INTERNATIONAL MONETARY FUND

Statistical Capacity Building

Case Studies and Lessons Learned

Edited by
Thomas K. Morrison

With Case Studies by
Zia Abbasi
Noel Atcherley
Jaroslav Kučera
Graham L. Slack

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Preface

Technical assistance is a key element in the role of the IMF Statistics Department. While in the early years it was provided as a support to the statistical publications program and to assist member countries in adopting internationally accepted methodologies, it evolved in the 1990s to respond to the broader demand that countries provide reliable data on a timely basis to policymakers and markets. In the wake of the financial crises of the 1990s, the Statistics Department spearheaded the drive to develop the data dissemination standards, as well as the Data Quality Assessment Framework (DQAF) that has been applied in many member countries in the context of Reports on the Observance of Standards and Codes (ROSCs). Technical assistance has been critical in assisting countries with their statistical capacity-building efforts to come into line with these international standards.

The effectiveness of technical assistance is evaluated in several different ways, including inspection visits and regular feedback from users. *Statistical Capacity Building: Case Studies and Lessons Learned* complements these efforts by analyzing in greater depth the technical assistance experiences in four country case studies. The studies focus on countries that were in transition and postconflict situations in the 1990s and early 2000s. It is hoped that the conclusions and lessons learned from this report will inform future technical assistance efforts, and will also be a helpful reference to the wider international community, particularly countries undertaking statistical capacity-building programs and other technical assistance providers.

The report was coordinated and edited by Thomas K. Morrison, advisor in the IMF's Statistics Department. The authors of the case studies are Zia Abbasi and Noel Atcherley (long-term resident experts) and Jaroslav Kučera and Graham L. Slack (senior economists in the Statistics Department).

Robert W. Edwards
Director
Statistics Department
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Abbreviations

ADB	Asian Development Bank
ASYCUDA	Automated System for Customs Data Administration
BHAS	Agency for Statistics of Bosnia and Herzegovina
BiH	Bosnia and Herzegovina
BOP	Balance of payments
BOPSY	*Balance of Payments Statistics Yearbook,* IMF
BPM5	Fifth edition of the *Balance of Payments Manual,* IMF
CARDS	Community Assistance for Reconstruction, Development, and Stabilization
CBBH	Central Bank of Bosnia and Herzegovina
CDC	Council for the Development of Cambodia
CED	Customs and Excise Department
COM	Council of Ministers
CPI	Consumer price index
CSES	Socioeconomic Survey of Cambodia
DFUD	Department of International Development
DHS	Demographic and Health Survey
DQAF	Data Quality Assessment Framework
EC	European Commission
ESCAP	Economic and Social Commission for Asia and the Pacific
EU	European Union
Eurostat	Statistical Office of the European Communities
Federation	Federation of Bosnia and Herzegovina
FIS	Federation of Bosnia and Herzegovina Federal Institute of Statistics
FMoF	Federation Ministry of Finance
GDDS	General Data Dissemination System
GDP	Gross domestic product
GFS	Government finance statistics
GFSM	*Government Finance Statistics Manual,* 1986 and 2001, IMF
Gosbank	The State Bank of the Soviet Union
GTZ	German Technical Commission
GVA	Gross value added
HBS	Household Budget Survey
IC	International community
IFS	*International Financial Statistics,* IMF
IIP	International Investment Position
ILO	International Labor Organization
IMF	International Monetary Fund
ISI	International Statistical Institute
ISTAT	Italian National Institute of Statistics
IT	Information technology
ITRS	International Transactions Reporting System

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JICA	Japan International Cooperation Agency
JOCV	Japan Overseas Cooperation Volunteers
JSA	Administered Account for Selected Fund Activities—Japan
JVI	Joint Vienna Institute
KM	Convertible Marka
KOICA	Korean International Cooperation Agency
LFS	Labor Force Survey
LSMS	Living Standards Measurement Survey
MAFF	Ministry of Agriculture, Forestry, and Fisheries
MDGs	Millennium Development Goals
MEF	Ministry of Economy and Finance
MFSM	*Monetary and Financial Statistics Manual,* IMF
MIME	Ministry of Industry, Mines, and Energy
MoC	Ministry of Commerce
MOEYS	Ministry of Education, Youth, and Sports
MoH	Ministry of Health
MoP	Ministry of Planning
MoT	Ministry of Tourism
MPT	Ministry of Post and Telecommunications
MSA	Multisector Advisor
MTPW	Ministry of Transport and Public Works
NBBH	National Bank of Bosnia and Herzegovina
NBC	National Bank of Cambodia
NBFRY	National Bank of the Federal Republic of Yugoslavia
NBRS	National Bank of Republika Srpska
NBU	National Bank of Ukraine
NIS	National Institute of Statistics
NOE	Nonobserved economy
NPRS	National Poverty Reduction Strategy
OHR	Office of the High Representative
PHARE	Poland Hungary Action for Reconstruction of the Economy
PMAS	Poverty Monitoring and Analysis System
PMG	Priority Mission Group
PMIS	Poverty Monitoring Information System
PPI	Producer price index
RDD	Research and Development Department
RGC	Royal Government of Cambodia
ROSC	Report on the Observance of Standards and Codes
RS	Republika Srpska
RSIS	Republika Srpska Institute of Statistics
SCB	Statistics capacity building
SDDS	Special Data Dissemination Standard
SEDP	Socioeconomic Development Plan
SFOR	Stabilization Force
SFRY	Socialist Federal Republic of Yugoslavia
SIAP	Statistics Institute for Asia and the Pacific
SIDA	Swedish International Development Agency
1993 SNA	*System of National Accounts 1993*
STA	Statistics Department technical assistance, IMF
TA	Technical assistance
TCAP	Technical Cooperation Action Plan

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UK-DFID	United Kingdom Department for International Development
UNDP	United Nations Development Program
UNECE	United Nations Economic Commission for Europe
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
YUD	Yugoslav dinars

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PART I

Overview and Lessons Learned

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1. Overview

Thomas K. Morrison*

Purpose of Studies

1.1 The importance of statistical information in the public arena is well established. Increasingly in the past decade, events and developments have propelled efforts to improve the quality of statistics. The financial crises of the 1990s increased attention to the timeliness and reliability of statistics. In addition, a heightened emphasis worldwide on good governance, transparency, and accountability underpinned the drive to improve data quality.

1.2 In this context, statistical capacity building became a focus of governments of developing countries and of donors that provide technical assistance (TA) in support of this effort. Growing out of crisis prevention and an emphasis on good governance and transparency, demands arose from a broad range of countries for TA. Demands also came from particular groups of countries and regions—for example, the transition countries and a growing list of postconflict countries. Both these groups required fundamental reforms and rebuilding of the statistical infrastructure.

1.3 Responding to these needs, developing country governments and TA providers alike focused scarce resources on increasing delivery of TA and implementing plans for improving statistical capacity. Over the past decade, TA in statistics provided by the International Monetary Fund (IMF), for example, increased more than fourfold.

*The author would like to take this opportunity to thank Carol S. Carson, who was director of the IMF Statistics Department when she approved my one-year sabbatical in 2003, giving me the time required to organize this project. I would also like to express my appreciation to the four authors of the case studies, who did not have the luxury of a sabbatical but somehow managed to carve out the necessary time from their busy schedules. Joan Gibson provided valuable editorial assistance. Thanks also to the various country officials who provided valuable comments. The views expressed in this paper are those of the authors and myself and do not necessarily reflect those of the IMF.

1.4 Sufficient experience has now been gained to permit stepping back and examining the effectiveness and impact of capacity-building efforts and attempting to learn lessons about how to improve these efforts. The country case studies in this report are based on the experiences of the four authors providing IMF TA. Both Mr. Abbasi's and Mr. Atcherley's experiences have been as resident long-term multisector statistics advisors, in Cambodia and Bosnia and Herzegovina (BiH), respectively. Both Mr. Kučera's and Mr. Slack's experiences, on the other hand, have been as monetary statistics experts involved in sustained medium-term programs of short-term missions to the Ukraine and BiH, respectively.

Scope and Structure

1.5 The case studies were selected to cover different TA delivery mechanisms, sectors targeted, and country situations. In the cases of Cambodia (see Chapter 2, Abbasi) and BiH (see Chapter 3, Atcherley), the mechanism was IMF multisector TA, focusing on the statistical system as a whole and including statistical organization, the main macroeconomic statistics sectors (balance of payments, monetary, government finance, national accounts, and price statistics), and selected sociodemographic statistics. In the cases of BiH (see Chapter 4, Slack) and Ukraine (see Chapter 5, Kučera), on the other hand, the mechanism was more narrowly focused single-sector (i.e., monetary statistics) TA, delivered by a series of short-term missions over a medium-term period.

1.6 All three countries are transition countries, having transformed over the past decade from planned to market economies, but in the different regional contexts of Eastern Europe, the former Soviet Union, and Asia. The two case studies on BiH provide the opportunity to examine two different approaches to TA in the same country. In addition, while the authors' experiences originate from their IMF assignments, the

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authors endeavor to recognize the capacity-building efforts in the countries in a broader context, including not only IMF activities but also those of the country authorities and other TA providers.

1.7 The four case studies are similarly structured, covering similar medium-term time frames in the late 1990s and early 2000s. They generally begin by describing the setting, giving a snapshot of the country's starting point in terms of general background, institutional setting, capacity, and statistical outputs. They then review the medium-term strategies and plans for improvement that guided the capacity-building activities. Following that is a description of the implementation and outcomes, focusing on concrete outputs and quantitative indicators. Obstacles and shortcomings in implementation are also noted and explained. The closing sections present conclusions and lessons learned. They emphasize factors that contributed to achieving objectives and, in cases where implementation fell short, discuss the reasons and identify lessons learned.

Setting

1.8 The four studies describe the settings in the three countries, first in terms of general sociopolitical and economic background—thereby providing the general context in which capacity-building efforts were launched—and second in terms of the status of statistical capacity building. In the first context, as noted earlier, all three countries were transition countries, although they were moving from different centrally planned systems and also from different types and levels of sociopolitical and economic development. Ukraine was moving from the former Soviet Union model, BiH from the Yugoslav model, and Cambodia from an Asian version of central planning. Ukraine had the advantage that it was not postconflict, compared with both BiH and Cambodia, where basic infrastructure had been destroyed and had to be rebuilt. As a result, poverty and a lack of resources were relatively greater in BiH and Cambodia than in Ukraine. All three countries benefited from large amounts of foreign assistance—which was most pervasive in BiH, where the Dayton Agreement set up a complex and divided political structure to rule the country. Ukraine and Cambodia were fortunate in experiencing their transitions with relative political stability and unity.

1.9 In terms of statistical capacity, all three countries began their transition needing fundamental reforms of their statistical systems, formerly based on centrally planned models. Interestingly, decentralization itself created serious problems to be overcome in setting up new systems, as traditional sources of data collection disappeared and the dispersion of responsibilities caused confusion and problems of coordination. Staff in statistical agencies needed basic training in the new methodologies. New institutions had to be created or rebuilt in the two postconflict cases. In all cases, the situations in the beginning were better for statistics produced by the central banks (e.g., monetary and balance of payments statistics), where relatively strong leadership and resources provided better bases on which to build. Nevertheless, in all country cases, statistical outputs at the beginning of the period were fairly limited. Statistical legislation was also lacking in all three countries.

Strategies and Plans

1.10 The authors discuss strategies for statistical capacity building and TA either for an entire statistical system (Chapters 2 and 3, Abbasi and Atcherley) or for a sector or project (Chapters 4 and 5, Slack and Kučera).

1.11 Not surprisingly, the difficulties described in the case studies dealing with systemwide strategies are greater than those in the studies dealing with sector-specific strategies. In both Cambodia and BiH, Abbasi and Atcherley describe a lack of initial overall strategies to guide the capacity-building efforts of the authorities and the donors. As a result, progress in the early years in both cases was seriously hampered by gaps in coordination and coverage, confused and overlapping responsibilities, and a lack of effective leadership.

1.12 Coordinated strategic planning in Cambodia improved over time as authorities and donors gained experience, but coordination in BiH has been more uneven. Cambodia made greater progress, because it was not hindered by the divided political structure experienced by BiH. A critical event in Cambodia was the convening by the authorities in October 2002 of a workshop, "Partnerships in Statistics Capacity Building for Cambodia," where a *Statistics Master Plan for Cambodia* was agreed upon by the various statistical agencies of the government and the donor community. This workshop probably would not have been possible had it not been for (i) the agreement of the major donors in 2001 to finance jointly and work together on

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a medium-term Technical Cooperation Action Plan (TCAP) that paved the way for closer donor cooperation and (ii) Cambodia's decision in 2001 to participate in the IMF's General Data Dissemination System (GDDS), which provided a comprehensive planning framework. Even in the more difficult situation of BiH, in Chapter 3 Atcherley describes four stages of the evolution of statistical strategy, leading finally to a situation where statistical legislation is in place and an empowered state statistical office is ready to embark on more prioritized strategic planning.

1.13 At the sector- and project-specific level in Chapters 4 and 5, Slack and Kučera point out that strategies were agreed upon fairly early by the authorities and the IMF to improve monetary statistics over the medium term in Ukraine and BiH. However, it became more complicated than simply using a kind of generic blueprint or "boilerplate" approach. Slack describes how flexibility and a sensitivity to logistical and pragmatic constraints were needed in deciding an appropriate phasing of TA delivery. The development of a unified strategy in both cases was simplified because the IMF was the major donor assisting with monetary statistics, and relatively little coordination with other donors was necessary. Although the IMF had developed an analytical framework specifically for improving the monetary statistics of the former Soviet Union, Kučera explains that this framework had to be adjusted to the particular circumstances in Ukraine, given that it takes time to change the culture of institutions.

Implementation

1.14 The discussions of implementation in the four case studies demonstrate clearly the importance of having a well-planned and coordinated strategy from the start.

1.15 In the two cases of TA focused only on monetary statistics, clear initial strategies and definite objectives led to a logical progression of outputs. While some unexpected setbacks and delays inevitably occurred, the existence of a "road map" served to keep the projects broadly on track. In both cases, the principal mode of TA delivery was a sustained series (over several years) of short-term missions, supplemented by training courses. The missions, staffed by the same experts to the extent possible, could effectively evaluate progress since the last mission, advise about appropriate next steps, and then leave the officials to manage the implementation largely on their own during the intervals between missions. This served to promote "ownership" of the capacity-building efforts and to better ensure their sustainability. Examples of some key actions that facilitated implementation were (i) the formation of a working group in Ukraine to improve internal coordination within the central bank and (ii) an effort in BiH to bring the commercial banks more effectively into the process through seminars explaining why the reforms were necessary and through actions to reduce their reporting burden.

1.16 On the other hand, in the two cases where TA focused on the statistical system as a whole, implementation suffered from a lack of initial overall strategy. This problem was most serious in BiH where the fragmented political structure and a huge but uncoordinated foreign donor presence resulted generally (except for the financial sector) in a number of uncoordinated and sometimes inconsistent strategies, despite the expenditure of substantial resources. In addition, the scarce staff resources of BiH were stretched thin by the demands of so many projects and were spread over many activities, some less critical than others. Another serious problem was the phasing of inputs, exemplified by the lack of resources provided to develop source data.

1.17 These problems had the greatest impact on the BiH real sector statistics, whereas financial sector statistics (i.e., balance of payments, monetary, and government finance statistics) benefited from the fact that a single donor (i.e., the IMF) could take the lead in TA and agree with one national institution (i.e., the central bank) on unified and coordinated strategies. One telling example of the difference strong unified leadership can make was the personal intervention of the BiH Office of the High Representative (OHR), with strong support from the governor of the central bank, in 2002 to impose the passage of statistical legislation, thereby strengthening the national statistical office.

1.18 Cambodia suffered as well from a lack of overall strategy in the early years, but both the donors and the authorities recognized and began to deal with these problems at a relatively early stage. Eventually, with the critical support of "champions" for statistics (see Chapter 2, Abbasi), a coordinated and unified strategy was developed. A number of factors served to highlight statistics in Cambodia and stimulate the demand for better statistics by policymakers. Statistics were given prominence in the Millennium Development Goals (MDGs), the National Poverty Reduction

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Strategy (NPRS), and the second Socioeconomic Development Plan (SEDP).

1.19 Nevertheless, an important problem of phasing in Cambodia—the failure for so long to enact statistical legislation despite the completion of many drafts and preliminary steps—hindered statistical capacity-building efforts. This lack of legislation adversely affected the implementation of TA, undermining the authority of statistical agencies and leading to problems in response rates and registration by businesses.

Lessons Learned

1.20 A main purpose of this project was to see whether a series of country case studies on statistical capacity building, conducted within a single framework, would yield some common threads and patterns of conclusions and lessons learned. If so, the lessons involved could be more generally applicable than if they were associated only with an individual case study. This is not to say that the findings of each case study are not rich enough by themselves to provide provocative lessons for TA practitioners. Indeed, much of the value of the individual case studies is the flavor and the texture of the lessons presented as real-world experience.

1.21 When the case studies are examined together, they do indeed provide common lessons. The most common are listed below under four headings: (i) lessons for country authorities, (ii) lessons for TA donors, (iii) lessons regarding prerequisites, and (iv) lessons for transition and postconflict countries. These categories may be somewhat artificial (for example, the lessons for authorities and for donors are not mutually exclusive), but they serve to focus attention on where the lessons may be the most relevant.

Lessons for Country Authorities

- The importance of high-level and unified **leadership** in the government to push statistical capacity building was emphasized especially in the multisector cases of BiH and Cambodia (see Abbasi's focus on "champions" in Chapter 2), but also in the single-sector cases (i.e., leadership within the central banks) of BiH and Ukraine. Unified leadership in BiH and Cambodia was complicated by inadequate attention to the impact of decentralization on the statistical system. In BiH the fragmented political structure presented serious challenges, whereas in Cambodia high-level champions emerged to promote statistical capacity building. Some examples of successful leadership in BiH are noted, however, such as the strong efforts by the governor of the central bank to take responsibility for and improve financial statistics, and the pushing through of statistical legislation in 2002.
- Taking **ownership** of statistical capacity-building activities and reforms was key in all cases, particularly with respect to sustaining the reforms. Interrelated with the leadership lesson above, this lesson also bespeaks the willingness of authorities to provide the necessary staff and budgetary resources to commit to the process. The Ukrainian authorities were relatively more successful in taking ownership, whereas in BiH the largely uncoordinated manner in which TA was delivered by donors discouraged ownership in the early years, and in Cambodia progress has continued to be hindered by inadequate budgetary resources.
- Taking charge of **internal coordination** of statistical activities in the government was critical. In Ukraine, for example, internal coordination within the central bank was a serious obstacle until an interdepartmental working group coordinated the compiling of monetary statistics within the bank. On the other hand, in BiH, internal coordination driven by the governor was a positive feature in the central bank's efforts to improve statistics.
- Giving responsibility for **donor coordination** to a single government institution was important in the two multisector cases. In BiH, donors improved effective coordination gradually but never fully achieved it, whereas in Cambodia high-level support of a forum for donor coordination could serve as a model for other countries. If the authorities do not take the lead in this area, experience shows that donors by themselves find it difficult to coordinate their respective activities. The identification of responsibility for donor coordination and the related responsibility for producing an overall strategy and work plans should be part of statistical legislation.
- Attention to **user consultation** was found to raise the profile of statistics by fostering demand for statistics and making products more relevant. The case study on Cambodia shows how the government used seminars and other means to consult with users.

Lessons for Technical Assistance Donors

- Regarding **donor coordination,** donors should engage in projects in accordance with the strategy and priorities of the host country, and not propose proj-

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ects that are tied to their own strategic interests and priorities if these are at odds with the priorities of the host country. If the host country does not have a clear overall strategy, then donors should do the best they can to coordinate among themselves. BiH (See Chapter 3, Atcherley) has been an example of a host country in which donors have at times not allocated project resources in accordance with the country's priority needs.

