

# Accounting Reforms in Municipalities: The Case of Bangalore City Corporation

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## Executive Summary

The fund-based accounting system that was implemented in Bangalore Mahanagara Palike (BMP) is widely acclaimed for its comprehensiveness and effectiveness. The revenue and expenditure statements and balance sheets have been published under the new system for the last three years on a timely basis. The system has been running smoothly for a few years and is on steady stream and it can be taken as a case of successful implementation of accounting reform. It is an appropriate case to highlight the synergistic effect of synchronizing organizational change, reengineering of processes, modernization of accounting system, and automation of accounts. It is quite difficult in this process to single out the factors that contributed maximum to the effectiveness of the Modern Accounting System (MAS) as implemented in BMP. It is equally difficult to attribute everything to the new accounting system. It can also be seen as a case of change management in the accounting system domain.

The case of the BMP illustrates the changes that were brought about in the accounting system. The new accounting system — MAS — adopts the best of fund-based accounting system, accrual system, and reporting system. Its contrast with cash accounting system, its advancement over the old system, and compliance with national accounting standards are also discussed. The organizational and change contexts are presented to help understand the drivers of change. The salient features of the accounting system implemented in BMP are:

- compatibility with accounting standards
- granularity
- dovetailing accounting system to organizational reengineering
- comprehensive management information
- reporting system.

The implementation is analysed as a case of change management process of implementing of accounting reforms in municipal organizations. MAS is analysed through the framework of management control system which helps to integrate various dimensions of institutional factors that go with accounting reform. MAS is also analysed for its contribution towards accounting information for strategic control, management control, and operational control. It was observed that even though the system has features for decision making and control, it is primarily used for operations and compliance. The focus is still more on transactional level than control or decision level.

The case raises interesting issues about the following:

- the purpose of the accounting reform
- sustenance of the old system
- demand for the new system
- areas where accounting reforms took off
- areas where reforms did not happen
- incentives to maintain status quo and incentives to change which are discussed through the control system framework.

One area where we can find the reasons are the triggers for change. The change drivers are discussed in terms of changes in the financing pattern, exposure to market borrowings and ratings, introduction of user charges, and passing of Transparency Act. Ultimately, it is suggested that the change drivers, though helpful, in ushering in the changes, can slow down the pace if the signals are weak. Weak signals could result in reinforcing the existing agency relationships. ✓

### KEY WORDS

Municipal Accounting Reforms  
Fund-based Accounting  
Accrual Accounting  
Change Management Process in Accounting Reforms  
Control System

**T**he accounting system reform implemented in Bangalore Mahanagara Palike (BMP), as Bangalore Municipal Corporation is called, is widely acclaimed for its features and performance. It is considered to be better than those implemented in many other municipalities. The accounting reform accompanied the larger organizational changes introduced in BMP. The new accounting system adopted the features of accrual system, fund-based system, and upgraded reporting standards. This case details the context of its implementation, its features and contrasts with the old system, institutional changes, and its manifestation. Discussed through the framework of management control system, it finally concludes that there is a control system cycle which is unique for the implementation stage of change management of accounting.

### **THE CASE OF BMP: NEED FOR CHANGE**

The Government of India passed the 74th Constitutional Amendment Act (CAA), 1992, aimed at strengthening the local governments which come under state governments. Its main objective was to facilitate a greater devolution of power to the local governments through more decentralization in the functional and financial areas. The implementation of the Act was yet to be felt in practice in many municipal corporations including Bangalore even by the late '90s. BMP did start a major reorganization through the creation of more zones, delegation of powers to the zonal level, introduction of self-assessment scheme to improve property tax collection, etc. However, these were attempted in a checkered fashion and there was no comprehensive strategy to integrate them.

The new government which took over in Karnataka in 2000 was reform-oriented. The fast growing software industry and the presence of the top software companies like Infosys and Wipro and the MNCs like Intel, IBM, Oracle, etc., made it imperative for the state to develop the city at par with the global standards in infrastructure. The new government embarked on several strategic measures to develop the city and one such initiative was the formation of the Bangalore Agenda Task Force (BATF). BATF consisted of several committed professionals and important citizens who were brought together to play an advisory role for improving the city. The members of BATF soon understood that if Bangalore had to be developed, one of the key organizations would be BMP. The top management of BMP and the BATF soon realized

that if BMP had to be effective, it had to focus as much on soft areas like financial management, organizational reforms, and information system as on infrastructure. BMP decided on fund-based accounting system (FBAS) as a critical component of financial reform and information system reform. BATF gave both professional and financial support.

### **BMP Profile**

BMP spreads over 100 administrative wards, covering an area of 225 sq. km. with a population of about 5.5 million and a matching floating population. It is divided into three zones — East, West, and South. However, for administrative and accounting purposes, BMP has four zones including the Head Office zone with about 11,500 employees. It maintains about 3,745 km. of road length and has about 2,200 properties. It fulfils diverse functions classified as obligatory functions, commercial functions, and agency functions. Its total revenue amounts to Rs.6.6 billion for the year 2004-05.

Municipal corporations are service delivery agencies and visible entities of governments in urban areas as far as the utility services are concerned. These are the last mile providers of service and have significant interface with public. They are complex institutions performing both legislative and executive functions comparable to the Legislative Assemblies in the legislative role and to the state-owned enterprises in provision of services like hospital care or water supplies. The Mayor, an elected representative, heading the corporation council, is elected every year by the corporators. The Commissioner, a senior bureaucrat, heads the Executive. The BMP Council is represented by 100 corporators who represent the 100 wards of BMP respectively. Each corporator is elected at the ward level on a five-year term. The BMP Council has many statutory committees like the Taxation and Finance Standing Committee, the Accounts Standing Committee, the Town Planning and Development Committee, the Standing Committee, Public Works Standing Committee, etc., which are the policy-making and decision-making bodies.

Municipal corporations have a highly bureaucratic and hierarchical set up and are heavily head-office-dependent. BMP is organized along functional departments like health, education, horticulture, project engineering, and solid waste management and support service departments like finance and accounts, administration, estates, etc. It took a major initiative to decentralize its

structure as part of organizational reform and give more functional and financial powers to the zonal offices under the new dispensation.

### Context for Modernizing Accounts

The growing infrastructure and service requirements led to a severe resource crunch in BMP in 2000. Though the state government was prepared to continue its support through grants, it had its own limitations. Despite improvement in revenue collections due to self-assessment system for property tax, they could not fill the gap. BMP was also considering other options like market borrowings, user charges, etc.

BMP brought in Mr. Srihari, an officer from central revenue services, to improve the financial planning and management. He brought some fresh thinking to the revenue department. The existing system was woefully inadequate in carrying out even basic functions like timely updates of revenue collection, tracking of flow of funds, status of contracts and committed expenditure, etc. Once, when Srihari was asked to provide the latest revenue figures by the Commissioner, his executives gave him three different figures with wide variations which was not unusual.

There was a need for resorting to market borrowings considering the financial requirements and deficit. It was clear that the institutional investors would be demanding better quality information if they had to lend. Therefore, there was a need for modernizing the legacy system and it was in this context that BMP decided to go for the Modern Accounting System (MAS). It draws upon the best features of FBAS and Accrual Accounting and Reporting Standards. The BATF team and the system consultant played a sterling role in developing a system which was benchmarked against the global standards and not just the national standards.

The MAS implementation in BMP has to be seen in the overall context of reengineering of financial management system (FMS). BMP launched a series of initiatives to reengineer its FMS with the stated objective of achieving "effectiveness in mobilizing resources and efficiency in managing resources" (Pangotra and Srihari, 2003). As Pangotra and Srihari mention, these objectives were translated into broad guidelines as follows:

- To implement administrative, legal, and managerial reforms for mobilizing internal and external financial resources.
- To implement budget reforms with a 'bottom up'

approach in order to strengthen responsibility, accountability, and need for justification in the budget-making process.

- To introduce results-based performance orientation in the financial management systems of the corporation.
- To facilitate citizens' cooperation and involvement by introducing transparency and simplification in the financial management system.

### Legacy Accounting System in BMP

The Traditional Accounting System (TAS) followed by BMP was archaic and typical of the accounting system in municipal corporations. The system followed by BMP was 'cash system' of accounting and line item accounting. It had outlived the limited purpose for which it was developed decades ago. The old system was one of record keeping more than financial accounting. The TAS maintained records of all monies received and paid — nothing beyond that. According to Schedule IX of the KMC Act, 1976, the corporations in the state are allowed to have their own accounting system but BMP did not have any specifically designed system of accounting. The system evolved by convention and convenience and was a mirror image of the state governmental accounting. It was oriented towards compliance.

### Cash System of Accounting

The salient features of the Cash Accounting System (CAS) followed by BMP is described in brief below as there could be mutations of these in other municipal corporations:

- Vouchers are prepared based on transactions (receipts and payments).
- The voucher information is recorded in the cashbook.
- Classified abstract or classified registers are prepared separately from the cashbook for revenue and expenditure.
- The columnar totals are carried over to the receipts and payments statement on a monthly basis. Every month, a similar statement is prepared. The accounts are maintained according to major and minor headings.
- The monthly balance in the classified register is not carried over from one month to another. Each month has a separate total. The receipts and payments statement is summarized for cumulative figures.

- While cashbook balances are carried over, break-up provided by the classified abstracts is not carried over. So, overall self-balancing is not achieved.
- The limitations imposed by manual maintenance of classified registers resulted in an unscientific grouping of the account heads.
- Though demand-collection-balance (DCB) registers are mandatory, the cash book accounts only for accounting the 'collection' portion (which is shown in receipts and payments statement) and there is no financial statement for accounting demand and balance.
- At the end of the year, an annual report is presented to the Council which gives the actual and budgeted figures for the previous year and the budgeted figures for the coming year. During the year, the revised estimates of expenditure and revenue are collated and presented to the Council as a mid-term review primarily to go for more appropriation or for revision of rates or estimates.

