agreement reached at the December 1998 Madrid Peace Implementation Council (PIC) meeting, and in the agreements between the governments of the two entities and the international community (i.e., the IMF blueprint, and agreements with the International Advisory Group – IAG), with a completion date of not later than December 2000. While we recognize the level of complexity of PB operations, and the aggressiveness of the deadlines for completion, we strongly believe that the transformation can be achieved within the agreed timeframe. We note with interest that the ZPP is in the process of upgrading its equipment platform and assuring Y2K compliance for its current configuration, which is expected to occupy a significant part of its available human resources between now and year-end 1999. Nonetheless, completion of several important features of the reform process can be achieved which will change the way PBs do business and publicly signal that the reform process is underway. We realize that full culmination and orderly transformation must coincide with the development and growth in the commercial banks of "back-room" experience and technological capabilities, and development of a competitive market for payment services among bank clients.

- ◆ Of greatest importance among the short-term changes is some type of privatization of the PBs' clearing institutions. While the scope of that effort, and the financial ability of the banks to acquire stock are unknown at this time, it is perhaps realistic to aim for majority control of the small value/retail clearing service to be in private hands sometime in 2000. The Central Bank would operate a large value/high priority payment and immediate settlement service with on-line access by banks to CBBH reserve accounts.
- ◆ Regarding the current cash services performed by the Bureaus, that portion relating to supplying currency and retiring unfit currency is a legitimate responsibility of the CBBH. Also, the current practice of storing cash in the vaults of the PB branches is helpful in maintaining adequate currency supplies throughout the country. With the elimination of the Bureaus, however, a portion of the staff and vault expenses should be transferred and chargeable to the CBBH, i.e., those functions should not devolve to the private sector.

TABLE 1

BiH Payment System

Functional Attributes of Service Providers
Current Arrangement (non-competitive)

Function	Provider - Payment Bureau	Provider - Private Sector
1. Account relationship	GIRO	Savings
a. Deposit	No	Yes
b. Loans		
2. Servicing the account		
a. Features	One size for all	Service not available
b. Price	Value based	Service not available
c. Personal attention	No (queues)	Service not available
3. Share of transactions	100	0
4. Trained staff	2,000 (estimated)	None

TABLE 2

BiH Payment System

Functional Attributes of Service Providers *Post - Transition (Competitive)*

Function	Provider - Payment Bureau ¹	Provider - Private Sector
1. Account relationship	No	Savings
a. Deposit	No	Yes
b. Loans		
2. Servicing the account		
a. Features	Small value clearinghouse ²	Large value/time critical payments
b. Price	Coast based – flexible	Cost based - flexible
c. Personal attention	Service bureau functions	Yes
d. Settlement	Net (end-of-day via CBBH)	Gross (direct to CBBH par transfer)
3. Share of volume	80	20
4. Share of value	20	80
5. Trained staff	Less 50 %(estimated)	As needed
6. Branch facilities	Consolidate	Market demand
7. Other services	Market Demand, Government Agencies	Market demand

¹ At last 51 % under private ownership

² Some transactions may be cleared and settled bilaterally through direct exchanges between banks

- ◆ More importantly, however, the intention to reform the PBs could be underlined if their revenue stream were reduced sooner rather than later. This leads to the suggestion that urgent attention be given to moving the PB tariff system away from pricing on a value basis to a cost recovery pricing system as soon as possible. Such a move will establish a benchmark for charging for services on a full cost basis. However, immediate implementation may be complicated by the fact that PBs use the existing “high” fee structure to generate revenue used to support a number of activities unrelated to the payments process, such as the treasury, tax, and statistical collection services.

IMPLEMENTATION ACTIVITIES

- ◆ **Change the pricing system.** Central banks in developed countries have substantial experience in cost recovery pricing and perhaps could supply expert resources to assist in analyzing costs and framing up a new price schedule in the next 90 days. If the effect on cash flows from re-pricing is severe, the new schedule could be incrementally installed over 6 months. If the PBs lack the underlying cost data (e.g. because of employing cash rather than accrual accounting) necessary to support cost-based pricing, estimates would suffice in setting the first round of new prices. A statement by the National Payments Council that a new price schedule is forthcoming would be a positive signal that reform was underway.
- ◆ **Install the CBBH Electronic Interbank Transfer System (EITS).** As pointed out in the latest IMF (Monetary and Exchange MAE) Report - Volume II, March 1999, installation of the Electronic Interbank Transfer System could be achieved early on because many Bosnian banks are already members of SWIFT. Such a service would have immediate usefulness for participating banks and improve liquidity management across the banking system. In this way, banks could also begin gaining valuable experience with both on-line data entry of transfers and cash management practices.
- ◆ **Assign bank numbers.** A prerequisite for EITS is the assignment of bank routing numbers - either determined by SWIFT standards or perhaps by a CBBH directive. Volumes may be small at the outset, but the principle of bank control of client transfer responsibility would be established.
- ◆ **Acquire software for an electronic multi-lateral netting service.** A decision should be taken in the near future that such software is needed in the Bosnian environment and should be acquired either by the banks, or by the CBBH. This would permit banks to receive diskette information of payment order data directly from their customers as an alternative to continued use of the current system that requires customers to visit their assigned Payment Bureaus and wait in line. A pilot test between two banks would be an important public statement by the National Payments Council signaling reform of the payments process. The software permits data sorting by sending banks and compilation of net settlement positions.
- ◆ **Develop CBBH regulations for a multilateral clearinghouse.** Regardless of which institution runs the multi-lateral clearinghouse, there must be a sound legal foundation for its operation according to Lamfullussy standards. Again, developed countries have model regulations, which could be used for guidance in developing a legal framework. Regulations should be in place when banks first begin to make direct exchanges either bilaterally or through the clearinghouse. Drafts should be circulated and discussed extensively with commercial banks in advance.

CONCLUSIONS

The Payments and Clearing segment of the BiH Payment Bureaus functional analysis has been progressively conducted and documented during the last 30 months by various IMF missions. That record is available to the entity governments and the international community. The only new element for this analysis is the Guidelines (Belgrade) which the PBs ostensibly follow. Review of its contents reveals that very little will apply to a privately owned clearing center. A few parts may apply to the role of the Fiscal Agency for the Ministry of Finance. Moreover, none of the current PB functions appears relevant to the new role of commercial banks in delivering client payment services. Note: The World Bank is currently undertaking a study to explore alternatives to the existing clearinghouse function performed by the PBs.

3. GOVERNMENT SERVICES

BACKGROUND

As part of the normal payments process, the Payment Bureaus provide some level of services to the government at Entity, Cantonal and Municipality levels. The range of services depends on the level of government. However, this functional review has determined that most of the services can be described as payment operations, where the government is either collecting revenue or is making a payment. In this sense, little government administrative activity takes place within the Payment Bureaus. The major activities relate to provision of information, most of which can be provided by the banking system, once banking arrangements for the government are confirmed, or can be developed by the Tax Administrations. This section of the report addresses specifically the transfer of government services to other agencies, while information requirements are addressed under the Statistics Section.

TAX AND CUSTOMS ADMINISTRATION

Tax Administration

The processes relating to tax payments are set out below.

- ◆ **Payroll Taxes.** Enterprises calculate their own payroll liability to employees along with the appropriate payroll taxes and contributions. The employee payroll is generally listed and summarized by the municipality since employee payroll taxes and contributions are paid at the municipality of residence. The entire payroll is summarized on a form called the "Specifikacija" which determines the amount of net pay; the employee portion of contributions by category of pension, health insurance and unemployment insurance; the employer portion of contributions by category of pension, health insurance and unemployment insurance; and salary tax. A separate payment order (PO) is completed for the employee portion of contributions, the employer portion of contributions and each municipality to which the salary tax is due. Also, a cash payment order is completed in order to obtain the cash to pay employees. The PB controller verifies the application of the rates for the various taxes and contributions and determines that the employer first has money in his/her GIRO account to pay the taxes and contributions. If there is sufficient money, the controller will then release the cash for the employer to pay his/her employees. Each payment order is made out to the appropriate tax or contribution organizations' 840 or 844 account. Since daily cash deposits are not required in the RS, it is possible for an employer to pay his/her employees without immediately paying the taxes or contributions. We were informed that this would not go undetected by the tax inspectors or the financial police. A future review of the RS Tax Administration will determine the competence of the tax inspectors in such a situation.

- ◆ **Turnover Tax.** Sales are summarized on a weekly basis, for the purpose of calculating the turnover tax. The appropriate turnover tax is calculated from the summary and tax payment is made to the appropriate municipality. A payment order is processed with the PB and is the only document that is submitted for payment. On a monthly basis, the company

completes a form "Obrazac PP-MI-1" which is the monthly report to the Tax authority on the turnover tax on products and services. A company is required to pay turnover taxes in every municipality in which sales occur. An annual summary of turnover taxes is also filed with the tax authority on form "Obrazac: PP-KO."

- ◆ **Enterprise Profits Tax.** The tax authority determines the amount of total tax payment for the coming year and the taxpayer must make monthly payments equal to 1/12th of the estimated tax. This payment is made by submitting a properly completed PO. The controller does not see any other documentation accompanying the tax payment; therefore, the PB simply serves as a conduit to collect payments. These payments are included on a computer diskette along with all other payments that are supplied to the tax authority to allow them update their files.

The companies supply the PB with copies of their balance sheets and income statements on a semi-annual basis. The PB personnel do not perform any specific function on these documents except to input the data into the computer and pass on the file to the tax authority. A representative from the RS Bureau, when asked why these statements go through the PB, said that there is no good reason except that this is the way that it has always been done.

In all instances of tax collection, banks could be set up as depositories and payments for such taxes could be paid through the banks. A system of identifying the specific taxes due to each tax entity can be developed and maintained by the banks as they receive tax payments. We have noted instances where the PB verifies some tax calculations. This is, however, a normal tax administrative function that should be transferred to the tax authority and would not place much of a burden on them when the PB stops performing it.

Key Findings

- ◆ ZAP and ZPP (Federation PBs) provide an efficient collection service for the Federation Tax Administration (FTA) and Federation Customs Administration (FCA). Similarly, although not formally verified due to travel restrictions to the RS during the course of this review, the SPP efficiently provides the RS Public Revenue Administration and RS Customs Administration with these services. The charges made for providing this service are questionable as both the Taxpayer/Importer are charged and the revenue accounts are subjected to a fee at the receiving end.
- ◆ There is a difference in the levels of service provided by the ZAP and the ZPP. While both systems have the technical capability to input details of taxes, etc. paid by the taxpayers, and send a daily diskette to the FTA Canton HQ, this is not done in the Croat areas as the charge for such an additional service is considered too high. Therefore, the FTA's own staff in these areas have to manually input the payments made at the ZAP, whereas in the ZPP areas it is already on the computer and only some minor reconciliation needs to be carried out (to give new taxpayers a unique number).
- ◆ In the Federation it would make much more sense if the taxpayers were only obliged to make one monthly payment, directly to the FTA, accompanied by the monthly tax return. This, however, would lead to a temporary cash flow difficulty, which would need addressing from a budgetary point of view prior to implementation.

- ◆ Only one "control function" is carried out by the PBs. This is the immediate verification of payroll and other taxes at the point of authorization of withdrawal of funds in order to pay salaries/wages.
- ◆ A number of annual (and one 6-month) returns are submitted by taxpayers to the PBs. While these may be of some statistical significance, and submission by the taxpayer is still legally required, there is little or no intrinsic value in these returns being sent to the PBs, as opposed to the Tax Administration
- ◆ The account balances and turnover figures are readily available to the FTA as well as the Financial Police (FP).
- ◆ The FTA and FP have the additional power to order the PBs to transfer available funds to meet additionally identified tax liabilities without the agreement of the account holder.
- ◆ The FTA and FP can also instruct the PBs to block the taxpayers accounts which means they cannot use them for withdrawals or deposits
- ◆ Every Monday and the last working day of the month the individual municipal tax accounts that the taxpayers paid into are automatically cleared and the funds transferred to either the municipality, the Canton (or a mixture of both) or the Federation depending on the type of tax.
- ◆ The daily requirement for taxpayers to deposit with the PBs all cash apart from a small holding amount is widely regarded as counter productive as it encourages taxpayers to omit cash takings from their records. The same can also be said of the requirement to account for all wages and other tax contributions (totaling some 83% of net wages) at the time of salary withdrawal.

Customs Administration

The Federation Customs Service collects 90% of all revenue for the Budget of the Federation of BiH. The total revenue in 1998 was DM 636 million. There are formally 10 Customs Houses in the Federation, but due to special circumstances in Mostar and Travnik, 12 accounting centers exist for tax administration purposes operating their own GIRO accounts. Each Customs House has at least 2 or 3 accounts. One account is for ordinary payment (845), one for deposits and one functional for the running of activities. As payments can be made in Deutsche Marks (DM), Konvertiblne Marke (KM) and Croatian Kunas, Customs Houses also have accounts for each currency.

- ◆ **Customs Clearance Process.** The Customs import declaration, prepared by the importer, is used for the calculation of duties and import excises. In 1998 there were approximately 285,000 declarations. The Customs Stations throughout the Federation calculate duties and excises. A copy of the declaration is given to the importer or his/her agent. The importer or his/her agent has to pay at the local Payment Bureau (ZPP or ZAP) into the Customs House GIRO account. The payment operation requires filling in a payment order. After paying at the Payment Bureau the importer has to submit a copy of the order/receipt to the Customs House.
- ◆ **High Duty Goods.** Besides the normal import procedure there is a special treatment concerning import of high duty goods. This treatment requires duty and excises to be

calculated and deposited in advance. Those deposits have to be paid at the Payment Bureaus as well. The number of such transactions is considerable.

In order to transfer the money into the Federation Budget, and to allocate payments to the correct account, the twelve Customs Houses, every Friday and on the last day of the month, clear the 845-account into the so called 840-accounts. The operation is carried out for all three currencies. There are approximately 23 different 840-accounts for each currency. The basis for the clearing is the payment order, which the Customs House hands over to the local Payment Bureau. The Payment Bureau then transfers the money from the Customs House accounts into the 840-account and then into the Federation Budget 630-account. The Payment Bureau records all movements on the GIRO accounts and issues account statements the day after the movement is recorded.

All Customs Houses are dependent on the daily statement to check if dues on import declarations are paid or still outstanding. The importer or his/her agent also needs the statement for accounting purposes

Key Finding

- ◆ In the Federation, taxpayers initially pay into literally hundreds of individual municipal tax accounts, depending on where the taxpayer is registered (or, in the case of high duty goods, where the *buyer* is registered). The reviewer understands that the World Bank is studying the need to continue with these individual accounts. Any decision to consolidate these various municipal accounts to Canton or even Federation level would obviously have an impact upon new operations carried out by the banking sector upon elimination of the PBs.

Recommendation of functions for transfer

Functions to be transferred as they stand:

- ◆ All annual returns currently submitted to PBs should go directly to the Tax Administration (with effect from 2000).
- ◆ The Tax Administration should take a more active role in assuring payment of wages and contributions taxes as the PBs cease to perform this function.

Functions to be transferred with reform:

- ◆ The Tax Administration will also need to take a more proactive and dynamic role in assessing the true level of cash taken by businesses when the daily requirement to deposit cash inevitably ceases (the ability to undertake this role will depend on the timing of withdrawal of this requirement).
- ◆ Legislation will need to be introduced to enable the tax authorities to apply to the courts for permission to obtain details of a taxpayer's account in a commercial bank once the automatic ability to obtain turnover information from the ZPP / ZAP ceases.
- ◆ Dependent upon the long term results of the World Bank study into the different types of indirect tax accounts currently operated at the municipality level, the Tax Administration

will need direction from the Treasury Functional Analysis Team on where those accounts that remain should be located and what local facilities there will be to pay into these accounts.

- ◆ As the option of automatically enforcing tax debts from PB accounts will no longer be available to the tax authorities, the Tax Administration will need to become much more active and progressive in instituting alternative methods of debt management / enforcement (CAFAO has written a separate paper on this subject).
- ◆ This project should also take the opportunity to recommend the development of a unique database, allocating every taxpayer a unique number.

Functions to be eliminated:

- ◆ The 6-month reports
- ◆ Control of wages tax by PBs
- ◆ Daily cash deposit by taxpayers
- ◆ Automatic right of FTA to obtain turnover details held on PB accounts by taxpayers

Many of the above issues relating to provision of information are also addressed under the section on Statistics and Information. Further consideration during implementation will ensure duplication of recommendations is eliminated.

Treasury and Expenditure Management

The term “Treasury” is used here to describe a Ministry of Finance department that has responsibility for ensuring that the government’s (State, Entity, Canton, Municipality) financial resources are managed in the most effective and efficient way and within the law. The extent of its duties may vary for budget resources compared to those “off-budget” or “extra-budgetary” resources not included in the general budget. Whereas the Treasury Department may have direct, day-to-day responsibility for the financial management of budget resources, its responsibility for “off-budget” or “extra-budgetary” funds may be limited to procedure development, general oversight and reporting.

Although there are differences in Treasury functions among countries, most often the functions delegated to the Treasury by the Minister of Finance broadly include:

- ◆ Cash management: managing the cash flow, performing cash optimization strategies, government securities emission and liquidation
- ◆ Budget execution
 - expediting government receipts
 - appropriation and budget accounting
 - centralized processing of government obligations and payments
- ◆ Accounting
 - maintaining the Treasury General Ledger, i.e., accounting for government financial transactions
 - management of the Treasury Single Account

- bank account reconciliation
- financial reporting
- ◆ Debt principal and interest payments.

