Digital Budget & Accounting System
(Integrated National Finance Information System)
Contents
1. Project Introduction
   1.1 Background Information 8
   1.2 Current State of Implementation 9
   1.3 Implementation Tasks 10

2. Composition of the Digital Budget & Accounting System 22
   2.1 Central Financial Information System 23
   2.2 Financial Statistics and Analysis System 31
   2.3 Linkage System 33
   2.4 Business Support System 36

   3.1 Organization 40
   3.2 Current State of System Use 41
   3.3 Current State of Education on Users 41
   3.4 Current State of System Promotion 42

4. Expected Benefits 46
   4.1 Expected Benefits after Reorganization of the Budget & Accounting Structure 46
   4.2 Expected Benefits of the Financial Information System 48

5. Conclusion 52
   5.1 Evaluation 52
   5.2 Future Tasks 52
Digital Budget & Accounting System (Integrated National Finance Information System)

1. Project Introduction
2. Composition of the Digital Budget & Accounting System
4. Expected Benefits
5. Conclusion
1. Project Introduction
1. Project Introduction

1.1 Background Information

Korea laid the foundation for today’s financial system by enacting the Treasury Act in 1951 and the Budget & Accounts Act in 1961. Since then, Korea has experienced drastic changes in the scale of finance and the financial environment over the past 50 years, but financial institutions and systems have not been able to effectively respond to those changes.

In 1961 when the Budget & Accounting Act was passed, Korea recorded only 45.9 billion won in terms of general accounting, but it had grown to 147 trillion won by 2006. In terms of those figures alone, the scale increased 3,200 times or more. If special accounting and funds are included, it has increased astronomically over the past 50 years.

However, Korean budget allocation in the past has been focused on controlling detailed business and line items and managing execution. Except for funds and corporate special accounting, single-entry bookkeeping and basic cash basic accounting standards have been observed. This system has revealed many limitations, as business accounting standards have been applied to funds and corporate special accounting, instead of government accounting standards.

As time progressed, trends in financial systems worldwide focused on the strategic distribution of resources in the mid-to-long term and the enhancement of performance management systems, while advanced countries were transforming the framework of the financial system, placing more emphasis on autonomy, division of power, responsibility and achievements.

In an effort to keep up with these trends, South Korea pushed for innovation of its financial system by establishing national financial operation plans, introducing a financial achievement management system and adopting a top-down system. In the process, some suggested the necessity of establishing an infrastructure that could support a new financial operation system and provide the necessary information required to operate financial processes in a timely manner.

At that time, various financial information systems were independently established and used, including the Fiscal Information Management System (Fimsys) in the Ministry
of Strategic Planning and Finance, the National Financial Information System (Nafis) in the Ministry of Finance and Economy, the Regional Financial Information System, the Regional Education Financial Information System and the Defense Financial Information System. In particular, the central government had two representative financial information systems—namely, Fimsys, which is aimed at allocating budget; and Nafis, which is aimed at dealing with revenues, expenses and settlement. However, they were managed by different operators and not sufficiently linked to each other, thus failing to effectively share needed information. They also failed to provide diversified financial information required to effectively distribute resources at the national level, as they were focused on dealing with business conducted by the central government. In addition, as they were not designed to support the innovation of financial systems (that included the establishment of a national financial operation plan), management of financial projects, and a top-down system, a new system was required.

1.2 Current State of Implementation

In a political affairs meeting held in March 2004, the government recognized the necessity of establishing a system that can provide information to distribute financial resources at the national level, and manage outcomes of financial projects based on a new budget accounting system. It thus decided to introduce the digital budget and accounting system. In this regard, a task force team for the digital budget & accounting system was formed by government officials with the Ministry of Strategic Planning and Finance, the Ministry of Finance and Economy, the Ministry of Public Administration and Security and the Board of Audit and Inspection of Korea in addition to CPAs and IT experts. An advisory committee was established by inviting scholars and other related experts. The Business Strategy Planning (BSP) was introduced to strategically establish the digital budget accounting system in July 2004, and it was completed in November. In the process of establishing system development strategies, a planning division pushed for joint research with the World Bank. It aimed to reduce the possibility of failure in the development of the system and spread the developed digital budget accounting system as a model case throughout the world along with the innovative financial system. At that time, the World Bank was exploring model cases worldwide, so it agreed to conduct the joint research. Professor Allen Schick of Maryland University, who is a world-renowned finance expert, personally participated in the research to assist the innovative attempt and prevent repetition of past failures as seen in other countries.
As a result of BSP, a strategic master plan aimed to establish the digital budget & accounting system was established at the end of 2004, and Business Process Reengineering (BPR) and Information Strategy Planning (ISP) were established from February 2005 through September 2005 before the development of the system was initiated in earnest in October.
The development was completed in October 2005, and its operation was initiated in earnest in January 2007 after a trial operation from November to December.

![Figure 1] Process of Establishing the Digital Budget & Accounting System

| 2004 (March) | Decision made to establish a system (National Agenda Meeting) |
| 2004         | Established the System Promotion & Planning Group (May), Prepared a strategy to build the system through consultation of Government Renovation Committee, Advisory Committee, World Bank, etc. |
| 2005         | Established Work Re-design & Information Planning focusing on budget/accounting renovation. |
| 2006         | Developed the system & conducted test operation |
| 2007 (January) | Started operation of the system |

Budget | About US$63 million, based on the average exchange rate of 2006 |

1.3 Implementation Tasks

The establishment of a digital budget accounting system is not confined to the development of the budget information system. Its purpose is to establish infrastructure that can support financial innovation aimed at managing achievements on financial projects.