Another important classification of accounts is capital and revenue and plan and non-plan accounts which are according to the national accounting practices. The classification of expenses is quite flexible (though fund surpluses cannot be transferred from one head to another without approval) and thus expenditure can get classified wrongly or arbitrarily. For example, BMP did not have any method tracing all the vouchers that came for payment. Each office made vouchers and the CAO's office in the Head Office would come to know about the payables only after the monthly accounts were submitted. Some of the entries passed by the bank, like the charges for the bounced cheques, were not accounted as bank charges and were adjusted by the bank directly. In case of contracts, there was no structured information on the status of work and bills payable. The system was more dependent on contractors to maintain the information. The contractors were also unhappy with the situation as it could create moral hazard problems.

The financial statements mainly present budgets and actuals according to various major and minor heads. The *Annual Report* for 2000–01 which was prepared as per the old system is provided in Annexure 1 to give an idea of the then financial reporting system. A financial statement that summarizes financial performance taking into account both 'operational aspects' and 'financial position' of BMP was not prepared.

## Gaps in the Legacy Accounting System

The accounting information (AI) system as it existed was designed more to account for the transactions and to ensure compliance than to help decision-making and financial control. Its basic advantage was its simplicity but even here it was deficient as annual accounts were in arrears and consequently audit was also delayed. Manual accounting accentuated the problem. The annual accounts that were prepared did not reflect various figures of items like receivables, payables, fixed assets, loans and other liabilities, cash and bank balances, etc. In the opinion of Srihari, the AI was often an aggregation of figures given by various offices and departments than system-generated figures. According to him, this could never give the actual picture for decision-making as it depends upon the quality of information provided by all the departments.

It is clear from the process flow that even if the cash transactions are accounted for, aggregation and presentation according to broad headings posed its own problems. The way AI is structured, it does not easily lend itself for manipulation for control and decision-making. For example, costing of services is difficult as expenditures were grouped unscientifically. An audit of TAS in select department showed these gaps and weaknesses (Table 1). There were also major gaps like non-existence of a single database for information and non-availability of information on a timely basis as evident from the table. The system might have survived because a highly centralized structure with a few decision-makers at the top felt no necessity for a fine-tuned accounting system. The emphasis was more on compliance and vigilance than on decision-making and control. Also, BMP being a public system had no hunger for information and hence there was no felt need to modernize accounting.

## MODERN ACCOUNTING SYSTEM

Accounting is one of the principal ways of addressing transparency and accountability in public systems. In public systems, it is considered that only statutes, legal systems, and vigilance ensure accountability and governance. A good accounting system with appropriate mix of financial and physical reports can also help improve transparency, plug loopholes, and ensure accountability. The passing of the Karnataka Right to Information Act, 2000 and the Transparency Act, 2001 increased the responsibility for providing information.

**Table 1: Gaps in Control under TAS**

Area	Weakness Resulting in Gaps	Risk
Accounts	<ul style="list-style-type: none"> <li>a. Internal account compilation dependent on banking inputs</li> <li>b. Expenditure tracking not done by ward/zone</li> <li>c. Numbering done monthly than annually</li> <li>d. CAO's office reduced to compilation section</li> </ul>	<ul style="list-style-type: none"> <li>a. Delayed reconciliation/lack of accuracy</li> <li>b. Inability to monitor detailed financial activities</li> <li>c. Weak control</li> <li>d. Inability to generate financial intelligence</li> </ul>
Revenue	<ul style="list-style-type: none"> <li>a. Inputs from three sources: Assistant Revenue Officers (AROs)/departments/banks</li> <li>b. Weak monitoring of dishonoured cheques</li> <li>c. No bifurcation of taxes and cess</li> <li>d. Delayed information</li> </ul>	<ul style="list-style-type: none"> <li>a. Difficulty of reconciliation (control)</li> <li>b. Misclassification</li> <li>c. Potential for missing credits</li> <li>d. Scope for temporary misappropriation (control)</li> <li>e. Accuracy of information</li> <li>f. Information gaps</li> </ul>
Expenditure	<ul style="list-style-type: none"> <li>a. Salary payment mechanism of one voucher-to-many bank cheques</li> <li>b. No tracking of assets from financial accounting</li> <li>a. No relation to physical progress</li> </ul>	<ul style="list-style-type: none"> <li>a. Weak control</li> <li>b. Weak performance evaluation system</li> </ul>

It was decided to replace the existing system with fund-based accounting and accrual accounting. In any organizational change, there has to be clarity on what the existing system should be replaced with as the remedy may sometimes pose more threat than the malady. The technical core of change is as important as the organizational aspects of change.

Thus, the Modern Accounting System (MAS) was introduced after a series of research, debates, and discussions (discussed later under implementation). Fund-based accounting is a concept that was new to the governmental accounting system at that time. MAS in BMP was designed according to the Accounting standards specified in the 'Technical Guide on Accounting and Financial Reporting by the urban local bodies' of The Institute of Chartered Accountants of India (though the technical guide did not specifically recommend FBAS) and guidelines prescribed by the Government Accounting Standards Advisory Board of the Comptroller and Auditor General (CAG) of India. It was also decided in principle in the beginning itself to develop a system which would move towards the standards of the Statement No. 34 of the Government Accounting Standards Board (GASB) of the US (which conceptualized fund-based accounting) and adopt the same to the Indian conditions.

The adoption of various accounting standards for various items is shown in Annexure 2 along with the AS Guidelines and compliance. New concepts like fixed assets accounting group (FAAG) and long-term debts accounting group (LTDAG), segregation of funds, generation of balance sheet, etc., mark a major departure of accounting information from the general government-

tal accounting systems across the globe.

### Fund Accounting Components and Method

Governmental accounting standards prescribe three categories of funds: governmental, proprietary, and fiduciary funds. BMP also decided to maintain these groupings. This categorization is based on the nature, purpose, and functional type.

**Government funds:** The financial statements in this category are prepared under the modified accrual basis of accounting. Under this system, revenues are recognized when susceptible to accrual and expenditures are recorded when the related fund liability is incurred as per the standard. In accordance with this concept, current assets and current liabilities alone are included in the balance sheet of the fund.

**Proprietary funds:** These are accounted on a flow of economic resources measurements basis and are prepared under the accrual basis of accounting. In accordance with this principle, all assets and liabilities associated with the operation of these funds are included in the balance sheet. The equity of the fund is segregated into two components, namely, contributed capital and retained earnings.

**Fiduciary funds:** These are accounted on a flow of economic resources measurement basis. Accordingly, all assets and liabilities associated with the operation of these funds are included in the balance sheet and equity is segregated into contributed and retained. The financial statements of trust funds are prepared on an accrual basis and agency funds under the modified accrual method as described below.

The long-term assets and liabilities belonging to

non–proprietary funds are accounted for separately with the use of accounting groups. Accounting groups are memorandum accounting entities. FAAG is used to ‘account for long-term fixed assets and LTDAG is used to account for long-term liabilities (Table 2).

In the non-proprietary funds, accounting for expenditure is based on the modified accrual concept. The amount spent on assets creation is shown as expenditure for the period in the revenue and expenditure account. Similarly, long-term receipts are shown as revenues in the revenue and expenditure account. However, in order to have complete control over long-term assets and liabilities, memorandum entries are passed for these entries and shown under the FAAG and LTDAG in the balance sheet. The entries in the accounting-groups column in FAAG and LTDAG columns in the balance sheet would thus refer to the non-proprietary fund that are of long-term nature (The balance sheet for 2004-05 is presented in Annexure 3 for illustration which has incorporated these).

Fixed assets are reflected directly in financial statements only in the case of proprietary (enterprise and internal service) funds and fiduciary funds. In the case of governmental funds, the cost incurred to acquire/construct a fixed asset during an accounting period is charged off as expenditure incurred during that period. Such expenditure is reflected in the FAAG column as an asset and disclosed appropriately under the relevant account head. The sources of funds for such acquisitions/constructions are disclosed under the caption ‘investment in fixed assets’ as a liability.

The expenditure on creation/acquisition of fixed

assets under governmental fund type is accounted as capital expenditure in the year in which such expenditure is incurred and is expensed in the revenue and expenditure account. For control purpose, such fixed assets are also accounted in the FAAG by passing memorandum accounting entries for such capital expenditure.

There are basically two important financial statements: balance sheet and revenue and expenditure statement. Apart from these, two important ancillary statements that are prepared are cash flow statement and budget variance statement. The balance sheet for BMP was prepared for the first time after the introduction of FBAS and reporting under the old system has been discontinued since then. The revenue and expenditure statement and balance sheet for the year 2004-05 are presented in Annexures 3 and 4 respectively. These are the financial reports that are now being presented to the Council.

### Accounting Structure

The accounting structure of MAS, as designed and implemented in BMP, makes an intelligent combination of organizational entities (ward being the unit of accounting), fund categories (major classification), sub-fund categories (minor heads), and account heads (chart of accounts). This classification is helpful in meeting the requirements of accounting in terms of tracking, decision-making, and control. Each of these items follows independent logical order so that the system as it has been designed helps to maintain the granularity of entries at line item level, functional level, and zonal level

**Table 2: Disclosure Schema of Fixed Assets and Liabilities**

#### Treatment of Fixed Assets

Assets	Fund-wise Financial Statements				Corporation-wide Financial Statements		Depreciation
	Governmental Funds		Proprietary and Fiduciary Funds		Proprietary and Governmental Funds		
	BS	FAAG	BS	FAAG	BS	FAAG	
Infrastructure assets (e.g., roads, bridges, culverts, flyovers )	☒	☑	☑	☒	☒	☒	☒
Other fixed assets (e.g. land, buildings)	☒	☑	☑	☒	☒	☒	☑

#### Treatment of Liabilities

Liabilities	Fund-wise Financial Statements				Corporation-wide Financial Statements	
	Governmental Funds		Proprietary and Fiduciary Funds		Proprietary and Governmental Funds	
	BS	LTDAG	BS	LTDAG	BS	LTDAG
Long-term loans	☒	☑	☑	☒	☒	☒
Current liabilities	☑	☒	☑	☒	☒	☒

aggregating from voucher level information. This design is being very much appreciated for its features, flexibility, and scalability.

