

Improving Telecommunications Performance in Developing Countries Via Restructuring & Privatization

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Agenda

- Introduction
- Arguments against restructuring/privatization
- Arguments for
- Four stages of privatization
- Getting help
- Discussion

Introduction: Why Is Telecom Vital?

**WITH
GOOD
TELECOM**

- **A grocer in Uruguay can develop a large delivery business**
- **Local governments in Korea can quickly disseminate information to isolated villages**
- **A factory can be set up in a depressed area of the United States**
- **Factories in the Philippines can minimize lost productive time due to equipment failures by rapidly locating spare parts and specialized technical personnel**

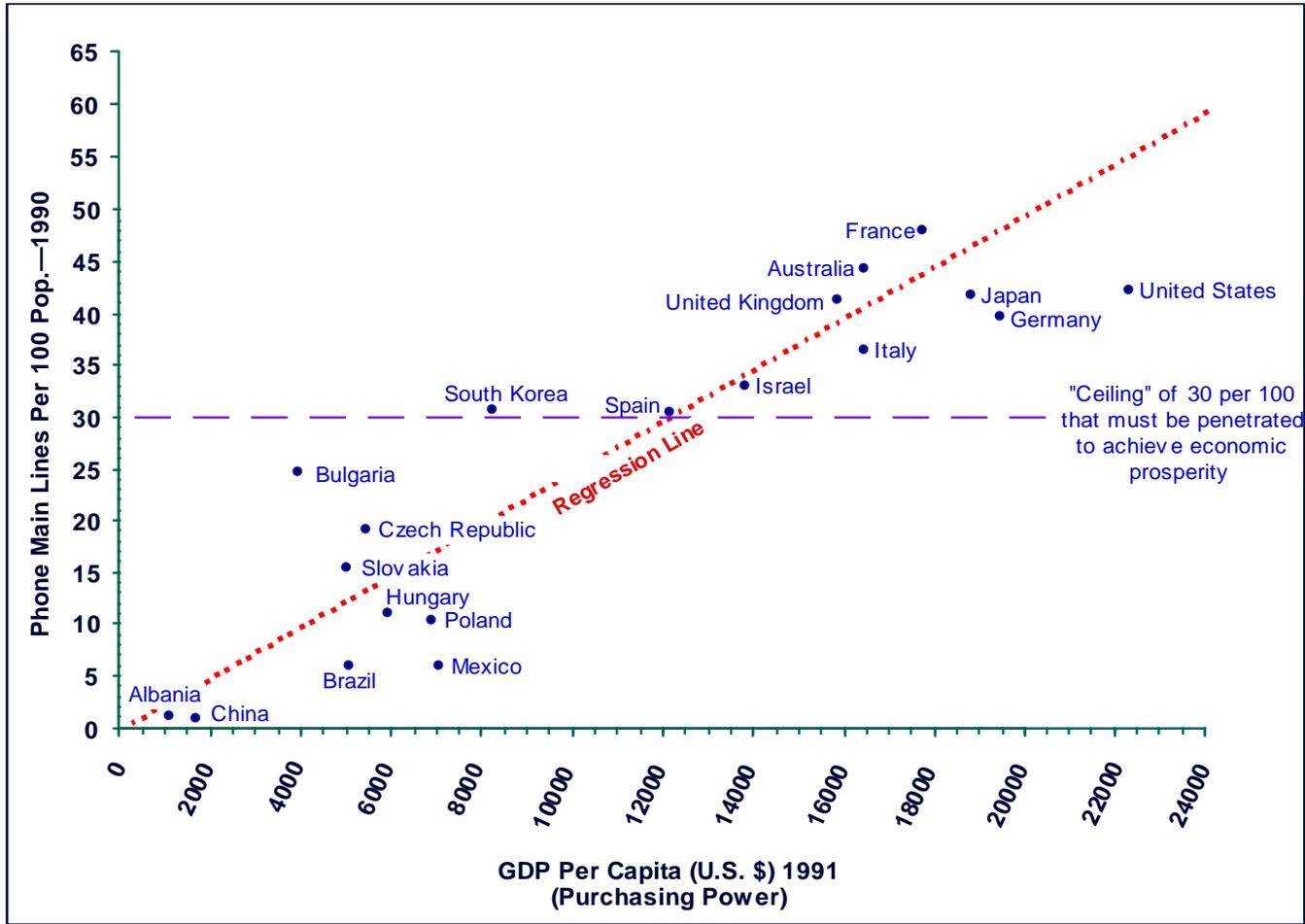
Introduction: Why Is Telecom Vital?

(Continued)

**WITH
POOR
TELECOM**

- A factory in Thailand tries 3 years to get adequate telecoms—investor considers moving to Singapore
- Banks in Paraguay function poorly and slowly in rural areas
- A factory in Eastern Europe spends 8 hours round-trip communicating via messenger, instead of 3 minutes via telephone

Introduction: Telecom Is Vital to Economic Growth



Source: *The Economist*

(JR) 4/94.36-1

Introduction: Far-Reaching Approach to Change

- In many countries, the roles of the state and of the state-owned enterprise as the engine of growth are being reconsidered
- This process, loosely called "deregulation," was initiated in the United States, Japan, and United Kingdom, and has started to spread to the developing world and Eastern Europe. It has 2 parts:
 - Relaxation, transformation, or abolition of regulatory control
 - Transition from monopoly to competition
- Poor performance by state telecommunications monopolies, together with increased understanding of the widespread adverse consequences of that performance for the productivity of other sectors, has generated the necessary political consensus to overhaul the sector
- Governments in many countries are attempting to change the organizational structure and improve the overall performance of telecommunications
- Experience in advanced industrial countries, however, suggests that such efforts often succeed better when privatization and/or a transition from monopoly to competition provide increased incentives for excellent performance and an increased "downside" for poor performance

THIS PRESENTATION DESCRIBES BOOZ-ALLEN'S PERSPECTIVE ON THE STRATEGY OPTIONS AND THEIR PROBLEMS AND POTENTIAL BENEFITS, AND OUTLINES A COMPREHENSIVE APPROACH TO POLICY DEVELOPMENT AND IMPLEMENTATION