While government revenue collection and expenditure transactions form a substantial part of the Payment Bureaus' processing workload, and would be functions that would need to be transferred, little activity in relation to the above Treasury functions are carried out by them. In fact the only activity that can be recognized is a component of cash management, where the Payment Bureaus make the necessary arrangements for cash to be available at the point of dispersal or for transferring the tax receipts to the Ministry of Finance account. The latter functions will need to be picked up and agreed with the banking sector, once banking arrangements are determined.

It should therefore be noted that reassignment of Payment Bureau functions will not generate a need to establish a Treasury Department in the Ministry of Finance, nor will it result in a large transfer of functions or personnel. The initiation of treasury functions in the Ministries of Finance is nonetheless essential to improve financial management, and has been a recurring recommendation of foreign experts. The elimination of the Payment Bureau, however, presents an opportunity to rationalize and simplify the bank account structure currently utilized in the Federation for receipt of taxes and making payments. Much simplification has already been achieved by the development of a Treasury Ledger System that, in the case of revenue recording, is currently cross referenced to the complex Payment Bureau GIRO account system. In the process of moving the bank account to a new location (either the Central Bank or a commercial bank) the Ministry of Finance has the opportunity to simplify the accounts and in fact move to a true Treasury Single Account operation.

The World Bank has reviewed the current situation in the Federation and developed proposals for full implementation of a Treasury System, based on work carried out to date. The timetable for implementation of the Treasury System has been coordinated with this review and the Payment Bureau Elimination Workplan reflects timings consistent with the World Bank's proposed reform plan. USAID and the US Treasury will provide the necessary technical assistance and material support to reform and strengthen Public Accounting (the backbone of an efficient treasury function) at the Ministries of Finance in both entities and at all levels of government.

Key Findings

- ◆ The simultaneous elimination of the Payment Bureaus and introduction of a full Treasury System allows simplification of the Government Accounting Structure and the introduction of a Treasury Ledger System and Single Account, to be maintained in a selected bank.
- ◆ Transfer of payments processing from Payment Bureaus to the selected bank cannot be accomplished until the Tax Administration has the full tax recording and verification processes in place.

4. STATISTICS AND INFORMATION SERVICES

BACKGROUND

The review of statistical uses of Payment Bureau data was not restricted to statistical agencies. However, since the data streams emanating from the Payment Bureaus are few in number and are often utilized by more than one agency, it is most convenient to begin by enumerating the streams themselves.

Initially the review focused on data flows emanating from the ZPP which required meeting on several occasions with the ZPP's statistics division and with major users, especially the Federation Institute of Statistics (FIS). Once these data flows had been mapped out and the findings (shown in table 1) confirmed by all parties, they were used as a template to research flows in the ZAP and SPP areas. Discussions were held (by phone) with the head of the Institute for Statistics in Banja Luka. For the ZAP areas, a meeting was held in Sarajevo with management and a one-day visit made to Mostar. Travel restrictions during the course of this review did not permit a visit to Banja Luka, but discussions were held by the team with senior SPP officials who visited Sarajevo. These meetings were sufficient to identify divergences from ZPP practice for both ZAP and SPP areas.

Key Findings

The review of statistics and information provided findings which suggested that transfer of these functions, while requiring preparatory work in the recipient agencies, could proceed largely independently of the process of transferring the payments system to the banking sector. The following are the major findings:

- ◆ Much statistical data provided by the Payment Bureaus is collected on forms that are independent of the payments process. For the most part, these forms are collected in support of tax administration. These tasks can easily be transferred to the Tax Administration or (where appropriate) statistics agencies, once those agencies are prepared.
- ◆ Some statistical data is based on the payments process. The major users of such data are the Central Bank and the Tax Administration. These reporting tasks can be transferred to banks performing payment services with little difficulty.
- ◆ The statistics agencies and the Tax Administration, the agencies to which data collection will need to be transferred, will need technical and other assistance to cope with the new challenge.
- ◆ A registry of "legal entities," including both enterprises and government, is compiled directly by the institutes of statistics in both the Federation and the RS. New legal entities must obtain a registry number from these institutes before they can open an account at a PB. However, the PBs do provide the statistical agencies with occasional data on changes in addresses and other characteristics of the enterprises. In sum, disappearance of the PBs would have little impact on the registry except that new enterprises would need to register at the relevant institute of statistics before opening commercial bank accounts.

DETAILED FINDINGS FOR THE FUNCTIONAL ANALYSIS OF STATISTICS

This section discusses in detail the findings outlined in tabular form in Annex 2.1-2.4.

A. Forms which the Payment Bureaus collect from all legal entities in part or whole for tax purposes

1. *Monthly data on employment and payroll for tax purposes.* Each month, employers throughout BiH submit a one-page tax form (which was specified before the war by Yugoslav regulations) on withdrawal of payroll funds from the PB. The form shows amounts due for payroll taxes and social insurance contributions. Indeed, the PB will not allow an employer to withdraw funds for its payroll unless the employer pays its payroll taxes and contributions at the same time.

In the ZAP regions, ZAP workers enter the monthly data from these forms (called *Osobni Dohodak* in these regions) into data files and compute totals per region. The totals are then sent to the FIS representative in Mostar, who converts them to the FIS format and sends them once a month to FIS headquarters. The data shows total employment for private enterprises and government respectively, but does not show breakdowns by sector (such as industry, trade, etc.). FIS estimates the ZAP breakdowns on the basis of data from the annual payroll statement discussed below under 2c.

In the ZPP regions, the Tax Administration receives the *Specifikacija* but little if any statistical use is made of the monthly payroll data. ZPP did tabulate the data manually during the period September 1998 to February 1999, but ceased doing so after February 1999.

In SPP regions, the name of the form is *Rekapitulacija plata*. After reviewing the document, the SPP controllers stamp it and return it to the employer. No statistical use is made of the data.

2. *Annual statements of legal entities.* In all parts of BiH, legal entities must submit three annual reports to the PB: An income statement, a balance sheet, and an annex on payroll and employment. Reporting formats were specified before the war by Yugoslav regulations, and the reports were collected by the old Payment Bureau, the Social Bookkeeping Agency or SDK. They appear to have had two functions – (1) to support the administration of profit and payroll taxes, and (2) to provide a basis for statistical reports.

The forms are collected from four ownership groups: government agencies, private enterprises, nonprofit institutions (cooperatives), and mixed-ownership enterprises. For 1998 in the Federation, the forms were collected from the following numbers of “legal entities:” as presented in Table 3.

Table 3. -- Number of legal entities in The Federation, 1998

Type of legal entity	ZPP regions	ZAP regions	Federation totals
Government agencies	803	307	1110
Private enterprises	13631	3357	16988
Cooperatives	113	13	126
Mixed-ownership enterprises	538	136	674

The following discussion refers mainly to private enterprises (companies), inasmuch as the main statistical interest attaches to them.

In the ZPP regions, an enterprise gives two copies of the statements to the ZPP controller. After checking the statements, the controller stamps one set for return to the enterprise, where it is kept in the files. The other set is keyed in at cantonal headquarters and held by ZPP. Data for all cantons (including the ZAP areas) is merged into a single file at ZPP headquarters. The file is used by ZPP to prepare an annual report with summary tables for the Federation. Micro data is provided to the FIS, but not, surprisingly, to the Tax Administration. Tabulations are provided to the Ministry of Finance, Chamber of Commerce, Federation Institute for Development, and local government.

In the ZAP regions, the procedure is similar except that ZAP keeps one set of the forms and sends the other to the Tax Administration. The data file for all ZAP regions is sent to ZPP for tabulation.

In the SPP regions, the procedure is similar to that in the ZPP regions except that a sealed copy of the set of statements is sent to the Tax Administration. However, SPP officials insisted that they are not obliged by law to collect these forms. Moreover, there are indications that the routine annual tabulations of these data are prepared by the Institute for Statistics and not by the SPP, although this has not yet been confirmed.

It is expected a new format (chart of accounts) for the income statement and balance sheet will be applied for calendar 1999 reporting. In recent months, a new chart of accounts has been approved, reflecting technical assistance from USAID's Legal and Regulatory Reform Project. For statistical purposes, it provides somewhat less detail than the old chart of accounts. The FIS has been disappointed with the new chart and is attempting to persuade others, in particular the Federation Institute of Accounting, to revise it to show more detail of interest for statistics.

The statistical value of the annual statements data throughout Bosnia and Herzegovina is limited by the fact that much of the private economy operates "off the books" and is therefore not captured by either ZPP payments or by the annual statements discussed here. Nevertheless, this data source remains significant, because the statistical agencies lack alternative sources and have not yet begun to develop them.

◆ **2a. Annual income statement.** – This statement provides support for business tax returns because it documents net profit. It shows total revenues and total expenditures. However, it is not a part of the business tax return in any part of Bosnia and Herzegovina. Businesses fill out a separate tax form on which the top line, net profit, is supposed to agree with the bottom line on the income statement.

In principle, one would expect that Tax Administrations throughout Bosnia and Herzegovina could use income statement microdata (as prepared by the Payment Bureaus) in support of tax enforcement. However, the Tax Administrations have in fact never obtained the microdata.

In the Federation, FIS makes limited use of the income statement microdata in preparing the national accounts. The use is limited because FIS relies more heavily on its own forms, discussed below under items 4 and 5.

In the RS, the Institute of Statistics (SI) makes heavy use of the income statement micro-data for its national accounts.

Local authorities throughout Bosnia and Herzegovina receive tabulations based on the income statement. Although the value of the data is limited, it is one of the few sources of economic data available at cantonal and municipal levels.

- ◆ **2b. Annual balance sheet.** – This statement is rarely if ever used for tax purposes. Nor do statistical agencies use it, although the FIS has plans to use it in the future when they construct financial accounts.

The balance sheet data are the most voluminous of the three annual statements, comprising 57 lines as opposed to only 19 lines for the income statement and 15 lines for the payroll annex, in the Federation. It would therefore seem that the burden of entering data for the annual reports could be reduced by more than half (in fact by 63 percent) if entry of annual balance sheet data were to be suspended for the time being.

If the FIS were at some time in the future to begin using balance sheet data, it could make arrangements to have data entered for a stratified sample of enterprises, as long as the statements continued to be filed with a relevant agency, presumably the Tax Administration.

- ◆ **2c. Statement on payroll and employment.** – This statement shows the value of payroll for the year, including net payment to workers, payroll taxes and social insurance contributions. It also shows, on one line, average employment “based on hours. This number is, however, rather unsatisfactory for statistical purposes as it appears to involve a concept of “normal working hours,” and thus appears akin to the concept “full-time equivalent employment.”

In the Federation, this form is known as the “Posebni podaci o placama i broju zaposlenih.” In the RS, it is known as the “Aneks.”

The monthly measurement of BiH employment is based mainly on other sources: in the ZPP and SPP regions on a form collected by both institutes of statistics called the RAD-1, and in the ZAP regions on the monthly payroll tax data. The RAD-1 has the advantages of applying a more suitable concept of employment, of distinguishing laid-off persons and providing a basis for sectoral breakdowns. Nevertheless, the institutes make some use of data from the annual payroll statements to complete their employment estimates. Data from this statement are most heavily used by the SI of the RS. They are used in more limited ways by the FIS, to help complement data from the monthly RAD-1 (which covers only 4000 enterprises) and the semi-annual RAD-1P.

3. Mid-year statements of legal entities. Mid-year statements (the contents of which are identical to that of the year-end statements) are submitted by legal entities to the Payment Bureaus in the same manner as year-end statements. However, the mid-year statements are said to have minimal value for either tax enforcement or statistical purposes. The only use for the data we learned of was mentioned by an FIS official, who said it could be used to support quarterly Gross Domestic Product (GDP) estimates. However, the FIS does not yet produce quarterly GDP estimates. Were the FIS to do so, quarterly or monthly data from a sample of enterprises would provide a far more efficient source than semi-annual data from every single enterprise.

Due to insufficient need, *it is recommended that submission of the mid-year forms be terminated.* In this way the reporting burden of the three statements on businesses and the data entry burden on government can at one stroke be reduced by 50 percent. If in addition data

entry for the annual balance sheet is eliminated, the data entry burden will be reduced by more than 80 percent. The remaining burden of data entry should be transferred to the Tax Administration.

B. Forms which the Payment Bureaus collect from all legal entities on behalf of the Federation Institute of Statistics

4. *Statement of income and expenditure required for national accounts.* Although both institutes of statistics rely on the *bilans uspjeha* in preparing the national accounts for the business sector, they also have supplemental statements that they collect from enterprises.

The supplemental statements are particularly important in the Federation, where FIS has begun preparing national accounts using the System of National Accounts (SNA) endorsed by the United Nations. Here the form is called the GI and is collected by ZPP and ZAP, on behalf of FIS, from all 19,000 legal entities. Because of their standing relationships with legal entities, ZPP and ZAP controllers are able to get a very high response rate for this form.

- ◆ The GI splits *receipts* into three income parts: (1) receipts from sales from production during the reference period, (2) receipts from services performed during the reference period, and (3) receipts from sales out of inventory.
- ◆ The GI splits *expenditures* into payroll costs and the costs of raw materials, purchased services, taxes, financing, and amortization.
- ◆ The GI shows *inventories* at the start and end of the year.

In the Federation, ***it is recommended that the task of collecting the GI be transferred to the FIS.*** In order to minimize the burden on the FIS, it is further recommended that the form be collected from a sample of legal entities, not from all 19,000 of them. Overall, a sample of no more than 5,000 legal entities should be sufficient. In particular, there is no need for complete coverage of 13,000 private enterprises with fewer than 5 workers; a small sample of these should be sufficient. The size distribution of enterprises is shown below in table 4.

Table 4. -- Legal entities by employment size, 1998

Mixed ownership enterprises					
Enterprises by number of employees	Number of enterprises	Total employees	Total gross wages (KM)	Total revenue (KM)	Net Income (KM)
0 employees	62	0	0	32.807.932	1.670.187
One employee	42	42	211.148	10.133.324	437.207
2-4 employees	69	188	1.085.626	29.977.270	454.382
5-9 employees	59	385	2.176.015	46.629.791	1.159.011
10-19 employees	73	997	6.471.153	96.800.636	815.043
20-49 employees	117	4.021	23.139.659	193.079.729	1.554.250
50-99 employees	99	7.304	43.080.589	247.430.412	5.456.774
Over 100 employees	153	44.077	251.650.787	1.341.590.906	32.256.146
Total	674	57.014	327.814.977	1.998.450.000	43.803.000
Private enterprises					
0 employees	3020	0	0	242.340.091	9128218
One employee	4672	4.672	14.672.835	401.936.327	19.034.202
2-4 employees	6572	17.138	60.644.211	1.748.087.525	60.510.283
5-9 employees	1672	10.544	44.160.860	1.518.199.913	50.933.942
10-19 employees	704	9.263	40.042.154	1.345.508.906	59.239.927
20-49 employees	273	8.127	38.939.824	1.245.722.077	35.759.223
50-99 employees	43	2.940	13.192.804	308.692.522	9.330.613
Over 100 employees	32	7.780	57.714.691	557.920.639	7.413.592
Total	16988	60.464	269.367.379	7.368.408.000	251.350.000

FIS officials still hope they can persuade other agencies to agree to include questions from the GI in the new financial statements (or chart of accounts) to be applied for annual statements for 1999. If they succeed, there would be no further need to collect the GI. However, the other agencies involved are unlikely to agree to revise the financial statements to incorporate so many statistical concepts into financial statements that are intended mainly for use by the businesses themselves and by tax administrators.

In the RS, the SI continues to prepare national accounts based on the “material product” system, formerly common in communist countries. However, it also prepares a revised version consistent with SNA concepts. In support of these efforts it collects forms known as the KGI-01 for some large enterprises (“complex” ones) and the KGI-02 for enterprises in health, education and other services. The SI collects these forms itself and does not rely on SPP for help in this matter.

5. Investment form required for national accounts. This form, the INV-1, is collected only in the Federation and is used to support estimates of investment in the national accounts. Like the GI, the INV-1 is collected by ZPP and ZAP from all enterprises. It itemizes capital expenditures by enterprises. However, as many as half of the enterprises return it blank, as they have undertaken no capital expenditures.

Just as for the GI, the task of collecting the INV should be transferred to the FIS to be conducted on a sample basis.

C. Reports based on payment orders executed by ZPP

6. Daily diskette showing individual tax payments. At the end of each working day, the cantonal level Payment Bureau prepares a diskette to be sent to the cantonal office of the Tax Administration (and to no one else) itemizing each transfer to a tax account made that day. Previously, the Tax Administration was obliged to input each transaction. The number of transactions involved is considerable. For the month of March 1999, Sarajevo Canton saw 173,000 deposits to tax accounts, or about 8,240 per day.

When ZPP ceases to perform tax functions, the task of preparing a diskette itemizing each tax transaction can be transferred to those commercial banks that receive tax revenues for the government. If, however, alternative ways of obtaining individual tax payments information will already have been established by the Tax Administration, there might be no further need for such a diskette.

7. Monthly report of total tax revenues, by type of tax and recipient. Each month the PBs send a report, the B-2, to the Tax Administrations (in both the Federation and the RS) showing the amount of revenue deposited in each type of tax account together with its distribution among the various levels of government. The Tax Administration needs this report to monitor revenue levels. The Institutes of Statistics also receive the report, which they need for the national accounts.

The Tax Administration could compute the B-2 itself on the basis of the daily diskettes discussed above. Officials of the data processing division of the Federation Tax Administration said as much to the functional analysis team. Therefore, the PBs will stop performing compilation when the preparation of the B-2 or a similar report has been transferred to the Tax Administration, assuming that the daily diskette data, or equivalent, are available. Of course, if a Treasury Ledger System were developed in time, it could provide reports for monitoring revenue levels.