First, the program budget system was introduced to enable a budget item structure to be linked with governmental policy and achievement management. Second, it is to effectively introduce double-entry bookkeeping and accrual basis accounting. Third, with regard to the scope of system development, it is to reestablish the scope of development of financial statistics in the public sector.
A. Introduction of the Program Budget System

The Program Budget System was established based on the minimum policy unit of the nation, with aims to link policy and budget and raise financial performance. It rearranges the previous ‘Jang-Gwan-Hang-Sehang-Sesehang’ budget structure into the ‘Sector-Section-Program-Unit Process’ structure and simplifies complex input items. Existing budget system values unit project rather than grouped projects and puts more emphasis on items than projects. It is effective in controlling the input of financial resources, but it has limitations in the distribution of financial resources based on policy priority and effective achievement management. On the other hand, the program budget system is to introduce a program as a policy unit and use it as a core unit with regard to the distribution of financial resources and achievement management. It is also there to improve descriptive materials by the program in terms of budget proposals so that they can be systematically provided. In addition, as for budget operation method, it pursues the development of programs through consultations between government ministries and the budget authorities as well as enabling the government ministries to autonomously conduct unit projects as instructed by the budget authorities.

The essence of the program budget system can be found in the design of programs. ‘Hang’ in the previous budget system is similar to the program in the program budget system. However, unlike the program, it is set by accounting and funds. In this regard, although a project fulfills the same policy objectives, if it belongs to other accounting and funds, it is included in a different ‘Hang,’ limitations occur in systematically managing financial projects. However, in the program budget system, programs are designed to embrace entire accounting and funds, so projects aimed to achieve the same policy goals belong to the same program although they are different in terms of accounting and funds, and it becomes possible to conduct management by program based on policy. In addition, in the program budget system, the program is used as a standard unit to determine the distribution of resources with regard to the establishment of a national financial operation plan, and in the top down system, it is applied as a standard unit for consultation and adjustment between the budget authorities and government ministries with regard to the designation of limitations of expenditure by ministry.

In order to introduce the program budget system, the government established a partnership with the World Bank and held a joint workshop in August 2004. The government set a basic direction to introduce the program budget system by the end of 2004 and reported a program budget implementation plan to the Steering
Committee and the Budget Settlement Committee in March 2005 and July 2005, respectively. The 2005-2009 National Financial Operation Plan was established as a program budget system in October 2005 to be presented at the National Assembly, and the Program Budget and Fund Operation Plan was established to present it at a time of submitting the 2006 Budget Plan (Draft) and 2006 Fund Operation Plan (Draft) to the National Assembly on a trial basis. In addition, a program budget system was used in earnest in 2006 to establish a budget and fund operation plan, and since the 2007 Budget (Draft) and Fund Operation Plan (Draft), the program budget system has been prepared for submission to the National Assembly.

[Table 1] Comparison of Previous Budget System with Program Budget System Structure

<table>
<thead>
<tr>
<th>Previous Budget System</th>
<th>Program Budget System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jang</td>
<td>Sector</td>
</tr>
<tr>
<td>Gwan</td>
<td>(Previous) Jang, Gwan, Hang</td>
</tr>
<tr>
<td>Hang</td>
<td>(Revised) Sector/Section</td>
</tr>
<tr>
<td>Sehang</td>
<td>Section</td>
</tr>
<tr>
<td>Sesehang</td>
<td>Program</td>
</tr>
<tr>
<td></td>
<td>(Previous) Hang/Sehang</td>
</tr>
<tr>
<td></td>
<td>(Revised) Program</td>
</tr>
<tr>
<td></td>
<td>Integration and simplification of the current Sesehang by project characteristics</td>
</tr>
</tbody>
</table>
[Table 2] Example of Program Establishment
(Example of the Ministry of Marine Affairs and Fisheries)

<table>
<thead>
<tr>
<th>Program</th>
<th>(Accounting/Fund)</th>
<th>Unit Project</th>
<th>Detailed Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fisheries Product Distribution &amp; Safety Management</td>
<td></td>
<td>Safety Management on Import &amp; Export Fisheries Products (General)</td>
<td>Distribution Promotion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Safe Supply and Management of Fisheries Products (Agricultural Special)</td>
<td>Modernization of Test Equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stabilization of Fisheries Product Prices (Fisheries Industry Development Fund)</td>
<td>Expansion of Test Facility and Equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Table 3] Comparison between Previous Budget System and Program Budget System
(The Ministry for Food, Agriculture, Forestry and Fisheries)

