

**Seok-kyun Hur**

Korea Development Institute

---

# **Successful Installation of MTEF to the Korean Fiscal System**

---

*Session 1-2 : Conceptual Framework*  
**PRESENTERS**



# Successful Installation of MTEF to the Korean Fiscal System

by  
*Seok-Kyun Hur, Korea Development Institute*

## 1. Introduction

The budget process in Korea begins in March when the Ministry of Budget and Planning (MPB) transmits the Guide to Budget Compilation to the line ministries. After negotiations between concerned parties, the budget draft is approved by the President and then presented to the National Assembly by October 2<sup>nd</sup>. The latter is supposed to approve the budget no later than December 2<sup>nd</sup>, well ahead of the new fiscal year that starts on January 1<sup>st</sup> of next year.

The current budgeting process in Korea is characterized by a lack of medium-term strategic perspectives on financial management. Macroeconomic forecasts contained in the Guide to Budget Compilation cover the next budget year only and no mention is made of the out-years. A medium-term fiscal plan was published in 1999, which included projections of fiscal aggregates and outlined priorities among the 12 broad spending categories between 1999 and 2002. It was subsequently revised in 2001. However, the plan remains largely indicative and, in practice, there is little formal connection between the plan and the annual budgeting process.

Another characteristic of the Korean budgeting process is the excessive reliance on the bottom-up approach. The Guide to Budget Compilation no longer contains a rough ceiling on the aggregate spending level (for example, one-digit increase in total). Nor does it provide a sectoral or ministerial allocation of the budget. As a result, budget requests for the next year across all line ministries tend to be unrealistically large, often implying a 20-30 percent growth from the current year's budget. The MPB then enters into a laborious period of negotiation with line ministries. The process becomes more painful because of the extremely segmented appropriation accounts - there are over 2,200 accounts (*Se-Hang*) and the MPB often negotiates with line ministries on sub-accounts (*Se-Se-Hang*) which total more than 6,000.

The current approach has certain merits. The budget authorities have large discretion over the total size of the annual budget and have used the power to contain and adjust expenditure growth to changing revenue conditions. To some degree, such myopism is inevitable in Korea where the socio-economic environment changes quite rapidly and unexpectedly. In addition, by emphasizing input control and regularity of budget execution, we find few cases of abuse or misuse of tax money.

On the other hand, the weaknesses of the current approach should not be overlooked. Without a long-term view on the appropriate level of tax burden, it can induce an ever-increasing expenditure size to accommodate rising demands from various sectors. It also fosters gradualism in budgeting and can hinder a strategic reprioritization of spending, exactly when the strengthened control on aggregate expenditure generates greater necessity for such reprioritization. Line ministries have little information on the availability of resources in the future and their planning function is severely limited. Limited planning function in turn reduces the effectiveness and efficiency of overall public spending.

Recognizing these shortcomings, the MPB is moving toward a medium-term expenditure framework (MTEF) and a top-down approach in budgeting. This year, it specified the aggregate level of the general account for the next year, which takes up the largest part of central government spending. It also asked line ministries to provide out-year projections of major program expenditures for fiscal years 2004 and 2005 together with the budget requests for fiscal year 2003. In addition, the MPB plans to designate a few organizations for a pilot study on top-down budgeting.

These are desirable developments, but we still have a long way to go before seeing the successful installation of an MTEF in Korea. The MPB has not set medium-term expenditure targets and has not provided line ministries with a sectoral allocation of the budget and medium-term forecasts on macroeconomic and other variables necessary to project out-year spending. Nor are there concrete guidelines on expenditure projections. For example, dividing the projection into three parts – for existing policies, for savings options, and for new policy initiatives – would be useful in identifying line ministries' spending priorities, but it has not yet been attempted at this stage.

One big challenge is the extreme compartmentalization and fragmentation of the budget, which is comprised of one general account, 22 special accounts, and 47 public funds. These accounts and funds are intricately inter-related with each other through complicated flow of grants and loans. Even when a sectoral allocation of the budget is set up, it will be technically very difficult to allocate the sectoral budget to accounts and funds.

Key questions in setting up an MTEF and introducing a top-down budgeting process include the following: How can we produce unbiased and credible medium-term macroeconomic forecasts? How can we overcome shortcomings of a compartmentalized budget structure, and establish an aggregate fiscal discipline? What are the guiding principles in setting up a medium-term aggregate expenditure level and allocating it across sectors and/or ministries? How can we minimize resistance and objections from line ministries to pre-determined sectoral allocation of spending? What are the technical details needed in out-year projections of spending? How much autonomy should be reserved for line ministries in top-down budgeting? What will be the redefined roles of the budget authorities?

The present study aims to answer these questions and produce operational plans to introduce an MTEF and top-down budgeting. It will first discuss general issues in budgeting, overview MTEF as recommended by international organizations and as practiced in foreign countries, and compare it with the current budgeting process in Korea. It will then propose an appropriate system for Korea.

The contents of the paper are construed as follows: Section 2 discusses motivational aspects of introducing MTEF and explores the requisites for successful installation of MTEF in Korea while comparing the current single year budgeting system with MTEF. Section 3 explores common pillars of MTEF system and provides suggestions for successful installation of MTEF in Korea. Finally, section 4 concludes.