8. The monthly report on balances and transactions in PB accounts, by type of account. Each month the PBs send a report to the CBBH showing balances at month-end and transactions during the month for many types of accounts. The report itself, known as the KNJ-1 report, is somewhat cryptic as it shows only the code without titles for the account types. To assist readers who need to better understand its content, a version of the KNJ-1 with titles for each of the more than 100 account types, is shown in Annex 3. Titles are not shown for codes not found in the “chart of accounts” in attachment 02-1 of the 600-page PB Guidelines published in Belgrade in May 1995.

At present, the Research Department of the CBBH uses only three aggregates of PB balances (deposits) from the KNJ-1, identified with codes A, B and C in Annex 3. These correspond respectively to deposits of private business, commercial banks, and government. One may infer from this that the CBBH does not need the full detail of the KNJ-1.

As the PBs are dismantled, commercial banks will need to file monthly reports with the CBBH showing deposit levels for various types of accounts. For this purpose, the CBBH will need to issue instructions to the banks well before the onset of reporting, with standard codes, to allow time for banks to apply the codes to each account.

While the KNJ-1 report shows more codes than the CBBH needs, the three that the CBBH currently distinguishes in its data may be too few. Moreover, while some KNJ-1 codes are

peculiar to a payment bureau and irrelevant for a commercial bank, other categories such as time deposits would be significant in a commercial bank but are absent in a payment bureau. The IMF statistics department can provide useful input on a suitable code structure for reports by commercial banks. A copy of Annex 3 has already been sent to the IMF for comment.

Recommendation of functions to be transferred

Functions to be transferred as they stand:

- ◆ ***Monthly payroll statement.*** When the PBs no longer monitor the payment of payroll taxes as they now do, the Tax Administrations will need to step up its activities in this area. It would be logical for the Tax Administration to require payroll tax statements to be submitted directly to it, either monthly or quarterly. Therefore, *collection of the form can be transferred to the Tax Administration, either as is or with reform.*

Entry of the data is of statistical value only in the ZAP regions. While the Tax Administration may be willing to collect the form, it will not necessarily be willing to enter the data. If it is not willing to enter the data, the *FIS may need to take over data entry for the ZAP region.* This would involve about 3000 reports a month.

- ◆ ***Annual income & payroll statements.*** *Collecting these statements from legal entities is a task that can be transferred to the Tax Administrations.* This will of course require that the Tax Administration allocate resources for obtaining statements from legal entities, which do not submit them on time. However, the task could be greatly streamlined by requiring that the statements be presented at the same time as the profit tax return for enterprises. At present, Tax Administrations in ZAP and SPP areas receive copies of the statements, but the Administration in the ZPP area does not.

Data entry into computer files could also be transferred to the Tax Administration. Here, however, the difficulty arises that the Tax Administration has never shown an interest in using the data files for tax administration purposes – although the electronic data would seem to have value for tax enforcement purposes. Instead, the Tax Administration's interest has been limited to hard copies of the forms, which it examines in doubtful cases.

If the Tax Administration agrees to enter the data, the cost will be modest. No additional full-time positions are required. Initial estimates suggest one worker could enter 2000 sets of forms per month. All entered data would be subjected to computerized consistency checks, which are usually effective in spotting data entry errors. More time would be required to correct the errors. Accordingly, 10 workers and a supervisor could finish the job in a month and a half. If necessary, the Tax Administration could hire 10 part-time workers for a month and a half, plus a supervisor who could also prepare and run the validation program. For the RS, the budget cannot be estimated until the number of legal entities there is revealed.

If, however, the Tax Administration refuses to enter the data, on the ground that it has no need for it in digital form, the task could be transferred to the institutes of statistics with little difficulty. Again, a budget would be needed to pay for the data entry. In this case, however, the Tax Administration would still need to collect the forms as attachments to tax returns. Otherwise, the burden of collecting the forms from all legal entities would be heavy indeed for the Institutes of Statistics.

Finally, *the Institutes of Statistics should take over the preparation of summary tabulations of the data* and provide these to the Ministry of Finance, the Federation Institute of Economic Development, the Chamber of Commerce, and local government. In the RS, the Institute of Statistics may already be entrusted with this task, as the SPP is said not to prepare such totals for the RS as a whole.

- ◆ **Daily diskette for tax payments.** Commercial banks assigned the task of collecting revenues will have to provide the Tax Administration with a daily diskette of deposits into the revenue accounts. If a Treasury Ledger System becomes operational, however, the need for a daily diskette may disappear.
- ◆ **B-2 report.** *The task of preparing the B-2 report can be transferred to the Tax Administration*, as long as it receives daily diskettes. This should require no additional staff, as it is a simple programming job. However, it will require the Tax Administration to keep good track of revenue sharing formulas for each municipality and canton.

Functions to be transferred with reform:

- ◆ **GI & INV surveys.** *In the Federation, these surveys should be transferred to the FIS.* In the RS, the SPP conducts no surveys for the Institute of Statistics. The two surveys can easily be combined into one. Transferring the surveys will challenge the FIS in two ways. First, the FIS has no experience with drawing probability samples; therefore it will need the Tax Administration for preparing both a sampling design and a tabulation design involving weights. The task is a fairly routine one, as a good sampling frame is already available from the registry of legal entities. Second, as the FIS is used to a passive role receiving data from the PB, it has little field staff. Although the survey can be conducted by mail, follow-up phone calls and visits will probably be needed to overcome non-response, particularly for the most important enterprises.

The combined package of technical assistance and field staff costs needed to help FIS cope with the new burdens would not exceed \$60,000 in the first year. In subsequent years some need for help may recur, but the need should decline as FIS masters the techniques of sampling and respondents become accustomed to filling out the forms and sending them to FIS.

- ◆ **The KNJ-1.** This function cannot be transferred as is, because a classification system needs to be created anew to adapt it both to the needs of the CBBH and the specifics of commercial banking. The CBBH is seeking advice from the IMF Statistics Department on an appropriate classification system. Once this matter is resolved, *the CBBH will need to instruct commercial banks on how to report well in advance of the date on which reports need to be submitted.* This will give the banks time to assign appropriate codes to both existing and new accounts.

Functions to be terminated:

- ◆ **Mid-year income statements, balance sheets, and payroll statements.** As discussed previously, this reporting can be dropped, as it is of little use for either statistics or tax administration.

- ◆ **Entry of annual balance sheet.** Entry of this data can also be dropped, as it is of little use for either statistics or tax administration.

Summary of Outstanding Statistics and Information Service Issues

- ◆ CAFAO needs to work with both the Federation Tax Administration and the RS Tax Administration to explain the value of the microdata files of annual statements available from the PBs. The Tax Administrations should be encouraged to request datafiles for as many years as are available from the PBs. The data should be requested soon, well before the disappearance of the PBs. Technical assistance will probably be needed to help the Tax Administrations develop applications for displaying time series for each enterprise and models for selecting enterprises for analysis.
- ◆ It needs to be clarified whether the Tax Administrations are willing to enter data for annual income and payroll statements. If they are not willing, procedures need to be developed for transferring hard copies of the statements to the statistical institutes for data entry. Some funding may be needed to cover the cost of data entry at either the Tax Administrations or the Institutes of Statistics.
- ◆ With the help of the IMF, the CBBH needs to develop a reporting format for monthly commercial bank reports on deposits and transactions by category of account.
- ◆ Technical assistance will be needed by the FIS to convert its GI and INV surveys to probability samples.
- ◆ The field capability of the FIS should be upgraded and funding provided in good time for implementation of the GI and INV surveys in February 2001. The surveys were in the past conducted by the ZPP in February.
- ◆ The Tax Administrations and Institutes of Statistics may need new hardware and software to handle their new tasks.

5. ACCOUNTING AND RELATED SERVICES

BACKGROUND

In addition to payment processing and certain banking related activities, the Payment Bureaus have performed other functions, which have been classified as bookkeeping or accounting services, throughout the economy. This functional analysis focuses on accounting services provided to enterprises in BiH, and identifies the role of the PBs in monitoring and supervising socially owned firms. Such an analysis is necessary to identify activities that need to be maintained, whether by commercial banks and/or by other governmental or private organizations.

ANALYSIS APPROACH

The analysis was conducted by first identifying all activities currently undertaken between the PBs and enterprises, including socially owned firms. These activities can generally be identified as either regular business-related deposits and payments, or transactions related to tax obligations arising from the company's business. The work flow, documents and reports associated with an activity were traced from the company through processing at the PB on to other organizations such as the Tax Administration. Where possible, actual transactions and documents originating within the company were traced through summary reports. This information flow was then followed via payment orders processed through the PB and/or submitted to organizations such as the Tax Administration.

An attempt was made to review all functions involving enterprises and the Payment Bureaus. Due to the sensitive political situation that existed when the review took place, the breadth of coverage within the ZAP and SPP was limited. Nonetheless, unless specifically mentioned, comments made in the accounting section apply to all three bureaus.

KEY FINDINGS

Following analysis of transactions between the Payment Bureaus and enterprises, the following conclusions may be drawn:

- ◆ The PBs provide little or nothing by way of accounting services to enterprises. Accounting (or bookkeeping for that matter) services may be defined as the processing of detailed transactions within an organized ledger system resulting in summaries that report operating results and the financial position of the entity. The PBs do not provide such services. When the PBs are discontinued, enterprises will not suffer any additional lack of service.
- ◆ The transition for enterprises away from using the services of the PBs, to using commercial banking services will be one of the easier processes. In fact, many managers and owners of enterprises have expressed a desire to establish commercial banking arrangements.
- ◆ Commercial banks must develop the capacity to receive deposits and disburse funds efficiently. (That is in addition to developing an efficient Payments System.). Once such improvements in the financial system are evident, enterprises could transfer their balances

from the payment bureaus and conduct their deposit and payment activities with the commercial banks.

- ◆ Tax revenues should not fall as a result of the PBs being dissolved, as the PBs only act as a collection point for tax payments and for certain tax forms.
 - Major concern exists as to whether the shift away from the payment bureaus will result in a fall in tax collection. The PBs provide a minimum service that may be referred to as tax administration, involving, for example, verification checks and the processing of information for computer input. The controllers at the PBs are reported to check the accuracy of calculations on certain tax forms. This Tax Administration function will need to be performed by appropriate Tax Administration offices and, as identified elsewhere in this report, the analytic and on-site investigative capacity of the administration will need to be strengthened, even if the PBs remain intact.
 - In addition, various options exist regarding future collection of tax payments. For example, payments could be made to deposit accounts within designated commercial banks, or through the post office (PTT) system. Certain functions could continue to be performed on the basis of agreement between the Tax Administration and a collecting agency.

Payment Bureau transactions with enterprises

All legal entities are obliged to have a GIRO account at the PB. Legal entities in the Federation are permitted to hold a maximum of DM 100 overnight. The remaining cash must be deposited with the PB. The rules, however, are different in the RS. Since all legal entities also have an account at designated commercial banks (the Razvojna Banka is considered a commercial bank for this purpose), entities in the RS are not required to deposit their cash with the PB on a daily basis. Other than the mentioned exceptions, transactions between the PBs and enterprises may be summarized under two major categories:

- ◆ normal business transactions, and,
- ◆ government related transactions (primarily tax payments).

Although the procedures of the Payment Bureaus have been fully documented in previous reports, a brief summary of these procedures is presented here in order to serve as a reference point for the discussion and conclusions that follow.

The principal document used in transacting business with the PBs is the four-part payment order. A separate form is used for cash transactions, as opposed to non-cash transactions. Non-cash transactions are the ones most generally encountered. The form contains, in addition to the amount of the transfer, the account codes of the payer and the payee. There are three major categories contained in the code applied to payer and payee positions on the form:

- ◆ the first five digits contain the branch and municipal designation of the PB branch of the payer or payee,
- ◆ the next three digits represent the statistical code that describes the type of activity (i.e. manufacturing, school, government agency) of the payer or the payee, and,
- ◆ the final five or six digits represent the account number of the payer or payee.

If the account is in KM, it is a five-digit account and if it is a DM account, the account number is preceded by a 2, making it a six-digit account. The accounts of government organizations will often have a hyphenated six-digit number to designate the tax account into which payment is being made.

The payer must present a payment order and any other required documents to the designated Controller at the PB. The Controller receives a daily update of all account balances for which he/she is responsible. The Controller determines whether the documents are in order and whether the payer has sufficient funds in their (GIRO) account to cover the payment being processed. The payer receives a copy of the PO, two copies are held within the PB for internal processing and documentation files and the final copy is sent to the payee. Transactions are processed at the end of the day and most transactions are reflected in the new balances the Controller receives at the beginning of the next day.

Cash transactions are processed on a PO form that is designed specifically for them. It is not usual to withdraw cash and the account holder must have a good and specific reason for doing so. This review determined that the RS is less intrusive regarding the issuing of cash. A similar form is used to deposit money within a GIRO account. Other cash transactions include payment in cash by an individual without a GIRO account to an entity with a GIRO account. This type of transaction can be processed through the PB or a post office (PTT). Every post office has a GIRO account with the PB and the post office can accept cash from an individual for transfer to a designated payee. The PTT's ability to accept cash transactions implies the possibility of their accepting cash for tax payment in remote locations where a bank branch may not be convenient.

Certain transactions such as cash payments require the customer to pay the PB fee at once. Most other transactions are tabulated over the month and the fee is billed monthly. Should the customer not pay the fee promptly the PB has the authority to debit his/her account.

The customer receives a daily list of transactions processed on his/her GIRO account along with a summary that contains the opening balance, debits, credits and closing balance in the GIRO account for that day.

Normal business transactions occur when a business deposits cash or cash related assets with a bank. In such a case, the deposit is made with the PB. Normal business transactions also include payments between a paying company and its suppliers. Such types of transaction are conducted in the manner described above. The PO contains the GIRO accounts of the payee and the payer. In no instance during the review did the PB conduct any "accounting" service for the payer on these normal business transactions.

Government related transactions, such as tax payments, could involve various types of documentation, depending on the type of tax. Another consultant on this project is documenting the procedures involving customs duty and excise taxes. Transactions involving payroll, turnover and profit taxes are described under the Government Services section.

Validation of accounts

In any situation where a transfer of banking responsibilities between two persons or two organizations occur, it is traditional that a verification of the accounts be performed and all cash and other assets be accounted for, or be reconciled, before transfer takes place. Before any banking organization outside the PB accepts any cash balances or other accounts within their responsibility, such verification must be performed. In the event an account cannot be

reconciled, responsibility can be established if the verification detects the difference in a timely manner, before transfer takes place.

Recommendation of functions for transfer related to enterprise/Payment Bureau activity

Functions to be transferred as they stand:

- ◆ General banking activities such as (non-government) deposits and payments currently performed by the Payment Bureaus should be transferred to commercial banks when the banks are deemed capable of performing them and meet conditions laid down by the Federation Banking Agency.

Functions to be transferred with reform:

- ◆ As a matter of priority the law must be amended in the Federation to eliminate the need for entities to deposit cash in excess of DM 100 on a daily basis, with the Payment Bureaus.
- ◆ The receipt of tax payments should be transferred to designated collection agents once the Treasury and Tax Administration have reviewed and simplified the Chart of Accounts. Generally, it would be anticipated that certain financially solvent banks would be established as depositories for tax payments. In the event that there is not a sufficient number of banking locations around the country to receive the tax payments, the number of depository locations could be increased by adding certain post office (PTT) locations as tax collection points. Before this transfer of responsibility is made, the Government Treasury System should be completed and the necessary accounts established in the treasury ledger. This will enable the banks and other collection agents to modify their systems so as to provide the necessary tax collection information to the tax authorities.
- ◆ If any verification or processing of tax reports is to be completed at the collection points, the necessary instructions should be prepared and employees at the depositories trained to perform such tasks. A key improvement to the administration process would be achieved if the project of establishing tax identification numbers (TIN) for all taxpayers were concluded. Once this numbering system is completed, all tax documents and payments should contain this TIN in order to allow effective cross-reference of all payments with the appropriate tax forms. It would be advisable to limit the amount of tax information processed through the depositories. In fact every effort should be made to have all tax information and reports submitted directly from the company to the tax authority.
- ◆ Based on the plans described by SPP representatives, the portion of the Payment Bureau spun off from the Razvojna Banka should be reviewed to determine the capabilities of personnel, practices and information systems. It may be possible for all or portions of the Payment Bureau to be converted to provide a clearinghouse function for the RS.

Functions to be terminated:

- ◆ It is proposed that all Payment Bureau activities related to enterprises be discontinued, other than the ones mentioned above, which may be transferred to other public and private service providers,.

Sequencing Accounting and related Service Issues

- ◆ Immediate steps should begin to engage a qualified certified public accounting firm to analyse the accounts of the payment bureaus.
- ◆ Before banks in the Federation are permitted to accept deposits and to make transfers between accounts, the payment law must be amended so as not to require daily deposits of excess cash and to eliminate the requirement that deposits must be made exclusively with the Payment Bureaus.
- ◆ Transfer should take place to banks of non-government related banking activities after the above mentioned amendment to the law and upon bank certification or licensing by the Federation Banking Agency (FBA).
- ◆ Tax Administration capacity should be strengthened in the areas of data transfer, data verification and data processing. The necessary comparative data should be provided to trained and qualified personnel in the Tax Administration for analysis purposes. The field analysis capacities of tax inspectors should be developed and strengthened. The account structure or other details that it may be necessary for collection agents to provide the Tax Administration should be determined. The financial solvency and capacity to perform payment services of certain key banks should be certified by the Banking Agencies. Then certain banks and possibly post office locations should be designated to serve as depositories to collect tax receipts.
- ◆ The frequency of payment of taxes such as the turnover tax should be reviewed. The payment cycles should be revised to cover longer periods of time, eg. From weekly to monthly payment of the turnover tax.

