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Report No: 22420

IMPLEMENTATION COMPLETION REPORT
(SCL-44650)

ON A

LOAN

IN THE AMOUNT OF EUR 85.21 MILLION

TO THE

KINGDOM OF MOROCCO

FOR A

TELECOMMUNICATIONS, POST AND INFORMATION TECHNOLOGY
SECTOR ADJUSTMENT LOAN

June 21, 2001

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CURRENCY EQUIVALENTS

(Exchange Rate Effective)

Currency Unit = Moroccan Dirham
100 MAD = US$ 8.40336
US$ 1.00 = 11.9 MAD

FISCAL YEAR
June 30 July 1

ABBREVIATIONS AND ACRONYMS

AfDB	-	African Development Bank
ANRT	-	*Agence Nationale de Réglementation du Secteur des Télécommunications*
BAM	-	*Barid Al-Maghrib* (postal operator)
CAS	-	Country Assistance Strategy
CAGR	-	Compounded Annual Growth Rate
ESW	-	Economic Sector Work
EU	-	European Union
GMPCS	-	Global Mobile Peronal Communications System
GOM	-	Government of Morocco
GSM	-	Global System for Mobile Communications
IAM	-	*Itissalat Al-Maghrib* (former name of Maroc Telecom, incumbent telecommunications operator)
ICT	-	Information and Communication Technologies
IDF	-	Institutional Development Fund
IISDL	-	Information Infrastructure Sector Development Loan
INPT	-	*Institut National des Postes et Télécommunications*
IT	-	Information Technology
LDP	-	Letter of Sector Development Policy
ONPT	-	*Office Nationale des Postes et Télécommunications*
PHRD	-	Policy and Human Resources Development
SEPTI	-	Secrétariat d'Etat aux Postes et Technologies de l'Information
TPI-SAL	-	Telecommunications, Post and Information Technology Sector Adjustment Loan
VSAT	-	Very Small Aperture Terminal
WAP	-	Wireless Action Protocol
WTO	-	World Trade Organization

Vice President:	Jean-Louis Sarbib
Country Manager/Director:	Christian Delvoie
Sector Manager/Director:	Rajesh Pradhan
Task Team Leader/Task Manager:	Carlo Maria Rossotto

MOROCCO
TELECOMMUNICATIONS, POST AND INFORMATION TECHNOLOGY SECTOR ADJUSTMENT LOAN

CONTENTS

	Page No.
1. Project Data	1
2. Principal Performance Ratings	1
3. Assessment of Development Objective and Design, and of Quality at Entry	2
4. Achievement of Objective and Outputs	4
5. Major Factors Affecting Implementation and Outcome	10
6. Sustainability	11
7. Bank and Borrower Performance	12
8. Lessons Learned	14
9. Partner Comments	15
10. Additional Information	15
Annex 1. Key Performance Indicators/Log Frame Matrix	16
Annex 2. Project Costs and Financing	18
Annex 3. Economic Costs and Benefits	19
Annex 4. Bank Inputs	20
Annex 5. Ratings for Achievement of Objectives/Outputs of Components	21
Annex 6. Ratings of Bank and Borrower Performance	22
Annex 7. List of Supporting Documents	23
Annex 8. Best Practice Note	24

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Project ID: P058128	*Project Name:* MA-TELECOM, POST AND IT
Team Leader: Carlo Maria Rossotto	*TL Unit:* CITPO
ICR Type: Core ICR	*Report Date: June 27, 2001*

1. Project Data

Name: MA-TELECOM, POST AND IT
L/C/TF Number: SCL-44650
Country/Department: MOROCCO
Region: Middle East and North Africa Region
Sector/subsector: BI - Institutional Development; DI - Private Infrastructure

KEY DATES

			Original	*Revised/Actual*
PCD:	07/05/1998	*Effective:*	05/14/1999	05/20/1999
Appraisal:	10/01/1998	*MTR:*		
Approval:	05/06/1999	*Closing:*	12/31/2000	12/31/2000

Borrower/Implementing Agency: KINGDOM OF MOROCCO/MINISTRY OF AFFAIRES GENERALES; KINGDOM OF MOROCCO/ANRT; KINGDOM OF MOROCCO/BAM AND SEPTI
Other Partners: African Development Bank

STAFF	Current	At Appraisal
Vice President:	Jean-Louis Sarbib	Kemal Dervis
Country Manager:	Christian Delvoie	Christian Delvoie
Sector Manager:	Rajesh B. Pradhan	Emmanuel Forestier
Team Leader at ICR:	Carlo Maria Rossotto	Michel Kerf
ICR Primary Author:	Carlo Maria Rossotto; Anupama Dokeniya; Catherine T. Doody	

2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

Outcome: HS
Sustainability: L
Institutional Development Impact: H
Bank Performance: S
Borrower Performance: S

	QAG (if available)	ICR
Quality at Entry:		S
Project at Risk at Any Time:	No	

3. Assessment of Development Objective and Design, and of Quality at Entry

3.1 Original Objective:

The $101 million two-tranche Telecommunications, Post and Information Technology Sector Adjustment Loan (TPI-SAL) was approved by the Board on June 6, 1999. The loan followed investment operations completed by the Bank in the sector during the 1990s. The main objectives of TPI-SAL were: (1) introducing competition in Morocco's telecommunications sector; (2) developing effective regulatory capacity in telecommunications; and (3) preparing the incumbent operator for privatization. The operation also aimed to broaden access to communications in poor and rural communities, improve competitiveness of postal service provision, and assist in the development of a national information technology (IT) strategy to facilitate Morocco's integration into the global information society.

The operation was designed to support telecommunications liberalization, through the implementation of the provisions of Law 24-96. The objectives of the operation were also designed to assist the Government's commitment to the World Trade Organization (WTO) to liberalize the sector. TPI-SAL was also consistent with the 1997 Country Assistance Strategy (CAS) objective of increased private participation and competition in most infrastructure services, through network modernization, tariffs reduction, and competitiveness enhancements.

The operation sought to leverage the synergies between the telecommunications, postal and IT sectors arising out of a common institutional legacy and technological convergence. The operation also recognized the different institutional capacity present in each of the sub-sectors. It set specific goals for each of them - more ambitious in telecommunications, where liberalization and the promotion of private investment is international best practice; and more guarded for the postal sector, where the global move for reform is at a nascent stage. Recognizing the importance of including Morocco in the information society, the operation also supported the Government effort to elaborate a national IT strategy.

3.2 Revised Objective:

The original objectives were not revised.

3.3 Original Components:

The components of the operation were intended to operationalize the liberalization agenda introduced by Law 24-96, which was adopted in 1997. Under Law 24/96, the operating arm of the ministry, the Office Nationale des Postes et Telecommunications (ONPT) was divided into two separate operating entities, Itissalat al Maghrib (IAM) for telecommunications, and Barid Al Maghrib (BAM) for posts. IAM was transformed into a joint-stock company. BAM was transformed into a public entity with financial autonomy. A regulatory body, the Agence Nationale de Reglementation des Telecommunications (ANRT) was created, separate from both operating entities and from the government. In IT, the Government had created a state secretary for information technology, the Secretariat d'Etat charge de la Poste et des Technologies de l'Information (SEPTI). The Government's Letter of Sector Development Policy (LDP), dated February 24, 1999, laid out in further detail the actions that would be taken to implement the provisions of Law 24-96 and the commitments under TPI-SAL.

The main components of TPI-SAL were designed to meet the objectives described above, and included the

following:

(a) ***Introducing effective competition in telecommunications.***

This project component was mainly designed to assist the government's decision to introduce competition in wireless telecommunications. The Bank agreed that a strong, privately-owned wireless competitor could exert pressure on the incumbent, enhancing the overall sector performance of mobile and fixed services. Under TPI-SAL, the government committed to licensing a second GSM (Global System for Mobile Communications) operator, through a competitive and transparent bidding process. The new GSM operator would be allowed to build its own long-distance infrastructure and, after January 1, 2002, build and operate its own international gateway. It would also be able to offer fixed wireless services in rural, suburban, and industrial areas. The government also committed to grant at least two VSAT (Very Small Aperture Terminals) licenses, and to study how to enable owners of alternative telecommunications infrastructure (for example, the electricity company), to become full-fledged telecommunications operators.