## **2. General Features of MTEF**

### **A. Objectives and Means of MTEF**

The pursuit of MTEF is multi-purposed: First, it aims to maintain fiscal sustainability by reigning in excessive expansion of public expenditures<sup>1</sup>. Under the current bottom-up

---

<sup>1</sup> The idea of MTEF was devised originally in countries (e.g. Sweden and UK) suffering from heavy

budgeting system, conflicting interests among line ministries are often resolved by aggregate budget expansion beyond what is optimal. In contrast, under MTEF, there are two different types of ceilings- a global ceiling and sectoral ceilings. These ceilings are determined interdependently by considering medium term economic forecasts and sectoral demand estimates for public expenditures over the matching period. By requiring that the global ceiling be stricter than the sectoral ceilings, such a two-tier ceiling system can accommodate fiscal sustainability as well as flexibility of moving public resources across sectors.

Second, MTEF enhances the efficiency of public spending by setting national priorities. The public sector produces various kinds of public goods in an economy. Accordingly, a reprioritization procedure is very critical in determining a production portfolio of diverse public goods within the limited resources. Accompanied with a top-down allocation system, MTEF enables each public sector (line ministry) to make a self-motivated sectoral budget plan based on a longer time horizon. This in turn ensures the time consistency and effectiveness of government expenditure programs and enhances the possibility of these programs contributing to long run economic growth. In this context, the role of top-down resource allocation cannot be emphasized enough. However, the importance and complementary role of Top-down allocation with respect to MTEF does not necessarily imply that Top-down allocation is the only means of MTEF and the bottom-up approach is an absolute vice to avoid. Rather, a successful MTEF relies on both approaches of allocation. Of course, physical resources and information on macro economic forecasting should be delivered from top to bottom. In contrast, critical information for allocation of fiscal resources, such as production efficiency and demand quantity of specific public goods (or projects), should be transferred from bottom to top. Thus, a key to successful introduction of MTEF lies in finding harmony between top-down and bottom-up allocations.

Third, MTEF strengthens the function of the fiscal management system as an automatic stabilizer. According to traditional public finance theory, one of the roles of the public sector is the stabilization of an economy. The role of automatic stabilizers is critical in that it smoothes out the production stream of public goods and reduces swings in business cycles by absorbing shocks, which otherwise would be directly born by private entities. Figure 1 shows how a well-designed MTEF reflecting the medium term economic prospect can provide insurance to the economy by changing fiscal positions (deficit->surplus in the figure) in the course of a business cycle<sup>2</sup>. However, the power of stabilizers is limited because most of the aggregate shocks arising in the economy cannot be hedged. In other words, it means that complete stabilization is not achievable without affecting the fiscal balance.

---

government debt. However, due to the heterogeneity of the situation each country is faced with, the implementation of MTEF in practice varies from a country to another.

<sup>2</sup> Even though a result differs by the time spans of data, the current year-by-year system is shown to be pro-cyclical. We suspect that the combination of the year-by-year system and the strong emphasis on fiscal consolidation causes the pro-cyclical feature.

Figure 1. Business Cycle and Fiscal Balance

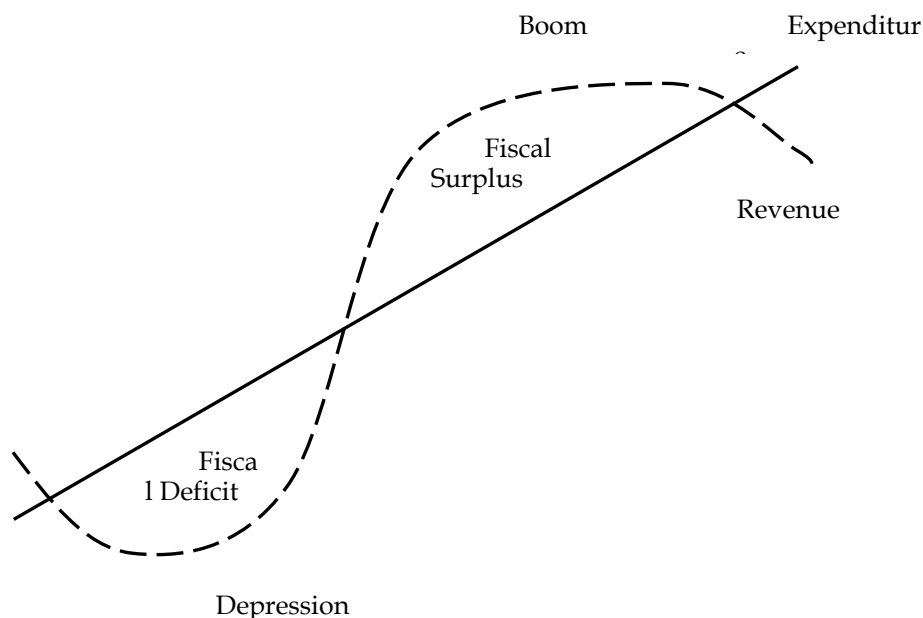


Table 1 describes the objectives of MTEF and matches them with relevant policy components in MTEF. In addition we provide analogies of MTEF to a consumer's intertemporal maximization program under uncertainty. Despite fundamental differences between the two, there are enough existing similarities to deepen our understanding about the MTEF.