- Donors should pay attention to the appropriate **phasing of project inputs** in view of the absorptive capacity of the country and the most effective sequence of inputs. The logical phasing for improving monetary statistics in BiH provided in Table 4.2 (see Chapter 4, Slack) is a good example of the effective phasing of project inputs. BiH (see Chapter 3, Atcherley), on the other hand, showed how too much attention to technical training initially at the expense of developing source data can prevent significant progress in improving national accounts.
- It is important to complement strategies and recommendations with **hands-on TA** and to work with the authorities to show them how to implement recommendations in the day-to-day, nitty-gritty activities. The effectiveness of the hands-on approach is particularly noted in Cambodia and BiH, which provide examples of how important it is for experts to be willing to work with the authorities on the mundane aspects of improving statistics, and not only on the big picture issues (see Chapter 2, Abbasi, and Chapter 4, Slack). This hands-on approach is facilitated where donors use resident long-term advisors rather than only short-term missions. Similarly, it is also critical that donors focus on direct data production activities and not solely on supporting activities such as seminars, study tours, and provision of office space, important though they may be (see Chapter 3, Atcherley).
- Closely related to the last point is that donors should be careful in their **choice of experts.** Several examples are noted in Cambodia (Chapter 2, Abbasi) and BiH (Chapter 3, Atcherley) where the effectiveness of projects was compromised by experts who were not adequately qualified.
- The **choice of mode of delivery** by donors (e.g., long-term advisor, short-term mission, series of short-term missions, training, workshops) should match the particular needs of the country's situation. The two cases of TA in monetary statistics (Chapters 4 and 5, Slack and Kučera) are good examples of how a sustained series of short-term missions matched well the need to provide patient medium-term assistance that allowed for the difficult process of culture change to take place and learning/technology transfer to occur. Resident advisors can complement short-term missions in countries requiring intensive sustained TA (which is especially the case in transition and postconflict countries).
- The ultimate success or failure of a project will depend on its **sustainability** and on whether the donors have designed an exit strategy. This is an important complement to the ownership lesson listed above under "Lessons for Country Authorities." Again, the Slack and Kučera case studies (Chapters 4 and 5) are good examples of how the TA was geared consistently toward the objective of eventual total transfer to the authorities.

Lessons Regarding Prerequisites

- Many examples are provided, particularly in Chapter 2 (Abbasi) and Chapter 3 (Atcherley), of how important **statistical legislation** is for progress in improving statistics in a variety of areas, such as coordination, adequate authority of the statistical agency, clear designation of responsibilities, and professional autonomy. Nevertheless, in BiH (Chapter 4, Slack) a culture of data reporting and goodwill among data providers and compilers was an effective short-term substitute for statistical legislation.
- Chapter 2 (Abbasi) and Chapter 3 (Atcherley) also provide many examples of how critical **adequate resources** are, both in terms of staff and budgetary resources, for achieving objectives in capacity building. This lesson is closely related to the ownership lesson for country authorities, as it is essential in cases like Cambodia and BiH, where large donor assistance is provided, that the country authorities gradually take over more and more of the ownership and financing for statistical capacity building. Resource shortages, however, need not prevent the production of at least limited yet reliable statistics in the near term. In BiH (see Chapter 4, Slack), careful staff selection, planning of workloads, and dedicated local officials compensated for initial shortages in staff numbers and technology.

Lessons for Transition and Postconflict Countries

These lessons are not exclusively for transition and postconflict countries, but they are of particular importance for these cases (and also perhaps for a number of very poor, resource-starved countries).

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- To be effective, the **scale of assistance** has to be significantly larger than in typical cases of TA, because fundamental changes in methodology and culture are often involved, as well as the basic building or rebuilding of statistical infrastructure.
- Donors must be extremely **flexible** in their approach and must adapt their strategies and modes of delivery to unusually difficult circumstances and low absorptive capacity.
- Both donors and country authorities should be patient and prepared for **sustained efforts** over a multiyear period, and should be focused consistently on eventual total ownership by the authorities and on donor exit strategies.
- **Institutional and statistical organization** issues are critical for these countries. For example, it was shown for both Cambodia and BiH that a decentralized statistical system seriously challenges post-conflict countries engaged in fundamental reform of the statistical system. A strong central statistical office can be a great help in coordinating and implementing large statistical improvement programs.

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PART II

Case Studies

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2. Cambodia: Multisector Statistics

Zia Abbasi*

Introduction

2.1 This case study broadly assesses the evolution of Cambodia's official statistics and statistical capacity building, emphasizing the partnership between the Cambodian authorities and their TA partners, as well as the lessons learned.

2.2 An assessment of Cambodia's official statistics and statistical capacity requires an appreciation of the Cambodian context. Thus, the study begins with a broad overview of socioeconomic development in Cambodia, the current legal and institutional environment, and resources available to the government for official statistics.

2.3 The study then focuses on statistical capacity planning and implementation in Cambodia between 1993 and 2003, noting that much has been achieved in terms of improvements in the coverage, quality, and range of statistics, especially as donor coordination and strategic planning improved over the period. The importance of the role of bilateral donors and international organizations in achieving these outcomes is also reviewed.

2.4 Critical success factors and constraints are identified, including champions and leadership; ownership and commitment by the authorities and local statistics counterpart staff; awareness and understanding of the need for sound official statistics by the authorities and donors; phasing and mode of TA; effective user consultation and involvement; independence of official statistics and technical autonomy of the National Institute of Statistics (NIS); and informal statistical coordination mechanisms.

2.5 The case study concludes with a discussion of the lessons learned concerning how to improve the effectiveness of statistical capacity building.

Setting

2.6 An assessment of Cambodia's statistical capacity, especially with respect to data quality, requires an appreciation of its current socioeconomic development, as well as an understanding of the legal and institutional environment and resources available to the government for official statistics.

Socioeconomic Situation

2.7 Cambodia has come a long way since the signing of the Paris Peace Accords in October 1991. The preceding two decades of war and the tragic loss of millions of lives during the Khmer Rouge years had left it nearly destitute in terms of both economic infrastructure and human capital. An estimated 39 percent of Cambodians lived below the poverty line in 1993.[1] However, since 1993 Cambodia has made significant advances in rebuilding its political, economic, and social infrastructure. Three general elections have been held over the past decade, and a degree of political stability has been achieved.[2]

2.8 Despite considerable effort by the Royal Government of Cambodia (RGC), together with its bilateral and multilateral development partners, to improve living standards and the quality of life of the Cambodian people, Cambodia still has one of the highest poverty rates in Southeast Asia (estimated at about 36 percent in 1997).[3] Its Human Development Index

*The author is IMF multisector statistics advisor in Cambodia. The IMF is grateful to the Australian Bureau of Statistics for releasing Mr. Abbasi to take this assignment. His assignment in Cambodia is financed by the Administered Account for Selected Fund Activities—Japan (JSA).

[1] NIS, *Socioeconomic Survey of Cambodia, 1993–94.*

[2] General elections were held in May 1993, July 1998, and July 2003.

[3] NIS, *Socioeconomic Survey of Cambodia, 1996.*

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score is currently ranked 130th out of 173 countries and is the lowest in Southeast Asia.

2.9 Cambodia is a small economy, with gross domestic product (GDP) in 2002 of about US$3.9 billion and a per capita income of US$291 per annum.[4] While GDP growth has averaged just over 6 percent per annum in recent years, GDP per capita growth has averaged about 3.5 percent. The economic base still depends largely on agriculture, fisheries, and forestry, with these sectors accounting for about 34 percent of GDP. The industry sector accounts for about 26 percent of GDP, with the textiles, garments, and footwear industries accounting for 50 percent of this sector. The services sector accounts for 24 percent of GDP and is largely driven by tourism. Most of the economic growth since 1995 has been due to the growth in the textiles, garments, and footwear industries.

The Evolution of Official Statistics in Cambodia

2.10 The Cambodian national statistical system is highly decentralized. In addition to the NIS of the Ministry of Planning (MoP), all ministries (and in some cases, departments within ministries) and other institutions have planning and statistics units responsible for producing statistics. While annual appropriations for official statistics have grown from an estimated US$0.2 million in 1993 to about US$1.5 million in 2003, this is only about 0.2 percent of the total budget. The NIS budget appropriation's share of the total has increased from about US$20,000 to US$427,300. However, these appropriations are still not commensurate with the demand for official statistics, and the NIS and other RGC statistics units do not have independent budgets. Over the past decade, the staffing level of the NIS has increased from 495 staff to more than 650 staff. However, staff with statistical skills in other RGC statistics units have been significantly reduced over the same period.

2.11 Compounding the need for adequate and autonomous appropriations for official statistics and appropriate staffing levels is the legal and institutional environment. The NIS and the few functioning RGC statistics units do not have the legal and institutional requisites to effectively collect the range of quality statistics required to monitor and measure development results. No crosscutting statistics legislation is implemented to provide the legal basis for official statistics. Similarly, no clear demarcation exists between official national and sector statistics and other management information needed to monitor government operations, services, and outcomes.

2.12 In the past decade, Cambodia has progressively moved from a centrally planned economy to a market economy, resulting in a significant transition in all spheres of Cambodian society. This transition has resulted in the dismantling of central planning, the decentralization of decision making in relation to government operations, and a high level of privatization, as well as opportunities for the private sector to grow. The central role of the MoP in economic management and central planning for the provision of government services has increasingly devolved to the Ministry of Economy and Finance (MEF) and various other line ministries. This process unfortunately also led to a weakening of data coordination mechanisms and centralized information management within the government, which was not the fault of decentralization but of inadequate attention to the maintenance of coordinated data systems during decentralization.

2.13 Similarly, coordination among donors assisting the RGC in different sectors was not as effective as it could have been in the early 1990s. Donors tended to focus on only one government agency, with their TA provision covering program development, implementation, evaluation, and statistics for that agency. With a few exceptions, statistics were generally collected, compiled, and produced without taking into account the needs of the wider user community outside the sector in question. The government agencies involved tended to monopolize the TA support, and the NIS's role in producing national statistics and its statistics collection and processing capacity were often overlooked.

2.14 Another important factor that has affected the development of Cambodia's official statistics is that donors tend to support the production of statistics of specific interest to them. As a result, the development of official statistics has varied across sectors and has been limited for core national statistics, according to the number of interested donors and the level of TA provided. Agriculture, education, health, population, and poverty statistics have attracted relatively more TA support than macroeconomic, industry, services, environment, natural resource, and other social statistics.

[4] NIS, July 2003 *National Accounts of Cambodia, 1993 to 2002.*

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2.15 To understand the environment in which Cambodia's official statistics are being developed, donors should consider not only the issues constraining supply but also the demand for these statistics. In following up on the Millennium Declaration, Cambodia has launched several initiatives, including several institutional reforms, to meet its global and national commitment to fight extreme poverty. The National Poverty Reduction Strategy (NPRS) builds upon a policy stance of economic growth and poverty reduction. The RGC's reform agenda essentially focuses on deepening economic reforms and macroeconomic stability, including fiscal and monetary reforms, trade and investment promotion, administrative reforms, military demobilization, and improved fishery and forestry management. The RGC has identified four priority sectors: education, health, rural development, and agriculture. In each sector, major programs of economic and social infrastructure development are underway. It has also prepared a Governance Action Plan to enhance governance in key areas such as the judicial and legal system, anticorruption programs, and public finance.

2.16 Related to the Millennium Development Goals (MDG), the NPRS, and various economic, fiscal, and monetary reform initiatives, the demand for official statistics has increased substantially. An integrated and relevant national statistical system has, therefore, emerged as an important component of overall reforms. High-standard and quality statistics are needed to capture economic growth and poverty reduction, as well as other dimensions of social development (e.g., gender equality, education and literacy, health and nutrition) and related demographic, economic, environment and natural resources, and social statistics.

Strategies and Plans for Improvement

2.17 The RGC authorities recognized at an early stage the need for good-quality national statistics on the Cambodian economy, society, and population, and reflected that accordingly in the first five-year Socioeconomic Development Plan (SEDP). However, at that time, no separate strategic plan focused solely on statistical development. The production of official statistics at the sector level was viewed as a planning function of each of the relevant ministries. Given the limited financial resources available to the government, it focused initially on moderately redeploying resources and staff to strengthen the planning function within line ministries.

2.18 The authorities' initial position was that the existing administrative processes and regulations would continue to provide the data needed to compile official statistics. What was not appreciated at the time was that the administrative data collections set up to provide statistics for a centrally planned economy were neither suitable nor of sufficient quality to meet the information needs of policymakers in a transition economy. Furthermore, the central government's beginning to decentralize decision making and devolve responsibility was also weakening the MoP's capacity to ensure effective data coordination. Another compounding factor was unclear definition of responsibilities for specific statistics. This resulted in duplication of effort and uncertainty about which sets of statistics were official (e.g., consumer price indexes (CPIs) were produced by the MEF and the National Bank of Cambodia (NBC) during 1994 and 1995, and national accounts were produced by the MEF and MoP from 1993 to 1995).

2.19 By early 1994, the authorities realized that while devolution was important in improving government operations and providing services, responsibility for basic official statistics needed to be centralized, and stronger data coordination mechanisms were needed. This led to the establishment of the NIS, as the national statistical institute, within the MoP in that year. The NIS was given sole responsibility for key official national statistics, such as the CPI, national accounts, and population statistics. The implementation of the Subdecree on Statistical Obligations in 1997 elevated the NIS from a department to a directorate general and strengthened its coordination role.

2.20 The authorities also realized that the administrative data collections were not providing suitable source data to compile key economic and sociodemographic statistics and that statistics staff had little or no experience in compiling the statistics required. As resources were scarce, the authorities recognized the need to enlist the donor community in financing and providing TA in the following areas: developing statistical capacity, skills, and infrastructure; conducting surveys; and compiling key economic and sociodemographic statistics.

2.21 While the authorities would have preferred to engage the donor community in supporting an integrated approach to developing the national statistical system, the government was constrained by the differing priorities of the various multilateral and bilateral donors. As a result, the authorities developed

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separate statistical plans and partnerships with key multilateral donors for each area of statistics from 1993 to 1997. The main partners in statistical development over the past decade have been the Asian Development Bank (ADB) and IMF, for economic and financial statistics; and the United Nations Development Program (UNDP) and the United Nations Population Fund (UNFPA), for sociodemographic statistics. While these multilateral donors provided the main financing and/or TA in developing Cambodia's official statistics, the authorities also engaged bilateral donors and other multilateral donors to supplement major development activities, conduct one-off surveys, and support sector statistics.

2.22 By 1997, both the authorities and donors recognized that separate TA agreements had hampered effective data coordination and made it difficult to reduce duplication, especially in collecting data. This led to improvements in the coordination of TA among donors and among line ministries. It also resulted in a strengthening of the NIS's role in facilitating more effective data coordination and integration between 1998 and 2002.

2.23 The second SEDP also helped focus on statistical capacity development and the need for improved data coordination and integration. The SEDP included initiatives to expand data collection and compilation for a number of sectors, especially poverty statistics. However, statistical development was still seen as part of the overall development objectives for each economic and social concern and as the responsibility of the relevant line ministry.

2.24 By 2002, statistical development planning had reached a degree of maturity and become more integrated, reflecting the authorities' two main objectives, economic growth and poverty reduction. The statistical objectives set out in the second SEDP and the first NPRS reflect this integrated approach. In addition, the first NIS Strategic Plan (2002–2006) and the five-year NIS Forward Work Program (2003–2007) were released in July 2002. These documents outline long-term statistical development strategies and annual development priorities for the NIS and the national statistical system. The authorities also convened a statistics workshop in October 2002, "Partnerships in Statistics Capacity Building (SCB) for Cambodia." Participants included all line ministries with responsibility for official statistics and the donor community in Cambodia. In addition to the NIS plan and work program, many other statistical capacity development proposals were presented at the workshop. In terms of content, the NIS plan and work program and the proposals discussed at the workshop constitute the main elements of a statistics master plan for Cambodia. The NIS authorities intend to develop the master plan in 2005 for release in early 2006.

2.25 Cambodia's adoption of the IMF's General Data Dissemination System (GDDS) framework has also further improved statistics planning and monitoring. The NIS prepared the GDDS metadata templates, with the assistance of an IMF GDDS mission and the multisector advisor (MSA), in December 2001. The RGC officially adopted the GDDS in February 2002. Short-term and medium-term plans to improve the production and dissemination of official statistics have been developed and are being implemented as resources permit. The NIS has monitored progress and completed its first GDDS Review in February 2003. Good progress has been made in implementing short-term plans, especially for balance of payments, national accounts, consumer prices, money and banking, education, and poverty statistics.

Implementation and Outcomes

Statistical Organization Prerequisites

Statistical legislation and regulations

2.26 Considerable attention has been given to developing statistical legislation in recent years. The prime ministerial Subdecree on Statistics Obligations was drafted and promulgated in 1997. The drafting of the statistics law commenced in earnest in early 2000, with ADB providing support. The draft law was substantially revised between November 2001 and May 2002, with IMF MSA assistance, to incorporate the fundamental principles of official statistics and to recognize the need for stronger coordination mechanisms, given the highly decentralized nature of the national statistical system. The draft law was approved by the Council of Ministers (COM) in June 2002 and submitted to the National Assembly in August 2002. The law was not yet enacted by the beginning of 2005. In addition, a draft Subdecree on Statistics Obligations, Roles and Responsibilities has been prepared and is being discussed by an interministerial technical working group. The Subdecree on Designated Official Statistics and related statistical regulations are currently being prepared. Statistical regulations have also been

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prepared and approved by the NBC Governor to implement the International Transactions Reporting System (ITRS) collection and the release of the new quarterly *Balance of Payments, Cambodia* publication.

Statistics coordination

2.27 Since 1997, a significant improvement has occurred in statistical TA coordination arrangements among most line ministries and the NIS, as well as among the donor community. Good examples of effective partnerships between the authorities and the donor community are the *1998 General Population Census of Cambodia,* the *1999 Socioeconomic Survey of Cambodia,* and the *2000 Demographic and Health Survey.*

2.28 The draft statistics law and subdecrees specifically provide for establishing the Statistics Advisory Council and Statistics Coordination Committee (including provisions relating to the composition and functions of these bodies), as well as for implementing other formal coordination mechanisms and institutional arrangements. The NIS has established technical working groups, with ADB assistance, for statistical legislation, agriculture statistics, environment and natural resources statistics, and foreign trade statistics. The authorities have also expanded and improved statistics cooperation, with IMF MSA assistance, among the NIS, ministries, and other institutions in relation to data-sharing arrangements.

2.29 The IMF MSA has assisted the NIS in improving the coordination of donor financing and TA for statistical capacity building for the MEF, MoP, NBC, and NIS. The MSA has worked closely with staff of the ADB, the Economic and Social Commission for Asia and the Pacific (ESCAP), the German Technical Commission (GTZ), the IMF, the Japan International Cooperation Agency (JICA), the Japan Overseas Cooperation Volunteers (JOCV), the UNDP, the United Nations Children's Fund (UNICEF), the UNFPA, and other experts and volunteers. Assistance has been provided to the authorities in coordinating ADB experts and IMF missions and in preparing ADB TA and IMF mission proposals.

Statistical planning frameworks

2.30 With IMF MSA assistance, the NIS implemented a Strategic and Forward Work Program Planning and Monitoring Framework in February 2002. MoP/NIS senior officials meet monthly and NIS department heads meet weekly to monitor progress in implementing capacity development and the statistics work program. The NIS Forward Work Programs (2002–2006) and (2003–2007) and the NIS Strategic Plan (2002–2006) were approved and released in April and July 2002, respectively. Work program planning and monitoring has also been introduced for statistics units in the MEF; the NBC; the Ministry of Education, Youth and Sports (MOEYS); and the Ministry of Health (MoH) through the GDDS framework. Similarly, awareness of the need for work plans and monitoring has been significantly raised for most other statistics units of the RGC by the MSA through the development of SCB project proposals, as well as the conduct of the SCB workshop in October 2002.

Statistics development

2.31 A broad review of current statistical capacity was conducted with IMF MSA assistance from January to May 2002, and the findings were released in the *Report on Statistical Capacity Building for Cambodia's Official Statistics* in June 2002. The report, considered a draft statistics master plan, includes broad programs, financing, and TA requirements for developing and improving official statistics. As mentioned above, the SCB workshop was conducted in October 2002 and discussed 58 project proposals. The workshop was successful in improving donor and government understanding of Cambodia's current statistical capacity, as well as in raising donor and government awareness of the need to:

- Implement appropriate statistical legislation and regulations and ensure that the legislation and regulations are enforced;
- Increase RGC appropriations and donor financing for official statistics;
- Establish a central body to advise the RGC and NIS on statistical development priorities and emerging demands for statistics;
- Improve coordination within the donor community and the government on TA issues;
- Establish a central statistics coordination committee and implement formal mechanisms and other institutional arrangements to ensure effective coordination of statistical capacity building and information sharing;
- Strengthen staffing, information technology (IT) resources, and facilities commensurate with the demand for official statistics, and implement more effective resource monitoring;
- Improve remuneration and career paths for statistics staff;

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- Implement an integrated skills development strategy for statistics staff;
- Introduce performance management and merit-based recruitment and promotion processes for statistics staff;
- Ensure efficient use of resources by eliminating duplication and leveraging the survey and data processing capacity of the NIS;
- Ensure official statistics are produced on an impartial and independent basis, and introduce transparent statistical policies and practices;
- Ensure that the methodological basis for official statistics is in line with international standards and good practice;
- Ensure the quality of statistical methods and the accuracy and reliability of statistics; and
- Ensure that official statistics and related metadata are readily accessible, comparable, and timely, and that periodicity of release is aligned to data user needs.