◇ Previous Budget System

<table>
<thead>
<tr>
<th>(Accounting/Fund)</th>
<th>Jang</th>
<th>Gwan</th>
<th>Hang</th>
<th>Sehang</th>
<th>Sesehang</th>
</tr>
</thead>
<tbody>
<tr>
<td>(General Accounting)</td>
<td>Agriculture, Forestry and Fisheries Development</td>
<td>Agriculture, Forestry and Fisheries Administration</td>
<td>Agriculture and Fisheries Administration Direct Agency Operation</td>
<td>Fisheries Industry Policy Bureau</td>
<td>Distribution Promotion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fishery Products Quality Inspector</td>
<td>Modernization of Test Equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fishery Products Quality Inspector</td>
<td>Expansion of Test Facility and Equipment</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fishery Industry/ Fisheries Areas</td>
<td>Fishery Policy Bureau</td>
<td>Fishery Products Sanitation Agreement</td>
<td></td>
</tr>
<tr>
<td>(Special Accounting for Structural Improvement in Agricultural &amp; Fisheries Areas)</td>
<td>Agriculture, Forestry and Fisheries Development</td>
<td>Fishery Industry/ Fisheries Areas</td>
<td>Fishery Policy Bureau</td>
<td>Place of Origin Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector</td>
<td>Section</td>
<td>Program</td>
<td>Unit Project</td>
<td>(Accounting Fund)</td>
<td>Detailed Project</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
<td>---------</td>
<td>--------------</td>
<td>-------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>The Ministry of Food, Agriculture, Forestry and Fisheries</td>
<td>Fisheries Industry - Fisheries Areas</td>
<td>Distribution of Fisheries Products &amp; Safety Management</td>
<td>Safety Management of Import &amp; Export Fisheries Products</td>
<td>(General Accounting)</td>
<td>Distribution Promotion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Safe Supply Management of Fisheries Products</td>
<td></td>
<td>(Special Accounting for Structural Improvement of Agriculture and Fisheries Areas)</td>
<td>Compliance with Fisheries Product Sanitation Agreement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Place of Origin Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Introduction of Production History System</td>
</tr>
</tbody>
</table>
B. Effective Introduction of Double-Entry Bookkeeping and Accrual Basis Accounting

Double-entry bookkeeping is an accounting method of recording revenues and expenditures when they occur in connection with an increase and decrease in assets and debts. Accrual basis accounting is a method of recording revenues and expenditures at the time when transactions occur instead of at the time of receipt and payment in cash.

Unlike the program budget system, the introduction of the double-entry bookkeeping and accrual basis accounting was being pursued prior to a decision of the establishment of the Digital Budget & Accounting System. Since the Ministry of Finance and Economy and the Planning and Budget Committee in the Central Government announced, respectively, in May 1998 and in March 1999 that they planned to introduce the system, they had been preparing to introduce it. In the meanwhile, in the case of local governments, the Ministry of Public Administration and Security reviewed the introduction of the system from 1998 and announced its plan to introduce the double-entry accounting system for local governments in February 1999. Since then, pilot operations were conducted by some institutions.

However, as the introduction of the double-entry bookkeeping and accrual basis accounting was not linked to the restructuring of the budget system, and it was implemented based on financial accounting generating a limited effect, the government set objectives of effectively pushing for the introduction of double-entry bookkeeping and accrual basis accounting for the establishment of the Digital Budget & Accounting System. As a result, local governments and the central government introduced the accrual basis/ double-entry bookkeeping accounting system, respectively, in 2008 and in 2009. With the introduction of the system, government activities were expected to be recorded, analyzed and processed in detail and enhance management accounting so that it could be used in establishing policy in the future. Diversified indices that can measure financial soundness, efficiency and productivity are expected to be
Digital Budget & Accounting System (Integrated National Finance Information System)

developed to help realize realistic financial risk management. All the while, the nine existing types of settlements by accounting/fund and asset/debt were restructured into three types of settlements including general review of settlements, cash accounting settlements and financial accounting settlements, and therefore, the settlement period was effectively reduced.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Overview of the Double-Entry Bookkeeping and Accrual Basis Accounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>◇ It is divided into single-entry bookkeeping and double-entry bookkeeping according to how transactions are recorded</td>
<td></td>
</tr>
<tr>
<td><strong>Distinction</strong></td>
<td><strong>Single-entry Bookkeeping</strong></td>
</tr>
<tr>
<td><strong>Record Method</strong></td>
<td>. Record only revenues and expenditure (Cashbook)</td>
</tr>
<tr>
<td></td>
<td>. Simple</td>
</tr>
<tr>
<td></td>
<td>. Inaccuracy or omission of information might occur (Revenues and expenditure not linked with changes in assets and debts)</td>
</tr>
<tr>
<td><strong>Comparison</strong></td>
<td><strong>Cash Basis</strong></td>
</tr>
<tr>
<td><strong>Time of Record</strong></td>
<td>Time of Receipt &amp; Payment of Cash</td>
</tr>
<tr>
<td></td>
<td>. Convenient understanding on the part of a person in charge on the back of simplified budget accounting</td>
</tr>
<tr>
<td></td>
<td>. Perfunctory indication of assets and debts (Ex.1) Depreciation not recognized (Ex.2) Continuous reflection of non-collectable bonds in an account book (Ex.3) Although construction costs occur every year, assets are recognized at a time of the completion of a building</td>
</tr>
</tbody>
</table>
C. Re-designation of the Scope of Establishment of Financial Statistics in the Private Sector