Arguments Against Privatization/Restructuring

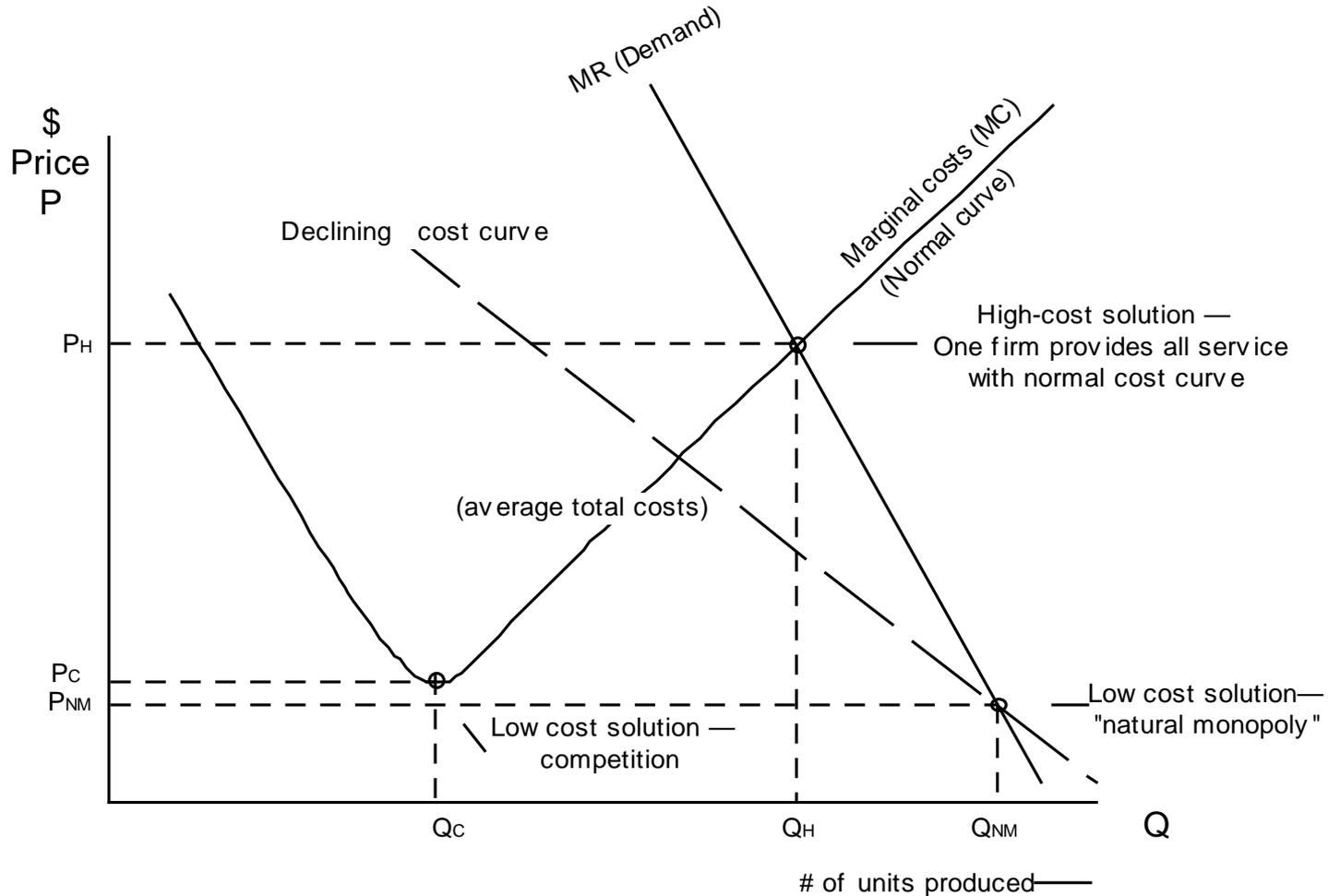
- **Public ownership of telecom is a valuable source of government revenue**
- **Public ownership prevents domination by foreign countries & multinational firms**
- **Public ownership allows cross-subsidization to achieve public goals**
 - **Rural phone service**
 - **Low postal rates**
 - **Long distance subsidizing local service**
 - **Source of foreign exchange**

However, a privatization/restructuring policy can be designed to effectively address these concerns

Arguments Against Privatization/Restructuring

- **Any major change is disruptive and will slow installation of lines**
- **Competitive privately owned systems might be technologically incompatible—increasing cost and inconvenience**
- **Privatization could increase corruption and dominance of sector by undesirable groups**
- **National security/emergency preparedness concerns**
- **Telecom sector has great economies of scale—“decreasing costs”—and therefore is a "natural monopoly"**

Arguments Against: A "Natural Monopoly"

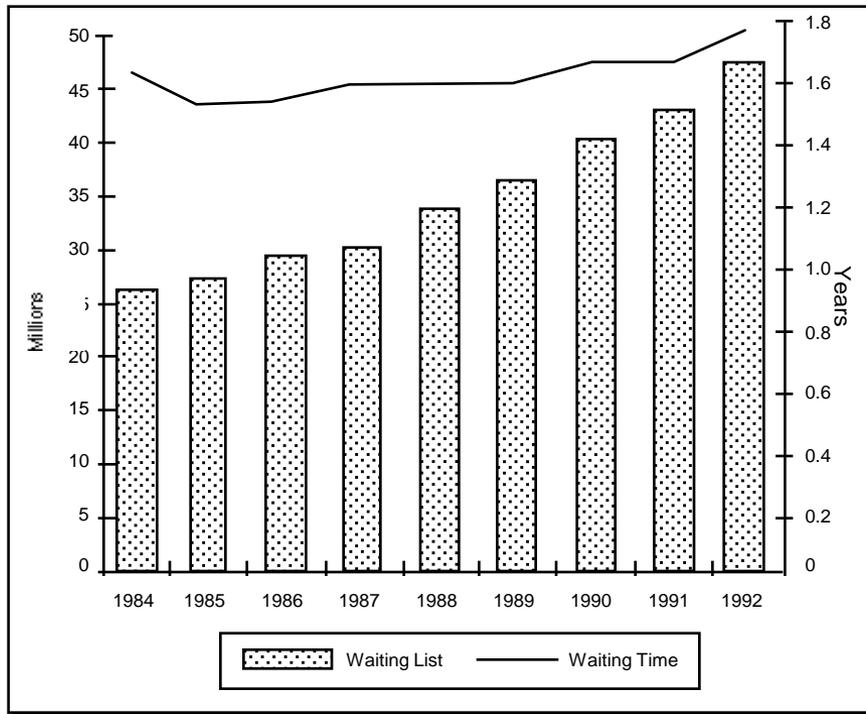


“Natural Monopoly”

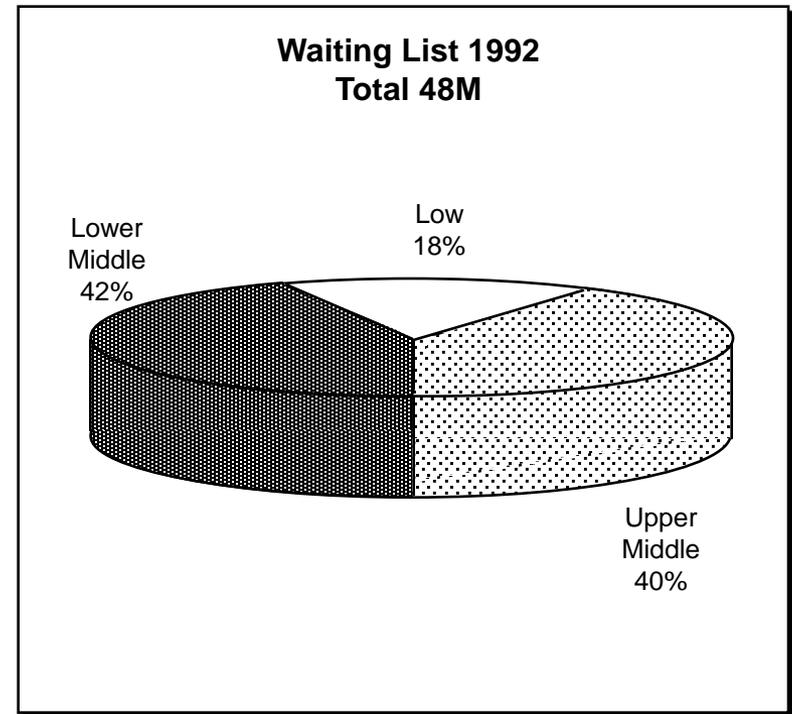
- The concept of natural monopoly is important to grasp
- A natural monopoly is a sector with declining costs, shown on the chart by the dashed line. Here it makes sense for only 1 firm to meet demand (the MR curve), since if 2 or more firms were involved each would have higher costs
- In a true natural monopoly an efficient solution can be achieved at point (QNM, PNM) – demand is satisfied at a low cost. (We will ignore the fact that the monopoly has the power to cut back output and raise costs.)
- But if this is really not a natural monopoly, then the actual cost curve is shown by MC. By allowing one firm to act monopolistically here, it will produce QH and set the price much higher, at PH. This is very unsatisfactory, and is arguably what is happening now in many telecom monopolies
- If the actual cost curve is MC, then the desirable solution is shown by the dot at "low cost solution–competition." Here several firms will each produce an amount QC at the low price of PC. Each firm will be very efficient and total demand will be satisfied by the total output of QC times (say) 3 firms.