The coding structure of MAS has 5 digit (Alphanumeric) coding starting from head of accounts and following a tree structure. The coding structure is shown in Table 3 through an example. The table shows one item each for asset, liability, expenditure, and revenue through a 5-level classification. The chart of accounts of BMP has over 1,500 heads. The granularity of the accounting has been maintained at micro level and accounting information can be generated and retrieved according to various classifications for control and decision-making purpose.

The chart of accounts classified along fund types, sub-categories-wise, for various levels of offices of BMP like the head office, zone, ward, etc., (accounting unit or entity) provides an excellent combination for granular accounting. This helps in manipulation of the accounting information to take care of all the administrative and decision-making requirements. The advantage of this design is that new groupings can be formed and information can be retrieved in any suitable form required by the decision-makers in future. Accounting and process manuals were prepared to reflect the new accounting processes.

Regarding work, an innovative design was adopted. A new 14-digit coding structure was introduced to classify work according to the year of origination, nature of work, source of funding for the work, type of work, sub-type of work, and a ward-specific running number. In order to enable initiation and migration of data, a detailed format to collect work-related information for coding plus other related information like the date of approval, tender issue date, work start date, approval

estimate, tender cost, actual cost in terms of bills received, extent of work completed, expected date of completion, details of payments made, etc., were all collected and central work database compiled. Totally over 6,500 works were coded as against 1,650 works that were presumed to be the number of works then pending. A payment system was also designed and payments were made according to the queue which could be altered only through due processes.

In the new system, revenue collection is captured from the tax collection module and various expenditure categories are captured from the respective modules like work expenditure from a detailed work management module, payroll from payroll sub-system, and all other expenditure from automated payment mechanism including online bill register, payment passing, and cheque printing. This has resulted in increased control over authorization process and payment mechanisms.

### MAS-enabled Financial MIS

MIS has been designed such that it would provide control as well as analytical information to the concerned levels. In BMP, five levels have been identified in the MAS-enabled MIS and for each level, the focus is different as shown in Table 4. Three types of reports have been provided for operational, statutory (obligatory), and analytical and performance purposes. There are four levels of reports: detailed reports, summary reports, analytical reports, and functional reports.

The highlight of the experiment in BMP is the excellent link between the accounting information and MIS. This is conspicuously absent in many other experiments. The report formats were developed with the participation and concurrence of the users. The contents

**Table 3: Accounting Code Schema**

1 Type	2 Major Group		3 Minor Group		4 Sub-group		5 Account Head	
	Code	Description	Code	Description	Code	Description	Code	Description
Assets	FIXED	Fixed assets	BLNDG	Buildings	COMML	Commercial assets	FBM02	Commercial complexes
Liabilities	CL	Current liabilities and provisions	CL	Current liabilities	CESS	Cesses, taxes, and royalties	CL004	Beggary cess payable
Expenditure	REXP	Revenue expenditure	GENAD	General admin. expenses	ELESH	Electricity charges – Shared expenditure	RE136	Electricity – Street lighting
Revenue	CREC	Capital revenue	GRNT	Grants	GRNTM	MOU grants – Rajdhani Development Fund	RR032	MOU Grants – Flood management work

**Table 4: Accounting Information and MIS Grid**

Level	Designation	Focus	Needs
1	Mayor, Council members, Commissioner	Corporate decision-making Performance evaluation	Policy/Organizational level Reporting to stakeholders like government, public, other agencies for utilization and compliance Reporting for governance
2	JC/ DC/ CAO/ EIC/ CE/ CHO/ EO/JDTP	Compliance, control, and performance evaluation	Compliance with budget and procedures Monitoring and progressive information Performance evaluation Business analytics
3	ACF/EE/ZHO	Operations/Task related info Day-to-day monitoring Reconciliation	Consolidation and information processing Procedure-related Progress of activity and expenditure Field level information Narrow focus Escalation of information
4	Unit officers	Operations-related Transaction-related	Source of data and data entry Ensure reliability and periodicity of reports Source of all enterprise level information
5	Data management	Integrated Comprehensive	The database needs to be authentic and comprehensive to cater to the needs of various levels Single source Need for data integrity

and periodicity varied with levels of reporting and information requirements.

The major accounting and statutory reports that are generated by MAS are revenue and expenditure report, balance sheet, and cash flow statements. The requirements of the elected representatives of the Council and the two committees on Taxation and Finance and Accounts were specifically addressed. For the corporators, an information kit called *Arthika Darpana* has been developed with scope for generating various reports. It includes revenue-expenditure information relating to the ward; the number and value of project work related to the ward; and a detailed report on various aspects of each and every ward work.

At the corporate level, the reports relate to various public works, projects, etc., which have a direct bearing on the finances of the Corporation. There are also reports for tracking revenue and tax collections and borrowings that provide snapshot information. The officers realized the power of information system when they had the MIS on operations concerning them on a concurrent basis and when these were frequently referred to in the review meetings at senior levels. Over 50 different MIS reports were getting generated for use at various levels in various frequencies.

In the second level of MIS, the focus is on 'control' to ensure that all plans are going as per schedule and

deviation if any is captured to enable corrective actions. This seeks to address various control requirements at senior operating level and provide the executives with useful MIS reports. The focus here is on zonal and functional levels. The operational level reports help the executives to ensure that the day-to-day operations are conducted properly as per plans and decisions are taken in relation to operations. This is the level at which records are maintained and employees at this level maintain the 'content' of various records and hence the reports are of a detailed nature. These act as feeder for reports in summarized form which are used at various levels above.

However, report generation is one thing and utilization is another. The responsibility centre in-charge and decision-makers are most likely to use information that is of critical importance to them. Here, it is possible that they look for the accounts and numbers in MAS that they are familiar with under the old system. The main focus may still be on revenue transactions, expenditure transactions, voucher views, receipts and payment status, etc.

The Data Centre is located in the head office. It works on LAN and its access is restricted to PCs within the main office. There is a proposal to make it WAN-based and extendable to divisions. BMP has a centralized server room located at its head office. Daily infor-

mation is collected from the zonal offices and entered in the Data Centre.

## REQUISITES OF CHANGE

### Reengineering of Accounting Information Flows

An important initiative of MAS is the decision to go for a complete process study to understand the implications of reorganization and delegation that have been introduced. BMP decentralized its administration but accounting and financial information were still centralized. The reengineering of accounting information flow made it totally in sync with the decentralized structure. The processes before and after introduction of MAS are presented in brief in Annexure 5.

Information on revenue collection, for example, from the Assistant Revenue Officer's (ARO) offices used to take over six weeks for the Accounts Department to get to know about the collection information as part of the monthly accounts. Bank reconciliation was delayed, incorrectly carried out, and at any point had several unreconciled entries.

In payroll, the overall picture was always hazy as over 300 drawing and disbursing officers (DDOs) were handling payroll independently. It has to be appreciated that 20 per cent of the total accounting entries related to salary expenditure and it was over time that all the employees were brought under the monthly computerized billing system. It was centralized at the head quarters and banking transactions were also streamlined through specific arrangements with the banks for providing information in the format required by BMP to facilitate accounting and control.

Information gathering was systematized and structured. Data feeding was centralized but the source of information was from the fields and these were automatically generated from various sub-systems. Even if the system was maintained and managed at the head office level, it was clear that it was basically providing a shared service for zones and functional offices. Vertical integration was achieved through formal reporting systems like Budget Information Data Sheet (BIDS), work reports, and revenue reports from each level. The BMP took major efforts to bring into accounts all its assets and got these assessed wherever needed.

BMP had over 300 bank accounts from which information flowed on a daily basis to the corporate office. This information flow was streamlined and was enabled

by a banking service MOU with the bankers. As per this arrangement, the bankers would provide daily information to BMP according to the BMP format to facilitate prompt accounting and reconciliation. Presently, effort is on to get one consolidated data from each bank for all their branches as all banks have electronic trading system.

### Budgetary Process Changes

Budgets act like glue on the organizations and provide the templates for operation and coordination. The budgetary system should reflect organizational designs and changes in it. One area in which MAS added value to delegation was in budgeting. Reengineering of the budgeting process and its integration with organizational structure enabled increased control and established accountability at various levels. The budgeting was done bottom-up through a process of collecting budget data through BIDS. Collected department-wise and accounting head-wise, BIDS provided scope for arriving at budget for each item of account head literally on a zero base approach. The successful performance of BIDS for the last three years made their officers repose a lot of confidence on the new system. Another major feature was the linking of the accounting heads to budget heads; this has resulted in creating various budget variance reports the generation of which is possible department/account head-wise and geography-wise. The entries for a year begin with incorporating the budget entries in the books of account.

### Creation of Support Infrastructure through Legal/Institutional Framework

One of the major interventions of MAS is the support infrastructure created. The accounting changes had to be initiated based on accounting policy changes which needed approval at the highest levels. The policymaking body in BMP is the Corporation Council and, in major issues, the changes need to be approved by the state government also. The Karnataka Municipal Corporations Act, 1976 enabled BMP to have its own accounting system but BMP had not prescribed any specific system for itself. Hence, the required regulations were drafted and passed. Initially, the BMP Accounting Regulations Act, 2001 was passed to make FBAS the official accounting system. Subsequently, the accounting policies, budgetary regulations, etc., were framed in accordance with the Act. Accounting regulations, policies, and budgetary

regulations were drafted for the first time in BMP.