(b) ***Strengthening the telecommunications regulatory framework.***

The operation included the following measures: a) establishment of a fee structure for ANRT, to be covered by a predetermined percentage of license fees collected from operators; b) elaboration of interconnection rules and introduction of a dispute resolution mechanism to solve interconnection disputes; c) adoption of an optimization plan for use and allocation of frequencies guaranteeing similar treatment to both the first and second operators with respect to access to GSM frequencies, and reserving frequencies which could possibly be granted to other operators; d) completion of a study on legal issues pertaining to the imposition of sanctions or penalties adapted for violations; e) submission to the WTO of a Revised Schedule of Commitments on Basic Telecommunications, including the standard Regulatory Annex.

(c) ***Preparing IAM's privatization.***

On privatization, the government committed to take preliminary measures for privatization of the incumbent, Itissalat-al-Maghrib (IAM). Steps included: a) adoption of a privatization strategy; b) selection of auditors for IAM's accounts; c) adoption of an action plan to reduce the arrears owed by the administration to IAM, and d) implementation of a recruitment procedure for financial advisors to implement the privatization transaction.

(d) ***Enhancing rural access.***

This component included: a) the elaboration of a pilot project in the poor or remote areas of the Northern Provinces; and b) adoption of a decree requiring telecommunications operators' contributions for public service obligations and introducing the use of market mechanisms for meeting public service obligations.

(e) ***Modernizing the postal sector.***

This component included: a) the elaboration of an action plan for public service obligations of the postal entity; and b) the completion of a study on private provision of postal services to rural areas.

(f) ***Formulating a national IT strategy.***

This component consisted of the support to a strategy that would incorporate policy guidelines on e-commerce, e-government, and indications on how to promote IT investment and entrepreneurship.

3.4 Revised Components:

Components were not revised.

3.5 Quality at Entry:

The operation was not reviewed by the Bank's Quality Assessment Group (QAG). At the time of this ICR, the Quality at Entry is considered to have been **satisfactory** for the following reasons:

- The objectives and components were in line with the capacity and commitment of the Government of Morocco (GOM) to implement the reform program, especially since Morocco had already adopted a satisfactory legal framework and put in place a sector regulator.

- A comprehensive TA program, funded by EU and PHRD, provided advise to the Government on key policy and regulatory issues, enabling it to successfully implement reforms.

- The operation had a significant degree of client ownership and commitment. The client was very involved in project preparation, and, overall, was responsive to Bank suggestions. The Bank team had ample access to key draft documents, such as the draft GSM license and the bidding documents for the GSM tender. ANRT, and other counterparts were available for frank and open discussions on different options related to the tender process and the rights to be granted to the second GSM operator.

- The objectives built on the success of past World Bank telecommunications operations in Morocco, thus ensuring steady and sequential Bank assistance in developing the sector.

4. Achievement of Objective and Outputs

4.1 Outcome/achievement of objective:

Overall, the operation was very successful, with significant development impact. Its outcome is rated **highly satisfactory**. The operation achieved all its objectives, especially in the telecommunications sector. The three major components of the project (increasing competition in telecommunications, strengthening the regulatory regime, and preparing IAM's privatization), are all rated highly satisfactory. The successful tender for the GSM license, which led to the selection of MediTelecom, was the most remarkable achievement of the reform program as it attracted strong interest from world class strategic investors and had a tremendous impact on sector development, accelerating access and reducing prices. The newly formed regulator, ANRT, led the GSM tender and licensing process in a transparent and competent way, generated record revenues for the State, and emerged as an effective arbiter of the conflicts between the new and the incumbent operator. The GSM tender in Morocco had a strong demonstration effect on

similar reforms in the MENA region and in Francophone Africa (Algeria, Mauritania, Senegal and Tunisia). The operation also accelerated the privatization agenda, by completing necessary preparatory tasks, and by stimulating the incumbent operator to improve performance by introducing effective competition.

In post and information technology, the gains were more modest, as the objectives in these sectors were also quite modest. Two studies indicated strategic options to increase the efficiency of the postal entity, BAM. SEPTI successfully completed the formulation of an information infrastructure strategy. The preparatory work done for post, information technology and IAM's privatization, is being followed up in the subsequent Information Infrastructure Sector Development Loan (IISDL), presented to the board on May 31, 2001. TPI-SAL also developed synergies with other World Bank Group activities, such as a $400 million IFC loan to MediTelecom and Information for Development (infoDev) grants for Y2K remediation activities and for the development of a Cyber Park. The achievements of this operation, successful introduction of competition in telecommunications, and significant preparatory work in post and IT , have put Morocco on the road to information society development.

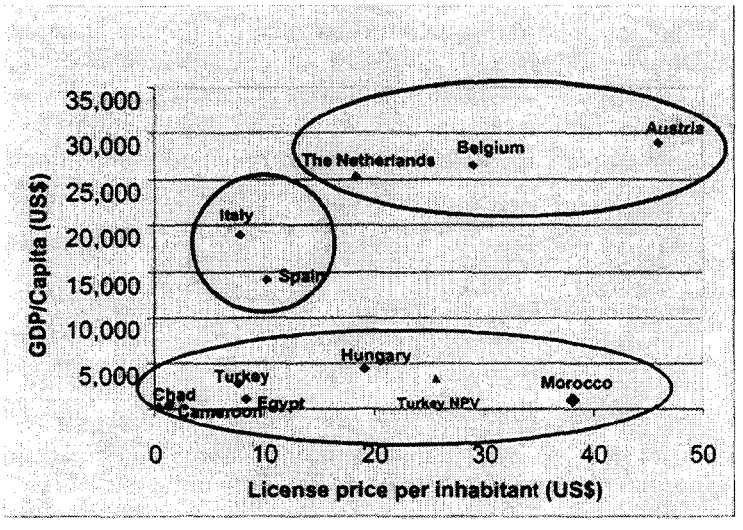
4.2 Outputs by components:

(a) Increasing competition in the telecommunications sector.

The achievements of the competition component of the operation were **highly satisfactory** (see Annex 8, Best Practice Note). In particular, the measures related to the award of a second GSM license were fully implemented. The Government awarded a second GSM license through an open, competitive and transparent international bid, led professionally by ANRT. International operators showed considerable interest, and MediTelecom, a consortium of Moroccan and international investors led by Telefonica of Spain and Telecom Portugal, emerged as the winner. Second, following an international competitive bidding process, three VSAT licenses were awarded in May 2000. VSAT operators are expected to exert a significant downward pressure on international capacity prices, key input for data and internet providers. Third, two studies on alternative infrastructure also contributed to the understanding of the necessary legal requirements for owners of alternative telecommunications infrastructures to lease capacity to service providers.

The successful GSM license triggered strong sector impact. The license brought substantial revenues to the Treasury (around $1.1 billion upfront, plus expected additional mid-term fiscal revenues up to $3.5 billion, in net present value). The price paid for the license related to potential market size was higher than the equivalent measure for other transactions in emerging markets (Turkey, Hungary, Egypt), as well as in developed economies (Italy, Spain, Belgium). Austria was the only country where the license price per inhabitant was higher than Morocco. An important factor explaining the success and the high financial offer was the design of the license, which allowed the new operator to build its own long-distance infrastructure and, after January 1, 2002, build and operate its own international gateway. The new operator was also allowed to offer fixed wireless services in rural, suburban, and industrial areas, subject to ANRT approval.

Graph 1: Price paid for a second GSM license for transactions occurred in the years 1997-1999.



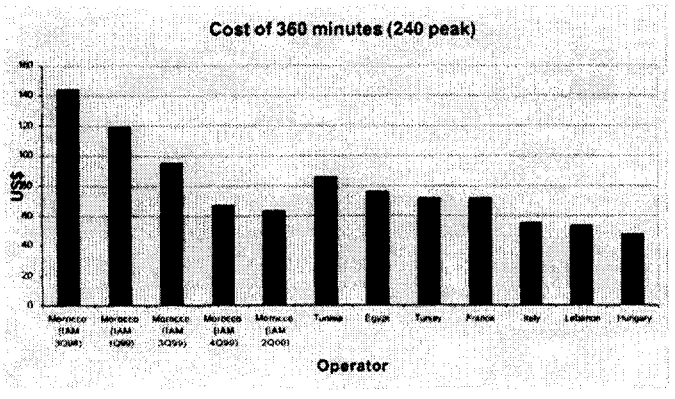
Source: ANRT, World Bank.

