

4. Financial Management of Executing Agencies

4.1. Financial Management Overview

4.1.1. The primary objective of the financial management process is to optimize financial and economic benefits from an investment. Financial management comprises multiple processes, including financial accounting, management (and cost) accounting, assets accounting, cash and money markets accounting, financial reporting, internal controls, and internal audit, with external audit providing a report and opinion on the reported financial status and performance. Each of these processes, including financial management itself, should incorporate subprocesses and techniques, including management, forecasting, strategic planning, planning and budgeting, procurement, disbursements, control, and communications.

4.1.2. The objective of this part of the Guidelines is to assist a financial analyst to examine institutional and systems requirements and to prepare appropriate financial analyses. These are needed to support an investment from its inception through completion, and where necessary, through the life of the loan or credit. In addition, this part will also help the analyst define efficient forms of performance measurement for use in monitoring project implementation and obligations undertaken by a borrower.

4.1.3. The general objective of ADB appraisals of EAs and IAs is to ensure that they are technically, managerially, and financially capable of efficiently and effectively implementing proposed projects or programs. The specific appraisal objectives are to: (i) develop criteria on which to decide whether institutional capacity (in terms of financial management) is sufficient to justify loan approval, (ii) identify the institution's development needs (in terms of financial management)—both project related and long term—that should be addressed either as a project component or by Technical Assistance, and (iii) confirm that the financial management system is sustainable.

4.1.4. Together with the parts on Investment Projects, Reporting and Auditing, and Financial Institutions, this part is aimed at providing the financial analyst with a comprehensive view of financial management of projects, based on ADB's Operations Manual and related guidance documents. In addition to this introduction, Financial Management has three parts:

- 4.2 Institutions and Systems This part describes techniques for examining the various institutions and agencies of borrowers, particularly as they impact on the financial management of projects.
- 4.3 Financial Analysis This part describes forecasting and financial analysis in relation to executing agencies.
- 4.4 Measuring Performance This part is mainly applicable to the executing agencies of revenue-earning projects. It describes the financial performance measurements that can be used to assess the performance of the EA in achieving the financial objectives of the project.

4.1.5. Each of the financial management processes and techniques that these Guidelines describe must be tied directly to the physical components and operational elements of the investment project.

4.1.6.. ADB appraisal of borrowers, EAs, and/or PIUs is not usually necessary where the World Bank has already appraised these clients. In these cases, ADB accepts the World Bank certification unless there is fundamental disagreement, which must be justified with full reasons.

4.1.7. OM Section 32 (1997), ADB's Operational Missions, describes ADB mission types, procedures, and requirements. These missions all involve aspects of financial management, in particular: (i) Loan Inception Missions (para. 22), (ii) Loan Disbursement Missions (para. 24), (iii) Loan Review Missions (paras. 25–27), and (iv) Audit Review Missions (para. 10).

4.2. Institutions and Systems

4.2.1. Introduction to Institutions and Systems

4.2.1.1. The Operations Manual G2 sets out ADB policy with respect to the need for the examination of the EA's financial management systems at project preparation and appraisal. This is to form an assessment of the financial policies and the capacity of the

financial management systems practiced or proposed by the borrower or EA to support project implementation and operation.

4.2.1.2. The EAs should be capable of providing correct and timely information on the progress of project implementation and, where appropriate, on its operation. ADB has also to be assured that the expenditures incurred on a project will, in fact, be used for the purposes stated in the loan agreement.

4.2.1.3. The identification, preparation, and appraisal activities to be undertaken by a financial analyst prior to loan negotiations should be adequate to comply with the requirements of OM G2. Identification and preparation of an investment project require a financial analyst to obtain a detailed knowledge of the institutions and systems that are, or will be used, for implementation and, where appropriate, future operation. This task includes, among other things, acquiring the knowledge and ability to determine at, or before, appraisal and preparation of the RRP, whether the financial management system(s) proposed by the borrower and the EA will be sustainable from project start-up, through implementation and, where appropriate, for the operation of the project.

4.2.1.4. The financial analyst should make recommendations to the borrower and ADB on the minimum changes to be made in financial governance, including financial management, considered necessary to assure efficient and effective delivery of the proposed project from start-up. The financial analyst should define to the EA and ADB those elements of a financial management system that either should be put in place before start-up, or within a defined time after start-up. This is to enable the financial management system to operate at full efficiency. The elements identified may constitute components that are to be financed as part of the project, and completed in accordance with a timetable acceptable to ADB.

4.2.1.5. The financial analyst should advise ADB in all cases where, in their judgment, the level of financial governance proposed by the EA would be inadequate to sustain the proposed project or the financial viability of the entity, especially if no defined modifications are to be set in place either before start-up or within a reasonable period of time following start-up.

4.2.1.6. The objectives of preparing and appraising institutions and systems are as follows: (i) to assess the institution's capacities in regard to project implementation (in the case of project preparation) or in regard to performing its sectoral role (in the case of sector reviews); (ii) to understand the role and significance of an institution within the overall political, executive, and institutional/systems environment, including its likely capability and capacity to influence decisions that will be beneficial to its project

implementation; (iii) to ensure that the proposed project is likely to be acceptable at the highest decision-making (including political) levels; (iv) to ensure that it will be tailored to the technical and managerial capacities of the agencies; (v) to identify the specific institutional deficiencies regarding financial management that should be addressed prior to appraisal; (vi) to develop specific institutional strengthening measures with regards financial management; and (vii) to define to the EA the appropriate project management, implementation and, where appropriate, operational arrangements for the project.

4.2.1.7. The extent of a financial appraisal will depend upon the extent and type of dealings ADB has with the concerned EA, the EA's experience in implementing projects, and the extent and nature of previous institutional strengthening. An appraisal's scope, pertaining to financial management activities, should include: (i) analyzing the EAs' structure and management framework with regards financial management; (ii) assessing the agency's resources, including the number, quality, and technical capabilities of its staff, the extent of financial and budgetary support it obtains, the nature of technology, equipment, software in use; (iii) assessing the agency's operating results (preferably for a 5-year period) and identifying specific performance shortfalls or variances. After this, a diagnosis of performance shortfalls should be undertaken to identify specific institutional deficiencies and related institutional strengthening interventions. The institutional deficiencies should be classified into those pertaining to the management framework and those due to resource constraints.

4.2.2. Major Institutional Assessments

4.2.2.1. For longer term and more comprehensive institutional strengthening of financial management, a detailed examination, with recommendations for improvements should preferably be part of the periodic country/sector reviews normally undertaken by ADB, or as a discrete and independent exercise by itself undertaken at the request of the concerned agency/government.

4.2.2.2. Specific consultant TORs should be included for the appraisal of the concerned EAs' financial management arrangements. The consultants recruited must specialize in financial management. Their experience must relate to the operations of the agency concerned. Usually 2-3 person-months' time is sufficient to conduct an institutional assessment of financial management arrangements and recommend corrective actions if required.

4.2.3. Governance

4.2.3.1. ADB's governance policies are operationalized through OM C4. This OM was developed from ADB's *Governance: Sound Development Management*. It is recommended that this paper also be studied to appreciate the thrust of ADB's policy on Governance as set out in OM C4.

4.2.3.2. ADB regards questions of governance from the standpoint of their relation to the effectiveness with which development assistance is used, the impact of development programs and projects, and the absorptive capacity of borrowing DMCs. However, ADB's analytical framework for addressing governance issues draws a distinction between elements of good governance and the specific areas of action (e.g., public sector management), in which they could be promoted or their existence enhanced. Accordingly, ADB has identified the four basic elements of good governance: accountability, participation, predictability, and transparency.

4.2.3.3. A financial analyst, or any staff member or consultant engaged by ADB to define the financial management and analysis requirements of a project, the project's EA and any associated organizations must take into account ADB's policy on good governance. This would also include ADB's definitions and the approach to supporting its DMCs in achieving that goal through its operations. By defining the above key elements of good governance, and drawing attention to the linkages between these four elements, ADB makes clear that sound development management is critical for ensuring adequate returns and efficacy of the programs and projects it financed and that these should be used to underpin its good governance policy.

- OM C4 proposes that ADB will enhance **accountability** by focusing on public sector management, public enterprise management, public financial management, and civil service reform.
- Under **participation**, ADB will support involvement of beneficiaries and affected groups in development programs and projects, the development of closer interfaces between public and private sectors, decentralization of economic functions (particularly to local government units), and cooperation with NGOs.
- As regards **predictability**, ADB emphasizes enhancement of effective legal and regulatory regimes for economic development and capacity building of institutions responsible for the administration and enforcement of such laws and regulations including training of legal personnel.
- Disclosure of information, as stressed in OMC4, is the principal focus of ADB's support for **transparency**, ranging from national-level data (statistics, etc) to annual financial reporting by EAs.

4.2.3.4. While ADB intends to provide specialist support to advise on, and to assist in, project preparation and implementation for financial management-related components, it will remain the responsibility of each financial analyst to prepare, appraise, and supervise each element of the project. This should be done in a manner that is fully responsive to ADB's governance policy. While it is recognized that accurate information on transparency, in particular, may be limited or not available with respect to a proposed project in the early stages of design and development, the financial analyst should still encourage the EA and any PPTA consultants to ensure full disclosure of all institutional, systems, and financial management aspects by the time final documentation of the project is available for appraisal.

4.2.3.5. OM C4 and the policy paper are extensive in their scope, their proposed assistance and definitions, together with a forecast of ADB's commitments, to not only assist the DMCs, but also to ensure that ADB itself can be held equally responsible for upholding its governance tenets.

4.2.3.6. ADB's Policy Paper on Good Governance also stresses the need to be vigilant with respect to corruption and fraud. To further assist financial analysts and others concerned with corruption avoidance, the Knowledge Management section of the web-based Guidelines contains useful reference materials on anti-corruption.

4.2.4. Financial Management and Governance Arrangement

4.2.4.1. ADB's Operating Principles

4.2.4.1.1. ADB requires that a project be designed, developed, and operated (among other factors) within the framework of the financial policies, strategies, and systems prescribed by those institutions of the government concerned which are responsible for national and sectoral economic and financial planning.

4.2.4.1.2. The project should respond to a clearly defined objectives, including among others, sustainable economic goals, execution based on the least cost solution, time-bound delivery of benefits, and financial viability. ADB has a broad interpretation of financial viability in this context. It implies at an optimum, the ability of a project to replicate itself, to finance day-to-day operations and maintenance, and to service its debt. As a minimum, financial viability should represent the provision of adequate funds to finance day-to-day operations and maintenance. The provision may come from either the operations of the project and/or from government budgetary support. This will be sufficient to assure ADB that a partial revenue-earning or a nonrevenue-earning investment will generate the target levels of economic benefits throughout its working life.

Exceptions to the Foregoing

4.2.4.1.3.. Circumstances may exist at fact-finding of a project where the prescribed financial policies, strategies and systems of the governments concerned in part, or as a whole, may contain defects not acceptable to ADB and which may affect the design and execution of the project. In such conditions, the design of the project should formulate means of eliminating these defects in the financial policies, strategies, and systems of the government concerned to enable the financial analyst to confirm at appraisal that the EA's financial management systems will be sustainable.

4.2.4.1.4. This means that the financial policies, strategies, and systems of the government must be adequate to underpin the EA's financial management systems, and will support the project and the EA from project start-up, through implementation and, where appropriate, during the operation of the project.

4.2.4.1.5. The project should include as covenants in the legal agreements, steps to be undertaken by the government in applying policies, strategies, and systems acceptable to ADB. These steps should support the project from the start of implementation through its working life. Also, policy dialogue should be conducted to remove concerns or unacceptable policies and practices.

4.2.4.2. Sector Financial Specialist's Responsibilities

4.2.4.2.1.. The sector financial specialist has to obtain sufficient information to assure ADB during fact-finding and by appraisal that a project will be developed and operated within a framework of government financial policies, strategies, and systems. And they should be assured that said framework is fully aligned with ADB's policy.

4.2.4.2.2. ADB typically uses various covenants in loan agreements, including financial performance covenants, to reinforce these assurances.

4.2.4.2.3. Following project inception, the sector financial specialist is required to continually assure ADB management that the above framework will facilitate the accomplishment of project targets.

4.2.4.2.4. The sector financial specialist should also draw the management's attention to any change, which has occurred, or could occur, in financial policies or strategies or systems, (including failure to comply with financial covenants) which could reduce project effectiveness.

4.2.4.3. Executing Agency

4.2.4.3.1. A project may be designed and/or implemented by an EA, which acts solely as a vehicle for its development, prior to its transfer on completion to an operating agency.

4.2.4.3.2. More frequently, particularly in the case of semi-autonomous public sector enterprises, the agency is the project executing and operating agency, and is typically referred as the EA in ADB documentation.

4.2.4.3.3. EAs typically have, as their primary objective, the timely delivery of an operational project, with parallel objectives of economizing and effectively using human, physical and financial resources.

4.2.4.3.4. Operating agencies' objectives should center on efficient operation by the effective use of such resources to achieve economic objectives with capabilities to: (i) adjust inputs and outputs to respond to changing objectives, and (ii) constantly measure the impact and use of inputs and outputs.

4.2.4.3.5. A public sector enterprise, as a project executing and operating agency, combines the two roles above, and embraces all the objectives, normally with better opportunities to adjust project development to meet changing operating objectives as implementation proceeds.

4.2.4.3.6. Identification and confirmation of the objectives of the project and those of the implementing and operating agency, and the proposed and/or actual means of achieving them, are the key tasks of the financial analyst.

4.2.4.3.7. While financial aspects of these matters should attract the financial analyst's principal attention, they must be intellectually aware of, and be capable of responding to other factors. These may be related economic and technical objectives, techniques of design and implementation, and the operation of the project, together with the impact of any related, ongoing facilities and activities with which the project will be linked.

4.2.4.3.8. These may include parallel investments in the same or other sectors that are to be appropriately linked to achieve common economic objectives. For example, the construction of water supply and sewerage facilities by different EAs, or by the same agency drawing on differing sources of funding, should have common economic, financial, and environmental objectives. These should primarily be related to achieving appropriate standards of public health, including in particular recognition of the financial impact which good health has upon the earning capacity of the population concerned.

4.2.4.4. Financial Policies and Strategies for Projects and Executing Agencies

4.2.4.4.1. Majority of ADB's operations is in the public sector. Therefore, project EAs and the projects that they design and implement must conform not only to their own policies, (where these are acceptable to ADB) and to their prescribed systems, but also to the various economic, technical, and financial policies and strategies of their superior authorities or controlling bodies. This also applies, almost without exception, to semi-autonomous public sector enterprises.

4.2.4.4.2. An example of an exception could be a development bank (an FI) that is incorporated as a public company with the government having 51% nominal financial interest. It's an exception since it has its own Articles of Incorporation which allows it to adopt its own policies, strategies and systems, and be managed by a Board on which the government is either not represented or is represented in a minority position only.

4.2.4.4.3. Government structures vary widely. Therefore, it follows that a wide range of superior or controlling authorities of EAs exist. Therefore, the financial analyst must obtain a detailed working knowledge of such authorities' financial policies and strategies, as well as of their financial systems of budgeting, allocations, allotments, and accounting.

4.2.4.4.4. The example below states a case where government may be encouraged to review its financial policy with regard to a particular enterprise. A result of the financial analyst's examination of the financial policy in detail recognizes that the public sector enterprise could, in fact, be strengthened by increasing its self-financing ratio, and by the government withdrawing some of its financial support over time.

Example of Policy Adjustments to Improve Opportunities for Market Participation

In an Asian Development Fund (ADF) recipient country, the Government sought the assistance of the Asian Development Bank (ADB) to finance part of the cost of a project to be executed by an enterprise intended by the government to become involved in open-market trading, particularly the capital market.

The government traditionally has lent ADF funds at about 1% under market rates, and provides from its own resources (revenues or loans) about 15% of the capital resources needed, leaving the entity to provide the remaining 5% from its own resources.

The debt-equity ratio of the entity is weak at 78:22, and examination reveals that only 4% of the total capital structure has been self-financed by the enterprise in recent years. Furthermore, in the past 2 years, the government has been increasingly unable to meet its commitments to finance its share of projects as agreed with ADB, and therefore its commitment to this proposed project is insecure.

4.2.4.4.5. At fact-finding, the financial analyst and the project officer should discuss overall financial planning with the enterprise, the sector and key economic and finance ministry officials. Focus should be made on the need to immediately improve the enterprise's debt-equity ratio, particularly if it is to start market operations in the near future.

4.2.4.4.6.. Upon advising the government to adjust the cash-based self-financing ratio over the maximum of a 2-3-year period to about 20%, the enterprise should automatically commence a program of reforming its debt-equity ratio by providing self-generated contributions. As such, the government will then be relieved from making any input after about three years.

4.2.4.4.7. The analyst should seek commitments from the government and the enterprise that the self-financing ratio will be increased for this and future projects, (whether financed by ADB or not). This is to bring the debt-equity ratio, closer to 60:40 by the end of project implementation. At that level, the enterprise is likely to have substantially greater opportunities of participating in the capital markets as the new project comes on line.

4.2.4.4.8. As a result of the financial analyst's methodical scrutiny of the institutional structures, unforeseen issues and problems are revealed, therefore preventing future hindrance in implementation and operations. The working knowledge gained by the analyst in the review of the policies and strategies, and their effectiveness would be essential in the following stages.

4.2.4.4.9. It must be ascertained during appraisal that the institutional and financial management systems of the EAs are capable of implementing the strategy. This would include assuring the sustainability of the financial management systems from start-up.

4.2.4.4.10. The financial analyst must be able to specify the nature and form of the analysis to be prepared by the EA. This should be in a manner that will enable the analyst to determine whether the financial objectives of all involved are credible. They should also be able to identify factors to which the proposed implementation and operations may prove financially sensitive.

4.2.5. Country Diagnostic Studies of Accounting and Auditing

4.2.5.1. To assist its DMCs to introduce and operate the most effective financial management systems, ADB may from time to time, undertake a Country Diagnostic Study of Accounting and Auditing (DSAA) in collaboration with the host government.

4.2.5.2. Each DSAA is designed to address and understand the financial management characteristics and issues of a country. Experienced ADB staff and/or consultants will conduct the study and a draft of the results will be shared with the government prior to publication of the final document. A DSAA supports the achievement of ADB's country accountability and financial management objectives including:

- fiduciary responsibilities, by identifying the strengths and weakness of institutional accountability in the public and private sectors and the risks that these may pose to the use of ADB funds; and
- development objectives, by facilitating a common understanding of the country's financial management arrangements in the public and private sectors by the borrower, EAs, and ADB and any involved development partners, thus facilitating the design and implementation of capacity-building programs.

4.2.5.3. ADB may from time-to-time participate with the World Bank to conduct joint studies for a country. The Terms of Reference (TORs) may be common or provided separately by each organization to its staff and/or consultants, as appropriate.

As of 2004, DSAs have been completed for:

- Azerbaijan
- Cambodia
- China, People's Republic of
- Fiji Islands
- Indonesia
- Kyrgyz Republic
- Marshall Islands
- Mongolia
- Pakistan
- Papua New Guinea
- Philippines
- Sri Lanka
- Uzbekistan
- Viet Nam

During 2005, DSAA Kazakhstan is being conducted.

During 2004–2005, the following DSAs are being updated:

- China, People's Republic of
- Mongolia
- Uzbekistan

4.2.5.4. These studies can be accessed at

http://www.adb.org/Documents/Books/Diagnostic_Study_Accounting_Auditing/default.asp

4.2.6. Executing Agencies

4.2.6.1. Introduction

4.2.6.1.1. ADB categorizes EAs as forms of organization that may undertake any combination of the following activities in the public and private sectors: (i) design of a project; (ii) implementation of a project; or (iii) operation of a project.

4.2.6.1.2. An efficient EA is critical to the success of implementing and, in many cases, operating a project. Therefore, it is essential that the management of an EA and its superior management (for example, a ministry or government department), be fully informed of ADB's objectives and requirements for project implementation and operation.

4.2.6.1.3. Equally important, ADB staff are required to ensure that the objectives, policies, strategies, and management of an EA are completely aligned with ADB's policies and strategies for a project before recommending its processing to loan negotiations.

4.2.6.1.4. EAs are broadly classified into the following three types:

- public sector agencies, which include country/government technical line agencies and state/provincial arms of such technical agencies, and local governments;
- statutory bodies, public sector enterprises, or government-owned bodies such as agricultural and industrial credit banks, fertilizer corporations, and the like; and
- private sector organizations like commercial banks; public utilities; oil, gas and minerals companies; telecommunications; farmers' entities and associations; etc.

4.2.6.1.5. EAs are also classified as revenue-earning and nonrevenue-earning. The term revenue-earning encompasses EAs and projects to be implemented and/or operated by it, which are commercially oriented enterprises whether in the private or public sector. Revenue-earning would also cover public sector institutions, which generate substantial revenues either by consumer charges, or forms of sector-specific local taxation (property tax-based levies for water supplies, drainage, etc.), or both. Examples are public sector enterprises, commercial and industrial enterprises, public utilities, telecommunications, industrial and agricultural credit banks, parastatal, and municipal government utility operations.

4.2.6.1.6. Nonrevenue-earning projects are usually implemented and operated by public sector EAs whose financial support derives predominantly from central, provincial, state, and/or local government budget allocations, and for whom there may be no cost or only partial cost recovery, often accomplished indirectly.