Statistical roles, functions, organization structure, and staffing arrangements

2.32 The IMF MSA assisted the director general of the NIS in developing a detailed organizational restructuring proposal in early 2002. A detailed implementation plan, *Structures, Roles, and Functions of the National Institute of Statistics (July 2003),* has been released and is in the process of being implemented. The plan includes:

- Role and function statements for NIS statistical units, as well as advisory, coordination, and management bodies;
- Staff competency and duty statements;
- Organizational charts for central, provincial, and district offices;
- Recruitment, selection, appointment, probation, performance management, and promotion procedures;
- Secrecy agreements and security clearances;
- Staff streaming and remuneration; and
- Job rotation, training, and development.

2.33 A similar implementation plan on the establishment of an NBC statistics department has been prepared and approved for implementation. Similar restructuring plans are being developed and/or implemented for some other RGC statistics units, for example the Ministry of Veterans and Women's Affairs.

Government financing

2.34 Although not significant, moderate increases have been made in government appropriations for NIS statistical activities over the past decade. The 2003 budget allocation was US$427,300, an increase of approximately 20 percent over the 2002 allocation. Similarly, remuneration for senior managers (i.e., directors and above) has increased considerably, and a further 26 NIS senior statistician positions were identified as part of the donor-assisted Priority Mission Group (PMG) initiative. Staff in these positions were to be paid salary supplements from 2004 onward. However, overall financing is still not commensurate with the demand for statistics.

Staff training and development

2.35 In 2001, ADB financed the establishment of an in-house statistics training program and the NIS Training Center. Findings from a review of NIS training and development needs, conducted in January 2002, were documented in the *NIS Training Program Review Report.* The NIS Training and Development Strategy (March 2002) outlines future directions and training courses to be implemented.

2.36 On-the-job training has been provided in macroeconomic statistics, especially for balance of payments, labor force, monetary, national accounts, and price statistics. Data collection and compilation by local officials leading to the establishment of self-sustaining statistical systems have been emphasized. In addition, a number of MEF, NBC, and NIS officials have been sponsored for courses, tertiary studies, and workshops by the ADB, ESCAP, the IMF, and the Statistics Institute for Asia and the Pacific (SIAP) over this period. An estimated 10 percent of statistical staff have gained postgraduate tertiary qualifications in applied statistics through this TA. While overall skills have significantly developed from a very low skills base, skills development has not been integrated across government, and some agencies and ministries have benefited far more than others.

Economic and Financial Statistics

National accounts statistics

2.37 The development of national accounts statistics has accelerated significantly in recent years, compared with the 1990s. This has been partly due to substantial support by the ADB (the only donor supporting national accounts development between 1994 and 2000), which provided financing for the significant survey program required to build the national accounts database. The development of national accounts statistics

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in the past two years is a good example of successful partnerships between the authorities and TA partners (the ADB and IMF). Significant ADB expert assistance and IMF MSA assistance have been provided to the NIS in improving compilation methods for both production and expenditure accounts aggregates in the past two years, resulting in significant revisions in 1993 to 2000 estimates, including an average increase in real GDP levels of 10 percent.

2.38 Further improvements in the source data and compilation methods were made during the 2003 estimation round, resulting in improved estimates, as well as an average increase in real GDP levels of 4 percent. The 2003 release of *National Accounts of Cambodia, 1993–2002* is approximately three times the size of the first bulletin (1993–96) released in 1997. The analytical content and number of statistical tables released over the years have also significantly increased. Additional detailed tables were included for the industry sector, services sector, household final consumption expenditure, and the experimental national income account. The technical notes section of the bulletin has also increased substantially.

2.39 The national accounts are now broadly consistent with the *System of National Accounts 1993* (*1993 SNA*), although full implementation is expected to take several years. New compilation methods have been implemented and revised estimates have been produced for many sectors. Experimental national accounts using the income approach were developed for the first time for 1993–2002. The MSA has also assisted in improving consistency of the 2001 and 2002 estimates with other macroeconomic statistics.

2.40 The NIS has significantly improved access to the administrative data required to compile the accounts and, with ADB experts, improved the quality of NIS survey data. It has improved coordination of final administrative and survey data for the relevant reference year for use in compiling national accounts estimates. It is more effectively using existing and new data sources. Access to the Ministry of Agriculture, Forestry, and Fisheries (MAFF) data on crops and livestock, fisheries, forestry, and rubber production has been improved, and basic supply/use tables have been developed for rice, fish, and some other agricultural products.

2.41 Improved data access has resulted in improved estimates for international tourism and new estimates for domestic tourism; new estimates for casinos; improved estimates for the finance industry and financial services charges; improved estimates for public administration; and new estimates for nonprofit organizations serving households. New NIS population projections data have been used to improve compilation of various series, especially household consumption expenditure. Access to the Council for the Development of Cambodia's (CDC) investment and nongovernment organizations expenditure data, to the Customs and Excise Department (CED) data, and to NBC unrecorded exports and imports estimates have resulted in more consistent national accounts estimates. Improved access to MAFF prices and other price data has led to revisions in price deflators.

2.42 The AsDB TA has underpinned the development of the national accounts database. It has assisted the NIS in conducting three establishment surveys, in 1993, 1995, and 2000; several Phnom Penh surveys and two national labor force surveys, in 2000 and 2001; the quarterly Survey of Hotels and Manufacturing Establishments; and the quarterly Retail Trade Survey. More recently, the ADB has financed a number of one-off agriculture and informal sector surveys for agriculture, marine and inland fisheries, forestry, rubber plantations, traditional textile manufacturers, small retailers and wholesalers, guesthouses, and land and water transport operators. The results from all of these surveys have helped produce new and revised formal and informal sector gross value added (GVA) ratios and production estimates for a number of industries from 1994 to 2002.

2.43 Work has commenced on compiling quarterly national accounts. The NIS intends to produce experimental quarterly national accounts from March quarter 2000 to June quarter 2005. The estimates will be consistent with the annual accounts on both expenditure and production bases. Source data are reasonably timely and comparable in quality to the annual source data currently used. An ESCAP expert has worked with the IMF MSA and NIS staff on developing the basic methodology. The IMF MSA worked with NIS counterparts on compilation methods and the development of the Excel spreadsheets.

2.44 The ADB provided significant support for statistical skills development in conducting economic surveys and compiling national accounts statistics over the past decade. In March 2002, the ADB expert and the IMF MSA conducted a three-week national

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accounts statistics course for 40 data compilers and users from the NIS and other ministries. In addition, two staff have attended the IMF national accounts statistics course at IMF headquarters. IMF MSA and ADB experts have provided ongoing assistance and on-the-job training to improve the quality of data collection, data quality assurance, compilation, and analysis and dissemination.

Price statistics

2.45 The NIS has significantly expanded its price statistics program since the first release of the monthly Phnom Penh CPI in 1995, extending consumer price collection to five provincial cities in addition to Phnom Penh, with ADB TA. The NIS has produced a linked CPI series, combining the 2000 series with the 1994 series for the Phnom Penh CPI, with MSA assistance. Assisted by an ADB expert, it has also released two provincial CPI publications. The MSA assisted the NIS in developing a methodology to link the various cities' CPI series to produce an Other Urban CPI and an Urban CPI. A new quarterly Urban CPI publication was released in January 2003.

2.46 Work has begun on producing a quarterly producer price index (PPI) for Cambodia, with ADB and IMF statistics department technical assistance (STA). A producer price survey commenced in August 2003, and the PPI for March quarter 2000 to September quarter 2003 was also released soon thereafter.

2.47 The MSA conducted an abridged IMF price statistics course in March 2003, for 40 data collectors, compilers, and users from the NIS and other ministries. In addition, two staff have attended the IMF's Joint Vienna Institute (JVI) price statistics course. Ongoing assistance and on-the-job training have been provided by ADB experts, the IMF MSA, and IMF missions to improve the quality of data collection, data quality assurance, compilation, and analysis and dissemination. The explanatory and technical notes in quarterly prices publications have been expanded to provide more information on concepts, sources, and methods.

Foreign trade statistics

2.48 The development of foreign trade statistics has been less successful, mainly owing to the lack of financing. However, the NIS has established a Foreign Trade Statistics Technical Working Group, which meets quarterly. The MSA has assisted the NBC and NIS to improve access to existing CED data and has prepared new report specifications for volume, value, and price data (by commodity and country). Despite significant resource constraints, CED has continued to cooperate with the NBC and the NIS and has completed the programming to generate the reports required, with the IMF IT advisor's assistance. Annual reports have been provided for 2001 and 2002, and monthly and quarterly reports for 2003.

Balance of payments statistics

2.49 The IMF posted a resident balance of payments statistics advisor to assist the NBC on balance of payments, foreign investment, and foreign trade statistics from May 1995 to May 1997. The NBC has significantly progressed in improving balance of payments (BOP) and international investment position (IIP) statistics data sources and compilation methods, as well as consistency with the standards of the IMF *Balance of Payments Manual,* fifth edition (*BPM5*). Compiling annual and quarterly BOP and IIP statistics, it publishes annual BOP statistics and quarterly BOP and IIP statistics. In addition, a *Summary Concepts, Sources and Methods Manual* was released in October 2003.

2.50 The NBC, assisted by the IMF MSA and missions in 2001–2003, has reviewed and improved compilation methods and access to existing administrative data sources for unrecorded exports and imports, reexports, transportation, travel, other services, income, current and capital transfers, foreign investment, and Cambodian investment abroad. More effective use is being made of partner country data. BOP and IIP estimates are now comparable. Revised quarterly estimates have been prepared for all quarters from 1998 to 2002. More detailed data have been compiled for a number of aggregates, especially travel credits and unrecorded trade.

2.51 In January 2003, the NBC financed and implemented a monthly ITRS to collect much-needed data of international transactions via the banking system, improving balance of payments estimates. The ITRS data have been assessed as being of good quality and covering approximately 90 percent of the total value of transactions going through the banking system. A revised questionnaire for foreign direct investment enterprises has also been developed and pilot tested. Unfortunately, the lack of financing has meant that a regular survey has yet to commence.

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Government finance statistics

2.52 The MEF is progressively implementing the recommendations of the March 2001 IMF mission. MEF reporting of monthly data for inclusion in the IMF's monthly *International Financial Statistics* (*IFS*) has continued, provided on a basis consistent with the IMF's *Government Finance Statistics Manual, 1986* (*GFSM 1986*). The MEF has begun producing government finance statistics (GFS) broadly based on the IMF's *Government Finance Statistics Manual, 2001 (GFSM 2001),* submitting preliminary 2001 GFS to the IMF Statistics Department. Progress in improving GFS has generally been slow, owing to limited financing and the lack of full-time counterpart staff.

Monetary and financial statistics

2.53 The NBC has significantly progressed in improving monetary statistics over the past decade. It has introduced a new chart of accounts that conforms with international standards for commercial and specialized banks and has revised the statistical compilation procedures to reflect the classification scheme of the new chart of accounts. It has reviewed mapping procedures used for moving from the old NBC chart of accounts to the new chart of accounts and revised procedures used for compiling the NBC's account statement. It has also implemented a new methodology for compiling monetary and financial statistics, as recommended in the IMF's *Monetary and Financial Statistics Manual* (*MFSM*). The IMF MSA and the 2002 mission assisted the NBC in improving the coverage and quality of monetary statistics.

Other economic statistics

2.54 Various line ministries and their departments produce summary annual industry statistics based on administrative or statistical collections. However, the reliance on ad hoc donor funding and TA, as well as the lack of sufficient coordination of statistical activities, have resulted in inadequate coverage of some industries. For example, MAFF, the Ministry of Commerce (MoC), and the Ministry of Tourism (MoT) appear to be better resourced to produce some of the core data required, but the CDC; the Ministry of Industry, Mines and Energy (MIME); the Ministry of Post and Telecommunications (MPT); and the Ministry of Transport and Public Works (MTPW) are underresourced. In addition, the current portfolio structure for the economic ministries does not favor the collection, coordination, and dissemination of industry and sector statistics.

Sociodemographic Statistics

Population and demographic statistics

2.55 Significant financing and TA by the UNFPA have underpinned the development of population statistics for Cambodia. The NIS successfully conducted the 1996 Cambodian Demographic Survey and the 1998 General Population Census of Cambodia and has continued to compile and disseminate demographic and population statistics over the years. It has released 16 publications and analytical reports. Having conducted in 1998 the first population census in Cambodia since 1962, the NIS intends to continue to hold decennial censuses.

2.56 The 1999 Cambodia Socioeconomic Survey, conducted with the assistance of the UNDP, the Swedish International Development Agency (SIDA), and the World Bank, provides estimates of the total population, household composition, age structure, marital status, economic activities, and housing characteristics and amenities.

2.57 The 2000 Demographic and Health Survey (DHS), conducted with the assistance of the UNFPA, UNICEF, and the United States Agency for International Development (USAID), provides new estimates of fertility and mortality rates. In addition, the DHS provides information on household population by age, sex, and residence and housing characteristics and amenities.

Poverty statistics

2.58 The UNDP has provided the majority of the financing for compiling official poverty indicators and for conducting the Socioeconomic Survey of Cambodia (CSES) 1993–94, 1996, 1997, and 1999 through the Capacity Development for Socioeconomic Surveys and Planning Project. As mentioned earlier, the ADB has also contributed extensively to the previous two surveys. Other TA partners have included the International Labor Organization (ILO), SIDA, UNICEF, and the World Bank. The UNDP is also financing the Poverty Monitoring and Analysis System (PMAS) and the development of the Poverty Monitoring Information System (PMIS).

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2.59 Estimates of the distribution of income and consumption by household in Cambodia are based on the CSES conducted in 1993–94, 1996, 1997, and 1999. Consumption poverty indicators derived from the CSES (such as the headcount ratio and poverty gap) are based on (i) a food poverty line, which refers to a minimal standard of living just sufficient to meet food consumption needs; and (ii) a higher poverty line, which includes a minimal allowance for nonfood consumption.

Dissemination and Use of Official Statistics

Availability and quality of statistics and methods documentation

2.60 The availability and quality of data sources for national accounts, BOP, CPI, labor force, and monetary and financial statistics, as well as for the socioeconomic statistics, have gradually improved. Documentation of BOP, national accounts, labor force, prices, government finance, and monetary statistics has also improved (for example, in STA mission reports, GDDS templates, and statistical publications and in summary concepts, sources, and methods documents). The *Directory of Statistical Sources,* begun in January 2003 and completed in 2004, includes broad concepts, methods, and sources metadata in relation to statistics produced by all RGC statistics units.

Dissemination and public access to official statistics and methodology

2.61 The NIS first launched the census website in December 2000 and then the expanded NIS website, www.nis.gov.kh, in July 2002, both with UNFPA assistance. It will expand and improve the content of the website, including statistics and related metadata, as resources permit. Metadata for priority socioeconomic statistics included in the GDDS templates are also now available via the IMF public website. The NIS has expanded and improved the statistical content and technical notes of its publications (e.g., the content of the *Statistics Yearbook* increased 33 percent). It has released new publications on child labor, provincial and urban consumer price indices, and new electronic products. As a result of the establishment of the Data Users Service Center in mid-2002, the NIS has also improved access to official statistics, also with UNFPA assistance. In addition, the MoC and MoT have statistics pages on their websites, and the NBC has begun developing its website (including statistics web pages). Official statistics are also released in the standard printed form by a number of agencies. In addition, the annual reports of various other ministries (including department-level annual reports in some instances) and institutions generally provide summary statistical data.

2.62 Under the framework of the project, Capacity Development for Poverty Monitoring and Analysis—led by the Council for Social Development in partnership with SIDA and the UNDP—the RGC has established a PMAS. The PMAS aims at timeliness and reliability of data, including the monitoring of process, inputs, outputs, and outcomes. The PMAS also aims at achieving both openness and result orientation for informed policy dialogue and decision making, by strongly emphasizing the measurement of poverty in relation to key macroeconomic, sector, and budgetary reforms. The system is expected to be the main tool for regular reporting on Cambodia's progress toward achieving its national development goals.

Conclusions and Lessons Learned

Sustainability

2.63 The implementation of TA over the past decade has contributed to sustainable capacity building in the following areas:

- Improved statistical legislation and coordination arrangements;
- Improved strategic planning, work program development, and work program monitoring by the NBC and NIS;
- Effective leadership and management of statistical projects in the NBC and NIS;
- Improved staff development and management in the NBC and NIS;
- Improved statistical skills of local counterparts involved in producing macroeconomic and financial statistics;
- GDDS short-term and medium-term planning and framework implementation for relevant line ministries;
- Expanded and improved data and metadata dissemination by the NBC and NIS via publications, electronic products, and websites;
- Expanded and improved documentation and dissemination of concepts, sources, and methods used in producing macroeconomic, financial, and priority sociodemographic statistics;
- Improved quality of data collected by the NBC and NIS;
- Improved consistency with international standards and improved compilation methods; and
- Improved access to administrative data sources.

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2.64 While TA has had a measurable impact, it is less likely to be sustained without further follow-up assistance, in relation to:

- Enforcement of statistics legislation;
- Improved formal statistical coordination arrangements and statistics governance;
- Establishment of central RGC statistics units and an integrated national statistical system;
- Improved planning and work program development and monitoring by all RGC statistics units;
- Effective leadership and management of statistical programs, as well as improved recruitment and remuneration of statistics staff for RGC statistics units;
- Appropriate financing for statistics capacity building and ongoing activities;
- Improved data and metadata dissemination by other RGC statistics units via publications, electronic products, and the NIS website;
- Improved quality of administrative data sources;
- Expanded and improved data collection activities; and
- Improved dissemination of official statistics and related metadata by RGC statistics units other than the NIS and the NBC.

2.65 Sustainability in these areas would be ensured by implementing the UNDP Capacity Development of the National Statistical System Program and the related TCAP proposal, as well as a continuation of TA provided by the ADB, the IMF, JICA, the UNFPA, and other donors over the medium term.

Lessons Learned

2.66 Several factors have contributed to developing Cambodia's official statistics and statistical capacity over the past decade, including champions and leadership; ownership and commitment by the authorities and local statistics staff; awareness and understanding of the need for sound official statistics by the authorities and donors; phasing and mode of STA; effective user consultation and involvement; independence of official statistics and technical autonomy of the NIS; informal statistical coordination mechanisms; and use of technology.

Champions and leaders

2.67 A critical success factor contributing to developing Cambodia's official statistics has been its champions. This is evident in the case of the development of official statistics produced by the NIS and NBC. The governor of the NBC, both as governor and in his previous position as minister of planning, has championed the development of Cambodian statistics over the past decade and has played a leading role in their development, as well as in increasing appropriations for statistics for these two agencies. The minister of planning, secretary of state in charge of statistics, and director general of the NIS have also championed the development of Cambodia's official statistics and the important expansion of the NIS and its statistics program since 1998. However, champions have not come forward in the areas of international trade and government finance statistics; agriculture, industry, and services statistics; social sector statistics; environment and natural resources statistics; and regional or subnational statistics.

2.68 The success of any project depends greatly on effective leadership and management. The people and project management and technical skills of senior officials at the MoP, NBC, and NIS responsible for statistics have been developed significantly in recent years through donor sponsorship of overseas studies. Effective leadership and management have contributed vastly to the improvements in MoP, NBC, and NIS economic and poverty statistics and to the successful conduct of the population census and several major establishment and household surveys by the NIS. While the MoP, NBC, and NIS have been successful, this success is to the credit of a dozen or so effective leaders and managers, and more needs to be done in developing the depth of leadership and management in these organizations.

Commitment and ownership

2.69 While strong commitment and ownership of statistics development are evident at the MoP, NBC, and NIS, they are less evident in other ministries and agencies responsible for producing official statistics. The success of any project depends on ownership of project objectives by the authorities and local counterparts. The successful development of BOP and national accounts statistics, the introduction of the ITRS collection, and successful conduct of NIS household surveys are all examples of the strong commitment of the authorities. Future TA initiatives should continue emphasizing the need for commitment and ownership by both the authorities and local counterparts.

2.70 The commitment of local counterparts at the MoC, MOEYS, MoP, MoT, NBC, and NIS is partly

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responsible for the major improvements over the past several years in balance of payments, commerce, monetary and financial, national accounts, prices, primary education, population, poverty, and tourism statistics. However, the level of commitment of local counterparts is limited as a result of poor pay and conditions. Inadequate remuneration continues to have a detrimental impact on capacity building and the quality of official statistics, despite relatively large increases in the past two years. The overall impact of low remuneration means that a number of counterparts do not work normal office hours and knowledge transfer and progress in implementing objectives have been slower than they could have been. For example, TA is often hampered by the lack of full-time counterparts. MoP and NIS authorities are attempting to address this challenge by including local counterparts in the PMG initiative. A need exists for the relevant authorities responsible for other RGC statistics units to include key statistical staff in the PMG initiative.