The design of MAS synchronous with responsibility and decision matrix formalized the structure of decentralization. For each functional area, separate modules were developed and designed such that they were highly functional and scalable. The MAS was also backed by changes through BMP (Accounts) Regulation, 2001, BMP (Budget) Regulations, 2003, and BMP Significant Accounting Policies, 2003 documents and MOUs with state government and banks.

A MOU between the Government of Karnataka and BMP provided the basis for strong review and control system. A MOU between the Finance Department of the state and BMP provided a review mechanism wherein the financial performance and implementation of reforms were reviewed by the Government of Karnataka periodically. The MOU contained specific benchmarks which were related to the release of grants to BMP by the Government of Karnataka.

## IMPLEMENTATION PROCESS CONTROL

According to Srihari, FBAS was implemented as unobtrusively as possible. Even the top management saw it as a part of series of innocuous initiatives that were being taken than as critical initiatives. Srihari led the way by using the system himself in many ways and when he needed information, he used to retrieve it himself than ask his officers. This made the officers use the system more proactively. He championed till the end until the system found acceptability with the officers. As he said, internally, "one should sell a system than impose a system."

### Decision-making Process for Implementing FBAS

The decision to opt for FBAS was not easy as there were no precedents or success stories in the municipal domain in India. As mentioned earlier, there were no prescriptions even about its structure or standards. While discussing why BMP should move to the new system, the following three issues came up:

**Compatibility:** The compatibility of FBAS with the existing organizational arrangements, legal system, and existing procedures. There were issues about the capability of the existing team of officials to handle the new system and the political acceptance of the same. The new accounting system also required approval from the Council and the government.

**Suitability:** At that time, there was no national consen-

sus on adopting accrual system in the government and its superiority over cash accounting was still being debated. Only Tamilnadu had taken the decision to migrate to the accrual system. There was a lack of understanding among all the segments on its impact on the accounting system especially in the area of financial reporting.

**Technical aspects:** There were issues about which accounting policy needed to be adopted as there were no national standards. Even the existing accounting policy had evolved more by convention and practice than by design. There was only the state financial code. Concomitant with any accounting change, auditing would also change and auditing of municipal corporations was done by the state accounts department which needed capacity building.

The above issues were tackled in a professional manner. A White Paper on Accounting System for Governments was prepared discussing various aspects of accounting reforms and highlighting the deteriorating financial position. The criticality of accounting reform to financial reforms was brought out. Detailed discussions were held at the Principal Secretary level and necessary inputs were given to the Chief Minister who was personally interested in the reform. The government was thus convinced that FBAS can be a good practice worth adopting. The Government of Karnataka entered into a MOU with BMP for various time-based deliverables (relating to FBAS implementation and other aspects) as part of its financial assistance package which further strengthened the implementation process. The State Accounts Department (the auditors) was involved in discussions at various stages. Some of the auditor department staff were also trained in the new system along with the BMP staff. BATF constituted by the then Chief Minister became the mentors for managing the implementation process at Bangalore.

### PPP in System Intervention

As mentioned earlier, BATF had a group of leading individuals from the private sector and governmental representatives and was chaired by Nandan Nilekani, the CEO of Infosys. It was a body providing intellectual and implementation assistance to various government bodies through its members by playing the interface role. Ramesh Ramanathan, an ex-banker and a member of BATF took the onus of FBAS implementation at BMP. BATF also assisted the implementation by funding the

consultancy for change management, specifically the implementation and internalization of FBAS at BMP.

### Transition Process

The implementation team reviewed the implementation process every Friday afternoon to understand the progress and bottlenecks and sorted out the problem issues immediately. Such a review continued for 30 months uninterrupted until the implementation was under total control. The Additional Commissioner (Finance) took personal interest in ensuring its smooth implementation and provided the leadership from BMP. The BMP officials were provided training in the conceptual aspects of the new system, commercial accounting, FBAS aspects, and also in the use of software. Simulated lessons for software usage provided the required comfort level. Thus, all possible aspects of getting the support of employees were addressed. However, there were issues in relation to frequent change of employees, lack of adequate manpower from the BMP side, delays in providing infrastructure, etc.

During the process of implementation of FBAS, the BMP upgraded its technology and built up both its IT department and infrastructure. It brought personnel with knowledge in IT on deputation from institutions like ISRO which further supported the cause of implementation. Apart from these, it also engaged the use of NCR Consultants Limited (NCRCL) on a full-time basis for handling the entire processes under the new system. As and when the internalization was completed, the consultants withdrew their support.

### Cross-Learning from Other Implementation Experiences in India

When BMP began its initiatives, the only state where a reasonable progress in urban accounting reforms was made was Tamil Nadu. The implementation strategy involved discussions with the Tamil Nadu team and using their inputs. In the initial stages of implementation, NCRCL too provided relevant research inputs in aspects relating to similar reforms across the world. The key personnel involved in the project used to take part in various discussions that were taking place in various parts of the country. The experience of other states which is available on hindsight now is provided in the Box.

### Post-script

The experiment in BMP started with the supply side of

### Box: Implementation Experience in Other States

The success of MAS implementation in BMP will become clearer if it is contrasted with its implementation in other municipalities. The initiative for modernizing accounting in municipalities in Gujarat came from the World Bank. The emphasis was more on going through the motion than implementing it in its true spirit. TCS undertook extensive work for Anand municipality but implementation was not part of the mandate. Its implementation was partial and lacklustre. Both the old and the new systems coexist in Anand (Joshi, 2003). The experience in Tamil Nadu is better. It involved administrators, professional bodies, and funding agencies. The municipalities in Tamil Nadu were probably highly budget driven and cost conscious. They proceeded in stages and it is still evolving. One study pointed out that the accounting system implemented in Tamil Nadu "does provide for co-relation between budget code and account code but this co-relation is at a macro or a very broad level. Detailed accounting code is co-related with broad budget heads and not with individual budget item. The detailing and 'wed-locking' (one to one matching) of the budget or object code with accounting code items will facilitate cost analysis and control at the micro level. It will also avoid maintenance of a separate accounting and budgeting database" (Joshi, 2003). This shows that the system still operates as budget-cum-compliance system than as control system. The granularity of the system is not maintained and it may not be easy to manipulate the system for control and decision-making. In Karnataka, MAS was attempted in Tumkur and Bangalore. It made uncertain progress in Tumkur and took inordinate time during implementation. Unlike Bangalore, Tumkur lacked a strong internal champion who could facilitate institutional changes.

accounting information reforms and it was felt necessary to generate useful information. However, unless there is demand for such information, these reports will remain as unexploited potential. In Bangalore, a campaign launched by four NGOs called PROOF (Public Record of Operational Finance) created some demand for accounting information. In reality, the precursor to PROOF campaign was JANAAGRAHA, a citizen's forum on public service delivery at Bangalore. JANAAGRAHA started using ward works information provided by FBAS for monitoring and later supported BMP for planning ward works. The PROOF platform is a citizens' platform where the performance of BMP is evaluated on a quarterly basis. By December 2005, seven quarterly reviews were completed and BMP has successfully gone through the exercise of replying to the issues raised by citizens in a public forum. These institutional mechanisms are critical to the sustainability of change mechanism that has been introduced in BMP.

BMP also publishes its summarized financial statements half-yearly in national dailies generally within six weeks of accounts closing properly approved by concerned statutory committees. It has been producing quarterly performance reviews systematically. One of the key aspects in this regard is the cannibalization of the old system; care was taken to see that the manual record maintenance and reporting are phased out.

The issues raised in one of the PROOF open forum meetings is presented in Annexure 6 which indicates the flavour of discussion that takes place in these platforms. The Chief Ministers, impressed by BMP's success and utility, announced in August 2002 that all ULBs in the state would be expected to follow FBAS.

The system is in the fourth year of operation and is being extensively used in the corporation. So far, three annual reports have been published in record time. The records are updated and tracked daily. The reports are being extensively used and discussed. Some proactive corporators find it a good source of information though the public is yet to use it in a significant way. In 2000, the audits were in arrears for more than five years. After implementation of FBAS, BMP took measures for completing the audits and bringing them concurrent. The annual report of 2004–2005 was completed in record time.

Srihari mentioned that it was evident from the beginning that the FBAS should help to clear the 'system-induced corruption' and improve vigilance effectively. As for the visible achievements of the new system, the information cycle time in the BMP has come down from 48 days to 48 hours; BMP's banking relationships as well as credibility with contractors who undertake the construction of development works have been strengthened; tenders are now being quoted at a price 15-20 per cent lower than before; BMP also secured a Rs. 250 crore loan from HUDCO based on its own creditworthiness without any guarantee from the state government (Pangotra and Srihari, 2003). Srihari calls these initiatives as a paradigm shift from the local body perspective in terms of pursuit of "...greater effectiveness, efficiency, and responsiveness" (Pangotra and Srihari, 2003).

## CASE ANALYSIS AND DISCUSSION

MAS in BMP has now stabilized enough to be studied. Internally, it has gained acceptance and many of its MIS reports and BIDS document are in regular use. All the past records have been updated and reconciled and, presently, it is the current which is a challenge in the municipal body context. Transition from the legacy system and initiation of the new system were themselves commendable efforts. Three annual reports have been prepared under this system and public meetings have also been held to discuss its performance. Its success also underscores the role of a strong internal champion, a crisis like situation, and an external change agency like

BATF. Any system change depends on both 'technical core' and 'organizational core' and this case analysis is about the contribution of 'institutional factors' to a 'soft skill' area like change management in an innocuous area like the accounting system. Accounting reform was embedded in a larger context of organizational reform and the linkages of accounting reform with this are also brought out.