The entry of the second GSM operator led to increased service quality and investments. It also accelerated the downward trend of mobile prices. Maroc Telecom (the new name of IAM) reduced tariffs three times in response to the competitive threat of MediTelecom. Tariffs were modified again during 2000, following effective competition. The 60 per cent price reduction in wireless services, coupled to more aggressive marketing efforts and a better distribution network resulted, in a single year, in a 66 per cent increase in the number of customers. This means that, at least over 1 million additional Moroccans having direct access to a phone. The number of GSM customers increased from 149,000 in June 1999, to over 3 million subscribers by end 2000, for a record 1,250 per cent Compounded Annual Growth Rate (CAGR), raising mobile penetration from 0.4 per cent in 1998 to approximately 10.7 per cent in 2000. Recent estimates indicate that the growth continued in 2001, to reach over 4,000,000 expected customers in June. This strong growth has been achieved both by the incumbent operator (retainer of a 60 per cent market share), and by the new competitor. This result is remarkable, considering that the fixed line network, developed in over 20 years by the incumbent in a monopoly regime, accounts for just 1.6 million customers.

The introduction of a second GSM operator and the enhanced performance of the incumbent, raised telecommunications revenues as a percentage of GDP from 2.04 per cent to 3.7 per cent in just two years. New services were introduced, for example Wireless Application Protocol (WAP) services. The operation also had a positive impact on job creation. Following MediTelecom's entry - which has already recruited 3,000 people - 20,000 new jobs will be created by 2004 (this includes also a major call center run by Atento, a subsidiary of Telefonica). The following Tables show the impact of competition on tariffs and

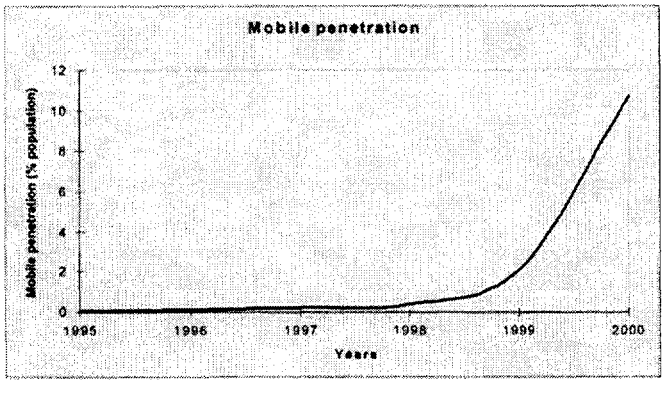
penetration.

Graph 2. Comparison of Tariff Cuts in Response to Competition



Source: IAM, other mobile operators.

Graph 3. Increase in Mobile Penetration



Source: ANRT, IAM, MediTelecom.

(b) ***Strengthening the telecommunications regulatory framework.***

The achievements for this component were **highly satisfactory**. The successful GSM tender raised ANRT' s international prestige, leading the Economist Intelligence Unit to rank it as one of the best regulators in Middle East and Africa, second only to the Israeli Ministry of Communications. Progress was made on ensuring autonomy, competence and transparency for ANRT. To create an adequate regulatory framework for competition, ANRT established and implemented fair and transparent rules and procedures to resolve interconnection disputes and allocate frequency. A test of the sustainability of the regulatory measures,

supported by TPI-SAL, was the satisfactory resolution of two complex interconnection disputes between IAM and MediTelecom.

All but one of the measures of the regulatory component of TPI-SAL were successfully implemented by ANRT and the Government. The only outstanding issue is related to the financial autonomy of ANRT. Although ANRT's success was also due to an adequate budget resources, its full financial autonomy was not secured. To ensure independence, Law 24-96 stated that each year's Finance Law should determine the operators' contribution to ANRT (fraction of the license fee). However, Fiscal Law 1999-2000 did not provide for this allocation, on the grounds that ANRT's real needs were already covered. On the other hand, the *Institut National des Postes et Télécommunications* (INPT), a training institute originally attached to ANRT by Law 24/96, to which a specific budget allocation is provided, remained under ANRT's control. This decision might embed the risk of having training resources cross-subsidizing regulatory activities. As a result, the long term financial autonomy of ANRT is still an outstanding issue.

(c) ***Preparing IAM's privatization.***

The achievements for this component were **highly satisfactory**. The threat from an effective wireless competitor forced IAM to accelerate introduction of private sector management practices. In addition, competition strengthened the constituency in favor of IAM's privatization. The specific conditions for privatization set under TPI-SAL were all achieved. A privatization strategy was adopted. IAM accounts were audited and the Government adopted a timetable for reimbursing the arrears due to IAM by the Public Administration. A reputable investment bank (JP Morgan) and legal experts (Clifford Chance) were hired to assist the Government with preparation and execution of privatization.

The preparatory work done under TPI-SAL was followed by specific measures under the subsequent operation (IISDL), that assisted in the sale of 35 per cent of IAM's shares to a strategic investor in February 2001. This is a significant achievement, given the tight conditions of capital markets for telecommunications operations in 4th Quarter 2000 and 1st Quarter 2001 Morocco and Jordan were the only cases of successful telecommunications privatization in the region in 1999-2000.

(d) ***Enhancing rural access.***

Progress on this component was overall **satisfactory** although along different lines than originally expected. The pilot rural project in the North was indefinitely postponed as the government, sensibly, wanted to first define more broadly the policies and implementation mechanisms to be used for universal service generally, including rural. To this end the government engaged consultants to review options and make recommendations, but never came to closure on these. A draft implementation decree has been in preparation for some time but not processed within the government. A regime to extend service to rural and low-income urban population groups, as outlined in the letter of development policy, is thus still not in place.

On the other hand, three important developments not initially envisaged were achieved. First, competition for the second GSM license resulted in bidders exceeding the tender documents' minimum requirements for territorial coverage. Meditel, the winner, committed to cover 90 percent of Morocco in four years. In practice, it achieved this target in only 1-1/2 years. While this by itself does not ensure widespread access to service, and it is unknown how many poor rural people actually use GSM service, it provides a network that enables extending access to unserved population groups at low marginal cost. Second, with the advent

of GSM competition, pre-paid service was introduced and grew very fast. This extended voice service from premium users to many lower income urban inhabitants who could not afford a fixed monthly charge, need tight control over call expenditure, and are not creditworthy for regular post-paid service. Third, the limits of IAM's obligations to provide or finance unprofitable services were clearly established in the draft *cahier des charges* before privatization. This contained investor risk and also defined how continuity of current service in potentially unprofitable areas would be maintained or modified in the future.

(e) ***Modernizing the postal sector.***

this component had a **satisfactory** outcome. The operation supported the launch of two studies. The studies define a postal sector strategy, including definition of universal service obligations, determination of a market liberalization path, and evaluating BAM's future strategic reorientation and private participation. These studies, which are nearing completion, combined with a number of seminars and workshops held in conjunction, have strengthened BAM's restructuring efforts.

(f) ***Formulating a national IT strategy.***

The outcome of this component was **satisfactory**. The Government published a national IT strategy reflecting the potential of IT as an engine for major growth and job creation. The IT Action Plan - published on the Internet (www.septi.gov.ma) - aims at: (a) establishing high-capacity links among administrative and business centers, hospitals, and universities ("Administration on Line" initiative); (b) developing an adequate regulatory framework and promoting e-commerce; (c) promoting IT investment and entrepreneurship; and (d) promoting the use of IT within firms. The Government obtained *info*Dev grants to undertake Y2K-related activities and fund the business plan for a Cyber Park, a high tech pole for Moroccan firms in IT and telecommunications. Since the completion of the project, the Borrower has undertaken steps to implement the strategy (see Annex 9).