Arguments For Privatization/Restructuring

The Waiting List Is Long, Growing, and Concentrated in the Developing World—Massive Investment Is Needed



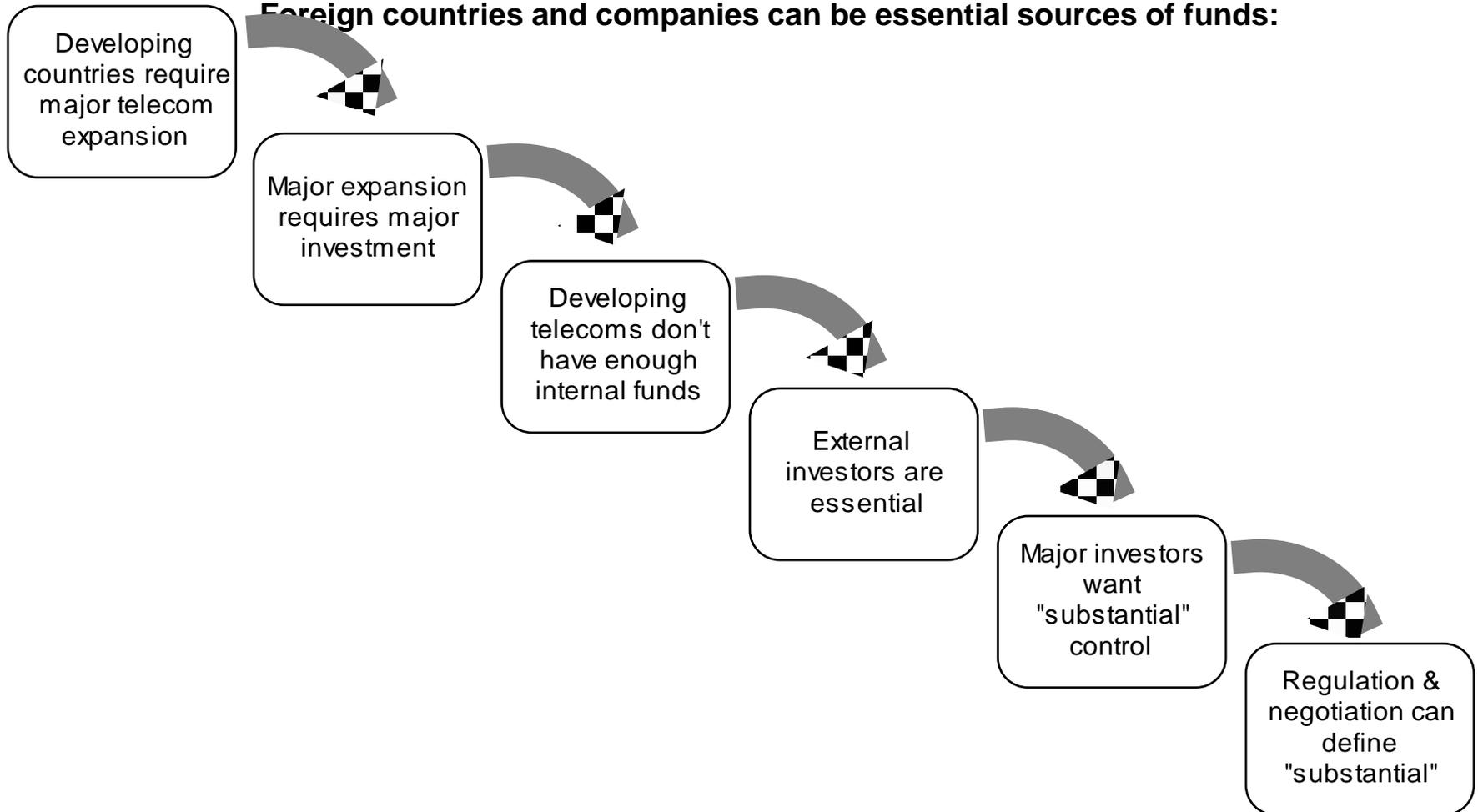
Source: ITU/BDT Telecommunication Indicator Database.



1992 GDP Per Capita

Arguments For Privatization/Restructuring (Continued)

Foreign countries and companies can be essential sources of funds:



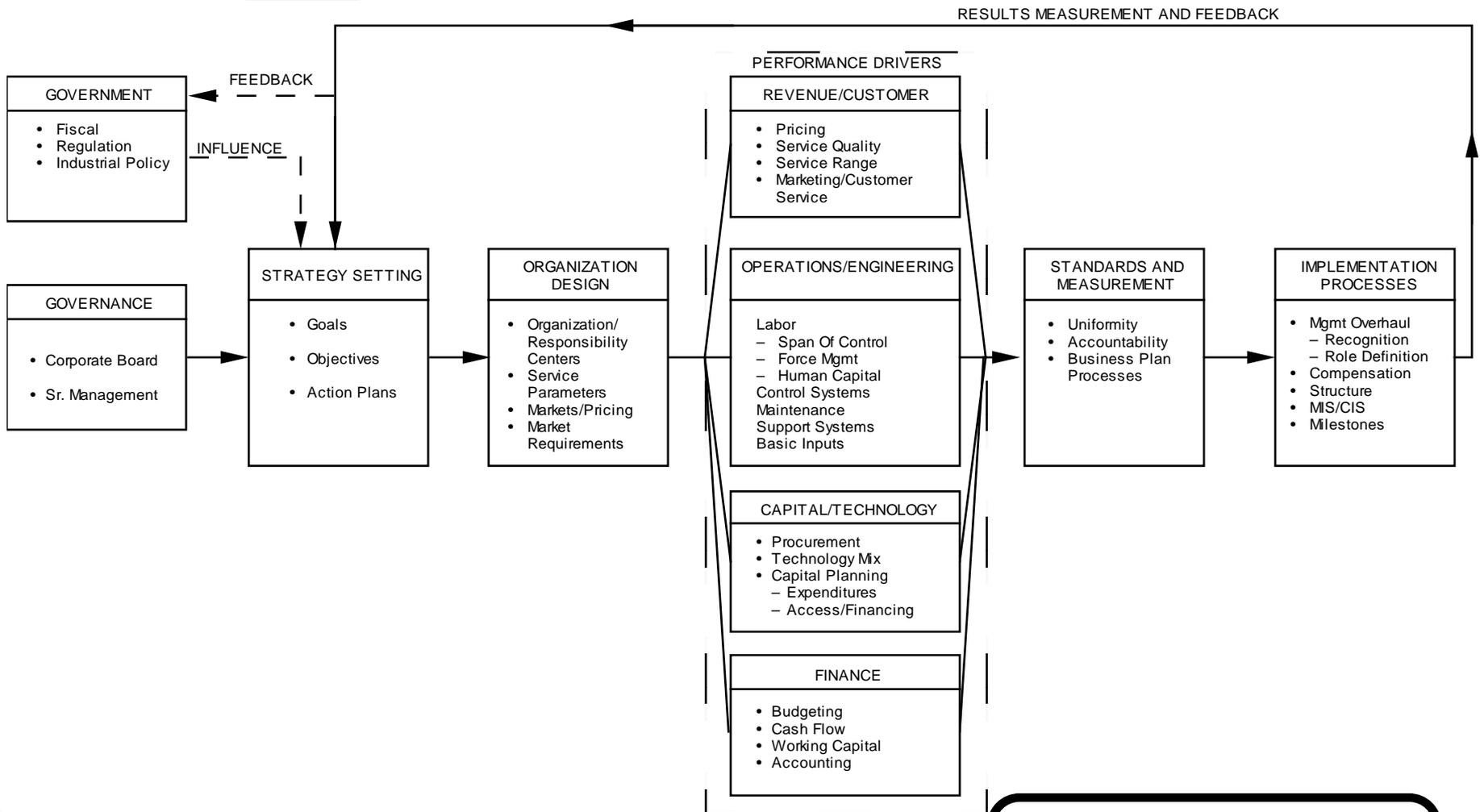
Arguments For Privatization/Restructuring

(continued)

- **Private owners will pay market rates, attract top talent**
- **A substantial private sector reduces government power in countries that are interested in reducing the size and influence of the government**
- **Other national security concerns, such as the amount of foreign involvement, can be addressed through regulation**
- **Concerns about technical standards and interoperability can be addressed through regulation**
- **Other public goals can be dealt with via regulation and specific contractual requirements with investors**