6. INFORMATION TECHNOLOGY ISSUES

BACKGROUND

This section of the report presents a survey of the current information technology (IT) supporting the findings on Payment Bureaus, PTT, Tax Administration and some commercial banks. The IT capacity of the branch offices and the field organizations are also included to show the level of integration currently attained by the institutions.

The presentation of IT capabilities in this section includes some hardware, software and data communication as well as the processing facilities used by the automatic data processing centers (ADPC). There are ongoing modernization projects within ZPP and ZAP. Both of these projects aim at replacing the previous IT capabilities completely. Some information about the ZPP project is included in this report. The strategic plan for the Payment Bureaus should also consider these ongoing projects and their potential results. Another survey of these new projects may be needed in the near future to adjust the strategic plans accordingly.

ZPP'S CURRENT INFORMATION TECHNOLOGY CAPABILITIES

Organizational elements and IT equipment of the ZPP can be listed as follows:

- ◆ Central Office – equipped with NCR 10000 system,
- ◆ Branches – equipped with NCR 10000 system,
- ◆ Sub-branches – equipped with NCR DM V, and
- ◆ Teller desks – equipped with PCs.

All the types of organizational unit listed above have local area networks (LANs) to connect personal computers (PCs) to the File Servers. File Servers and operations based on shared files on these file servers shape all data processing activities at data collection level. The organizational hierarchy of the units determines the types of services being carried out with the help of the computer systems at the units. The computerized services related to the payment process of the Payment Bureaus dominates the IT contribution to the business processes. Collection, distribution and documentation (reporting) of taxes, treasury function, reporting and control functions may be mentioned as other activities supported by the IT capabilities of ZPP.

Current ZPP Hardware and Connectivity Capabilities

- ◆ The hardware capability of the ZPP can be regarded as limited by the standards of current IT technology. In fact, this applies to almost all the IT capabilities of the governmental bodies. Central offices and the branches, except the one in Sarajevo, are equipped with NCR 10000 systems with batch processing and file transfer capabilities. The Sarajevo branch office uses a different system – an IBM 4381 – to carry out the operation, but the capabilities of the system are the same as the NCR systems. The Central office and the branches are interconnected by leased lines and dial-up connections.
- ◆ Municipal level offices (small offices) use PC LANs to accumulate daily payment data into shared files. Some of these sites are capable of sending and receiving data through dial-up connections while the others have to communicate with superior branches by daily-generated reports.

- ◆ The following table sets out the hardware systems owned by ZPP. Details such as disk capacity, printers and back-up systems are not included.

**Table 5.
Hardware System Owned by ZPP**

Unit	Computer System	Communication Equipment
Central Office	NCR 10000 NCR DM V PC	Modems LAN
Branches	NCR 10000 NCR DM V PC	Modems LAN
Sarajevo Branch	IBM 4381 PC	LAN
Sub-Branches	NCR DM V PC	Modems LAN
Teller-Desks	PC	

The central level computer systems being used by ZPP are not open systems, that is, they do not comply with current interoperability standards. This is one of the reasons why there are so many human interventions in the computerized processes of the ZPP.

Current ZPP Software

There is no use of Relational Database Management Systems. The most advanced technology for storing and retrieving data currently use by the PBs is index files, which require extra programming activities to operate. Application programs are being developed by experts in the central offices, using the COBOL and BASIC programming languages without support of the “Libraries” used in the development of software to today’s standards. The tools being used for file transfer between the branches are Kermit and PCTS protocols.

The problems of the systems related to the ZPP software capabilities can be specified as follows :

- ◆ The system is not capable of processing on-line transactions. This means that update of the core data must occur at predetermined periods and all business depending on that core data must wait for these batch updates to proceed.
- ◆ Any particular need to query data requires programming activity. As a consequence, there are thousands of large and small programs in existence to maintain and interrogate the data stored in the disks.
- ◆ Maintenance of the data definition of index files is too expensive. Any update in data definition requires excessive programming for making transitions.
- ◆ The relationships between the data files are hidden in the programs operating on that data. This means that any change in the rules defining the relationships between the data files will

result in significant programming and testing activities and cause an increase in maintenance costs and a decrease in the reliability and integrity of the system.

- ◆ The system can not generate reports at presentation level. To create such reports, first, data must be queried and stored by running programs on the host computer (if the query program is not available, a program that retrieves the relevant data from the index files must be developed). Second, the files containing the result of the queries must be transferred to the PCs using file transfer protocols. Finally, these files must be imported into office productivity programs such as Microsoft Word and Microsoft Excel for the presentation level charts and reports to be created.
- ◆ Facilities such as on-line context sensitive help, usage of windows and developed data entry techniques are absent because the experts have to develop all the data entry forms using COBOL or BASIC.

All of the bottlenecks mentioned above can easily be summarized as resulting from “batch data processing” and “file transfer” technology.

The following table gives a summary of the software inventory at the offices of ZPP.

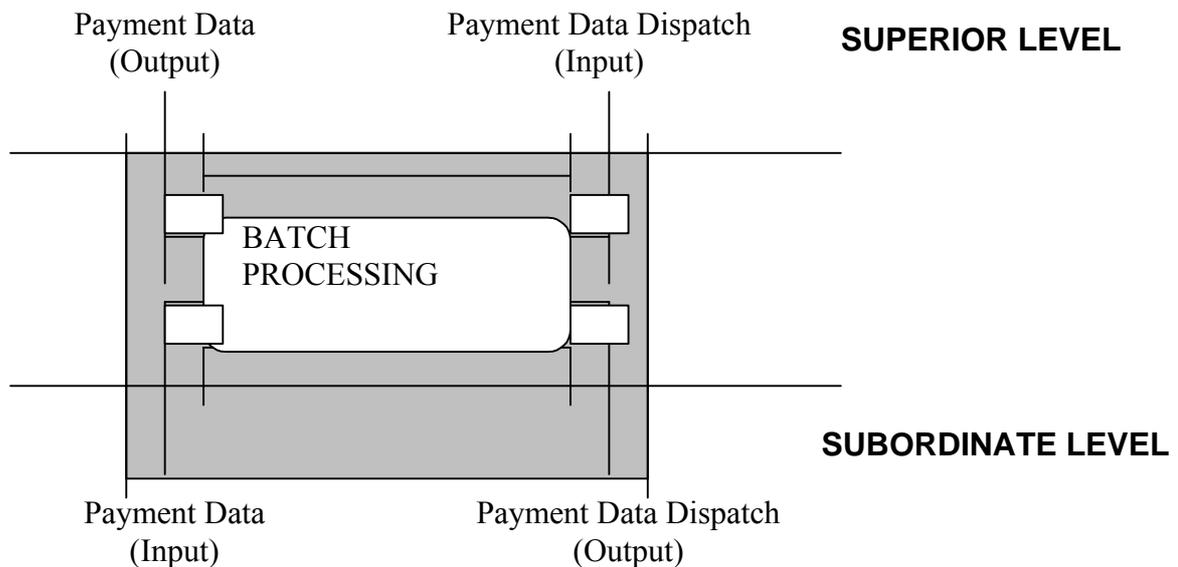
Unit	Operating System	Applications	Data	Communication
Central Office	ITX DOS	COBOL	Index Files Files	ITX NET RBS BSC 3780
Branches	ITX DOS	COBOL	Index Files Files	ITX NET RBS BSC 3780
Sarajevo Branch	VSE/SP DOS	COBOL	Index Files Files	3780 RJE Protocol
Sub-Branches	ITX DOS	COBOL	Index Files Files	BSC 3780 SynCom 3780
Teller-Desks	DOS	COBOL BASIC	Index Files Files	SynCom 3780

Current ZPP IT Operations

All operations are carried out using the limited IT capability presented above, which is considered adequate by the operators of the systems. The systems function well within the limits of current needs but the operation is highly supported by human labor, that is, it requires frequent human intervention.

Payment order processing is batch based processing that crosses the functional units within the organization. Because of the nature of the hardware and software installation, this processing has several steps with human intervention and inevitably, communication and processing is cumbersome. A generic operational unit can be depicted as shown in Figure 1.:

Figure 1.
Generic Payment Order Processing Operational



Processing of payment orders is a two-phase job. In the first phase, the payment data is moved from the bottom up the hierarchy. While doing this, the automatic data processing centers do not pass all the payment data to the superior offices. Payment data within the scope of the ADPC is kept and not forwarded. After all the relevant payment data has been sent to the superior offices, the ADPC waits for incoming payment data from them. In the second phase, this data combined with data received from the subordinate offices, is dispatched to the subordinates. So, for the first phase, the subordinates are the senders and the superiors are the receivers. In the second phase the situation is reversed, that is, the superiors are senders and the subordinates are receivers. Each data processing center is responsible for updating the GIRO accounts of its participants.

Payment data processing requires close communication between the superior and the subordinate offices. The organization tries to communicate by using telephone lines through dial-up networking. If dial-up connection is not available, the data is passed either on magnetic media such as diskettes and magnetic tapes or as printed material. If the organization send the data either through dial-up connection or on magnetic medium, data transfer means file transfer. In either case, received data is first stored in disks and then processed by several batch processing programs so that the data can be imported into the index files.

THE ZPP'S NEW UPGRADED IT PROJECT

The ZPP is in the process of procuring and developing new IT capabilities. There is a DM 9 million investment to reestablish the entire system and operations. The new system will not be operational before 2000. Their plans to start the new system at the beginning of 2000 can be regarded as optimistic.

New ZPP Hardware and Connectivity Capabilities

The ZPP has purchased NCR S26 systems for branch operations at canton level and an NCR 4400 as central office server. The municipal level offices are being equipped with PC servers

and PCs with LAN connection. The PC servers will be capable of transmitting data through dial-up or leased line connections.

Unit	Computer System	Communication Equipment
Central Office	NCR 4400 PC	WAN LAN CISCO Routers
Branches	NCR S26 PC	WAN LAN CISCO Routers
Sub-Branches	PC Servers PC	Modem LAN

- ◆ The central office will have a system running a central database server and a second system will be used as lifesaver when the NCR 4400 fails. The system will have enough HD capacity (more than 72 GB) to conduct processing of payment orders and the disk unit will comply with the RAID 5 standard.
- ◆ Branch offices will be equipped with dual processor NCR S26 systems running a intermediate database server with replication capability. There will be two of them per branch office to keep the sites alive in case of failure. The disk unit will be RAID 5 to reduce possibility of failure. A set of routers will allow external parties to get into the system to access available PB services.
- ◆ The canton level offices will have Cisco routers for external connections such as those with subordinate offices, the main office and with third parties like commercial banks.
- ◆ Municipal level offices are planned to have powerful PC servers and a PC LAN. The PC server will host the municipal level database management system. These sites will be data collection centers for both cash and non-cash payments.

With this new project, the ZPP PB will eliminate all hardware and communications problems pertaining to system integration.

New ZPP Software

The software technology being introduced by this new project is based on the database client-server concept that allows a remote computer to connect to a central database and perform transactions over this connection. There will be several databases throughout the system and these databases will be communicating with each other either by use of the transaction monitors or built-in replication features.

The central office and the canton level offices will have UNIX operating systems and ORACLE 8i relational database management systems. Municipal level PC servers will have the MS-Windows NT operating system with a Microsoft SQL server as the local database management system.

Clients will have applications developed with MS-Visual Basic that can connect to the local Microsoft SQL server database. A background process in this server will establish communication with the branch offices and the municipal level offices for data replication purposes.

Unit	Operating System	Applications	Data	Communication
Central Office	UNIX MS-Windows NT MS-Windows 95/98	C++ Visual Basic	RDBMS	TCP/IP
Central Office	UNIX MS-Windows NT MS-Windows 95/98	C++ Visual Basic	RDBMS	TCP/IP
Sub-Branches	MS-Windows NT MS-Windows 95/98	C++ Visual Basic	RDBMS	TCP/IP

Future ZPP IT Operations

This new project will change the entire operational approach in ZPP by introducing online transaction processing. It will be possible to replace all the manual and semi-automatic processes with automatic ones, with the support of the new systems. These new systems can be enablers of future process engineering / optimization exercises within the organization.

ZAP'S CURRENT INFORMATION TECHNOLOGY CAPABILITIES

The IT capabilities of ZAP are similar to those of ZPP. They have old computer systems and processes for conducting internal Payments System functions. The hierarchical organization structure and the related IT capabilities of the units are determined by transaction volumes. Units can be classified as those that have batch processing capability (batch processing units) and those that can only collect payment data (collection units).

ZAP Hardware and Connectivity Capabilities

The hardware that ZAP owns is very similar to the ZPP hardware. Batch processing units are equipped with NCR 10000 systems and they are capable of transferring files. The collection units are equipped with PCs connected with the file servers over LANs. Some of the batch processing units are connected through leased lines while the others, including the collection units, are connected through dial-up connections. In case of data communication failure, the following methods are applied:

- ◆ File Transfer on Magnetic Media
- ◆ Data Transfer on Printed Material

The following table gives the hardware systems owned by ZAP. Details such as disk capacity, printers and back-up systems are not included.

Unit	Computer System	Communication Equipment
Batch Processing	NCR 10000 PC	Modems LAN
Collection	PC	Modems LAN

ZAP Software Capabilities

Software capabilities of ZAP are limited by batch processing. Since there is no use of relational databases and integration facilities, they are not capable of doing transactions on-line. The servers are used as big data storage and batch processors. Their data communication programs allow them to exchange files through dial-up connections and leased lines. There are plenty of COBOL programs around to batch process the data collected. The same limitations apply to ZAP as outlined in the previous section on ZPP.

Unit	Operating System	Applications	Data	Communication
Batch Processing (Canton)	ITX DOS	COBOL	Index Files Files	ITX NET RBS BSC 3780
Branches (Municipalities)	DOS	COBOL CLIPPER	Index Files Files	BSC 3780

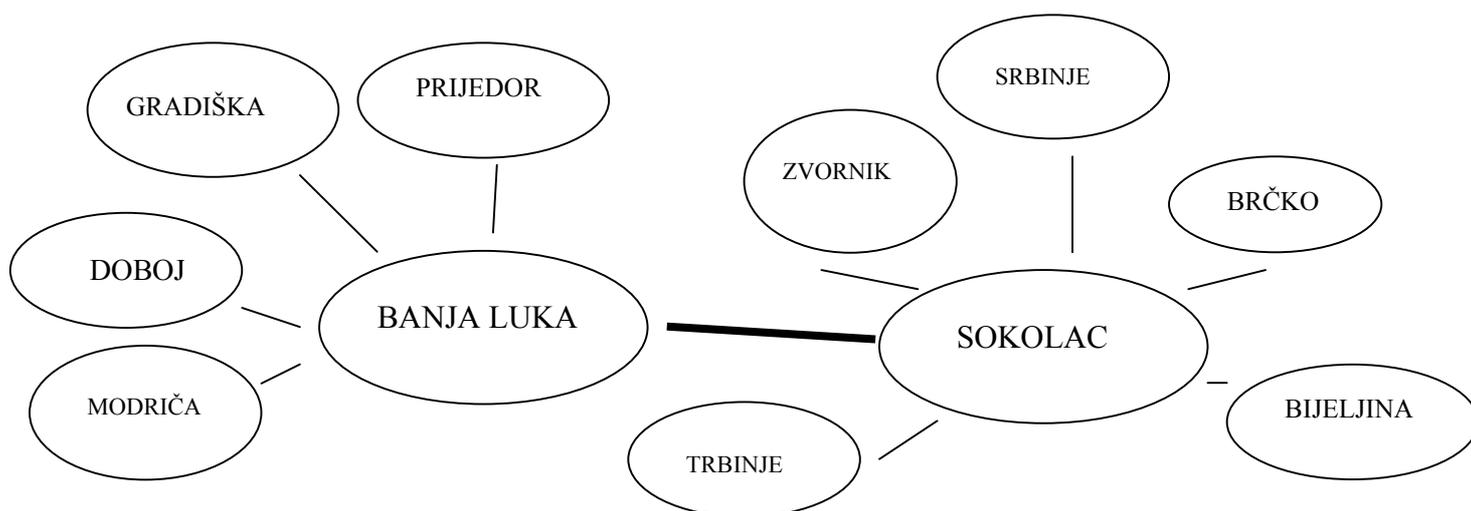
ZAP IT Operations

The operation model for the ZAP offices is the same as that of the ZPP described above.

SPP'S CURRENT INFORMATION TECHNOLOGY CAPABILITIES

The RS Payment Bureau (SPP) is essentially one step ahead of its Federation counterparts. Their approach is to use a mixture of batch processing and database systems, but unfortunately they do not have a central database system for capturing payment orders. Their IT organizational structure has two main components: branch offices and small municipal level offices. Branch offices are responsible for holding all relevant payment order processing data while the small offices are responsible for capturing (collecting) and sending them to the branch offices. The following figure depicts the SPP branches and their connections.

Figure 2.
SPP Branches and their Connections



As can be seen from Figure 2., there are two main concentration centers: Banja Luka and Sokolac. These two branches and their connections play the most important role in processing payment orders.

The SPP allows third parties to connect to their systems by using special applications provided by the SPP software development center. Only the branch offices support that connection facility. The connection is arranged under contract between the Payment Bureau and the connecting institution. The contract defines terms and conditions pertaining to security, usage and maintenance of the connection software as well as other legal obligations.

Municipal level offices are used as data collection centers. These offices do not use state of the art technology to conduct their business.

SPP Hardware and Connectivity Capabilities

The main systems in branch offices are UNISYS A systems, holding the central databases at branch level. These systems are interconnected via leased lines so as to transfer relevant payment order data to their destinations.