4.3 Net Present Value/Economic rate of return:

NA

4.4 Financial rate of return:

NA

4.5 Institutional development impact:

Institutional development of the telecommunications regulatory framework was a major focus of the reform agenda in order to ensure the success of both the licensing of the second GSM operator, as well as the success of later liberalization in the local, long-distance and international markets. Technical assistance helped develop the capacity of ANRT to regulate the complexities of the telecommunications sector, and strengthened its autonomy to ensure a level playing field, conducive to increased competition. ANRT had also relatively large jurisdiction over the sector, being entrusted, for instance, with the licensing of the new GSM operator. As described above, the GSM license allocation process was handled with transparency and high professionalism by ANRT. ANRT was also able to elaborate spectrum allocation rules, undertake a

relatively complex spectrum monitoring process, as well as speedily resolve interconnection disputes. There was fair play and transparency in the awarding of licenses for GSM and VSAT operators.

5. Major Factors Affecting Implementation and Outcome

5.1 Factors outside the control of government or implementing agency:

Certain key external factors substantially affected the positive outcome of the project:

- Availability of funds in global capital markets in developing countries: 1998 and 1999 were strong years for telecommunications investment, with global capital markets booming and channeling much of the new investment into telecommunications and high tech industries, in both developing and developed markets.

- The attractiveness of the GSM market elicited large license fees in GSM auctions across countries, although not as high as in Morocco.

- The three highest bids came from consortia led by major European companies, which also had a strategic interest in the Mediterranean Basin. The Moroccan GSM bid was the first serious opportunity in the Maghreb region for telecommunications strategic investors.

5.2 Factors generally subject to government control:

The government also substantially contributed to the project outcome. It demonstrated keen commitment to sector reform, liberalization and privatization. Law 24/96 was adopted well in advance of the GSM tender, increasing bidders confidence in the legal, regulatory and institutional environment. Law 24/96 was complemented by several implementing decrees, which established general interconnection principles, defined a dispute resolution mechanism, specified the essential elements of the interconnection contract, provided technical and cost principles for interconnection, and established the legal regime for leased lines. The appointment of highly skilled professionals at the head of ANRT goes also to the government's credit.

5.3 Factors generally subject to implementing agency control:

The actions of the regulatory agency, ANRT, also substantially affected the implementation of sector regulatory reform. Law 24-96 gave ANRT a broad mandate and clear authority, giving it jurisdiction over managing and allocating spectrum, thus helping to reduce regulatory risk. ANRT was adequately staffed in key decision making positions. It had an efficient internal organization, along main functional units. Precise responsibilities were allocated to different divisions.

Two main factors subject to ANRT's control helped the success of the GSM tender. The first was the design of the license, and the second was the transparency of the tender process.

License conditions were particularly appealing to investors because they conferred embedded rights that mitigated the risks posed by IAM's initial market dominance. They enhanced the expected cash flow of the

new competitor, and signaled the authorities' willingness to allow effective competition. In particular, the license allowed the new operator to: (a) build its own long-distance infrastructure, bypassing the network of the incumbent operator, or build its own infrastructure up to the point of interconnection; (b) build and, after January 1, 2002, operate its own international gateway to provide services to its clients; (c) offer fixed wireless services in rural, suburban, and industrial areas, subject to ANRT approval. The first two features gave the new entrants much flexibility to invest in and develop its network and to overcome possible capacity and pricing bottlenecks in IAM's network. The third allowed the extension of access outside the core markets at marginal cost, and to develop potential sources of additional revenue in industrial areas where advanced applications can be launched.

The tender was administered in a transparent manner. ANRT sought expressions of interest from prospective investors after it had drafted the conditions of the license and IAM had published a default interconnection offer. These elements helped investors better forecast the expected net cash flow, break-even point, key drivers of the financial offer. The criteria for evaluating bids were set out in the tender documents, including the weights assigned to each technical sub-criteria. ANRT published a bid evaluation report on its website disclosing the evaluation given to each bidder.

5.4 Costs and financing:

NA

6. Sustainability

6.1 Rationale for sustainability rating:

The sustainability of a competitive market structure is **likely** because of the presence of many established players in the market. In addition, the regulator, ANRT, succeeded in building capacity in terms of staff expertise, and transparency of its procedures, and also established a sound interconnection regime. These conditions increase the possibility of the establishment of a competitive market in the local loop, long-distance and international markets when competition is introduced in 2003. Morocco's commitments to WTO provide international credibility for the continuation of the liberalization path. Also, the contractual rights and obligations built into the licenses provide a sound legal basis for sustainability of the competitive market. For instance, in rural and universal access, the service requirements imposed by ANRT under the license conditions, as well as the commitments made by IAM and MediTelecom, are likely to result in significant rural telecommunications expansion.

However, while ANRT is stronger relative to most nascent regulators in developing countries, it also faces some risks common to most these regulators. For example, the governing body of ANRT is appointed by Government. The Government also appoints the director of ANRT. Changes in the political goals of the Government with respect to sector liberalization might have a negative impact on new sector reforms, although the presence of established international operators is a guarantee that the achievements of TPI-SAL in terms of institutional capacity building will not be reversed.

Sustainability of the measures introduced under TPI-SAL is also supported by continued Bank assistance in the sector through IISDL, whose objectives sustain and further the achievements of TPI-SAL. These objectives include deepening market liberalization, privatizing IAM, strengthening the regulatory environment, and developing IT and postal sectors.

6.2 Transition arrangement to regular operations:

NA

7. Bank and Borrower Performance

Bank

7.1 Lending:

The Bank's performance during the preparation phase of the operation was satisfactory. This rating is based on the following :

- *Efficiency of the loan and team composition:* The loan was prepared over a period of about one year (7 months from identification to negotiations), at low cost with respect to similar operations, and with a good staff mix. Four missions took place during project preparation in April, June, September and October (appraisal) 1998 followed by negotiations in November 1998 which were conducted jointly with the cofinancier (AfDB). The teams included private sector development specialists, telecommunications and postal experts, and members of the AfDB team.

- *Close working relationship between the Bank, the borrower and other donors:* The African Development Bank (AfDB) prepared the operation jointly with the Bank and contributed parallel financing of $113 million. Throughout project preparation, the Bank maintained a close dialog with the Moroccan government and ANRT, in particular in the implementation of the technical assistance program. The Bank, AfDB, the EU, and GOM collaborated closely on the preparation of TORs for the various studies carried out under the TA program, and consultants were invited to present the results of their studies directly to GOM as part of the appraisal mission to ensure dissemination of the results.

- *Technical Assistance (TA) program*: The TA program, funded by EU and PHRD grants (about $6.3 million and $200,000, respectively) included: (a) continued dialogue with ANRT for the design of an adequate interconnection regime and preparation of the second GSM operator's *cahier des charges*; (b) completion of a study on the impact of a second GSM operator on the Moroccan telecommunications sector in general, and on IAM in particular; (c) completion of two studies addressing, respectively, technical and legal aspects related to the provision of alternative telecommunications infrastructures in Morocco; and (d) dialogue with the Ministry of Privatization for the design of a privatization strategy for IAM, completion of the audits and other pre-privatization measures. In May 1999, during the week-long visit of a Moroccan delegation, Bank staff made presentations on key issues including global best practices on privatization, and gave technical advice on mobile tenders, and interconnection. The TA program had a very significant impact as it was a key factor influencing the final decision of the Moroccan government to proceed with the liberalization.

- *The timing of project preparation* also allowed the Bank to provide on-going support to GOM: (a) during the GSM tendering process, including introducing measures to strengthen ANRT's capacity; and (b) in preparing its Letter of Sector Development Policy.

7.2 Supervision:

Overall project supervision was satisfactory. The Bank carried out two supervision missions during the course of project implementation (November 1999, and May 2000) and an ICR mission in March 2001. Project performance indicators were monitored and discussed with GOM on a regular basis, with particular attention given to the Borrower's progress in meeting the conditions for second tranche release.

7.3 Overall Bank performance:

Overall Bank performance is satisfactory due to: (a) speed and efficiency with which the project was prepared; (b) high-level expert advice and technical assistance given by the Bank to the borrower in the design of a wireless license and preparation for privatization; and (c) dialogue maintained with the borrower, eliciting considerable counterpart commitment.