Financing for statistics

2.71 Possibly the most significant constraint in developing statistics is appropriate financing. Government financing as a percentage of the total budget for Cambodia's official statistics is among the lowest of all Southeast Asian countries. Almost all survey activity is donor financed. With the exception of financing for the consumer prices and ITRS collections, no budget allocations exist for regular surveys. To produce good-quality statistics, a significant increase in government budget appropriations for statistics is essential. The additional funding needs to be directed to conducting surveys:

- annual agriculture, establishment, financial sector, and government-owned enterprise surveys.
- quarterly surveys of domestic and international investment; international trade in services; selected producer, trade, and services prices; business profits; and the labor force.
- expanded monthly consumer prices surveys.

2.72 The NIS has yet to conduct agriculture sector and establishment censuses, and the absence of these benchmark data reduces the quality of annual national accounts estimates. The establishment census is also needed to develop an integrated business register.

2.73 Additional financing is also required to strengthen administrative collections. Lack of sufficient funding for the CDC and CED to redevelop systems and to collect foreign trade prices and volumes data and international investment data has delayed progress in developing merchandise trade price indices and improving IIP statistics. Considerable scope remains for further improving the range and quality of Cambodia's economic and financial statistics, if appropriate financing is made available.

Awareness and understanding

2.74 Increased awareness and understanding of the need for good-quality national statistics have also contributed to the development of official statistics in Cambodia, especially since 1998. Examples include the commitment of significant donor and government financing for developing poverty statistics, the conducting of the 1998 General Population Census of Cambodia, and the CSES. More recently, the SCB Workshop conducted in October 2002 significantly improved donor and government understanding of Cambodia's statistics capacity and raised donor and government awareness of the need to increase financing for capacity development.

User consultation and involvement

2.75 The MoP, NBC, and NIS have a good track record of ensuring that data users are actively involved in planning, developing, conducting, and evaluating the establishment and household surveys. The agencies also conduct regular user seminars whenever the national accounts or the results of major surveys are released. In addition to attracting additional financing, this contact results in more relevant statistics for data users. While other RGC statistics units consult to a degree, consultation is far less frequent, thus contributing to poorer quality and less relevant statistics. The resulting lower profile of these statistics has also led to lower levels of TA.

Phasing and mode of technical assistance

2.76 Effective phasing and the mode of TA are also critical success factors. For example, IMF TA commenced with a multisector statistics mission in 1992 and followed through with a combination of resident advisors and short-term missions. The combination of a resident ADB senior statistics advisor in the early 1990s and a resident IMF MSA since November 2001, working with ADB short-term experts, has also been effective. This has resulted in statistics on balance of payments, consumer prices, labor force, money and

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banking, and national accounts that are more developed than other economic statistics. Similarly, the combination of long- and short-term experts provided by the UNFPA was also a major factor in successfully developing NIS demographic and population statistics.

Selection and use of experts

2.77 The appropriate selection and use of experts is a critical success factor for TA. Occasionally, donors select experts on the basis of their seniority in national statistics agencies at the time they retired or on the assumption that the higher the tertiary qualification the better. The general view of the authorities is that these criteria are not necessarily effective and that the key to a successful expert is applied skills and results orientation. The most effective experts are hands-on, are willing to learn as much as to teach—irrespective of their seniority or tertiary qualifications—and are willing to lead by example. TA is less effective when an expert assumes that giving broad direction and providing conceptual training are all that is required. Effective TA in Cambodia requires an expert to understand local culture and to appreciate, for example, that counterparts may be reluctant to ask questions or challenge advice, even when they suspect that the proposed methodology is not appropriate in the Cambodian context. To ensure data quality, experts must be willing to supervise directly the development of the establishment register or population frame and to review the data and coding at each stage of processing, from completed survey questionnaires through output validation. To paraphrase the current senior minister of finance, "At times the expert teaches the local counterparts to cook and at other times the expert needs to cook so that the meal is prepared on time."

2.78 TA is also less effective when the workloads and terms of reference of the experts are too ambitious. Workloads and expectations of experts are sometimes too high, given that local counterparts may not have the level of commitment or the skills required to complete the work program within the deadlines specified.

Appropriate legislation and enforcement

2.79 The delay in recent years in enacting the statistics law has adversely affected the overall statistical system. While the NIS is technically independent in producing and disseminating statistics, other RGC statistics units are not necessarily so. Technical independence is a fundamental prerequisite for objective, good-quality, relevant, and timely official statistics. The NIS requires the authority under law to establish the Statistics Advisory Council, the Statistics Coordination Committee, and other formal coordination arrangements. The NIS and RGC statistics units involved in business registration and establishment survey activities need the backing of law to improve reporting and registration by businesses. Response rates for business and establishment collections can be as low as 10 to 20 percent, although NIS establishment surveys have generally higher response rates (about 70 percent).

2.80 Statistical legislation should ensure:

- Autonomous budget allocations for statistics, thereby encouraging debate on better financing;
- Reporting by the NIS and the Statistics Advisory Council to the government on statistical capacity building and outputs, thereby increasing accountability and transparency;
- Data provider understanding that noncompliance will result in possible fines and imprisonment, thereby improving response rates and providing more accurate data reporting; and
- Penalization of statistics officers who profit from or release confidential individual information, thereby building the trust of data providers.

2.81 However, even the best statistics law will fail to deliver the desired outcomes without proper law enforcement. Effective implementation of the current anticorruption and judicial reforms is therefore essential.

Coordination mechanisms

2.82 Data coordination has improved significantly as a result of establishing informal arrangements. As mentioned above, the NIS has established technical working groups, with ADB assistance, for statistics legislation, agriculture statistics, environment and natural resources statistics, and foreign trade statistics. Statistics cooperation has also been expanded and improved among the NBC, NIS, ministries, and institutions in relation to data-sharing arrangements. The IMF MSA has assisted the NIS in improving the coordination of donor financing and TA for statistics capacity building for the MEF, MoP, NBC, and NIS. The MSA has also worked closely with the NIS/MoP on improving the coordination of TA provided by experts and volunteers from the various ADB, ESCAP, GTZ, IMF, JICA, JOCV, UNDP, UNFPT, UNICEF, and

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other organizations. Assistance has been provided to the authorities in coordinating ADB and IMF STA missions and in preparing ADB and IMF STA mission proposals.

2.83 However, the current formal coordination mechanisms between RGC institutions and ministries for statistical activities and capacity building have proven to be severely constrained. Communication among ministries about information sharing generally requires a written request by one minister to the other minister—a process that can typically take about a month to get the desired result. More formal arrangements, such as the Statistics Coordination Committee and specific provisions in the subdecrees requiring direct information exchange and cooperation between the NIS and RGC statistics units, will help reduce turnaround times.

2.84 The level of decentralization is also a significant constraint. For example, in addition to the MAFF statistics office, six other departments and offices within the ministry are involved in statistical collection and dissemination. Similar levels of decentralization in the MEF and some other ministries make coordination more difficult. It also means much duplication in statistical infrastructure and statistics produced, and that scarce resources are being spread too thin. The law includes an article specifying the need for ministries to establish centralized statistics units. This should improve capacity within each ministry and make TA and skills transfer more cost effective and easier to implement.

Use of technology

2.85 A final success factor contributing to more rapid statistical development is the use of technology. Computerization of statistical activities in the NIS Central Office and major provinces and statistics units in the CDC, MAFF, MEF, MoC, MOEYS, MoP, MoT, and NBC has vastly improved the quality and timeliness of official statistics. In addition, establishing the National Information Development Authority in 2001, with TA from the Korean International Cooperation Agency (KOICA), contributed to building IT capacity for other line ministries.

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3. Bosnia and Herzegovina: Multisector Statistics

Noel Atcherley*

The Immediate Postwar Setting

General Background

3.1 Bosnia and Herzegovina (BiH) in 1996 emerged from a four-year war that had commenced only a month after the country had declared independence from the Socialist Federal Republic of Yugoslavia. The conflict left more than 200,000 people (about 5 percent of the population) dead, half the population displaced abroad and locally, and the civil infrastructure, including housing, severely damaged.

3.2 The Dayton Agreement that led to the end of the war in December 1995 divided the country into two entities, the Federation of BiH (Federation) and Republika Srpska (RS).[1] Under the Dayton Agreement, the main constitutional powers were assigned to each entity, leaving the State (the term generally used to describe the central government) with foreign affairs, monetary policy, foreign debt service, trade and customs policies, and some more limited functions. The Agreement provided for the Stabilization Force (SFOR) to assume military control to ensure peace and for the Office of the High Representative (OHR), appointed by the 50-member Peace Implementation Council, to be responsible for civilian implementation of the Agreement.

3.3 The economic situation of BiH in the immediate postwar period is reflected in an estimated GDP of US$2.8 billion (per capita US$665) in 1996 compared with US$10.6 billion prewar (1990) (per capita US$2,446). In addition, there were high unemployment, low output from the mainly government-owned enterprises, and circulation of several currencies.

3.4 With military control and civilian guidance from the international community (IC) accompanied by large official aid flows and assistance from international financial organizations, reconstruction began quickly. Governments were established, administrative agencies created, and a new central bank established with a currency board arrangement that provided full currency convertibility and contributed to a progressive lowering of inflation.

3.5 Substantial international donor assistance was committed at the end of the war (some US$5 billion for civilian aid over a three-to-four year period). In addition to the SFOR and the OHR, many international and regional organizations, together with foreign government agencies and hundreds of nongovernment organizations, established a significant presence in BiH. BiH joined the IMF one week after the Dayton Agreement was signed. In the first few postwar years, humanitarian aid and reconstruction were the main focus of donor assistance. Substantial military and civil assistance was undertaken directly by donors and not channeled through government budgets.

Statistical Situation

Statistical organization

3.6 The structure of the postwar statistical services reflected the constitutional powers and government structures established by the Dayton Agreement. Prewar, the main headquarters statistical office for BiH was the regional office of the Yugoslav Statistical Institute in the capital, Sarajevo, with small offices elsewhere. That office began to operate independently in 1992 and evolved in 1997 into the Federation of Bosnia and Herzegovina Federal Institute of Statistics (FIS), operating under the Statistics Law of 1995. In

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[1]The map at the beginning of Chapter 4 (Map 4.1) may be a helpful reference.

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the Federation, the government has a decentralized structure of 10 cantons (which spend about half of the total Federation budget), each with municipalities. Thus, the FIS has statistical staff in the cantons for data collection, while a few large cantons have their own statistical offices.

3.7 In RS, the government has a more centralized structure with only the central government and municipalities. Thus, the small former statistical office of the Sarajevo branch became the nucleus for the RS Institute of Statistics (RSIS) during the war and operated under a new statistics law from 1996. Hence, in the immediate postwar period, RSIS started with a much smaller staff (less than 50) than the FIS (which had about 100) and also was substantially isolated from international statistical TA for the initial postwar years. Because numerous experienced staff had left the country, many postwar staff were new and inexperienced. In 2001, following the creation of the small District of Brcko, with powers similar to those of the entities, a Brcko Bureau of Statistics was established with three staff within the Revenue Agency, and a statistics law was provided.

3.8 Each entity statistical office operated largely independently and sought to compile and publish basic statistical data, mostly based on limited administrative by-product data. Staff had generally been trained under the statistical system of the former Yugoslavia, and both statistical institutes were using Yugoslavian methodologies, which differed significantly from international statistical standards. Until the establishment of the Agency for Statistics of Bosnia and Herzegovina (BHAS) in Sarajevo in August 1998 with encouragement of the IC, no coordination of entity statistics took place, and no official data were compiled at the country level. Having only nine staff, the fledgling BHAS operated under the State Council of Ministers (COM) without any statistical legislation.

3.9 In 1997, BiH established an independent central bank—the Central Bank of Bosnia and Herzegovina (CBBH)—under the Law on the Central Bank of BiH. The Bank initially assumed central responsibility for monetary statistics and later assumed responsibility for balance of payments and government finance statistics, in accordance with Article 68 of the law, which empowered it to collect statistics on "economic and financial matters." The statistical offices were responsible for other statistics, notably real sector statistics.

Statistical output

3.10 For the **real sector,** the FIS had produced, since 1995, national accounts in current prices based on the IMF's *System of National Accounts 1993* (*1993 SNA*) and confined largely to GDP on a production basis.[2] On the other hand, RSIS continued to publish national accounts according to the Material Balances System. Both entities used accounting reports and other administrative data collected by the payment bureaus as the main data source for the national accounts. Retail price indices, published by both entities, were proxies for consumer price indices and were based on generally sound methodological principles but with seriously outdated weights. A producer price index (PPI) was available for the Federation but not for RS. Labor statistics were weak for both entities. No population census had been done since 1991, and, owing to the massive movements of people in and out of the country during the war, the country had no reliable population statistics.

3.11 Balance of payments statistics were not compiled. The CBBH commenced this task in 1998. No **government finance statistics** (GFS) were compiled by the authorities for the consolidated general government in BiH. Budget data available from entity ministries of finance and the state treasury used nonstandard classifications, excluded substantial military and civilian expenditures externally financed "off-budget," excluded significant expenditure arrears, and suffered from problems with the time of recording.

3.12 No countrywide **monetary statistics** were compiled at the beginning of 1996. However, by year end, monetary data began to be reported to the IMF. Soon afterward there was a transfer of responsibility for this task from the National Bank of BiH (NBBH) to the CBBH.

3.13 The statistical outputs in the immediate postwar situation, therefore, were very limited indeed. Except for monetary data compiled in 1996, country-level macroeconomic statistics did not exist, owing to three factors: the socialist origin of the statistical offices in a prewar centrally planned economy, a government structure where entities had the main responsibilities for compiling statistics, and the lack of a state statistical office to ensure consistency and coordination.

[2]International Monetary Fund, 1993, *System of National Accounts 1993* (Washington).

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3.14 Real sector statistics were especially limited, were based on differing standards in the two entities, and suffered from the lack of directly collected data based on *1993 SNA* requirements. The main source of data for the national accounts, for example, was accounting reports. These reports were not lodged by all registered incorporated businesses, there was a growing number of unregistered and unincorporated businesses, and reported data were affected by tax evasion. More generally, the substantial growth in the nonobserved economy was largely omitted from national accounts estimates.

3.15 The capabilities of the statistical offices were constrained by a lack of training in international statistical standards, inadequate staff (especially in RS), very inadequate office space in RS, the lack of even the bare minimum of computing and other office equipment, lack of coordination, and serious deficiencies in source data. There was no statistics legislation at the State level, and both the entity statistical offices operated under new legislation that was not consistent with international best practices. There appeared to be little government priority for improving statistics.

Strategies and Plans, Implementation, and Outcomes

Introduction

3.16 A notable feature of postwar TA in statistics to BiH is that there were no agreed overall strategies or plans for improvement on the part of governments or donors. In other words, no broad, let alone detailed, plan was devised by donors or BiH governments to deal with matters such as the following: (i) which BiH agency would be responsible for which statistics, (ii) how country-level statistics would be coordinated and produced, (iii) which international standards should be used, (iv) which statistical outputs were priorities and by when they should be finished, (v) how a reasonable balance between economic and social/demographic statistics was to be struck, and (vi) how those statistics were to be produced. The reasons for this lack of overall strategy and plans can be ascribed mainly to the following factors: the highly decentralized structure of BiH government, particularly the lack of an effective State body to coordinate statistical developments; the focus of governments on the many pressing problem areas of a postconflict society; and the lack of coordination among foreign donors. Donors did indeed coordinate somewhat on a few specific statistical activities but not in terms of overall strategies or agreed plans.

3.17 Most TA in statistics in postwar BiH can be divided into four periods: the initial postwar years 1996–97, with little TA in statistics; the next couple of years 1998–99, when donors mainly developed their longer-term programs for assisting BiH; the period 2000–2003, when most donors extensively trained BiH statisticians or initiated some statistical collections and when a new State statistics law was established. The fourth period is just beginning, with serious though limited donor support for priority data collections and at least the opportunity for a much more fruitful phase in donor TA, especially because of developing improvements in the government organization of statistics in BiH.

3.18 IMF TA in statistics followed a different pattern than that described above. Focused TA began in 1996 and continued thereafter, aiming at measurable results in compiling needed macroeconomic statistics and at the same time establishing adequate legislation, institutional capabilities, and statistical infrastructure. Nevertheless, it is convenient to consider all donor statistical strategies under these four periods.

1996–97—Initial Postwar Years—A Limited Focus on Statistics

Strategies and plans

3.19 As stated above, no overall strategies and plans were developed during this period. The two entities' statistical offices were largely left on their own to acquire knowledge of international statistical methodologies while continuing with limited statistical output. However, late in the period some European Commission (EC) programs were available to provide some study visits to European Union (EU) countries, some training abroad, and attendance at some technical working groups and meetings in the Statistical Office of the European Communities (Eurostat) and elsewhere.

Implementation and outcomes

3.20 Significant initiatives were taken in developing monetary statistics. With IMF assistance, including two missions, the NBBH developed monthly monetary statistics during 1996 for policymaking purposes and for reporting to the IMF and other users. During 1997, with the establishment of the CBBH, an IMF

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mission worked with the CBBH to transfer the capability to new statistical staff and to resolve new problem areas. This served as the basis for regular compilation of the monthly monetary statistics from January 1997 and for dissemination in the IMF's *International Financial Statistics* (*IFS*) and by the CBBH.[3] Monetary statistics were the first sector of macroeconomic statistics based on international standards that were produced by BiH.

1998–99—Support for Physical Infrastructure, State Agency, and Donor Planning, but Limited Technical Assistance

Strategies and plans

3.21 During this period, the major goal of donors was the establishment of a State agency with the role of coordinating the development of country-level statistics and negotiating with donors. Without such a body, donors were concerned that little country-level statistical development would occur.

3.22 The EC and Swiss Federal Statistical Office also sought to meet some immediate office and equipment needs of the entity and new State statistical offices. The EC also planned some expert support to the BHAS to assist it in undertaking its new coordination role. Also, the EC planned continued funding for BiH statisticians to attend expert meetings in Eurostat and for study visits to some EU countries. Some EC consultancies for countries in the program, Poland Hungary Action for Reconstruction of the Economy (PHARE), proposed that assessments be made of social, regional, and education statistics, and of household surveys and classifications.

3.23 In these years, donors developed their longer-term strategies and plans for TA to BiH statistics. Following the creation of the BHAS as the prerequisite for further donor assistance, BHAS sponsored the first significant international donors' meeting for TA in statistics, held in Sarajevo in November 1998 and chaired by the OHR (a preliminary meeting of selected donors had been held in Geneva in January 1998). Donors were now prepared to consider technical support for BiH statistics. The Italian National Institute of Statistics (ISTAT) had assisted in arranging the meeting by coordinating among donors and BiH statistical offices. The IC was widely represented at the meeting.

3.24 The BHAS and the entity institutes had each thought in broad terms about their needs, and they outlined their requests for TA. BHAS proposals included in particular (in order of priority) English training for all staff; a population census in 2001; demographic statistics; statistics for national accounts, trade, household consumption, labor force, employment/unemployment and wages; computer training; sampling techniques; and communications facilities. The FIS sought support for training in international standards, national accounts, internal and foreign trade statistics, and household budget surveys.

3.25 The RSIS requested support for national accounts based on the *1993 SNA,* a population census, development of business registers, surveys on household consumption and labor force, the introduction of EC industrial products classification and sample surveys of industry, foreign trade statistics based on EU standards, environmental statistics, migration statistics, a new office for the RSIS, and staff training. But there was no coordinated strategy or plan agreed at the country level, nor did the individual statistical offices indicate how those statistics were to be developed, especially with respect to the balance needed between training and source data collection.

3.26 Donors also had not developed any overall strategy and plans for assisting with BiH statistics but rather indicated what they each were planning to contribute. The EC had sought funds for a DM 5 million national PHARE program for BiH (content not specified), and it was also funding a foreign coordinator in the BHAS appointed by the State COM. The United Nations Development Program (UNDP) proposed a Japanese-funded project probably focusing on the national accounts, social and demographic statistics, and labor force and household surveys. The World Bank envisaged assistance in external debt statistics, national accounts, institution building, and a labor force survey; it also envisaged possible assistance in information technology, household budget surveys, and, if needed, environmental statistics. Bilateral donors, notably Italy, Sweden, Switzerland, and Turkey, indicated similarly wide-ranging assistance.