The focus here is on the implementation phase of change management (CM) process in the accounting system domain in a municipal corporation as a case of government entity. The implementation is discussed through the framework of management control system (CS). This case and the framework would help to highlight the control cycle of a CM process at the implementation stage. Generally, control cycle is discussed only at the organizational level and rarely at the system intervention level. The existing control system framework would treat this as a case of project management system. The better post-implementation track record of BMP can be explained through the properly enacted introductory phase. The synergistic effect of process re-engineering and MAS is also brought out.

At the next level, the impact of the new system is analysed using the framework of control at three levels: strategic, management, and operational. It will be worthwhile to see where it made the maximum impact and where it was weak. The effective utilization of the new system would depend upon the performance management system and the incentive system which only can motivate people to utilize the system effectively. Otherwise, it will remain as a robust system lying in isolation.

## Method of Analysis

The methodology adopted for bringing out inferences are through the system audit of the design achieved, its successful adaptation, and the post-implementation manifestations. The control system framework raises questions more about the survival of a particular system, success factors of the new system, and why certain areas gain prominence over others. For example, reports may be getting generated but if there is no felt need for these reports, then the issue is about the incentive system than about the role of accounting system or automation. The design and manifestations of the accounting system and reports themselves can be taken as indicative of the effectiveness of control system in place. This analysis is also based on the insights of the co-author who was the

external consultant to the system design and whose firm was instrumental in developing the system. He was a 'participant observer' and his insights were useful in analysing the MAS implementation experience.

### MAS Embedded in Larger Change

It can be observed from the case that accounting reform is embedded in the larger CM processes of organizational reorganization and process reengineering. It is quite difficult to single out in this process the factors that contributed maximum to the effectiveness of the MAS. It is equally difficult to attribute everything to the new accounting system though the absence of anyone of these could have weakened the system. The potential of MAS could be realized because it was simultaneously implemented with automation. In the absence of an enterprise level system, MAS probably took its place. The larger organizational CM created the context for a more robust accounting information system. For example, delegation of powers to zonal managers for contract management and payments meant that these have to be tracked at the zonal level and that the information is provided at this level itself. Information theory says that information has to be handled where decisions are made. MAS was suitably designed to accommodate the changes in delegation of powers. The inter-relationship is presented in Figure 1.

### Modern Accounting System

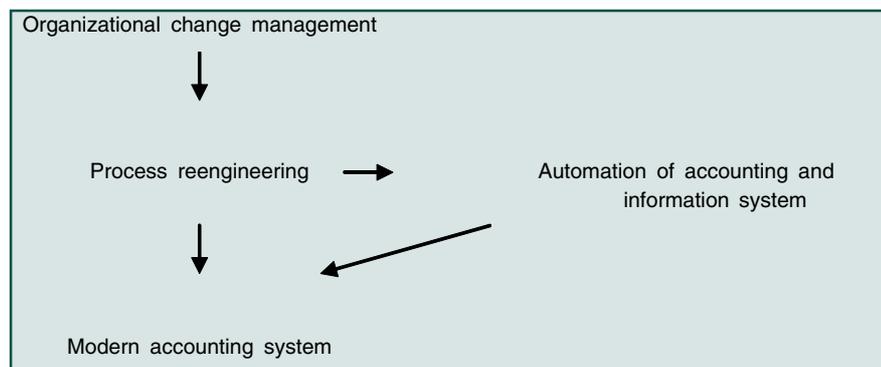
This case starkly brings out the importance of going by the rule books of CM even in a peripheral area like the accounting system. Since BMP was part of the public system, the changes in the accounting system which should have been purely an internal concern involved even the outside stakeholder — the government. CM in accounting reform seems to follow the same trajectory

as other organizational interventions in terms of:

- the role of the internal champion
- the strategy to maintain a low profile about the accounting system intervention until visible and tangible gains are made for everybody to see
- creation of an army of users and adopters and letting others to follow
- generating acceptability by sending the right signals. When the subordinates saw the boss referring constantly to reports, they were forced to refer to them as well.

The availability of the option of automation meant that all process flows could be looked at in a comprehensive way. A complete system audit was undertaken which in the absence of automation would have remained a drawing board exercise. In system design, it is important that the three streams of activity flow, control process, and accounting information stream are in synchrony. MAS sought to make a mesh of these three and made important changes within the parameters of what a public system would allow. Wherever legislative changes were required, BMP approached the state government and got suitable amendments made. The process changes that were attempted are presented in Annexure 2 which contrasts this from the old system. It is evident that it did not simply stick to capturing revenue or expenditure flows but went deep into upgrading budgeting, work tracking, etc. This created a single database and system-fed information which ensured consistency of accounting information and structured information flows. At the same time, it did not get carried away by the features offered by technology and try to over-reach itself with a complex reporting system but beyond the capabilities of the public system. It made a judicious combination of compliance to accounting standards and pragmatism.

**Figure 1: Inter-relationship of CM Processes and Accounting System**



## Control Cycle of System Intervention

The implementation of MAS can be seen from the CS perspective of project management. At the simplest level, the case can be seen as an accounting software system development and implementation intervention, which it was. At the next level, it can be seen as a project management system established for implementing accounting changes. In this section, an attempt is made to look at it from the CS perspective, i.e., as a case of understanding the CM process of modernizing accounting system in a municipal organization at the implementation stage. The focus of CS, as mentioned before, is invariably on the control system of ongoing organizations. One departure from organizational control is the focus on project management control. One can use this framework to see how a system or a process initiative is rolled out in an organization and if it can provide pointers for its success and failure. The implementation can be seen as a project management process and it might be interesting to see what trajectory it followed during the implementation process and if any additional inferences are possible.

Regarding the software development and implementation control cycle, it is less complex compared to the institutional context in which this was implemented. In software development models also, there are models which consider both social system and technical system and joint optimization (Weber, 2005). The various phases of this are: diagnosis and entry, management of change process, system design, adjustment of coordinating mechanisms, and implementation (Weber, 2005). But, in the information system context, software development team or the change management team is more concerned with system design and system capabilities than organizational design and organizational capabilities. The system development model usually discussed in this context are: planning, analysis, design, construction, and implementation which are basically drivers of project deliverables (Weber, 2005).

Regarding project management, Anthony and Govindarajan (2004) mention that, "The most important difference between the management control of ongoing operations and the management control of projects is that the ongoing operations continue indefinitely whereas a project ends... a project starts, moves forward from one milestone to the next, and then stops. During its life, plans are made and executed and the results are evaluated. The evaluations are made at regular intervals and

these may lead to revision of the plan." The stages of operating cycles that they mention are annual planning, execution, evaluation, and revisions or strategic planning. Anthony and Young (2003) describe CS at organizational level as "strategic planning, budget preparation, operating and measurement, and reporting and evaluation. In contrast, in projects, the stages are: the decision to undertake, strategic planning, detailed planning, execution, evaluation, revision, and repeat of the evaluation process until the project ends." Evaluation again can be distinguished between evaluating the implementation process and evaluating the impact of the project for the organization.

It might be worthwhile to analyse the MAS project in the context of project management control cycle. However, given the complexity of the organizational context, the focus here has to include the politico-legal environment, criticality of the task, and lack of technical guidelines. The distinctive phases that one can observe in the project are: the decision to go for FBAS, design of FBAS and its blueprint (stress on technical qualities and professional inputs), structure for implementation (in terms of PPP, committees, and implementation structure), development phase, implementation phase, review phase, and revision phase (Table 5).

In all the phases, one can observe the simultaneous existence of accounting issues, system issues, and organizational issues. There was a structured formal system and response mechanisms to handle issues arising out of these. There was an internal champion who took the onus for its implementation, i.e., for its success and failure. There were both internal and external perspectives and bureaucratic and professional perspectives which were accommodated.

## Management Control Framework

The case raises interesting issues about the contributory factors towards the purpose of the accounting reform, survival capabilities of the old system, demand for the new system, areas where accounting reforms took off, and areas where reforms did not happen. It raises issues about incentives to maintain the *status quo* and incentives to change which can be discussed under the control system and agency framework. Anthony and Govindarajan (2004) classify the hierarchy of control system at three levels: strategic control, management control, and operational control. We can see how the accounting information system was designed to serve these purposes.

**Table 5: Control Cycle at Initiation and Implementation Phases**

Cycle	Sub-dimensions	Distinctive Process
Decision to opt for FBAS	Policy area	Wide consultation Co-opting mode Strategic fit with wider reforms
Design phase	Accounting domain	Higher benchmarks Standards - driven Professional approach
	Systems domain	Scalable model Pragmatic
	Organizational domain	In sync with organizational reforms Preceded by reengineering
Implementation structure	Blueprint	Thorough understanding of system requirements Adherence to standards Enriched design to enable scalability for control and decision-making
	Development	Process control-driven Milestones met Persistent effort
	Execution	Low key Participative Internal champion PPP model All clearances followed up and obtained Modular release
Review	Evaluation	Regular Focus on clearing hurdles
	Feedback	Sorting out practical problems in accounting Sorting out organizational issues Technology-related Issues
Revision	Design Structure	System modifications PPP model maintained Committee structure maintained as it involved vendor, BMP, and PPP
	Process issues	Sorted out in committee meetings to de-bottleneck Stress on process issues of implementation

So far we were discussing the effectiveness of MAS in terms of its implementation process. The Management Control System (MCS) framework can be used to discuss the effectiveness of MAS in terms of its effective utilization.