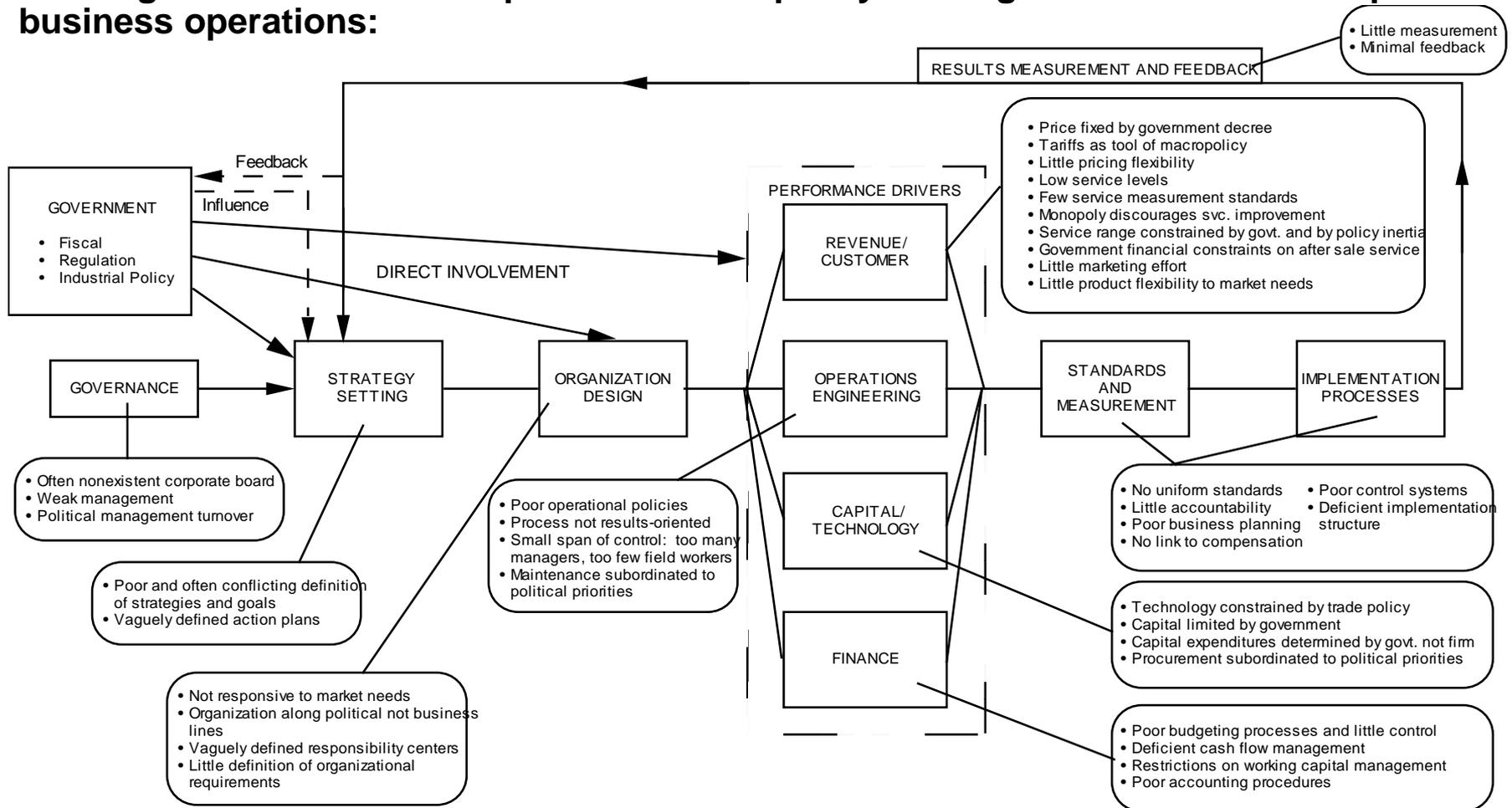
Arguments For Privatization/Restructuring (continued)

Well-managed private telecom firms follow a logical business management cycle:



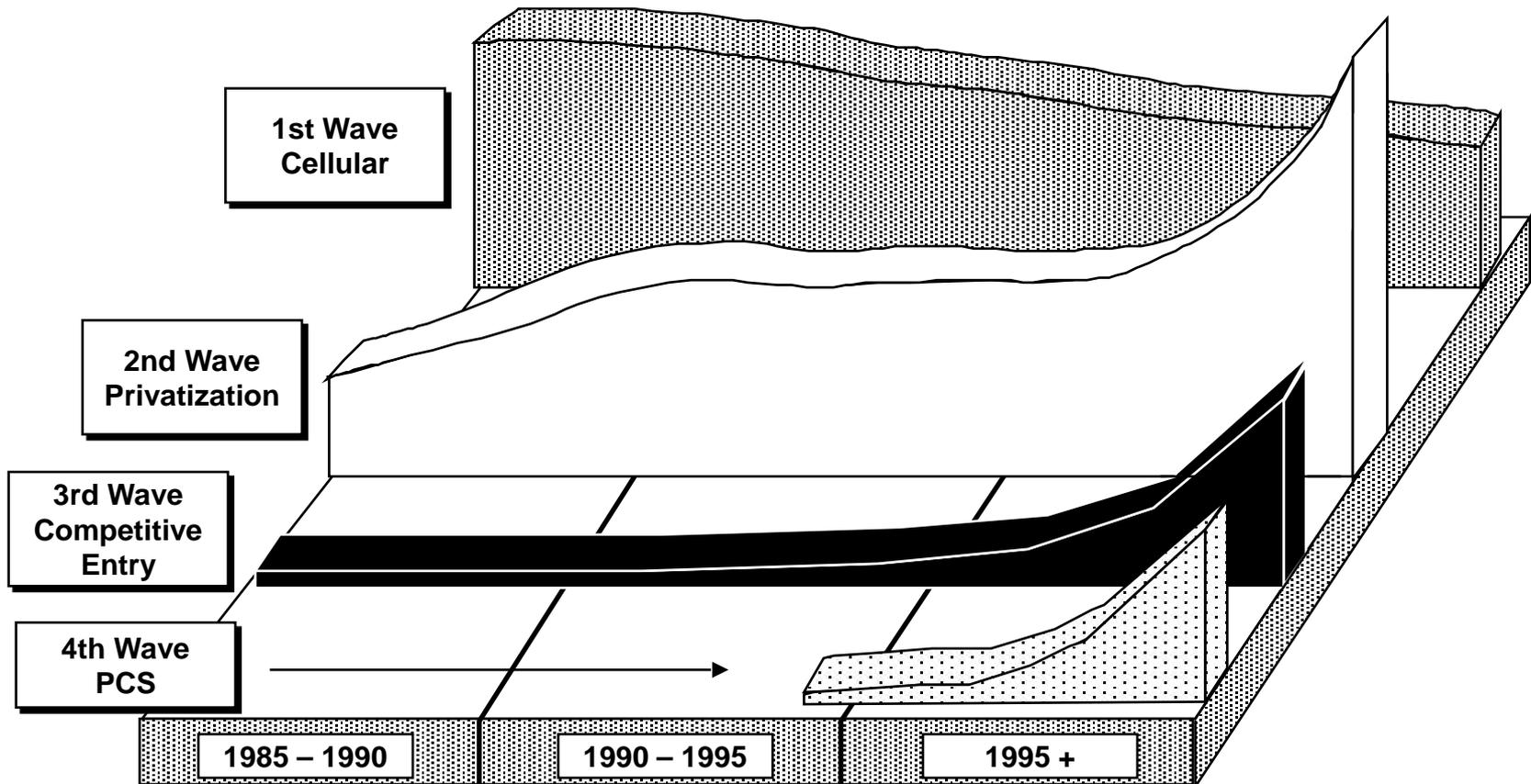
Arguments For Privatization/Restructuring (continued)

State agencies are more adept at matters of policy and regulations than of fast paced business operations:



The Stages of Privatization

Privatization Is One Wave of Four That Is Sweeping the World

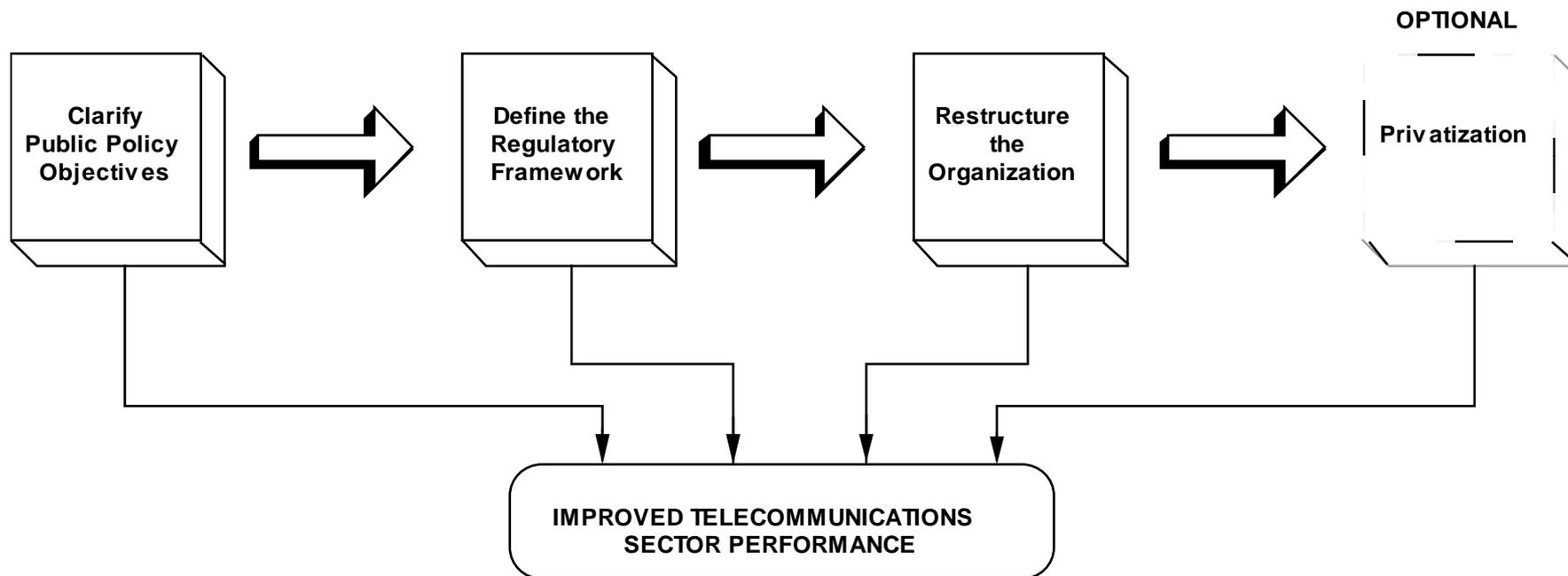


Source: Coopers & Lybrand; Booz-Allen Analysis

Booz·Allen & Hamilton

The Four Stages of Privatization

Assuming you want to restructure and/or privatize, need to disaggregate into 4 key stages:



Detailed Approach to 4 Stages

Key Point: **Redefining Regulatory Environment to Demonopolize** \neq **Restructuring** \neq **Privatization**

Any or all of the above can be done in almost any sequence:

POSSIBLE SEQUENCES

1. Restructure only

- Become more efficient and effective
- Invest in modern technology
- Respond to customer needs
- Introduce new services
- Change rapidly
- Improve skills and productivity

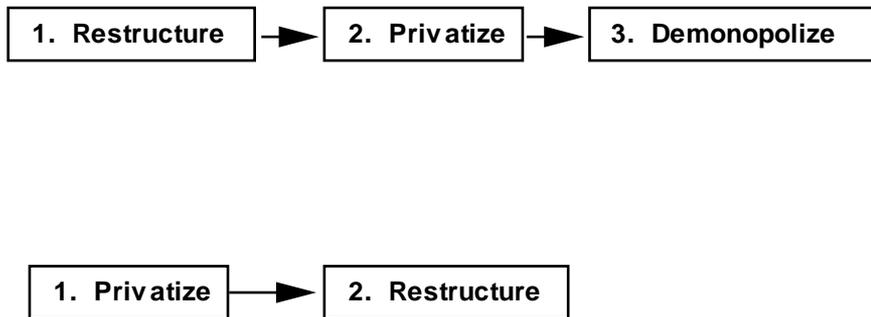
1. Restructure → 2. Privatize

- All of the above plus:
- Attract new capital
- Obtain external skills/technology transfer
- Avoid numerous competing demands for scarce government investment funds
- Allow more entrepreneurial management methods
- Maximize value via restructuring before privatizing
- Set stage for possible market entry

GOALS

Detailed Approach to 4 Stages (Continued)

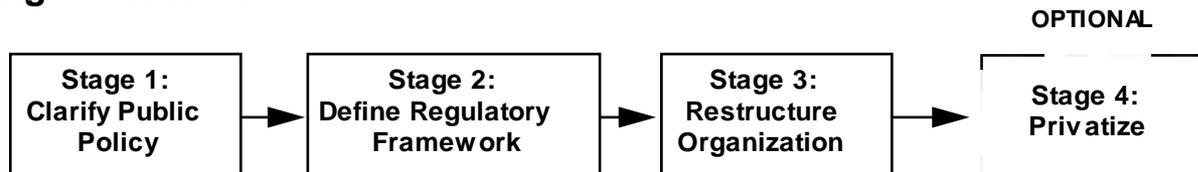
POSSIBLE SEQUENCES (cont.)



GOALS

- Increase competitive pressure on former monopoly to hold down costs and improve quality
- Attract entrepreneurs into sector
- Demonopolize last to allow regulatory framework time to be set up, bring relative stability to system in stage 2 before disruption in stage 3.
- Give rapid privatization "shock" to system in bad shape or with very bureaucratic management
- Rapidly bring in external talent
- Rapidly address imminent bankruptcy

Other sequences possible, we choose this one as most likely in Eastern Europe and most developing countries:



Detailed Approach: Stage 1

Clarify Policy Objectives

GOVERNMENT SHOULD IDENTIFY AND PRIORITIZE THE GOALS IT WISHES TO PURSUE THROUGH SECTORAL REFORM

- Expanded/universal service (or access)
- Prompt response to demand/service order
- Service quality improvement
- Development/introduction of new services
- Consequential user benefit/economic impact
- Access to capital/funding the network's technology upgrade
- Access to technology transfer
- Improved management performance through improved decision making and incentives
- Accelerated productivity gains/cost reduction
- Reduction in size of public sector
- Reduction of foreign debt
- Develop (not just preserve) the national telecom resource

TYPICAL
GOALS

Detailed Approach: Stage 1

Clarify Policy Objectives

(Continued)

GOVERNMENT MUST ALSO RESPOND AND EDUCATE PUBLIC ATTITUDES...