Suppose a consumer with certain duration of life lives in a world full of uncertainties. Then, evidently his/her economic decisions should concern the following three dimensions: time, states, and sectors. To rephrase, he/she has to choose (1) how much to consume today instead of consuming tomorrow, (2) how many apples to consume instead of pears today, and (3) how much more to consume tomorrow in case of an event in comparison with the case of another event. Interestingly, each combination of an objective and a policy tool is analogous to each dimension of the consumer's decisions. Likewise, MTEF defines the functions of fiscal activities in a multi-dimensional space: First, MTEF is a mechanism, through which subsidiaries of a government are encouraged to compete with others by demonstrating cost efficiency and social need for public goods or services they produce. Second, MTEF provides insurance not only to subsidiary organizations but also to the aggregate economy. Budget allocation in consideration of long-term fiscal sustainability will induce precautionary fiscal savings for a rainy day. Third, budget planning based on the longer term prospect contributes to improvement in growth potentials through rational allocation of public resources.

Table 1. The objectives and their matching policy tools of MTEF

| Objectives  | Policy tools in MTEF and their analogies  |
|---|---|
| Fiscal Consolidation<br>(Cross-time substitution)                         | <ul style="list-style-type: none"> <li>● Setting a global ceiling and sectoral ceilings on the budget plan based on medium term economic forecasts</li> <li>● Analogous to consumption-savings decision by a private entity</li> </ul>                                    |
| Enhancing Efficiency in Public Spending<br>(Cross-sectional substitution) | <ul style="list-style-type: none"> <li>● Assigning sectoral ceilings based on national priorities and encouraging line ministries to allocate resources within their sectoral ceilings</li> <li>● Analogous to consumption bundle decision by a private entity</li> </ul> |
| Automatic Stabilization Mechanism<br>(Cross-state substitution)           | <ul style="list-style-type: none"> <li>● Smoothing public expenditures across time (in a business cycle) by assigning public expenditures within a medium (or long) term framework</li> <li>● Analogous to precautionary savings by a private entity</li> </ul>           |

Table 2. Comparison of Single Year Budgeting and Medium-Term Expenditure Framework (MTEF)

|  | <b>Traditional BUDGET<br/>(at Ministry level)</b>  | <b>M.T.E.F.<br/>(3-year-rolling program at Sector level)</b>  |
|--|--|---|
| AGGREGATE FISCAL DISCIPLINE<br>(to keep expenditure within the means)  | Focused on short-term macro-economic concerns<br>(with international agencies providing the discipline in many countries).   | Situates short-term macro-economic concerns within a medium-term macro-economic and sector perspective (3 years: $n+1$ , $n+2$ , and $n+3$ ). Involves building domestic macro-economic modeling capacity.  |
| LINK BETWEEN POLICY, PLANNING, AND BUDGETING<br>(Reflecting the government's capacity and willingness to prioritize expenditures programs) | Very weak because policy choices are made independent of resource realities. Thus policy is not sustainable and spending patterns may not reflect the priorities articulated by government | Policy making tightly disciplined by resource realities. Thus a much stronger link exists between policy making, planning, and budgeting. Spending reflects the stated priorities of Government.  |
| PERFORMANCE AND SERVICE DELIVERY<br>(Relating to operational performance of all resources human as well as financial)                      | Incentives for results in terms of outputs and outcomes are generally low because emphasis is on input control. Little attention to the predictability of budget funding.                  | Emphasis is on the delivery of agreed outputs and outcomes with available resources. Incentives are structured to increase the demand for evidence of good performance (accountability for sector managers for results). Consequently, service delivery should improve. |
| AUTONOMY OF CREDIT MANAGERS  | Generally low, because lack of discipline within the traditional budget framework is translated into detailed input controls   | Generally high because of greater discipline in setting and enforcing hard budget constraints plus accountability mechanisms that makes it possible for managers to be given more authority to determine how agreed outputs and outcomes should be achieved.            |

In contrast with the current single year budgeting system, the potential advantages of adopting MTEF are highlighted in [Table 2]. In an ideal situation, in which there is no information asymmetry, single year budgeting may produce the same level of outcome as MTEF. However, reality is that information asymmetry combined with various socio-economic uncertainties persists within a government as well as between the government (as a whole) and the public. Furthermore, generational inequity cannot be restrained due to dynamic inefficiency under the current single year budgeting.

Unlike other countries, which have already adopted MTEF, Korea does not have an apparent fiscal problem at the present. The annual budget is more or less maintained in balance and the ratio of government debt with respect to GDP is smaller than other OECD countries. Inefficiency arising in the process of allocating fiscal resources exists but is not big enough to attract the public's attention. In such a situation, it would be very difficult to address the need for introducing MTEF not only to the public but also to public officials. However, anticipating increasing social welfare spending following the rapidly aging demographic structure, we have to be reminded that MTEF serves as a precautionary measure. By taking precautionary measures before symptoms arise, unnecessary turmoil in the economy could be avoided.

## **B. Requisites and Key Processes of a Well-designed MTEF**

In discussing the optimal design of MTEF, the following policy environments should be taken into account: First, the major participants in this setup encompass the budgeting authority, legislative body, line ministries (including local governments), and the public. Among them, most of our discussion focuses on the relationships between the budgeting authority and line ministries as well as the relationships among the line ministries. Second, each participant has a heterogeneous motive. For example, each line ministry has an objective of maximizing the production of (a) public good(s), which it is assigned to produce<sup>3</sup>. On the other hand, the budgeting authority has an incentive to promote the nation's welfare across time and across states. Accordingly, the budgeting authority tries to enhance the production efficiency of public goods and find an optimal composition of various public goods to satiate the public's needs. In such an environment, a pareto efficient allocation would be reached in the absence of information asymmetry and other frictions. However, the reality confirms their existence. MTEF is a trial to overcome information asymmetry arising in the budgeting process. In this sense, we have to consider what elements should be included in MTEF in order to reduce social welfare loss due to information asymmetry.