Some of the branch offices have UNISYS B20 front-end pre-processors, to communicate with subordinate offices and external parties. Remaining branch offices use a different architecture for the same type of connections. In this model, several PC servers are used as branch office servers, operating stations, bridge stations and communications stations. All this equipment is old technology with limited functionality. All the equipment in the branch offices is interconnected through LANs and the main server can communicate with the other branches' main servers by modem.

Municipal level offices have PCs to capture data. Some of the municipalities have LAN but many do not. They are responsible for collecting payment data and forwarding it to the branch offices on a regular basis. Hardware capabilities of their PCs are not high, which however their operations do not require. These offices are capable of transferring data to branch offices over dial-up connections.

Unit	Computer System	Communication Equipment
Branch Offices	UNISYS A (Server) UNISYS B (for Model B1 ² branches) PC Servers (for both Model B1 and Model B2 branches)	Modems LAN
Municipalities	PC PC Server (for some branches)	Modems LAN

SPP Software Capabilities

The SPP stores payment information in non-relational database files using a system called DMS. This is a proprietary database for UNISYS systems and is not as elaborated as current relational database management systems. There is no central database holding all payment information so it is not straightforward to retrieve overall payment data.

They also use transaction monitors to forward recorded payments between branches. The DMS entries are monitored by background processes and based on routing tables maintained in each main server. They are distributed accordingly. The distribution or routing is done via a method based on a matching between the recipient's account number and the routing tables.

The programs running on the communication servers and front-end processors allow Payment Bureau branches to communicate with subordinate level offices and external parties. These programs can communicate with their counterparts installed at external offices and can send and receive files. The front-end processor is capable of analyzing incoming files and dispatching payment orders accordingly. It is also capable of forwarding payment information to external subordinate level offices. This type of information is used not only for payment order processing but also for external analysis purposes. For example, the Central Bank can communicate with the SPP branch office servers to collect some data for analysis purposes.

The small offices use old-fashioned COBOL files and send branches data over dial-up connections. Some of them have LAN facilities but they are old fashioned too.

Unit	Operating System	Applications	Data	Communication
Branches	BTOS DOS MCP	COBOL C	CTOS ISAM II Index Files	BTOS X.25 Network Gateway BTOS B-multi Poll Select CTOS II BNET II
Branches	DOS	COBOL	Index Files Files	Novell Netware

SPP IT Operations

The collection and the distribution of payment orders is done automatically at the branch offices and does not require as frequent human intervention as ZPP and ZAP operations. The users of

² Model B1 and Model B2 are model names emphasized by Belgrade Notes : The Guidelines on Payment Bureau operation, Payment Bureau Main Office-Belgrade, Belgrade, May 1995.

the system are directly connected to the databases. They communicate with the front ends running the pre-processors, and the routing of transactions is done by underlying machine processes. This processing technique puts the SPP one step ahead of the ZPP and ZAP.

Operations at the subordinate offices and external institutions are not much different than the processing techniques used by the ZPP and ZAP municipal offices (See municipal level operations in ZPP notes).

It is a major problem to derive data from overall payment information because there is no central database approach. To solve problems caused by this situation, SPP has established another central agency whose responsibility is to prepare reports on a periodic basis. This center has several programs capable of connecting to the branch offices and collecting information by communicating with the processes at remote servers.

PTT'S CURRENT INFORMATION TECHNOLOGY CAPABILITIES

Organization of the PTT section is different than the others because the PTT is still in mid process of building IT capabilities. Thus, the information we have gathered so far is limited. The PTT organization has three levels, composed of a central office, regional branch offices (there are seven branch offices: Sarajevo, Zenica, Tuzla, Mostar, Bihac, Goradze and Travnik) and small offices. At the central unit there is an old technology IBM S390 system, which is not being used efficiently. The new PTT project will modernize the branch organization with PC servers and LANs running MS-Windows NT and ORACLE RDBMS. PTT is developing in-house software with its 25 IT experts and 70% of the work has been done. Development of applications will be completed in last quarter of this year. There is no definite plan available for the central and small offices.

THE TAX ADMINISTRATION'S CURRENT INFORMATION TECHNOLOGY CAPABILITIES

The main function of the automatic data processing centers of the Tax Administration (TA) is keeping the electronic books of the taxpayers. This is done by:

- ◆ keeping and maintaining the tax dictionary,
- ◆ opening and closing the tax payers' accounts, and
- ◆ keeping the credits and debits for each tax account.

The organizational structure of the Tax Administration is straightforward. There is one central office for federation level, one office per canton and one office per municipality. There are two exceptional cantons within this hierarchy -- Travnik and Mostar. In these two cantons, there are additional offices because the administration of these two cantons are mixed, that is, they have both Bosniak and Croat regions.

TA Hardware and Connectivity Capabilities

Every unit within the organization has the same hardware architecture -- PC LAN network with PC servers. For some small branches, one PC is enough.

Unit	Computer System	Communication Equipment
Central Office	PC	Modem LAN
Branch Office (Cantons)	PC	Modem LAN
Municipality	PC	Modem LAN

The PCs and PC servers have at least Intel Pentium level processors and enough hardware capacity to conduct the operation. Additionally, the PC servers or the PCs have modems so that the units can communicate with each other through dial-up connection. Generally, the data communication is between the superior and the subordinate offices. The nature of this communication is explained in the following Software and Operation sections.

TA Software

As with the hardware, the software architecture of each unit is uniform. The FTA use the same data definitions for storing data, the same application to manipulate data, and have the same file system organization to hold the files.

Unit	Operating System	Applications	Data	Communication
Central Office	MS-Windows NT	Fox Pro	Index Files Files	NetBeui
Branch Office (Canton)	MS-Windows NT	Fox Pro	Index Files Files	NetBeui
Municipality	MS-Windows NT	Fox Pro	Index Files Files	NetBeui

The servers perform only as “File Servers”. This means that the operation is conducted using shared files residing on the server’s hard disk. In this case all clients must have access rights for both reading and writing.

The files are Fox Pro files with help indexes. The application program was written in Fox Pro and has direct access to these files. Generally speaking, the data is manipulated through file libraries residing on the clients.

The operating system is MS-Windows NT Server for the PC servers and MS-Windows NT Workstation for clients on the LAN. For the sites with only one PC, the operating system is MS-Windows 95.

TA IT Operation

The processing approaches for keeping the debits and the credits of a taxpayer are different. The payment information, the credit, comes from the Payment Bureau. The taxpayer obligation, the debit information, is entered by the municipal level offices.

- ◆ **Credit Information.** Credit information is posted from the correspondent Payment Bureau to the canton level tax office on a daily basis. The information is sent on diskettes whenever/wherever possible. If sending on diskettes is not possible, conventional methods are used -- on paper. In both cases, it is the correspondent Payment Bureau’s responsibility to prepare the data and it is the tax office’s responsibility to get the prepared data from the

Payment Bureau. So, everyday, someone from the Tax Administration goes to the Payment Bureau and picks up the data.

The payment data is copied into the file server at the tax office and “batch processed” so that the data transfer images for each subordinate office can be generated. After the preparation of the files, the files are transferred to the subordinate offices through dial-up connections. Transferred files are processed by each municipal level office and finally taxpayers credit becomes updated.

- ◆ **Debit Information.** Debit information is collected at municipal level offices. The debit data collected is that entered by the operators of the systems at the municipal level tax office.
- ◆ **Other.** The Central Customs Office also sends data on imprinted CD and these data are imported into the central database at the Central Tax Office. In fact, this is a filtering and conversion process from MS-Access files to Fox-Pro files.

The credit and debit information of taxpayers is passed to superior offices monthly using dial-up connection. Data at the central office is updated once a month, which gives the central office enough flexibility to answer questions on tax collection.

MARKET BANKA’S CURRENT INFORMATION TECHNOLOGY CAPABILITIES

The Market Banka in Sarajevo purchased its IT equipment within the last two years. The computers, communication equipment and other peripherals are brand new and many of them have state of the art technology.

This new bank has 5 branch offices equipped with the same level of technology but these offices are not capable of making transactions on-line.

Market Banka Hardware and Connectivity Capabilities

The computer systems are PCs running MS-Windows NT. At the central office, there are 120 PCs interconnected over a LAN. The computers are connected to hubs via category 5 UTP cables and there are several ethernet switches to improve the performance of the network.

The servers are PC servers with RAID 5, which means they have immunity against disk crashes. However, they are not using the disk mirroring, which can be supported by the operating system of the servers. The use of servers dedicated to the internal banking system is limited by file access, communication and backup services. The Bank has another system which handles SWIFT operations, which is on another MS-Windows NT server. This server runs a special application on a database layer. There is one more server dedicated for their Card Services. This is a system under development and will have database services on it. The Bank is planning to use an additional server for Card Services to meet backup and communication requirements.

Unit	Computer System	Communication Equipment
Central Office	PC Servers PC Clients	LAN Ethernet Switches
Branch Office	PC Server PC Clients	LAN

Market Banka Software

The software capability of the Market Banka can be reviewed in three categories:

- ◆ the Internal Bank System,
- ◆ the SWIFT System, and
- ◆ the Card System.

The internal bank system software is in-house developed software, although the bank has decided to cease development activities on that system and outsource the software project. The in-house software is still being used and operates on shared files residing on a file server. This application software is also being used at the branch offices.

The SWIFT system is a turnkey system and it is functioning well.

The Card System is still under development.

Unit	Operating System	Applications	Data	Communication
Central Office	MS-Windows NT	Internal Bank System SWIFT Card System	Index Files Database	NetBeui
Branch Office	MS-Windows NT	Internal Bank System	Index Files	NetBeui

HRVATSKA BANKA'S CURRENT INFORMATION TECHNOLOGY CAPABILITIES

The Hrvatska Banka has a dynamic IT team that enables the bank to keep track of changes in information technology. They are planning to extend their services so that their customers can use the bank's internet services.

The bank has 21 branches, including the one in Sarajevo, although the operations of the branches are not fully integrated. It is anticipated that by the end of October 1999, all the branches will be able to conduct on-line real-time transactions.

Hrvatska Banka Hardware and Connectivity Capabilities

At the central office of the Hrvatska Banka, there is a Dec-Alpha server running the UNIX operating system. This system works in integration with the central office PCs over a LAN. The central office has all the relevant LAN equipment and building blocks. Distant operating sites are interconnected with fiber-optic lines. They are in contact with suppliers about purchasing additional communication equipment such as routers and modems for online transaction processing with the branch offices.

The branch offices are equipped with PCs and they have modems for communication with the central office over dial-up connections.

Unit	Computer System	Communication Equipment
Central Office	DEC-ALPHA PCs	LAN Routers Fiberoptics Ethernet Switches
Branch Office	PC Server PC Clients	LAN Modem

Hrvatska Banka IT Software

The operating system of the DEC-Alpha server is UNIX. The database management system running on this server is ORACLE 7.3.3. It will be upgraded to version 8 in short term. There are applications on PCs written in ORACLE Developer 2000, which are being used in conducting the Bank's internal affairs.

The branch offices are using applications running on file servers, but this situation will be changed after the implementation of the project for transitioning the branches, by end of the October 1999. After the transition, the branches will:

- ◆ have local Relational Database Management Systems,
- ◆ be able to process transactions on-line, and
- ◆ eliminate the file server approach for critical operations.

Currently, branches are transmitting data over dial-up connections using file transfer protocols and the transmitted data is batch processed at the central office.

CONCLUSIONS

- ◆ When we look at IT support to Payment Bureau operations we can see two different profiles. The operations of ZPP and ZAP are fundamentally the same. The following table summarizes the IT characteristics of the Payment Bureaus, with the items that generate the difference between ZAP-ZPP and SPP in italics.

Category	Status	
	ZPP, ZAP	SPP
- Automatic Data Processing		
- Relational database management system.	No	No
- <i>On-line transaction processing</i>	No	Yes
- Batch processing techniques	Yes, massive	Yes, limited
- Processing techniques	Old fashioned	Mixed
- <i>Human intervention</i>	Frequent	Rare
- System integration	Weak	Medium
- File transfers	Yes	Yes
- Printed material and re-keying	Yes	Rare
- <i>Integration service processes</i>	No	Yes
- Software		
- Operating systems	Old, not open	Old, not open
- Programming style	Obsolete	Mixed
- Old data storage and manipulation techniques	Yes, massive	Yes, limited
- User interface	Old style	Old style
- Computer system		
- <i>Main computers</i>	Obsolete	Need upgrade
- Capabilities	Limited	Medium
- Ownership cost	Expensive	Normal
- Data Communication		
- WAN and LAN	Yes	Yes
- Advanced data communication equipment	No	No

- ◆ The entire ZAP/ZPP IT capability must be replaced with current state of art technology instead of improving or upgrading them. The ZAP and ZPP are doing this. Both these projects aim to replace the previous IT capabilities completely. The strategic plan for the transition of the Payment Bureaus should also consider these ongoing projects and their potential results. Another survey for these new projects may be needed in the near future to adjust the strategic plans accordingly. These new systems can be enablers of future process engineering/optimization exercises within the PB organizations.
- ◆ IT capabilities of commercial banks are being established. They are purchasing new systems and are in the middle of procuring new software for their banking services.
- ◆ The Tax Administration has limited IT capability because they are not using their capable hardware capacity effectively. They are using old processing techniques with new machines.
- ◆ PTT is still building new IT capabilities with a limited perspective.

TABLE 6.**SUMMARY TABLE OF IT CAPABILITIES -- PAYMENT BUREAUS**

Institution	Branch	Hardware	Software	Data	Capability/Function	Connection Types
ZPP	Central Units	NCR 10000	ITX Operating System COBOL Programs	ISAM Files Files	Batch Processing File Transfer	LAN Dial-Up
	Central Unit (Sarajevo)	IBM 4381	VSE/SP PL/I Programs Assembler Programs	ISAM Files Files	Batch Processing File Transfer	LAN
	Small Branches	PC Servers PCs	COBOL Programs BASIC Programs	Index Files Files	File Server File Transfer	LAN Dial-Up
ZAP	Central Units	NCR 10000	ITX Operating System	ISAM Files Files	Batch Processing File Transfer	LAN Dial-Up Leased Line
	Small Branches	Olivetti+PCs	COBOL Programs CLIPPER Programs	Index Files Files	File Server File Transfer	LAN Dial-Up
SPP	Branches	UNISYS A UNISYS B20 PC Servers PCs	COBOL Programs C Programs BTOS CTOS DOS	DMS Files	Special Services Transaction Monitoring File Transfer Batch Processing On-line transactions	Leased Lines Dial-Up
	Small Units	PCs PC Servers	DOS COBOL Programs	Index Files	File Transfer File Server	Dial-Up

TABLE 7.

SUMMARY TABLE OF IT CAPABILITIES – SOME OTHER INSTITUTIONS

Institution	Branch	Hardware	Software	Data	Capability/Function	Connection Types
Tax Authority	Central Unit (Cantons)	PC Server PCs	MS-Windows NT MS-Windows NT Workstation FoxPro Programs	Index Files Files	File Server File Transfer	LAN Dial-Up
	Branches	PC Server PCs	MS-Windows NT MS-Windows Workstation FoxPro Programs	Index Files	File Server File Transfer	LAN Dial-Up
Banka Hrvatska	Central Unit	DEC ALPHA Server PCs	UNIX Oracle 7.3.3 Developer 2000 SQL-Forms	RDB	Database Server Online Transactions File Server	LAN Dial-Up Fiberoptic
	Branches	Olivetti PCs		Files	File Server File Transfer	LAN Dial-Up
Market Banka	Central Unit	PC Servers PCs	MS-Windows NT MS-Windows NT Workstation MS-Window 95/98	Files	File Server File Transfer	LAN Dial-up Fiberoptic
	Branches	PC Servers PCs	MS-Windows NT MS-Windows 95/95	Files	File Server File Transfer	LAN Dial-up

7. ORGANIZATION AND HUMAN RESOURCE ISSUES

BACKGROUND

As each functional review component progressed, it became clear that the initial expectation that significant staff transfer in key functional areas would be required, was mistaken. Significant transfers and associated training may still be required of staff needed to handle the payment processing volumes that may be taken up by the commercial banking sector. Another potential area for current PB employees is the treasury function at entity, cantonal (Federation) and municipality levels.

This review looked briefly at the transaction volumes currently undertaken at the PBs and at selected banks to assist in understanding the likely transfer requirements. At the same time the review looked at staffing levels within each Payment Bureau. The age and education distribution of staff was also examined.

KEY FINDINGS

Transaction Volumes

- ◆ **Transaction volume at the PBs.** Transactions at the ZPP during the 61 business days of the first quarter of 1999 averaged 97,000 per business day, as detailed in Annex 4.

Data were also obtained from the Sarajevo cantonal office of the Tax Administration on the number of tax-related transactions during March in Sarajevo canton. The total was 173,200, averaging 8,240 transactions per day. This is 19 percent of the average daily transaction volume for Sarajevo for the first quarter of 1999, 43,800, and 24 percent of average daily noncash transactions for the same period, 34,400.

- ◆ **Transaction volume at commercial banks.** An initial appraisal was carried out of transactions volumes at four commercial banks. Results, shown below in Table 8, do not include cash transactions (deposits and withdrawals). Among others, the survey included the Hrvatska Banka and the Central Profit Banka, the two believed to have the largest transaction volumes in the ZAP and ZPP areas respectively.

**Table 8. -- Rapid Appraisal of Transactions Volumes
at Commercial Banks, April 1999**

Name of bank	Head office	Number of transactions			Total
		Exter- nal	Dom- estic	Credit Card	
Hrvatska Bank	Mostar	1143	545	65	1753
Central Profit Bank	Sarajevo	800	2200		3000
Market Bank	Sarajevo	200	175		375
Universal Bank	Sarajevo	50	90		140

On the basis of this initial appraisal, total commercial bank non-cash transactions appear unlikely at present to exceed 15 percent of non-cash transactions at the PBs. Non-cash transactions at ZPP numbered 67,300 per day during the first quarter.