3.27 The IMF indicated its objective of building the capacity of institutions to compile macroeconomic statistics in the area of GFS and BOP statistics; further improving monetary statistics; and disseminating the data internationally via IMF publications. Missions would also involve developing a framework for

[3] International Monetary Fund, *International Financial Statistics* (Washington). A monthly and annual publication.

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consolidating data for all governments, which would occur after a State agency has been identified to coordinate this work. Finally, the IMF advised that it would provide a resident statistical advisor to advise on institutional issues and the four main areas of macroeconomic statistics.

3.28 Donors also urged the need for a three-year work program for priority tasks for the BHAS and the entity institutes and the need for the substantial strengthening of cooperation and working relationships between the State and entity statistical offices.

3.29 The OHR suggested there was no further need for coordination meetings of donors because the process was moving to implementation. However, an additional limited donor meeting occurred in 1999 to provide a more specific plan for three household surveys: The Living Standards Measurement Survey (LSMS) to be funded by the World Bank, the UNDP, and the Department for International Development (DFID); the Household Budget Survey (HBS) to be funded by Italy; and the Labor Force Survey (LFS) to be funded by the World Bank and UNDP.

3.30 As the basis for the IMF's planned TA, the IMF had assessed the TA needs in detail for macroeconomic statistics by sending a multisector statistics mission in January 1998. The mission reviewed the key macroeconomic statistical systems to assess their suitability for economic analysis and policy formulation, commenced work on developing unified systems for compiling macroeconomic statistics, and identified TA needs. Initial detailed recommendations and action plans were provided to the CBBH and the statistical offices.

3.31 In summary, during this period, donors attempted to provide effective assistance, but there was no single strategy or agreed set of plans for improvement. Basically, coordination was left to bilateral communications between the BHAS, entity statistical offices, the EC coordinator in the BHAS, and other donors. No further donor coordination meetings were foreseen as necessary. In this process, the seeds were sown of subsequent problems.

Implementation and outcomes

3.32 A major focus of donors, especially the EC and IMF, during this period was the creation of a State agency to coordinate the development of country-level statistics, negotiate with donors, foster cooperation among entity statistical offices, and undertake BiH's international responsibilities in statistics. This was achieved when the COM decided in August 1998 to establish the BHAS. It had no authority to collect statistics directly nor any authority over entity statistical offices. Its management was to be undertaken by a management board of three members, one from each ethnic group. All three members had to agree before the board could take any action. Six staff, in addition to the board, were provided to the BHAS, which had no legislative powers. The COM agreed that an EC-funded semiresident coordinator would participate in managing the management board for the first year. The BHAS began work operations in 1998. It published a very limited range of country-level statistics commencing in 1999. The EC and the Swiss Federal Statistical Office quickly funded some initial rented offices and later fitted out BHAS's government offices and provided some computers and other equipment.

3.33 With this institutional obstacle to funding of technical programs by most donors overcome, it was expected that the general commitments made at the November 1998 donor meeting would be firmed up in consultation with the BHAS and entity statistical offices and then would be implemented. The actual donor TA and statistical outputs during this period were very limited, however, especially in real sector statistics. The EC funded attendance of statisticians to some technical meetings of Eurostat and some study visits to EU countries. Several EC-funded assessments were done on social, regional, and education statistics. ISTAT provided some coordination among donors. The EC was developing its substantial PHARE program, but the program was implemented only from September 2000 onward. However, the EC continued to fund a semiresident coordinator in the BHAS to liaise between the EC and BiH statistical offices. UNDP/World Bank/DFID/ISTAT plans for household surveys remained to be finalized. The World Bank project was not undertaken in this period. Sweden provided some short-term consultancies and missions, including some on national accounts and, like the EC, provided training in English and IT, which assisted some statisticians acquiring some knowledge in these fields.

3.34 Support proposed by various donors for a 2001 population census was not pursued. The reason was that the OHR advised in 1999 that it would be inappropriate to conduct a census until Annex VII of the Dayton Agreement (which deals with return of

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displaced people) was implemented, which could take a number of years. Thus, a serious gap in BiH statistics remained; the last census was in 1991.

3.35 Regarding the IMF's plans, further work continued to improve monetary statistics and respond to changing circumstances in the banking sector, with assistance from annual missions and the statistical advisor from May 1999. Details of the work undertaken are given in Chapter 4 (Slack).

3.36 The IMF provided an expert mission in 1999 to work with newly appointed CBBH statistical staff and the IMF statistical advisor to develop annual BOP statistics. The statistics were first produced in 1999 starting from 1998 and were based on the fifth edition of the IMF *Balance of Payments Manual* (*BPM5*). BOP statistics became the second field of macroeconomic statistics based on international standards to be produced and disseminated. This work involved assessing and determining the best available data sources and estimation methods and training staff in BOP compilation both on the job and at seminars. The CBBH began publication of BOP statistics in its 1999 quarterly bulletins.

3.37 Concerning GFS, no State agency had been found during this period to coordinate this work. Thus, the role of implementing functional classifications was undertaken as part of a U.S. Treasury project to assist the entities and the State to develop modern treasury functions. The project commenced in this period but was not completed until 2002 for entities and the State and continues at subentity level with assistance from the United States Agency for International Development (USAID).

3.38 IMF efforts to develop annual country-level national accounts estimates based on international standards commenced in 1999 with entity and State statistical offices. Each office had allocated staff for national accounts work—though only one each in the RSIS and BHAS—and some training was provided for these staff on the job by the IMF statistical advisor and at the IMF's Joint Vienna Institute (JVI).

3.39 In summary, during 1998 and 1999 the main accomplishments of donor support were the initiation of the BHAS; the participation of some statisticians in expert meetings and some study visits; the first compilation of BOP statistics; further improvement of monetary statistics; and the commencement of development of country-level national accounts (though with continued poor source data). Donors did not plan, nor did the authorities fund, the collection of the new and better economic source data essential for improving real sector statistics. No overall agreed country strategy or plans emerged during this period.

2000–03—Training, Coordination and Planning Attempts, Limited Collections, a Statistical Law, and Further Donor Meetings

Strategies and plans

3.40 Donor and country plans for improvement in this period focused largely on extensive training for statisticians in many fields and study visits to other countries; attempts at better coordination among the statistical office; the development of a work program; efforts to produce more and better statistics at the country level by initiating some new data collections and drafting a State statistics law; and holding a couple of further donor meetings later in the period. In addition, the authorities committed to improving macroeconomic statistics in the context of a reform program supported by the IMF.

3.41 Programs that had been discussed in general terms at the November 1998 donors' meeting were developed in more detail in the early years of this period, and implementation commenced. The EC's PHARE program was the largest and from 2000 to 2002 was designed to train statistical staff, both in-country and abroad. It also provided numerous consultancies in various fields of statistics, especially national accounts, prices, and foreign trade. The program was also intended to support frequent meetings of entity and State statistical staff. Three semiresident coordinators were provided for, one in each of the statistical offices, to monitor and coordinate the PHARE program. Also, in this period Eurostat planned to develop a draft State statistics law and seek its acceptance.

3.42 Early in this period, various donors planned a major set of household surveys, reflecting in part statistical offices' requests for support for household budget and labor force surveys. Also, an LSMS was added as a donor requirement. These three surveys were planned to be undertaken consecutively because of limited country capacities for such large surveys. Donors planned a master sample to select specific samples for each of the surveys. Italy committed funding of an HBS, designed to provide household con-

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sumption data for use in compiling expenditure-based GDP and new weights for CPIs.

3.43 The World Bank/UNDP/DFID proposed funding for the LSMS, and the UNDP/World Bank proposed funding an LFS. All three donors, together with the EC and the Swedish International Development Agency (SIDA), funded the development and implementation of the master sample. Donors and statistical offices differed in their views about the desired order of priority of the three surveys. Those donors and statistical offices especially concerned to improve macroeconomic statistics preferred that the HBS be first, while others preferred that the LSMS be first because the microdata were to be used to assist in developing poverty statistics.

3.44 Sweden planned consultancies and training. The World Bank provided a grant for developing a master plan for statistics, for some of the work on sample implementation, for a long-term expert for national accounts, and for some English training. Turkey planned study visits and consultancies on price and industry statistics. The DFID, one of the donors for the LSMS, also planned to fund extensive annual follow-on longitudinal surveys ("panel surveys").

3.45 The IMF's multisector statistical advisor was to continue supporting the development of statistical legislation, capacity building in all fields of macroeconomic statistics, on-the-job training of statisticians, dissemination of macroeconomic statistics in IMF publications, and coordination with other donors in macroeconomic statistics. The IMF's plans for improving macroeconomic statistics were continuously reviewed and updated throughout this period.

3.46 The BHAS hosted two donor meetings, in 2001 and in June 2002. The main objectives were to urge donors to speed up action on implementing the HBS and LFS and to provide funding for the HBS sample (not part of the ISTAT project), which appeared to be available and not needed for the LFS. The EC delegation expressed concern at the lack of progress in developing new and better statistics, especially at the country level, and indicated that its future funding would support that objective. BiH statistical offices sought further funding for high-priority projects, but none was offered.

3.47 An EC Community Assistance for Reconstruction, Development and Stabilization (CARDS) regional program for BiH was planned to begin in 2002. It later changed to 2003 and covered pilot projects for foreign trade statistics, small- and medium-size business statistics, and the BiH's participation in the European Comparison Project.

3.48 On May 31, 2002, in a Memorandum of Economic and Financial Policies for BiH prepared in the context of a Stand-By Arrangement supported by the IMF, State and entity authorities committed to improving a wide range of statistics. These included the following: by end-2002, GFS, an HBS, foreign trade commodity data, and quarterly BOP statistics; and by September 2004, production of national accounts on an expenditure basis, real GDP, nonobserved economy (NOE) estimates, a revised CPI and an industrial production index based on updated weights, improved foreign investment data, and the initiation of a population census.[4] On December 4, 2002, in a Supplementary Memorandum, the authorities committed to an HBS and to strengthening business registries, implementing the State statistics law, and continuing work on new national accounts, the CPI, and foreign trade statistics.[5]

3.49 The first successful efforts of the statistical offices to agree to a program of high-priority, new, and improved statistics, mainly macroeconomic statistics, began in mid-2002, with the support of the IMF and EC. The heads of all the statistical offices developed and endorsed a proposed three-year work program of their highest priority projects in June 2002 and later developed a one-year detailed program based on the three-year plan. The EC presented the program to a high-level meeting of heads of relevant international organizations and bilateral donors, which endorsed the program.

3.50 The one-year plan focused mainly on establishing working groups to harmonize existing statistics between the entities and the HBS; to begin work on a population census; to develop strategies for future development of new systems of economic censuses, surveys, and price statistics; to conduct feasible "light" economic censuses in selected industries (mining and energy); and to plan the censuses of other industries.

[4] Bosnia and Herzegovina, Memorandum of Economic and Financial Policies (attached to Letter of Intent, May 31, 2002, paragraph 22). Available at www.imf.org.

[5] Bosnia and Herzegovina, Supplementary Memorandum on Economic and Financial Policies, December 4, 2002, paragraphs 9 and 23. Available at www.imf.org.

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In the absence of any credible economic source data for real sector statistics, these proposed economic censuses were seen as an essential step in obtaining benchmark data for national accounts and other economic indicators and as a basis for establishing regular business surveys.

Implementation and outcomes

Statistics law

3.51 Early in the period, Eurostat proposed a draft State statistics law, which was reviewed by other donors and the statistical offices. It would have provided a legal basis for the BHAS but with very limited powers, for example, no power to directly collect data and no power to coordinate entity statistical offices. Also, it proposed a statistical council largely confined to statistical officials. The COM eventually endorsed the draft law in July 2001. Later, one house of the Parliament endorsed it. However, for about a year, it awaited approval of the second house of Parliament, after being rejected several times.

3.52 With OHR backing, IMF and CBBH support, and the agreement of other international organizations, a new and much more modern statistics law was drafted based on sound international practices and UN principles. Noting the failure of Parliament to enact a law and the importance of progress in statistics to support economic reform, the OHR, with the support of the governor of the CBBH, imposed the statistics law in October 2002. It became effective in November 2002. As part of its decision imposing the law, the OHR instructed that the entities and the State must enter into negotiations within a year, with a view toward combining entity and State statistical offices into a single statistical service under State control.

3.53 The new statistics law provided for new positions of director and deputy director of the BHAS, with the director having full decision-making powers (i.e., not shared among three as with the former management board). It created a statistical council including outside users (the governor of the CBBH, the State minister of finance and treasury, and three others from the fields of economics, business, or statistics). The council advises the COM on work programs and resources, coordination, and other issues. A rolling four-year work program is specified, and an annual report is published. The BHAS is given powers to collect data directly if necessary. The small Brčko Bureau of Statistics became a branch of the BHAS. Substantial penalties are provided for breaches in confidentiality, nonresponse, and false response. The OHR's decision required the entities to harmonize their laws with the new State law.

3.54 Implementation of the law was slow. Not until June 2003 were the director and deputy director positions advertised. Nevertheless, with OHR direction and support of the CBBH and IMF, work was undertaken with the entity statistical offices to harmonize their laws with the new State law. Both entities by the end of 2003 had enacted new laws: the RS law was more closely harmonized with the State law than was the Federation law. Although there was still no statistical council or a new four-year work program by the end of 2003 (these awaited the appointment of a new director of the BHAS), the provision of a modern law on statistics was an essential achievement for BiH statistics.

Coordination

3.55 The donor objective of building the capacity of the BHAS to lead effectively the development of a sound statistical system had limited success during this period. BHAS resources remained at only 9 staff for most of this period, increased to 12 only in 2002, but fell to 10 in 2003. The complex management arrangements established for the BHAS created continuing difficulties for decision making and achieving progress. The entity statistical offices retained their largely independent operations, and coordination remained limited. Very limited country-level statistics were produced regularly by the BHAS. One sound achievement for the BHAS in macroeconomic statistics was, with IMF assistance, the release of the first country-level national accounts bulletin in 2000.

3.56 From mid-2002, with IMF and EC assistance, the BHAS coordinated a series of lengthy meetings with entity statistical offices with the objective of developing a three-year program of high-priority macroeconomic statistics and a more detailed program for the first of the three years. All heads of statistical offices endorsed this program, the first such initiative in BiH. A primary objective of the one-year program was the EC's request that it be prepared as the basis for support of an EC PHARE program that the EC eventually decided not to fund. Nevertheless, the development of these agreed work programs reflected an important step in the creation of country priorities for statistics. It was also the country's first attempt at a

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medium-term strategy for real sector statistics; unfortunately, the attempt lapsed because of inadequate donor support.

Household surveys

3.57 Provision of a master sample for the three planned household surveys was undertaken with advice from Swedish and EC experts and funding from the World Bank, UNDP, and DFID. The cost was significant (an estimated 860,000 euros of donor funding alone) and was completed in 2001. As indicated earlier, the issue of which of the three surveys should be first conducted was debated among the IC and statistical offices. Those (including the IMF and the statistical offices) who urged much-needed improvements in macroeconomic statistics favored the HBS. But others preferred the LSMS with its emphasis on microdata. The LSMS was chosen as the first survey, although it was not in the priority work programs of statistical offices. Official results were not published until August 2003.

3.58 Several aspects of the LSMS's operation warrant comment. First, the survey was largely undertaken by donors working directly with entity statistical offices, with very little BHAS involvement. This led, in effect, to two separate and inconsistent surveys, rather than to a coordinated single survey. Second, after the survey there was significant criticism from some donors and statistical offices that the sample was not representative and, in particular, that rural households were underrepresented. It is difficult to know the extent of this problem without some basis of comparison (e.g., with a population census). While the LSMS provided a large database of microdata for BiH households, the quality of the results remains in question.

3.59 The follow-up "panel" surveys, which are longitudinal surveys using a subsample of LSMS sample households, were conducted in three waves from 2001 to 2003, funded wholly by the DFID. Although funded to undertake specific operational tasks of the survey, the statistical offices had no decision-making authority for the surveys. They did not consider these costly surveys a high priority, as they generally were not included in their work programs.

3.60 Since the HBS was planned to follow on quickly from the LSMS, it could have commenced early in 2002. This high-priority project was the first project that donors had funded for macroeconomic source data since 1996. Statistical offices supported early implementation and made use of ISTAT's expertise in conducting household surveys. However, commencement was delayed until mid-2003. After the HBS was delayed, the LFS—the last of the trilogy of household surveys, which was expected to be at least in the planning stages by this point—was itself deferred.

IMF TA

3.61 IMF TA led to a number of demonstrable outcomes. First, the new State statistics law was established. The IMF worked with the OHR on implementing aspects of the law, including the terms of reference for the new positions of director and deputy director of the BHAS and the harmonizing of the entity statistics laws with the new State law.

3.62 Second, regular short-term IMF missions in monetary statistics, combined with day-to-day assistance from the statistical advisor and training of staff at the JVI, dealt with numerous changes in the banking environment and improved the quality and scope of monetary statistics. The quality, including timeliness, of BiH monetary statistics improved greatly. A time series of monetary data was disseminated on the CBBH website in June 2003, together with the first BiH advance release calendar for official statistics.[6] After May 2003, monthly monetary data were disseminated immediately on the website rather than being held up for publication in the next quarterly bulletin. With IMF assistance, the statistical organization of the CBBH was rationalized and made more efficient for producing monetary statistics.

3.63 Third, quarterly BOP statistics were introduced starting 2001, with IMF mission and statistical advisor assistance, and were generally disseminated within one quarter. Extensive improvements were made to the quarterly and annual BOP estimates, and more metadata were provided. In particular, detailed and large adjustments for coverage, valuation, and timing were made in 2002 for merchandise trade, back to 1998. These adjustments related to undervaluation of a large proportion of imports and considerable smuggling of imports (and to a smaller extent exports). Adjustments were also made to exclude from customs data imports by international organizations, embassies, and other foreign government offices in BiH. With improving customs and tax administration and introduction of a State border service, appropriate trends in those adjustments were built into the estimation methodology.

[6] Available on the CBBH website, www.cbbh.ba.

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However, the underlying customs data on exports and imports, despite the strengthened customs administration and the Automated System for Customs Data Administration (ASYCUDA) computer systems, remained of doubtful quality and needed substantial improvement. Financing arrangements for the significant unrecorded trade in goods also needed to be estimated in parallel with adjustments to trade in goods. A new estimation methodology for workers' remittances resulted in substantially increased amounts, more in line with other countries in the region. A time series of BOP estimates was disseminated on the website, data and metadata were provided for the IMF *Balance of Payments Statistics Yearbook* (*BOPSY*), more detailed metadata were published locally, and an advance release calendar was introduced.

3.64 Fourth, the previous IMF statistical advisor worked extensively with statistical offices to introduce the first country-level national accounts publication, with metadata, in October 2000.[7] National accounts became the third field of macroeconomic statistics based on internationally accepted methodologies to be developed with IMF assistance. However, the main source data for the national accounts remained poor. Also, no estimates were included in the official statistics for the assumed large NOE. The general source data problem could have been substantially overcome only if donors had supported economic censuses of the main industries. The failure to include NOE estimates was due in part to poor and limited source data, but mainly to a reluctance of statistical offices to make such adjustments. With no significant improvements in source data for the national accounts, the GDP estimates throughout the period lacked credibility both in levels and in changes. The number of staff compiling the national accounts and their capability (aided by training from IMF and other donors) improved during the period.

3.65 Fifth, with improved macroeconomic statistics the IMF was able to introduce a country page for BiH in the monthly *IFS* starting July 2001. Though limited in range of data, the page provided users worldwide with better access to BiH statistics that were based as far as possible on consistent international methodology.

[7] Agency for Statistics of Bosnia and Herzegovina (Sarajevo), *Statistical Bulletin 3,* October 2000.

3.66 Sixth, as noted above, the IMF assisted in reorganizing the CBBH's statistical capabilities with the creation of a new statistics division, with a section each for monetary statistics, BOP, GFS, and real sector statistics. This resulted in new leadership, increased staff numbers, and an organization more focused on improving the macroeconomic statistics for which the CBBH is responsible. New three-year work plans with clear objectives and planned outcomes have been introduced, and staff have received deeper and broader training. These factors, together with senior management support for statistics, provide a good basis for sound continuing progress in statistics.

3.67 Seventh, the foundation has been created for initiating the development of GFS, including government debt statistics for BiH based on international standards. The foundation includes establishing a section in the CBBH for this work, preparing detailed work plans, and training staff. The task of developing these statistics has begun, with support of short-term IMF missions. TA from the United States in establishing modern treasuries and computer systems for the State and entities led to the introduction of new charts of accounts and classifications based on the IMF's *1986 Government Finance Statistics Manual (GFSM)* in 2001. This will now serve as a good basis for the actual production of GFS statistics, with the CBBH having assumed responsibility for that role.