Government budgets are prepared according to an annual cycle, but to be well formulated and to contribute to high-quality and sustainable services, they must take into account events outside the annual cycle particularly macro-economic realities, expected revenues, and longer-term needs of programs and of government's spending policies. This is why annual budgeting cannot be performed properly in isolation but has to be linked to planning, in the context of a multiyear framework.

A medium-term expenditure framework (MTEF) consists of a top-down estimate of aggregate resources available for public expenditure consistent with macro-economic stability; bottom-up cost estimates of carrying out policies, both existing and new; and a framework that reconciles these costs with aggregate resources. It is called "medium-term" because it provides data on a prospective basis, for the budget year  $t$  and for following years  $t+1$  and  $t+2$ .

---

<sup>3</sup> In a principal-agent context, the objective of the line ministry would be assumed to maximize the size of budget allocated to the ministry rather than the size of production.

MTEF is a rolling process repeated every year and aims at reducing the imbalance between what is affordable and what are demanded by line ministries. MTEF does this by bringing together policy-making, planning, and budgeting early in the budgeting cycle, with adjustments taking place through policy changes. It involves building domestic macro-economic and sector modeling capacity. Also, even if the whole of the Government's budgeting system is not working well, each sector is better off managing itself with a medium-term perspective.

A well implemented MTEF should: (i) link the Government's priorities with a budget within a sustainable spending envelope; (ii) highlight the tradeoffs between the competing objectives of the Government; (iii) link budgets with the policy choices made; and (iv) improve outcomes by increasing transparency, accountability, and the predictability of funding.

In detail, seven major requirements must be considered for MTEF implementation:

- **Good Macro-economic Policies and Reliable Forecasting:** Good macro-economic analysis and forecasts are needed as a basis for a MTEF. Inaccurate macro economic forecasting dilutes the credibility and feasibility of MTEF.
- **Adaptable Fiscal Policy and Instruments:** The MTEF approach is based on a strong link between macro-economic and fiscal policy. Plans for future expenditure must be based on reasonable estimates of prospective resources.
- **Reprioritization and Reallocation:** Behind the move to MTEF is a conviction that the annual budget by itself is a poor mechanism for shifting resources from lower to higher priority use. A major function of an MTEF is to provide a better mechanism for aligning budgets with policies.
- **Budgetary Discipline:** Budget allocations must be based on a hard aggregate budget constraint derived from what is affordable, and line ministries must live with their budget allocations.
- **Institutional Conformity and Absence of Bias:** An MTEF requires a supportive institutional base; that is to say, one in which the various actors use the MTEF as a framework within which expenditure decisions are made. In particular, political decision makers must accept the MTEF as the means by which resources are allocated.
- **Appropriate Parameters:** Designing an MTEF requires that its parameters be set. These parameters include the following: the definition of aggregate expenditure to be used, the relationship between the sectoral breakdown and the organizational structure of the government, the content of expenditure envelopes, the appropriate price basis for estimating future expenditures, the mechanism for its coordination with the annual budget process, and the degree to which it is to be flexed for different scenarios.

**Transparency:** Fiscal transparency and policy transparency improve the accountability of actors engaged in the MTEF process. Fiscal transparency means being open to the public about the structure and functions of government, fiscal policy intentions, public sector accounts, and fiscal projections. Policy transparency means being open to the public about what Government intentions are in a particular policy area, which outcomes are to be achieved, and the costs of achieving these outcomes. Also,

transparency means reporting actual performance with quality of outputs and results achieved.

An MTEF cannot be achieved without the operation of key government processes on which it will depend upon. For the MTEF to work, key supporting processes have to function in the following:

Table 3. Annual Procedure of MTEF

| CORE PROCESSES  | SUPPORTING PROCESSES  | PURPOSE   |
|---|---|---|
| <b>Define the aggregate resources</b>                                 | Macro-economic analysis, revenue forecasting and definition of sustainable fiscal policy.             | To provide a realistic estimate of the total resources available in the medium term to allocate to spending programs. |
| <b>Formulate and cost sectoral spending plans</b>                     | Spending ministries formulate sectoral expenditure programs (SEPs)                                    | To show sectoral objectives, programs and activities and their costs.   |
| <b>Reconcile available resources with sectoral spending plans</b>     | Politicians and other decision makers reconcile top-down constraints with bottom-up spending demands. | To reach agreement on medium term expenditure programs.   |
| <b>Set medium term sectoral allocations</b>                           | On the basis of relevant data, decision makers allocate the aggregate resources to sectors.           | To communicate to ministries a sectoral expenditure policy constrained by aggregate resources.                        |
| <b>Announce sectoral expenditure limits for year one of the MTEF</b>  | Formulation of annual budget.   | To ensure that the budgets prepared by ministries reflect agreed sectoral expenditure programs.                       |
| <b>Ensure that budget execution is in line with budget intentions</b> | Accounting, reporting and expenditure controls are used during the execution of the annual budget.    | To prevent excessive deviation from the annual budget and MTEF  |
| <b>Ensure that desired results are achieved</b>                       | Incentives for civil workers to perform. Ex-post audit and evaluation;                                | To align civil workers' and politicians' incentives with public goals.  |

A MTEF involves a radical change in the business of budgeting. Consequently, without political commitment, it has little chance of succeeding. Evidence also suggests that a comprehensive approach (entire government) is preferable for introducing an MTEF incrementally, starting with select sectors and then expanding coverage for the entire government. This is partly a question of data gathering, analysis, and reporting; and partly of people who can both supply and use the information, and the institutional mechanisms for coordinating the efforts of participants.