Borrower

7.4 Preparation:

The Borrower's performance during preparation is rated as satisfactory. The operation was closely tied to the sectoral objectives of the government and hence elicited considerable responsiveness and commitment. Partly as a result of intensive policy dialogue with the Bank, the Government had already implemented far-reaching legal and institutional reforms, in particular the adoption of Law 24-96. The Government openness to accept a dialogue with the Bank contributed to the adoption of the implementing decrees. The placement of highly skilled professionals at the head of ANRT was also a choice with far-reaching importance on sector reform, and signalled the commitment of the Kingdom of Morocco to the reform agenda.

7.5 Government implementation performance:

Borrower performance during implementation is rated satisfactory. The implementation of the project was also undertaken with relative speed and success. The GSM tender was concluded in June 1999, and the license was awarded in August 1999. The impact of license conditions for the second GSM license exceeded the expectations set at the inception of the project. Most of the other policy measures originally included in the project were completed on time, to full compliance. Some threats were posed to both the introduction of competition and the strengthening of regulatory autonomy from selected stakeholders. However, these risks continued to be modest or negligible through most of the project and did not hinder either steps to privatize IAM or ANRT's ability in discharging its functions.

7.6 Implementing Agency:

The main implementing agency for the GSM license was ANRT. As stated before, ANRT proved to be a strong, capable, and independent regulator and its performance was especially important in ensuring the success of the mobile tender, and sustaining the reform path. The only weakness was a delay in awarding VSAT licenses because the privatization process attracted most of the attention of policy makers and drained ANRT's technical resources. ANRT completed the tender with about three months delay with respect to the schedule originally envisaged in the project. A subsequent delay of 6 months, due to

administrative procedures, occurred from the approval of ANRT's decision and the issue of the actual decree, required for compliance with the Bank's second tranche measures. During this period, however, the selected operators were authorized to start building their network and offer services.

The main implementing agency for postal reform were BAM and SEPTI. While progress on postal reform was slower than in telecommunications, BAM undertook the study and action plan committed under the project, although the recommendations of the study have not yet been implemented. SEPTI elaborated a strategy for information technology ahead of most countries of the region, and was efficient in implementing Y2K remediation activities.

7.7 Overall Borrower performance:

The overall Borrower performance is rated as satisfactory because ANRT was the main beneficiary, and its performance was exemplary. In addition, the Government as a whole showed sustained commitment to reform, overcoming resistance from selected stakeholders.

8. Lessons Learned

Four main lessons can be drawn from this project.

First, TPI-SAL's pioneering design integrating telecommunications, information technology, and postal components into a single operation proved valuable. It encouraged the government to consider (for example, in its public commitments through the letter of development policy, and subsequently in the design of the follow-up IISDL operation) the broader scope of information infrastructure, potentially also including broadcasting, in addition to the individual participating sectors. This is increasingly necessary for effective use of information for development and is also consistent with global convergence among what traditionally were separate services, networks, and businesses.

Second, differences in institutional capability and political will to deal with the components of information infrastructure must be reflected in realistic project design. This was the case of the TPI-SAL, in which expectations and achievements were high for telecommunications, more modest for the posts, and fragmentary for information technology. The success in telecommunications was due to a mix of political focus and attention expertise and resources allocated to the relevant institutions. Post and IT did not move at a slower pace because they did not enjoy the same mix of institutional factors. Operations like TPI-SAL need to consider these different institutional and political realities, and be designed accordingly.

Third, introducing competition before privatizing the incumbent telecommunications operator is a powerful option for sector reform. Three aspects can be noted. One, the prospect of competition in mobile services prompted IAM to focus early on customer service, accelerate service roll-out, reduce prices, and strengthen commercial management. The design of the second GSM license, aimed at enabling the new entrant to become an effective competitor to IAM beyond the narrow limits of mobile service, resulted in IAM improving performance also in fixed services. Two, the successful GSM tender accelerated the agenda for privatizing IAM. Although privatization was contemplated in the telecommunications law of 1996, there was no timetable and little will to proceed, so much so that the TPI-SAL only included modest preparatory steps towards future privatization of IAM. But the award of the second GSM license highlighted the need to enable IAM to compete effectively by freeing it from public sector restrictions and facilitating access to global capital markets, technology, management, and scale of procurement through a major international

partner. The high license fee obtained for the second GSM probably also contributed to government interest. And three, opening the market to competition before privatizing IAM limited the risk that IAM's monopoly privileges would be extended in an attempt to increase the sale price. Actual steps taken to liberalize telecommunications before privatization, the government's commitments with the WTO to complete the process by a fixed date, and subsequent plans by the authorities to issue new licenses in all market segments, add up to an effective plan for opening up the market over a period of about five years – not the fastest on global record, but unequalled in the MENA region.

Fourth, extending telecommunications services to unattended areas and population groups can largely be achieved through the market. The obligations of both the incumbent and new entrants to provide potentially unprofitable services were kept to a minimum. Rather, competition for and in Morocco's markets has resulted in rapid build-out of new networks that reduce the incremental cost of providing rural service almost countrywide and has made affordable new service modalities available to modest urban users. Gaps probably remain, however, between what operators are prepared to do on commercial terms alone and service access objectives that the government might establish on broader development grounds. But the cost of narrowing these gaps is now likely to be much lower than the 4% of revenues initially set as the upper limit of what operators must contribute to universal service (plus 2% towards 'amenagament des territoires'). This would bring Morocco closer to global best practices that have net cost of universal service around one percent of revenues or less.

9. Partner Comments

(a) Borrower/implementing agency:

Borrower's comments attached as Annex 9.

(b) Cofinanciers:
Comments from African Development Bank:

The program has shown the very beneficial effects of opening the market to competition in a transparent context and within a reliable regulatory framework. The achievements of the objectives and outputs as indicated in the ICR fully reflected the results of the program. In view of the very good performance of the program and the need to consolidate the achievements, it was decided to pursue the reforms of the telecommunications, post and IT sector, under the IISDL program. The coordination between the two co-financiers, the African Development Bank and the World Bank, has been very satisfactory. The two institutions in fact jointly undertook missions for the preparation, appraisal and supervision of the program.

(c) Other partners (NGOs/private sector):

NA

10. Additional Information

Annex 1. Key Performance Indicators/Log Frame Matrix

Outcome/Impact Indicators:

Indicator/Matrix	Projected in last PSR[1]	Actual/Latest Estimate
Market share(s) of the new operator in the cellular market	27%	30%
Number of suppliers of leased lines (number of licenses granted to suppliers of leased lines)	at least 4	4
Efficiency of new investments : 3-year moving average of the amount of additional capital needed per new subscriber (US$)	$1,000	around $900
No. of reported faults (per year, per 100 main lines)	30	24.8
Number of fixed lines outside Casablanca / Rabat	861,000	940,000
Percentage of population with access to at least one phone	90%	92%

[1] End of project

Note: the original table of indicators included also two indicators on the price of leased lines for local and long distance connections. The price of leased lines for a 2Mbps capacity, at the time of the preparation of the project was expressed as a function of the price of 64kbps leased lines. After the presentation of the project to the Board, this method to determine the price of 2Mbps capacity had been discontinued, and a direct 2Mbps link has been priced and offered to the customers. As a consequence, the new data on the price of leased lines was not comparable with the benchmarks originally set in the project. In general, notwithstanding the fact that the introduction on the market of a 2Mbps connection is a positive technological development, it is fair to assess that the price of leased lines in Morocco is still higher than international best practise and the prices, in this area, did not drop as quickly as in other areas (such as mobile telephony).