The Hrvatska Banka is planning to expand its Visa operations, with issuance of Visa cards expected to begin in June 1999. The Central Profit Banka (CPB) is testing two ATM machines and plans to begin issuing credit cards in May. A CPB executive said that the ZPP had offered to create a facility for on-line transactions between ZPP and CPB at a cost of 15 pfennig per transaction, but that this was rejected as too expensive. He said CPB could conduct domestic payments through SWIFT at 4 pfennig per payment.

Payment Bureau Personnel

- ◆ **ZPP Staffing.** The total staff of ZPP, based on data for April 1999, numbered 1,061 persons. Details of their skill and age distribution are shown in Annex 5. The Director of the ZPP Human Resources Department volunteered the information that only 10 employees were scheduled to retire during the next three years. The Director added that this was fortunate, because the pension fund was virtually empty.
- ◆ **ZAP Staffing.** ZAP employees, according to a “systematization” report prepared in October 1998, numbered 373, as shown in Table 9.

Table 9. -- Distribution of full time positions at ZAP, by educational level, October 1998

Location or region	Number of Branches	Full-time positions, by educational level					Total
		Univ grads	Some univ	HS grads	ES grads	Crafts-men	
Mostar head office		20	13	56	10	4	103
Mostar branches	5	11	5	19	5	1	41
Vitez cantonal office		3	2	27	1	2	35
Vitez branches	9	9	9	42	5		65
Siroki Brijeg cantonal office		6	4	15	1		26
Siroki Brijeg branches	3	5	6	19	4		34
Levno cantonal office		5	2	13	3	1	24
Levno branches	4	4	3	11	1		19
Orasje cantonal office		2		9	1		12
Orasje branches	3		3	11			14
TOTAL	24	65	47	222	31	8	373

- ◆ **SPP Staffing.** Total SPP staffing was reported to be 1,325. Table 10. shows the distribution by educational level. Caution must be exercised in reviewing these data as it is not clear yet what the staffing level of the unit equivalent to the SPP will be once the functions split off from the Razvojna Banka. The consultancy assisting with this activity is expected to conclude in early July, 1999. At that time, once the exact nature of the new entity and its functions are known, the figures should be reviewed.

**Table 10. -- Distribution of full time positions at SPP,
by educational level, Feb. 1999**

		Positions by educational level						Total
		Post grads	Univ grads	Some univ	HS grads	ES grads	Crafts- men	
HEADQUARTERS	Full-time	2	55	36	121	17	8	239
	Part-time	0	4	3	22	5	2	36
BIJELJINA	Full-time	0	15	17	44	11	5	92
	Part-time	0	0	1	2	0	0	3
BRCKO	Full-time	1	9	6	40	8	3	67
	Part-time	0	1	0	1	0	0	2
SRBINJE	Full-time	0	14	2	40	10	5	71
	Part-time	0	0	2	5	0	0	7
TREBINJE	Full-time	0	20	14	57	10	6	107
	Part-time	0	0	0	5	0	0	5
PRIJEDOR	Full-time	0	12	19	44	10	4	89
	Part-time	0	0	0	4	1	2	7
ZVORNIK	Full-time	0	15	19	75	9	7	125
	Part-time	0	0	0	6	0	1	7
GRADISKA	Full-time	0	14	8	53	8	2	85
	Part-time	0	0	0	3	0	0	3
MODRICA	Full-time	0	7	8	30	9	1	55
	Part-time	0	0	1	2	1	0	4
SOKOLAC	Full-time	0	21	8	52	8	6	95
	Part-time	0	0	0	1	2	0	3
S.SARAJEVO	Full-time	1	23	8	54	8	5	99
	Part-time	0	0	0	0	0	0	0
DOBOJ	Full-time	0	17	18	69	8	4	116
	Part-time	0	0	1	8	1	0	10
SPP TOTAL	Full-time	4	220	163	679	116	56	1238
	Part-time	0	5	8	59	10	5	87
Total		4	225	171	738	126	61	1325

Total employment at all the PBs therefore stands at around 2,760.

Prospects for staff transfer

The transfer of statistical and information functions to the Tax Administrations, the Institutes of Statistics, and commercial banks provides almost no opportunity for transfer of PB staff. At most, the FIS may need to add 5-10 full time positions to cope with the increased burdens of field work and one person to perform data entry in the ZAP regions – provided the Federation Government is willing to fund these positions.

The implementation of a full Treasury System in the Federation and the RS is unlikely to require significant staff transfer to the entity Ministries of Finance. The World Bank proposals for reform suggest utilizing existing staff of the Mutual Services Department for the initial Treasury development, with little augmentation. Development of Treasury functions at canton and municipal level may provide some scope for staff transfer. This aspect needs to be evaluated early in the human resource implementation plan. *(Note: although lower level government treasuries may require a large number of employees, estimates matching supply and demand and staff mobility must be determined. This will be the subject of a new study by USAID to commence sometime in July/August).*

The Tax Administration is also *unlikely* to require large staff transfers for activities related to strengthened tax payment monitoring and enforcement.

The most likely transfer requirement relates to payment processing itself and therefore depends largely on the commercial bank requirements as the payments system is freed up and processing outside the Payment Bureaus begins. This will be influenced by:

- ◆ The extent to which the payments are distributed amongst the banks in initial stages. An even distribution of payments would mean each individual bank will have a modest increase in volume and existing staff may be able to cope.
- ◆ The level of technology within the banks which means payment processing may be more automatic than the current Payment Bureau processes, in which case technology may reduce the requirement for additional staff.

Staff Development and Training

At this stage of the development of the Strategic Implementation Plan it would seem the major activity relating to staff transfer will be training for alternative employment. The Human Resource development plans will need to focus on this aspect, by identifying the staff involved, confirming the options for transfer and then developing and delivering retraining along with assistance in identifying employment opportunities.

8. STRATEGIC IMPLEMENTATION PLAN

OVERVIEW

The Strategic Implementation Plan for the elimination of the Payment Bureaus and the allocation of functional activities to other public and private institutions is based on detailed findings of each of the functional analyses, and takes into account the interaction and dependency identified in this analysis. The plan overall takes a phased approach to transfer of payment processing to the banking system, in accordance with the risk groupings set out in the draft Decision on Regulation of Bank Activities Providing Payment Services in FBiH. In addition to this risk-based approach, the transactions are further treated as private sector only or as transactions that involve the Government on one side (either receiving money or making payment). This approach suggests that following some initial activities to confirm the legal framework and changes necessary to eliminate some Payment Bureau mandates, payment processing can be taken over by the commercial banking sector and operated for a period of time before the Payment Bureaus are eliminated. In this way any difficulties encountered in the transition can be rectified, if necessary by reverting to operation through the Payment Bureaus, before final liquidation takes place.

Many of the peripheral activities currently carried out by the Payment Bureaus require strengthening of the capacity of the recipient institution before transfer can take place. In some instances this will be the limiting factor to the speed of transfer. This is identified in the Strategic Plan, and where appropriate, technical assistance to the recipient Agency has been proposed.

PAYMENT BUREAU ELIMINATION STRATEGIC PLAN -- KEY STEPS AND MILESTONES

Management and Regulatory (Workplan ID Tasks 2-7)

The law on the Internal Payments System in the Federation has been approved by the government and the House of Representatives, and is on the agenda of the House of People for adoption. The changes in the law open the way for the commercial banking sector to participate in payment services. This law must be enacted before any further change can take place. It also provides for establishment of a Governing Board, which, inter alia, shall be responsible for implementing the elimination of the Payment Bureaus according to a plan adopted and approved by the Governing Board. Accordingly, the Workplan allows for adoption of the law, establishment of the Board and acceptance of the elimination plan to occur by the end of July 1999. Similarly, the RS must amend its internal payments and transactions law and establish a Governing Board.

In addition, the Workplan proposes that the decision to eliminate the Bureaus and key aspects of the timetable be announced and widely disseminated to Bureau staff and to the Public. This calls for an Information and Education Campaign to be developed quickly. This aspect is important to counter misunderstandings and opposition to the changes encountered amongst staff of various agencies during the functional analysis.

Prerequisite Activities (Workplan ID Tasks 8-11)

The following three prerequisite activities are identified as important in preparing for transfer of payment services to the banking sector. Carrying out each of these activities will demonstrate the resolve to reform and finally eliminate the Payment Bureaus as currently operating.

- ◆ ***Financial Verification of PB Accounts.*** The transfer of banking responsibilities from the Payment Bureaus to banks for any particular account will require verification of the account at the Payment Bureau and the transfer of funds, if relevant. For this purpose it will be necessary to conduct financial verification of the Payment Bureaus before any transfer takes place. This will require analysis of the Bureaus financial statements and confirmation of cash holdings and other assets in each Bureau.
- ◆ ***Revise Payment Bureau Fee Structure.*** The current fee structure for payment services is based upon transaction value and is not well understood by service recipients. The pricing of payment services should be redeveloped to be on a per transaction basis and designed to cover the full cost of each operation.
- ◆ ***Cash Holding and Deposit Requirements.*** The framework within which the Payment Bureaus operate with regard to cash holding and deposit requirements by legal persons and enterprises must be amended. This aspect is important in two regards. First, it will impact on the number of transactions processed by Bureaus if legal entities choose not to deposit daily with the Bureau (or bank) once the restriction is removed. Second, it will remove a source of information relating to tax payments, which the FTA will need to pick up through other methods of tax administration.

These three activities can be conducted concurrently, but must be completed before any transfer of payment processing to the banking sector. The first two activities will also require additional technical assistance to develop Terms of Reference for the financial verification and revision of the fee structure. As stated in previous reports, the financial verification should be conducted by an independent external accounting body.

Payment and Clearing System (Workplan ID Tasks 12-28)

Following passage of the laws on the Internal Payments Systems by the entities, the decision on regulation of bank activities, specifying payment transactions by risk related groups, must be completed. The division of transactions into low, moderate and high risk provides the framework for some transaction processing to be taken over by the banking system as soon as individual banks are considered capable. The Workplan allows 60 days for these two activities to be completed so that processing for low and moderate risk transactions could begin once the prerequisite activities above are completed, and the Tax Administrations' requirements (see below) are in place.

The plan proposes a four-month trial of processing by certified banks, to which additional banks could be added as required. At the end of this period a review of progress should be undertaken.

The second stage of the transfer involves higher risk transactions and development of a private clearinghouse. Detailed plans for implementing this aspect are being developed by the World Bank and the IMF, and include consideration of operating procedures and legal requirements.

Government Services (Workplan ID Tasks 29-42)

- ◆ ***Tax Administration.*** The loss of information flow from the Payment Bureaus relating to tax payments must be picked up by requiring the banking system to provide equivalent information to the FTA and the RS tax authorities. In addition, the Tax Administrations must be confident that they have other methods in place for determining business activity and the associated cash flow for the calculation of taxes, before private sector transactions can be processed through the banking sector, where it would not be appropriate to require banks to disclose such client cash flow information. This aspect must be addressed before payment processing of low and moderate risk transactions can be opened up to the banking sector.

In order to achieve this, Tax and Customs legislation will need to be redrafted to ensure that the Tax and Customs Administrations have the appropriate powers, and that the banking system is required to provide the necessary information.

In the approach proposed in the Workplan, entities may chose initially to make low or medium risk payments of a private nature through the approved banks. However, they would still be required to make tax payments through the applicable Payment Bureau until such time as the government accounts are transferred to the selected bank.

The Tax Account System is currently complex, based on the use of an account at the Payment Bureau relating to tax type and the government entity receiving the tax, as determined by the location in which payment takes place. This account system should be reviewed, in conjunction with the introduction of a General Ledger System for government (see below). Where simplification to the account structure can be introduced, this should be done before the banking system is utilized for collection of government revenues.

- ◆ ***Treasury and Expenditure Management.*** Establishment of a Treasury System within the Ministries of Finance is largely independent of the payment processes conducted by the Payment Bureaus for government. Reform of the Treasury System, however, should be undertaken in conjunction with transfer of government accounts to the banking system. In essence, the Treasury will need to review the Ledger Chart of Accounts, establish the concept of a single account for government monies, and determine the appropriate bank to operate the account. Following this, the processing of government payments can occur through the selected bank account. In accordance with the timetable established by the World Bank Reform Agenda, this could take place as of January 1, 2000. Further reforms to the Treasury System, including assumption of Cash Management and other activities, will occur progressively throughout the Year 2000 in line with the World Bank proposals.

The review of Treasury Ledger Chart of Accounts should be conducted in parallel with the Tax Administration review mentioned above to simplify the Tax Account System.

Statistics and Information Services (Workplan ID Tasks 43-56)

The transfer of statistical and information gathering activities is related to the following three components:

- ◆ **Banking System Requirements.** The requirement for banks to provide data relating to entity transactions should be specified in law and be consistent with the provision of data required for tax administration purposes. This is addressed above. In addition, once tax *payments* are made to the banks (as decided by the Tax Administration/Treasury) then the banks should also be legally obliged to provide daily information to the Tax Administration in an agreed format.
- ◆ **Tax Administration Requirements.** The FTA and RS Tax Administration should review the data requirements for taxation purposes and review the Tax Account Code structure for simplification in conjunction with the development of the Treasury Ledger System. Assuming the Treasury Ledger System and Single Account begins operation on January 1, 2000, the FTA should take over processing of monthly payment statements and preparation of revenue statistics from that point.
- ◆ **Statistics Agency Requirements.** The transfer of National Income and Investment Data collection to the Institutes of Statistics can be delayed until after collection of the 1999 statistics by the Payment Bureaus as currently conducted. In March 2000, the Institutes should begin to develop survey and sampling methodologies and to refine data requirements for the new collection process. At the same time field staff requirements to conduct surveys, and necessary training, should be addressed. Survey collections would then start for the year 2000 (i.e. in January 2001) after the Payment Bureaus have been eliminated.

Information Technology Implications (Workplan ID Tasks 57-63)

- ◆ **Information Technology Confirmation and Upgrade.** The initial review of Information Technology in agencies taking over functional responsibilities showed considerable variation in capability and capacity. Accordingly, the capabilities of the banking system (and if required, PTT) should be confirmed as part of the certification process for banks to assume low and medium risk transactions. At the same time the Tax Administration requirements should be reviewed and where necessary upgrade plans developed. Similarly, the Treasury requirements should be reviewed and upgraded in accordance with the reform plan proposed by the World Bank.
- ◆ **Liquidation of the Payment Bureaus.** Following successful implementation of payment processing by banks and planning for the establishment of a clearinghouse, the Payment Bureaus should be surveyed to determine in detail the Information Technology Assets available for reallocation. The assumption that hardware and/or application software will be suitable for transfer to the clearinghouse(s) should be confirmed at this point. A reallocation strategy can be developed, to come into effect in the second half of the Year 2000 as the Payment Bureaus are liquidated.

Organization and Human Resource Issues (Workplan ID Tasks 64-68)

The initial review of staffing levels and the transfer of functions suggests that very few staff transfers will be required for the Treasury function, Tax Administration or Statistics and other information services. The major unknown is the capacity required by the commercial banking sector in taking up the processing workload, when the Payment Bureaus are eliminated. The Workplan suggests this will occur progressively. Accordingly, the first activity is to confirm the staffing levels of the three bureaus, and to assess the skills of those staff. Following this the transfer requirements to each of the agencies taking over functions can be determined, including development of necessary training courses for those staff to be transferred. The training and redeployment of excess staff can then be addressed. This will include assistance with identifying employment opportunities.

This component of the work in eliminating the Payment Bureaus is considered important and critical to the success of the undertaking. Accordingly, further technical assistance is suggested for this activity.

Other Activities (Workplan ID Tasks 69-71)

The CBBH currently has an agreement with each Bureau for storage and handling of banknotes, a function normally exercised by Central Banks. These agreements will need to be reviewed and new arrangements developed.

TECHNICAL ASSISTANCE REQUIREMENTS

Many of the identified functional areas are already receiving considerable assistance from the International Community. This is particularly so with regard to the development of the Payments System, Tax and Customs Administrations and Treasury System. However, the implementation plan for elimination of the Payment Bureaus identifies a number of specific areas where additional technical assistance is warranted to ensure that the plan can be completed by December 2000.

The following table (Table 11.) sets out a summary of these activities and indicates possible donor agencies for funding the assistance. In some instances the specific requirements are not yet fully developed and where this is the case the requirement for developing Terms of Reference is shown in bold type. Activities in italics are integral to the overall Strategic Plan but have already been substantially completed. Table 12. Presents a time line for the activities necessary to complete the transformation of the Payment Bureaus.

TABLE 11.