4.2.6.1.7. Nonrevenue-earning EAs include the above forms of governments' ministries and departments, and project EAs under their control in such sectors as poverty alleviation, agriculture, education, highways, population, and health. An EA may have a tiered management in the form of a Project Management Unit (PMU), with the latter having one or more Project Implementing Units (PIUs). In such cases, the EA is responsible to the borrower and ADB for the successful implementation of the project, including delivery of all financial reports and auditors' reports and opinions in accordance with agreed timetables.

4.2.6.1.8. A principal concern of ADB is the efficiency of the financial management and accounting systems of EAs, as an integral part of project preparation, appraisal and implementation, and supervision. This concern is extended to the efficient operation of the elements of the government agency charged with project implementation, even in cases where project objectives initially do not include the improvement of the agency's financial and/or management performance.

4.2.6.1.9. Some projects may have as the sole or primary objective the improvement of the operation of a government ministry (for example, a Ministry of Finance), a department or an agency, or of a segment of the economy, such as the capital markets. Such projects are normally classified as nonrevenue-earning, even though the reforms may impact significantly on revenue-earning performance of the economy.

4.2.6.1.10. Enterprises (as compared with nonrevenue-earning EAs), as project implementing and operating agencies, combine the two roles above, and embrace all the objectives, normally with better opportunities as implementation proceeds.

4.2.6.2. *Determining the Status and Roles of EAs*

4.2.6.2.1. An EA is likely to be subject to regulation by laws, regulations, and rules that are administered by superior authorities, typically ministries or departments.

4.2.6.2.2. Departments in particular, that have forms of control over EAs, may themselves be agencies of state or provincial governments that are also the subjects of superior central administrations.

4.2.6.2.3. Therefore, extent of an EA's autonomy and/or control by superior authorities at all levels of a national government's hierarchy should be established. This in order to determine its authority and ability to formulate and implement financial policy, and to design and install financial management systems, (and thereby indirectly to determine how much time may be needed for making changes).

4.2.6.2.4. To resolve these concerns, answers should be sought to the following questions:

- Is the EA fully autonomous (for example, can it legally exist in its own right by the laws of the country without government control)?
- Can it contract, and sue and be sued in its own name?
- Can it determine its own financial policies?
- Is it government-controlled? If so, what is the extent of that controls and influence on financial policies and accounting requirements?
- Is there a specified national code or chart of accounts?
- Is it a government agency? If so, does the EA's management have any powers to decide financial policy, determine its own accounting systems and financial management rules, or does government prescribe these? For example, there could be separate accounting rules for public sector enterprises.
- Is the project to be executed by a part only of an EA?
- Is it necessary or desirable to require a separation of accounts and/or funds for that part of the EA only, and would such a step be feasible?

4.2.6.2.5. It is possible that an EA may not have a definitive view of related governance, particularly the actual superior levels of control. In such circumstances, it may be prudent to seek the advice of the government auditor.

4.2.6.2.6. Government auditors are often well informed on national legislation and of the powers and duties of the agencies for which they have the responsibility for auditing.

4.2.6.3. *Appraising an Executing Agency*

Introduction

4.2.6.3.1. This section covers the following areas:

- Overall Objectives,
- Appraisal Methodology,
- Designing the Institution Development Proposal,
- Types of Institution Development Interventions,
- Costing of the Institutional Strengthening,
- Implementation Strategies, and
- Risks.

Overall Objectives

4.2.6.3.2. The overall objective of appraising an EA is for ADB to satisfy itself that the concerned agency does in fact have the technical, managerial, and financial capacity to implement the proposed project or program efficiently and effectively. An appraisal's specific objectives, from the financial management perspective, are to:

- Develop criteria on which to decide whether to postpone loan approval until financial management arrangements are strengthened appropriately.
- Assist in identifying the institution's specific development needs (in terms of financial management), both project-related as well as long-term, that are to be addressed either as a project component or as an independent TA.
- Assist in arriving at appropriate project organization management and coordination arrangements, with regards financial management and reporting.

4.2.6.3.3. The appraisal of EAs for purposes of project planning should take place during project feasibility studies. For longer term and more comprehensive institutional strengthening, the appraisal should preferably be part of periodic sector reviews normally undertaken by ADB or a discrete and independent exercise by itself undertaken at the request of the concerned agency/government. Include specific TOR for consultants for the appraisal of the concerned EAs during project feasibility studies for project-related purposes or during sector reviews for any independent assistance planned for institutional strengthening. Consultants should be from the specializations of institutional development and the technical expertise related to the operations of the agency concerned.

Appraisal Methodology

4.2.6.3.4. An agency's capacity to achieve results mainly depends on: (i) its structural and managerial ability to effectively and efficiently employ its resources; and (ii) the extent of resources mobilized in the form of financial budgets, the number and quality of staff, and the extent and type of materials and equipment. In relation to financial management, the appraisal and assessment of EAs should comprise the following four steps:

4.2.6.3.5. **Step 1:** Analyze the EA's Structural and Management Framework:

- Examine the organization's structure with regards financial management. This will include an analysis of how functions are distributed and distinguished, how roles, responsibilities, and authorities are delineated and apportioned both vertically and

horizontally, what are the key lines of command etc. Also included should be an analysis of links with collaborating agencies also operating in the sector concerned.

- Examine the agency's main administrative and management systems and procedures, in relation to financial management. These should include operational planning and programming systems, financial management and budgetary processes, and management information and monitoring systems.

4.2.6.3.6. **Step 2:** Assess Institutional Resources (Inputs)

- Assess the number, qualifications, and experience of financial management staff at all key levels.
- Assess for all relevant periods, the extent of financial support available in terms of investment budgets and operating budgets. These should be described by major items, as well as by allocations made to various operational units, both functional as well as geographical.
- Assess the adequacy of agency accounting information systems.

4.2.6.3.7. **Step 3:** Assess Institutional Results (Outputs)

- Develop agency consolidated financial statements (against budgets) for each functional area, for relevant operating periods, and for geographical agency units (if these exist).
- Also develop consolidated financial statements for past operating periods (including growth trends, if possible) and compare these against similar agencies (comparator agencies may be similar agencies in other countries where the sociopolitical environment, the cultural context, and the geographical dimensions of operation are similar).
- Identify financial performance shortfalls or variances by comparing current performance with targeted performance, past performance-growth trends and, if feasible, with the performance of comparator organizations.

4.2.6.3.8. **Step 4:** Analyze Performance Shortfalls

- Develop a diagnostic analysis of linkages between identified financial performance shortfalls/variances and deficiencies in the agency's resource availability and management framework. This should be done in collaboration with the agency's top management. These analytical findings should be agreed with the agency's management.

- Together with the agency's management, develop alternative institution-building interventions, with regards financial management arrangements. These should be prioritized and based on an alternatives-analysis, using criteria such as cost, envisioned scope of impact, degree of risk, ease of implementation, etc.

Design the Institution Development Proposal

4.2.6.3.9. Types of Institution Development Interventions, with regards financial management:

- When planning and designing institution development proposals (based upon project preparation), staff should keep in mind that institutional strengthening can be targeted at resource enhancement or management upgrading or both, depending on the needs identified. As a general rule, resource enhancement should be resorted to first, if this option is available, since this can be achieved more easily and quickly.
- The caveat, however, is that resource enhancement is normally only a short-term solution to institutional deficiencies and should preferably be supported by more basic institutional changes or upgrading. Changes in or upgrading of policies, strategies, structures, administrative and management systems, etc. are far more difficult to achieve, require strong institutional support and commitment, and consequently a more extended time frame. On the other hand, they have a more lasting and permanent impact on institutional efficiency and effectiveness.

4.2.6.3.10. A general checklist of the types of institutional strengthening that may be focused upon in an institution-building proposal is given below.

- Resource Enhancement
 - Staffing: enhance staff availability, reallocate staff resources, upgrade staff skills (training);
 - Budgets: enhance operating budgets, reallocate funds by item; and
 - Technology: enhance availability of equipment and materials, improve quality of equipment, introduce new types of software.
- Management Upgrading
 - Policies and Strategies: review, revise, change priorities, adjust funding allocations, adjust strategic emphasis, build research and analytic capability, enhance "market" or "sector" information system, etc.;

- Organization Structure: change and reassign roles and responsibilities change lines of authority, revise position descriptions and position hierarchies, establish task groups, create coordination mechanisms, strengthen linkages with collaborating agencies, etc.;
- Administrative and Management Systems and Procedures: revise, upgrade, simplify, reorient basic systems and procedures such as: planning and programming, financial management, operations monitoring, information feedback, personnel management and compensation, incentive systems, etc.; and
- Leadership Style: revise methods of communication, methods of involving staff at all levels, build openness and willingness to innovate, etc.

Costing Institutional Strengthening

4.2.6.3.11. If part of a project, the institution strengthening measures should preferably be consolidated into a discrete component to facilitate project administration. The costs relating to such a component would usually include (i) consultant services; (ii) civil works (e.g., training center), equipment; (iii) training expenses; and (iv) administration overheads (e.g., for the training center). Some of these costs could be recurrent costs that will continue to be incurred even after project/TA completion.

4.2.6.3.12. In such a case careful consideration should be given to whether ADB should fund such costs during project/TA implementation: if so, to what extent; and does the government have the capacity to meet such recurrent costs after project/TA completion. Given ADB's tight TA budget, the availability of cofinancing or funding from other donors should be examined.

Implementation Strategies

4.2.6.3.13. Implementation strategies will necessarily depend on the type of institution development interventions planned. However, staff should bear in mind the following when planning and scheduling the implementation of institution development interventions with the agency concerned.

- Institutional strengthening measures, especially those which relate to the upgrading of the management framework, have to be implemented in a gradual and phased manner. Like a person, an institution takes time to learn, adopt, and adjust to new and revised forms of behavior.
- Experience has indicated that it is very useful to make use of implementation workshops. These are carefully structured discussion sessions of small groups of

concerned institutional staff held periodically. Their primary objectives would be as follows: (i) creating awareness and recognition of the need to change, revise, and upgrade; and developing the commitment to do something about it; (ii) action planning to ensure the active involvement of all concerned and to facilitate briefing of what is required; and (iii) reviewing implementation to assess progress and impact, and to accordingly adjust the direction, focus, schedule, etc. of the institutional strengthening program.

Risks

4.2.6.3.14. Some of the major risks that should be taken into account when planning institutional strengthening measures (in relation to financial management arrangements) are as follows:

- In the case of resource enhancement, do not create dependency.
- In the case of management upgrading, do not create disorientation by introducing too many changes too quickly.
- Do not overlap or conflict with already ongoing institutional strengthening initiatives.

4.2.6.3.15. Institutional strengthening programs should also always be proposed and undertaken by ADB with caution, care, and a great deal of responsibility. This is because the longer-term risk potential with institution-building programs is usually greater than those related to the transfer of capital and investments. Furthermore, these types of program can create dependency or result in the transfer of inappropriate technology.

4.2.6.3.16. If not done in a circumspect and phased manner, attempts to revise or upgrade the management framework can create serious institutional disorientation, especially if prior commitment at all levels has not been ensured for the changes being implemented.

4.2.6.3.17. External financing agencies tend to view “their” project as the most critical. Consequently, institution-building activities can be implemented in a parallel rather than a complementary manner. This usually confuses, rather than assists, the institution concerned. In the longer term, the results of a misguided institution-building program can consequently be quite the opposite than what was originally envisaged. It is, therefore, always necessary and essential to proceed cautiously and with an action-learning format that is structured to include phasing, review, and consequent program readjustments in an ongoing cyclical process.

4.2.6.3.18. The extent of an appraisal will depend upon the extent and type of dealings ADB has with the EAs concerned, the experience of the EA in implementing projects and the extent and scope of institutional strengthening previously undertaken by ADB or other external financing agencies.

4.2.7. Project Objectives

4.2.7.1. A project should respond to clearly defined objectives, including, among others, sustainable economic goals; financial objectives; achievement based on the least cost solution; time-bound delivery of benefits; and financial viability.

4.2.7.2. ADB has a broad interpretation of financial viability in the context of project design and development. It implies at an optimum, the ability of a project to replicate itself, to finance day-to-day operations and maintenance, and to service its debt. As a minimum, financial viability should represent the provision of adequate funds to finance day-to-day operations and maintenance. The provision may come from either the operations of the project itself and/or from government budgetary support. This will be sufficient to assure ADB that a partial revenue-earning or a nonrevenue-earning investment will generate the target levels of economic benefits through its working life.

4.2.7.3. In addition, primary aims should be the extent to which the inclusion of financial and institutional components of a project that can enhance good governance, either of the EA and the project itself, or of any related/adjacent institutional elements.

4.2.7.4. For projects to be developed, implemented, and operated by public sector institutions, ADB requires that a project be designed, developed, and operated (among other factors) within the objectives and framework of the financial policies, strategies, and systems prescribed by those institutions of the government concerned. These are government institutions responsible for national and sectoral economic and financial planning.

4.2.7.5. For private sector projects to be developed, implemented, and operated by private sector institutions, ADB requires that a project be within the objectives and framework of the financial policies, strategies, and systems prescribed by the Articles (or a similar statutory document) of the company or organization. Furthermore, this should be within, and in conformity with, national and sectoral economic and financial planning objectives.

4.2.7.6. Identification and confirmation of project objectives and those of its implementing and operating agency, and the proposed and/or actual means of their achievement, are key tasks for the financial analyst.

4.2.7.7. While financial aspects of these matters should attract the financial analyst's principal attention, they must be intellectually aware, and capable, of responding to other factors. These may be related to economic and technical objectives, techniques of design and implementation, and the operation of the project, together with the impact of any related, ongoing facilities and activities with which the project will be linked. These may include parallel investments in the same or other sectors that are to be appropriately linked to achieve common economic objectives. For example, the construction of water supply and sewerage facilities by different EAs, or by the same agency drawing on different sources of funding, should have common economic, financial, and environmental objectives. These should primarily be related to achieving appropriate standards of public health, including in particular recognition of the financial impact which good health has upon the earning capacity of the population concerned.

4.2.8. Revenue-Earning Projects

4.2.8.1. Introduction

4.2.8.1.1. The public and private sectors are likely to operate many forms of revenue-earning entities. Section 3.2.1 contains a listing of typical revenue-earning entities. The delivery of goods and services by these institutions can embrace many different activities and components. Therefore, this listing should not be considered as comprehensive.

4.2.8.1.2. All public and private sector revenue-earning institutions operate under forms of law, usually substantially defined within regulations and rules. The form of law will differ extensively between public and private sectors.

4.2.8.1.3. Institutions may operate under the control or guidance of a particular ministry or department such as a Ministry of Energy, Department of Agriculture, etc. Their control/guidance activities typically impact nationwide and other ministries and departments of government are likely to be involved. For example, a Ministry of Transport is likely to be involved in reviewing and granting permissions for long-distance water, gas, oil pipelines construction. Typical examples are Ministries (or Departments) of Economic Development, Finance/Treasury, Trade and Industry, Environmental Protection, and Consumer Protection.

4.2.8.1.4. Laws, government regulations and/or rules (in relation to financial management) under which an entity operates should be examined, and the entity's observance or non-observance of them should be identified, to determine any possible effects on the project cycle. Introducing new legislation or amending any existing laws may require considerable time. Advice of the OGC and the concerned Operations

Coordination Division should be sought if it appears that legislative changes may be required. If introduction of legislation proves necessary, it should be made the subject of a realistically dated loan covenant.

4.2.8.1.5. Statutory powers or requirements may relate directly to the entity's operations (e.g., power to fix tariffs and levy charges for products or services) or they may define criteria within which an entity may operate (e.g., banking laws which define borrowing/lending limits).

4.2.8.1.6. Detailed financial or accounting requirements may not be part of specific legislation relating to the entity or in the entity's "charter" but may be addressed in general laws to which the EA's "charter" may refer.

4.2.8.1.7. Most revenue-earning EAs are autonomous, or have a high degree of autonomy, with powers to determine financial policies and the design and operation of financial management and accounting systems. Some state-owned enterprises, on the other hand, may be required to conform to a national accounting plan or chart of accounts. Such plans and charts are sometimes not conducive to providing adequate information for project and EA management.

4.2.8.1.8. The following is a checklist of items to be considered when reviewing these arrangements. The reviews may take place at the time of project identification, preparation, or appraisal. As a general rule, the earlier these reviews take place the greater the opportunities for corrective or initiating actions for new systems.

- Statutory requirements for accounting and financial reporting
- Status of the entity (autonomous or under government control)
- Accounting policies and practices in force
- Financial regulations
- Management and control
- Data processing, unless integrated in above systems
- Centralized or decentralized accounting systems
- Management accounting
- Corporate planning and budgeting, and budgetary control
- Accounting systems
- Financial management and internal control, and internal audit systems
- Financial staff: management, competence, and training

4.2.8.2. Entity Status

4.2.8.2.1. Therefore, extent of an EA's autonomy and/or control by superior authorities at all levels of a national government's hierarchy should be established. This in order to

determine its authority and ability to formulate and implement financial policy, and to design and install financial management systems (and thereby indirectly to determine how much time may be needed for making changes). The following questions should be resolved:

- Ascertain and describe in detail the status of the entity within its system(s) of governance.
- Is it fully autonomous (for example, can it legally exist in its own right by the laws of the country without government control)?
- Can it contract, and sue and be sued in its own name?
- Can it determine its own financial policies?
- Is it government-controlled? If so, what is the extent of that control and influence on financial policies and accounting requirements? If not, does it have an adequate set of articles or statutory form of incorporation to operate in the private sector?
- Is there a specified code of chart of accounts?
- Is it a government agency? If so, does the entity's management have any powers to decide financial policies and accounting systems, or does government prescribe these? For example, there could be separate accounting rules for state-owned enterprises.
- If it is a private sector enterprise, is its governance satisfactory? Who makes financial policy/strategy and who executes these?
- Is the project to be executed by a part only of an entity? If so, has that part the necessary legal authority to do so?
- Is it necessary or desirable to require a separation of accounts and/or funds for that part only, and would such a step be feasible? Would this increase operating costs?

4.2.8.3. Planning and Budgeting

4.2.8.3.1. Long-, medium-, and short-term planning should be the primary elements in financial management. Long and medium-term plans are usually referred to as corporate planning and require different planning approaches, often characterized by “rolling program” techniques, or “indicative planning only”. Compared with the short-term budgeting and budgetary control procedures, which are normally based on annual plans. In addition, examination of planning and budgeting systems adopted by an EA should focus on the emphasis placed on operational efficiency compared to routine fiduciary and revenue control. Answers to the following groups of questions may provide an adequate overview of the corporate planning and budgetary systems.

- Characteristics of Planning
 - ◆ Is there overall corporate planning?
 - ◆ What is the time span of corporate plans?
 - ◆ How are corporate plans expressed?
 - ◆ Are corporate plans summarized in financial terms (proforma annual financial statements and balance sheets)?
 - ◆ Are overall financial plans supported by appropriate subsidiary budgets (revenues and operating expenditures, capital expenditures, and debt/equity proposals)?
 - ◆ What are the critical monitoring indicators in corporate plans?
- Responsibility for Planning
 - ◆ Who prepares and approves corporate plans and annual budgets?
 - ◆ Is there a review system for tariffs, prices, and charging mechanism?
 - ◆ Is there a review system for capital expenditures?
 - ◆ Do the corporate plans and annual budgets identify specific managerial responsibilities for implementation and review?
- Timetables for Planning and Budgets
 - ◆ What is the timetable for preparation and approval of corporate plans and annual budgets
 - ◆ Does the timetable allow sufficient time for generation of all inputs and management reviews of corporate plans and annual budgets (consider the extent of centralization/decentralization of the entity)?
 - ◆ Who prepares and controls these timetables?

4.2.8.4. Accounting Policies

4.2.8.4.1. The acceptability of an EA's accounting policies, including standards of financial reporting and general accounting practices, should be examined. If these policies do not conform to accepted international or national standards and practices, which makes comparison and performance evaluation difficult, the EA should be informed of any required modifications. In addition, the EA should also be notified of the latest date for the modification's introduction (e.g., before project implementation commences, or by a date to be specified in a covenant).

4.2.8.4.2. On the other hand, if only minor items are involved (e.g., methods of apportioning overheads or valuing inventories), as long as these variances are quantified and revealed in the annual financial statements and the auditor's report, their continued use may be acceptable.

4.2.8.4.3. At loan negotiations, where financial covenants are incorporated in the loan agreement, the accounting standards that will be used as the basis for measurement of financial performance should be defined.

4.2.8.4.4. If variances exist from acceptable accounting form and practices, they should be discussed with the entity's auditor, if possible before requesting a change in practices. The auditor should be asked by the EA to address these subjects in the opinion and report on the annual financial statements.

4.2.8.5. Financial Regulation

4.2.8.5.1. The underpinning of a sound accounting system is a regularly updated set of financial regulations. These are usually designed to define the objectives of, and responsibilities within, a financial management and accounting system. Regulations should also clearly define who is responsible for implementing and updating of financial regulations.

4.2.8.5.2. The provision of new regulations or the improvement of existing ones should preferably be sought before loan negotiations.

4.2.8.5.3. Assistance to introduce or improve regulations and systems should be encouraged, where necessary, by seeking Bank consideration of a proposal for Technical Assistance to the borrower or EA.

4.2.8.6. Accounting Systems

4.2.8.6.1. ADB requires that appropriate systems of accounting and control be installed and operational for a project, and where applicable, an EA.

4.2.8.6.2. Any issues or special requirements relating to the development of these systems, particularly during project preparation, should be referred to the Regional Director. If these are not resolved before appraisal, these should be referred to in the Appraisal Mission Issues Paper.