Outcome Indicators:

Measures	Compliance	Outputs
Introducing effective competition in telecommunications		
Licensing second GSM operator, through competitive and transparent bidding process.	Implemented	2nd GSM license awarded. Operator allowed to build long-distance infrastructure; build int'l gateway (after Jan '02); and offer fixed wireless services in rural, suburban, and industrial areas.
Grant at least two VSAT (Very Small Aperture Terminals) licenses	Implemented	Three VSAT licenses awarded in May 2000
Study on legal instruments to enable owners of alternative telecommunications infrastructure to become telecom operators.	Implemented	Two studies completed.
Strengthening the regulatory framework		

Adopt interconnection rules and procedures for dispute resolution.	Implemented	Interconnection rules and dispute-resolution procedures implemented.
Establish fee structure for ANRT. Include in FY 2000 Appropriations Law, provisions to grant ANRT predetermined percentage of operator license fees.	Partially Implemented	ANRT's financial autonomy not established. Appropriations Law did not grant ANRT fee contribution.
Adopt frequency allocation plan on fair pro-competitive principles.	Implemented	Frequency allocation plan adopted.
Submit to WTO Revised Schedule of Commitments on Basic Telecommunications, including the standard Regulatory Annex.	Implemented	Revised Schedule of Commitments submitted to WTO.
Preparing IAM's privatization		
Adopt privatization strategy.	Implemented	Privatization strategy adopted.
Select auditors for IAM's accounts.	Implemented	IAM accounts audited.
Adopt action plan to reduce arrears owed by Administration to IAM	Implemented	Timetable to reimburse arrears adopted.
Implement recruitment procedure for financial advisors to implement privatization transaction.	Implemented	Financial advisors and legal experts appointed.
Expanding access to telecommunications		
Adopt Decree 2-97-1026 requiring telecom operator contributions for public service obligations.	Implemented	Decree adopted.
Adopt Decree 2-97-1026 to use market mechanisms for public service obligations.	Implemented	Decree adopted.
Elaborate pilot program to expand access to poor remote regions.	Not Implemented	Pilot program not undertaken.
Strengthening competitiveness of postal services		
Action plan on public service obligations.	Implemented	Formulation of Action Plan started.
Study on private provision of rural postal services.	Implemented	Study launched.
Formulating National Information Infrastructure Strategy		
Elaborate National Information Infrastructure Strategy.	Implemented	National Information Infrastructure Strategy formulated and published on SEPTI's website.
Implement Y2K readiness mechanisms.	Implemented	Y2K readiness implemented effectively.

Annex 2. Project Costs and Financing

Not applicable as this was an Adjustment Operation.

Annex 3. Economic Costs and Benefits

Not Applicable as this was an Adjustment Operation.

Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating	
Month/Year	Count	Specialty	Implementation Progress	Development Objective
Identification/Preparation				
April 1998	*3*	2 PSD specialists, 1 Telecommunications specialist		
June 1998	*6*	1 Sector Manager, 2 PSD specialists, 2 Telecommunications specialists, 1 Postal expert		
September 1998	*4*	2 PSD specialists, 2 Telecommunications specialists		
Appraisal/Negotiation				
October 1998	*4*	1 PSD specialist, 3 Telecommunications specialists		
Supervision				
November 1999	*4*	2 PSD specialists, 2 Telecommunications specialists	S	HS
May 2000	*4*	2 PSD specialists, 2 Telecommunications specialists	S	S
ICR				
June 20, 2001	*3*	1 Regulatory Economist, 1 Telecommunications Specialist, 1 Program Assistant		

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US$ ('000)
Identification/Preparation		166
Appraisal/Negotiation		
Supervision		133
ICR		
Total		299

The SAP system combines the data for Appraisal/Negotiation with Preparation, and data for ICR with supervision. The data on No. of staff weeks is not available from SAP. An additional amount of $156,500 in trust funds was utilized during project preparation.

Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	Rating				
☒ *Macro policies*	○ *H*	● *SU*	○ *M*	○ *N*	○ *NA*
☒ *Sector Policies*	● *H*	○ *SU*	○ *M*	○ *N*	○ *NA*
☒ *Physical*	○ *H*	○ *SU*	○ *M*	○ *N*	● *NA*
☒ *Financial*	○ *H*	○ *SU*	○ *M*	○ *N*	● *NA*
☒ *Institutional Development*	● *H*	○ *SU*	○ *M*	○ *N*	○ *NA*
☒ *Environmental*	○ *H*	○ *SU*	○ *M*	○ *N*	● *NA*
Social					
☒ *Poverty Reduction*	○ *H*	● *SU*	○ *M*	○ *N*	○ *NA*
☒ *Gender*	○ *H*	○ *SU*	○ *M*	○ *N*	● *NA*
☒ *Other (Please specify)* *Not Applicable*	○ *H*	○ *SU*	○ *M*	○ *N*	● *NA*
☒ *Private sector development*	● *H*	○ *SU*	○ *M*	○ *N*	○ *NA*
☒ *Public sector management*	○ *H*	○ *SU*	○ *M*	○ *N*	● *NA*
☒ *Other (Please specify)* *Not Applicable*	○ *H*	○ *SU*	○ *M*	○ *N*	● *NA*

Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

6.1 Bank performance	*Rating*
☒ *Lending*	○ *HS* ● *S* ○ *U* ○ *HU*
☒ *Supervision*	○ *HS* ● *S* ○ *U* ○ *HU*
☒ *Overall*	○ *HS* ● *S* ○ *U* ○ *HU*

6.2 Borrower performance	*Rating*
☒ *Preparation*	○ *HS* ● *S* ○ *U* ○ *HU*
☒ *Government implementation performance*	○ *HS* ● *S* ○ *U* ○ *HU*
☒ *Implementation agency performance*	○ *HS* ● *S* ○ *U* ○ *HU*
☒ *Overall*	○ *HS* ● *S* ○ *U* ○ *HU*

Annex 7. List of Supporting Documents

- All Back-to-Office Reports and Aide Memoires
- PSRs
- Report and Recommendation of the President, April 9, 1999
- Memorandum on Second Tranche Release, December 20, 2000
- Viewpoint Note : *Introducing Telecommunications Competition through a Wireless License, Lessons from Morocco*, November, 1999, B. Wellenius and C.M. Rossotto
- Loan Agreement, October 23, 1999

Additional Annex 8. Best Practice Note

Introducing Telecommunications Competition through a Wireless License: Lessons from Morocco

A first version of the article was published in the World Bank Group Viewpoint Note N. 199 in November 1999. Journal of Network Economies published an updated version of the Note in April 2001.

Björn Wellenius and Carlo Maria Rossotto

In August 1999 the Moroccan government awarded a second mobile telecommunications license through international tender. All bidders made commitments on quality, coverage, and tariffs that would significantly expand and improve telecommunications services. The winning bidder was Medi Telecom, a consortium of Telefónica of Spain, Portugal Telecom, and Moroccan investors. Medi Telecom paid about US$1.1 billion for the fifteen-year license to operate under relatively unfettered competition—one of the highest prices ever paid for a mobile license relative to population size. Just as impressive is that the price was offered in a country not usually on the radar screen of foreign investors. The fiscal and development impact will be far reaching. The strong competition from reputable bidders was the payoff to Morocco's decision to set up a credible, pro-competitive regulatory environment before the transaction and to conduct open, professional bidding for the license. This Note examines why Morocco was able to reap these big rewards.

The liberalization of Morocco's telecommunications sector formally began with the Parliament's passage in 1996 of a telecommunications law (effective June 1997) that lay the foundations for an increasingly competitive, private-led sector. The law enabled competition in all segments of the market and set up an independent regulatory agency, Agence Nationale de Réglementation des Télécommunications (ANRT). The law also envisaged privatizing Itissalat-al-Maghrib (IAM), the incumbent state-owned telecommunications monopoly, but set no timetable. IAM operates fixed and mobile services, including the first Global System for Mobile Communications (GSM) network.

The award of a GSM license to a second operator in August 1999 was the first major step in introducing competition in the telecommunications market. As the process of tendering and awarding the license unfolded, the agenda for privatizing IAM accelerated. By the time the license was issued, the government had set the first quarter of 2000 as the target for opening IAM to private capital and had hired financial advisers to prepare the transaction.

Preparation

The successful issue of the second GSM license can be attributed largely to three features: a credible regulatory framework, the transparent tender process, and the attractive terms of the license.

Clear rules and roles

A legal and regulatory framework, including ANRT, was in place before the tendering of the second license started. The framework could have used improvements, such as simplified licensing, the addition of modular penalties, and ex post rather than ex ante financial control of ANRT. Nevertheless, coupled with the government's sustained commitment to telecommunications reform, it gave investors sufficient confidence and a basis for reliable business decisions.

The law set out the principles for licensing and competitive award. It also ensured that throughout the process the bidders had a clearly identified, independent counterpart, ANRT, with explicit responsibilities and functions. And by giving ANRT a broad mandate and clear authority (putting it in charge of managing and allocating spectrum, for example), the law helped reduce regulatory risk.