Simons (1994) discusses two forms of MCS — Diagnostic Mode of Control (DM) and Interactive Mode of Control (IM) wherein DM is primarily directed at performance evaluation and reward system and IM at learning and decision-making system. Different organizations lay different emphasis on these two types of control system contingent upon their own belief system and boundary systems. In BMP, we find that even though MAS has features of IM, the application was primarily oriented towards DM and within that more on task control. Old belief system continues to hold its sway.

An ADB study (2004) of reforms in government accounting in developing member countries (DMCs)

points out that at “the organizational level, accrual-based financial statements provide better measures of organizational efficiency and effectiveness and reduce opportunities for fraud and corruption.” In the case of BMP, it was in the reverse direction with more emphasis on reducing corruption, tracking revenue and expenditure flows, and stress on monitoring and auditing bordering on compliance. Improvements in these areas itself were expected to bring in efficiency and effectiveness. Operational efficiency; and effectiveness were accorded low priority. If there had been emphasis on efficiency, it should have focused on cost management issues, intra-organizational performance, etc. There was less focus on these though the system design provided for it. It did improve efficiency, for example, contractors brought down rates when they realized that approval and payments systems were streamlined and that they need not provide for delays and uncertainties.

The financial reporting framework says that reports should indicate the health of financial position, efficiency of resource utilization, and status of physical resources and contractual obligations (as stated in the Summary of Concept Statement No. 1 which lists out the objectives of financial reporting as recommended by GASB, 1987). The financial reports generated by BMP along with performance evaluation document do seek to address all these areas. The issues raised in PROOF meetings point out towards the concerns (Annexure 6). However, the usage is still restricted to a small circle. The concerns still largely lie at the top management level and its application mainly depends upon the priorities of the 'men at the helm,' and it is still not system-driven. The release of the financial statements of BMP does not definitely lead to public debate by the citizens or the financial analysts as much as, let us say, a company balance sheet would. The indifference of the analysts to these statements makes it a formal exercise.

Another classification of the hierarchy of accounting information can be the three levels of transaction, control, and decision support. The transaction level corresponds to operational and task level though it also includes some control applications. The control and decision levels correspond to the management control process. We have categorized below the components of accounting information according to the level that it seeks to address from a system designer's perspective:

#### *Transaction Level*

- capturing
- tracking
- reconciliation
- coding structure
- maintaining granularity of accounts capturing
- classification and structuring of accounts
- inter-departmental transfers
- inter-ministry transfers.

#### *Control Level*

- compliance/vigilance
- internal reporting
- financial progress
- physical progress
- external reporting
- intra-organizational comparison
- inter-temporal comparison
- inter-organizational comparison
- audit.

#### *Decision Level*

- categorization and consolidation
- relational information—physical and financial
- financial reporting
- cost analysis and pricing
- analytics
- valuation.

Earlier, the accounts remained unreconciled for months. In fact, unreconciled accounts is one of the main source of moral hazard problem in public systems. In the present system, reconciliation is automatic, system-driven, and takes care of many laxity. Earlier, there was no clear account of pending and incomplete projects. The accounting system was flexible enough for this to exist for years. Today, there is continuous tracking of revenue collection. Cash flow management and bank reconciliation have improved tremendously. The cash float that used to be with the banks has come down drastically. Contractors appreciate the present system of vendor management and payment system and have consequently brought down quotes for services. Annual reports are made available on time making audit also timely. There are perceptible improvements in the quality of accounting information and internal reporting systems.

An analysis was carried out to evaluate the features of MAS on various parameters like relevance, reliability, verifiability, neutrality, etc., which are commonly used factors in evolving standards as prescribed by GASB (1987) and other standard setting agencies (FASB, 1980). An analysis of what might have been the position of BMP on various dimensions is presented in Annexure 7. We find that among these parameters, the ones which scored high are relevance (as BMP thought the situation then was vastly different from what existed prior to that), reliability (it was believed that the old system lacked reliability in terms of the quality and speed of information produced), credibility (helps in convincing lenders and analysts), and accountability (gives more scope for control).

It can be observed from the MAS design that the top management would have liked to address areas of control and decision-making and not just operations and compliance. Control again gets translated as compliance and vigilance than variance control and cost management in public systems to which BMP is no exception. The top management did act as the driver of change but the focus remained largely transactional and to some extent control. The control focus in public system largely

manifests as compliance and vigilance focus. Probably, it reflects the way a system evolves in organizations: first it starts with transaction and control level applications and then progresses to decision level applications. The system is heavily loaded in favour of capturing data, tracking data, reconciliation, operational level reports, capturing bank float, audit trails, etc. These details which were available only at corporation level with delays are now available at project level, sectoral level, and geographical level in real time. The focus of inter zonal-inter temporal comparisons is still on revenue and expenditure than on performance or returns. Divisional officers still lack online access to database which means that the intended benefits of decentralized structure and information have to wait. Work and expenditure progress are tracked but there is no intelligent system to develop their relationships.

### Triggers for Change

The reasons for change, CM process, and the final manifestation have to be understood from the triggers for change and the strength of their signalling effect. On the whole, we can say that the triggers for accounting information change came from four factors:

- **Financing pattern:** The state government was financially supportive but was helpless in providing more support. It expected BMP to mobilize its own resources through better revenue collection methods, user charges, and borrowings. Once the state government fixed the cap for financial support, financial prudence became important. In fact, BMP entered into a MOU with the state government which required "the BMP to implement significant administrative and policy reforms and, in exchange, commit substantial financial support from the state government for a variety of infrastructure projects" (Pangotra and Srihari, 2003).
- **Borrowings/Ratings:** Market borrowing makes immense difference to the way financials have to be managed by organizations compared to being funded through grants by governments. They have to market the stakes to external stakeholders and accounting information becomes that much more critical. The borrowers would ask for ratings of instruments which again means more demand for better accounting information and reports.
- **User charges:** One of the avenues for covering the deficit was levying user charges. Resource crunch

made BMP look at commercial complexes, parking lots, parks, etc. commercially. Levying user charges required BMP to have an idea of what it costs to create and maintain these assets.

- **Public pressure:** The setting up of BATF created an effective pressure group which also provided external fillip to reforms. The passing of the Transparency Act in Karnataka led to the demand for more information by the public and the NGOs as is evident in the discussion in PROOF platform. They would need updated information project-wise, zone-wise, etc. In the old system, it would have been difficult even for the top management to gather this information.

MAS got helped by these change drivers and it enabled effective response to these changes. BMP is now accountable for resource mobilization as well as financial management. It is evaluated on these and is accountable for performance on financial outcomes. Earlier, the deficits were bridged by the state government as it had committed to fulfil whatever be the gap. The incentive for economic use of resource and management of financials were weak. In the new regime, continued financial support depends on performance on agreed upon performance parameters. The financial support moved from deficit financing to 'capping' the state government's commitment. The gap has to be now filled by its own revenue sources or by market borrowings. This definitely brings in discipline in spending and financial management. Agency relationship and performance get altered when these factors gain importance.

Borrowings increased 'accountability' to external parties and BMP came under the analyst's glare. There is periodic assessment of BMP instruments and rating exercise. The rating institutions are supposed to be looking at the resource mobilization capabilities of municipal corporations, elasticity of revenue sources, and robustness of escrow accounts.

### Weak Triggers

The change drivers were there but the signals were weak. The organizational frame of BMP still remained steadfast on bureaucratic control mechanisms and this probably meant that the incentive system was still tuned towards older paradigm. In BMP, it required tremendous thrust by the change agent to keep the focus on effective utilization of MAS. This was also helped by the

decision to cannibalize the old system as otherwise the old system could live in its embryonic form only to rear its head at an opportune time. In some corporations, both exist side by side posing continuous challenge to the survival of the new system. They generate two reports which are like bi-lingual reports. People familiar with the old system continue to go by reports prepared under the traditional method. It creates two classes of users. At the Council level, there was no change which called for changed thinking. For example, if there is scope for recall of corporators or accountability of officials to the public, these systems might have helped. The initiatives are still restricted to select active corporators and a few NGOs who act as watchdogs.

The financing pattern by the state government and MOU is in place but resource dependency is still significant. Revenue grows at good pace but there are commitments in terms of demand for utilities and infrastructure. Performance monitoring mechanisms have improved but the government knows that the revenue sources of local governments are limited and that it has to support it when it comes to the crunch. This again gives a comfort level to the municipal corporations. The share of user charges is not large enough to warrant any major change in accounting information system.

When it comes to the analysts or lenders, it is not clear how they incorporate accounting information produced by MAS in their analysis. The external stakeholders like analysts or investors are also not clear about what accounting information they would like to have and models to analyse (Zimmerman, 1977). Different methods are followed like accrual method and modified accrual method within the same financial report and it is difficult to make expert judgments based on different templates in the same report. The debate still continues about the level of disaggregation, sophistication, and reporting formats. There are no templates for reporting and the benefits are not clear.

If we go by the criteria followed by rating agencies, the weights seem to be more for accounting systems and reports *per se* than for the content of MAS. They are yet to develop appreciation for information presented in the annual reports. In any case, they do not have the luxury of having reports of many corporations as this is yet to become a movement in India. In the final analysis of analysts, the instruments of municipal corporations may be rated based more on credit enhancement mechanisms like government guarantees, strength of escrow accounts,

etc., as reported by the credit rating agencies than on the strength of the balance sheet. The control exercised by the voters is still distant and not strong enough to lead to a demand for information.

In BMP, in spite of weak signals in the above mentioned areas, we observe that the utilization of accounting information has been increasing over time and is more purposeful. But, it required and did have a strong internal champion and top management backing. In other cases, probably, the locus of change drivers was external and so persistent efforts were not there to ensure its successful utilization.