3.68 Eighth, the three statistical offices introduced websites during 2002, ensuring better access to their statistics. The CBBH had already introduced a website in 1998.

Other TA

3.69 The EC's extensive PHARE program commenced in late 2000. Originally planned to cover 18 months, it was extended to over two years. Its aim was to "support the development of a sustainable statistical system" and to "support the entity statistical institutes to be in a position to provide . . . BHAS . . . data for the production of reliable, up-to-date, relevant . . . statistics." The program provided training courses for statistical staff and many study visits abroad. The PHARE program also provided three semiresident foreign coordinators—one in each statistical office—to coordinate and monitor the training activities and outcomes and to assist the BHAS to develop its capacity. It also financed travel costs to facilitate meetings of entity and State statisticians, and financed computers, software, and other office equip-

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ment for the entity and State statistical offices. The extensive training provided by the PHARE program at times contributed to the shortage of staff available to work on producing new and improved statistics, posing a difficult trade-off for managers.

3.70 In mid-2001, the World Bank consultant prepared a master plan for the future development of BiH statistics; however, this was not pursued. SIDA and Turkey provided some training courses, consultancies, and study visits.

3.71 After mid-2001, the World Bank national accounts expert worked intensively with the statistical offices for a year and recommended changes, such as including NOE estimates in GDP and estimating constant price GDP by using available volume measures; however, these were not implemented. The expert emphasized that only limited progress was possible until better source data were collected.

3.72 The CARDS regional program had, by late 2003, mainly involved meetings abroad for BiH statisticians planning the extensive work needed for participating in the European Comparison Project over the coming years. The project will require BiH to collect extensive price data over a period. But because BiH lacks expenditure-based GDP, it is difficult to envision results from this project except in the longer term. Expenditure-based GDP would be essential if volume comparisons of GDP (expenditure approach) were to be made based on purchasing power parities.

3.73 In summary, donors intended the period 2000–2003 to show major improvement in economic and other statistics, including a population census, together with the building of a sound State statistical office. Indeed some major successes did occur, such as the provision of a State statistics law, substantial training, well-equipped offices, and improved monetary and BOP statistics. There was little improvement in real sector statistics throughout the period.

2004 Onward—Implementation of Law, Priority Surveys, Declining Technical Assistance, and Possible Organizational Change

Strategies, plans, and implementation

3.74 A top priority for the future is the full implementation of the State statistics law. A statistical council needs to be created and a medium-term work program developed. Entity statistics laws, broadly harmonized with the State law, should provide important support for consistency of statistics.

3.75 The main HBS, which began in January 2004, should lead to improved real sector statistics, providing data on household consumption expenditure for use in preparing expenditure-based GDP, serving as a check on official production-based GDP estimates, and providing a basis for up-to-date weights for entity and country-level CPIs.

3.76 A third in the series of donor-financed household surveys, the LFS, would provide urgently needed data on employment/unemployment and other labor market indicators.

3.77 The CBBH, with the support of IMF TA, will progressively develop government external debt and other government finance statistics, which, apart from providing essential fiscal data, will also yield significant input to the measurement of GDP on an expenditure basis. Also, the CBBH will complete the initial exploratory survey of foreign investment, followed by regular quarterly surveys, for BOP purposes.

3.78 IMF missions will work with entity and State statistical offices to develop for the first time a State CPI using the latest international methodology and existing weights. They will also develop new entity CPIs based on the same updated methodology and existing weights and price collections.

Setting 2004, Conclusions, and Lessons Learned

3.79 In this final section, some lessons learned and conclusions from the postwar period of TA in statistics for BiH are discussed, but first a summary is given of the setting in 2004.

The Setting 2004

Economic and political

3.80 Eight years after the war's conclusion, BiH's overall political economic setting is much improved. Governments have been elected for the first time by democratic processes, peace has been maintained (although some ethnic tensions remain), SFOR strength has been reduced progressively to about 12,000, and

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some 940,000 people have returned to their prewar locations. Supporting this process, international donors have spent US$5–6 billion in various forms of civil assistance to BiH. The rate of economic growth has been respectable, and inflation has fallen to typical Western European levels. Fiscal stabilization has occurred, with the help of the central bank's strict implementation of the currency board arrangement. The establishment of a stable banking system has raised confidence. Foreign investment has begun to grow substantially, albeit from a small base. Nevertheless, GDP per capita stands at the lowest level for any European country. Unemployment remains very high. Many challenges remain for BiH to recover and emerge fully from the postconflict arena.

Statistical

3.81 In the statistical arena, significant changes have occurred during the last eight years in statistical infrastructure and organization. The BHAS was created in 1998 to coordinate development of country-level statistics and negotiate with foreign donors. The State statistics law was enacted in October 2002 and is slowly being implemented, with an initial focus on harmonizing entity laws with the State law. Concerning resources and capabilities, much-improved office facilities, including computer equipment and software, are now in place; statisticians have received much training in international statistical methodologies; staff resources have increased over 90 percent since 1996; budgets are close to typical EU countries in terms of statistical expenditure as a proportion of GDP (although official GDP estimates for BiH are thought to be significantly understated); but staff numbers are well below typical EU levels on a population basis. Cooperation and coordination between State and entity statistical offices have improved, with frequent meetings of heads of statistical offices and working groups established to improve statistics. In particular, for the first time, the statistical offices agreed on a three-year work program of high-priority statistics as the basis for seeking donor funding.

3.82 In terms of specific fields of statistics, notable improvements are seen in the range of macroeconomic data over the period and in dissemination practices. Monetary statistics were the first to be developed and are now at a high standard. BOP statistics were introduced from 1998 and are being progressively improved in quality and detail. GDP estimates on a *1993 SNA* basis became available in 2000. Proxies for CPIs are available at the entity level (with CBBH estimates at the country level). A start has been made on developing GFS including government debt data, based on international standards.

3.83 Nevertheless significant shortcomings remain to be addressed. No credible GDP estimates yet exist, largely owing to inadequate source data. No country-level price indices are produced. CPIs at the entity level are not based on consistent international methodology, and the weights are seriously outdated. PPIs exist for only one entity. Foreign trade statistics do not include estimates for smuggling and undervaluation and suffer from a lack of transparency with respect to their differences with customs data. GFS—consolidated and based on international standards—are not yet available. BOP statistics, though very much improved, suffer from significant inadequacies in source data, especially inadequate customs data and the lack of regular surveys of foreign direct investment, services, foreign aid, and other items. An International Investment Position (IIP) is not yet available. Credible labor market data are unavailable. There has not been a census of population and households since 1991, before the massive effects of the war. There are no comprehensive external debt data—the gaps relate to sub-State and nongovernment nonbank debt.

Lessons Learned

3.84 The postwar history of statistical progress reflects in many ways the wider political, entity/State, and ethnic climate in BiH as well as the highly decentralized structure of government. The key lessons that can be identified for transition and postconflict countries like BiH are the following:

- **Effective leadership is important for progress in statistics.** Such leadership in the CBBH was critical in the progress of macroeconomic statistics. On the other hand, for real sector statistics, the poorly resourced State statistical office, with a complex management structure, is a major reason for the lack of much progress since 1996.
- **Adequate legislative basis for compiling statistics is needed.** Again, where the CBBH has had such legislative backing, until very recently the State statistical office has not, severely limiting its ability to coordinate country-level statistical development.
- **Appropriate organization of statistics for the country is essential.** Reflecting the general decentralization of government powers in BiH, real sec-

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tor statistics are mainly compiled by the entities and the Brcko District. The State is largely left to the role of seeking to coordinate the development of country-level data, rather than primary data collection. It is therefore highly dependent on cooperation from the entity statistical offices. A combined statistical service that meets the needs of both entity and State governments would achieve substantial economies of scale. Also, by eliminating the time-consuming and frustrating tasks of seeking coordination and consistency among disparate administrations, it would yield an organization much more conducive to progress in statistics.

- **Governments must set overall strategies for statistical capacity building,** with clear and prioritized work programs. Once this is accomplished, preferably on the advice of a statistical council, countries can seek donor support for the priorities. This is one of the most important lessons from postwar TA in BiH. Reflecting in part the structure of its governments, the BiH did not develop a coherent strategy for statistics and generally accepted all offers of TA in statistics.
- **Donors should coordinate their TA strategies.** If a country finds it difficult to create a set of statistical priorities, donors should coordinate their programs among themselves, avoiding duplication and balancing aid appropriately among types of statistics (e.g., economic and sociodemographic statistics). Apart from the household surveys, coordination efforts in BiH were largely ineffective.
- **An appropriate balance should be struck among the various focuses of TA** (i.e., TA focused on direct production of statistics and collection of reliable source data, or on staff training or on improving statistical infrastructure such as office premises and equipment). This balance would be determined by the appropriate *phasing* of TA inputs. For example, regarding BiH real sector statistics, the phasing was frustrating for the staff because they were amply trained in the technical aspects of producing statistics, but they had little source data with which to apply this training actually to produce the statistics.
- **A pragmatic and flexible approach to institutional responsibility for different sectors of statistics may lead to faster progress.** For example, reflecting its relatively better resource situation and strong interest in economic statistics, the central bank (at least in the early years of statistical development) may improve macroeconomic statistics more rapidly if it takes formal responsibility for compiling them.
- **The selection of high-quality experts is critical.** The selection of consultants who have had little or no experience in compiling official statistics will likely lead to limited results.
- **Governments should provide adequate statistical staff to absorb TA,** since donors generally do not fund salaries for statistical staff. This has been a constraint for the BHAS and RSIS in particular.
- **IMF lessons are critical.** The main lessons from the IMF's contribution to TA in BiH have been the following: (i) *the flexibility of IMF TA* was highly important in being able to move quickly (as with the development of monetary statistics in 1996) to assist in creating new fields of statistics and building long-term capability; (ii) a *supportive host institution (e.g., the CBBH) is essential* if timely action is to occur and the capability is to be sustained; (iii) the IMF's approach of *focusing on concrete activities that directly lead to development and dissemination of new and better statistics* led to positive results for users; (iv) the IMF's interest in *building local in-depth capability in all fields* of macroeconomic statistics contributed to cross-sectoral consistency; and (v) a long-term *resident multisector statistical advisor can be especially useful* where there are many serious gaps in statistics, a lack of suitable infrastructure, and many institutional issues that need day-to-day attention.
- **Estimates should be made for omitted or poorly covered activities.** When country statisticians make estimates, it is important to accompany the estimates with a *clearly stated revisions policy for official statistics,* so that the estimates can be revised credibly when more and higher-quality statistics become available.[8] In many countries, especially in transition countries, these reforms require changes in culture to be able to correct or revise statistics without creating suspicion of wrongdoing. In the case of BiH, this has been a significant factor for national accounts statistics, which suffer from the failure to include estimates of what is generally regarded as a large NOE. This failure to include the NOE also encourages international and other organizations to produce their own estimates (in the case of GDP, these range up to several times the official figures), thus creating confusion for policymakers, potential foreign investors, and others.

[8] See Carol S. Carson, Sarmad Khawaja, and Thomas K. Morrison, 2004, "Revisions Policy for Official Statistics: A Matter of Governance," IMF Working Paper 04/87 (Washington: International Monetary Fund).

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3.85 In conclusion, BiH statistical offices and donors are at a crossroads. One path leads to a continuing lack of real progress in real sector statistics and the danger that the statistical offices will become irrelevant for meeting the minimum statistical needs. The other path leads toward integration with Europe and the needed major progress in real sector statistics. This path would be based increasingly on local initiative, adequate budgets, enhanced government interest in using statistics for decision making, and continuing TA in priority fields targeted on new and better source data. It would improve national accounts, prices, and other statistics, preferably with a single statistical service serving State and entity governments and with a well-focused and prioritized work program. The CBBH, based on experience to date, will continue to play its part in ensuring sound progress in the fields of macroeconomic statistics for which it is responsible.

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4. Bosnia and Herzegovina: Monetary Statistics

Graham L. Slack*

Setting

Institutional Setting (Capacity, Statistical Outputs, Shortcomings, and Challenges)

4.1 Four months after the signing of the Dayton Peace Accord in December 1995, the first of a series of monetary and financial statistics missions from the IMF's Statistics Department began work in Bosnia and Herzegovina (BiH). Countrywide monetary and financial statistics were urgently sought by the BiH authorities and the IMF to support efforts to establish a new central bank and a countrywide currency, as called for in BiH's constitution.[1]

4.2 BiH presented a particularly challenging environment for delivering TA in macroeconomic statistics, not least because the conflict had severely affected data collection and processing systems and the organization structures established under the former Socialist Federal Republic of Yugoslavia (SFRY). For instance, computer equipment at official institutions and commercial banks was generally inoperative or severely outdated; thus, many commercial banks were relying on manual methods for recording transactions. In addition, banks' balance sheet data, typically used to compile monetary and financial statistics, were drawn up according to plans of accounts and accounting rules that had evolved differently in the three regions of BiH (see Map 4.1). Several currencies were being used for transactions and savings purposes—one private currency issued by commercial banks, and three other currencies issued by foreign central banks—thereby adding an element of so-called currency co-circulation to the local economy.

4.3 Added to these difficulties and reflecting the post-conflict regional/political boundaries was the fact that three institutions undertook monetary authority functions in BiH (see Table 4.1): the Federation Ministry of Finance (FMoF) in the city of Mostar; the National Bank of Bosnia and Herzegovina (NBBH) in Sarajevo; and the National Bank of Republika Srpska (NBRS) in the city of Banja Luka, Republika Srpska (RS). Payment bureaus in each region of BiH also undertook some monetary authority functions, such as releasing currency into the local economy.[2] As with the commercial banks, the payment bureaus' charts of accounts had evolved differently in each region of BiH. Finally, responsibility for compiling statistics on the banking system was shared by the NBBH, the FMoF, and the NBRS; each of them was collecting balance sheet data from the commercial banks under their respective control. The key elements of BiH's banking system as of 1996 are summarized in Table 4.1

The Plan of Action and Outcomes

Plans for Improving Statistical Capacity, Technical Aspects, and Institutional and Systemic Issues

4.4 The first step in defining a plan of action was to establish what data were being collected by which agencies. Extensive consultations were undertaken with national/regional authorities and agencies, as well as with IMF departments and bilateral and other international agencies engaged in BiH. Meeting national/regional officials was not straightforward, however—not least because they were generally reluctant to travel outside their jurisdictions, and key agencies were dispersed around the country. Also, initial technical discussions were complicated by the need for translation between languages and differences in financial terminology. Nevertheless, with the help of patient

*The author was senior economist in the IMF Statistics Department during the period of this study. He is grateful to Keith Dublin, Gérard Raymond, Xiuzhen Zhao, and Silvano Spencer—fellow members of the IMF monetary and financial statistics missions to BiH—for comments on this case study.

[1] In addition to the IMF's Statistics Department, the European, Monetary and Financial Systems, and Fiscal Affairs Departments of the Fund were closely engaged in providing policy advice and technical assistance to BiH.

[2] Payment bureaus controlled the electronic payment system in BiH.

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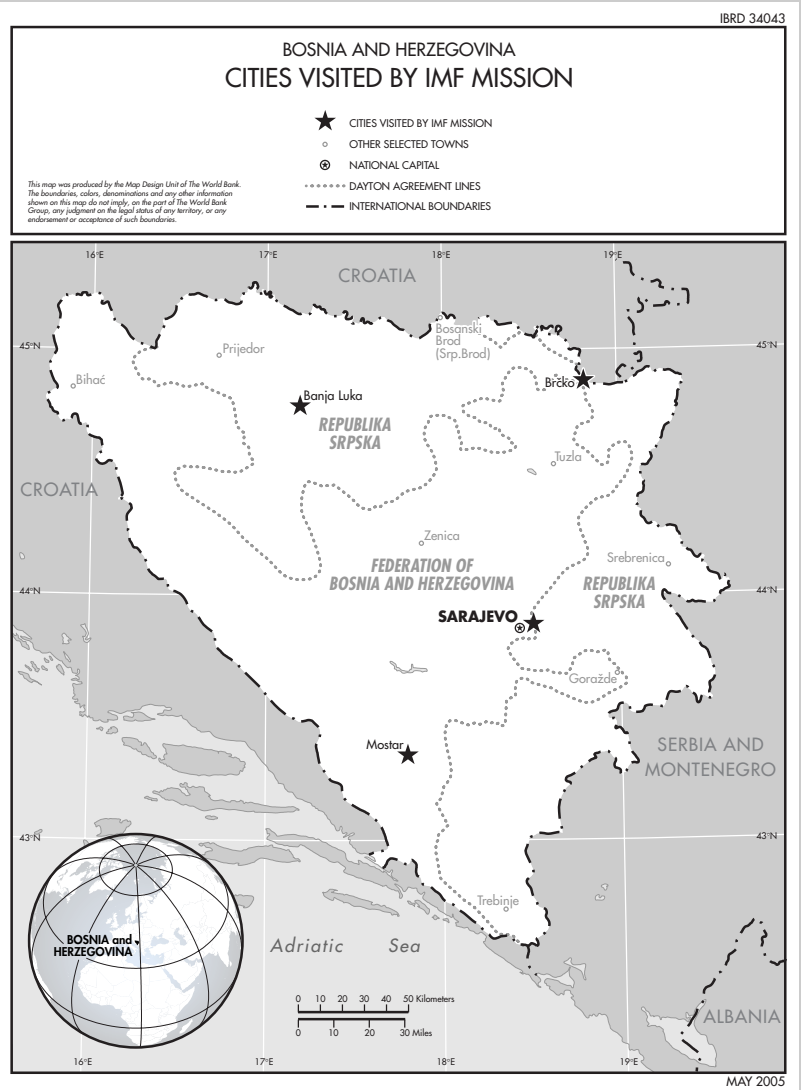
Map 4.1. Bosnia and Herzegovina



translators, key elements of the situation were broadly clear by the end of the first mission.

4.5 The mission reviewed available source data and assessed whether they could be used to compile reliable countrywide monetary and financial statistics. A key decision was whether a "top-down" or "bottom-up" approach should be followed for compiling countrywide monetary statistics. Under a top-down approach, data compilers use aggregate balance sheet data as the primary source together with supplementary information to allow certain groups of accounts to be allocated to sector and instrument classifications. This approach can yield monetary statistics quite quickly but often at the price of transparency and long-term reliability, not least because it is approximate and over time generates unallocated residual balances.[3] Under the bottom-up approach, accounting balances at the most disaggregated level (e.g., at the five-digit level in a five-digit plan of accounts) are classified, account-by-account, according to their attributes (such as holding sector and type

[3] A top-down approach was initially used by the authorities but did not provide sufficiently reliable statistics for analysis of the components and counterparts of broad money growth.

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Table 4.1. Overview of Key Aspects of the Banking System in BiH in 1996

	Banking System						
	Region	Entities	Currency	Monetary Authority Composition	Monetary Authority Functions	Commercial Banks	Plan of Accounts
BOSNIA AND HERZEGOVINA	Sarajevo	Federation	Bosnian dinar[1] Deutsche mark	1. NBBH, Sarajevo 2. Payment Bureau	1. Currency issue 2. International reserves management 3. Financial relations with the Fund 4. Credit and monetary policy 5. Bank regulation 6. Fiscal agent of government 7. Banker to banks	30[2]	1995 Ministry of Finance
	Mostar Federation		Croatian kuna[3] Deutsche mark	1. FMoF, Mostar 2. Payment Bureau	1. International reserves management 2. Credit and monetary policy[4] 3. Bank regulation 4. Banker to banks[5]	7	1990 former SFRY
	Banja Luka	Republika Srpska	New Yugoslav dinar[6] Cashier checks[7] (May 95–Feb 96) Deutsche mark	1. NBRS, Banja Luka 2. Payment Bureau	1. Currency issue[7] 2. International reserves management 3. Credit and monetary policy[8] 4. Bank regulation 5. Fiscal agent of government 6. Banker to banks[5]	12	1994 Serbian

[1] Issued by the NBBH.
[2] Including one bank that had its license revoked in March 1996.
[3] Issued by the National Bank of Croatia.
[4] Through banks' required reserves.
[5] Through overdraft facilities at the Payment Bureau.
[6] Issued by the NBFRY.
[7] Private currency issued by commercial banks between May 1995 and February 1996.
[8] Through selective interest rate controls, credit ceilings, and banks' required reserves (prior to April 1996).

of instrument). This approach requires intensive work, especially if these attributes cannot be discerned from the account coding structure or from the text descriptors.[4]

4.6 Although application of the bottom-up approach was further complicated by the various plans of accounts that existed in BiH, this approach was adopted because it provided a transparent and reliable framework and facilitated transfer to the authorities and future development work. In view of policymakers' demand for countrywide monetary statistics in the near term, however, it was clear that an intensive period of work would be needed to put in place the compilation system, and that IMF staff would meanwhile need to be the principal compilers of BiH's monetary statistics. Because of the lack of functioning database systems, it was also clear that a spreadsheet system for compiling monetary statistics would have to be developed. Given the multiple data sources and the different charts of accounts under which the data were reported, careful design of the spreadsheet architecture and thorough documentation were essential in transferring the compilation system to the authorities.