4.2.8.6.3. To ensure accountability for project implementation funds, each project should have an adequate accounting and internal control system for recording and reporting project-related financial transactions from the time that project expenditures commence (which could be before Board approval to the loan).

There are no exceptions to this requirement.

4.2.8.6.4. Specifically, the system should:

- Be simple to operate;
- Require staff to operate with minimum supervision, and have the necessary personnel trained to operate the system from project start-up;
- At a minimum, provide records of project expenditures, receipts or monies, and funds flow generally from the date of first transactions, including expenditures incurred prior to project approval which might be eligible for inclusion in disbursement claims (retroactive financing);
- Where available, have data processing and information technology systems that are modern, efficiently managed, and fully responsive to the needs of management of the EA and the proposed project;
- Have adequate internal checks and controls, be able to balance financial data frequently and to report project financial results at intervals and within the time frame required by ADB;
- Where needed, meet requirements for Statements of Expenditure (SOE) or Imprest Fund records; and
- Be capable of expansion, when necessary, to meet the increasing demands for financial data arising from expanding project activities or entity operations.

4.2.8.6.5. Where ADB is also concerned with the financial performance and status of the EA, the latter should provide adequate financial management and accounting systems and reporting procedures for both the project and the EA responsible for project implementation from the start-up of the project. However, in cases where an EA's systems need upgrading or expansion to meet the requirements above, ADB may consider approving the use of assistance as a project component. Such assistance does not exempt the EA from providing accounting and internal control systems capable of meeting the requirements with regard to the project accounting and reporting. Given ADB's tight TA budget, the availability of cofinancing or funding from other donors should be examined.

Centralized and Decentralized Accounting Systems

4.2.8.6.6. A financial analyst may be confronted with an inefficient accounting system. The borrower may suggest a local freestanding system that would be more effective if it would be merged with large central systems with their enhanced facilities. Or it may be a centralized system would work more efficiently if it would be detached from the core system, and establish a semi-autonomous accounting unit.

4.2.8.6.7. Large industrial and commercial organizations, or large state-owned enterprises, may operate centralized financial management and accounting systems. In many such systems, all information generated at operational levels (e.g., project sites) is

transferred to a central location for making payment to contractors, etc., for data processing and for compilation of accounting records.

4.2.8.6.8. Delays and loss of data can result, which affect, inter alia, prompt and accurate reporting to ADB by the EA. In addition, difficulties may arise when the external auditor is required to provide a separate report and opinion on the project operations and on the EA.

4.2.8.6.9. Conversely, decentralized systems, which permit local financial operations, usually require more extensive controls and more staff with related difficulties of obtaining good management.

4.2.8.6.10. Therefore, before recommending financial management and accounting systems changes to a borrower on project (and, where applicable, EA), it is prudent to examine the advantages and disadvantages of existing and proposed systems with regard to the efficiency of centralized or decentralized operations.

4.2.8.6.11. Key factors to be considered are the competence of management, security, internal controls, communications, and the availability of trained staff to provide routine quality performance, but also the ability to address nonstandard operations; for example, what to do when something goes wrong.

4.2.8.6.12. The financial analyst should be aware that there are snags and pitfalls when deciding how to resolve these situations. One solution may require that a consultant should be engaged under appropriate TORs to recommend most effective alternative system requiring the least cost. Another solution, dependant on the role and responsibilities of the EA, could be to recommend the hiring of an accounting firm to provide the necessary financial information during the period of project implementation. Or financial analysts can study the system(s) in detail and recommend their own solution for consideration by the EA.

4.2.8.6.13. Whatever optimum solution is recommended, it must be acceptable to the management of the EA. If management does not accept the proposed system, it is unlikely to be successful, despite its potentially successful attributes.

4.2.8.7. *Financial Management and Control*

4.2.8.7.1. To judge the effectiveness of an organizational structure, the following should be reviewed to judge their suitability to support project implementation and operation and the extent of their observance in practice:

- By-laws of the entity;
- Executive orders (if any);
- Statements of objectives and policies;
- Organizational structure;
- Control environment, internal control, and internal auditing;
- The need to furnish financial information on an entity's performance to concerned parties within and external to, the EA and the extent of the achievement of such dissemination; and
- The impact of management and control systems on the operation of the financial management and accounting systems should be examined by seeking answers to the following:
 - What is the background and experience of those who represent the finance function on the Board of Management?
 - Who, in management, reports on financial performance to the entity's owners?
 - Who reports on finance to the management? What is the status of this official?
 - In what form and how frequently does management publicize its decisions on financial policy?
 - In what form and how frequently does management require and receive information about financial performance-type of reports and distribution of such to various levels of management?
 - What are the control systems and linkages between top management and financial management, and between other managers and the financial managers?
 - Do the answers to questions above add up to a system acceptable to ADB for project implementation? If not, can they be amended in a timely manner to facilitate project implementation?

4.2.8.8. Internal Audit

4.2.8.8.1. The following is an extract from the INTOSAI's Advisory Document on *Standards for Internal Controls*:

72. ... internal control is a management tool. It is management's responsibility to implement and monitor the specific internal controls for its operations. Even in countries where specific controls are set out in legislation, a manager has no less a responsibility for implementing and monitoring those controls. All managers should realize that a strong internal control structure is fundamental to their control of the organization, its purpose, operations, and resources. They should accept responsibility for it.

73. To design, establish, and maintain an effective internal control structure, managers should understand the objectives to be achieved. Legislation can provide a common understanding of the internal control definition and objectives to be achieved. It can also prescribe the policies managers are to follow to implement and monitor their internal control structures and to report on the adequacy of those structures.

74. Management often establishes an internal audit unit as part of its internal control structure. While internal auditors can be a valuable resource to educate and advise on internal controls, the internal auditor should not be a substitute for a strong internal control structure.

78. Management can also use its internal audit unit to help monitor the effectiveness of internal controls. The closeness of internal auditors to the day-to-day operations usually places them in a position to continually assess the adequacy and effectiveness of internal controls and the extent of compliance. The internal auditors have a responsibility to management for reporting any inadequacies in the internal controls and any failure of employees to adhere to them and recommending areas needing improvement. In addition, they should establish procedures for following up on previously reported internal and external audit findings to ensure that managers have adequately addressed and resolved the matters brought to their attention."

4.2.8.8.2. The above advice was developed for use in public sector institutions, but the key principles are equally applicable to private sector operations, except for the suggestion that legislation may be necessary to underpin the provision of internal controls. The key principles are:

- It is management's responsibility to implement and monitor the specific internal controls for its operations
- While internal auditors can be a valuable resource to educate and advise on internal controls, the internal auditor should not be a substitute for a strong internal control structure; and
- Management can also use its internal audit unit to help monitor the effectiveness of internal controls. The closeness of internal auditors to the day-to-day operations usually places them in a position to continually assess the adequacy and effectiveness of internal controls and the extent of compliance.

4.2.8.8.3. Internal audit units and operations are most likely to be found in public and private sector enterprises. The units may be centrally located with a mandate to monitor the operation and efficiency of all units throughout the area of operation of the enterprise. Exceptions may occur in very large operational units, where subunits of an enterprise's internal audit group may have a high degree of autonomy.

4.2.8.8.4. It is unlikely that a nonrevenue-earning Project Implementing Unit (PIU) would have an internal audit unit specifically installed, although a central unit of a ministry or department of government may have been awarded the responsibility to review and monitor internal controls of the PIU.

4.2.8.8.5. ADB's primary concern is to be assured that internal controls not only exist but also are the subjects of regular review and monitoring for efficiency and responsiveness to current operations. Therefore, if an enterprise has an efficient means of achieving this objective, the engagement of a specific internal audit unit may not be appropriate.

4.2.8.8.6. Where reviews and monitoring of ongoing operations of an enterprise are inefficient, ADB should discuss with senior management of the enterprise the need to introduce improvements, one of which may be the use of an internal audit operation. Such a recommendation will require an expert to advise and evaluate a cost/benefit study prepared for that purpose.

4.2.8.9. Financial Regulations

4.2.8.9.1. Financial regulations are usually designed to define the objectives of, and responsibilities within, a financial management and accounting system. They may form part of Standing Orders or Operating Rules or be a preface or appendix to a Manual of Accounting, or they may be restricted to limited definitions of budgetary accounting or internal auditing responsibility within an entity. They may range from government statutory regulations to financial managers' informal rules with no legal status, and should facilitate the examination of the financial management systems by defining their structure and subsystems, and by designating responsibilities.

4.2.8.9.2. Regulations, if any, should be reviewed for their form and content and for their observance. Normally, before appraisal, the extent to which Financial Regulations satisfactorily address the following should be examined:

- Basic financial policies regarding revenues and expenses
- Appropriation of surpluses/treatment of deficits
- Accounting organization
- Recording of assets and inventories
- Inventory control
- Depreciation rules
- Planning and budgeting, including medium to long-term investment planning
- Budgetary control
- Bidding procedures
- Payment procedures
- Form and timing of production of financial statements and balance sheets

- Debt management
- Billing and debt collection
- Write-offs
- Internal checks and controls
- Internal audit
- External audit

4.2.8.9.3. Regulations should also clearly define who is responsible for their implementation. The provision of new regulations or the improvement of existing ones should preferably be sought before loan negotiations. Assistance to introduce or improve regulations and systems should be encouraged through a project Technical Assistance component.

4.2.8.10. Management Accounting

4.2.8.10.1. A management accounting system should collect and promptly report financial and related statistical information on all aspects of the operating performance of an agency's operations to the various management levels, supplying each level with the necessary details at the appropriate times.

4.2.8.10.2. The management accounting system should produce the annual and periodic financial statements, including the statements for audit. It should incorporate procedures for recording current budgeting and financial planning data, record keeping and reports, and cost accounting (including cost control and analysis) for recording costs. Desirably, but not mandatory, it should use activity-based costing to report detailed costing of all activities of the EA by allocating the maximum amounts of management, supervision, and maintenance costs to each activity as costs of production. Such a system, which is often best illustrated in chart form, should include adequate internal checks, controls and internal auditing.

4.2.8.10.3. In the absence of a chart of a management accounting system, an organization chart of the entity's operating structure should be obtained or drawn up by the financial analyst. This should be suitably redrafted to illustrate the areas of management served, or to be served during project implementation by the management accounting system. The chart should show the linkages between the system and the management center of the EA, and to a central organization, if the agency or system is a decentralized unit. The chart should also show the main and subordinate activity areas. The following is a hypothetical example.

4.2.8.10.4. Organizations have many differing forms of management. In some, the Controller may not have a responsibility for Programming and Budgeting:

Controllership	Treasury
Programming and Budgeting	Cash Collection
Financial Accounting	Payments
Costing, etc.	Banking Operations
Billing, Receivables	Debt Management
Inventory/control	

4.2.8.10.5. Finally, it should show established posts/salary levels, and posts occupied and vacant. The borrower should be notified of any concerns about inadequacies, or changes required in the management accounting system to achieve satisfactory project implementation.

4.2.9. Nonrevenue-Earning Projects

4.2.9.1. Introduction

4.2.9.1.1. The following topics, relating to nonrevenue-earning projects, are examined in this section:

- Financial Management and Accounting Systems,
- Government Accounting,
- Executing Agency,
- Planning and Budgetary Control,
- Financial Accounting and Costing, and
- Internal Control Systems.

4.2.9.2. Financial Management and Accounting Systems

4.2.9.2.1. For nonrevenue-earning EAs, the design and installation of the initial financial management system should usually provide for the necessary accounting procedures throughout project implementation.

4.2.9.2.2. However, to save expenses, it may be useful to design and install a system that can be readily converted for use during implementation. At project preparation, the financial analyst should either ensure that an existing system would be adequate for the intended purposes or not. If the system is inadequate, the EA should design and install a system that will be operational when the project starts, and can be expanded, if necessary, as the demands on it increase.

4.2.9.2.3. In nonrevenue-earning projects, financial management and accounting systems should be kept simple. An analytical cash book (showing the sources of funds), with payments-out classified by project activity and payee, could form a satisfactory basic accounting tool with which to begin operations. It could be supplemented by additional documents (e.g., asset registers, contract registers, inventory systems) as the needs for these arise during implementation.

4.2.9.2.4. The staff required to carry out initial operations could also be minimal; one or two competent account clerks or bookkeepers may be enough for each operational center until full-scale operations commence. Their supervisor could initially be the project manager, assisted if necessary by an accounting technician or an accountant.

4.2.9.2.5. A basic system should include internal controls, which divide responsibility between those who approve budgets, authorize allotments, approve budgeted expenditures, make payments from cash resources, keep the books of account, and reconcile cash and bank balances with the books of account. If the staff is not large enough to meet this minimum division of responsibility, devices to provide minimum security, such as requiring two persons to execute each action jointly, should be used (e.g., two signatures on checks; two responsibility levels for posting account books and balancing).

4.2.9.2.6. Government departments or agencies implement most nonrevenue-earning projects. The checklist that follows is designed to facilitate examination of typical government budgeting, accounting, and internal control systems, and should be read in conjunction with Reviews of Revenue-Earning EAs. The latter contains detailed recommendations for reviews applicable to both forms of projects.

4.2.9.3. Government Accounting

4.2.9.3.1. Most nonrevenue-earning projects will be executed by entities that are part of a government, or government-controlled, government-sponsored bodies (e.g., cooperatives). Any existing financial regulations on the operation of financial management and accounting systems should be reviewed to ensure their compatibility with ADB's requirements. Any amendments to regulations should be made only to strengthen an EA's internal systems, in addition to supporting the project.

4.2.9.3.2. Before each project is started, the financial analyst must achieve a complete understanding of the principles, rules and operations of the management, accounting and budgetary systems. Government systems may include what appear to be overly bureaucratic prepayment checks, repetitive bookkeeping at different levels and locations, performance delays caused by a seeming lack of delegated responsibility, and "old-fashioned" regulations.

4.2.9.3.3. Dismantling existing checks and balances in systems, without (i) understanding the consequences; and (ii) substituting adequate new measures—without the necessary trained staff to implement them—can cause more trouble than the existing deficient systems. Improvements in government budgetary and accounting systems should only be recommended and implemented when the analyst, the operating staff, and the government (and the government auditor in many countries) are mutually satisfied that the changes are beneficial and operable. There should be assurance that adequately trained staffs are available to operate the new systems.

4.2.9.3.4. As the largest collectors and distributors of funds in a country, governments require sound financial management systems, with mandated methods of budgeting and accounting. The cash accounting basis has been the normal accounting practice for most governments (compared with the accrual basis for commercial practice, including parastatals).

4.2.9.3.5. An EA, which is part of a government administration, would normally adopt the government's systems of budgeting and accounting, unless the government and ADB staff can agree that a specialized form of project accounting would be beneficial to the government. Therefore, analysts should recognize and report in the Aides Memoire and BTORs of the identification and preparation missions (as well as in the RRP) that the systems to be used are adequate and acceptable to ADB.

4.2.9.3.6. The responsibility for government accounting and budgeting services varies among countries, and must be determined as part of project identification, in order that missions can identify locations of the authorities for obtaining agreement to modifications to a particular system. An Accountant- or Comptroller-General may be responsible or, in other countries, the Ministry of Finance may determine the budgetary and accounting practices.

4.2.9.3.7. Because there is no consistency, analysts must not assume that (i) the system with which they are familiar in one country also applies identically in another and (ii) EA staff are fully conversant with the responsibility levels and authority in their own country. (The Auditor-General's Office or equivalent may be the most reliable source of information on the subject).

4.2.9.3.8. The senior financial staff of a recognized government accounting service should hold responsible roles (e.g., accountants-general), from which they can influence the development and maintenance of sound accounting practices.

4.2.9.3.9. The existence of these services cannot, however, be taken to imply that government practices are automatically sound and acceptable for prospective EAs. Prescribed government practices may have been unofficially modified at the local level because they are too detailed, misunderstood, or ill supervised.

4.2.9.3.10. Analysts should familiarize themselves with the precise roles which responsible officials play in controlling and monitoring the performance of accounting in government before seeking their assistance on specific project accounting matters.

4.2.9.3.11. The term “accountant” in government often has a very different meaning or interpretation from “public accountant” in the private sector. An accountant-general may be a designation for an official post, whose incumbent may have little or no knowledge of finance and accounting.

4.2.9.4. Executing Agency

4.2.9.4.1. The status of an EA should be established to determine, in particular, its ability to:

- budget for and obtain budget approvals for required funds;
- furnish funds promptly for project implementation and operation and maintenance;
- institute, operate, or amend financial accounting systems to respond to ADB requirements;
- provide the necessary staff, with requisite skills, for project implementation; and
- institute satisfactory internal and external controls and audit arrangements.

4.2.9.4.2. To the extent that any of the above requirements is outside the agency’s jurisdiction, analysts should conduct the examination with the responsible institution(s) to ensure either their agreement to fulfill the requirements promptly or to delegate to the agency the right(s) to implement them during the project period.

4.2.9.5. Planning and Budgetary Control

4.2.9.5.1. The reviews relating to annual budgets and budgetary control recommended in section 4.2.8.3 are also appropriate as far as they apply to a nonrevenue-earning project. Experience with these projects, however, emphasizes the importance of determining the budgetary system that will apply during the project period.

4.2.9.5.2. At project identification, staff should be satisfied that they fully understand the system and that they have obtained (or can obtain at negotiations) agreement on the:

(i) budget procedures to be used by an EA and/or by controlling institutions which give higher-level approvals and which will ensure timely and adequate project implementation, (ii) timing of all budget framing and approval operations to ensure annual allocation and release of funds, and (iii) timing of release of counterpart funds provided in budgets.

4.2.9.5.3. If a borrower's fiscal year in which the project is due to begin starts before the date of loan effectiveness, it is essential to ensure that the budget for project start-up (including the costs of operating the EA and its accounting system, and of engaging auditors) is available for the initial fiscal year.

4.2.9.5.4. The availability of such provisions should be confirmed in the RRP. If there are no budget provisions, the RRP should describe how the project would be funded pending budget authorization.

4.2.9.6. *Financial Accounting and Costing*

4.2.9.6.1. It is preferable that an EA maintains at least the records specified in section 4.2.9.8, but in some accounting systems (particularly those of governments) many such records—particularly control accounts—may not be maintained. Typical government accounts may reflect only budget heads for services.

4.2.9.6.2. A project or project component may utilize only one line in an expenditure “block”, or it may even be contained with other items in a one-line entry. Unless ADB staff make early requests for more detailed reporting, project subcomponent expenditures may be impossible to control when the project starts. When a government budgetary and accounting system is to be used, it is useful to decide the details of project expenditures for which regular reporting will be required, and whether these can be introduced into the accounting or costing system without difficulty.

4.2.9.6.3. If they cannot, then the borrower and/or the entity should be asked to establish a subsystem to meet ADB's accounting and financial reporting requirements. An EA should be encouraged to use the resultant totals of a subsystem to support or reconcile the data in the standard system; i.e. the subsystem should become an integral costing system of the main accounting system.

4.2.9.6.4. EA systems must be capable of clear and timely disclosure of: (i) cumulative and annual project costs by components agreed on between ADB and the EA for each project, (ii) operating costs by budget heads analyzed in sufficient detail to provide control of incremental current expenditures, and (iii) basis for all types of claims for disbursement of ADB loans.

4.2.9.6.5. The first item above is particularly important in government accounting, where asset records covering a period of years are not often maintained. It is also important that the analyst ensures that the auditor will provide an audit opinion and report in a form satisfactory to ADB if nonstandard systems are introduced.

4.2.9.6.6. ADB may agree to finance incremental recurrent expenditures, i.e., expenditures above a particular level established at an agreed time with a borrower. Government accounting systems may not distinguish between base and incremental expenditures, particularly in the case of salaries, wages, and related overheads. It is, therefore, necessary to coordinate with an EA the formulation of adequate means of identifying both budgetary provisions and accounting data that can provide for and report on these expenditures. The following steps could be taken:

- estimate at appraisal the incremental current expenditures, and associate their incidence with the tracking of implementation of physical inputs/outputs of the project and reimburse a fixed percentage of total actual expenditures from each agreed category of incremental expenses;
- establish appropriate accounting for special heads of expenditure, subcodes, subsystems and special reports;
- agree on accounting for only the main heads of expenditure concerned and develop a formula for periodic application to total expenditures under those budget heads to obtain a reasonable apportionment of incremental expenditures; and
- continuously revise base and incremental costs.

4.2.9.7. Internal Controls

4.2.9.7.1. Any system to support a project should include basic internal control measures. If the internal checks and control systems are not satisfactory, and the effectiveness of the external audit is not established, then the project should not be allowed to proceed until the borrower and/or EA has agreed to strengthen the internal control systems.

4.2.9.7.2. Government auditors are normally responsible for the audit of the EAs that perform nonrevenue-earning projects. Therefore, it may be appropriate to seek their advice and experience with regard to the efficacy of internal controls in a particular system. Their involvement may help to introduce any necessary tightening of controls, as well as encouraging their active involvement in surveillance of the systems for project implementation. The financial analyst may best achieve this by providing the government auditor with a copy of the loan agreement immediately after its signing and discussing the audit requirements.

4.2.9.8. A Simple System for a Nonrevenue-Earning Project

4.2.9.8.1. The following is a simple system for a nonrevenue-earning project. It should be modified as necessary to meet the requirements of each project as well as the adequate and timely delivery of required financial information to the borrowers and ADB.