Korea has failed to establish financial statistics that embrace the entire public sector. Integrated financial information based on the IMF is generated centering on the central government, so it has limitations at the time of using it to conduct international comparisons. In addition, there have been no statistics on the private sector as well as the general government sector required to implement financial policy. Thus, there have been limitations in effectively analyzing the effect on financial policy and systematically managing financial risks. Against this backdrop, efforts have been made to re-designate the scope of financial statistics that it can be embraced by the Digital Budget Accounting System according to the international standard (IMF 2001 GFS) and enhance the usage of the system through the inclusion of the maximum amount of information. Public Sector Classification Committee that consists of the Ministry of Strategy and Finance, the Ministry of Finance and Economy, Statistics Korea, the Bank...
of Korea, the Board of Audit and Inspection of Korea, National Assembly Budget Office and financial economists in June 2005. Until September 2005, six review meetings were held to establish the basic framework and standard for redesignation of the scope of financial statistics in the private sector, and in the 7th meeting held in October 2005, the final classification committee proposition (draft) was completed, and a public hearing was held in KDI to collect opinions from stakeholders. As a result, a system was established to generate statistics by including about 150 affiliated institutions and 80 public corporations in the scope of the establishment of financial statistics in the private sector.
Digital Budget & Accounting System
(Integrated National Finance Information System)

1. Project Introduction
2. Composition of the Digital Budget & Accounting System
4. Expected Benefits
5. Conclusion
2. Composition of the Digital Budget & Accounting System

2.1 Central Financial Information System
2.2 Financial Statistics and Analysis System
2.3 Linkage System
2.4 Business Support System
2. Composition of the Digital Budget & Accounting System

The Digital Budget & Accounting System deals with the entire process of financial activities including collection of taxes, formation of budget, execution, accounting, settlement and management of achievements based on the program budget system and double-entry bookkeeping and accrual basis accounting. It provides information that can be used to manage achievements with regard to the distribution of resources and financial projects at the national level that embraces the entire public sector including the central government, local governments and public institutions. The Digital Budget & Accounting System consists of the Central Financial Integration System, the Financial Statistics & Analysis System, the Linkage System, and the Business Support System.
2.1. Central Financial Information System

The Central Financial Information System integrates Fimsys aimed to formulate budget and Nafis aimed to process revenues, expenditure and settlement to realize a single information system. It was established to support a new budget & accounting system including the program budget system and double-entry bookkeeping and accrual basis accounting.

A. Budget Management System

According to the changed financial operation paradigm, determination on the five-year-term distribution of resources is made in accordance with the national financial operation plan, and the limit of expenditure is designated every year by sector, section and ministry. Each ministry introduced the top-down budget formulation system aimed to establish a budget request according to priority within the limit of expenditure
by ministry. Accordingly, if a person in charge of each ministry makes an annual investment plan, it is automatically reflected in expenditure plans on the national financial operation, and each expenditure plan is submitted to a financial planning official through the system. After the financial planning official integrates and adjusts the plan, it is submitted to the Ministry of Planning & Budget through the system. As for annual budget requests, requests by ministries and deliberations on draft budget are processed. It enables a person in charge to conveniently check the state of execution, information on achievements and the outcome of the preliminary feasibility survey.

B. Business Management System

The business management system links the entire process of registration, execution and conclusion of programs, unit projects and detailed projects within a program budget structure with budget and accounting-related modules. It conducts integrated management, making it possible to assess the current state of business, including achievements on execution on a real-time basis.

It deals with the entire financial process, ranging from registration to conclusion according to a One-Stop Method with regard to budget, revenues, expenditure, funds, national assets, goods, bonds and settlement, enables life-cycle management by project and provides a permanent monitoring system.
C. Accounting Management System

It conducts integrated management on the financial process—including revenues, expenditure, assets, expenditure, accounting settlement and cost calculation and automatically journalizes transactions that occur at the time of execution of financial funds based on the types of transactions by account, making it possible to calculate costs by program and use them in the management of achievements at the time of settlement. The Accounting Management System consists of Revenue Management, EBPP, EFT, Expenditure Management, Fund Management, National Assets & Goods Management, Debenture & Debts Management, Automatic Journalizing, Accounting Settlement and Procurement (Contract) Management.
(1) Revenue Management System
The Revenue Management System formulates, executes, settles and reports revenue budgets and deals with the entire process related to determination on collection, notification on payment and management of collection conducted by revenue collectors as requested by government officials in accordance with laws and regulations. It is an integrated notification system that implements electronic presentment or provides notifications in writing according to requests by revenue collectors.

Revenue management consists of determination of collection, receipt & payment, return of erroneous payments and revenue closing, and automatically links additional information, including creditor information and the level of notification and receipt & payment. As for expenditure management, it reflects achievements through the management of causal actions and real-time expenditures.

[Figure 5] Composition of Revenue Management and Bonds & Debts Management System

(2) EBPP/EFT
The Electronic Bill Presentment & Payment (EBPP) System deals with receipt and
The Electronic Funds Transfer (EFT) System deals with national funds with regard to payment, refund, Giro payment and national funds substitution in connection with the IT systems in the Bank of Korea, Korea Financial Telecommunications & Clearings Institute and financial institutions. It is linked to transfers in the local financial system, supports fund transfers by local governments and deposits and withdraws funds.

[Figure 6] Composition of EBPP System

1. **Real-Time Linkage of Receipt Statement**
   - It receives receipt statements from nation fund receipt agencies through the Bank of Korea on a real-time basis to settle accounts.
   - It figures the current state of revenues on a real-time basis.

2. **Local Financial Receipt**
   - It separately receives national tax and local tax after integrated presentment.
   - It inquires receipts with regard to local financial presentment.