TECHNICAL ASSISTANCE REQUIREMENTS -- SUMMARY TABLE

Component	Activity	Timeframe	Possible Donor Agency
Management and Regulatory			
Legal Framework	<i>Complete Payments System Law</i>	July, 1999	IMF, USAID
Develop Information and Education Campaign		July, 1999	USAID
Prerequisite Activities			
Financial Verification	Develop Terms of Reference	July, 1999	USAID
	Conduct Verification	July-August, 1999	USAID
Payment Bureau Fee Structure	Develop new Fee structure	July-August, 1999	USAID
Payment and Clearing System			
Payment and Banking Activities	Develop Regulations for Payment Services	July-August, 1999	USAID
	Bank Certification	July-August, 1999	IMF, USAID
Clearinghouse Development	Design Framework for Implementation	May-July, 1999	World Bank, IMF
	Clearinghouse Implementation	Oct, 1999-Mar, 2000	
Government Services			
<i>Tax and Customs Administrations</i>			
Tax and Customs Legislation	Draft Legislation	Jun-Sep, 1999	CAFAO
Strengthen Administrations		Jun, 1999-Dec, 2000	CAFAO, US Treasury
	Consolidation of Accounts	Oct-Dec, 1999	CAFAO, US Treasury
<i>Treasury and Expenditure Management</i>			
Establish Treasury	<i>Develop Implementation Plan</i>	July, 1999	World Bank, US Treasury
	Treasury Implementation	Sept., 1999-Dec, 2000	US Treasury, USAID
	Consolidation of Accounts	Oct-Dec, 1999	US Treasury, CAFAO

Component	Activity	Timeframe	Possible Donor Agency
Statistics and Information Services			
Banking Requirements	Confirm data requirements for Risk Free and Moderate Risk transactions	Aug-Sep, 1999	USAID
Tax Administration Requirements	Data and processing requirements	Jan-Mar, 2000	CAFAO, US Treasury
Statistics Agency Requirements	Develop Terms of Reference	Sept., 1999	USAID
	Develop Statistics Agency capability	Mar-Sep, 2000	EU
Information Technology Implications			
Bank Capabilities	Review Capabilities for Risk Free and Moderate Risk transactions	June-Aug., 1999	USAID
Tax Administration	Determine Requirements	July, 1999	CAFAO, US Treasury
Treasury	Determine Requirements	Sep-Dec, 1999	US Treasury, USAID
Payment Bureaus Disposition	Survey PB Assets	Dec 1999-Feb 2000	USAID
	Develop asset transfer strategy	Feb-Mar, 2000	USAID
Organization and Human Resource Issues			
	Develop Terms of Reference	July, 1999	USAID
Staff level and Skills Inventory		Aug.-Nov, 1999	EU, USAID
Determine Transfer Requirements		Nov-Dec, 1999	EU, USAID
Staff Redevelopment		Dec, 1999-Jun, 2000	EU
Other Activities			
CBBH Cash Distribution	Revise Distribution Arrangements	Jul-Aug, 2000	IMF

ANNEX 1. Guidelines for Payment Bureau Operations

The Guidelines comprise some 600 pages, 13 Sections, and myriad required forms. This level of detail is impressive and leaves little room for employee discretion in following the rules. During each of the interviews with the Payment Bureaus, management confirmed that the Guidelines are still essentially in place, in spite of the breakup of the FRY. This analysis looks briefly at each of the sections and forecasts whether similar functions may continue to be provided by the PBs or through private banks operating payment services. A summary is presented in the attachment.

1.0 General:

The Guidelines define uniform operational practice according to which the Payment Bureaus should conduct affairs in each of 23 specified functions. It is published in the form of modifiable inserts, in case any of the activities are modified. A few sections could conceivably apply to commercial banks, but most likely there would be separate banking regulations from the CBBH. This would certainly be the case for reserve requirements, clearinghouse rules, and settlement procedures. Also, banking regulators would set criteria for qualifying banks willing to offer payment services directly to clients.

In a new environment where the PBs act as processors only, they would not use GIRO accounts.

2.0 Uniform Chart of Accounts:

The Guidelines contain a Chart of Accounts covering 9 classes of activities. It is not known whether this classification is consistent with national standards. In the new environment foreseen, banks will be covered by banking regulations and the PBs, presumably, will not have accounts for either natural or legal persons. However, accounts used for government activities may still be relevant if the PBs act as Fiscal Agents for the Ministry of Finance. Accounts pertaining to relationships with the National Bank of Yugoslavia are no longer relevant.

3.0 Opening of accounts:

This title appears to cover accounts held by both natural and legal persons with the PBs - whether in GIRO or current accounts. The PBs used a committee structure, comprised of representatives from the Legal & Accounts departments, to approve applications. Thirteen standard forms are attached to this section, many of which are routinely forwarded to government agencies for appropriate action. In the new environment, PBs will not have transaction accounts with the public. Banks will follow their own procedures, which may vary, depending upon bank policy.

4.0 Keeping of records

This section contains extensive rules pertaining to information supplied by clients submitted for government control purposes. It is likely that there will be no change in these provisions during the transition period; however when banks take over client account payment services much of this section may no longer apply. Four standard forms, used in local offices, are attached.

5.0 Liquidation Activities

Liquidation Activities include receiving, and controlling accuracy for, cash payment orders; keeping cashiers books, handling damaged bank notes for redemption, selling payment order forms and checkbooks, and usage and control of money order stamps. During the transition period, such rules will apply. Later bank rules will replace them.

6.0 Cashier's Activities

Activities of the cashier's include: receipt and payout of cash, acceptance of cash through night depositories, accepting surplus cash, receipt of worn-out notes and damaged coins, determining and investigating shortages and overages and reporting on cashier daily statistics. These rules may apply in the new environment if the PBs handle cash transactions and store inventories for the CBBH. Banks will have their own rules for currency and coin processing by their employees. There are 22 standard forms attached - all of which appear to be required by and kept in the PB offices.

7.0 Tasks of the Treasury

This organizational unit is responsible for maintaining the cash supply, handling counterfeits, transporting shipments of currency, security of vaults keys, etc. The 15 standard internal forms are attached. These rules will apply in future, if the PBs act as agents of the CBBH in the storage of currency.

8.0 Purchase, Exchange, and Sale of Real Foreign Currency Holdings

The activities in this section are clear from the title. These rules will apply, in modified form, to the PBs, commercial banks and the CBBH, in relation to the activities they perform. The six standard forms are attached – half of which remain internal, and the other half are forwarded to the main office of the National Bank of Yugoslavia.

9.0 Fee and Tax Value Stamps and Blanks

This section appears to apply to government tax functions; two standard forms are attached. If the PBs perform Fiscal Agency activities in the future, the provisions will apply as they are conducted in BiH.

10.0 Receipt, Control of Regularity and Execution of Non-cash Payment Orders

This is the most extensive section of the Guidelines, comprising 6 subsections and about 20-25 attachments. The section contains all the rules pertaining to printing and negotiating payment orders. In the future, similar rules would apply to banks; some may be incorporated in CBBH clearinghouse regulations, and others could be provided for in a uniform negotiable instruments law. During the transition period, the rules will still apply to the PBs as they process PO's, as agents for banks, under the new organizational structure.

11.0 Multilateral compensation

This section appears to apply to settlement of disputes regarding commercial transactions. In the new environment, they would be included in national statutes on contract law, negotiable instruments and insurance settlements.

12.0 Specific Attributes of Executing Orders from Bank Accounts

Most of these rules apply to avoiding insufficiency of funds in business accounts. Bank rules, and perhaps civil law may apply here in the future. The PBs will not be involved in assuring adequate cover under such circumstances. Nine standard forms are attached, all of which appear to remain internal to the PB offices.

13.0 Payments from Accounts, Forced Collection and Methods of Recording Outstanding Cash Commitments

This section sets forth rules for prioritization of payment orders in the event there are insufficient funds in a business account. In the future this function will be a bank responsibility to administer under the appropriate national statutes. It will not be a function of the PBs. Two internal standard forms are attached

14.0 Processing of Data from Payment Orders in the Payments System

These rules apply to cases in which PBs perform automatic processing of payment orders. 23 standard internal forms are attached. Financial institutions are likely to issue similar rules in future for the receipt and processing of computer data when acting as 3rd party processors. Also the new clearinghouses may accept magnetic media according to certain standards.

15.0 Payments System Computer Data Exchange

This section is similar to 14.0 with direct inputs front computer to computer connections. Similar rules may be set by the successor institutions in the new environment when acting as 3rd party processors.

16.0 Monitoring Payments System Efficiency

This section contains standard methods for recording volume by the PBs. 3 standard internal forms are attached. Presumably, it will not apply in the new environment.

17.0 Accepting, Controlling, Classifying, Processing, and Reporting according to: Semiannual and Annual Accounts of Legal Entities

Contained herein are uniform data reporting requirements for legal persons covered by Federal reporting laws. Financial data is the prime target here. Most of the 14 attachments convey data to the Federal Government. In the future, the PBs will not be responsible for this, as they will not have access to such data nor the legal obligation to collect it.

18.0 Unique Application of Control Procedure

This section appears to set forth a process for resolving inter-branch disputes. These are prescribed procedures when decisions about the rights, obligations and legal interests of legal entities need to be made. In the new environment banks will be responsible for resolving such disputes.

19.0 Reporting Bureau

These procedures are prescribed for the reporting of statistical information from PB branches to head offices. Five attachments convey the requirements. During the transition period such rules may apply, but not after the conversion to private sector processing.

20.0 Closing and Opening of Books

These procedures prescribe the reporting of statistical information from PB branches to head offices. Three attachments convey the requirements. During the transition period such rules may apply, but not after the conversion to private sector processing.

21.0 Decision about the Beginning, Schedule, and the End of the Working Day in the PB Organizational Units

These rules set out the work schedule for the PB offices on a uniform basis. Such rules are common in industry and presumably would be recast for the new environment.

22.0 Application of Central Bank Decision on Cash Payments

At issue here is the payment of cash by the PBs for government purchases and the maximum amount of cash that can be held at individual offices. Also, this section sets out the basis for a PB office in making transfers from client savings accounts. It is a control process that will not exist in the new environment.

23.0 Review of Federal Laws governing Operations of Payment Flow and the System of Payments in the Country

This is a compilation of laws that apply to the work of the PBs. It must be updated if used in the new environment.

24.0 Final Provisions

This appears to be a catchall for miscellaneous additions made to the preceding sections before final publication.

**Annex 2.1. -- Routine Data Reports Provided by ZPP to Other Agencies
For Statistical & Tax Enforcement Purposes**

Item	Name of		Fre- quency	Compu- terization	Currently-Met Needs of Data Users			
		Report			Tax Admin	FIS	CBBH	Other*
<i>A. Reports based on forms collected by ZPP from businesses/employers, for tax purposes:</i>								
1 Employment & wages at registry employers	Specifikacija uz isplatu placa		Monthly	Manual tabs, with plans for computerization	Individual sheet. for doubtful cases	Not sent	Not sent	Totals
2a Annual income statement	Bilans uspjeha		Annual	Computer files	Individual sheet. for doubtful cases	Microdata for limited use	Not sent	Totals
2b Annual balance sheet	Bilans stanja		Annual	Computer files	Not used	Plans to use in future	Not sent	Unused
2c Annual employment & wages	Posebni podaci		Annual	Computer files	Individual sheet. for doubtful cases	Microdata for limited use	Not sent	Totals
3 Mid year income statement, balance sheet, employ. etc.	Same as above		Annual	Computer files	Same as above; rarely used	Little used	Not sent	Totals
<i>B. Forms collected by ZPP on behalf of FIS (FIS processes):</i>								
4 Income & expenditures, required for national accounts	GI		Annual	FIS enters data	Not sent	Own use	Not sent	Not sent
5 Investment questionnaire	INV-01		Annual	FIS enters data	Not sent	Own use	Not sent	Not sent
<i>C. Reports based on payments executed by ZPP:</i>								
6 Tax payments by each payer			Daily	Computer files	Microdata	Not sent	Not sent	Not sent
7 Government revenues, totals by type of tax & recipient		B-2	Monthly	Computer files	Totals	Totals	Totals	Totals
8 ZPP balances and transactions by category of account		KNJ-1^	Monthly	Computer files	Not sent	Not sent	Totals	Not sent

* Other agencies, including the Ministry of Finance, Economic Development Planning Institution, cantonal governments, etc.

^ The KNJ-2 report provides a subset of the data in the KNJ-1 report.

Note: Items 2 and 3, when reported by ZPP, are grouped into three reports: for (1) enterprises and nonprofit institutions, (2) Banks and insurance and (3) government agencies.

Annex 2.2 -- Routine Data Reports Provided by ZAP to Other Agencies For Statistical & Tax Enforcement Purposes

Item	Name of		Fre- quency	Compu- terization	Currently-Met Needs of Data Users			
	Form	Report			Tax Admin	FIS	CBBH	Other*
A. Reports based on forms collected by ZAP from businesses/employers, for tax purposes:								
1 Employment & wages at registry employers	Specifikacija uz isplatu placa Osobni dohodok (OD)		Monthly	Computer files	Individual sheet. for doubtful cases	Used for employ & wages	Not sent	Totals
2a Annual income statement	Bilans uspjeha		Annual	Computer files	Individual sheet. for doubtful cases	Microdata for limited use	Not sent	Totals
2b Annual balance sheet	Bilans stanja		Annual	Computer files	Not used	Plans to use in future	Not sent	Totals
2c Annual employment & wages	Posebni podaci		Annual	Computer files	Individual sheet. for doubtful cases	Microdata for limited use	Not sent	Totals
3 Mid year income statement, balance sheet, employ. etc.	Same as above		Annual	Computer files	Same as above; rarely used	Little used	Not sent	Totals
B. Forms collected by ZAP on behalf of FIS (FIS processes):								
4 Income & expenditures, required for national accounts	GI		Annual	FIS enters data	Not sent	Own use	Not sent	Not sent
5 Investment questionnaire	INV-01		Annual	FIS enters data	Not sent	Own use	Not sent	Not sent
C. Reports based on payments executed by ZAP:								
6 Tax payments by each payer			Daily	Computer files	Microdata	Not sent	Not sent	Not sent
7 Government revenues, totals by type of tax & recipient		B-2	Monthly	Computer files	Totals	Totals	Totals	Totals
8 ZAP balances and transactions by category of account		KNJ-1^	Monthly	Computer files	Not sent	Not sent	Totals	Not sent

* Other agencies, including the Ministry of Finance, Economic Development Planning Institution, cantonal governments, etc.

^ The KNJ-2 report provides a subset of the data in the KNJ-1 report.

Note: Items 2 and 3 after data entry are sent to ZPP don magnetic tape. The data are then included both in ZPP totals and in a tape for the Federation. ZPP send the data on tape to FIS and other agencies.

**Annex 2.3 -- Routine Data Reports Provided by SPP to Other Agencies
For Statistical & Tax Enforcement Purposes**

Item	Name of:		Fre- quency	Compu- terization	Currently-Met Needs of Data Users			
	Form	Report			Tax Admin	SO	CBBH	Other*
<i>A. Reports based on forms collected by SPP from businesses, for tax purposes:</i>								
1 Employment & wages at registry employers	Rekapitulacija uz isplatu placa		Monthly	Computer files	Individual sheet. for doubtful cases	Not sent	Not sent	Not sent
2a Annual income statement	Godisnji obracun: Bilans uspjeha		Annual	Computer files	Individual sheet. for doubtful cases	Microdata for limited use	Not sent	Totals
2b Annual balance sheet	Godisnji obracun: Bilans stanja		Annual	Computer files	Not used	Plans to use in future	Not sent	Totals
2c Annual employment & wages	Godisnji obracun: Aneks		Annual	Computer files	Individual sheet. for doubtful cases	Used	Not sent	Totals
3 Mid year income statement, balance sheet, employ. etc.	Same as above		Annual	Computer files	Same as above; rarely used	Not used	Not sent	Totals
<i>C. Reports based on payments executed by SPP:</i>								
6 Tax payments by each payer			Daily	Computer files	Microdata	Not sent	Not sent	Micrfodata
7 Government revenues, totals by type of tax & recipient		B-2	Monthly	Computer files	Totals	Totals	Totals	Totals
8 SPP balances and transactions by category of account		KNJ-1^	Monthly	Computer files	Not sent	Not sent	Totals	Totals

* Other agencies, including the Ministry of Finance, cantonal governments, etc.

^ The KNJ-2 report provides a subset of the data in the KNJ-1 report.

Note: Items 2 and 3, when reported by SPP, are grouped into three reports: for (1) enterprises and nonprofit institutions, (2) Banks and insurance and (3) government agencies.

**Annex 2.4 -- Routine Statistical Reports Provided by Payments Bureaus:
Evaluation of usefulness & recommended action**

Item	Name Of Form	Report Name	Fre- quency	Usefulness to:		Recom- mendation
				Tax Admin	Data users	
A. Reports based on forms collected by PB from employers/businesses, for tax purposes:						
1 Employment & wages at registry employers	Specifikacija uz isplatu placa		Monthly	Needed to document payroll taxes	Used by FIS for ZAP regions.	Transfer to TA or FIS in ZAP regions
2a Annual income statement	Bilans uspjeha		Annual	Needed to document net profit.	FIS makes loimited use of microdata; other Fed. data users get totals only.	Transfer to TA
2b Annual balance sheet	Bilans stanja		Annual	Rarely used	SI of RS uses microdata. Not yet needed by any user but FIS has plans to use for national accounts	No need to key in
2c Annual employment & wages	Posebni podaci		Annual	Needed to document payroll taxes	Used by SI of RS; used to a limited extent by FIS	Transfer to TA
3 Mid year income statement, balance sheet, employ. etc.	Same as above		Annual	Rarely used	Not much needed by any user	Terminate
B. Forms collected by ZPP/ZAP on behalf of FIS (FIS processes)*:						
4 Income & expenditures, required for national accounts	GI		Annual	Not sent	Needed by FIS but suitable for sampling	Transfer to FIS with sampling
5 Investment questionnaire	INV-01		Annual	Not sent	Needed by FIS but suitable for sampling	Transfer to FIS with sampling
C. Reports based on payments executed by PB:						
6 Tax payments by each payer			Daily	Microdata for tracking revenue & compliance	Transfer to banks which collect revenue.	Transfer to banks
7 Government revenues, totals by type of tax & recipient		B-2	Monthly	Totals for monitoring revenue.	Needed by MinFin & FIS/SI. Transfer to TA which can calculate. from daily data.	Transfer to TA
8 PB balances and transactions by category of account		KNJ-1^	Monthly	Not sent	Needed by CBBH. Transfer to all commercial banks (banks must code accounts).	Transfer to banks & simplify

* SO of RS collects similar forms for some businesses but does not rely on SPP for this purpose.