Most of the necessary changes for successful MTEF do not require high-tech solutions, but rather common sense and perseverance. In this sense, political support would be critical in order to succeed in introducing MTEF once and for all. The lack of political support is of concern because budgeting is still seen as a technical exercise mainly driven by the Ministry of Planning and Budget (MPB). Another reason is that politicians seem unaware of the

benefits of the new process, and still rely to a large extent on the old, incremental methods to obtain funding. Finally, the incentive for good budget preparation remains limited, because much is lost in the implementation, which is still driven by cash rationing.

### **C. Anticipated Outcomes from MTEF**

The MTEF approach stresses that expenditure management is about appropriate policies in the medium term, rather than about cash management in the short term. Where the available cash is the strongest influence on expenditure, management in the normal meaning of the term becomes impossible. MTEF provides more predictable program funding and therefore better management. From the adoption of MTEF, we expect the following outcomes:

- (1) Improve macro-economic balance by developing a consistent and realistic resource framework
- (2) Improve the allocation of resources to strategic priorities among and within sectors
- (3) Increase the commitment to predictability of both policy and funding so that ministries can plan ahead and programs can be sustained
- (4) Provide line agencies with a hard budget constraint and increased autonomy, and increasing incentives for efficient and effective use of funds.

Implicit in the above are two further gains: (i) to improve the linkage between annual budgeting and medium-term considerations, such as investment plans, borrowing capacity, changing spending policies, and priorities, and (ii) to provide relevant information to political decision-makers on cost implications of expenditure policies.

## **3. Specific Issues for the Implementation of MTEF in Korea**

From the previous sections we discussed the rationales for the adoption of MTEF and its general working mechanism. Thus, most of the claims suggested there are valid for any countries. This section covers “specific” issues regarding the design of MTEF for Korea. We emphasize the word “specific” for the following reasons. First, a more detailed description of MTEF system is necessary. Second, country specific factors (Korean factors) should be counted.

### ***Coverage of MTEF***

MTEF should cover the entire consolidated budget in GFS. It means that all the resources under the discretion of the government need to be reviewed and prioritized for spending. This comprehensive budget coverage is particularly important considering that MTEF tries to improve resource allocation in line with the government’s priority.

### ***Time Horizon of MTEF***

Usually, the time horizon of MTEF ranges from 3 to 4 years. The longer the horizon, the less responsive the annual budgeting is to changes in the socio-economic environments. In contrast, a shorter time horizon is not consistent with the basic motive of MTEF, the provision of insurance to line ministries. Accordingly, an optimal time horizon should be determined which lies in-between. In addition, the Korean economy is exposed to various risk factors, internal and external, as evidenced in the past. Therefore, it is recommended that MTEF of Korea cover a three-year time horizon.

Table 4. Time Coverage of MTEF

| Time Horizon | 2-year | 3-year  | 4-year                                | 5-year |
|--------------|--------|---|---------------------------------------|--------|
| Country      | Italy  | Canada, Cazech,<br>France, Germany,<br>Sweden, UK | Netherlands,<br>New Zealand<br>Mexico | USA    |

(1) Macroeconomic Forecasting

Horizon of macro economic forecasting

The time horizon of macro economic forecasts should not be shorter than the time horizon of MTEF. In cases of other countries, forecast horizons are usually longer than the time horizon of MTEF, even though officially, the budgeting authority announces macro forecasts only for the time horizon of MTEF. Under the premise of a 3-year MTEF, macro forecasting 4 to 5 years ahead would be appropriate.

(2) Who forecasts macro variables?

In case of US, the Office of Management and Budget (OMB) is mainly responsible for forecasting, which OMB has a separate division for. The forecasting figures are cross-checked by the Department of Treasury and Council of Economic Advisors. In contrast, the Department of Finance in Canada collects economic prospects from credible private entities and takes arithmetic averages of the numbers reported.

Considering that MPB of Korea does not have an in-house macro economic research division whereas there are many publicly funded research institutes, the adoption of a Canadian style approach depending on government funded research institutes would be preferable.

(3) How should the forecasts be reflected on MTEF?

Conservatism prevails. At the stage of making a mid-term expenditure plan, conservatively discounted economic forecasts should be used. Cautioning on the side of prudence would provide a buffer zone to the fiscal system.

***Harmony of Top-down and Bottom-up in MTEF***

As mentioned earlier, top-down and bottom-up approaches do not conflict each other within MTEF. An optimal mix of top-down and bottom-up approaches should include the following transfer processes of information and physical resources.

- (1) Top-Down: information flows on macroeconomic forecasts and national priorities, broadly itemized budget allocation and risks of performance
- (2) Bottom-up: information flows on performance measurement and demand or social need for specific public good and risk of budgeting and debt management
- (3) These duplex exchanges of information and resources are made at legally set (or publicly guaranteed) opportunities.