3. **24-Hour Inquiry & Receipt System**
   - It realizes 24-hour inquiry and receipt for Finance EBPP in cooperation with National Fund Receipt Agency and KFTC.
(3) Expenditure Management System
The Expenditure Management System makes contracts that cause governmental expenditure or conducts other activities that cause expenditure based on allocated budget, implements expenditure resolution on causal activities within a fund plan and transfers national funds to creditor accounts through an Electronic Funds Transfer. It deals with diverse processes related to general expenditures, payment for costs of operation of offices, government purchase card management, national funds debt action, taxation management, Giro payment, refund & correction management and deposits of national funds.

(4) Fund Management System
Fund Management System is a fund operation & management system that deals with fund-raising, adjustment of supply and demand of funds and operation of deposits, and its detailed system includes plans on funds, financing, domestic borrowing, overseas borrowing, operation of national funds, operation of deposit funds, the current state of national funds, etc.
(5) National Assets & Goods System
The National Assets & Goods System deals with processes related to the management of national assets required to fulfill national objectives, provision of administrative...
services, and acquisition, ownership, use and management of goods required to conduct projects.

(6) Debenture & Debt System
This system effectively manages national debentures and debts in accordance with laws related to debts. It links information on debentures with a source system on a real-time basis. It realizes actual debt management through debt evaluation, figures/manages the current state of national debts, and deals with refunds, national debt management planning, guarantee debts, debt closing and the current state of debts.

(7) Automatic Journalizing System
The Automatic Journalizing System automatically creates journalizing slips based on the introduction of the program budget system and double-entry bookkeeping and accrual basis accounting at a time of the completion of defined journalization.

(8) Accounting Settlement System
The Accounting Settlement System provides settlement reports—including compound trial balance, financial status reports and financial operation reports—based on totals by account item on a general ledger by recording operational results on national finance. It calculates the results of financial operations so that analytical evaluation based on government settlement of accounts can be reflected in the financial operations at the time of formulating the next year’s budget. It settles accounts with regard to cash/financial accounting ledgers, cash/financial accounting settlement, general review on settlement and settlement reports.
2. Composition of the Digital Budget & Accounting System

[Figure 9] Composition of Settlement System

Central Financial Information System
(General Ledger/Settlement of Accounts)

- Budget Management
- Revenues/Expenditures
- Fund Management
- National Assets & Goods Management
- Debenture/Debts

Budget Management

Total Tax Revenue
Total Tax Expenditure Closing
Budget Settlement

Budget Settlement

General Ledger

- General Ledger Verification
- Automatic Journalization of Settlement Adjustment

Cost Information

- Financial Settlement

Automatic Journalizing Module

General View on settlement of accounts

Settlement of Accounts by Accounting/Fund
Settlement of Accounts in Central Government Agency
Integrated Settlement of Accounts in the Government

General View on Settlement of Accounts in the Central Government Agencies
General View on Settlement of Accounts in the Government

EAI

Private/Trust Funds
The Ministry of National Defense

2.2 Financial Statistics & Analysis System

The Statistics & Analysis System aimed to provide information on statistics and analyses that is used to support national financial decision-making through the timely establishment of a user-oriented analytical system.

The Integrated Financial EDW(Enterprise Data Warehouse) Infrastructure was established to support the collection and integration of decentralized national financial information, statistical analyses and decision-making, and OLAP and EIS screens were developed to support ministers, deputy ministers, CFO, various users, multi-dimensional analyses by re-designated financial statistics category and decision-making.

The Statistics & Analysis System provides statistical analysis information by category in order to analyze and evaluate the current financial state and policy at the national level. Second, it provides diversified information on daily, monthly, quarterly and annual statistics of various combinations in connection with the source system. Third, it supports formal reports and non-formal analyses to provide differentiated analysis information by user. Fourth, it created the 1986 Standard Integration Finance Report
based on cash basis accounting in accordance with recommendations made by IMF GFS Report and the 2001 Standard Integration Finance Report based on double-entry bookkeeping and accrual basis accounting. Fifth, it conducts comprehensive monitoring on abnormality by issuing warnings and precautions with regard to statistics generated by each statistical item.

A. On-Line Analytical Processing (OLAP)

It enables users to calculate and analyze information collected from the unit system. It helps users conduct analyses on information related to budget, revenues, expenditure, funds, debentures, debts, national assets, goods and settlement through analytical levels and measured values in a desired way. The users include the Ministry of Strategy and Finance and people in charge of budget and account settlement in the central government ministries.

B. Executive Information System (EIS)

It provides summarized comprehensive information on national finance to high-ranking officials, including ministers, deputy ministers or higher. It helps assess the current state of national finance through classification of resource procurement, distribution of resources, management of execution achievements, issue management and local government finance and enables comparative analyses on finance through non-financial statistics.
2.3 Linkage System

The Linkage System helps exclude redundant data input by institutions that operate existing internal systems without using the Digital Budget & Accounting System and organically exchange data among systems through linkage modules. Toward this end, infrastructure was established and the linkage modules were developed for the purpose of integrated management and operation of the extended scope of finance in the central government, local governments and affiliated institutions.

Infrastructure was established to accommodate diversified environments in linked institutions and each linkage system based on functionality, availability and stability for the purpose of dealing with finance.

The system, which was aimed to financially link up with the Digital Budget & Accounting System, was established based on the real-time management of financial operations by the central government, integrated financial statistics according to
expanded financial scope and achievement of objectives on the integrated financial information system.