The law was complemented by several subsequent implementation decrees. One of these established general interconnection principles, defined a dispute resolution mechanism, specified the essential elements of the interconnection contract, and provided technical and cost principles for interconnection. Another established the legal regime for leased lines.

ANRT sought expressions of interest from prospective investors once it had drafted the second license and IAM had published a default interconnection offer. These elements helped investors forecast the net cash flow and the break-even point, the main drivers of the financial offer.

Transparent tender

ANRT, which was responsible for conducting the licensing process, asked qualified bidders to offer commitments matching or exceeding targets for service quality, coverage, and tariff plans. These three elements form the core of the technical offer; the financial offer, the amount the bidder intends to pay for the license, is separate. Seven bidders made offers. In determining the best bid, ANRT weighted the price 60 percent and the technical offer 40 percent. Medi Telecom submitted the highest financial offer and the second highest technical one.

The process for awarding the license was transparent and conducted fairly and professionally by ANRT, and it stayed on schedule. The criteria for evaluating bids were set out in the tender documents, including the weights to be given each part of the technical offers. How marks would be assigned within each part to reflect offers above minimum requirements, however, was left to the evaluating committee. This balance between predictability and uncertainty is consistent with practice in some European countries, and ANRT believes it encouraged bidders to offer better than minimum performance. To enhance transparency, ANRT published a bid evaluation report on its Website disclosing the marks given to each part. But at the bidders' request the offers were not disclosed, so as to protect commercial information.

Nor have the technical offers of the winning bid been made public or reflected in the license. In some countries, such as Italy and the United Kingdom, the license includes the main technical parameters in the winner's bid, since their disclosure is not judged a violation of confidentiality. Other countries, such as Belgium, follow the same approach that Morocco has. If Medi Telecom fails to meet the minimum requirements published in the tender, anybody can complain to ANRT, including IAM or consumers. But if it fails to meet the technical commitments in its bid, it will be up to ANRT to enforce compliance.

Commercially attractive license

The license was particularly appealing to investors because, in addition to the usual features of a mobile license, it conferred embedded rights that mitigated the risks posed by IAM's initial market dominance, enhanced the expected cash flow, and signaled the authorities' willingness to allow effective competition. In particular, the license allowed the new operator to:

- Build its own long-distance infrastructure, bypassing the network of the incumbent operator, or build its own infrastructure up to the point of interconnection.
- Build and, after January 1, 2002, operate its own international gateway to provide services to its clients.
- Offer fixed wireless services in rural, suburban, and industrial areas, subject to ANRT approval.
- Serve as the sole licensed cellular communications operator, other than IAM, for four years.

The first two features give Medi Telecom much flexibility to invest in and develop its network and to overcome possible capacity and pricing bottlenecks in IAM's network. The third allows Medi Telecom to extend access outside the core markets at marginal cost, and to develop potential sources of additional revenue in industrial areas where advanced applications (such as wireless) can be launched. These features enable Medi Telecom to position itself well for building up a wide range of services once IAM's exclusive rights expire.

The last feature, which establishes a duopoly in mobile communications for four years, is more controversial. Hindsight suggests that restricting entry was unnecessary to attract serious investors. Moreover, it added little to the price paid for the license. The three highest bids came from consortia led by major European companies that had a strategic rather than a purely financial interest in the Mediterranean Basin. Whether the somewhat higher bid price justifies slowing the liberalization of mobile services is questionable. Experience in other countries suggests that a third operator is needed for competition to bring further big cuts in retail prices and innovations in service.

Impact

The new license has already prompted the incumbent to improve service and reduce prices. It also promises to deliver big benefits to customers and new revenues to the government.

The bid evaluation report shows that the bidders' average growth forecasts for the mobile market in Morocco envision it expanding from 170,000 customers today to about 5 million in 2010. While the technical commitments of the winning bidder are confidential, the average commitments bid greatly exceed the minimum targets for the population share and road length to be covered in the first five years. Service is expected to reach 90 percent of Morocco's population during the fourth year, compared with the minimum requirement of 60 percent by the end of year three and 75 percent by year five. Moreover, because the winner committed to matching IAM's mobile coverage when it launches the new service, all current customers will have a choice from the start. These commitments are in line with the aggressive roll-out programs in other countries. In Turkey, for example, Telsim agreed to cover 50 percent of the population in two years and 90 percent in five.

From the start of service, tariffs are likely to fall about 30 percent below those at the time of bidding, or to less than half what they had been before the tender was issued. That will bring retail prices within the range for the region, but still 20 to 30 percent higher than the best international prices, about US$50 for 360 minutes of GSM service.

Performance of the incumbent

As in other countries, the imminence of competition alone prompted big improvements in the incumbent's service:

- Between March and November 1998, as the tender was being prepared and expressions of interest were being sought, IAM reduced mobile service prices by about 25 percent, partially rebalanced tariffs for fixed telephone service, and committed publicly to expanding mobile and fixed networks.
- In December 1998, shortly after the tender was issued, IAM again reduced its mobile charges by about 25 percent and introduced the ability to receive short text messages.
- Although IAM introduced GSM service in 1994, it connected most of its customers (and considerably improved service quality) while the second license was being processed. Its customers increased by 57 percent in 1998 and by another 30 percent in the first half of 1999, reaching more than 170,000 in July 1999.

Fiscal impact and jobs

At about US$40 per inhabitant, the license price exceeds by 50 percent or more what operators recently paid for mobile licenses in most other countries. These include other middle-income countries in the region (Egypt, Turkey) and elsewhere (Hungary), mature economies where operators expect to build up large customer bases with high purchasing power (Italy, Spain), and small but very high-income markets (Belgium, the Netherlands). Among recent transactions, only Austria did better than Morocco.[1]

The US$1.1 billion license fee increased Morocco's fiscal revenue for 1999 by about 13 percent. The government could use the proceeds—equal to about half a year's public capital expenditures or two years' capital inflows (portfolio and direct foreign investment)—to finance new public sector investments or to reduce the foreign debt stock by about 6 percent. World Bank estimates suggest that the total fiscal

impact of the second license (including future taxes and research and development) will be much larger—in present value terms, more than US$2 billion by 2008, and perhaps as much as US$3.5 billion. Moreover, Medi Telecom expects to employ about 3,000 people, and its operations may generate 20,000 additional jobs, mainly in sales, distribution, and network installation and maintenance.

Results one year after

The impact of the second GSM license one year after it was awarded has exceeded expectations. MediTelecom began commercial service on schedule in April 2000. The mobile market grew 10-fold during the year ending in July 2000, reaching about 1.4 million customers. Prices have dropped further and are now within the range of European competitive markets. New services have been introduced, for example Wireless Application Protocol (WAP) services, that enable the customer to access Internet through a GSM phone . IAM continued to expand and face the competitive pressure from MediTelecom, and expects to have about 70 percent of the much-expanded market by end 2000. Telefonica, the main operator in the consortium that owns MediTelecom, has further expanded its presence in Morocco by establishing a subsidiary of Atento, its call-center business, expected to generate over 4,000 new jobs. ANRT handled promptly and successfully the first major dispute between MediTelecom and IAM, on interconnection prices, adding to the credibility of regulatory arrangements in time for the privatization of IAM later in 2000.

Conclusion

The 1990s have seen an unprecedented pace of telecommunications reform around the world, but some developing countries have moved more cautiously. Reform has been particularly slow in the Middle East and North Africa, where such countries as Algeria, Syria, and Tunisia have maintained closed markets. Elsewhere, as in parts of Africa and South Asia, unclear regulatory frameworks, lack of process transparency, and indefinite reform timetables have made private investors hesitant and prevented end users from getting the full benefits of competition. Morocco shows that a middle-income developing country can quickly become attractive to major international investors. Its reform sets a quality benchmark for the region and the effects are thus likely to extend beyond Morocco to many of its neighbors.
In the 1980s and early 1990s the World Bank financed modernization and expansion of IAM's network. An April 1999 telecommunications sector adjustment loan of US$100 million supported initial liberalization, including the issuing of the second GSM license.

[1] Revenue sharing in Lebanon probably has a higher present value but is not readily comparable, as mobile replaced the destroyed fixed network and the future was more uncertain.