- Project Entity Bank Account Record, by categories of expenditures
- Project Entity Cash Payment Record, by categories of expenditures
- Record of Project Expenditures incurred but not paid by categories of expenditures
- Record of Project Expenditures by Third Parties by categories of expenditures
- A Summary of the above to produce Total Project Expenditures by categories of expenditures
- Record of Sources of Project Financing including ADB (and other lenders) Loan Disbursement Claims

4.2.9.8.2. In addition, it is desirable that a simple General Ledger be used to record at regular intervals the totals of payments (by week or by month) using checks and cash, and funds received. This ledger, in addition to establishing summary accounts for the above transaction accounts, should include accounts for assets, liabilities, contracts, and currency transactions.

4.2.9.8.3. Corrections and adjustments to the data entered in the basic records can be made at any time prior to entries being summarized in General Ledger entries. Changes to be made on data already recorded in the General Ledger will need special entries in that ledger, preferably through the use of a Journal.

4.2.9.8.4. ADB's *Loan Disbursements Handbook* is available from the Knowledge Management section of the web-based Guidelines. The Handbook provides guidance for financial analysts on Imprest Accounts, Statements of Expenditures, and Accounts and Audit generally for projects.

4.3. Financial Analysis

4.3.1. Introduction to Financial Analysis

4.3.1.1. This Financial Analysis section contains methods of preparing and assembling data for financial analysis. The analysis is to provide a quantitative and qualitative examination of the financial operations of revenue-earning and nonrevenue-

earning projects in the public and private sector and, where appropriate, EAs. (It may be noted that for nonrevenue-earning agencies, an analysis of the EA is rarely required.)

4.3.1.2. This quantitative and qualitative examination is designed to: (i) assess the financial viability of a proposed investment in a project; (ii) assess the financial viability of a project, including during implementation, at commissioning, and after completion; (iii) illustrate the financial structure of an EA, and its existing and potential financial viability, including the financial efficiency and effectiveness of its operations with and without the project; (iv) assess the adequacy of the financing plan for the project; and (v) advise on methods of improving the financial viability and efficiency of an EA, including the appropriateness of tariffs, prices and cost recovery generally, and on the financial arrangements, conditions, or loan covenants which should be required as conditions of ADB financing, and the extent of a borrower's compliance therewith.

4.3.1.3. This section illustrates, in particular, approaches to the analysis of revenue-earning projects and EAs because these are the most complex forms of analysis likely to be required. The illustrations of sound financial management and analytical practices herein should be modified to meet the requirements of each project. They are neither intended to substitute for the financial analyst's judgment as to the best method of presentation in each case, nor to define precise financial measurement criteria for a project or, where applicable, an EA.

4.3.2. Financial Analysis Objectives

4.3.2.1. Introduction and Objectives

4.3.2.1.1. This section examines the following topics:

- Financial objectives of a public sector project
- Financial objectives of a private sector project
- Using financial analysis to identify achievement indicators (and to generate financial indicators to demonstrate efficiency in the achievement of objectives)
- Economic objectives.

4.3.2.1.2. The primary objective of financial analysis is to forecast and/or determine the actual financial status and performance of a project and, where appropriate, of the EAs. This is to enable ADB to combine that information with all other pertinent data (technical, economic, social, etc.) to assess the feasibility, viability, and potential economic benefits, of a proposed or continuing lending operation.

4.3.2.1.3. A secondary objective is the provision of Technical Assistance to a borrower and an EA to enable them to make similar assessments for the project and to apply the techniques to other non-ADB investments.

4.3.2.1.4. A tertiary objective is to encourage borrowers and EAs to make any necessary changes to their institutional and financial management systems to facilitate the generation of appropriate data to support good financial analysis.

4.3.2.1.5. The objectives of financial analysis as set out above are intended to measure the achievement of financial objectives of a borrower, the project to be (or being) financed, and its EA.

4.3.2.2. *Financial Objectives: Public Sector Project*

4.3.2.2.1. Public sector projects are classified as revenue-earning and nonrevenue-earning.

Revenue-Earning Projects

4.3.2.2.2. A principal objective of revenue-earning projects is the achieving of financial viability of revenue-earning EAs (REEAs). This has two purposes. First, to enable self-sustainability and to achieve a degree of autonomy in their day-to-day operations to encourage better management. Second, to relieve governments from financial burden associated with the continuous provision of scarce public funds.

4.3.2.2.3. The provision of these latter funds contributes to the scope of the government budget deficit and is, therefore, likely to be inflationary. Increased taxation, borrowing, and/or reduction of other forms of public expenditure may finance them.

4.3.2.2.4. The pursuit of certain financial goals by a REEA can also be seen as a means of stimulating managerial efficiency. If financial viability were to be ignored, the incentive to hold down costs may be weakened, if not removed. Adequate levels of (real, i.e., cash) revenues earned from the sale of their services should enable REEAs to have a satisfactory financial performance. It generally indicates an ability to generate sufficient revenues to cover operation and maintenance costs, renew assets, service debt, pay dividends on equity capital, where appropriate, and finance a reasonable proportion of their capital expenditures from internally generated funds.

4.3.2.2.5. REEAs are sometimes required to generate additional revenue to supplement national resources for investment. Experience in some DMCs, however, suggests that the

continuing financial losses made by many REEAs may not make them satisfactory tools for resource mobilization, unless government is willing to enforce the use of effective tariffs and revenue collection.

4.3.2.2.6. Tariffs should permit a level of financial performance that would enable a REEA to operate efficiently and on a continuous basis, provided that the collection of revenues continues to be efficient.

4.3.2.2.7. Financial analysis is used at the design and appraisal stages of a project to define financial performance. Throughout implementation and commissioning, it is used to measure, by use of financial indicators, the EA's performance in delivering the project according to design estimates. Financial analysis is used to measure the operational performance and achievement of financial objectives. The analysis should examine: (i) ongoing operations during project implementation (where these are present), and (ii) the combined performance of ongoing operations and the new project following commissioning throughout the life of the ADB loan.

Nonrevenue-Earning Projects

4.3.2.2.8. A principal objective of nonrevenue-earning projects is the achievement of the financial and economic goals of a project. This has three purposes. One is to enable the project to deliver the forecast benefits at the price(s) estimated at time of design and financial and economic evaluation. A second objective is to achieve a degree of efficiency in the EA's implementation operations to encourage better management of the development of the project. A third objective is to minimize the government's financial cost to reduce as much as possible of the financial burden associated with the continuous provision of scarce public funds.

4.3.2.2.9. As for revenue-earning projects, financial analysis is a key tool in defining and measuring the achievement of financial objectives.

4.3.2.3. Financial Objectives: Private Sector Project

4.3.2.3.1. The financial objectives of a private sector project are similar to those of a public sector revenue-earning project, except that the owners, stakeholders, and management of the enterprise are substituted for the government. Unlike governments that may have access to temporary funds to sustain a financially ailing public utility EA, the owners and management of a private company are quickly judged by market forces as to their financial capability and competence.

4.3.2.3.2. One result could be that project financial failure, either during implementation or during operation, would deter actual and potential investors to the point of withdrawing all financial support. Therefore, effective and efficient use of financial analysis to define and apply the most appropriate performance indicators is imperative. In addition, the continued utility and effectiveness of indicators should be continuously reviewed to ensure that management obtains the most effective information for decision-making throughout implementation and operations.

4.3.2.4. *Using Financial Analysis to Identify Achievement Indicators*

4.3.2.4.1. The financial performance of a public and private sector EA should normally be measured by the use of at least one indicator selected from the range of the following groups of indicators derived from the financial analysis of a project and its EA: (i) operation; (ii) capital structure, and (iii) liquidity.

4.3.2.4.2. ADB seeks to agree with a borrower on the covenanted use of one or more key indicators. In addition, the borrower/EA should be asked to agree to the use of noncovenanted indicators in periodic financial reporting.

4.3.2.4.3. This means that, if only one indicator from one of the three categories of indicators above would be the subject of a loan covenant, the remaining indicator or indicators from each group above recommended by the financial analyst should be the subject of periodic reporting.

4.3.2.4.4. Additional indicators should be developed whenever necessary to measure specific performance.

4.3.2.5. *Economic Objectives*

4.3.2.5.1. The efficient allocation of resources is an important consideration in pricing policy, particularly for REEA services. Financial analysis is used to describe the impact of such a policy.

4.3.2.5.2. It is desirable, in DMCs where the alternative is the additional output that could have been generated and which the countries could ill-afford, to give up.

4.3.2.5.3. Economic theory suggests that efficient allocation of resources is achieved when price equals the marginal cost of supplying the service; that is, the increment to the total system cost of producing and delivering an additional unit of output under specified circumstances.

4.3.2.5.4. Some outputs of an REEA's service are often valued highly by a majority of consumers and exceed the cost of supplying it. Other uses are less valuable, and the quantity consumed for these uses will depend on the price charged by the REEA. For an efficient allocation of scarce resources, consumption should be encouraged when its valuation by consumers exceeds the added cost of supply, and discouraged whenever it is not the case.

4.3.2.5.5. This balancing of added benefits with added costs may be achieved by establishing prices equal to the marginal costs of supply and relying on consumers to equalize benefits and costs at the margin. In other words, the cost-benefit analysis is decentralized and each consumer is left to decide what quantity they would like to consume and when.

4.3.2.5.6. Economic theory also suggests that important divergences between social costs and benefits on the one hand, and market price on the other (due for example to external effects) should be taken into account, and that public enterprise investments should be evaluated in terms of opportunities for investment or consumption foregone elsewhere in the economy.

4.3.3. Linkages with Cost Recovery and Tariffs

4.3.3.1. Introduction

4.3.3.1.1. Readers are recommended to review the Table of Contents of ADB's *Guidelines for Economic Analysis* when addressing Cost Recovery. In particular, reference should be made to Appendix 22: User Charges, Cost Recovery, and Demand Management: An Example for Piped Water.

4.3.3.1.2. Efficient cost recovery impacts on economic and financial analysis of projects, and it is essential for the financial analyst to have a comprehensive understanding of the issues. Not least, the analyst must ensure that the cost element of cost recovery is the lowest economic and financial cost commensurate with the highest levels of efficiency of performance. Recovery of unreasonable costs must be avoided.

4.3.3.1.3. Both financial and economic project analyses are closely related, and in practice both involve, among others, the calculation of internal rates of return. Both types of analysis are conducted in monetary terms, the major difference lies in the definition of costs and benefits.

4.3.3.1.4. Financial analysis evaluates the commercial viability of a project from the viewpoint of the project entity; that is, all expenditures incurred under the project and revenues resulting from it are taken into account. This form of analysis is necessary to assess the degrees to which a project will generate revenues sufficient to meet its financial obligations.

4.3.3.1.5. In practice, it is typically necessary to establish the financial viability and profitability of the project and of its parent public or private sector enterprise by determining all expenditures of the latter with the project, and the total revenues earned (and collected) from all sources.

4.3.3.1.6. The principles of financial cost recovery should be based on one or more of the following, as appropriate to the project, public or private sector enterprise, and sector concerned: (i) full-cost recovery, (ii) cost reductions commensurate with increased efficiency to reduce demands on revenues, (iii) a need to generate contributions to ongoing and/or future investments, (iv) achievement of income redistribution and/or generation of additional income for specific beneficiaries, (v) minimization of waste which low-cost recovery policies tend to promote, (vi) containment of demand where essential goods and services are in short supply, (vii) need to raise additional public sector revenues, and (viii) encouragement of financial discipline and efficient management.

4.3.3.1.7. Factors or criteria to determine full-cost recovery include: (i) recovery of long- or short-run marginal costs, as appropriate to the EA and/or sector; (ii) need to cover total financial costs where these exceed those above; (iii) extent of additional fiscal resources requirements over and above the two factors above, for purposes of income redistribution within the sector, for related sectors, or for general budget support; and (iv) incremental financial costs (and the reasonableness thereof) for achievement of the third factor above.

4.3.3.1.8. Although ADB's cost recovery principles center on full-cost recovery, it recognizes that, in some cases, financial, distributional, and national fiscal considerations may require a flexible approach, albeit compatible with promoting efficient operation of the public sector enterprises responsible. Such cases may involve health and other social sectors, and projects involving the introduction of new techniques, etc., where less than full-cost recovery may be desirable in the short or medium term. However, whenever less than full-cost recovery is proposed, this must be disclosed and justified in the Aides Memoire and BTORs of a fact-finding or appraisal mission, and in the RRP.

4.3.3.1.9. Where an activity, such as sewerage operations, may appear to have difficulty in achieving full-cost recovery, it should be linked whenever possible with an allied activity or service of the enterprise to achieve such performance. In the case of sewerage, its principal activity is wastewater removal, which can be directly related to water consumption. An integrated tariff policy to recover water supply and sewerage costs should be developed which would achieve at least full cost recovery. Similar activities include rural electrification for irrigation systems which can be recovered through the overall tariff structure by cross subsidies; rural roads which can be recovered through adjustments to vehicle import or operating taxes.

4.3.3.1.10. These latter cases typically give rise to valid concerns where the technical problems and costs of installing and operating charging mechanisms could exceed benefits. The Knowledge Management section of the web-based guidelines provides a copy of the useful OECD publication *Best Practice Guidelines for User Charging for Government Services*.

4.3.3.2. Cost Recovery Systems: Introduction

4.3.3.2.1. Private sector entities, because their primary financial objective is to earn a return on invested capital, would be expected to seek full cost recovery, albeit they may, from time to time, charge less than full cost as a means of encouraging development and introduction of new products.

4.3.3.2.2. For public sector entities, there is no absolute rule as to a sector/subsector when less than full cost recovery may be acceptable. A useful guide is provided in ADB's Subsidies Paper. This recommends sectors and circumstances when subsidies may be acceptable, and therefore less than full cost recovery can be proposed for a project.

4.3.3.2.3. Generally there are two options available for full cost recovery, namely the pricing by user charges of products and services produced (typically using tariff-structured charges); and benefit taxes that are levied directly (wherever possible), or indirectly, on beneficiaries. Vehicle or gasoline tax, and land taxes, are typical benefit taxes.

4.3.3.2.4. The selection and use of the appropriate mechanisms should be a matter of practical convenience, e.g., where a system is already in place and which either works or could be made to work with minimum investment; rather than enforcing a principle. In water supply utilities, it is frequently a principle that domestic water consumers should always pay for water by measured consumption.

4.3.3.2.5. However, where by local practice a property value-based water tax can yield the necessary revenues, this may be a more suitable mechanism. (This may occur where the availability of groundwater is sufficiently abundant to prevent the installation of metering systems, which are the most effective form of recovering the cost of water supply benefits.)

4.3.3.2.6. Similarly recovery of domestic refuse collection costs may be more readily recovered through a general municipal property tax, but removal and disposal of trade wastes can often be charged direct to beneficiaries, typically using a price per container per collection. However, while expediency for achieving efficient recovery as suggested above is desirable (and useful in many cases), the use of pricing as a means of limiting or redirecting consumption must be actively considered.

4.3.3.2.7. A property tax based water charge will not inhibit consumption. Therefore, in conditions of constrained supply and high long-run marginal cost, the recovery mechanism adopted should contribute materially to the attainment of objectives; in this case by charging on a consumption basis, and restraining consumption and thus deferring the need for future investments. This particular approach requires that (i) metering systems are efficient, (ii) illegal connections are prevented, and (iii) tariff structure effectively constrains high consumption levels by incremental pricing.

4.3.3.2.8. In some sectors, traditional arguments are sometimes used to claim that pricing of a commodity is impossible for reasons of unacceptable costs. These must, however, always be demonstrated. For example, failure of irrigation systems to effectively measure and price water consumption continues to result in overbuilding of such systems in some countries, with resultant misallocation of resources.

4.3.3.2.9. It is frequently argued that the costs of installation and maintenance exceed the building costs, but these should be fully demonstrated during project fact-finding, and justified in the Identification/Preparation Aides Memoire/BTORs and the RRP.

4.3.3.2.10. It should be noted that user charges might, in some cases, inhibit the attainment of objectives. Charges for sewer connections, while having merits as a revenue source, may deter potential users from making connections. This may be overcome in some municipalities by imposing penal property taxes payable until sewer connections are made. Excessive industrial power line and connection charges have caused industrialists to install generators with loss of the benefits of scale of production, while high domestic connection fees typically encourage illegal connections.

4.3.3.2.11. The equity principle must be observed. Public utilities sometimes favor providing services to the more affluent sections of a population, partly on the grounds that cost recovery is likely to be more effective, and that delivery to, and servicing of these domestic consumers is generally more simple and cost-effective. However, research into these situations often shows that the poor, ill-served population are paying, and will continue to pay, considerably more per liter for their limited supplies of water, either by bottles, or through tankers or venders, than the more affluent sections who are already served (albeit insufficiently) or will be provided with water supplies by the proposed project.

4.3.3.2.12. Social benefit must not be sacrificed for financial expediency. Sound project design should call for an equitable distribution of benefits, including the use of cross-subsidies, where necessary, to provide the largest volume of benefits to the most deprived sectors of the population concerned.

4.3.3.3. Cost Recovery Systems: Social Sectors and Services

4.3.3.3.1. In sectors that support the delivery of social services, including poverty relief, health services, education, agriculture extension, etc., cost recovery is not normally sought because they have been regarded as public services to be financed from general taxation. While this practice is likely to continue for many years, particularly for the poorest sections of a population, increasing pressures on national budgets may force the development of forms of user charges.

4.3.3.3.2. While some may be introduced to reduce budget deficits, others may be used to cut back demand for frivolous or unnecessary services or to redirect demand for services for which a section of the population could pay. But because user charges applied in such sectors will probably have the effect of demand reduction, their introduction needs to be designed with much care.

4.3.3.3.3. Income and social studies may be needed to identify and to target the elements of services and population groups to be addressed.

4.3.3.3.4. User charging assessment and collection methods should be examined for feasibility and costs, as part of cost/benefit studies to determine viability of such schemes. Comparing the demand, supply, and costs of ongoing, parallel private sector schemes that provide similar service can develop validity tests of such studies. As an example, private sector fee-paying education facilities sometimes rival state systems, which may be of lower quality due to lack of funding.

4.3.3.3.5. Measurement of likely demand for equivalent-level state schemes may reveal the feasibility of charging for partial, or all, services in a particular stream of training, without undue hardship, especially if the constraint is lack of facilities instead of consumer resources.

4.3.3.4. Cost Recovery Systems: Summary

4.3.3.4.1. The financial analyst must be aware of the underlying economic principles of cost recovery, and:

- contribute to the design of projects which achieve full cost recovery for the sectors in which ADB specifies this criteria;
- be prepared to participate in the design of appropriate recovery systems, or utilize/modify existing systems to achieve efficient recovery;
- keep in mind the various impacts that cost recovery systems generate, to avoid adverse side effects; and
- in those sectors for which cost recovery has not normally been sought, be prepared to develop charging systems which can enhance poverty reduction and social development.

4.3.3.5. Tariff Policy

4.3.3.5.1. ADB does not have a prescriptive policy on formulation and operation of tariffs for public and private sectors. It relies on the skill and experience of ADB staff and experienced consultants to develop appropriate tariffs for revenue-earning EAs, and to report their findings and recommendations in RRP's and Supervision Reports.

4.3.3.5.2. An October 2000 ADB Workshop identified the following as the most intractable issues and problems (in descending order of intensity) likely to be encountered in formulating tariffs for electricity utilities: (i) country differences; (ii) lack of commonality among definitions; (iii) achieving consensus among politicians, administrators, economists, engineers, and financial analysts, etc.; (iv) country political differences; and (v) ownership.

4.3.3.5.3. In 1985, the African Development Bank published its policy on tariffs and cost recovery. While many years have passed since its publication, much of the advice and guidance relating to tariffs and cost recovery continues to be relevant. The emphasis is primarily on the sufficiency of revenues to finance operations and debt service, and perhaps there may be insufficient reference to the need to develop means of cost reduction to avoid increasing tariffs and rates.

4.3.3.5.4. Readers are also recommended to review ERD Technical Note No. 9, *Setting User Charges for Public Services: Policies and Practice at the Asian Development Bank* (http://www.adb.org/Economics/erd_technical_notes.asp).

4.3.3.5.5. The following materials are extracted from the *Good Practice Guideline (GPG): Financial Analysis of Revenue-Generating Entities: Sector Analysis, and Financial Ratios and Covenants*. The GPG was prepared by the MDB Harmonization Technical Working Group and was finalized in February 2003.

Tariff and Competition Policy

Tariffs for infrastructure services should cover the full cost of service provision, including capital cost, operations and maintenance expense, and the cost of negative environmental and social externalities. The level and structure of tariffs should offer incentives to service providers to minimize costs, and to customers to consume services efficiently. When tariffs are inadequate, Bank projects should (a) identify a plan for improving cost recovery, and (b) identify sources of financing for the full cost of service provision. The Asian Development Bank has commissioned a study aimed at developing a framework for tariff setting that will integrate financial, economic and institutional issues. The results will be incorporated into future editions of this guideline.

It generally costs more to serve small users and users in remote areas than to serve larger, urban users. Incumbent service providers may be unwilling to extend service to such users if they are unable to recapture the additional cost through higher tariffs. Competition policy should provide opportunity for alternative providers to serve customers who do not have access (as well as those who do). Unbundling of infrastructure sectors provides such an opportunity. Introducing competition through unbundling implies a need to consider the following: (i) tariffs for each segment of an “unbundled” sector (e.g., wholesale, retail); (ii) applying price cap regulation vs. rate-of-return regulation; (iii) open access to “natural monopoly” segments at appropriate prices; and (iv) limiting the duration of any monopoly concessions.