It comprehensively links central governmental institutions with internal systems (Defense Finance Information System, Onnara System and etc.), local governments (Regional Finance Information System and Local Educational Finance Integration System), funds (Civil Servant Pension System and etc.), affiliated public corporations and accounting management by embassies and legations abroad. It is linked to financial institutions (Board of Audit and Inspection of Korea, Bank of Korea, KFTC and etc…) to manage real-time receipt and payment of financial funds.
### 2. Composition of the Digital Budget & Accounting System

#### Figure 11: Composition of Linkage System

<table>
<thead>
<tr>
<th>Fund</th>
<th>Own System</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>National Housing</td>
</tr>
<tr>
<td></td>
<td>Housing Credit guarantee</td>
</tr>
<tr>
<td></td>
<td>Korea Infrastructure Credit Guarantee</td>
</tr>
<tr>
<td></td>
<td>Merit Reward</td>
</tr>
<tr>
<td></td>
<td>The Korea Teacher’s Pension</td>
</tr>
<tr>
<td></td>
<td>Korea Export Insurance</td>
</tr>
<tr>
<td></td>
<td>Industrial Infrastructure</td>
</tr>
<tr>
<td></td>
<td>Wage Claim Guarantee</td>
</tr>
<tr>
<td></td>
<td>Industrial Worker’s Accident Compensation Insurance and Prevention</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
</tr>
<tr>
<td>Ministry of Public Administration and Security</td>
</tr>
<tr>
<td>Ministry of Education Science Technology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Affiliated Organization/Public Entities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliated Organization</td>
</tr>
<tr>
<td>Within the Scope of Finance</td>
</tr>
<tr>
<td>Public Entities</td>
</tr>
<tr>
<td>Within the Scope of Finance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Public Interface web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Homepage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DMZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Relay Server</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Backbone web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linked DB</td>
</tr>
<tr>
<td>(Relay) DB Server</td>
</tr>
<tr>
<td>Linked Server</td>
</tr>
<tr>
<td>Mapping Conversion Routing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Finance Interface web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Relay Server</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard API</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAI</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Large Collection Org.</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Tax Adm.</td>
</tr>
<tr>
<td>Customs Service</td>
</tr>
<tr>
<td>Korea Industrial Property Office</td>
</tr>
<tr>
<td>Ministry of Land, Transport and Maritime Affairs</td>
</tr>
<tr>
<td>National Police Adm.</td>
</tr>
<tr>
<td>Prosecutors’ Office</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Procurement Adm.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Audit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board of Audit &amp; Inspection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Bank of Korea</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>National Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea Forest Service</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Own</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Knowledge Economy</td>
</tr>
<tr>
<td>Ministry of National Defense National</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>G4C</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAMCO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Supreme Court</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Public Administration and Security</td>
</tr>
</tbody>
</table>
2.4 Business Support System

It consists of the financial portal, homepage, e-Settlement linkage, cyber educational contents and a call center for the purpose of effective integration and support for finance.

A. Financial Portal System

It comprehensively provides a decentralized system service to various users, including financial personnel and decision-makers, including the central government, local governments, public corporations and affiliated institutions in addition to a consistent user environment, integrated authentication and enhanced authority.

B. Homepage

The financial homepage is established based on integrated financial contents to make it possible to provide financial information to the general public through various platforms, such as; System Introduction, Reference Rooms and Bulletin Board.

C. E-Settlement Linkage System

The system links the e-Document system owned by each institution to the Central Financial Information System and provides approval or settlement services through the business system.

D. Cyber Education Contents

This system provides cyber education contents for the purpose of earlier adaptation to the system and enhanced usage through education on how to use the Digital Budget & Accounting System and apply the provided information in a useful manner. Diversified course modules for cyber education were developed and provided in consideration of the level of learners, and promotion and a permanent effective educational system was established for the Digital Budget & Accounting System.

E. Call Center & ITSM System

A One-Stop User Support Window, a Call Center System aimed to receive complaints and resolve errors and an ITSM System were established for the system operation.
Digital Budget & Accounting System (Integrated National Finance Information System)

3.1 Organization 40
3.2 Current State of System Use 41
3.3 Current State of Education on Users 41
3.4 Current State of System Promotion 42

3.1 Organization

The system has been operated by a private operator selected through open competition under the supervision of the Budget & Accounting Reinvention Office affiliated with the Ministry of Strategy and Finance (the financial authorities) since its inauguration in January 2007. A total of 14 civil servants that comprise one department and two teams and 130 delegated operation staff that comprise seven teams operate and manage the system. In addition, a total of 30 staff members in the Call Center respond to users’ inquiries on how to use the system.

[Figure 12] Operational Organization of the Digital Budget & Accounting System

- (The Ministry of Strategy and Finance)
- Budget & Account Reinvention Office
- Call Center
- SAMSUNG SDS Consortium with LG CNS
- Operating Management Team

[Diagram showing operational organization]

Budget Team
- Budget 1 Team
- Budget 2 Team

Accounting #1 Team
- National Property/Item
- Supply Management
- Expenditure
- Accounting Settlement

Accounting #2 Team
- Revenue
- EBPP/EFT
- Fund
- Credit/Debt

Statistical Analysis Team
- BIS/OLAP
- GFS

Support Team
- Standard Information
- Finance Portal
- Homepage

Technology Team
- Server/Network
- System S/W
- Common Module
- R/G change Management
- Exterior Interface

3.2 The Current State of System Use

The Digital Budget & Accounting System conducts comprehensive government financial activities online, and they include formulation and execution of budget and settlement of accounts. It is used by a total of 70,000 persons, including civil servants in the central government and local governments and employees of some public corporations. In addition, 10,000 users deal with an average of 20 cases every day through the use of the system, and an average of 3 trillion won of funds are settled every day. In the meantime, information is comprehensively managed in connection with 48 related systems as of the end of 2008.