Björn Wellenius (bwellenius@worldbank.org) and Carlo Maria Rossotto (crossotto@ worldbank.org), Global Information and Communications Technology, The World Bank

Additional Annex 9. Borrower's comment on Completion

(translated from the French)

Telecommunications Sector

The telecommunications sector has changed extremely rapidly in the last three years in Morocco. In this regard, the help provided by the World Bank through the Sectoral Adjustment Loan was highly appreciated.

The telecommunications sector was liberalized through granting the second GSM license, which included in its *cahier des charges* fundamental elements like the capacity to build its own network and have an international telecommunications gateway. This had an impact beyond all expectations in terms of both the license fees paid (US$ 1.1 billion) and market growth (less than 200,000 subscribers in 1998 against 4 million to date). It is also remarkable that a large number of new subscribers belong to the middle to low-income category, because the tariffs applied to prepaid cards have been more than reasonable. We are witnessing the actual integration of telecommunications into the national economy at all levels.

The rapid development of GSM had a further impact on the notion of universal telecommunications service as foreseen in the decrees of Law 24-96. While universal service was earlier seen as being inevitably a service of fix telephony, it is obvious today that mobile telephone service is the one used in majority, even in rural areas. Therefore, a study was initiated to propose a new approach to universal service. One of its main conclusions is to set up a universal service fund, to be financed by all the operators and possibly used independently of technology, to fund telephony services in remote and low income areas through specific projects.

In addition, and as foreseen in ANRT's action plan, three VSAT licenses have also been granted. The new operators (Cimecom, Gulfsat Maghreb and Spacecom) are currently deploying their infrastructure and have started marketing their services.

The progress in the telecommunications sector of Morocco clearly shows that it is a dynamic sector, in full expansion and whose direct and indirect contributions to the economy have become very important.

Information Technologies Sector

The aforementioned loan also aimed to support the government in carrying out the Information Technologies Development Plan. This plan foresees:

- Promoting the modernization and efficiency of the administration and public institutions through the implementation of the on-line administration program.
- Allowing for the emergence of an economy based on knowledge and innovation.
- Improving and finalizing the legal and regulatory framework ensuring information technologies development.
- Promoting e-commerce.
- Accelerating the use of the Internet.
- Promoting the decentralization and land use planning through the use of information technologies.
- Strengthening the regulatory framework to coordinate the development of information technologies.

To implement this plan, the following actions were taken:

Adoption of the legal and regulatory framework:
In this area, the following draft laws have been elaborated:

- Draft law on giving legal status to electronic signature for its certification in accordance with international standards. This law, whose text was finalized by an expert commission nominated by the Prime Minister, will be adopted by the Government Council in 2001.

- Draft law on privacy protection through declaration procedures, authorization for the creation and exploitation of databases of personal information, establishment of procedures to grant access to these databases, and conferring rights to the citizens to be excluded from theses databases.

Internet development:
Further to the extension of the telecommunications infrastructure, several actions have been undertaken for the development of the Internet. These actions aim mainly to (a) improve conditions of access and interconnection with public telecommunications networks for ISPs, through new telecommunications licenses; and (b) extend the MARWAN network, a broadband information system destined to promote research and formation, that already covers 16 university campuses, and (c) develop national contents on the Internet. The last will be done through:

- Information to schools in the frame of the program "one school, one computer" within 2008 horizon;
- Implementation of the "administration on-line" project through 2004;
- Implementation, in partnership with local collectivities and BAM, of public telecenters with Internet access;
- Use of information technologies as tools for land use planning through the implementation of digital towns projects;
- Development of national portals for e-commerce.

Data standardization:
In order to launch standardization, the Government is currently conducting a study planned to lead to the creation of a normalization structure. Standardization will enable the coordination of information systems of administration and professional group, the development of standardized databases regarding public or sectoral data and the definition of encryption and formats for the exchange of digital data.

On-line Administration:
Within the framework of this project, an inter-ministerial committee has been set up, to formulate an implementation strategy for the inter-administration network. In additionally, a study was carried out by an international-standard consulting firm. The study consolidated the implementation strategy of this project, proposed a governance structure as well as financing sources and mechanisms and recommended the implementation of a pilot project for the management of State employees (GIPE).

Promotion of e-commerce:
Also within the framework of this project, the Government selected two business-to-consumer (B2C) e-commerce portals in accordance with the international standards in August 2000. These platforms will be operational in June 2001, and will be accompanied by a one-year training program on the use of information technologies for the cooperatives managers and increase awareness of the advantages of participating in e-commerce. Further, the search is currently on for investors to participate in a public-private partnership to implement at least one "certification authority" and a niche in the Moroccan market for e-commerce between companies (B2B).

Use of information technologies for regional planning
The main objective in this area is to ensure a better distribution of the communication and information infrastructure and technical and tariff conditions. To this end, the government has implemented a strategy centered on the following priorities, and run several awareness campaigns to achieve these goals:

- Set up community telecenters allowing all segments of the population to access communication

and information services, including the Internet, as well as reducing the isolation of rural areas.

- Take advantage of the immense potential of remote working in terms of jobs creation and value-added. To this end, the government will implement the appropriate environment for the development of tele-services, like tele-teaching, tele-informatics, tele-medicine, mediation and information tele-services.
- Achieve partnership with local collectivities to promote the use of town portals to create awareness of the local economic, cultural and tourism potential; ease access to and exchange of local information; favor the development of tele-services; and develop virtual commercial windows on local products. Following an agreement with the Hassan II Fund, the government has undertaken a strategy study for the implementation of town portals, expected to end in September 2001.
- Use information technologies for the valorization of cultural heritage. The evolution towards the information society represents the opportunity to reinforce Moroccan cultural identity thanks to the digitalization and diffusion of culture assets. The policy of cultural heritage digitalization has the following objectives: implementing electronic filing systems at the administration level; enabling public access; digitalizing the assets of the General Library and Archives; creating multimedia cultural spaces and develop national Internet sites.

Promotion of a national information technologies industry

The Government is determined to encourage the emergence of a national information technologies (IT) industry, and intends to:

- Mobilize resources to support IT projects evaluated as strategic and dynamic.
- Implement a regulatory framework for venture capital to benefit innovative companies.
- Promote research and development (R&D) through the implementation of an R&D coordination network of corporations, universities and training schools, promotion of partnership between Moroccan and foreign corporations, and valorization of human resources.

To that end, in October 2000, an ultra-modern 30,000 sq. meters cyberpark, located in Casablanca, has been dedicated to the development of IT companies, especially start-ups. A joint public-private company has been created to manage the Bouznika Park that must be operational in July 2001. Further, a budgetary envelope of DH 90 millions has been reserved by the Hassan II Fund for the development of the Park.

In conclusion, Loan no. 4464 has largely contributed to the realization of the Government objectives in the area of information technologies.

Postal Sector

The actions regarding Barid Al-Maghrib foreseen in the framework of this loan summarize as follows:

1. Promulgation of Law 24-96 that establishes the postal entity, ONPT, as a public establishment, with legal personality and financial autonomy, and opens the international mail segment to competition.
2. Elaboration of an action plan aiming to clarify the obligations of public services, the manner in which the cost of these obligations will be determined and financed, and the manner in which the providers in charge of fulfilling these obligations will be identified.
3. Launch of a study to extend private provision of postal services through franchising in remote areas.

The first action has been carried out. In effect, Law 24-96 was promulgated through Dahir 1-97-162 of August 7, 1997. By virtue of this law, Barid Al-Maghrib was created as an "etablissement public à caractère industriel et commercial" (public sector company with industrial and commercial nature), and the international mail segment has been liberalized.

As regards the second and third actions, they have been transferred to the State Secretariat of Post and Information and telecommunications technologies, which was given the task, in the framework of the

Information Infrastructure Sector Development Loan (IISDL), to launch a study on the "definition of public service obligations, their scope and cost, modalities of financing and execution mechanisms".

Within the scope of IISDL, Barid Al-Maghrib is also engaged in a study for "the elaboration of a strategy plan and restructuring of the corporation in view of its adaptation to the sectoral context and strengthening its competitiveness".

As regards the Ministry of Economy, Finance, Privatization and Tourism (Directorate of Treasury), it will pilot, as part of IISDL, a study on the development of postal financial services products (Caisse d' Epargne et des Comptes Courants Postaux).