Subsidies

If full-cost-recovery tariffs exceed affordable levels, subsidies may be justified on the grounds of equity (subsidies targeted to poor people who cannot afford cost-recovering tariffs³), positive externalities (subsidies to encourage individual use, if it gives rise to environmental or social benefits to the public) or efficiency (subsidies to support a transition to the market).

³ Studies have shown that infrastructure subsidies benefit nonpoor people disproportionately; see *World Development Report 1992: Development and the Environment* (New York: Oxford University Press for the World Bank, 1992).

Financial analysis should do the following:

- Fully identify existing and proposed subsidies,⁴ considering the following aspects: (i) objectives of the proposed subsidy; (ii) effectiveness of existing subsidy programs in meeting their objectives; (iii) appropriate duration of the program; (iv) transparency in regard to the amount and source of financing; and (v) feasibility of financing the proposed subsidy.
- Justify a proposed subsidy on the grounds listed above.
- For a subsidy justified on the grounds of equity, ensure that the borrower puts in place credible mechanisms to ensure that the proposed subsidy is targeted explicitly to poor people (a transition period for existing subsidies is permissible)—for example, direct payment to consumers through fiscal relief (preferred alternative), or indirect payment, via below-cost tariffs.
- Identify a plan for fully financing the subsidy—for example, (a) tariff increases (preferably as a precondition to a financing operation); (b) industry levies that can be tapped by providers who serve poor areas; (c) limited cross-subsidies from other consumer groups, such as lifeline block tariffs (generally, a less preferred alternative to industry levies) or Ramsey pricing; and (d) output-based payments to the provider.
- Identify ways to eliminate unfunded subsidies, i.e. those based on systematic underpricing of service.

Affordability

Poor households without access to network infrastructure services often pay high unit costs for infrastructure substitutes—such as batteries, kerosene, and vendor-supplied water—in terms of both financial costs and externalities (such as negative impacts on public health). This fact challenges the conventional wisdom that poor people cannot afford to pay for infrastructure services, and suggests that more attention should be paid to identifying the services that poor people want and are willing to pay for, through social assessments of income, consumption patterns, and willingness to pay. Such assessments should include analysis of (a) how low-income households purchase infrastructure services, (b) whether nontraditional supply is available, and (c) to what extent low-income households are willing to pay for alternatives and for improved access and quality. Financial analysis should contribute to the collection of the socioeconomic data required to conduct such analyses—for example, by formulating questions for formal social assessments.⁵ When it is not feasible to obtain such data, rules of thumb can be applied.

⁴ Financial and (where possible) economic subsidies should be identified in project appraisal documents. Social/transitional considerations should be identified in Country Assistance Strategies within a country's Comprehensive Development Framework. Estimates of financial subsidy and qualitative assessment of economic subsidy should be reported in the Report and Recommendation of the President (for both projects and country strategies); see *Guidelines for the Financial Governance and Management of Investment Projects Financed by the Asian Development Bank*, op. cit.

⁵ [“Better Household Surveys for Better Design of Infrastructure Subsidies.”](#) *Public Policy for the Private Sector*, Viewpoint No. 213, June 2000, which provides recommendations for adapting Living Standard Measurement Study to yield the information required for affordability analysis and subsidy design.

Service and Quality Alternatives. Since different types of service may be appropriate for small, poor or rural users than for higher-volume users, the data gained from such analysis should be used, with the data from the technical analysis of the proposed project, to consider alternative service and quality standards. For example, technical innovations that yield declining minimum efficient scale of technologies—such as pico-hydro and small-scale sewage treatment—can make services more accessible to poor, remote areas, and less costly than network-connected alternatives. Other alternatives could include, for example, community water delivery instead of in-house water connections, using tankers, community standpipes, or low-cost piping; different quality standards for water for drinking vs. washing; access to telecommunications via prepaid wireless phones or privately owned phone booths; and off-grid renewable rural electrification as an alternative to grid extension. It is also important to consider regulatory incentives for serving small or remote users—for example, water quality standards, open market entry, and unregulated tariffs for water delivered by tanker. Facilitating entry by new service providers can help expand the range of price and quality options in service provision to low-income areas, thus improving quality and lowering prices.

4.3.4. Preparing Financial Tables

4.3.4.1. Introduction

4.3.4.1.1. As a reminder, reference should be made to the Glossary of Terms and Definitions when preparing presentational material for ADB reports involving financial data. This will ensure consistent presentation across ADB, and also encourage borrowers to use such terms and their interpretations in the interests of improving financial management.

4.3.4.1.2. Footnotes should be used to explain infrequently-used terms or terms of an ambiguous nature. Cross-referencing should be used within any report, and between the document and any attachments or appendixes.

4.3.4.2. Preparing Summary Financial Tables

4.3.4.2.1. Summary tables may be used to display the key elements of financial analysis in its various presentational forms. This may take the form in one consolidated summary of the financial history, current performance and status, and forecast performance of an EA, together with trends and definitive data, ratios, and performance indicators.

4.3.4.2.2. Summary tables should be inserted adjacent to the textual material in a report to which a summary table refers. Past, present, and future performance, and status data may be combined in one summary.

4.3.4.2.3. The use of summary tables should not be substituted for detailed tables in an appendix to a report where the latter are necessary to disclose significant information to support a project and loan. Conversely, the presentation of lengthy summary tables in the Financial chapter of an RRP covering many years of past and future performance may be confusing to readers.

4.3.4.2.4. The optimum presentation is the one that conveys the maximum information in the minimum of space, without sacrificing accuracy and intelligence.

4.3.4.2.5. The Knowledge Management section (7.16 - 7.17) of the Guidelines provides examples of summary tables, including

- Balance Sheet,
- Income Statement,
- Cash Flow Statement, and
- Financial Summary.

4.3.4.2.6. The examples provided are for a service-type organization and for a manufacturing organization. The examples should be modified appropriately to reflect the nature of each project or EA.

4.3.4.3. *Preparing Detailed Financial Tables*

4.3.4.3.1. The Knowledge Management section of the web-based Guidelines provides examples of detailed tables, including (i) Detailed Financing Plan, and (ii) Project Cost Table. As in the case of the summary statements above, the formats are not sector-specific and for presentation in an appendix to an RRP, they should be drawn up to reflect the financial reporting characteristics of the sector concerned.

4.3.4.3.2. Supplementary information may be given in additional tables (e.g., to demonstrate a tariff structure and the revenue streams which the components are forecast to generate—all of which may be presented as a single line entry “Revenues” in an Income Statement). The adopted format should best demonstrate the potential for achievement of project objectives.

4.3.4.4. Demonstrating Past (Actual) and Future (Forecast) Performance

4.3.4.4.1. Detailed financial statements may be prepared to illustrate: (i) past performance, and (ii) forecast future performance. Alternatively, these sets may be combined in statements extending from 2 to 3 years before Board presentation through the completion of a project, or through the years required to reach full capacity. A primary concern is to be able to display the results of at least 2 years audited annual financial statements as the basis for the forecasting. This latter combined format, however, may make it difficult to provide adequate and consistent referencing to subsidiary data.

4.3.4.4.2. The principal recommended presentations relate to projects and their revenue-earning EAs. These presentations, while illustrating the performance of the EA, should also specifically display the status and performance of the project while under implementation and in operation.

4.3.4.4.3. Presentations are required to demonstrate the performance and status of nonrevenue-earning projects, and where appropriate, their EAs. There are no standard presentations for the wide range of these nonrevenue-earning projects and agencies, but a possible example is provided in a Model Project Financial Statement for nonrevenue-earning projects and agencies.

4.3.4.4.4. The examples of formats referred to in this section reflect principles of good presentation, but are not intended as rigid models. They should be applied in a flexible manner, and will vary in content and arrangement to meet the requirements of a particular project or sector.

4.3.4.4.5. These statements should be compiled in accordance with IAS even though in structure they may reflect the accounts classifications and financial reporting methods of the EA under appraisal. Alternatively, tables can be prepared on the basis of the local accounting standards used by the EA, but the text or footnotes must disclose the deviations from IAS, and the impacts on the financial statements (i.e., the differences in reported data that arise by reason of adopting the local standards compared with IAS).⁶

4.3.4.4.6. In an EA whose accounts and procedures do not conform to these standards, or to the country's Generally Accepted Accounting Principles (GAAP) which is acceptable to ADB, or where the latter GAAP are inappropriate for presentation of financial analysis, actual and forecast data should be presented on the basis of the staff's judgment of

⁶ Financial Analysts have discretion to agree alternative arrangements (see paragraph 2.4.3)

reasonable practice. Where the presentation departs from the EA's existing procedures, the report should explain the changes made.⁷

4.3.4.4.7. Where restatement is extensive, however, during future supervision, comparison of actuals with forecasts may be impossible without preparing an additional set of forecasts reflecting the entity's accounting practices; these forecasts should be included in the Project File.

4.3.4.4.8. ADB recognizes and uses IAS for financial analysis and presentational purposes. Because ADB prefers the use of IAS, these normally should form the basis of its financial covenants.⁸ Therefore, if presentations of financial information are made in RRP's and other project-related documentation, such as an Aide Memoire, in which the data are not compiled on the basis of international standards, the definitions to be used in determining financial performance to measure compliance with financial covenants must be based either on: (i) the accounting standards used in the RRP and which are also used as the basis for the financial covenant ratios, and this fact should be duly noted in the minutes of loan negotiations for purposes of measuring compliance; or (ii) the financial covenants' ratios should be based on IAS, and the factors necessary to convert local standards to IAS for purposes of measuring compliance with the covenants should be stated in the minutes of loan negotiations.

4.3.4.4.9. When preparing a financial statement, which illustrates past, present, and forecast performance, a decision may need to be made on the most appropriate subsidiary presentations to support data, recommendations, and conclusions in the RRP. The objective should be to present data in the clearest possible form; this may be feasible only by using a combination of methods (annotations, footnotes, or separate appendixes). In that event, explicit and clear indicative referencing should be used to ensure that readers are not misinformed and are easily directed to supporting information.

4.3.4.5. *Preparing Income Statements*

4.3.4.5.1. Income statements can be presented in summary or in detail, depending on the requirements for the presentation in the form of report (for example, the RRP). The following matters should be considered when preparing detailed income statements:

- data for each year are to be defined as Actual or Forecast;
- presentations normally should follow the accounting and financial reporting format adopted by the EA; and

⁷ Financial Analysts have discretion to agree alternative arrangements (see paragraph 2.4.3)

⁸ Financial Analysts have discretion to agree alternative arrangements (see paragraph 2.4.3)

- operating revenues and operating costs presentations will vary widely by sectors, and should detail the specific forms of revenue and costs typically used in the sector. Significant variations in format may occur:
 - where an agency has inventories produced and held for sale;
 - when the operating revenues section should show the gross profit arising from gross sales revenues after meeting the cost of sales; and the operating revenues section should show the gross profit arising from gross sales revenues after meeting the cost of sales; and
 - where an agency chooses to present the operating expenses under objective headings (e.g., bulk storage of water, transmission, distribution, etc., all of which include labor, materials, transport, fuel, etc.).

4.3.4.5.2. These latter categories are often presented as subjective headings, without reference to the objective headings. Either presentation may be acceptable, depending on the objectives of the agency and the project.

4.3.4.5.3. The following information and analyses should be provided with the income statement:

- unit volume: the basis for volume forecast should be described and related to the EA's output capacity and market demand;
- operating revenues: describe significant past and expected changes in selling prices, tariffs, and composition of sales mix;
- operating costs: analyze past trends, and give assumptions for projections in each operating cost category (for example: examination of numbers and types of staff and unit costs; expected costs trends of goods and services; or percentages of revenues or assets where these are the appropriate bases for the forecasts);
- depreciation rates: these may be addressed as balance sheet information;
- nonoperating section: describe any significant past experience and give assumptions for the forecasts of other income and expenses, relate forecast interest expenses to loans outstanding;
- taxes on income: give the basis for income tax charges, in public utilities or other sectors where taxes on income are normally presented as part of operating costs, the presentation shown in the table need not be adhered to; and
- appropriations from new income: state basis for past appropriations and any assumptions on future dividends, etc.

4.3.4.5.4. The following comparators and ratios are useful for analyzing income statement information:

- Growth rates,
- Working ratio,
- Operating ratio,
- Gross profit as percentage of revenues,
- Net income as percentage of revenues,
- Operating income or net income as percentage of revenues, and
- Return on average invested capital.

4.3.4.6. *Preparing Cash Flow Statements*

4.3.4.6.1. A summary cash flow statement should allow users to ascertain how an entity raised the cash it required to fund its activities and the manner in which that cash was used. Cash flow statements classify cash flows during the period from operating, investing, and financing activities. ADB prefers that cash flows are prepared using the Direct Method (i.e., cash flow components are shown directly, such as cash receipts and payments to employees and suppliers, rather than being derived from the income statement and balance sheet). Where the direct method of presenting cash statements is used, a note that reconciles net surplus to net operating cash flows should be provided.

Example of Cash Flow Statement Presentation

(\$'000s)	20X1 Actual	20X2 Forecast	20X3 Forecast	20X4 Forecast
OPERATING CASH FLOWS				
Receipts				
Sales of goods and services	35,134	36,868	39,466	41,397
Interest received	1,070	835	834	901
Payments				
Employees	-12,615	-13,043	-13,428	-13,917
Suppliers	-19,750	-20,920	-20,848	-21,167
Interest paid	-2,507	-2,516	-2,561	-2,502
Other payments	-369	-490	-1,088	-1,684
Net Cash Flows from Operating Activities	963	734	2,375	3,028
INVESTING CASH FLOWS				
Receipts				
Sales of fixed assets	250	125	68	59
Sales of investments	1,983	57	1,071	244
Payments				
Purchases of fixed assets	-1,469	-2,459	-2,808	-3,181
Purchases of investments	-130	-55	-102	-98
Net Cash Flows from Investing Activities	634	-2,332	-1,771	-2,976
FINANCING CASH FLOWS				
Receipts				
Proceeds from borrowing	275	1,477	353	56
Payments				
Repayment of borrowings	-1,900	..	-953	-105
Distributions/dividend payments	..	..	..	..
Net Cash Flows from Financing Activities	-1,625	1,477	-600	-49
CASH AND CASH EQUIVALENTS				
Net increases/(decreases) for period	-28	-121	4	3
Balances as at 1 January	230	210	93	97
Currency changes on opening balances	8	4	..	..
Balances as at 31 December	210	93	97	100

Reconciliation to Income Statement

Net Surplus per Income Statement	1,449	765	2,205	2,829
<i>Items included in net surpluses but not in net cash flows from operations:</i>				
Unrealized net foreign exchange gains	-66	-87	..	..
<i>Asset movements</i>				
Depreciation	791	872	918	926
Gains/(losses) on sales of assets	-7	3	..	..
<i>Other noncash items</i>				
Movements in employee benefit liabilities	-936	110	864	1,134
<i>Movements in working capital</i>				
Decrease/(increase) in receivables	-62	30	-69	-34
Decrease/(increase) in inventories	-63	-55	-19	-31
Decrease/(increase) in work in progress	-59	-773	-751	-513
Decrease/(increase) in prepayments	..	..	..	..
Decrease/(increase) in receivables	41	-3	-613	-1,256
Increase/(decrease) in payables	-125	-128	-160	-27
Net Cash Flows from Operations	963	734	2,375	3,028

4.3.4.6.2. The following list identifies matters that may need to be considered when preparing cash flow statements.

- data for each year: should be defined as “Actual” or “Forecast”;
- a total column: to reconcile the statement with the financing plan, a total column should be inserted to show the aggregate cash flows during project implementation period;
- capital expenditures: for the proposed project, reference should be made to the detailed tables showing project cost by year, or to other supporting data in the Project Costs section of the RRP. The following items should be shown separately:
 - the total expenditures on assets;
 - financial charges during development (FCDD) (from whatever sources); and
 - working capital where significant, and particularly for start-up industrial and manufacturing projects.

4.3.4.6.3. The separation of the first and third items should facilitate reconciliation with the project cost table and the addition of FCDD should be reflected in the financing plan.

- Borrowings: data on the ADB loan should be directly related to the data in the table(s) in the RRP showing the detailed schedule of disbursements. Estimates of funds available from other sources should be consistent with the information contained in the discussion of the financing plan. In more complicated financing, the funds statement should be supported by a supplementary schedule showing the forecast disbursement of other loans and equity investments:
- Short-term loans to finance working capital: working capital requirements may be shown net of short-term loans, in which case a footnote indicating the amount of short-term financing being used should be added. On the other hand, such short-term financing may be shown separately as a source of funds with a corresponding increase in working capital needs:
- Debt service: the actual payments estimates of interest and debt repayment should be consistent with the terms of debt explained by notes attached to the balance sheet. Where several loans are involved, an interest expense and debt repayment schedule could be used. Interest payments should be net of FCDD;
- Equity contributions: these should be classified as amounts contributed by shareholders, the government, and consumers, where appropriate. Reference to retained earnings as part of the resource mobilization and cash generation may be appropriate:

- Cash should contain an amount estimated to reflect operational needs. If cash surpluses are planned, for example, as a result of advance long-term borrowing, the balances may be added to a “short-term investments” account, to distinguish the operational cash needs from the more financially related, tactical funds needs. The use of a short-term investment account is advisable when the surplus cash balances are large and the interest income significantly affects income. If the cash surplus is not planned and not due to fluctuations resulting from management decisions, a separate “cash surplus” account may be used, especially if the balances are large. “Short-term borrowings” may be used as a “balancing liabilities account”, if the funding needs temporarily exceed the funds sources.

4.3.4.6.4. The following are typical comparators and ratios for use in a cash flow statement:

- Debt service coverage, based on the total of loan interest and principal repayments, including interest incurred on work in progress if this is to be financed from net income and not from capital receipts (loan/equity);
- Growth rates; and
- Percentage of capital expenditure financed by internal sources.

4.3.4.7. Preparing Balance Sheet

4.3.4.7.1. A summary balance sheet may be included in the text of a report, appropriately referenced to its sources in the appended tables. It should highlight critical features of an entity’s financial structure, such as its liquidity position, or trends in the growth of fixed assets, equity, and long-term debt.

4.3.4.7.2. The detailed balance sheet should include a detailed listing of matters that may need to be referred to in the report and referenced in the summary table. The following should be considered when preparing this detailed financial statement:

- Data for each year should be defined as Actual or Forecast.
- Surplus cash: where it is assumed that material amounts of funds may be accumulated and available for other capital projects or paid as dividends, the forecast balance sheet should show such cash separately.
- Long-term debt: should be shown in detail, if necessary. Distinguish between local and foreign debt. Current maturities of long-term debt should be deducted and shown under Current Liabilities.
- Current assets and liabilities: working capital requirements should be based on the entity’s practices, together with any changes due to the project; operational cash

requirements should be illustrated; and projected cash surpluses or shortfalls should be explained.

- Intangible assets and long-term investments: the basis of forecasts should be stated—particularly any valuation of goodwill on acquisition of other executing enterprises, or justification for the realization and use of long-term investments.
- Fixed assets: the basis for estimating additions to fixed assets in relation to the construction program, revaluation of assets, and any anticipated property retirements should be in accordance with IASs or otherwise explained.⁹ Transfers of capital expenditures to the “plant under construction” and “plant in service” accounts may be based on the assumption that a certain percentage of capital expenditures is “booked” to plant in service each year. In other instances, the transfers may be based on a detailed completion schedule. It is often useful to provide a subsidiary schedule to the balance sheet, showing the transfers from capital expenditures to plant under construction and plant in service, together with the basis for such transfers.
- Accumulated depreciation: rates and bases for depreciation should be stated. Alternatively, they may be shown with the Income statement or in an Assumptions Appendix. Any substantial changes in accumulated amounts (e.g., due to revaluation of assets) should be explained.

4.3.4.7.3. Comparators and ratios for use in a balance sheet include:

- | | |
|--|--|
| <ul style="list-style-type: none"> • Asset turnover • Growth rates • Quick ratio • Current ratio • Debt as percentage of total capitalization | <ul style="list-style-type: none"> • Rate of return on net fixed assets in operation • Accounts receivable outstanding on a daily basis (number of days, etc.) • Inventory outstanding on a daily basis • Net tangible assets as percentage of long-term debt. |
|--|--|

4.3.4.8. *Preparing Financial Summaries*

4.3.4.8.1. The use of a financial summary is an acceptable alternative to the main statements—Balance Sheet, Income Statement, and Cash Flow Statement. It must however, display the vital elements of each of these summary statements.

4.3.4.8.2. The normal size and content of the traditional income and cash flow statement and the balance sheet would not permit the production of a combined detailed

⁹ Financial Analysts have discretion to agree alternative arrangements (see paragraph 2.4.3).

statement for all main financial statements, and therefore the financial summary statement has been developed as an alternative.

4.3.4.9. Preparing Financial Tables Using Spreadsheet Models

4.3.4.9.1. The Knowledge Management section of the web-based Guidelines provides spreadsheet models that can be used to prepare financial tables. The models include summary and detailed tables, including:

- Balance Sheets,
- Income Statements,
- Cash Flow Statements,
- Financing Plans, and
- Financial Summaries.

4.3.4.9.2. Using these tables requires a working knowledge of financial accounting and financial analysis. The generic or model tables may be modified by users by changing the line item titles and the column titles to reflect the nature and form of the financial statements of the EA with which they are working. However, care should be taken to respect accounting conventions, particularly the use of subtotals and grand totals in each table to ensure that the financial data of line items that should be incorporated therein is appropriate. Each detailed and summary financial statement can be accessed in the model.