***Categories of Spending in MTEF***

It is recommended that classification and presentation of budget estimates under MTEF be presented in a way to link expenditures to objectives, outputs and activities clearly. This result-oriented budget structure is, however, not a necessary condition to introduce MTEF. A country may opt to apply existing budget classification and charts of accounts for better sectoral allocation. Once this stage of MTEF is internalized, the

government can move on to improve budget classification and charts of accounts to produce sufficient information in determining policy and program costs, which will further the benefits of efficient resource allocation and financial operation.

MTEF, in its full-fledged form, should provide information on the cost of individual programs and, ultimately, its overall impact. Under this situation, it will serve as a basis for decision making when programs compete for funding and aggregating all selected program expenditure to make a sectoral budget proposal.

In many countries, including Korea, existing budget classification structures, chart of accounts and legal requirement may not allow line ministries to be privy to this information. If so, sectoral ceilings are set first by the central budget office using a macroeconomic framework, and then line ministries decide on how to allocate resources to their programs.

It is recommended that if the initial MTEF exercise becomes internalized, the government should consider improving/modifying the budget structure and chart of accounts in order to build a stronger link between resources and priorities.

### ***Rules for Selecting a Global Ceiling and Sectoral Ceilings.***

(1) Who sets the ceilings?

Ultimately, overall size of expenditure and sectoral/ministerial limit should be decided/agreed at a ministerial level meeting, where the central budget office provides a medium-term expenditure plan, usually considering multiple scenarios for different economic and social factors.

It is important to recognize that the medium-term expenditure plan, most likely in a multiple number of (contingency) scenarios, are technical inputs to decisions that need to be made at the cabinet meeting on allocation between sectors. Thus, the expenditure framework and scenarios are not the end themselves, but are tools for improving decision making.

(2) What factors determine ceilings?

As for the global ceiling, the potential GDP growth rate would be the most reasonable guideline. However, precise estimation of the potential GDP is not an easy task. Thus, the government revenue forecast is recommended as its proxy.

For the measurement of fiscal affordability (sustainability), the current government debt structure should be considered as well as the revenue forecast. Most commonly used measures for fiscal sustainability are ratios of government debts/GDP and fiscal deficit/GDP. Since the integration of fiscal deficit over time is equal to government deficit, these two ratios encompass the same amount of information mathematically.

According to the definitions of the IMF, government debt is defined as follows:

$$\text{Government debt} = \text{Central government liabilities} + \text{Local government liabilities} \\ - \text{Local liabilities to the central government}$$

The above definition of government debt does not include de facto government liabilities such as contingent ones. A true indicator of government debt should be the sum of the above IMF definition and the following:

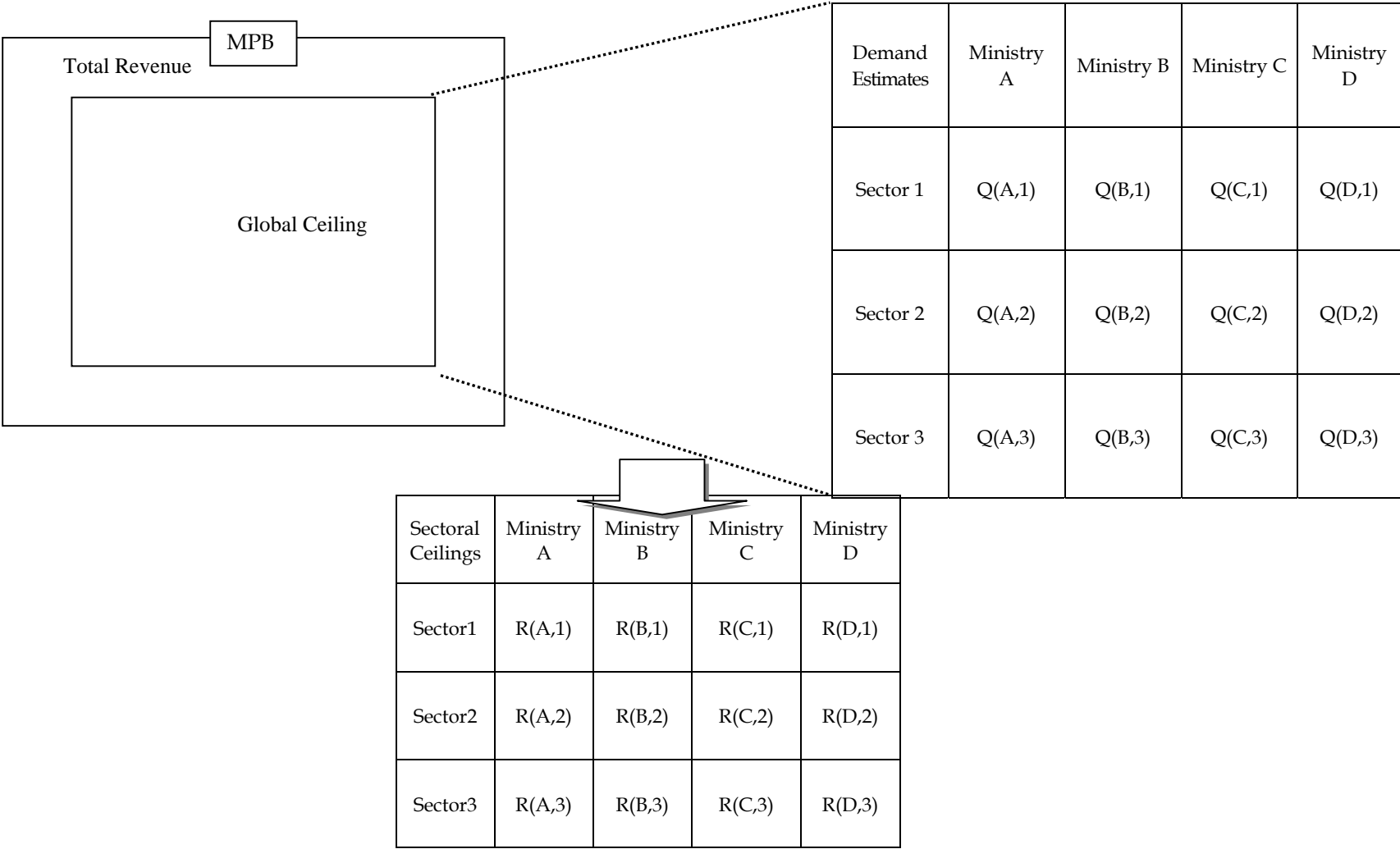
$$\text{Non-government debt} = \text{Guarantee of Payment} + \text{Central bank debt} \\ + \text{State owned companies} + \text{Public pension}$$