Implementation

4.7 Implementing the plan of action required a series of TA missions. As shown in Table 4.2, an initial phase of intense TA occurred during 1996 to establish the system for compiling monetary statistics. This was followed by a consolidation phase during 1997 and 1998 aimed at improving the system and enabling the national authorities to compile countrywide monetary statistics. The third phase was aimed at developing the authorities' capacity to further improve the system and to develop related statistics, such as rep-

[4] Even where the text descriptors appear to provide sufficient information to accurately classify the account, it is necessary to carefully validate with the account manager(s) that the descriptor accurately portrays the account's attributes.

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Table 4.2. Time Line of IMF Monetary Statistics Missions and Key Outcomes

Mission Dates	Key Outcomes
1996	
April 4–23	Facts established and Plan of Action drawn up.
June 4–23	First set of countrywide monetary statistics compiled, and new commercial bank report forms introduced.
November 6–26	Authorities take on responsibility for producing regional monetary statistics on a regular and timely basis.
1997	
August 13–28	Compilation procedures refined. Plans developed for authorities to compile countrywide monetary statistics.
1998	
January 14–28	Authorities ready to begin compiling countrywide monetary statistics.
September 23–October 8	Development of countrywide interest rate statistics and data on exchange rates and international liquidity. Ongoing improvements in the monetary statistics.
1999	
June 23–July 8	Draft country page prepared for BiH for inclusion in *IFS*. Timeliness of monetary data improved.
2000	
October 31–November 15	Ongoing improvements to the monetary statistics and agreement on *IFS* country page for BiH.
2001	
December 3–18	Improvements in dissemination of monetary and financial statistics, further methodological improvements, and development of capacity to analyze monetary statistics.

Note: Part of a multitopic mission covering balance of payments, government finance, and national accounts statistics, as well as monetary statistics.

resentative interest rate statistics.[5] Hands-on and formal training was provided throughout the three phases of TA.

To provide context for describing in more detail the three phases of TA in BiH, selected methodological issues are first described below, followed by an overview of the tools used to deliver the TA.

Selected Methodological Issues

Reliability of Source Data

4.8 A key check on the reliability of the source data used to compile monetary statistics is to determine whether reported bilateral positions among banks (interbank positions) are broadly consistent. Once the first set of countrywide monetary statistics was compiled, the focus was put on identifying the causes of inconsistencies in the bilateral positions. Some of the key factors identified included the following:

- After the creation of BiH as an independent country in 1992, the NBBH assumed a liability to local commercial banks for frozen deposits held at the National Bank of the Federal Republic of Yugoslavia (NBFRY) and entered a matching claim on the NBFRY in its balance sheet. A review of relevant accounts showed that the liability recorded in the NBBH balance sheet was not equal to the sum of the commercial banks' claims on the NBBH. In addition, in the commercial banks' balance sheets, liabilities to citizens for frozen deposits were not always equal to the counterpart claims on the NBBH. Resolving these inconsistencies formed a key part of the work plan drawn up for the authorities.
- Locating the source of interbank discrepancies in the monetary statistics for RS was complicated because no distinction was made in the plan of accounts between commercial banks' transactions with the NBRS and with the other commercial banks.
- Parts of one bank's branch network declared themselves independent banks and ceased to recognize liabilities to the former parent bank, which continued to recognize in its balance sheet claims and liabilities relating to the branches. Also, some banks' branch operations located outside of BiH were included in the source data used to compile monetary statistics.

[5]This description is somewhat stylized for illustrative purposes. In practice there was some overlap of tasks and outcomes across the three phases of technical assistance.

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Data on Domestic Bank Financing

4.9 An important contribution of monetary statistics to formulating and monitoring economic policy is the timely and frequent information it provides on the government's recourse to net financing from the domestic banking system. This facet of monetary statistics was especially valuable in BiH in the absence of complete and reliable fiscal statistics. As fiscal statistics steadily improved, the 1998 multisector statistics mission to BiH assisted in reconciling the two data sets on domestic bank financing. The mission's work led to modification of the monetary and fiscal statistics to promote closer consistency among the two data sets.

Payment Bureau Accounts

4.10 Although operating under different plans of accounts, the payment bureaus in each of the three main regions of BiH undertook similar functions: (i) effecting cashless payments among legal entities, (ii) releasing local currency into the economy on the instruction of the central bank, and (iii) acting as accountant for the payment system (thereby generating data used in monitoring bank system liquidity and financial statements for all legal entities). A key task of the initial missions was delineating these functions and identifying which accounts in each of the three payment bureaus' plans of accounts were mirror images of accounts recorded by the banks themselves. The exercise was immensely time consuming because a detailed understanding of the unique accounting codes and structure was needed.

Cashier's Checks

4.11 Following the Federal Republic of Yugoslavia's imposition of sanctions on RS in 1994, the supply of Yugoslav dinars (YUDs) from the NBFRY to RS declined sharply. In the absence of sufficient YUD cash balances to service deposit withdrawals, RS commercial banks issued transferable cashier's checks through 1996, representing a form of private currency issue. These checks were transferable and used widely in everyday transactions and were therefore included in the countrywide measure of currency in circulation.

Co-Circulation of Currencies

4.12 As noted earlier, BiH used several foreign currencies for transactions and savings purposes. While the balance sheets of the banking system and payment bureaus captured foreign currencies deposited with these institutions that were therefore included in source data used to compile monetary statistics, the source data did not capture corporate and household foreign currency cash held outside of the banking system. In the absence of reliable information on the amount of foreign currency in circulation in BiH, estimates had to be made.[6]

Currency Board

4.13 The currency board that was introduced in 1997 under the auspices of the Central Bank of Bosnia and Herzegovina (CBBH) required some modifications to the analytical presentation of BiH's monetary statistics. In particular, to facilitate analysis of the currency board within the context of broader monetary developments in BiH, the analytical accounts of the monetary authorities needed to separately identify issuances of local currency and the Deutsche Mark (subsequently, euro) reserves that backed the currency.

Tools of Technical Assistance in Bosnia and Herzegovina

Technical Assistance Reports

4.14 At its conclusion, each mission to BiH prepared a summary technical assistance report (translated into the local languages) and discussed it in detail with the relevant authorities. The mission discussed issues at various levels of seniority, discussing detailed technical issues at the working level and broader policy and strategic issues at meetings with senior officials. Shortly after returning to IMF headquarters, the mission finalized comprehensive mission reports, complete with detailed appendixes and technical notes, and sent translated versions to counterparts in BiH. The reports presented a step-by-step discussion of recommendations and time-lined actions to be taken by the authorities, set within an overall medium-term work plan agreed with the authorities.

Training

4.15 Hands-on training was the initial method used to enable a core group of officials to produce monetary statistics in BiH. This training consisted of their informally discussing issues as they arose and sitting down

[6]For information on the measurement issues involved, see Russell Krueger and Jiming Ha, 1995, "Measurement of Co-Circulation of Currencies," IMF Working Paper 95/34 (Washington: International Monetary Fund).

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with staff in front of computer spreadsheets for guidance on the mechanics of the data compilation processes. Officials involved in compiling monetary statistics also took advantage of various formal courses offered by the IMF, both at its regional training centers and in Washington, DC.

IMF Statistical Advisor and Resident Representative

4.16 The work of the missions was greatly facilitated by the appointment of an IMF resident statistical advisor and an IMF resident representative to BiH. Not only did they facilitate meetings with senior country officials, but their active involvement in the mission's work reinforced to the authorities the importance of a sound statistical base for policy work. Also, the statistical advisor followed up between missions on progress made by the authorities in implementing recommendations, provided general day-to-day TA to the authorities, and relayed to IMF headquarters technical difficulties that required expert advice.

Multisector Mission

4.17 The IMF multisector mission in 1998 provided a valuable opportunity to check consistency among the monetary statistics and other macroeconomic sectors (i.e., government finance, balance of payments, and national accounts statistics). In particular, reconciliation between monetary and fiscal statistics was undertaken during this mission.

Phases of Technical Assistance

Implementation Phase (1996–97)

4.18 The bottom-up approach to compiling monetary statistics required close collaboration with the accounting and operational departments of the central and commercial banks and other institutions. Discussions were initially held with the staff of the largest commercial banks and a sample of other banks to provide an overview of the scope of their banking activities, accounting systems, and database capabilities. Importantly, this approach also provided an opportunity to explain the context of the statistical work that was being undertaken and its relevance to the broader economic and financial issues facing BiH as well as an opportunity to listen to the concerns and suggestions of these key data providers.

4.19 Several rounds of review and discussion were necessary to identify economic attributes (e.g., type of financial instrument, sector of holder, maturity, currency of denomination) of each account specified in the various charts of accounts used by the commercial banks and in the trial balances of the monetary authorities. A useful tool in this process was to assign alphanumeric codes to each account identifying its economic attributes and thereby its classification in the analytic presentation.[7] This systematic approach facilitated not only explaining the compilation system to the BiH officials charged with preparing and analyzing the monetary statistics but also automating the compilation process.

4.20 The process of consultation was especially important in designing and implementing a standard set of balance sheet report forms (so-called call reports) for the commercial banks. These call reports were necessary to enable the compilation of meaningful countrywide monetary statistics.[8] IMF staff conducted a seminar to explain the motivation for introducing the report forms and the broad macroeconomic concepts they embodied and to provide a line-by-line review of how the forms should be completed.[9] The seminar was followed up with bilateral discussions to assist the banks map their accounting balances onto the report forms.

4.21 The commercial banks began using the new report forms in July 1996. Their willingness to adopt these new report forms was facilitated when the national/regional authorities agreed to review the overall reporting burden on the banks. In particular, they had concerns that many of the existing data requests were no longer relevant and were wasteful of resources. Reducing the banks' reporting burden was also important in the context of improving the accuracy and reliability of data reported on the core statis-

[7] While analytical presentations can be derived directly from the source data, a two-step approach was used here that involved transferring the accounting data into a (sectoral) balance sheet presentation from which the analytical accounts could be derived. This approach proved useful because it facilitated transparency in the methodology and thereby explanation to the authorities. Also, such an approach facilitates wider application of the data, for instance compilation of financial accounts statistics for the national accounts (see the IMF's *Monetary and Financial Statistics Manual* (*MFSM 2000*)).

[8] These forms were later adopted as the centerpiece for a new suite of prudential supervisory report forms introduced under the supervision of the United States Agency for International Development (USAID).

[9] Reflecting the goodwill that had been developed with the commercial banks, more than 100 commercial bank representatives attended the seminar.

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tical and supervisory returns.[10] The successful introduction of the new report forms was also facilitated by adopting a flexible approach to historic data series—while historic data compiled in accordance with the new report forms was desirable, it was given a lower priority to reporting current balance sheet data.

4.22 A particularly sensitive issue to be addressed was the designation of an official agency to be responsible for compiling countrywide monetary statistics. Not wanting to risk upsetting the reporting and compilation procedures that were by now in place, IMF staff initially took on the responsibility of preparing countrywide monetary statistics by consolidating the regional monetary data compiled by the NBBH, FMoF, and NBRS.[11]

4.23 Aside from the organizational and technical aspects, training of BiH officials on the concepts and principles used in macroeconomic statistics was also needed. The initial objective was to enable officials to advise commercial banks on the appropriate classification of accounting balances on the new report forms, with more general training in macroeconomic statistics coming later.

Consolidation Phase (1997–98)

4.24 Regional monetary statistics for the Federation and RS continued to be compiled by the NBBH[12] and NBRS, respectively, and countrywide statistics continued to be assembled by the IMF, until the CBBH was established in August 1997. The Research and Development Department (RDD) of the CBBH was charged with compiling and analyzing countrywide monetary and balance of payments statistics.[13]

4.25 Establishing the CBBH involved equitably distributing key functions across the Federation and RS. Under the regional decentralization plan for CBBH departments, the RDD was located outside of Sarajevo, in the town of Pale in RS. The RDD enabled the authorities in BiH to assume responsibility for compiling countrywide monetary statistics, but because the staff of the NBBH[14] was reluctant to travel to RS, and the staff of the NBRS was reluctant to relocate from Banja Luka to Pale, a further round of training was required. The staffs of the NBRS and NBBH were extremely helpful in this regard and met with RDD staff to discuss methodology and compilation issues. Data flow and compilation arrangements nevertheless continued to be rather complicated (see Figures 4.1 and 4.2), reflecting the decentralized nature of official institutions in BiH. These arrangements were simplified somewhat when the RDD was eventually transferred to the CBBH's main unit in Sarajevo.

4.26 Under the supervision of an expert group headed by USAID staff, work was also underway to develop and implement a unified chart of accounts for the commercial banks. Important in this regard was the close involvement of CBBH staff to ensure that the new chart contained sufficient detail to compile monetary statistics. In view of the privatization program that was underway in BiH, separate identification of banks' financial relations with public and private entities was an important consideration for the new plan. The involvement of the monetary statistics compilers in reviewing the CBBH's new chart of accounts proved to be similarly useful in ensuring that it met the needs of monetary statistics.

Facilitating Phase (1998 to Date)

4.27 From late 1998 onward, TA focused on developing the capacity of the authorities to further improve the compilation system and develop related statistics. This phase was aided by the day-to-day assistance of an IMF resident statistical advisor appointed to BiH in 1999. With the development of countrywide interest rate statistics and data on BiH's international liquidity position, a country page for BiH was published in the July 2001 issue of the IMF's *International Financial Statistics* (*IFS*). Assistance also extended to developing official statistical publications of the CBBH.

[10] USAID provided considerable on-site technical assistance aimed at improving the reliability of data reporting by the commercial banks.

[11] The technical details of the consolidation process involved in compiling monetary statistics are described in the *MFSM 2000,* paragraphs 242–44.

[12] The NBBH emerged as the lead agency for compiling monetary statistics in the Federation and extensive assistance was provided to specify the functions, responsibilities, and staffing for a new statistics department in the NBBH.

[13] The IMF's Monetary and Financial Systems Department (formerly Monetary and Exchange Affairs Department) extended considerable technical assistance to the authorities in establishing the CBBH. The Central Bank Law stipulated that the CBBH was the single unified monetary authority in BiH and would act as a currency board. Its primary functions are (i) the issuance of domestic currency (the Convertible Marka (KM)) in exchange for Deutsche Marks (subsequently, euro) on a one-to-one basis; (ii) the management of the official foreign exchange reserves; (iii) levying required reserves on commercial banks' KM deposits; and (iv) acting as fiscal agent for the State government (limited to maintaining deposit accounts of the government since the CBBH is prohibited by law from extending loans). The CBBH main unit (headquarters) occupied the Sarajevo premises of the NBBH.

[14] Most of the NBBH staff were employed by the CBBH.

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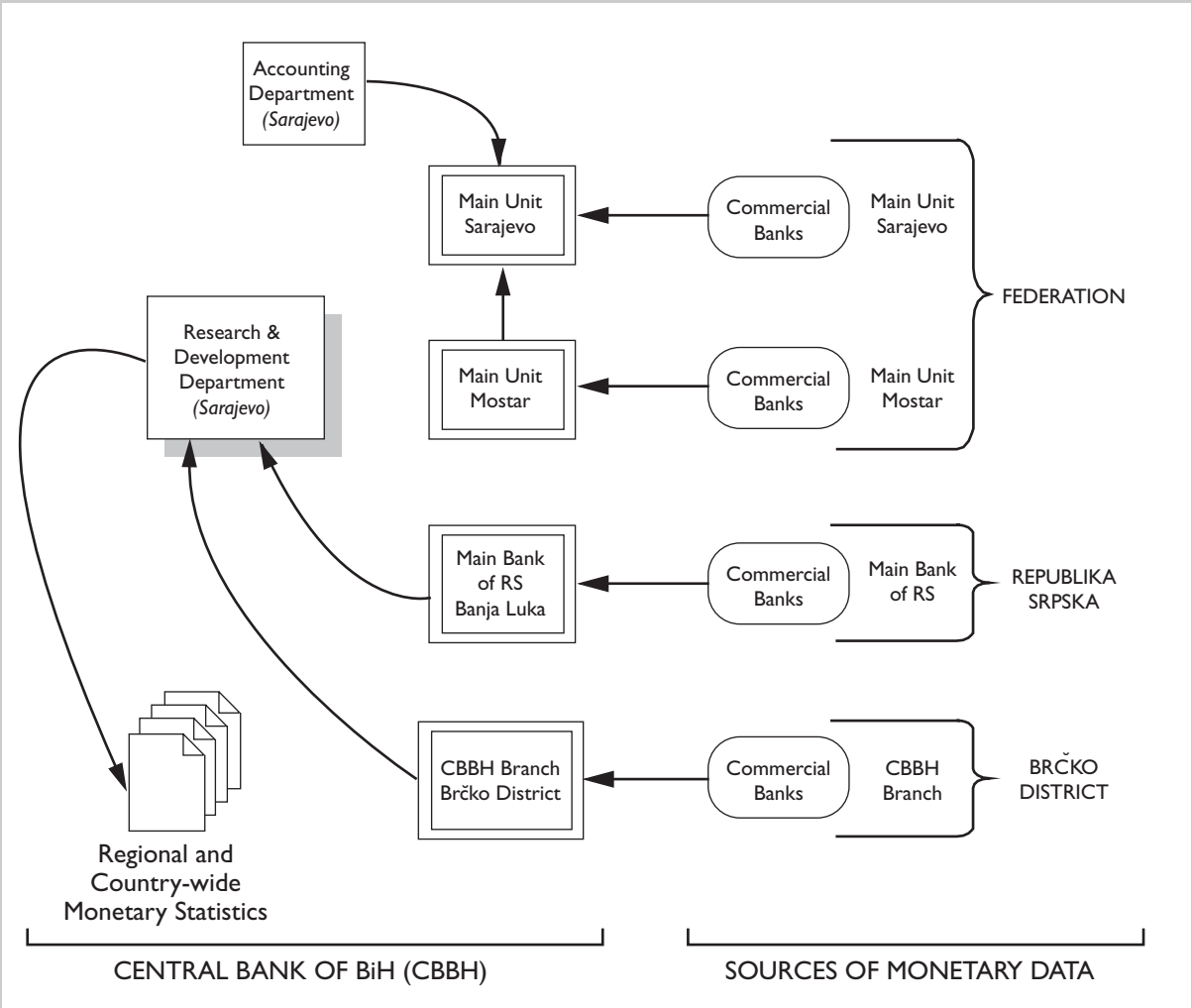
Figure 4.1. Institutional Arrangements for Data Collection and Compilation of Monetary Statistics for BiH
(As of July 2001)



Conclusions and Lessons Learned

- **Prerequisites:** Statistical legislation and adequate resources are generally thought of as necessary prerequisites to deliver reliable statistics.[15] In the immediate postconflict setting of BiH, however, a culture of data reporting among the commercial banks and goodwill among the banks and statisticians substituted for a legalistic approach to data reporting. Similarly, careful staff selection, planning of workloads, and dedicated officials compensated for shortages in staff numbers and technology that might otherwise have impeded the development of the monetary statistics. Thus, while statistical legislation and adequate resources[16] in particular are needed to support sustainable improvements in statistical output, shortcomings in these areas in the early years of development of a statistical system need not pre-

[15] See, for instance, the IMF's Generic Data Quality Assessment Framework (DQAF) available from the IMF's data quality reference site: http://dsbb.imf.org/Applications/web/dqrs/dqrshome.

[16] Determining what constitutes adequate resources usually involves a heavy dose of judgment based on extensive experience across countries and with local circumstances.