3.3 The Current State of Education on Users

Since its inauguration in 2007, continuous education has been provided to help users quickly fast adapt to the system. Field education, assigned education by educational institutions and on-line education have been provided to users on a regular basis, and education by visitation is sometimes offered at the request of educational institutions. As many as 140 educational sessions were provided in 2007, and the number of participants who took part in education, came to a total of 21,000 persons. In 2008, there were 100 educational sessions provided to 17,000 persons.
3.4 The Current State of System Promotion

Major Asian countries are pushing for the establishment of financial information systems. In particular, Indonesia decided to establish an integrated national financial information system by benchmarking the Korean system, and selected LG CNS, which is currently operating dBrain as a business partner. In addition to Indonesia, other countries like the Philippines, Cambodia and Uzbekistan have shown a great deal of interest by extending invitations and requesting South Korea’s briefings on the system. Not only Asian countries but also major African countries have developed a great deal of interest in the Digital Budget & Accounting System in Korea, which took part in the KOAFEC e-Procurement Workshop held in Tunisia in October 2009 to promote the excellence of the Digital Budget & Accounting System to 10 northwest African countries. In November, Commissioners of National Tax Service from five African countries visited Korea to participate in training and asked dBrain to provide briefings. Korea was invited to The Second ITC Conference of KOAFEC held in South Africa in December, and proactive activities are being conducted to promote the excellence of the system among nine southeast African countries. Most countries that took part in education on the Digital Budget & Accounting System (one of the representative e-Government systems in Korea) showed interest and stated they are proactively considering introduction of the system after being deeply impressed by decision-makers who effectively use national financial information generated by a single system.

[Figure 13] The Current State of Overseas Promotion of the Digital Budget & Accounting System

Uzbekistan
- Invited Budget & Accounting Reinvention office and held workshop in Tashkent (2009.5)

Bangladesh
- Visited high-ranking officials in the Budget & Accounting Reinvention office (2008.10)

Indonesia
- Benchmarked Korea National Finance Information System and started off Budget and Treasury System procurement (2009.7)

Philippines
- Invited Budget & Accounting Reinvention office and held workshop in Manila (2008.12)
- Chairperson of Philippines council on national competitiveness who went on a business trip asked about dBrain explanation (2009.3)

Africa
- Introduced dBrain to Tunisian high-ranking officials who visit Korea on training (2009.5)
- Introduced dBrain in the <KOAFEC e-Procurement Workshop> to 10 countries of North-West Africa (2009.9)

Cambodia
- Invited Budget & Accounting Reinvention office and held workshop in Phnom Penh (2008.10)
- In progress of discussing visiting Budget & Accounting Reinvention office as site survey (2009.9)

South America (13 countries)
- Introduced dBrain in e-government Int’l Road Show (2007.11)
- Introduced dBrain in the international conference unified governed by Korea Institute of Public Finance and IDB (2009.4)
4. Expected Benefits

4.1 Expected Benefits after Reorganization of the Budget & Accounting Structure 46
4.2 Expected Benefits of the Financial Information System 48
4. Expected Benefits

Expected benefits of the establishment of the digital budget & accounting system are divided into two aspects—namely, the restructuring of a budget and accounting structure with regard to introduction of the program budget system and double-entry bookkeeping & accrual basis accounting; and the redesignation of the scope of establishment of financial statistics in the public sector, as well as the development of the financial information system.

4.1 Expected Benefits from Restructured Budget & Accounting Structure

There are various expected benefits from a restructured budget & accounting structure including the introduction of the program budget system and double-entry bookkeeping & accrual basis accounting.

As for the benefits of the introduction of the program budget system, as the budget system was focused on an individual project (Sesehang) and item (divided item-detailed item) turned into the program budget system, the following can be realized:

First, as programs are designed based on the entire accounting and funds, compartmental operation by accounting and funds is eliminated, and resources can be divided from an integrated perspective. Unlike the item-budget system of the past, the program budget system adopts a Sector-Section-Program System that is the same in terms of accounting and funds, so similar projects are devised under the same program regardless of accounting and funds, and the basis can be established to distribute resources based on specific programs.

Second, under the program budget system, a one-year budget can be formulated based on the mid-to-long-term vision. In the past, the mid-term budget system based on sector-section was different from the one-year budget system based on Jang-Gwan-Hang, but with the introduction of the program budget system, the mid-term and one-year budget operating systems are unified. As a result, it facilitates financial operation in the mid-term and reduces administrative waste that entails different
4. Expected Benefits

budget systems.

Third, with the introduction of the program budget system, achievement-oriented financial operation is facilitated. In the past, individual projects were focused on micro-management of achievements, but with the introduction of the program budget system set by policy unit, achievements can be managed based on programs linked to policy. In addition, with the introduction of the concept of achievement management to the budget system, financial resources are naturally re-allocated centering on projects with high achievements making it possible to increase financial efficiency.