The national budget accounting system varies from country to country. Accordingly, it is very difficult to maintain comparability among data provided by governments. For this reason, the IMF measure of government debt is widely used for cross-country comparison, though it may underestimate the actual amount.

As an extra precaution, MTEF of Korea should adopt the measure of fiscal sustainability that includes non-government debt going beyond the IMF criterion. In addition, the duration of revenue forecasts and government debt structure should be matched in order to hedge against interest rate and liquidity risks. After undergoing a thorough examination of the revenue forecast and current government debt structure, the MPB could determine global ceilings for the next three years.

Also, determining sectoral ceilings is not independent of the factors influencing the global ceiling. In addition to such macro economic factors, sectoral ceilings should reflect national priorities and information on sectoral production efficiency.

Figure 2. Cross-sectoral Procedure for MTEF



In regard to the procedures on determining sectoral ceilings, the timing and number of communications between the budgeting authority and line ministries is important. These procedural issues do not have a right or wrong answer. Depending on the country specific characteristics (e.g., schedules for congressional sessions, the organization of a government body, and its relation to the legislative body), the types of communication or negotiating channels within the government should be defined. Instead, more important is what information the involved parties should be equipped with at the time of discussions over sectoral ceilings. Frictionless flow of information should be encouraged, at the same, conflicting demands among the line ministries should be reconciled through the voluntary demonstration of social worthiness and efficiency.

In regard to the enforceability of the ceilings, we recommend that global ceilings be binding at least for the coming fiscal year while the sectoral ceilings may be indicative. In other words, this implies that voluntary exchanges of sectoral budget allocations among line ministries with/without mediation of the budgeting authority. There might be concerns that allowing voluntary exchanges among the line ministries will make the process of budget allocation deviate from national priorities. However, if it is complemented by Performance Based Budgeting (PBB), which assigns more weight to a program with higher national priority, the exchange scheme will ensure more dynamic flexibility of line ministries.

#### ***Time Consistency of Ceilings-changeable or Unchangeable***

Under the assumption that the annual budget is prepared through MTEF process, the previous year's MTEF plan ( $t$ ) does not necessarily bind the annual budget or the MTEF of this year ( $t+1$ )<sup>1</sup>. Expenditure perspectives of two or three years included in MTEF should be seen as guidance. Since situations almost always occur unexpectedly, it would be optimal to adjust the original plan following the track of events. For example, in the event of a natural disaster such as a typhoon, there would be a huge amount of unexpected public expenditures.

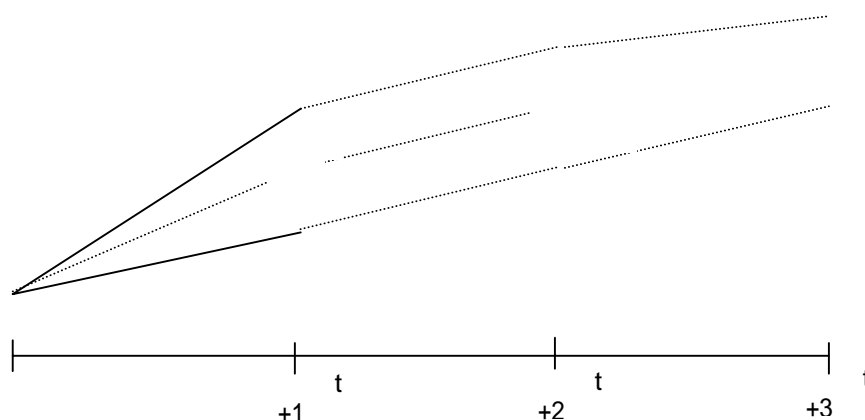
On the other hand, if a change in the ceiling is permitted frequently and flexibly, the time consistency or credibility of MTEF would be affected bringing about a similar outcome to that of the year-by-year approach.

Figure 3 describes the multi-year process of MTEF. C represents the MTEF ceilings determined for the periods ( $t, t+1, t+2$ ) at  $t-1$  whereas A and B are the MTEF ceilings determined for the periods ( $t+1, t+2, t+3$ ) at  $t$ . A and B differ by the state of an economy from period  $t$  to  $t+1$ . Realization of different paths makes A and B deviate from the original plan C. In order to maintain balance between flexibility and consistency, we have to determine an acceptable degree of variation, which sets a boundary separated by space between A and C or B and C.