### **Agency Dimension**

One possible explanation for the positive results of MAS in BMP could be the changing agency relationship. In Zimmerman's (1977) view, the concept of agency may provide a basis to understand the behaviour of a manager of a public organization. In public system, "...in the absence of the market, the parties to the firm must design administrative devices to (1) measure performance, (2) evaluate performance, and (3) partition decision rights." In the absence of the market, these three activities are "performed by (costly) administrative devices inside the firm" necessitating high transaction costs. So, explicit rules and regulations like budgets are imposed to restrict public official's discretion (Zimmerman, 1977). The control thus manifests in the form of compliance and vigilance. Meeting the budget becomes the end and compliance the means. This is a dissatisfactory situation as it does not necessarily mean efficiency or effectiveness.

The long route of social control over public system also means that control will be more on processes, inputs, and expenditure which translates in to compliance rather than on outcomes or effectiveness. This minimal function was performed by cash accounting in the earlier era and is sought to be achieved by fund-based accounting system now. It is in this context that the survival capability of the older system and the role of modified system of accounting has to be understood. While at one level, the cash-based accounting system helped in ensuring compliance to budgets, it also helped in obfuscating the position as it was presented at high levels of aggregation and had little utility in terms of decision-making and control other than vigilance. In the analysis of implementation of MAS, we see an influence of changing financial arrangements which might have altered the agency relationship.

## CONCLUSION

It is said that system design for accounting information should consider both conceptual and institutional frameworks for developments in accounting system (Gandhi, 2005) and this case brings out clearly the need for doing so. That TAS has become outdated and outlived its purpose is a well-received knowledge in literature. Its longevity can be attributed to the incentive system which favours the existing system, as pointed out in the case analysis, or to the organizational inertia. As Miller (1995) writes, "...an accounting practice, may have attained (or retained) acceptability because users are accustomed to receiving statements prepared with it." Even in the US, financial reporting by the government does not come out shining. "The federal system did produce a financial report for 1997 and has done for every year thereafter, but none of these reports has met the minimum requirements established by the American Institute of Certified Public Accountants" (Anthony and Young, 2003).

It has to be conceded that implementing reforms, even in an innocuous area like accounting and financial reporting, takes time in public systems. As early as 1898, Durand wrote that, "the accounts kept by our American municipalities are so complicated and differ so greatly among themselves that a comparative study cannot be made off-hand" and that "the budget system, considered as a system, has passed from bad to worse ... in all

aspects, the Charter of Greater New York does little to effect improvement" (Durand, 1898).

Decades and even a century might pass but the problem can still persist. Writing in 1975, Robertson noted that, "The set of conditions that led to New York City's situation are (1) the unusually liberal borrowing power to the city by the state, and (2) the city's use of budgetary and accounting procedures that even experts find baffling. The second condition helped to conceal the fiscal abuses engendered by the first" (Robertson, 1975).

The problems persist because the solution lies elsewhere. The institutional arrangements and the incentive issues have to be addressed for accounting reforms to become fruitful. Zimmerman points out that, "... reform in the New York City's budget and accounting systems does nothing to change the politicians' and voters' incentive which generated the spending policies and financial 'crises'" (Zimmerman, 1977).

In the final analysis, it should be appreciated here that the accounting information system implemented in BMP can provide a template for other municipalities to emulate. This case provides an illustration of the prerequisites and the support structures for effective reforms in accounting system. It will need the understanding of the larger contextual settings. For MAS to completely succeed in other municipalities, the other contextual properties also have to be considered. ♡

### Annexure 1: Financial Statement of BMP, 2000-01 (Before Implementation of MAS)

Head of Accounts	Budget Provision for 2000-01 (Rs. in Million)	Pro Accounts from 1-4-2000 to 31-3-2001 (Rs.)
Property tax	1,122.81	1120798000.00
Advertisement tax	105.10	26526000.00
Service charges on central govt. building	21.82	207100000.00
Income from revenue dept.	7.26	7264000.00
Improvement charges from revenue dept.	16.50	49447000.00
Fees collected from engg. dept.	2,356.56	2316966000.00
Other fees collected from engg. dept.	297.75	257441000.00
Fees collected from health dept.	74.00	40121000.00
Misc. receipts from health dept.	1.11	795000.00
Fees collected from horticulture dept.	1.00	1256000.00
Fees from GAD dept.	0.80	561000.00
Grants – Census	39.65	28446000.00
Surcharge on Cauvery 4th stage	97.27	6500000.00
Grants – Fire and riots	576.22	431607000.00
Other fees collected from education dept.	82.01	151000.00
Income from capital investments	1,214.29	880360703.00
Grants from state govt.		96182710.00
<b>Total</b>	<b>6,014.17</b>	<b>5471522413.00</b>

**Note:** Provisional receipts and expenditure statement for the period 1-4-2000 to 31.03.2001 as per KMC Act 1976, Schedule-I, Rule 4.

## Annexure 2: Adoption of Standards and Accounting Treatment for Illustration

### AS 1 – Disclosure of Accounting Policies

Basic Requirements	Compliance by FBAS
Disclosure of significant accounting policies	Disclosure of accounting policies is being made in the notes part.
Prudence, substance over form, and materiality	These concepts have been incorporated. Being early adopter, improvisation and prudence to suit Indian system were appropriately adopted.

### AS 5 – Profit or Loss for the Period, Prior Period Items, and Changes in Accounting Policies

Extraordinary items to be disclosed separately	Reporting of any extraordinary item of revenue or expenditure is automatically taken care of since it would not have a matching budget head. This will be separately disclosed in income and expenditure account.
Change in accounting estimates and policies	Disclosure of such changes is made in the notes forming part of the financial statements.

### AS 6 – Depreciation Accounting

Depreciation to be charged keeping in view the useful life and the residual value of the asset	Rates of depreciation are fixed keeping in view the useful life and the residual value. However, governmental fund assets are not depreciated.
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### AS 10 – Accounting for Fixed Assets

Fixed assets are to be reported at cost less accumulated depreciation	This method of reporting is adopted.
Valuation of fixed assets in different cases	Purchased and constructed fixed assets are valued at cost (purchase price, transportation costs, installation costs, and other incidental costs). Donated assets, assets acquired free of cost, etc. are accounted at nominal value. Existing infrastructure assets are brought into the balance sheet at nominal value (Re. 1). Improvements to fixed assets are accounted at cost. Governmental fund fixed assets are expensed in the year of purchase / creation. Information about such assets is separately tracked by means of memorandum group entries.

### AS 15 – Accounting for Retirement Benefits in the Financial Statements of Employers

Provision to be made for liability on the basis of actuarial valuation	Year-end entries have to be passed to provide for the liability towards retirement benefits. The liability has to be determined on the basis of actuarial valuation.
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### AS 16 – Borrowing Costs

Capitalization of direct borrowing costs	Interest costs on specific borrowings are capitalized along with the asset till the date of completion of the asset
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## Annexure 3: BMP's Balance Sheet as on 31.03.2005

(Rs. Million)

	As on 31/03/2005				Accounting Group			Memorandum	As on
	Funds			Total	Fixed Assets	Long-term Debt	Total	Total	31/03/2004
	Governmental	Enterprise	Fiduciary						
<b>Liabilities</b>									
Fund balance	854.82	24,508.31	27.97	25,391.10	-	-	-	25,391.10	25,436.25
Long-term liabilities	-	-	-	-	-	5,055.17	5,055.17	5,055.17	3,362.72
<b>Current Liabilities and Provisions</b>									
Current liabilities	503.65	-	-	503.65	-	-	-	503.65	445.38
Deposits	258.41	-	-	258.41	-	-	-	258.41	247.73
Provisions	1,604.61	-	-	1,604.61	-	-	-	1,604.61	1,546.76
	<b>2,366.67</b>	-	-	<b>2,366.67</b>	-	-	-	<b>2,366.67</b>	<b>2,239.87</b>
Inter-fund balances	-	21.37	-	21.37	-	-	-	21.37	7.13
Sources of funds for fixed assets	-	-	-	-	8,473.33	-	8,473.33	8,473.33	5,358.48
<b>Total</b>	<b>3,221.49</b>	<b>24,529.68</b>	<b>27.97</b>	<b>27,779.14</b>	<b>8,473.33</b>	<b>5,055.17</b>	<b>13,528.50</b>	<b>41,307.65</b>	<b>36,404.44</b>
<b>Assets</b>									
<b>Fixed Assets</b>									
Buildings	-	6,866.18	26.77	6,892.96	667.03	-	667.03	7,559.98	7,328.86

Contd.