Annex 3. Monthly KNJ-1 Report Submitted by Payment Bureau to CBBH

(Data as
of Feb.
28, 1999)

CBBH CATEGO RY	KNJ-1 CODE	TITLE	TURNOVER		BALANCE	
			FROM JAN 1 TO FEB 28		AS OF FEB 28	
			DEBITS	CREDITS	DEBITS	CREDITS
	100	Cash in safe - Payment Bureau vault	406.271.050	316.577.150	89.693.899	
	101	Cash at post offices	101.305.561	99.000.909	2.304.650	
	102	Damaged and old bills and damaged coins	51.281		51.281	
	110	Grants to post offices	64.480.280	63.217.022	1.263.257	
	111	Surpluses of post offices	31.259.041	31.598.012		338.97
	116	Grants to distanced units of the Payment Bureau	16.719.600	16.719.600		
	117	Surplus of distanced units of the Payment Bureau	6.146.600	6.146.600		
	165	National Bank - on the basis of duty and tax stamps				
	187	Deficits in safes of post offices	1.27	1.114	155	
	188	Surpluses in safes of post offices	30.544	30.911		366
		GROUP 1	626.265.229	533.291.319	92.973.909	
	240	Cash accounts of national banks	2.363	390.363.029		390,360,666
	242	Current accounts of national banks for payment system transactions	2.058.404.838	1.760.998.794	297,406,043	
	249	GROUP 2	2.945.757.454 5.004.164.655	2.945.757.454 5.097.119.278		92.954.622
	500	Collective settlement of bank deposits	322.064.705	204.942.902	117,121,803	
	503		129.288.865	105.329.535	23.959.330	
	506	Collective settlement of bank unit deposits	66.364.600	46.300.201	20.064.399	
	506	Collective settlement of deposits of the National Bank of Yugoslavia	26.234.630	8.216.830	18.017.800	
	506		46.300.201	66.364.600		20.064.399
	506	Calculated a-vista deposits of the National Bank of Yugoslavia	8.213.800	8.213.800		
	506	Covered checks	15.651.071	16.505.183		854.112
	506	Money orders for the payment through post offices	2.963.779	3.165.497		201.717
	506	Remittances and money orders received	480.032	481.953		1.92
	506	Temporary account of PTT companies	56.862,33	58.467,80		1.605
	506	Internal temporary accounts	12.821.018	13.947.218		1.126.200
	506	Orders forwarded by collective notifications of credit	160	160		
	506	Forwarded telex and fax credit orders	1.743.990.140	2.032.913.353		288,923,212
	506	Forwarded telex and fax debit orders	45.469.084	37.308.927	8.160.156	
	506	Forwarded electronic credit orders	227.029.649	237.059.428		10.029.778
	506	Forwarded electronic debit orders	33.461.587	32.955.767	505.819	
	506	Received telex and fax credit orders	2.067.919.743	1.779.594.300	288,325,443	
	506	Received telex and fax debit orders	40.245.933	45.649.864		5.403.931
	506	Received electronic credit orders	228.690.029	228.690.029		
	506	Received electronic debit orders	33.457.300	33.457.300		
	506	Special settlement in the PB for the territory of the	113.994.599	113.994.599		

	506	republic or the autonomous province Cash settlement for the territory of the republic or the autonomous province with the national bank	404.505.392	404.505.392		
	506	The accounts of PB units adjustment on the basis of payments for the previous year	14,091,859,953	14,110,633,881		18.773.946
	506	The accounts of PB units adjustment on the basis of payments for the current year	4.259.121.136	4.212.797.616	46.323.520	
	506	Settlement upon forwarded telex and fax credit orders	489.347.806	489.347.806		
	506	Settlement upon forwarded telex and fax debit orders	44.847.491	44.847.491		
	506	Settlement upon forwarded electronic credit orders	62	62		
	506	Settlement upon forwarded electronic debit orders	20	20		
	506	Settlement upon received telex and fax credit orders	567.136.063	567.136.063		
	506	Settlement upon received telex and fax debit orders	44.864.396	44.864.396		
		GROUP 5	25,066,380,099	24,889,282,652	177,097,446	
A	601	Business accounts of legal entities from the area of the economy	604.120.490	652.163.547		48.043.057
A	603	Business accounts of legal entities from the area of the non-economy	109.103.693	128.490.484		19.386.791
A	604	Accounts of units of legal entities from the area of the economy	53.519.803	56.532.140		3.012.336
A	609	Accounts of units of legal entities from the area of the non-economy	50.448	155.314		104.865
	611	Business account of the National Bank of Yugoslavia	169.365.082	169.365.082		
	612	Accounts of units of the National Bank of Yugoslavia	399.064	399.064		
B	620	Business accounts of banks	1.740.906.349	1.740.906.349		
B	621	Accounts of bank units deposits are not calculated for	18.605.410	22.003.664		3.398.253
B	623	Business accounts of other financial organizations	9.882.709	13.076.101		3.193.392
B	625		513.629	1.262.464		748.834
B	626		4.590.76	6.045.984		1.455.221
	629		8.213.800	26.231.600		18.017.800
C	630	Business accounts of the federal state budget, republics-members and local self-management bodies	185.680.444	206.178.695		20.498.251
C	637	Business accounts of governmental bodies and organizations and bodies and organizations of local self-management bodies	110.465.893	119.731.868		9.265.974
C	638	Accounts of units of governmental bodies and organizations and bodies and organizations of local self-management units	42.211.087	46.415.796		4.204.708
	640	Business accounts of funds, i.e. business accounts of health insurance organizations	10.888.941	11.196.958		308.016
C	642	Business accounts of funds, i.e. business accounts of pension and invalid insurance organizations	42.292.385	42.823.463		531.078
	644			86		86

C	645		573.897	1.111.628	537.731
	650	Business accounts of funds for the development of undeveloped areas	8.864	364.442	355.578
C	652	Business accounts of governmental funds and local self-management unit funds	1.208.337	1.475.722	267.384
C	655	Business accounts of solidarity funds	83.612	92.625	9.013
	661	Business accounts of funds in material production area		8.603	8.603
C	662	Business accounts of funds in housing and utility areas	382.126	991.453	609.326
C	664	Business accounts of insurance organizations	3.087.275	3.385.299	298.024
	665	Accounts of units of insurance organizations	5.506.019	6.467.607	961.588
	670	Business accounts of political organizations	166.387	205.559	39.172
	671	Accounts of units of political organizations	749.184	1.189.954	440.77
	672	Business accounts of religious organizations	906.013	1.370.695	464.682
	675	Business accounts of residential buildings	25.014	34.305	9.291
	678	Business accounts of associations, social organizations and other legal entities	9.301.338	15.823.894	6.522.556
	679	Accounts of units of associations, social organizations and other legal entities	1.403.757	3.180.231	1.776.474
	685	Business accounts of shops	46.918.513	51.881.007	4.962.494
A	690	Accounts of legal entities in the liquidation i.e. bankruptcy	79.046	335.611	256.564
	696	Funds of court deposits and confiscated funds	68.381	281.807	213.426
A	697	Funds of other deposits	8.514.352	9.989.174	1.474.822
A	698		44.67	249.51	204.84
A	699	Funds from accounts of participants not being used	2.636	197.598	194.961
		GROUP 6	3.189.839.424	3.341.615.401	151.775.976
	710	Reserves of legal entities from the area of the economy	1.542	2.047	505
	713	Reserve funds of legal entities from the area of the non-economy	4.283	11.56	7.277
	714	Reserve funds of insurance organizations	10.05	225.393	215.343
	715	Reserve funds of other financial organizations		40	40
	718	Reserve funds of governmental bodies and bodies of local self-management units		101	101
	740	Other purposes funds of legal entities from the non-economy area	21.049	22.118	1.069
	741	Other purposes of funds, i.e. social insurance organizations and local communities	994.748	1.115.432	120.683
	742	Prevention funds of insurance organizations	70.324	147.081	76.757
	743	Solidarity and other purpose funds of legal entities	67.854	170.364	102.51
	746	Funds of political organizations, associations, social organizations and other legal entities	500	44.447	43.947
	748	Funds transferred to banks or other financial institutions upon activities for the accounts of legal entities	66.936.174	71.195.427	4.259.253
	750	Reserve funds of the federal state, republics	682	263.301	262.619

	and local self-management units				
752	Special reserve funds of the federal state, republics and local self-management units		7.664		7.664
762	Allocated cash funds and letters of credit from the area of economy	388.409	1.422.893		1.034.484
763	Allocated cash funds and letters of credit from the area of non-economy	358.603	947.388		588.784
774				0	
780	Funds of the voluntary local tax		3.054		3.054
781		658.806	2.604.809		1.946.002
789	Other specific purpose funds of the federal state, republics and local self-management units	32.641.435	36.824.737		4.183.302
791		307.726	527.818		220.091
	GROUP 7	102.462.189	115.535.683		13.073.493
833	Pass-through accounts for the realization collection	604.694	612.333		7.639
840	Pass-through accounts for the payment of budget revenues of the federal state, republics and local self-management units	140.930.986	144.458.233		3.527.246
842	Pass-through accounts for the payment of revenues of funds in areas of the material production, housing, utilities and other funds	5.527.364	5.813.121		285.756
843	Pass-through accounts for the payment of revenues of funds, i.e. social insurance organizations	74.042.816	74.346.423		303.606
844		38.026.984	42.726.868		4.699.883
845	Accounts for revenue recording of administrative bodies	20.433.277	21.421.167		987.89
846	Pass-through accounts of revenues of natural persons		24.333		24.333
847		528.386	922.907		394.52
848			20.918		20.918
849	Pass-through accounts for the common revenue collection	58.528.190	60.543.658		2.015.467
	GROUP8	338.622.701	350.889.965		12.267.263
992	Deposits	421		421	
997	Depositors of community deposits and accounts of their units		421		421
999		4.195.543.524	4.195.543.524		
	GROUP 9	4.195.543.945	4.195.543.945		
	Total	38,523,278,246	38,523,278,246	270,071,355	270,071,355

ANNEX 4.

Number of ZPP transactions for first quarter 1999, by Municipality

CANTON AND MUNICIPAL OFFICES	CASH		NON-CASH			TOTAL transact.	
	KM	DM	KM	DM	HRK	Cumulative	Daily
FEDERATION ZPP	1,435,270	370,804	3,036,433	1,074,950		5,917,457	97,007
Canton offices Sarajevo, Travnik, Mostar					597	597	
CANTON SARAJEVO	473,254	101,755	1,545,779	552,786	354	2,673,928	43,835
Centar	179,836	38,667	587,396	210,059		1,015,958	16,655
Stari Grad	70,988	15,262	231,867	82,918		401,035	6,574
Novo Sarajevo	85,186	18,315	278,240	99,501		481,242	7,889
Novi Grad	66,256	14,247	216,409	77,390		374,302	6,136
Ilidza	42,593	9,158	139,120	49,751		240,622	3,945
Hadzici	14,198	3,053	46,373	16,584		80,208	1,315
Vogosca	9,465	2,035	30,916	11,056		53,472	877
Ilijas	4,732	1,018	15,458	5,527		26,735	438
CANTON BIHAC	198,751	98,394	203,627	153,183		653,955	10,721
Bihac	57,348	30,868	100,826	59,329		248,371	4,072
Bosanska Krupa	18,434	7,906	14,507	12,374		53,221	872
Cazin	35,985	19,440	28,768	22,004		106,197	1,741
Velika Kladusa	30,196	8,755	18,928	16,047		73,926	1,212
Buzim	7,661	3,945	5,213	2,649		19,468	319
Kljuc	10,097	6,490	8,873	9,254		34,714	569
Bosanski Petrovac	6,197	4,919	5,951	4,059		21,126	346
Sanski Most	32,833	16,071	20,561	27,467		96,932	1,589
CANTON GORAZDE	21,519	6,884	30,897	13,311		72,611	1,190
CANTON TRAVNIK	78,971	29,221	142,164	41,361	221	291,938	4,786
Travnik	26,277	10,976	66,161	19,803		123,217	2,020
Bugojno	19,395	7,627	26,178	7,935		61,135	1,002
Gornji Vakuf	5,331	2,469	6,618	2,087		16,505	271
Vitez	3,110	1,186	5,055	1,470		10,821	177
Novi Travnik	5,042	1,508	9,460	1,680	19	17,709	290
Busovaca	4,097	949	5,143	1,680		11,869	195
Fojnica	7,345	1,429	11,261	2,085		22,120	363
Donji Vakuf	7,188	3,077	11,083	4,008		25,356	416
Jajce	1,185		1,205	613		3,003	49
CANTON TUZLA	355,654	71,356	612,773	177,772		1,217,555	19,960
Tuzla	115,109	25,823	311,302	96,600		548,834	8,997
Gradacac	29,739	8,000	39,954	12,922		90,615	1,485
Kladanj	10,701	1,928	9,080	3,162		24,871	408
Celic	7,456	1,103	8,337	2,702		19,598	321
Gracanica	31,754	6,601	42,685	12,490		93,530	1,533
Brcko	21,904	2,961	22,413	5,515		52,793	865
Doboj-Istok	7,528	1,559	9,641	2,890		21,618	354
Sapna	7,401	1,093	1,951	711		11,156	183
Teocak	3,789		2,432	794		7,015	115
Banovici	14,013	2,633	19,372	3,152		39,170	642
Zivinice	33,035	6,080	48,795	13,830		101,740	1,668
Srebrenik	27,964	5,026	36,980	9,600		79,570	1,304
Kalesija	19,055	3,575	16,685	5,010		44,325	727

	Lukavac	26,386	4,974	43,146	8,394		82,900	1,359
	CANTON ZENICA	250,521	48,204	420,861	101,301		820,887	13,457
	Zenica	83,725	16,538	193,001	46,758		340,022	5,574
	Kakanj	25,233	3,174	28,400	4,894		61,701	1,011
	Zavidovici	26,534	3,929	30,358	6,043		66,864	1,096
	Breza	11,967	1,963	16,715	2,949		33,594	551
	Begov Han	4,739	740	6,089	1,627		13,195	216
	Maglaj	16,308	4,928	20,378	5,309		46,923	769
	Tesanj	32,361	6,898	48,040	14,525		101,824	1,669
	Vares	6,432	1,872	10,076	3,050		21,430	351
	Olovo	7,589	1,644	10,442	2,667		22,342	366
	Visoko	31,699	5,312	53,189	11,680		101,880	1,670
	Doboj-Jug	3,934	1,206	4,173	1,799		11,112	182
	CANTON MOSTAR	56,259	14,785	76,776	32,991		180,811	2,964
	Mostar	32,606	9,032	46,523	22,875		111,036	1,820
	Konjic	15,715	3,309	21,509	6,720		47,253	775
	Jablanica	7,851	2,444	8,406	3,083		21,784	357
	Prozor	87		338	313		738	12
	DISTRICT MOSTAR	341	205	3,556	2245	22	6,369	104

ANNEX 5.

ZPP Employee Qualification, Age, Gender and Ethnicity									
(as of March 31, 1999)									
I	By location								
	1	Central office							69
	2	Canton Bihac							150
	3	Canton Gorazde							21
	4	Canton Mostar							69
	5	Canton Sarajevo							263
	6	Canton Travnik							103
	7	Canton Tuzla							191
	8	Canton Zenica							195
		TOTAL							1061
II	By educational qualification								
			G	U	HS	SC	C	ES	
	1	Central office	38	5	14	5	2	5	
	2	Canton Bihac	18	24	92	2	2	12	
	3	Canton Gorazde	2	5	11	1	-	2	
	4	Canton Mostar	11	7	42	-	4	5	
	5	Canton Sarajevo	28	25	165	3	1	41	
	6	Canton Travnik	8	15	66	1	-	13	
	7	Canton Tuzla	20	36	102	1	1	31	
	8	Canton Zenica	22	23	126	-	3	21	
		TOTAL 1.061	147	140	618	13	13	130	
G is university graduate, U is some university, HS is high school graduate, SC is skilled craftsman, C is craftsman, and ES is elementary school graduate									
III	By age								
			under 30		30-50		over 50		
	1	Central office	4		39		26		
	2	Canton Bihac	27		95		28		
	3	Canton Gorazde	-		17		4		
	4	Canton Mostar	9		43		17		
	5	Canton Sarajevo	16		198		49		
	6	Canton Travnik	9		74		20		
	7	Canton Tuzla	7		161		23		
	8	Canton Zenica	10		157		28		
		TOTAL 1.061	82		784		195		
IV	By gender								
			WOMEN				MEN		
	1	Central office	39				30		
	2	Canton Bihac	113				37		
	3	Canton Gorazde	11				10		
	4	Canton Mostar	59				10		
	5	Canton Sarajevo	172				91		
	6	Canton	76				27		

		Travnik					
	7	Canton Tuzla	141			50	
	8	Canton Zenica	145			50	
		TOTAL 1.061	756			305	
V	By ethnicity						
			Bosnian	Croat	Serb	Montenegrin	Other
	1	Central office	53	6	8	1	1
	2	Canton Bihac	139	8	3	-	-
	3	Canton Gorazde	21	-	-	-	-
	4	Canton Mostar	64	2	3	-	-
	5	Canton Sarajevo	232	15	16	-	-
	6	Canton Travnik	95	7	1	-	-
	7	Canton Tuzla	173	12	5	-	1
	8	Canton Zenica	167	16	12	-	-
		TOTAL 1.061	944	66	48	1	2