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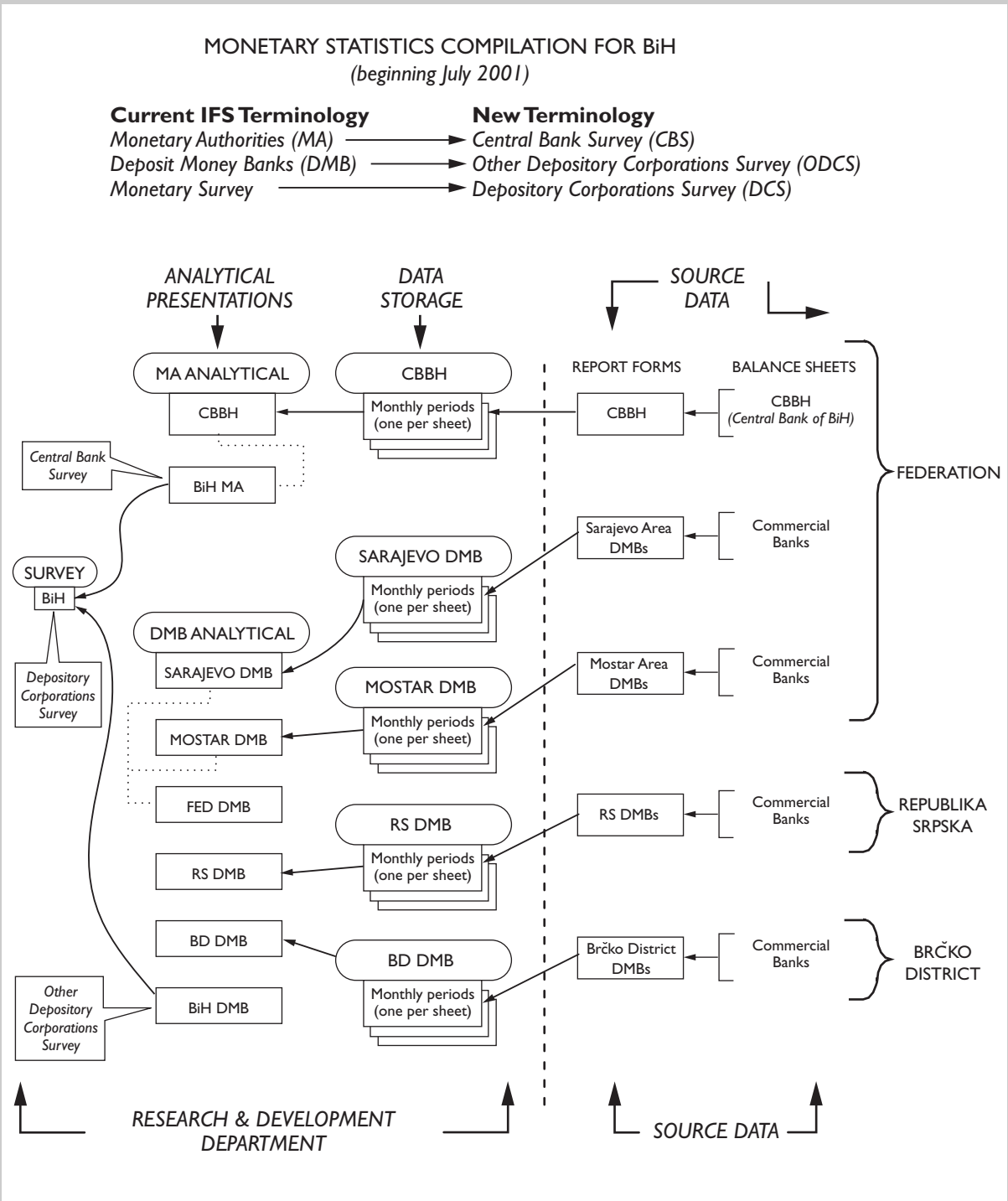
Figure 4.2. Spreadsheet Architecture for Data Compilation



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vent production of at least limited reliable statistics in the near term if there is a focus on overcoming more immediate shortcomings.

- **Pace of technical assistance:** The authorities need sufficient time to absorb TA. While intensive TA was initially necessary in BiH and ran ahead of the authorities' capacities to absorb it, the consolidation phase and training that followed allowed the authorities to catch up before additional TA was provided. Also, while having a medium-term framework for delivering TA is important, the framework should evolve over time and be flexible enough to allow the intensity and frequency of the TA to respond to changing local circumstances. The extended period and changing pace of TA to BiH, with each mission building on the previous mission, greatly facilitated the gradual enhancement of the authorities' capacity for compiling reliable and timely monetary statistics. An environment that encourages candid post-mission assessment by the mission team of the authorities' capacity to absorb TA and the success or failure of a particular mission is clearly important to adjusting the pace of TA to suit local circumstances.
- **Balance in technical assistance:** Describing to the authorities what needs to be done, how to do it, and actually implementing the advice are important elements of TA. Finding the right balance is not easy, but it is important for developing country ownership of the project. In BiH, the initial balance was weighted heavily toward getting the compilation system up and running, with the IMF taking the lead in setting up and running the system (a hands-on approach). Thereafter, the balance shifted toward identifying tasks that needed to be done, making recommendations about how to do them, and leaving the authorities to implement them (a hands-off approach), with support provided via e-mail and the IMF resident statistical advisor and resident representative, as needed. An important link between these two approaches was having mission representatives sit down with the data compilers in front of computer spreadsheets and walk through the nitty-gritty of how the statistics were put together.
- **Comprehensive documentation:** Essential to the hands-off approach is comprehensive and timely documentation that not only sets out clearly the technical aspects of the recommendations but also provides a comprehensive and time-lined work plan geared toward senior- to mid-level country officials. In short, the plan should summarize in nontechnical terms what needs to be done, by which department(s), by when, and why it is important. Translation of the mission reports into the local language(s) is essential in this regard.
- **One size does not fit all:** While experience from other country settings is valuable in developing recommendations, a formula approach is unlikely to yield successful results—a flexible approach is necessary. For example, while striving for the best statistical practice, it will often be necessary to settle for second- or third-best alternatives during an interim period to achieve results in the near term. Recommendations should be shaped to fit local conditions, and a prioritized action plan should be agreed to with the authorities, taking into account local constraints.
- **Coordination with other donors:** Having an overview of the activities of other donors can generate synergies with the statistical project at hand. For example, the timely USAID work on upgrading the commercial bank accounting and data reporting systems rapidly improved the accuracy and reliability of the sources used to compile monetary statistics.

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5. Ukraine: Monetary Statistics

Jaroslav Kučera*

Setting

5.1 Following the dissolution of the Soviet Union, Ukraine gained its independence in December 1991. On September 3, 1992, it became a member of the IMF. In May 1991 the National Bank of Ukraine (NBU) was established, replacing the State Bank (Gosbank) of the Soviet Union.

5.2 In 1991, the banking sector of Ukraine consisted of the NBU (functioning both as a central bank and a commercial bank), the Savings Bank (the only institution that accepted household deposits), and the Export-Import Bank for financing foreign trade operations. In 1992, commercial activities were separated from the central bank functions, and commercial banks emerged.

5.3 As in other countries of the former Soviet Union and centrally planned economies in eastern Europe, monetary data were limited to those on credits and deposits in national currencies. Allocation of credit to the economy had been centrally planned, and monetary data were used for determining how the plan was to be fulfilled. Thus, data on credits and deposits were classified by purpose, maturity, and debtor/creditor branch (ministry) of the economy. However, data on banking operations in foreign currencies and detailed balance sheets of banking institutions were considered top secret and therefore not used for compiling money statistics.

5.4 Other types of financial instruments had not been used, a sectoral breakdown of domestic institutions was unavailable, and the concept of residency was unknown. The monetary data had been compiled on mainframe computers, and personal computers were unavailable to the NBU staff. The NBU's staff were unfamiliar with compiling monetary statistics in accordance with international standards.

Statistical Capacity, Technical Assistance, and Institutional Issues

Stage One: Fact Finding and Outlining the Plan

5.5 The IMF's TA to Ukraine in 1992 identified problems and initiated the compilation of monetary statistics using the analytical framework that the IMF developed for the countries of the former Soviet Union. The first step in the action plan was to establish a system for collecting accounting data from all banking institutions for compiling monetary statistics on a monthly basis. A significant challenge was collecting monthly data from the Savings Bank, which previously had supplied only quarterly data. An NBU unit responsible for compiling monetary statistics was identified; its staff was trained during the missions, as well as in subsequent IMF courses on money and banking statistics.

5.6 To introduce and apply international methodology to Ukrainian monetary statistics, it was necessary to begin by examining the existing methodology and plan of accounts to see how these data sources could be adapted. The first set of monetary statistics that broadly accorded with international methodology (developed by the NBU staff working with IMF staff) used the existing accounting data. The NBU and all other banking institutions in Ukraine used a unified plan of accounts, based on the former Gosbank accounting plan. At the outset, it was necessary to study this accounting plan (consisting of about 1,000 three-digit accounts) and map its components to the monetary statistics categories. Since this accounting plan did not provide all the necessary data for compiling monetary aggregates, some data had to be estimated. In particular, most accounts denominated in foreign currencies, even when they belonged to residents of Ukraine, were classified

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as positions with nonresidents. These shortcomings complicated the accurate determination of the external position of the banking system.

5.7 The TA missions provided guidance on the consolidation of banking system accounts into a monetary survey. The missions also made recommendations to modify the plan of accounts so that banks could compile data in accordance with the residency of the account holder, rather than on the basis of the currency in which the account was denominated. On this basis, it was expected that the authorities would be able to begin compiling monetary statistics in accordance with the framework established by the TA missions and that they could start reporting to the IMF on a regular monthly basis.

Stage Two

Implementation of initial recommendations and further steps to improve monetary statistics

5.8 The IMF mission in late 1993 found that the initial recommendations had not been implemented. In particular, the separation of resident and nonresident accounts had not been completed. Improving the data had been hampered by lack of cooperation among the three departments involved in collecting and compiling monetary statistics (the Accounting, Monetary Policy, and Economic Analysis and Statistics Departments) and by insufficient monitoring of the accounting changes that were crucial to the analytical framework for the compilation of monetary statistics.

5.9 Owing to a lack of coordination within the NBU, confusion arose over how to establish the official monetary statistics for Ukraine. Different monetary statistics were compiled by the Economic Analysis and Statistics Department and the Monetary Policy Department. The Economic Analysis and Statistics Department compiled monetary statistics according to the analytical framework developed by IMF TA missions. However, it had not been able to adjust the framework, because new accounts were continuously being created by the Accounting Department. In addition, there was a problem with the proper distinction between on–and off–balance sheet items, with a portion of international reserves being recorded as off–balance sheet accounts.

5.10 Responding to an urgent need for monetary statistics for financial programming purposes, the Monetary Policy Department developed procedures for compiling monetary statistics that were sufficient for initial monitoring of the economy in Ukraine. However, the Monetary Policy Department's methodology for compiling the data differed in many respects from the internationally accepted methodology. In particular, (i) foreign currency deposits of residents were included in foreign liabilities, (ii) insurance premiums were classified as broad money, and (iii) local government and pension fund deposits were classified as money, even though local governments and pension funds were not independent and obtained financing resources mainly through redistributions and transfers from the central government.

5.11 TA missions during 1994 and 1995 aided the authorities in revising the analytical framework so that more detailed monetary statistics could be based on three-digit accounts. As a result, staff of the NBU became more familiar with the classifications (by economic sector and liquidity) underlying the analytical framework. To strengthen communication among departments involved, a working group for compiling and monitoring monetary statistics was formed in response to mission recommendations.

5.12 Because of frequent changes in the plan of accounts, missions recommended that the NBU provide extensive training and assistance to commercial banks to ensure the proper introduction and classification of new accounts. They suggested that this assistance be provided through training seminars for commercial bank staff, NBU staff visits to major Ukrainian banks, and written instructions for introducing the new accounting codes prepared by the NBU's Accounting Department.

5.13 It was also recommended that the NBU compile only one monetary survey, which would be based on a proposed analytical framework that would be refined over time. The single set of official monetary statistics to be produced by the NBU's Economic Analysis and Statistics Department would aim at promoting meaningful interpretation of economic developments in Ukraine, as well as fostering the future publication of monetary statistics.

Substantial progress

5.14 The monetary and banking statistics mission in February 1997 concluded that the NBU had made substantial progress over the previous four years in developing the capability to compile and publish monetary

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statistics in accordance with international standards. This progress reflected the strong commitment to this work by the senior management of the NBU and a high degree of cooperation between the NBU staff and the IMF's TA missions. It also reflected the dedication and expanding skills of the staff of the Economic Department (successor of the Economic Analysis and Statistics Department), which maintained effective quality control over the monetary statistics.

5.15 Even though staff still compiled two sets of monetary data, TA in monetary statistics narrowed the gap between the two data sets, bringing each set closer to the IMF's methodology. It remained for both departments to coordinate and harmonize their work on monetary statistics with a view to producing a single set of monetary statistics that would fully conform with the IMF's methodology.

5.16 Other achievements included the introduction of new accounts to separately identify banks' nonresident positions and thereby improve the sectorization of residents' accounts; computerization of the interbank settlements system; streamlining of the NBU's procedures for recording foreign exchange transactions; and changes in banks' accounting procedures to reduce asymmetries in the interbank accounts.

5.17 The improvements in Ukraine's monetary statistics were essential for the creation of a Ukraine page in the IMF's *International Financial Statistics* (*IFS*), which was introduced in July 1996. Thereafter, the reporting of monetary data to the IMF by the Economic Department became reliable and timely.

Stage Three

New plans of accounts

5.18 The blueprint for developing the new plans of accounts for the central bank and other banking institutions was initiated in 1993, in cooperation with the World Bank. This approach was fully supported by the IMF's TA missions, which emphasized that the ability to obtain more meaningful analytical data would be limited unless new plans of accounts for the central bank and other depository corporations were implemented. The new plans of accounts were to contain the classification of financial instruments by economic sector and liquidity, which was needed for compiling reliable analytical accounts to support the policy needs of the NBU. In particular, the TA missions emphasized that new plans of accounts should disaggregate accounts by residency, instrument, economic sector, and liquidity category.

5.19 The authorities had planned to introduce the new plans of accounts without a formal transition period. The IMF's TA missions suggested, however, that the accounting reform should contain a transition period during which banks would use both the old and new charts of accounts. If the old charts of accounts were abandoned without a transition period, the introduction of the new plans of accounts would expose the Ukrainian banking system to unnecessary risks. Only with a transition period would it be possible to ensure continuity in the monetary data and to verify the consistency of the monetary statistics derived from the old and new plans of accounts. Also, potential disruption in the flow of monetary data could result from a switch to the new accounting system that was only partially successful.

5.20 The TA mission in 1997 reviewed the ongoing work on the design of the new plans of accounts and new reporting forms. The main conclusion was that the latest drafts of the new charts of accounts would make it possible to derive the monetary statistics directly from the balance sheets of banks (as was the case when the old accounting plan had been used). Thus, the monetary statistics would continue to be derived from a fully integrated set of accounts for which the reliability of the accounting data could be monitored.

5.21 The new plans of accounts for the NBU and commercial banks were introduced successfully in January 1998, followed by a short transition period. Even though monetary data were not reported to the IMF for a few months, the staff of the NBU were able to prepare a conversion to the new compilation framework on their own.

5.22 The new plans of accounts provided international accounting guidelines to Ukrainian banks, to ensure that the monetary data would be compiled in accordance with international standards. This applied in particular to the accounting and the monetary statistics methodology to include accrued interest in the underlying monetary aggregates.

Improvements in the framework for the compilation of monetary data based on new plans of accounts

5.23 TA provided by the IMF from 1999 to 2001 initially concentrated on reviewing in detail the new

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framework for the compilation of monetary statistics and recommending improving data quality by compiling monetary statistics directly from accounting records. Improvements in monetary statistics were also achieved by resolving the most important outstanding methodological issues relating to monetary aggregates. Later, TA was provided to implement the IMF's *Monetary and Financial Statistics Manual* (*MFSM*).

5.24 In general, it was confirmed that procedures for compiling monetary statistics, based on the new plans of accounts, were broadly in accordance with international accounting guidelines. These procedures were based largely on balance sheet data of the NBU and commercial banks, but supplementary data were still needed for proper sectorization of bank loans, securities holdings, and deposit liabilities.

5.25 Detailed analysis of the data and compilation procedures revealed that even though staff were compiling the monetary data in accordance with international accounting guidelines, shortcomings in the composition of some monetary aggregates persisted. Accordingly, TA recommendations included introducing additional accounts within the plans of accounts of the NBU and commercial banks, thereby further facilitating the compilation of monetary statistics directly from accounting records. These recommendations primarily dealt with the compilation of foreign assets, international reserves, and claims on the central and local governments. To improve the quality and reliability of monetary data, it was also recommended that the NBU's and commercial banks' accounting data should be regularly analyzed from the perspective of meeting the needs of the monetary statistics.

5.26 These efforts contributed to the formulation and monitoring of economic policy by providing timely and frequent data on the banking sector's activity with individual sectors of the domestic economy (in particular, with the government sector) and nonresidents. To improve the analytical quality of the monetary data compiled by the NBU, the IMF recommended several changes in methodology, the most important of which were (i) expanded institutional coverage to include all financial institutions that accept deposits or issue other liabilities viewed as deposit substitutes and (ii) the proper treatment of (a) Ukrainian bank branches operating abroad, (b) data on banks with revoked licenses, (c) classification of certificates of deposits issued by the NBU and commercial banks, (d) classification of local government deposits, (e) classification of accounts of the banks' employees, and (f) treatment of shares and equity.

5.27 Most of the recommendations on methodology were implemented, and in the process the hands-on TA and on-the-job training contributed significantly to the NBU staff's understanding of monetary statistics methodology. Overall, the implemented recommendations on methodological issues have greatly improved the quality of Ukrainian monetary statistics.

5.28 TA in 2002 concentrated on the implementation of the *MFSM*. TA missions conducted seminars for the NBU staff and held discussions with individual staff members of the Economic Department concerning the *MFSM* chapters dealing with sectorization of the economy, classification of financial instruments, and compilation of monetary aggregates. Issues concerning the adaptation of the *IFS* to the *MFSM* methodology have also been discussed. It was concluded that close cooperation of the Economic Department and other NBU units is necessary to introduce the system for collecting accounting data from commercial banks and, possibly, all other financial institutions if the reported data are to be consistent with the methodology in the *MFSM*. The IMF mission in April 2002 also suggested that the authorities establish a plan for implementing all of the recommendations of the *MFSM*.

Conclusions and Lessons Learned

5.29 During the past 10 years, the IMF's TA to Ukraine achieved most of the objectives agreed with the authorities, notwithstanding the hope that the results might be achieved in a shorter period. However, these hopes had to be tempered by the realization that fundamental reforms were needed in both the banking system and the rest of the economy. In addition, the culture of the NBU had to evolve during the 1990s in a way that supported a more proactive environment of initiating and implementing reforms.

5.30 Rapid progress in the development of monetary statistics was hampered by cumbersome administrative procedures, as well as by frequent changes in the staff involved in compiling monetary data. For example, the IMF mission in February–March 2000 found that all previous staff of the Monetary and Banking Statistics Division of the NBU—the unit responsible for compiling the analytical accounts of the monetary authorities and the commercial banks—had retired as a result of the Law on Public Service and the presi-

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dential decree on the reduction of the staff of government institutions.

5.31 Cooperation and coordination were essential for improving monetary statistics. The strong leadership of NBU management, a high degree of interaction with IMF TA missions, and the dedication of compilers of monetary statistics gradually improved the working environment and the cooperation of all parties involved in collecting and compiling monetary statistics.

5.32 Through interactions with IMF missions, the NBU has made the two sets of monetary statistics almost identical. Actions were undertaken to introduce an integrated monetary database for Ukraine, wherein staff would compile and report a single set of monetary statistics to the IMF. The single set of monetary statistics will be used also for official publication within Ukraine and for the NBU's conduct of monetary policy.

5.33 A consistent and sustained strategy of IMF TA over a medium- to long-term period contributed to developing monetary statistics in Ukraine in accordance with international standards. Regardless of initial problems and difficulties in cooperation among NBU units, it was important that the IMF continuously provide TA and train staff in monetary statistics methodology. The fact that the IMF was the major TA provider in monetary statistics and hence did not generally need to coordinate with other donors simplified issues and avoided the confusion that sometimes arises when many donors are involved in the same sector. One area of coordination that was necessary and that went smoothly was ensuring that the World Bank advisors incorporated in the new plan of accounts the classifications and sectorizations needed for compiling monetary statistics directly from accounting records.

5.34 Proper legislation and adequate budgetary and human resources have also been positive factors facilitating progress in the development and improvement of monetary data. In the early stages of development, the obligatory reporting culture applicable in the former Soviet Union overcame possible problems in the collection of data. The current law for the NBU entitles it to obtain all necessary information required for the compilation.

5.35 Over the past decade, monetary statistics in Ukraine have improved significantly. On January 10, 2003, Ukraine became the fifty-second subscriber to the Special Data Dissemination Standard (SDDS) and the first among the Commonwealth of Independent States. Subscription to the SDDS represented an important milestone in the decade-long refinement of Ukraine's monetary and other macroeconomic statistics.

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