	As on 31/03/2005								As on 31/03/ 2004
	Funds				Accounting Group			Memorandum	
	Governmental	Enterprise	Fiduciary	Total	Fixed Assets	Long-term Debt	Total	Total	
Infrastructure assets	-	-	-	-	6,577.28	-	6,577.28	6,577.28	4,101.87
Lands	-	17,552.16	-	17,552.16	914.61	-	914.61	18,466.77	18,170.00
Other assets	-	0.64	-	0.64	298.85	-	298.85	299.49	156.36
Vehicles	-	-	-	-	15.57	-	15.57	15.57	10.47
	-	<b>24,418.99</b>	<b>26.77</b>	<b>24,445.76</b>	<b>8,473.33</b>	-	<b>8,473.33</b>	<b>32,919.09</b>	<b>29,767.56</b>
Long-term investments	23.55	-	-	23.55	-	-	-	23.55	6.00
<b>Current Assets</b>									
Inventory	17.89	-	-	17.89	-	-	-	17.89	35.95
Receivables	899.53	12.39	-	911.92	-	-	-	911.92	1,077.81
Cash and bank balances	542.02	98.30	1.20	641.52	-	-	-	641.52	451.70
Loans and advances	112.52	-	-	112.52	-	-	-	112.52	148.82
	<b>1,571.95</b>	<b>110.70</b>	<b>1.20</b>	<b>1,683.84</b>	-	-	-	<b>1,683.84</b>	<b>1,714.27</b>
Inter-fund balances	21.37	-	-	21.37	-	-	-	21.37	7.13
Application of long-term liabilities	-	-	-	-	-	5,055.17	5,055.17	5,055.17	3,362.72
Work-in-progress	1,604.61	-	-	1,604.61	-	-	-	1,604.61	1,546.76
<b>Total</b>	<b>3,221.49</b>	<b>24,529.68</b>	<b>27.97</b>	<b>27,779.14</b>	<b>8,473.33</b>	<b>5,055.17</b>	<b>13,528.50</b>	<b>41,307.64</b>	<b>36,404.44</b>

#### Annexure 4: BMP's Revenue and Expenditure Statement (1.4.04 to 31.3.05)

(Rs. Million)

	2004-05				2003-04
	Governmental	Enterprise	Fiduciary	Total	
<b>Revenue</b>					
<b>Revenue (Capital)</b>					
Grants	230.00	-	-	230.00	244.02
Long-term loans	2,206.42	-	-	2,206.42	1,719.24
Non-tax revenues	33.41	-	-	33.41	-
	2,469.83	-	-	246.98	196.33
<b>Revenue (Revenue)</b>					
Grants	1,147.33	-	-	1147.33	1,107.18
Non-tax revenues	699.24	35.70	-	734.95	718.67
Other revenues	38.37	18.85	-	57.21	50.46
Tax revenues	2,251.37	-	-	2,251.37	2,176.45
	4,136.31	54.55	-	4,190.86	4,052.75
<b>Total</b>	<b>6,606.14</b>	<b>54.55</b>	<b>-</b>	<b>6,660.69</b>	<b>6,016.01</b>
<b>Expenditure</b>					
<b>Expenditure (Capital)</b>					
Buildings	194.45	-	-	194.45	163.44
Comprehensive development programme	1.25	-	-	0.13	21.03
Infrastructure assets	2,475.41	-	-	247.54	2,207.59
Lands	326.27	-	-	32.63	367.21
Other assets	143.13	-	-	14.31	89.90
Repayment of long-term loans	513.97	-	-	51.40	447.73
Vehicles	5.10	-	-	0.51	10.47
	3,659.56	-	-	365.96	330.74
<b>Expenditure (Revenue)</b>					
Council-related expenditure	18.92	-	-	18.92	16.10
Employees retirement benefits	322.86	-	-	322.86	272.13
Financial expenses	323.41	-	-	323.41	258.76
General administration expenses	218.26	11.62	-	229.88	139.22
General expenses	237.85	1.56	-	239.42	174.48
M&R to buildings	27.01	5.05	-	32.06	28.69
M&R to infrastructure	76.22	-	-	76.22	302.15
M&R to lands	14.70	-	-	14.70	1.83

Contd.

	2004-05				2003-04
	Governmental	Enterprise	Fiduciary	Total	
M&R to other assets	80.18	-	-	80.18	73.63
M&R to vehicles	14.51	0.01	-	14.52	12.36
Physical education activities	1.05	-	-	1.05	0.71
Public health	492.19	-	-	492.19	359.37
Public works	9.59	-	-	9.59	15.63
Salary expenses	1,116.05	11.74	-	1,127.79	1,053.81
Welfare activities	70.02	-	-	70.02	26.29
	3,022.80	29.98	-	3,052.78	2,735.15
<b>Total</b>	<b>6,682.37</b>	<b>29.98</b>	<b>-</b>	<b>6,712.35</b>	<b>6,042.52</b>
<b>Net Surplus/(Deficit)</b>	<b>(76.23)</b>	<b>24.57</b>	<b>-</b>	<b>(51.66)</b>	<b>(26.51)</b>

#### Annexure 5: Reengineered Processes

Area	Before FBAS	After FBAS
Revenue	No single information source Daily collection position not known Estimated than generated by system Delay in information	Information updated on a daily basis Real-time knowledge of revenue collections position – at all levels Single source of information to all users Frequent review of collection and target made possible Systematic transfer of funds to operating accounts
Expenditure	No information on availability of funds for expenditure Centralized payments	Decentralization of powers to zonal ACFs Payments decentralized Payment process simplified and speeded up No payment without work code has enabled complete control over work payments
Budgeting	Budget prepared based on estimates of previous years Incremental approach	BIDS implemented Systematic way of budgeting Bottom-up approach in budget preparation: ward to zone to HO BIDS process also helps documenting proposals formally. Creates mutual commitments Helps making provision for pending work
Work	Number of work in BMP not known No tracking of work Duplication of work Delay in payment of work bills to contractors Contractors cushion costs for all delays	Complete database of all works (current and old) available at a single source All work tracked throughout the life cycle of the work till its closure No duplication – each work identified by a unique work code MAS-enabled financial management system helped BMP in planning its finances. Work bills now settled faster
Payroll	No central database of employees Pay bills prepared manually Manual efforts – most of the time used in payroll activities	Employee electronic database available for all employees (about 13,000) DDO-wise (224) pay bills generated through the system Total control in salary related aspects Reduction in efforts. Manpower effectively deployed in other areas
MIS	AI only for compliance Tracking and capturing expenditure than controlling expenditure	MAS-enabled AI and MIS includes about 150 MIS reports of various modules at various levels MIS for public ( <i>Arthika Darpana</i> ) MIS on revenue/accounts/work/payroll
Financial statements	Annual consolidated budget statements Bi-monthly accounts prepared for submitting to the Council	MAS provides financial statements like balance sheet, revenue and expenditure statement, cash flows, receipts and payment statement Annual reports prepared systematically and on time

## Annexure 6: Select Questions Raised in PROOF Meeting

### Education

- How is the budget prepared? Is information collected from each school?
- Why is there not a simplified procedure for maintaining day-to-day needs of a school? Why are the headmasters not given the freedom to take some financial decisions on their own?
- How is the success of a school measured? School results are not commensurate with expenditure. Can more details be provided for the budget? What is the expense for various sub heads?
- Why cannot corporation, headmaster, and community leaders participate in sanctioning expenditure? Are there any plans to do so?
- Is the headmaster aware of what budget has been allocated to his/her school?
- As per the Karnataka Public Libraries Act, ULBs are required to levy a 6 per cent cess on property tax towards the setting up, operations, and maintenance of public libraries. What was the amount made available to the DPL in the past financial year?

### Expenditure

- Project management capabilities need to be improved so that projects are executed on time. What are the steps being proposed for that?
- Why is there a shortfall in collection of other receipts?
- How has the collections (deposits, etc) increased? What are the new sources that gave rise to such heavy collection?
- Why is there a heavy shortfall in repayment of cess?
- Why is the revenue surplus not as budgeted?
- Cash balance analysis is missing. Can it be incorporated in the future?
- Receipts from long-term loans and MOU grants are lower as compared to the target amount. Less use of loan amount means missed opportunities because of low collection. How is this being addressed?
- Repayment of cesses collected (746.80 million) has not been satisfactory. Only 117.50 million have been remitted to GOK. Can this be explained?
- Does BMP apply and adopt management techniques like CPM and GERT in the execution of major projects?
- What is the status of developing GIS bringing into BMP tax net all properties within the municipal limits?
- What are the latest figures on residential, commercial, and vacant plots in the BMP municipal limits?

**Note:** Based on BMP performance report for the year ended 31 March 2005.

## Annexure 7: Decision Analysis of Opting for MAS in BMP

Criteria	Prescriptions by Standards	TAS	MAS	BMP Position
Relevance	Capacity of information to make a difference to a decision	Limited in scope	Broad scope	Enhanced requirements of the BMP
Reliability	Quality of the information that assures that it is free from errors and biases and faithfully represents	Largely true Represents limited information	Open to biases and interpretations. Represents richer information	Design improves over time. Thrust on capturing revenue and expenditure flow
Verifiability	Chosen method of measurements faithfully represents without bias	Largely true	Can cause variation in areas like asset valuation	Top management indifferent to concern of professionals
Neutrality	Absence of bias intended to attain a predetermined result	Largely neutral	Can lead to under or overstatement	TAS thought to be better
Conservatism	Understatement rather than overstatement	Largely true	Possible through suitable accounting policies	TAS considered to be conservative
Comparability	Enables comparisons between two sets of economic phenomena	Comparable on limited information that it represents	Comparable if same accounting standards are observed by all	Focus on internal comparisons Across corporations possible over time
Consistency	Conformity from period to period in policies and procedures	Consistent	Deviations to be avoided and mentioned in notes if unavoidable	Not fully appreciated
Understandable	Enables users to perceive its significance	Easy to understand	Understandable to lenders and analysts and not so much to administrators	In a limited circle
Materiality	Magnitude of omission or mis-statement that could have altered judgment	More chances	Less chances if standards are adhered to	Can help in accounting for long-term assets

*Contd.*

Criteria	Prescriptions by Standards	TAS	MAS	BMP Position
Cost / Benefit of the system	Cost should not exceed benefit	Both are limited	Comes at high cost; benefits can be higher if there is high demand for information and good usage	Unclear; depends on utilization which is expected to improve over time
Credibility	With clients, lenders, rating agencies	Limited	High; more popular outside the government circle	A strong reason for opting for it
Accountability	To stakeholders	Limited to compliance	Provides information for accountability of resources; Good scope to satisfy different stakeholders	Internally can improve accountability; externally unclear and weak
Cost management and pricing	Disaggregated data, logically classified	Limited	Good	Less felt need
Vigilance and fraud control	Compliance and process control	Compliance yes Ineffective audit and control	Good scope Needs expertise Stress on outcome	More faith in the old system

**Source:** Criteria and features adopted from qualitative characteristics of AI, SFAC NO 2, FASB, and other standards setting bodies.

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