4.3.4.9.3. When a user is satisfied with the contents of a statement or statements, these should be saved to the user's own hard disk or floppy disk. When the Page is closed, the tables (templates) revert to their original state.

4.3.4.10. Preparing Financing Plans

4.3.4.10.1. The Cost Estimates table provides as its bottom line, the total financing required for a project. It is essential that the means of financing this total expenditure is specifically defined in the RRP. The illustration and discussion of the financing plan for a project to be implemented by a revenue-earning enterprise usually consists of a summary—all in current terms of: (i) the project financing requirements and the external sources of finance from the cash flow statement; (ii) other capital and incremental working capital expenditures occurring during the project construction period; (iii) incremental and initial operating costs to be incurred during the implementation period, to be financed out of either project capital funding, or from local budgetary provisions; (iv) net income from any ongoing operations; and (v) debt service.

4.3.4.10.2. In a nonrevenue-earning project, where there are rarely any internally generated sources of funds, project financing is usually not related to the future financial performance of the entity. In such cases, the illustration and discussion of the financing plan would be confined to the project only and set out with the discussion on project costs.

4.3.4.10.3. The text of an RRP requires a discussion of a financing plan. In the case of a nonrevenue-earning project, this is normally an extension of the discussion of the Project Cost Estimates. In the case of a revenue-earning project to be implemented by an EA, a summary-financing plan may be included after the Project Cost Estimates table. A detailed discussion on the financing plan (with a table showing a detailed financing plan, where necessary) should be included as part of the Project Chapter in the RRP. The following items should be covered, with detailed explanations, where necessary, in an Appendix to the RRP:

- Any cofinancing arrangements;
- Availability of internal funds, referenced as necessary to the cash flow statement;
- Self-financing ratio, particularly when this is to be incorporated in a financial performance covenant;
- Equity contributions;
- Terms of loans, including interest rates (or on lending rates, where applicable), grace periods, repayment periods, incidence of foreign exchange risk, guarantee fees and financial charges during development; and
- Dependability of a financing plan in terms of firm commitments that have been received, the progress of negotiations where loans or equity contributions have not been finalized, the availability of additional sources of funds in the event of cost overruns or lower-than-expected generation of internal funds, and a sensitivity analysis relating to the latter items, and any critical items listed above.

4.3.4.10.4. Funds from all principal sources should be identified as line items in the financing plan. Funds sources should be set out in terms of foreign and local currencies, using the US dollar as the foreign currency, and grouped in the table under local and foreign sources, including ADB loans, ADF, and TA; funds from other foreign lenders and donors; local loans, local equity including grants and subsidies from government; and internally generated funds. In cases where the EA is conducting an ongoing operation, as in the case of a public sector enterprise, it may, or may not, be generating sufficient funds from ongoing operations to support these activities. It is, therefore, advisable to include in the financing plan either the net funding through the period of the financing plan that the agency will generate, or the additional funding needs, which it will require, to operate and maintain its existing and new facilities. The sources of additional funding should be identified; for example, subsidies from government.

4.3.4.10.5. The financing plan should contain explicit references to contributions to be made by the agency during implementation, with specific reference to the acceptability to ADB of a policy of deficit funding by government, particularly any policy that contributes to the capital investment of the EA.

4.3.5. Determining Fiscal Period Coverage

4.3.5.1. Introduction

4.3.5.1.1. Forecasting financial performance is frequently a hazardous task for the financial analyst. The records of past performances may not always be available, nor reliable, and a current less-than-satisfactory performance may be one of the reasons for proposing the project. Political, inadequate human resources, and natural disaster problems, among others, can influence future performance.

4.3.5.1.2. Despite these hazards, the financial analyst is required to develop financial information relating to a project and, where appropriate, the EA for a period of time that will allow ADB's Management and the borrower to form judgments, at the least, as to past and current capabilities, and the most desirable, minimum financial performance that must be achieved to allow the project to be viable. It will not help the borrower or ADB for a financial analyst to forecast financial success in order to bring a project to the ADB Board, when all the sensible indications are that such success is unlikely. The latter has too often been the cause of unsuccessful projects.

4.3.5.2. Fiscal Period Coverage: Revenue-Earning Projects

4.3.5.2.1. For revenue-earning projects and their EAs, financial analysis needs to be based on a reasonable period of confirmed past financial status and operating performance of the EA. The current financial status and performance will be a useful guide to the capability and capacity of the Executing Agency to deliver the project.

4.3.5.2.2. With the information gained from the current and past performances, forecasts should be prepared of the financial status and performance likely to be achieved during implementation, and for a meaningful early period of operation following commissioning of the project. This applies particularly in cases where the EA will implement and operate the project as part of its ongoing operations, such as an existing electric power-generating utility or a water supply and sewerage utility.

4.3.5.2.3. There can be no definitive periods of performance measurement, and the chosen years for each project and EA must be selected on the basis of the financial analyst's judgment of the period(s) that are likely to be the most informative for an accurate and reliable justification for the project and use of the particular EA.

4.3.5.2.4. As a general rule, it is unlikely that a period of less than 2 years of actual confirmed (audited) performance immediately prior to implementation, together with the implementation period and not less than 3 years of full operation following final commissioning would provide a satisfactory, reliable sample.

4.3.5.2.5. Some projects include components that have protracted implementation periods, for example, dams and forestry. For some the implementation period often can only be defined by the success of the project; for example, oil and gas wells exploration. Other components are often commissioned within 1 or 2 years of the commencement of implementation. Usually it is necessary to provide a financial picture of the completed project, including at least 3 years of full operation and, therefore, in such a case, the period of detailed analysis may cover 12-15 years or more (2 years past, 2 years on existing operations, say 6 years for implementation and 3 years after project completion).

4.3.5.2.6. The word "detailed" has been emphasized here because, by comparison, for purposes of the FIRR the financial inflows and outflows for the full period of the life of the investment must be determined, but for FIRR purposes, the analytical requirements are not so complex.

4.3.5.3. *Fiscal Period Coverage: Nonrevenue-Earning Projects*

4.3.5.3.1. Normally for nonrevenue-earning projects, the financial analysis should address only the financial requirements of the project itself, in the form of the Financing Plan, and the operating costs for up to 5 years following completion.

4.3.5.3.2. Unless the EA is also to be the subject of some form of financial performance reform as part of the project, there is no requirement to provide past performance data, unless this is material to support project justification.

4.3.5.3.3. Similarly future performance should normally focus on project execution and include only those costs of the EA for which financing must be assured to ensure the successful implementation of the project.

4.3.6. Forecasting and Financial Projections

4.3.6.1. Introduction and Overview

4.3.6.1.1. Forecasts, in the form of annual financial projections over the period of implementation, and for the period necessary to achieve a steady state, should be made in nominal (current) prices (and tables should clearly so indicate) using the year of appraisal as the base year of projection. For an existing EA that operates facilities similar in nature to the proposed project, the financial projections should include actual performance for 2 or 3 years prior to project start-up. However, this may also require the forecasting of performance for the year of appraisal and loan negotiations/signing.

4.3.6.1.2. The objective of the actual performance and forecasts in the previous paragraph is to provide comparative performances, including establishing any trends and patterns, with the forecasts for the proposed project.

4.3.6.1.3. The preparation of financial projections should be an integral part of the PPTA consultants' TOR. The TORs for project implementation consultants will include, as part of project supervision, the monitoring of financial management and internal control procedures of the applicable project or EA.

4.3.6.1.4. Forecasts normally should be made in the local currency. An exception should be made when the local currency is unstable; for example, due to high and erratic levels of inflation, projections may be made using a stable currency, typically the US dollar.

4.3.6.1.5. The use of current prices is particularly important for the analysis of the Financing Plan which, to be complete, must relate to all project costs, including physical and price contingencies and, where appropriate, FDCC, and for appraising debt service coverage and the effect of debt limitation covenants (which govern contractual obligations which are fixed in nominal current terms).

4.3.6.1.6. Forecasts in current terms are usually based on the same price assumptions as in the project cost estimates, at least through the construction period, as long as such assumptions are relevant for the labor, goods and services concerned. Appropriate price assumptions should be made for items which are not involved in the project cost estimate or which need to be priced on differing bases.

4.3.6.1.7. Forecasts are normally made for the period covering the duration of project construction up to at least the end of the third year of normal capacity (steady state)

operations. When debt service coverage is based on a multiyear moving average, the projection should cover the final year of the moving average. The objective should be to provide adequate data on the profitability and debt servicing ability of the enterprise in relation to the investments to be undertaken under the project.

4.3.6.1.8. Forecasts should normally be made until a “steady state” has been reached, reflecting normal utilization of the project facilities. If a substantial financial change is forecast within the life of the loan that would seriously affect the “steady state”, the text should specifically discuss the impact of such a change on the financial condition of the EA. If possible, the projections should be extended to cover such an event.

4.3.6.1.9. In cases of projects which take many years to reach normal capacity operating rates (e.g., 15–20 years for forestry projects), it is acceptable to limit the time horizon of the forecasts for the enterprise as a whole to between 2 and 5 years beyond the completion of project construction, even though normal operating levels may not have been reached.

4.3.6.1.10. Since it is necessary to demonstrate the impact of grace periods on loans, the time frame should include the first year or years of full debt servicing whenever feasible for treatment of FIRR forecasting.

4.3.6.1.11. As stated above, where debt service coverage is based on a moving average calculation, the time frame should be sufficient to cover the last year of the moving average for the final year shown in the projections.

4.3.6.1.12. In addition to this overview, this section reviews the following topics in relation to forecasting and financial projections: (i) using real prices, (ii) using constant prices, (iii) using a stable foreign currency, and (iv) presenting data.

4.3.6.2. *Using Real Price*

4.3.6.2.1. Where the analysis is made in real terms, its use must be fully justified and the impact of current prices on the financing plan and other elements listed in the preceding paragraph fully explained in the text and subtables.

4.3.6.2.2. Relative price changes resulting from the differential effects of changing prices and inflation on particular expenditure items and on the revenue stream are apt to be overlooked when real terms are used. This can lead to distortions in the analysis of a financing plan and in cash flow statements.

4.3.6.2.3. By contrast, forecasts in current terms require the analyst to make specific judgments about these effects. Therefore, forecasts in current price terms are preferred. Such forecasts should be made on the basis of alternative scenarios to illustrate a range of possible futures and uncertainties, and the forces that are likely to shape them. The use of sensitivity analysis on key variables is recommended.

4.3.6.3. Using Constant Price

4.3.6.3.1. Where an EA operates within an established national system for adjusting costs and/or revenues for inflation, or in countries where price and foreign exchange rate movements are highly erratic, constant price forecasts may be used, providing the impact of the conversion to current prices, particularly on cash flows, is demonstrated.

4.3.6.4. Using a Stable Foreign Currency

4.3.6.4.1. An alternative method is to prepare tables in current price terms using a more stable currency with which the country has a consistent money market/foreign exchange relationship, e.g., with the US dollar. Judgments on, and justification for use of current and constant prices and the foreign exchange rates used should be stated early in this section of the RRP.

4.3.6.5. Presenting Data

4.3.6.5.1. Projected Balance Sheets, Income Statements, and cash flow statements of the project entity should be shown in summary and detailed tables, to permit comparisons between past and forecast data and to allow for ready identification of trends. The data should be consistent with demand and disbursement forecasts elsewhere in the report. Because the presentation and interpretation of figures in periods of changing prices and inflation is both difficult and risky, staff should assist readers whenever possible by highlighting underlying trends in data, particularly where these may be obscured by substantial rates of inflation.

4.3.6.5.2. For example, the cost of wages paid by an EA over 3 years may have risen by 150%, apparently matching commodity or other price rises of 140-160%. In fact, however, government, or employers, may have restricted the growth of wage rates (to, say, only 25%) during the period, with rising manpower numbers accounting for the rest of the 150% increase. The long-run effect may be that a wages “explosion” is due in the project period, and this should be reflected in forecasts.

4.3.6.5.3. This kind of elucidation of data is central to good analysis. In cases where changes exist in significant elements of cost (e.g., labor, fuel) or revenues, the analysis may be given in both current (nominal) terms and real (constant) terms together with physical amounts (e.g., numbers of employees; tonnes of oil consumed) and the implicit assumptions for future forecasts should be explicitly stated.

4.3.7. Forecasting Assumptions

4.3.7.1. Financial forecasting requires analysts to make assumptions, even though as many factors as possible in an analysis should be based on researched and actual empirical performance data.

4.3.7.2. A new project will require assumptions to be made by its designers and by the analyst regarding input costs, quality and quantities for both investment purposes, and for operation and maintenance. Therefore it is essential that the analyst should list all assumptions, and the base date of the data, used in compiling the analysis in an Appendix to the RRP, as well as in the Project File.

4.3.7.3. The basis for assumptions should also be indicated, and in cases where an assumption is critical, and possibly contentious in nature, the grounds or basis for its adoption must be stated in the RRP text. An efficient management of an EA should be continuously monitoring costs and prices. Therefore, to be assured that this takes place, the financial analyst should request the EA to provide an annual review, as a contribution to project supervision, of the validity of key (critical) assumptions used (e.g., inflation rate, forecast costs of principal imports—like petroleum products, cement).

4.3.7.4. The listed assumptions in an RRP appendix and Project File should be used as a key supervision tool, by requiring the EA, as part of the financial reporting requirements to provide annual updates of specific (critical) assumptions requested by the financial analyst. By this means the financial analyst can maintain a continuous review of the factors on which the financial projections were based, and obtain early warning signals of potential deviations from the forecasts.

4.3.7.5. In the event that the borrower or EA is unable to provide the necessary data for updating, the analyst is responsible during supervision for obtaining the requisite data and preparing an annual revision to the Assumptions Appendix of the RRP.

4.4. Measuring Performance

4.4.1. Introduction to Measuring Performance

4.4.1.1. Revenue-earning projects operate in the public and private sectors of member countries' economies. The advice in this subsection is broadly applicable to institutions in both sectors. However, there are good reasons for applying performance measurement to the operations of a nonrevenue-earning project particularly to measure the efficiency of its use of a project's resources, including human resources.

4.4.1.2. ADB encourages the application of financial performance measurement techniques to revenue-earning EAs that implement and operate projects financed using ADB loans, and which typically apply these factors in the designs of their primary cost recovery mechanisms. More specifically, they apply to all revenue-earning enterprises for which financial performance necessary to achieve the project objectives agreed between the borrower and ADB needs to be covenanted in legal agreements.

4.4.1.3. However, because each sector contains subsectors which may not be mutually compatible, either in their fiscal and social objectives, or in detailed aspects of their accounting treatment and financial reporting, sector-specific guidance may be provided in supporting guidelines at a later date by ADB. Nevertheless, this subsection does provide examples from different sectors to explain its concepts, and these may be used by ADB staff as guidance for financial performance measurement techniques in these sectors.

4.4.2. Objectives of Measuring Performance

4.4.2.1. ADB's objectives in using performance measurement techniques as a key element in the management of projects is to: (i) provide the managements of the borrower, the EA, and ADB with an effective means of measuring the progress of a project, of its many components, and the adequacy and timeliness of provision and use of funds; (ii) regularly assess the potential for achieving the technical, financial, and economic objectives of the project; (iii) determine the form and nature of corrective actions necessary to achieve targets measured by performance indicators; and (iv) assist in defining new or modified performance measures that may be more effective, and to replace those that are ineffective.

4.4.2.2. The OGC takes the key financial performance objectives agreed with a borrower and an EA at appraisal and loan negotiations and translates these into financial covenants in loan agreements. Loan covenants, with the relevant performance indicators

incorporated in the text, are established among other things, as a means of assuring the regular (normally annual) measuring of, among other things, the: (i) the enhancement (or otherwise) of specified sector(s) of the national economy concerned; (ii) the impact of the project on the community concerned; (iii) the impact of the project on key concerns, such as poverty relief, environmental protection; (iv) the extent to which the investment (including ADB's loan proceeds) is utilized effectively; (v) the extent to which the ADB's loan, other lenders or donors funds, and the government's counterpart contribution each are effectively used for the purposes intended, and (vi) the efficiency and effectiveness of the management of the EA in managing the project.

4.4.2.3. In addition to covenanted indicators, ADB will seek to agree with the EA concerned that other noncovenanted performance indicators will be subject to periodic reports to ADB.

4.4.3. Performance Indicators

4.4.3.1. The private sector in member countries, in particular, has developed various performance measuring devices to enable managements and stockholders to understand and/or be assured as to the performance of enterprises. The use of a number of these techniques is feasible in public sector enterprises, and, of course, in private sector enterprises which are financed by ADB.

4.4.3.2. Performance measurement ratios or indicators are an effective and concise means of transmitting financial information, particularly when used to compare time-bound performances. An inherent danger in the use of performance ratios and indicators lies in the brevity of the descriptions used, and sometimes of the information on which they are based.

4.4.3.3. These indicators are intended to convey information quickly and succinctly, but users may be misinformed unless they are provided with a clear understanding of the bases of the data used to compile the indicators and of any changes that occur to cause sudden fluctuations. As examples, the term "debt" can mean all debt both long and short term, or only long-term debt; or it can mean the historical value of foreign debt on its acquisition at local currency conversion rates at the date of acquisition; or it can mean the current value expressed in current US dollars etc.

4.4.3.4. A debt service coverage indicator may change significantly if the structure of interest rates falls sharply by reason of substitution of low interest-bearing debt for high interest-bearing debt.

4.4.3.5. Ratios and indicators should be displayed on a financial report or its tables in such a manner that readers can quickly appreciate the significance of the information and are left in no doubt as to the basis of the information used to generate a ratio or indicator. This means that financial analysts must include in their documents, particularly the financial projections, and in the Project File, the assumptions used in compiling financial ratios and indicators.

4.4.3.6. The guidance on specific indicators provided in this section relates to specific indicators. It is provided to assist staff in determining the most appropriate ratios and indicators to use when measuring performance, including the most suitable methods for their compilation and incorporation in financial covenants.

4.4.4. Using Benchmarking Indicators

4.4.4.1. The use of benchmarks (or benchmarking) is a widespread practice of establishing a clearly defined performance measurement or indicator. They are used in most public and private sector organizations, by all forms of industry and commerce, and by military organizations. Dictionary definitions of a benchmark include a standard, a criterion, a standard of comparison, an indicator, a measuring stick, a yardstick, a barometer, a frame of reference, a gauge or index, (e.g., a Plimsoll line on a sea-going vessel). Often a benchmark is intended to denote optimum performance requirements; sometimes it is intended to set a minimum standard below which performance must not be allowed to fall.

4.4.4.2. Revenue-earning enterprises in the public and private sectors have benchmarks. Some are set for them by governing, regulatory, and advisory bodies; some they set themselves to establish local parameters of performance.

4.4.4.3. While regulators of utilities for some countries have tried to set national benchmarks, these have rarely proved to be practical and in countries such as the US (that has state regulators), UK, and Australia, the regulators for telecommunications, water, electricity, and gas have chosen to determine benchmarks for individual companies or regional groupings of companies. This is because each organization (and project) is unique.

4.4.4.4. Benchmarks for nonrevenue-earning projects are more difficult to establish. Non-financial mechanisms need to be used to indicate performance. Benchmarks/indicators such as “Mortality per million of population under age 45”, or “Percentage reduction in traffic accidents in urban areas”, are typical.

4.4.4.5. The Multilateral Development Banks have tended to avoid the use of the word “benchmark” in favor of “indicator”. A “benchmark” is regarded as having primarily an engineering connotation—a standard of performance that must be achieved or must succeed, whereas an “indicator” for use by these banks has come to be regarded as a form of measurement to determine progress towards project objectives.

4.4.4.6. The characteristics, or elements/ingredients of a performance indicator can be agreed between a borrower/EA and ADB at project appraisal and the resulting formula can generate a benchmark or indicator that the project is designed to achieve. Throughout implementation, and often during the operational period of a project, the performance of each defined characteristic or element is applied to the formula to provide the most recent measure of performance. The result is to be compared with the benchmark or performance indicator agreed between the parties at appraisal.

4.4.4.7. For the financial analyst, this means that, in addition to the traditional financial performance indicators, supplementary benchmarks or indicators may need to be agreed with the borrower.

4.4.4.8. It is good practice to select no more than about 12 benchmarks or indicators. While 12 is not an absolute rule, the use of more can be confusing, and less may not provide the necessary wide coverage. About half this number should focus on implementation, and the remainder on outcomes and impact for use in project supervision and evaluation.

4.4.4.9. The Knowledge Management section of the web-based Guidelines provides a copy of the World Bank’s *Performance Monitoring Indicators Handbook*. This includes a detailed description of approaches to the compilation of performance indicators and about 15 pages of indicators for nine sectors.

4.4.5. Selecting Indicators and Covenants

4.4.5.1. Introduction

4.4.5.1.1. This section provides advice and guidance on the selection of performance indicators and financial covenants that are likely to advance and secure efficient and effective financial viability and financial integrity for the wide range of EAs that seek funding of revenue-earning projects from ADB. This section does not apply to FI. Specific advice and guidance on FIs is provided in section 6.4.

4.4.5.1.2. Recommending a specific performance indicator and a related financial covenant for a project in each sector or subsector is not feasible due to the prevailing wide range of sectors, subsectors, and country conditions. This section is intended to set out key issues that may be encountered and possible solutions that the financial analyst should consider.

4.4.5.1.3. The advantage of using financial covenants is that ADB expects the borrower and EA to make every effort to comply with the terms thereof to assure the financial viability and integrity of the project and the EA.