---

<sup>1</sup> In our prior knowledge, Brazil is the only country, which strictly keeps the ceilings set by MTEF for the whole matching time horizon.

Figure 3. Cross-time Procedures of MTEF



In practice, there are several ways to maintaining balance between flexibility and consistency: (1) to allow adjustments among the sectoral ceilings while maintaining the global ceiling, (2) to assign different margins of adjustment between the global ceiling and the sectoral ceilings or among the sectoral ceilings, and (3) to decompose the budget items into mandatory spending and discretionary spending and allow different margins of adjustment to them. Each of the above alterations has pros and cons in comparison with others. Hence, it is in the hands of political decision makers to choose one of them.

Table 5. Fixed VS. Flexible MTEF

|         | Fixed MTEF                             | Flexible MTEF                                      |
|---------|--|--|
| Country | UK, US(till 2002), Sweden, Netherlands | Canada, France, Germany, New Zealand Czech, Mexico |

Source: OECD(2003).

#### ***Performance Based Budgeting (PBB) and MTEF***

One of most important modules in MTEF is the provision of diverse channels for information flow, the usefulness of which depends on its precision. Accordingly, a logical tool for justifying a certain program, such as performance evaluation, would be essential in MTEF. However, heterogeneity (or diversity) of public programs and unaccountability of their hidden or intangible effects makes inter-program performance comparison impossible.

#### ***Performance Measures for MTEF***

MTEF itself is a fiscal program and is an object of performance. The two biggest objectives of MTEF are (1) to maintain fiscal sustainability and (2) to enhance the allocative efficiency among various sectors. However, due to the difficulty of finding a right performance measure for inter-program comparison, in practice, performance evaluation for MTEF is limited in checking fiscal sustainability. MTEF is not a legal code to keep, once put into practice. Rather, MTEF is an apparatus to be evolved reflecting past

track records. The provision of performance measures for MTEF will complete the evolutionary cycle of MTEF.

#### **4. Concluding Remarks**

The budgeting process is a collective action game. Various agents participate in the process in the name of social welfare with hidden heterogeneous incentives. From the standpoint of a principal, who devolves his/her decision right to the agents, optimal mechanisms designed to coordinate interactions and conflicts among the agents would be very critical. However, at the implementation stage informational asymmetry may work against achieving social optimum.

The purpose of our research is to introduce a so called Medium Term Expenditure Framework (MTEF) and evaluate the pros and cons following its adoption to Korea's current budgeting process. MTEF is not a perfect solution guaranteeing the efficiency of the public sector. However, compared with the current system, MTEF is advantageous in the following sense:

(1) MTEF is less reliant on discretionary factors and is rather rule based. Rule based allocation of public resources ensures system predictability to participants. Accordingly, the participants can pursue fiscal programs in a more consistent way.

(2) MTEF system encourages efficiency-based competition among the conflicting agents leading to a pseudo market allocation. In contrast, allocation under the current system does not provide a formal channel, through which the agents can compete against others.

For the successful installation of MTEF in Korea, there are several points to ponder. A substantial portion of this paper is devoted to the examination of various issues, especially procedural ones. References to foreign country cases makes us realize that at the stage of implementation MTEF should adapt the socio-economic environments of an economy it is applied to. Accordingly, different schemes can be adopted from country to country depending on the country specific factors. Though seemingly heterogeneous, diverse types of MTEF are designed to attain a common goal, the provision of information channels and mechanism for early resolution of uncertainty within a government, which is a necessary condition for Pareto efficiency in Welfare Economics. Therefore, in designing an optimal MTEF for Korea, we have to always ask ourselves whether a certain feature or a procedure under consideration will contribute to reaching a pseudo market allocation of the annual budget.

## Reference

- Anderson, B., Budgeting in a surplus environment, OECD, 1999.
- Bayoumi, Tamim, "The Japanese Fiscal System and Fiscal Transparency," in (eds.) Bijan B. Aghevli, Tamim Bayoumi, and Guy Meredith, *Structural Change in Japan: Macroeconomic Impact and Policy Challenges*, 1998, Washington D.C.: International Monetary Fund.
- \_\_\_\_\_ and Barry Eichengreen, "Restraining Yourself: The Implications of Fiscal Rules for Economic Stabilization," *IMF Staff Papers*, Vol. 42, No. 1, March 1995, pp. 32-48.
- Brusewitz, U.H. *The Swedish Medium-Term Budget Framework*
- Committee on the Budget of the United States Senate (1998), *The Congressional Budget Process: An Explanation*
- Congressional Budget Office (CBO) (2003), *The Budget and Economic Outlook: Fiscal Years 2004-2013*
- Koh, Young-Sun (2000) "Budget Structure, Budget Process, and Fiscal Consolidation in Korea", KDI Working Paper
- Koh, Y., Introduction of MTEF, KDI Policy Forum, 2002 (in Korean)
- OECD (1999) *Budgeting in Canada* (Puma/SBO(99)5/Final)
- OECD (2003) *Budgeting in the United States*, Gov/Puma/SBO(2003)16
- Protter, B. and J. Diamond, *Guidelines for public expenditure management*, IMF, 1999.
- Regeringskansliet, *The Central government budget process*
- The Swedish Riksdag (1998) *The Riksdag and the Central Government Budget*, Factsheets N0.7
- Von Hagen, Jurgen and Ian Harden, "Budget Processes and Commitment to Fiscal Discipline," *IMF Working Paper WP/96/78*, July 1996.