Fourth, budget deliberation by the National Assembly is facilitated, and participation by the general public is further promoted. In the past, the National Assembly deliberated budget centering on individual projects, but with the introduction of the program budget system, budget proposition based on the program system is now submitted to the National Assembly making it possible to deliberate the budget centering on policy and help the public easily understand budget projects, which leads to enhanced understanding and facilitated participation in governmental functions by the general public.

In terms of accounting, the introduction of double-entry bookkeeping and accrual basis accounting generates the following advantages:

First, self-verification by double entry bookkeeping contributes to enhance transparency and reliability in financial operations. In the past, only cash revenues and expenditures were recorded in addition to the increase and decrease in national assets, goods, debentures and debts, so it is impossible to accurately or completely check the amount of assets and debts. However, with the application of double-entry bookkeeping, changes in assets and debts can be recorded at the same time making complete and accurate checks possible now.

Second, as it becomes possible to accurately calculate the current state of national finance according to accrual basis accounting and management of financial resources, sound financial operation can be secured for the future. According to accrual basis accounting, although the inflow and outflow of cash does not occur, if the level of recognition of profits and costs is satisfied, profits, costs and related assets and debts are recognized, it is possible to calculate the overall national financial state more accurately.
Third, with the introduction of the program cost-settlement system, cost information on administrative services is measured and reported, and as it is used as the basis information for evaluation on achievements, it becomes possible to conduct rational evaluation on achievements and can be used as a critical resource to effectively distribute resources.

In the meantime, with the redesignation of the scope of the establishment of financial statistics in the private sector, along with the introduction of the program budget system and double-entry bookkeeping and accrual basis accounting, financial statistics befitting policy objectives can be generated and used; in accordance with the scale of finance in the private sector, the central government and local governments, and the current state of distribution of financial resources by sector and section. Furthermore, strategic distribution of financial resources can be realized at the level of the government and the public sector separate from centralized finance. In addition, the current state of financial operation can be compared among countries based on the same standard.

4.2 Expected Benefits of the Establishment of Financial Information System

Expected benefits of the establishment of financial information system that embraces the entire process and that provides information required to distribute financial resources and manage achievements of financial projects at the national level are as follows:

First, the financial process is automatically handled, and financial project management is systemized. With the integration of the entire system, which includes formulation and execution of budgets and settlement of budget and business management system that enables life cycle management, all financial processes are automatically linked, and a real-time financial management system is established. In particular, the flow of financial processes that was initiated and concluded by budget and accounting personnel in the past has transformed to enable personnel in charge of projects to request and execute budgets and settle accounts through the business management system. Existing business management has focused on after-the-fact evaluation and management has turned to a new management system where proposition and operation of projects are linked with the budget and accounting system and it has helped systematically management business. In addition, the business management
system is expected to realize effective financial operation by providing information required to manage the achievements of financial projects. In the meantime, as the budget system is combined with the accounting system, and information related to execution can be used at the time of processing the formulation of budget, the efficiency of the distribution of financial resources will also be improved.

Second, with the establishment of financial statistics and analysis system, diverse information can be used in the process of policymaking. Reasonable policy alternatives are expected to be generated through timely financial statistics and effective analyses, and it is expected to improve the overall quality of policy.

Third, with the establishment of the linkage system, information can be generated for integration of the central government, local governments and public institutions making it possible to manage information and implement projects for the entire public sector. In the short-term, integrated financial information in the public sector can be generated, and in the mid-to-long term, achievement management and monitoring of financial information can be conducted in the public sector. This makes it possible to prevent reckless management in public institutions and induce effective financial risk management. In addition, as a system that can link the central government and local governments is established with regard to government-subsidized projects for the purpose of effective project management for local governments, real-time monitoring on the current state of execution of government-subsidized projects by local governments can be realized, and it is expected to contribute to reducing costs at a time of formulation and execution of budgets for government-subsidized projects.
Digital Budget & Accounting System
(Integrated National Finance Information System)

1. Project Introduction
2. Composition of the Digital Budget & Accounting System
4. Expected Benefits
5. Conclusion
5. Conclusion

5.1 Evaluation 52
5.2 Future Tasks 52
5. Conclusion

5.1 Evaluation

The Digital Budget & Accounting System has revitalized the financial system and contributed to reducing administrative costs and improving efficiency by dealing with finance online on a real-time basis. The system has made a great contribution to stabilizing the process and enabled the Administration, the legislature, the Board of Audit and Inspection of Korea and the general public to make the most of financial information. In the meantime, it has been highly recognized as an excellent system at home and abroad, and many developing countries wanting to benchmark have requested visits and briefings to fully appreciate the advantages of the system. Some of them have even visited operating institutions in person to see the system for themselves and conduct interviews.

In this regard, it seems to be on track to achieve its goal of realizing the national financial informatization policy and improving bases and systems, as well as it is expected to become a world-class financial information system befitting Korea’s knowledge information society.

5.2 Future Tasks

In the future, it needs to assess new demand and reflect it in the system in an effort to continuously increase its stability and efficiency.

In particular, efforts need to be made to stabilize the accrual basis/double-entry bookkeeping accounting system that was introduced in 2009, and systematic support needs to be provided to expand the scope of financial statistics for the purpose of statistical production of international standards.

In addition, it needs to endeavor to attain results abroad by pushing for ITIL-based ISO 20000 with aims to enhance international recognition of the system and pursuing the Service Award in the public sector. Toward this end, an appropriate amount of human
resources and budget need to be invested in addition to an appropriate amount of effort.