- **Toward government regulation**
- **Toward government ownership**
- **Toward privatization**
- **Toward payoffs and union concerns**

AND RESPOND TO ECONOMIC AND SOCIAL FACTORS:

- **Stage of economic development**
- **Sources of capital**
- **Demographic conditions**
- **Geographic factors**

Detailed Approach: Stage 2

Define Sector Framework

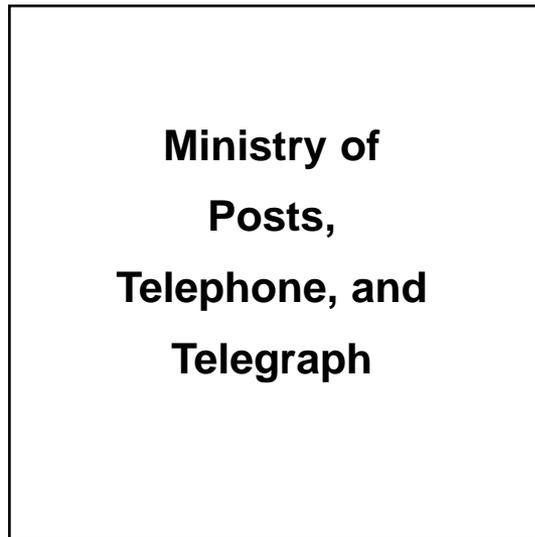
DEFINING THE SECTOR FRAMEWORK TYPICALLY INCLUDES THE FOLLOWING ELEMENTS:

- **Separate telecoms from post—why?**
- **Secure source of funding for regulatory body**
- **Separate telecom operational from regulatory activities**
- **Corporatize the telecoms organizations**

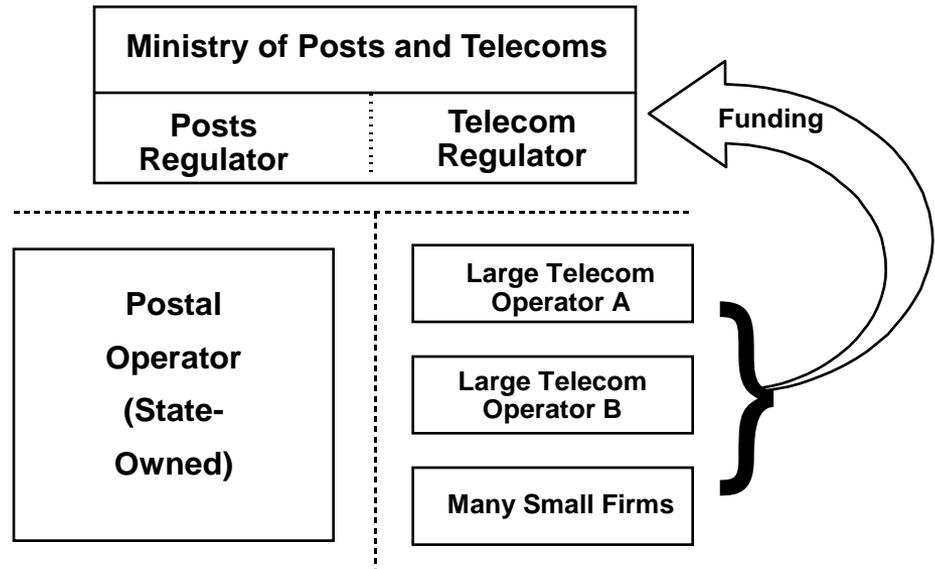
Detailed Approach: Stage 2 Define Sector Framework (Continued)

THE RESULT IS A DRAMATIC CHANGE IN THE “LOOK” OF THE SECTOR

OLD



NEW



Detailed Approach: Stage 2

Define Regulatory Framework/Industry Structure

DEFINE RELEVANT
SEGMENTS, E.G.



DEFINE CURRENT LEGAL
FRAMEWORK, E.G.



DEFINE OPTIONS FOR
FUTURE LEGAL
FRAMEWORK, E.G.



Local	Monopoly	Joint Venture
Long Distance	Monopoly	Limited Competition
International	Monopoly	Limited Competition
Cellular	Monopoly	Limited Competition
VAS	Open Competitive	Open Competitive
etc.	etc.	etc.

Detailed Approach: Stage 2

Define Regulatory Framework/Industry Structure

(Continued)

Sample Scenario 1
Current Industry
Structure in
Indonesia

Sector Segment				Legal Framework	Key Operators		Comments
Services	Public Network	Domestic	Local	Monopoly	PT Telkom		<ul style="list-style-type: none"> • Extensive cooperation through "revenue-share" in local network build • Cooperation in VSAT
			Long Distance	Monopoly	PT Telkom		
		International	Monopoly	PT Indosat			
	Special Networks	Cellular		Monopoly	PT Telkom		<ul style="list-style-type: none"> • Extensive cooperation through "revenue-share" in network build and marketing
	VAS	e.g., Managed Network Services		Monopoly	PT Telkom		
		e.g., EDI, E-mail		Open to full Competition	PT Indosat	Unclear	<ul style="list-style-type: none"> • Provided by PT Indosat on a domestic basis
	Private Networks			Allowed (data only)	Several eg: <ul style="list-style-type: none"> • Banks • Railways • Oil Company 		<ul style="list-style-type: none"> • Cannot resell capacity to other organizations
Equipment	Customer Premise Equipment			Open to full Competition	PT Telkom	Multiple Layers	<ul style="list-style-type: none"> • Several market brands but equipment still has to be installed by a third party

LEGEND	
	Government Owned
	Private Competitive

Detailed Approach: Stage 2

Define Regulatory Framework/Industry Structure

(Continued)

Sample Scenario 4 Industry Structure

Sector Segment				Legal Framework	Key Operators	
Services	Public Network	Domestic	Local	Regional Monopoly	JV 1	
			Long Distance	Limited Competition	PT Telkom	PT New
		International	Limited Competition (1)	PT Indosat		
	Special Networks	Cellular		Limited Competition	PT New	Private 1
	VAS	e.g., Managed Network Services		Open to full Competition		
		e.g., EDI, E-mail				
	Private Networks				Allowed (no resale)	Any Company (data only)
Equipment	Customer Premise Equipment			Open to full Competition	Remove barriers to fair competition	

LEGEND

Government Owned
 Minority (<49%) private stake in PT Telkom
 Private Competitive

Detailed Approach: Stage 2

Define Regulatory Framework/Industry Structure

(Continued)

YOU WILL PROBABLY HAVE TO PASS A LAW CREATING A NEW TELECOM CORPORATION:

- **Corporatizing and defining shares and ownership**
- **Providing for classes of shares**
- **Transferring assets and liabilities**
- **Defining status of new employees (non-civil servants)**
- **Powers of the company**
- **Privatization of the company allowed**
- **"Golden Share"**
- **Management contract permitted**
- **Dividends allowed**
- **Taxes to be paid**
- **Board of directors**
- **Repeal of old acts**

Detailed Approach: Stage 2

Define Regulatory Framework/Industry Structure

(Continued)

YOU WILL ALSO NEED A NEW LAW CREATING AN INDUSTRY STRUCTURE (COMPETITION POLICY) AND A REGULATORY BODY:

- **Define what services the monopoly(ies) cannot enter**
- **Give power to regulatory body to regulate the sector**
- **Define organizational structure of regulatory body**
- **Allow regulatory body to issue licenses, hear complaints, adjudicate interconnect problems, regulate tariffs**
- **Provide funding and staff for regulatory body**
- **Provide for penalties for violations**
- **Provide for national security/law enforcement concerns**
- **Repeal old acts**

Key Question: When to Introduce Competition?

- **South Africa - five year monopoly on local, long-distance and international, with an additional year if development targets are met**
- **Ghana - immediate licensing of a full service SNO**
- **Uganda - immediate licensing of a full service SNO**
- **Ivory Coast - seven year monopoly on local, long-distance and international**
- **Kenya - five year exclusivity on long distance and international - local service licenses proposed**