4.4.5.1.4. Financial analysts should encourage EAs to recognize that it is very useful for their management and the borrower (and ADB) to provide noncovenanted performance indicators in periodic and annual financial reports, and their regular review by Management and ADB can often provide critical information on an entity's operational progress and financial performance.

4.4.5.1.5. Performance is represented by indicators that are usually characterized by ratios expressed as relationships (e.g., percentages, relating absolute numbers) between two items of information (e.g., debt-equity).

4.4.5.1.6. The Multilateral Development Banks (MDBs), including ADB, use ranges of indicators drawn from the three categories below, with associated financial covenants, namely: (i) operating indicators, (ii) capital adequacy indicators, and (iii) liquidity indicators. ADB uses indicators selected from these ranges to measure EA performance.

4.4.5.1.7. The reference to the MDBs in the discussion above is intentional because it is important for financial analysts to recognize that they may be operating with an EA where another MDB has either already established performance and covenanted criteria, or may be seeking to do so. In such cases, the financial analyst needs to understand the rationale for the MDB's selections and, if possible, in the interests of the borrower and ADB, to agree with their use. In the event of failure to agree with the MDB, an issue should be notified to the Project Officer, borrower, the EA, and the MRM.

4.4.5.1.8. International commerce and industry, in addition to also using many of the above indicators, also select from a wide variety of other indicators to measure financial, production, processes, and service performance.

4.4.5.2. Questions Before Selecting Performance Indicators and Covenants

4.4.5.2.1. The following checklist should be consulted when selecting performance indicators and covenants:

- What is the basis for the available financial management and financial analysis data?
- Is it transparent, accurate, reliable, and the subject of an auditor's report and opinion, or prepared by a consultant with a reliable financial management track record?
- What are the current, or in the case of a "greenfield project", the most likely, financial performance weaknesses that should be given priority for correction (or prevention)?
- Which indicators and covenants could be the most appropriate to achieve correction (or prevention)?
- For ongoing operations of an EA, what are the deficiencies in cash management performance for at least the past 2 years (using audited annual financial statements)?
- How should they be corrected?
- Which indicators and covenants could be the most appropriate to achieve correction?
- What changes are necessary to ensure an adequate capital structure (debt/equity including reserves) for the EA?
- How can they be affected?
- What should be the time scale to achieve correction?
- Which indicators and covenants could be the most appropriate to achieve correction?
- Do the levels of revenue generation and collection need upgrading, prioritize the steps to achieve: (i) short-term improvements, and (ii) long-term improvements?
- Which performance indicators should be included in periodic performance reports (i.e., not subject to covenants)?
- Will ADB's sector operational experts or consultants confirm that each level of operating costs are, or will be, operating at optimum efficiency and effectiveness?
- If not, what performance levels are they proposing, and which financial performance indicators should be used to support their proposed operational performance upgrading?
- Does (or will) the EA have a financial management system from the date of project start-up capable of accurately reporting the financial performance data required in a timely manner?
- Does the EA have a track record of submitting interim financial reports and audited annual financial statements?
- Should this track record be improved? If so, how?
- Does (or will) the EA have a management system capable of developing and efficiently responding to the results of each proposed financial indicator and financial covenant?
- Does the EA have qualified and

experienced personnel who can interpret and monitor performance against the indicators or covenants?

4.4.5.3. Objectives of the Use of Financial Indicators and Covenants

4.4.5.3.1. The primary objective is to achieve and or sustain the financial viability and integrity of public and private sector projects and EAs that are financed by ADB. Borrowers and ADB that jointly agree on the achievement of this objective at loan negotiations recognize that its accomplishment may extend at least over the period of project implementation, commissioning, and achievement of a steady state of operations. This period will probably cover a minimum of 5 years.

4.4.5.3.2. Meaningful performance and financial forecasting over extended periods of time is not possible. Projected financial performance information can only be indicative, rather than realistic. There will be inherent risks that not only the designed project content and performance may change, but that the prevailing financial and economic conditions in which the project is to be constructed and operate will change. Recognition of the inherent risk means that ADB's and a borrower's agreed definition of the type of financial indicators and financial covenants with their specific measurement criteria at loan negotiations must change as physical, financial and economic conditions change in the future. The following references to PAI 5.03 are included to draw attention to ADB's facilities to address the modification of a performance covenant under changing circumstances.

4.4.5.3.3. PAI 5.03, Part B (Review of Covenants) recommends that ADB staff should report on the continued validity of special loan covenants (such as those used to prescribe financial performance) and, as standard practice, attach to the BTOR an appendix detailing the status of compliance with all covenants. In addition, PAI 5.03 (Part C: Follow-up Actions) addresses a borrower's failure to comply with loan covenants and recommends, according to circumstances, that staff should consider whether the covenant should be amended, whether an extension be granted, whether alternative measure should be introduced, or whether the covenant should be waived or deleted. It should be noted that a borrower may continue to comply, but the performance required may have changed to become more severe or constraining (for example, increased efficiency of inputs and/or outputs), thus reducing the validity of the covenant concerned. In such cases, ADB staff should also use the provisions of PAI 5.03 to introduce more meaningful performance requirements into a covenant.

4.4.5.3.4. The financial covenants should also enable reviewers to specify an agreed date or dates for subsequent reviews. The covenants should provide for earlier review in the event that the borrower/EA is not in compliance with the covenant at any time.

4.4.5.4. Financial Viability and Integrity of Projects and Executing Agencies

4.4.5.4.1. The achievement of this goal requires that the EA meets targets of physical, economic, and financial performance as specified in the RRP and agreed with ADB at loan negotiations. Specific definitions of financial viability and integrity should be defined in the RRP. These may be extensive, but as a minimum should include one indicator selected from each of the following ranges: (i) revenue indicators, (ii) capital structure indicators, and (iii) liquidity indicators.

4.4.5.4.2. The selected indicators should be the subject of financial covenants where agreement is essential to achieve the objectives and financial viability of the project and/or the EA. Noncovenanted indicators should be agreed with the EA and included in the reporting requirements provided by ADB to the EA at project start-up. Where appropriate, additional indicators should be included, either within covenants or in ADB's financial reporting requirements.

4.4.5.5. Cash Requirements

4.4.5.5.1. Most operating and capital adequacy indicators are formulated on the basis of accrual information. This means that they may not adequately disclose an EA's liquidity (actual cash) position. An exception is the cash-based Self Financing Ratio Covenant that provides a definition of cash availability for performance.

4.4.5.5.2. ADB's experience shows that lack of, or insufficient, cash are a major cause of nonperformance by EAs. Therefore, a liquidity indicator, preferably the Quick Ratio or "acid test", should be provided for each project, but note that this is a "snapshot" view at one point in time (e.g., balance sheet date). This "snapshot" defect can be substantially overcome by calling for a periodic report to provide a table of month-end quick ratio results for the preceding 12 months (or such other appropriate period).

4.4.5.6. Managing Operating Costs

4.4.5.6.1. ADB recommends to borrowers that their public and private sector revenue-earning enterprises should be required to meet a "reasonable portion" of their investment requirements from internally generated funds, after providing for costs of operation and

maintenance, taxes, incremental working capital, debt service, and any dividend requirements. The generation of this “reasonable proportion” is heavily dependant on the relationship between operating costs and operating revenues. The smaller the share of revenues consumed by operating expenses, the larger the amount available for meeting taxes, incremental working capital, debt service, and any dividend requirements with the residual to provide the “reasonable portion” of investment requirements.

4.4.5.6.2. It is critical that there should be an effective measure of performance for the level of operating revenues consumed by operating costs. This measure is the operating ratio. An alternative indicator, which should only be used to bring stability to a financially ill-managed EA, is the breakeven ratio and covenant.

4.4.5.6.3. Each of the projects listed in section 3.2.1 should be asked to provide an operating ratio in periodic and annual reports and, where necessary, in parallel with an operating ratio covenant.

4.4.5.6.4. In addition to seeking an overall reduction in costs, it may be necessary to select one or more categories of costs to seek specific reductions. Levels of salaries and wages frequently require specific indicators. There can be other costs, such as fuel, transportation, management and administration, etc. that should be the focus of the EA’s and ADB’s attention by use of indicators.

4.4.5.6.5. Where an operating ratio indicator is to be installed using a financial covenant and it is proposed that the levels of operating costs should decline in real terms over a defined period, the covenant should define the appropriate performance indicator(s) and the selected years of covenanted performance.

4.4.5.7. Managing Operating Revenues

4.4.5.7.1. Where there is a need to assist an EA to improve its revenue generation, either in parallel with operating cost improvements, or with respect to improving operating revenues only, the Operating Ratio should also be used with appropriately designed performance indicator and the respective years of recommended performance.

4.4.5.7.2. Indicators should be used to show the performance of each revenue category (e.g. domestic, commercial, industrial, etc. or passenger traffic, freight traffic, etc.). Typical indicators are “Percentage Growth in Revenues” and “Gross Profit Margin” together with billing performances (number of consumers billed by billing periods, or annually).

4.4.5.7.3. Where an operating ratio indicator is to be installed using a financial covenant, and it is proposed that the levels of operating revenues should increase in real terms over a defined period, the covenant should define the appropriate performance indicator(s) and the respective years of covenanted performance.

4.4.5.8. Asset Revaluation

4.4.5.8.1. ADB and other MDBs have, in the past, accepted the use of both historical cost accounting, and modified historical cost accounting (where assets are revalued on a regular basis). While both these accounting methods are consistent with IAS, historic cost accounting is the benchmark treatment, with revaluation the alternative. However, ADB and the other MDBs will seek to agree on a consistent policy position on the revaluation of assets, or otherwise, as part of the harmonization exercise.

4.4.5.8.2. In the meantime, and in keeping with general ADB practice, asset revaluations should be undertaken where that is the standard practice of the particular country. However, if asset revaluations are undertaken: (i) the whole class of assets should be revalued at the same time (e.g., land); (ii) a robust methodology should be applied that accords with generally acceptable practices (e.g., as applied by the International Valuers' Association), the use of price indices and other less robust revaluation methods should not be used; and (iii) the assets must be revalued on a regular basis (e.g., every 3 years).

4.4.5.9. Managing Funds for Investment and/or Reserves

4.4.5.9.1. The rate of return on net fixed assets is appropriate under low inflationary conditions. When inflation is forecast to exceed 7% per annum over the 5 years from the date of loan effectiveness, the practice has been to require a periodic revaluation of assets.

4.4.5.9.2. Where a self-financing ratio covenant is proposed, ADB's current version calls for cash generation (rather than funds generation). This change was made to reflect the need for an EA to be able to meet its commitments in cash with the objective of encouraging contractors and suppliers to provide timely support for the project. However, this modification will only be successful if the EA effectively meets the terms of the covenant, by generating cash to support self-financing.

4.4.5.9.3. Each of the projects listed in section 3.2.1 should be asked to provide either (i) a rate of return on unvalued net fixed assets; or (ii) self-financing ratio indicator, in periodic and annual reports. One or both of these indicators may be included as financial covenants.

4.4.5.9.4. The objective of using both indicators in covenants would be to try to ensure that the EA generates sufficient cash to at least meet the self-financing ratio. This latter ratio should be established at a level that is estimated to correspond to the funds required to support the rate of return indicator.

4.4.5.10. Assuring Capital Adequacy

4.4.5.10.1. All capital has a cost, even in circumstances where a government may waive interest or dividends on equity (grants), or where a donor may provide a grant. This latter case represents the cost to another worthy cause that did not benefit from the grant proceeds and had to forego the benefit, and possibly find an alternative at a cost.

4.4.5.10.2. Capital primarily comprises equity, loans, and grants. Typically the highest cost is equity, due to the risk of a failing investment. Loans are normally at a lower cost than equity although short-term funds in high risk/inflationary conditions may exceed long-term equity cost (but under such conditions, the latter may not be available).

4.4.5.10.3. An EA that seeks capital should minimize its capital costs by seeking the lowest cost selections between loans and equity; the latter can be either obtained from investors or from retained earnings (which are frequently measured by the return on investments).

4.4.5.10.4. The effectiveness of such a policy is typically judged by the debt-equity ratio. While it may be argued that a revenue-earning EA that is controlled and funded by government should not be concerned about the level of its debt, recognize that such loans usually are part of a government's borrowing ceiling, and, as such, may deprive other government agencies of scarce funds.

4.4.5.10.5. When redistribution of resources is a key element of ADB's policy for the country concerned, a revenue-earning entity should be encouraged to generate revenues to make surpluses available for redistribution by government, providing the EA is able to retain sufficient funds to assure its own financial viability and integrity.

4.4.5.10.6. A debt-equity ratio will vary according to an EA's financial policies and perhaps the government's also, where the entity is in the public sector. The long-term aim should be to sustain a level of cost of capital that virtually balances between the two sources of funds. A 60:40 debt-equity ratio should imply that the cost of equity is about 1.5 times that of loan interest rates—or (say) 12% for equity to 8% for loan interest per annum. If the equity proportion in the indicator should exceed the level of debt, this can mean that the EA should be seeking an improved return on its capital.

4.4.5.10.7. Delinquent payers with a poor capital structure, and poor earnings records will attract high loan rates. As an example, a public sector water utility with a high level of government equity and loans from MDBs and similar concessional lenders will have serious difficulty in breaking out of that pattern. Unless EAs can develop a record of timely settlements and earnings growth that will attract lower cost loans, availability of venture equity will be scarce, should it seek privatization.

4.4.5.10.8. ADB, therefore, encourages its borrowers to achieve satisfactory debt-equity ratios and debt-service coverage performance as a means of attracting other lenders to replace ADB as a lender of last resort.

4.4.5.10.9. In addition, ADB may wish to limit the debt that a borrower/EA may incur, sometimes to encourage the use of equity, usually through internal cash generation, but also to prevent an EA from borrowing for noncapital purposes, such as supporting declining operating revenues.

4.4.5.11. Deciding on Indicators

4.4.5.11.1. The financial analyst should:

- Identify all factors that could prevent, or limit the effectiveness of, financial sustainability of the project and of the EA's own performance. Using these factors, determine the most efficient financial and nonfinancial performance indicators that would reflect increases in exposure to financial failure.
- Recommend financial performance indicators that would give early warning of actual or approaching financial management failures by selecting at least one financial performance indicator from each of the revenue, capital adequacy and liquidity financial indicators referred to above, plus any necessary additional financial performance indicators.
- Establish recommended dates of performance achievement and review where the EA will be required to adjust financial performance during project implementation and operation.
- Recommend those financial performance loan covenants that should cause the borrower and the EA to take action to limit or remove the exposures.
- Insist that all forms of financial management weaknesses be either eliminated before that time, or that the financial commitments of the proposed project be scaled down to levels that the EA would be able to sustain (because an EA's financial management system must be sustainable from the date of start-up).
- Develop a rationale for the use of each indicator selected for inclusion in the RRP.

4.4.6. Operating Indicators and Covenants

4.4.6.1. Introduction

4.4.6.1.1. Before commencing a detailed review of the various measurement methodologies, it is appropriate to set out ADB's objectives in using such techniques. The private sector in member countries, in particular, has developed various performance measuring devices to enable managements and stockholders to understand and/or be assured as to the performance of enterprises. The use of a number of these techniques is feasible in public sector enterprises and, of course, in private sector enterprises that are financed by ADB.

4.4.6.1.2. To assist an EA in achieving its financial objectives, as well as the government's economic objectives which may be supported by an ADB loan, ADB wishes to be reassured that the operational objectives of an EA and, where appropriate in the public sector, agreed upon with the borrower, will be met at least through the life of the project.

4.4.6.1.3. These objectives are translated into covenants by the General Counsel and are established, among other things, to enhance the national economy concerned and to ensure that the investment (including ADB's loan proceeds) are utilized effectively.

4.4.6.1.4. Performance measurement ratios or indicators are an effective and concise means of transmitting financial information, particularly when used to compare time-bound performances. An inherent danger in the use of performance ratios and indicators lies in the brevity of the descriptions used, and sometimes of the information on which they are based. As indicators, they are intended to convey information quickly and succinctly, but users may be misinformed unless they are provided with a clear understanding of the bases of the data used to compile the indicators and of any changes that occur to cause violent fluctuations.

4.4.6.1.5. Typically ADB loan/project agreements provide the necessary definitions, but care should be taken when comparing indicators between ADB-financed projects and non-ADB-financed operations, where the definitions may not be readily available. As examples, (i) the term "debt" can mean all debt both long and short term; or only long-term debt; or it can mean the historical value of foreign debt on its acquisition at local currency conversion rates at the date of acquisition; or it can mean the current value expressed in current US dollars etc.; and (ii) a rate of return on net fixed assets in operation indicator may change significantly if inflation becomes severe and there is no corresponding revaluation of assets.

4.4.6.1.6. Ratios and indicators should be displayed on a financial report or its tables in such a manner that readers can quickly appreciate the significance of the information and are left in no doubt as to the basis of the information used to generate a ratio or indicator. This means that financial analysts must include in their documents, particularly the financial projections, and in the project file, the assumptions used in compiling financial ratios and indicators.

4.4.6.1.7. The guidance in this section is intended to assist staff in determining the most appropriate revenue performance ratios and indicators to use, and the most suitable methods for their compilation and incorporation in financial covenants.

4.4.6.2. Rate of Return

4.4.6.2.1. Section 3.6.2.2 discusses the application of this indicator in relation to investment projects. The conventional concept of a rate of return is a measure of the efficiency of the use of operational assets, or alternatively, a measure of the return on invested capital compared with other opportunities to invest in the market place. This is particularly true at the margin (i.e., it is illogical to invest in assets if their yield is less than that obtainable for alternative uses of capital).

4.4.6.2.2. The cost of capital is also proxy for when a utility should, or should not, put its money in the money market instead of buying an asset. But the application and use of the rate of return concept has been broadened in its application to the measurement of performance of public sector enterprises.

4.4.6.2.3. The rate of return on net fixed assets in Operation is a common financial performance indicator used in industry and commerce, and particularly by utility regulating agencies that seek to limit private sector profit maximization at the expense of unprotected consumers. Its application by MDBs in their financial covenants has been the opposite of that adopted by regulatory agencies. The latter have always sought to keep rates and prices of utilities within fixed limits, whereas the MDBs have treated the indicator as a minimum (i.e., the borrower should either achieve or exceed the indicator specified in a covenant). This alternative use, particularly in cases where the target is set too low, may result in the achievement of less than the effect desired by MDBs (as a measure of the efficiency of the use of invested capital) or justified on economic grounds, by encouraging politicians and managements to believe that, as long as they achieve the specific “target”, the financial health of an enterprise will be assured.

4.4.6.2.4. In practice, the rigid adoption of the prescribed target under inflationary conditions, in particular, or in times of financial stringency, may result in an adverse

impact on long-term performance by providing insufficient resources for investment and reserves, with resultant damage to the quality of the service and/or product. The rate of return for ADB purposes is the relationship between the net operating income and the net fixed assets in operation, and expressed as a percentage.

4.4.6.2.5. Expressed in other words, it is the net yield or return after tax achieved by the net assets in operation in an operating period. A rate of return indicates the return which should be achievable on invested productive capital of an enterprise in the country concerned; or the reasonable rate of return to the enterprise which it could obtain from average interest rates or returns for the similar amounts of capital invested in the market place (long-term borrowings and equity) which are usually higher than interest rates payable on long-term borrowings available to public sector enterprises and institutions. The definition of “reasonable” in these circumstances is a judgment call, and reference should be made to similar returns on investment elsewhere in the economy of the country concerned, or at the current interest rate structure, after making allowances for differences in the business risks and terms of comparable investments.

4.4.6.2.6. Net operating income after taxes is represented by operating income less operating expenses. Operating expenses include adequate maintenance and provision for depreciation, usually on a straight-line basis at a specified rate or rates but interest and other financial charges are not included as part of operating expenses (a detailed definition of all elements is included in the draft covenant). Capital invested in fixed assets normally is the average for the year of the net value of an enterprise’s fixed assets (Refer to 4.4.5.8 for a discussion of ADB policy on asset revaluation). Invested capital may also include adequate working capital, particularly for enterprises that require a relatively high proportion of working capital to conduct operations.

4.4.6.3. Self-Financing Ratio

4.4.6.3.1. Section 3.6.2.3 discusses the application of this indicator in relation to investment projects. The self-financing indicator, sometimes referred to as contribution to expansion, or contribution to investment, or cash generation, measures the net internal cash generation generated by an enterprise which is available for investment (expansion) purposes, usually to contribute to its investment program, particularly the proposed project.

4.4.6.3.2. It is typically defined as a percentage of specified capital expenditures that are to be financed after meeting operating expenses, debt service, taxes, dividends, increases in working capital, and other significant cash outflows excluding capital expenditures. As such, a self-financing ratio indicator directly measures the adequacy of

internal cash generation to finance consistently an agreed proportion of investment requirements. However, a self-financing ratio, as for all performance ratios, should be determined on the basis of discussions of financial policy with the enterprise, the sector and center/state economic and financial ministries/departments' officials.

4.4.6.3.3. It should be logical; it should not be a "traditional" number which has been used in the past, or is in the ongoing loan covenants etc. It should be a carefully measured ratio which will directly support current and future policy objectives.

4.4.6.3.4. The percentage of internal cash generation to be specified is usually derived from the financing plan and financial projections for the period under consideration (which typically may be the project construction period plus 3 to 5 years beyond completion), after reflecting policy decisions (agreed by ADB) on equity financing versus debt financing, and debt servicing principles.

4.4.6.3.5. The principal method of determining this percentage is by comparing the net funds generated in a given year with the average capital expenditures for a representative period. This should consist of 3 years, including the year just past, the current year, and the next following year. The data for the current year and the next following year should be supported by a firm budget.

4.4.6.3.6. The often uncertain nature of future investment programs may make it necessary to provide for periodic reviews of the percentage(s) of internal cash generation. When a self-financing ratio indicator is used, the rate of return indicator for the enterprise should also be estimated and its adequacy should be judged on the basis of the considerations stated in that Section.

4.4.6.3.7. The financial analyst should encourage the policy-makers in an enterprise and the government concerned to address the issue of what should happen when investments decline, i.e., when the funds generated through the use of a self-financing ratio are greater than the yield specified in a loan agreement. For example, if a self-financing ratio of 20% generated about \$20 million equivalent annually for an enterprise, and the investment program declined to about \$40 million annually, or even to less than the yield of the ratio, what should the policy be vis-à-vis this "surplus" and the self financing ratio itself.

4.4.6.3.8. Two matters should be actively pursued. First, the enterprise should be encouraged to meet as much of its capital development requirements (asset financing) as possible, and therefore even if the ratio reached 100%, the benefit would accrue to the enterprise, its consumers, and to the government, particularly if foreign loans were no

longer needed. Second, either the government has undoubtedly provided equity in the past for the development of the enterprise (and therefore the sector concerned) and is entitled to receive payment for the use of that capital in the form of dividends—or even in the form of repayment of capital contributions to reemploy the resources in other less fortunate sectors, or enterprises within the same sector. Or, in cases where the self-financing ratio is a sector-specific policy, this repayment of capital, or the payment of dividends on equity of government, could commence once the balance of funds in excess of the yield of the specified self-financing ratio, even though the enterprise was still incurring debt, on the grounds that this “surplus” represented the funds available for distribution within the sector.

4.4.6.3.9. However, the self-financing ratio will continue to present the financial analyst with a paradox: (i) the higher the assessed risk, the higher the self-financing ratio required by prudent creditors; but (ii) weaker enterprises probably have higher risks and probably are unlikely to afford a high self-financing ratio, with the result that only limited investments are possible, thus contributing to (and not allaying) inherent weaknesses with the inevitable adverse impact on the community, the economy, and government generally.

4.4.6.4. Operating Ratio

4.4.6.4.1. Section 3.6.2.5 discusses the application of this indicator in relation to investment projects. The objective of an operating ratio is to measure operating efficiency. It should be used to address the efficient use of manpower, materials, transport, and other factors of production. It should not be used to measure cash flow requirements.

4.4.6.4.2. The operating ratio indicator expresses operating expenses, including adequate maintenance and depreciation, as a percentage of revenues. It is easily understood and calculated from income statement data. The lower the ratio, the better is the borrower’s financial performance; a ratio up to 100 means that revenues are sufficient to meet operating expenses (a ratio of 80 means that operating expenses consume 80% of revenues).

4.4.6.4.3. It does not provide for financial obligations for debt repayment or contributions for expansion, except indirectly to the extent that revenues fund depreciation. It is difficult to design an operating ratio indicator to achieve the objectives of a return on investment indirectly. In the event that the operating ratio at project preparation is inadequate, or is already low (below 100), the financial analyst should discuss with the project engineer and the enterprise the efforts which should be made to improve the ratio without increasing revenues by increases in charges.

4.4.6.4.4. There may be a need for supplemental loan covenants that address physical performance, or for an action plan linked with the covenanted operating ratio, to improve efficiency in the enterprise (e.g., water and/or sanitation employees per 1,000 house connections).

4.4.6.5. Breakeven Ratio

4.4.6.5.1. Section 3.6.2.6 discusses the application of this indicator in relation to investment projects. The breakeven indicator, which is infrequently used, compares the total revenues of an enterprise with the operating expenses plus the amount by which debt service requirements exceed the provision for depreciation. The objective is to measure an enterprise's efforts to breakeven, without providing any surpluses for investment, dividends, etc.

4.4.6.5.2. It is typically used by transportation enterprises (buses, trams) which are frequently heavily subsidized, where the indicator can be used by these institutions to measure their efforts to obtain sufficient revenues, exclusive of subsidies, to match operating expenses and debt service.

4.4.6.5.3. This indicator, and a covenant which may be used to support its use, should not be introduced without a detailed justification at fact-finding, and in the appraisal. The justification should include a detailed breakeven analysis, displaying the effects of changes in volume on the breakeven point(s), and on profitability and cash flows.

4.4.6.5.4. The discussion should include a forecast of when a self-financing ratio should be introduced, and if debt service is not being met completely, or at all, the steps which the government and the enterprise propose to take to recover debt service from consumers through the charging system(s) of the enterprise.

4.4.7. Capital Structure Indicators

4.4.7.1. Introduction

4.4.7.1.1. Public sector and private enterprises need an appropriately balanced, adequate capital structure, even though for the former, the objective of return on capital may be tempered by socioeconomic policy considerations.

4.4.7.1.2. It would be possible to provide all the capital of a public sector enterprise as equity and thus avoid all financial risks. This is undesirable since this would forego the benefits of the financial discipline associated with the obligation to service debt. Limits on

the liability of public sector enterprises to contract additional debt also prevent the use of borrowings to postpone cost reductions (or increase of charges), to maintain earnings at an adequate level.

4.4.7.1.3. It is also an oversimplification to view the equity capital in a public sector enterprise as having no recognizable financial cost because the funds used have an opportunity cost regardless of where they are invested. Also the cost of capital is a legitimate cost that owners/consumers should pay, regardless of whether there is no debt in the structure of the enterprise. Moreover, in a public sector enterprise, earnings must be in excess of debt service obligations (and/or dividend payments on equity) to provide a safety margin, and to provide additional funds for investment. The previous paragraph is a typical commitment entered into by an enterprise to enable it to continue to incur debt, particularly to draw down the ADB's loan.

4.4.7.1.4. The enterprise can use these funds for its capital requirements or to pay dividends that the government can apply for other developmental or fiscal needs. Capital structure indicators serve to indicate an assurance (or otherwise) of the continued solvency and financial viability of revenue-earning enterprises by imposing prudent limits on their long-term borrowing. However, they are not designed as revenue-generating indicators and thus cannot be used as operating covenants.

4.4.7.2. Capital Structure as a Debt Limiter

4.4.7.2.1. An EA that does not incur debt after agreeing to use a capital structure indicator, or refrains from further borrowing after a period of compliance, even though the agreed performance criteria subsequently may not be complied with, is not in breach until it again commences to incur debt.

4.4.7.2.2. The limits of the indicator should be set to enable debt service obligations to be met under adverse as well as normal business conditions, taking into account business and financial risks.

4.4.7.3. Capital Structure and Risk Management

4.4.7.3.1. Business risk refers to the inherent uncertainties, or variability of expected returns, related to the nature and type of business activity of a particular enterprise. The financial risk is the additional risk inherent in the obligations associated with borrowings (interest and debt repayment) which must be met irrespective of the results of operations.

4.4.7.3.2. The foreign exchange risk is an extension of the financial risk when the obligations associated with borrowings (interest and debt repayment) that must be met irrespective of the results of operations are expressed in a currency other than the local currency.

4.4.7.3.3. The principal foreign exchange risk arises when the local currency declines in value against the foreign currencies in which the obligations must be paid, resulting in the cost (or value) of the obligation being increased by reason of the additional local currency required to purchase the requisite amount of foreign exchange to meet the obligation.

4.4.7.3.4. If the local currency increases in value against the foreign currency obligation, the borrower requires less local currency to purchase foreign exchange to meet the obligation (and therefore, in this case, there is no foreign exchange risk).

4.4.7.3.5. A well-managed entity with a low business risk will have a fairly dependable cash flow and can assume higher financial risks in the form of a large proportion of debt to equity in its capital structure. This would apply, for example, to a public utility with a relatively steady and increasing demand for its services, little competition from other sources of supply, and fairly dependable production facilities. On the other hand, an entity which may be subject to wide variations in demand and prices, such as a steel company or a coffee estate, is likely to have substantial swings in its cash flow from year to year. It should therefore have a relatively conservative financial structure with low fixed financial obligations.

4.4.7.4. Inflation and the Capital Structure

4.4.7.4.1. The risk of inflation is another factor that affects the cost of capital and decisions on capital structure. Although inflation may lower the burden on servicing outstanding debt at fixed terms, it may increase the financial risk associated with loan capital, since the earnings of an enterprise may not keep pace with inflation.

4.4.7.4.2. The interest payable on long-term loans at fixed terms may include a substantial inflation premium over the returns lenders would otherwise accept for the business and financial risks they are assuming. Alternatively, long-term loans may be available only if loan amounts and repayments are indexed for changes in the value of money, or if the interest rate varies with the current cost of borrowings.

4.4.7.4.3. The impact of inflation on financial risk is greatest when only short- or medium-term funds are available, and the enterprise is exposed to the risk of being

unable to refinance at maturity or of having to pay higher interest rates for renewal. The risks associated with borrowings under inflationary conditions, therefore, must be carefully appraised in determining a prudent capital structure. Inflation also increases the working capital requirement of enterprises.

4.4.7.4.4. The negative effects of inflation often outweigh the positive effects of lower debt service, and after a few years, the impact may be of undercapitalization.

4.4.7.5. Equity versus Debt

4.4.7.5.1. Equity investors, because they are subject to the prior claims of lenders and have no fixed promises of returns, will usually expect a higher return on their capital than lenders. Like lenders, equity investors will accept lower or higher returns when they judge the risks to be low or high. They will consider their risk to be lower when equity is high in relation to debt, and vice versa.

4.4.7.5.2. Thus, when a private enterprise is being established, or is raising funds for expansion, the capital invested ideally should be structured to balance the lower financial costs of loan funds against the higher costs of equity capital and provide for long-term financial stability at minimum cost.

4.4.7.5.3. Differences in the capital structure of enterprises in the same industry or in industries with similar business risks may reflect varying management judgments on the trade-off between security and risk, or an unwillingness to adequately fund replacements or expansion, all subject to limitations imposed by protective covenants agreed with lenders.

4.4.7.6. Debt Service Coverage

4.4.7.6.1. Section 3.6.3.3 discusses the application of this indicator in relation to investment projects. The debt service coverage ratio measures the extent of the coverage of an enterprise's debt service by its internal cash generation over a defined period.

4.4.7.6.2. A performance of one means that there is precise coverage, while a performance in excess of one (e.g., 1.3) indicates a margin of safety in covering debt, plus yielding surplus funds for investment etc. This indicator recognizes that the terms of a debt are more significant than the amount in measuring borrowing capacity. Except for Financial Institution Indicators, the debt service coverage ratio is used for revenue-earning enterprises in all sectors, particularly for public utilities, transportation, and industry, including agro-industry. There are two versions of this indicator: (i) based on historical earnings, and (ii) based on estimated future earnings.

4.4.7.6.3. Version (i) is based on historical earnings. It can address either the latest completed fiscal year or a more recent 12-month period. It is more objective and certain than version (ii) which is based on estimates of future earnings. In calculating the internal cash generation, (i) permits an adjustment to be made for changes in sales prices introduced during the year as though they were in effect throughout the year. Nevertheless, this version (i) may be constraining because it gives no credit for the earning power of the investments to be financed by the proposed loan, or any other expected increases in earning power (ADB's loan agreement clause "Except as ADB shall otherwise agree" may be used to overcome this problem, where appropriate).

4.4.7.6.4. Conversely, an EA that fails to implement a project within the grace period of the related loan can be faced with debt servicing demands that cannot be met by the unfinished investment, which is not yielding revenues.

4.4.7.7. Debt-Equity Ratio

4.4.7.7.1. Section 3.6.3.4 discusses the application of this indicator in relation to investment projects. The debt-equity ratio represents the relative proportions of these two sources of funds in the capital structure of an entity. This ratio is not appropriate for measuring FI performance.

4.4.7.7.2. If a capitalization of \$240 million is financed by long-term debt of \$180 million and by equity of \$60 million, the debt-equity ratio would be presented as 75:25. This conventional presentation is normally used for all sectors except FIs.

4.4.7.7.3. The debt-equity ratio indicator is normally used only for new enterprises, such as a "greenfield" industrial plant where, for lack of an earnings record, application of the debt service coverage covenant is not practicable.

4.4.7.7.4. Except for FIs, the debt-equity ratio helps to maintain a satisfactorily balanced financing plan in an enterprise's early years, but a debt service coverage covenant should be used also, because this is likely to become a more meaningful measure as output commences. It should then supercede the debt-equity ratio covenant after the first year or two of operations.

4.4.7.7.5. The considerations determining the magnitude of the debt-equity ratio are the same as those discussed for debt service coverage. It is generally inappropriate to have a debt-equity ratio higher than 60:40, but flexibility is permissible, depending on the sector or industry concerned, on the degree of capital intensity, and on the level of debt service commitments entered into.

4.4.7.7.6. Where the latter are not severe, a higher ratio may be admissible. For example, where the loan principal is repayable at the end of the term and inflationary conditions prevail; or the interest rate is fixed at a low level; or the prospects for continued intensive borrowing are negligible, giving prospects of declining debt-equity ratios.

4.4.7.7.7. Lower ratios than this are preferable for enterprises whose earnings are subject to wide fluctuations. Higher ratios, normally not greater than 70:30, may be acceptable for enterprises with very dependable earning power. However, there are a number of public sector enterprises, which are funded almost entirely by government debt, where the debt-equity ratio is 90:10 and sometimes 100:0.

4.4.7.7.8. In terms of sound commercial and financial management practice, such ratios are meaningless, but because the enterprises concerned are, in effect, government “departments”, there may be no adverse performance effects, save that debt service could reach unmanageable proportions should the governments concerned ever seek to recover real interest rates. However, in many of these cases, the “debt” is often nonrepayable, and interest rates are usually kept low. The indicator in these circumstances has no credibility.

4.4.7.7.9. It should be noted, however, that one of ADB’s long-term objectives for enterprises of this type is as a minimum to achieve self-financing status, and as an optimum to achieve privatization. For either option, an unbalanced debt-equity structure of 90:10 or higher will mean that the enterprise will be regarded in the capital markets as not creditworthy, and until it can adopt a structure around 60:40, is unlikely to attract institutional lenders.

4.4.7.7.10. However, an important side issue arises from the highly leveraged enterprises referred to above. While it may be reasonable to accept their status in terms of an abnormally high debt-equity ratio, the financial analyst must recognize that these enterprises are operating on free or very “cheap” capital.

4.4.7.7.11. ADB considers, generally speaking, that enterprises should pay for the use of capital, and that a reasonable interest rate should be levied. If this capital is not transferred in the form of loans and is injected instead as equity, this too has a price—probably a higher price than loan funds if it were sought in the money market. Therefore, the analyst should actively encourage the payment to government for this form of capital injection.

4.4.7.7.12. Any issues should be discussed at Project Preparation, and the RRP should contain a clear statement on the treatment proposed, and justification, therefore, particularly if the market price of funds is not to be levied by government.

4.4.7.8. Debt Limitation

4.4.7.8.1. Section 3.6.3.5 discusses the application of this indicator in relation to investment projects. The typical case when this restriction is sought through a loan agreement is when a public authority whose capital structure consists entirely or predominantly of debt, because of statutory requirements that all externally provided investment funds be advanced in the form of borrowing from government.

4.4.7.8.2. It is used infrequently and only where debt service coverage or debt-equity covenants cannot be applied, primarily because the latter ratio is meaningless. For example, the equity may be zero, when all liabilities are in the form of government loans.

4.4.7.8.3. An absolute debt limitation covenant limits the amount of debt that may be incurred annually to an amount agreed between the borrower and ADB, and is either a specified amount expressed in absolute terms, or specified as a proportion of the total capitalization. The borrower would require ADB concurrence before exceeding this limit.

4.4.7.8.4. The limit for new debt is fixed at a relatively small amount, which, together with the internally generated funds that are forecast to be available, permits the borrower to carry out minor plant replacements or improvements without consulting ADB. Whenever the borrower plans a major expansion it must consult with ADB. This form of covenant has substantial disadvantages. It is related to a stated amount of debt without consideration of its terms and without taking into account changes in an enterprise's financial requirements or debt servicing capacity; and it severely restricts an enterprise's freedom of action.

4.4.7.8.5. A more constructive solution would be to agree with the borrower that a substantial part of any loan by the government to the public sector enterprise would be subordinated and treated as quasi-equity capital. This would permit the use of the debt service coverage or debt-equity ratio covenants.

4.4.7.9. Capital Adequacy Ratio

4.4.7.9.1. Section 3.6.3.6 discusses the application of this indicator in relation to investment projects. The capital adequacy ratio indicator is used extensively in commercial banking, and is now being applied to most FIs. Section 6.4.3.1 describes the development, calculation, and application of this indicator in detail.

4.4.8. Liquidity Indicators

4.4.8.1. Introduction

4.4.8.1.1. Liquidity indicators are intended to measure the adequacy of an enterprise's working capital, i.e., an excess of current assets over current liabilities, to meet its current obligations in a timely manner and conduct its operations effectively without financial constraints. These indicators were generally used only when working capital requirements were significant, as in the case of most industrial and agro-industrial projects. However, the inability of many EAs to collect and manage their cash resources has brought these indicators into increased attention and popularity.

4.4.8.1.2. While these indicators were not normally used for projects where working capital needs were considered to be relatively small, they are increasing being deployed, particularly as noncovenanted reporting requirements.

4.4.8.1.3. The current ratio and quick ratio define a specified minimum liquidity ratio and corrective actions will be necessary when the actual ratio falls below the prescribed level.

4.4.8.1.4. The quick ratio (or acid test) is the preferred indicator because it ignores inventories that are frequently not readily realizable in public utilities (e.g., large water main pipes and electrical transformers that are stored for emergency use).

4.4.8.2. Current/Quick Ratios

4.4.8.2.1. Sections 3.6.4.2 and 3.6.4.3 discuss the application of these indicators in relation to investment projects.

Current Ratio

4.4.8.2.2. The current ratio is the ratio of current assets to current liabilities as of the date of the balance sheet. It is the measure of the adequacy of working capital and short-term liquidity, since it indicates the extent to which short-term obligations are covered by assets that are capable of being converted to cash in a period roughly corresponding to the maturity of the obligations.

4.4.8.2.3. Current assets are cash; cash equivalent; assets held for collection, sale, or consumption within the enterprise's normal operating cycle; or assets held for trading within the next 12 months. [IAS1.57]. Current liabilities are those to be settled within

the enterprise's normal operating cycle or due within 12 months, or those held for trading, or those for which the entity does not have an unconditional right to defer payment beyond 12 months. [IAS1.60].

4.4.8.2.4. The acceptability of a current ratio depends on the type of production and selling operations and the characteristics of the market for the output.

4.4.8.2.5. A ratio of less than 1.0 is generally unacceptable and usually a ratio substantially above 1.0 is deemed necessary. For example, an enterprise subject to seasonal or fluctuating demand for its output, or irregular timings of inventory acquisition/build-up, should have a current ratio high enough to carry the necessary inventories of goods in process and finished and saleable output pending actual sales—possibly as high as 4.0.

4.4.8.2.6. An enterprise such as a public utility, with steady inflows of funds from monthly billings and a good record for prompt collection, may operate with a current ratio as low as 1.0, or even marginally lower. An enterprise which has to transport at its own time and expense large quantities of inputs and finished goods for long distances will likewise require a high ratio.

Quick Ratio

4.4.8.2.7. An alternative and better test of liquidity is the quick ratio. The basic difference between this and the current ratio lies in the treatment of inventories, which are the least liquid of current assets and are also those on which losses are most likely to occur if business conditions are adverse.

4.4.8.2.8. The quick ratio is calculated by deducting inventories from current assets and dividing the remainder by current liabilities. In other respects, this form of covenant possesses similar advantages and disadvantages as the current ratio.

4.4.8.2.9. A quick ratio of at least 1.0 is usually prescribed. The current and quick ratio indicators have a serious deficiency in that they present the status of an enterprise at a point in time, and not its regular performance.

4.4.8.2.10. Distortions frequently occur, such as the case of enterprises relying on customers' advance payments for large delivery contracts, which if they do not take place, cause major shortfalls in cash, or if they occur as contracted, may make the ratio far higher than the actual consumption of inputs warrant.

4.4.8.2.11. It is feasible using this indicator to “window-dress” the enterprises’ financial status for presentational purposes at the reporting date.

4.4.8.2.12. The intention of covenanting this indicator is to require a borrower to not operate below the covenanted level. However, in practice it can be very difficult to determine defaults during a year. Therefore, the most useful application of this indicator is to request an enterprise to provide a graphic presentation of a series of status indicators at, say, monthly or weekly intervals for each year. In this way, the effective liquidity position can be better determined.

4.4.8.3. *Dividend Limitation*

4.4.8.3.1. Section 3.6.4.4 discusses the application of this indicator in relation to investment projects. The dividend limitation indicator, with a dividend limitation test, establishes the point at which the borrower is prohibited from declaring a dividend, the payment of which would cause the current ratio (or quick ratio, if that is the selected test basis) to fall below a specified minimum.

4.4.8.3.2. The minimum level of current ratio may be higher than the minimum required under a Current Ratio indicator because decisions on whether to pay dividends are often discretionary, and a stricter standard of prudent financial management can thus be applied to this context. Therefore, a borrower should be asked (through a covenant) not to make voluntary payouts of cash to its stockholders until it has taken further measures to establish and maintain the liquidity essential for operations.