Detailed Approach: Stage 3

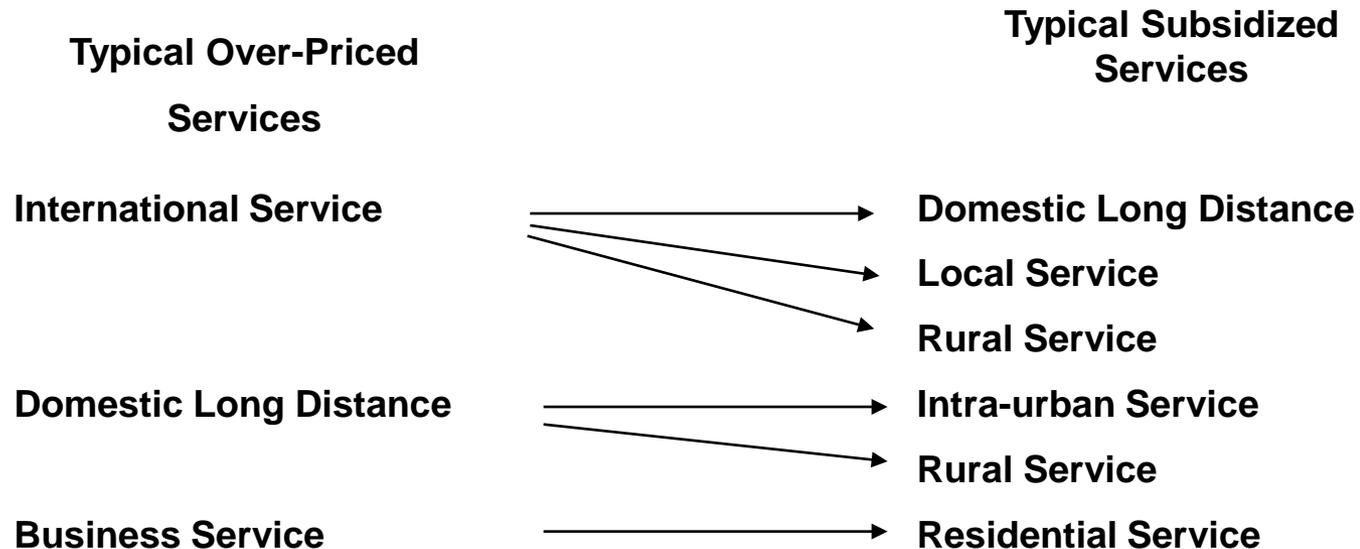
Restructure the Organization

IN PARALLEL WITH THE DEFINITION OF THE REGULATORY FRAMEWORK, POLICIES FOR RESTRUCTURING THE PTO SHOULD BE DEVELOPED

- **Improvement or organizational effectiveness through:**
 - **Better organization**
 - **Better decision-making processes**
 - **Accountability, performance measurements, and incentives**
 - **Better operating policies**
 - **Workflow streamlining**
- **Booz-Allen's experience (in Latin America and the U.S.) shows that large benefits are obtainable:**
 - **Cost**
 - **Service quality**
 - **Increased capacity expansion per unit of capital investment**
- **An effective restructuring program increases the possibility of successful privatization in terms of:**
 - **Value realized**
 - **Post-privatization performance**

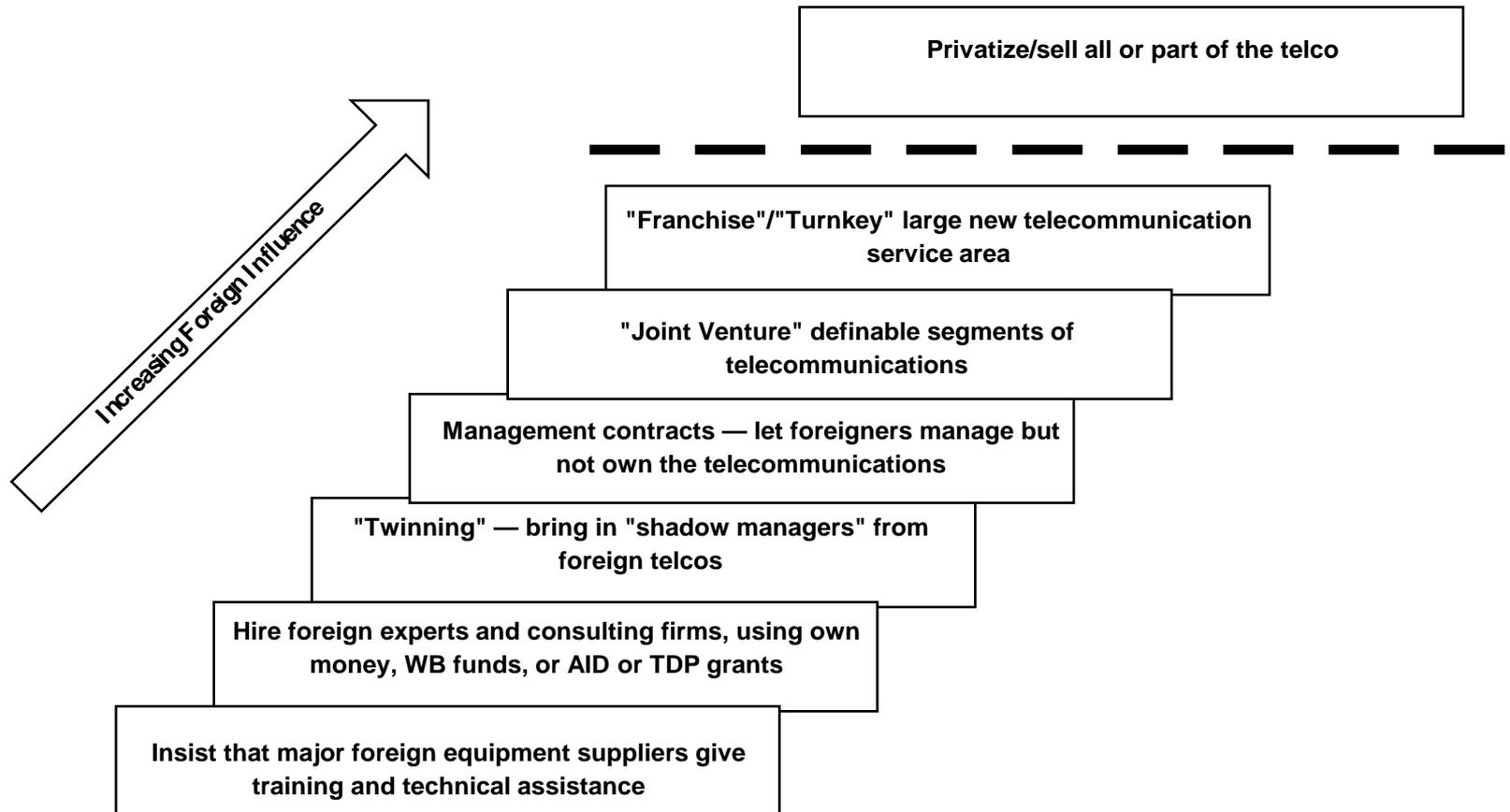
Detailed Approach: Stage 3 Restructure the Organization *(Continued)*

**TYPICAL CROSS-SUBSIDIES WILL NEED TO BE GRADUALLY ELIMINATED,
TO MOVE TO COST-BASED PRICING**



Detailed Approach: Stage 3 Restructure the Organization (Continued)

Restructuring can involve bringing in foreign expertise. This can be done without privatizing by:



Detailed Approach: Stage 4 Privatize

PRIVATIZATION INVOLVES FOUR STEPS:

- Design of transaction
- Definition of criteria for acceptable bids
- Valuation
- Transaction

Detailed Approach: Stage 4

Privatize

(Continued)

THE PRIVATIZATION TRANSACTION SHOULD BE DESIGNED TO SATISFY PREVIOUSLY DETERMINED SECTORAL AND POLITICAL GOALS

- **Specify ownership characteristics**
 - Foreign ownership shares
 - Domestic participation requirements
 - Other participation possibilities/requirements (e.g, banks, technology firms, foreign PTO operators, employees, management)
 - Nature and extent of property sold (franchise versus network and areas to be served) and timing
- **Specify any supervisory/regulatory/emergency powers to be retained by government**
- **Specify process and timeliness for privatization**
 - Nature and extent of property sold (franchise versus network) and areas to be serviced
 - Coordinated with regulatory revision and carrier restructuring
 - If franchise, clarify timing of concessions
 - Public vs. private placement

Detailed Approach: Stage 4 Privatization Options

Option	Characteristics
<ul style="list-style-type: none">• Strategic Sale• IPO (Domestic only, or Domestic and International)• Technical Service Agreement	<ul style="list-style-type: none">• Sell a stake to a strategic partner• Initial Public Offering on Domestic Stock Exchange• Award a contract based on a revenue share to a team from a telecommunications operating company to run Entity for a period of time
<ul style="list-style-type: none">• Business Level Strategic Sale	<ul style="list-style-type: none">• Partnership or sale of stake in individual businesses (eg mobile, payphones, data, value added services, international)
<ul style="list-style-type: none">• Equity Warehousing	<ul style="list-style-type: none">• Sale of shares to a large institutional investor, pending private sector involvement
<ul style="list-style-type: none">• Build Operate Transfer	<ul style="list-style-type: none">• Create a special purpose vehicle for a finite duration to build a certain number of lines on a specific revenue share basis

Detailed Approach: Stage 4

Privatize

(Continued)

CRITERIA FOR ACCEPTABLE BID FROM BUYER OR BUYER CONSORTIA MUST BE DEVELOPED

- **Buyer's financial strength**
- **Buyer's organizational stability**
- **Technology contribution that investor group may bring to carrier**
- **Experience with PTO operation, including advanced management practices with favorable results**
- **Other sources of management contribution**
- **Willingness to commit management effort, staff and expertise to privatized PTO**
- **Capital commitments to expand and upgrade network**
- **Price willing to pay for PTO**
- **How acquisition will be financed (e.g., how much, if any, debt leverage will be allowed)**

Detailed Approach: Stage 4

Privatize

(Continued)

VALUATION, A CRITICAL ELEMENT OF THE PRIVATIZATION, HAS BEEN APPROACHED IN MANY DIFFERENT WAYS IN PREVIOUS TELECOM PRIVATIZATIONS. A SOUND APPROACH COMBINES SYSTEMATIC ANALYSIS WITH AN EFFORT TO OPTIMIZE THE PTO'S MARKET VALUE WITHIN THE OVERALL FRAMEWORK OF SECTOR POLICY REFORM

- **Methods used have included:**
 - **Discounted Cash Flow (DCF) Net Present Value calculation derived from revenue and expense projections**
 - **Multiples of projected earnings**
 - **Multiples of projected cash flow**
 - **Replacement value of network assets**
 - **Comparables ("peer comparison") studies**
- **In practice, the level of valuation acceptable in the marketplace will depend on how successfully regulatory reform and PTO restructuring have been carried out. For example, price-cap regulation of rates should yield higher DCF valuation than rate-of-return regulation**
- **Policy makers must balance the potential social benefits of a pro-competitive telecom policy with the possible adverse effects on market value of the PTO. However, Japan (NTT) and UK (BT) experience suggest that a pro-competitive policy should not adversely affect financial prospects of market valuation of the established PTO.**

Detailed Approach: Stage 4

Privatize - How much is it worth?

(Continued)

Country	Company	Stake	Amount Paid
South Africa	Telkom SA	30%	US\$1,260 million
Ivory Coast	CI-Telcom	51%	US\$210 million
Ghana	Ghana Telecom	30%	US\$38 million
Guinea	Sotelgui	60%	US\$45 million
Senegal	Sonatel	33%	US\$140 million
Congo	SET	67%	US\$44 million

US\$

Country	EV / Line	EV / Pop PPP adj	EV / Revenue
South Africa	392	996	589
Ivory Coast	1,224	1,073	1,046
Ghana	926	392	1,799
Guinea	1,655	n/a	n/a
Senegal	1,448	1,171	1,273
Congo	795	481	424

Source: Rothschilds

Detailed Approach: Stage 4

Privatize

(Continued)

FINALLY, GOVERNMENT AND ITS ADVISERS ISSUE REQUESTS FOR BIDS AND UNDERTAKE A TRANSACTION

- **Identify potential buyers**
- **Define foreign ownership restrictions**
- **Time the bidding when there is no "glut" of telecommunication privatizations on world market, if possible**
- **Issue sale conditions and timing**
 - **Required financing arrangements (debt/equity, cash, debt, contingencies)**
 - **Define required commitments (e.g., to minimum future rate of capital investment by new owner)**
 - **Clarify deadlines**
 - **Clarify tariff structure, tax and repatriation environment that all bidders must assume**
- **Request bids**
- **Negotiate and conclude transaction**

Getting Help

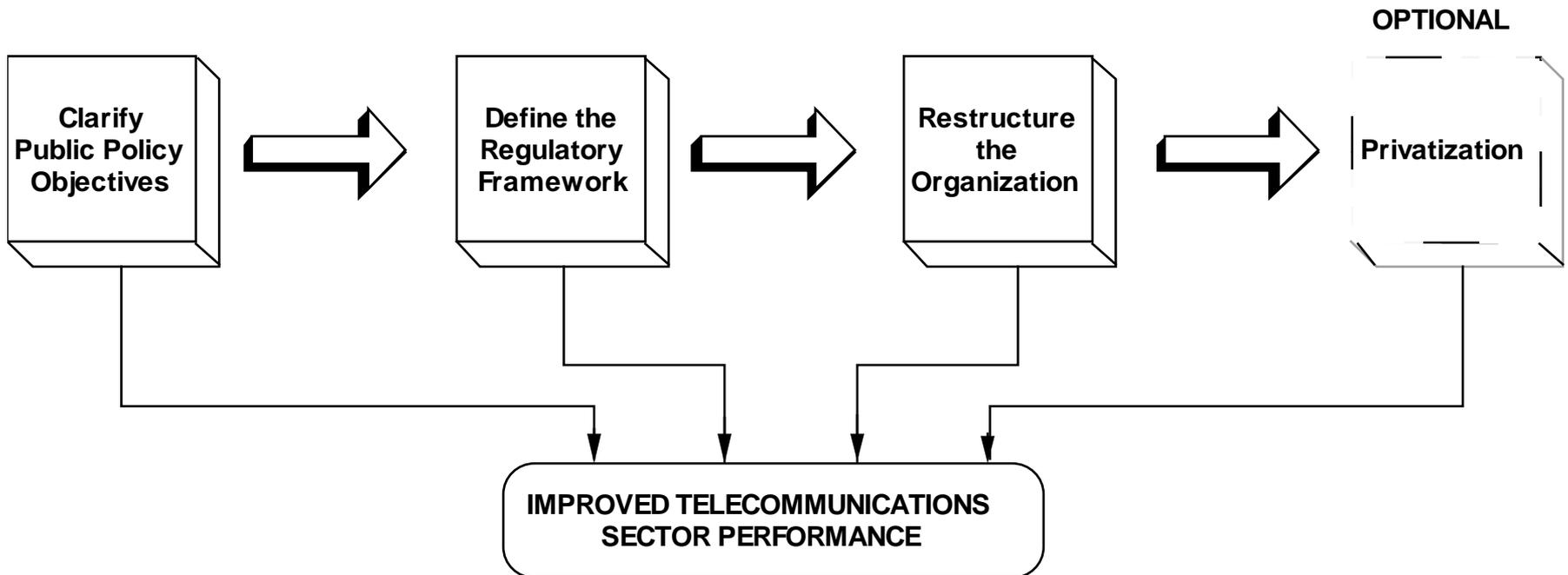
PROGRAM/TASK	ASSISTANCE NEEDED	POSSIBLE SOURCES OF FUNDS FOR ASSISTANCE
Legal/regulatory analysis	Law firm Technology consultants	US AID US TDP World Bank/EBRD/EC/ADB/AfDB Internal \$
Industry structure analysis	Technology consultants	US AID US TDP World Bank/EBRD/EC/ADB/AfDB Internal \$
Public relations campaign	PR firm	Internal \$
Labor relations campaign	Technology and human resource experts	Internal \$ World Bank/EBRD/EC/ADB/AfDB
Privatization transaction	Investment bankers Accounting firm	Success fee Internal \$
Valuation	Accounting firm Technology experts	Success fee Internal \$ World Bank/EBRD/EC/ADB/AfDB

Discussion on Telecom Privatization and Restructuring

- **Do you agree that restructuring is necessary? Must it precede privatization?**
- **What are the concerns about privatization?**
- **How could these concerns be addressed?**
- **What lessons have you learned from other countries' experience?**
- **What is the most radical privatization/restructuring/demonopolization scenario you can envision happening in your country and region over the next 5 years?**

Conclusion

- Privatization alone is not a panacea
- Organizational restructuring before privatization is recommended
- Use the four stage approach if this meets your public policy needs:



Annex A

Recent Strategic Sales

Information Provided by Rothschilds

