EB/CB/05/6

July 15, 2005

To: Members of the Committee on the Budget
(Managing Director, Chairman; Mr. Al-Turki, Mr. Duquesne, Ms. Jacklin, Mr. Kashiwagi, Mr. Kiekens, Mr. Kremers, Mr. Loyo, Mr. Ngumbullu, Mr. Schwartz, Mr. Shaalan, Mr. Solheim, and Mr. Wang)

From: Bernd Esdar, Committee Secretary

Subject: **Review of Fund's Information Technology Outlays**

Attached for the information of the Committee on the Budget is a report on the review of the Fund's information technology outlays, prepared by an interdepartmental taskforce headed by Mr. Christopher Towe (WHD), which is being circulated for the forthcoming Committee on the Budget meeting on **Thursday, July 21, 2005.**

Management has commissioned follow-up work on implementation issues associated with the report's recommendations, and is currently deliberating on how to take these issues forward. Mr. Kato will brief the committee on elements of management's thinking at the committee meeting; TGS staff will also brief the committee on follow-up actions taken in response to some of the specific information technology recommendations of the Towe taskforce.

Questions may be referred to Mr. Towe, WHD (ext. 38489).

This document will be shortly be posted on the extranet, a secure website for Executive Directors and member country authorities.

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INTERNATIONAL MONETARY FUND

Review of Information Technology Outlays

Prepared by an Interdepartmental Taskforce[1]

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[1] The taskforce was established in June 2004 at the request of Deputy Managing Director Kato and was chaired by Christopher Towe (WHD) and included S. Choi (TGS), A. Coune (OIA), K. Kochhar (RES), and H. Young (OBP); assisted by S. Bernhardt (TGS), D. Blume (OIA), C. Faulkner-MacDonagh (WHD). J. Riley (TGS) and J. Sevigny (OBP) also contributed significantly to the taskforce's background work.

I. Introduction and Executive Summary

1. **In June 2004, management established an interdepartmental taskforce to review IT spending in the Fund and requested consideration of the following questions:**

a. Where is the IT budget going?

b. Have the Fund's IT investments paid off?

c. Has the Fund allocated its resources appropriately between new investments versus exploiting the capabilities of existing technologies?

d. Are the Fund's governance structures sufficient to evaluate new projects and establish their approximate costs and benefits?

e. Is the Fund appropriately exploiting the scope for introducing new technologies?

The taskforce was also asked to identify opportunities for cost savings and for increasing the effectiveness and manner in which IT supports the mission and work of the Fund.

2. **To address these questions, the taskforce relied on both external and internal analyses.** A team of external consultants from A.T. Kearney (ATK) was selected in September 2004. ATK's research took place during October/November and their report was finalized in late December. Internal studies were also commissioned—contained in a set of *Background Papers*—covering: (i) an analysis of the Fund's IT spending; (ii) a comparison of IT outlays and service levels among major international financial institutions (IFIs); (iii) the numerous other recommendations and reports prepared by consultants in recent years; (iv) data management in the Fund; (v) the Fund's project management; and (vi) management information in the Fund.

3. **This analysis confirms that the Fund's IT outlays have paid substantial dividends, but suggests scope to improve their efficiency and effectiveness.** In particular, while the Fund's IT outlays do not appear significantly out of line with comparator institutions, outlays on a per user basis are somewhat higher than in benchmark institutions. Moreover, mechanisms do not seem to be in place to ensure that project implementation fully maximizes returns, that information management is effective, and that IT spending is fully aligned with the institution's broad strategic objectives.

4. **These conclusions point to a range of specific suggestions (summarized below), some of which may have budgetary implications.** Significant steps toward the key recommendation—to strengthen the management of the Fund's IT assets—could be achieved by re-allocating existing resources and strengthening governance structures. However, substantial resources may be required to achieve gains in information management, data management, and IT infrastructure reliability, where the Fund appears to have underinvested in the past. Although the report offers suggestions for cost cutting, the savings that might be available seem unlikely to represent a large proportion of total IT outlays, which in turn are less than 10 percent of the Fund's total operational budget.

5. **The Fund's IT outlays are somewhat higher than comparator institutions on a per user basis, which points to the following opportunities to improve cost effectiveness:**

- Establish clear service level agreements on IT services.
- Further review IT staffing levels and costs, especially with regard to the Help Desk.
- Explore scope for offshoring, especially for new applications development.
- Establish regular benchmarking of IT spending and service levels.
- Contain pressures for customization of major systems.
- Provide additional support for infrastructure, especially to ensure high availability and reliability of critical IT systems.
- Improve change management, including through clearer commitments by departmental leadership and management to new systems and the training and standards they require.
- Consider targeted opportunities to assign IT professionals to user departments.

6. **Further strengthening the quality of project management could also reduce costs and raise productivity.**

- Increase user departments' accountability for effective IT project implementation, including with regard to delivering the process and organizational changes needed to yield expected returns.
- Rigorously enforce, and measure performance against, existing requirements for cost-benefit analyses.
- Carry forward ongoing efforts to map out a clear statement of departmental and Fund-wide strategy in the context of an Enterprise Architecture, so as to provide a coherent framework for prioritizing projects.
- Develop IT portfolio and program management tools, and enhance the role of the Business Project Team (BPT) in overseeing IT project management.

7. **A determined focus on information management is needed.** Welcome steps have been proposed recently by an interdepartmental steering committee, but these will require sustained support—including from management—to ensure success and avoid the Fund falling behind its peers.

- Establish and enforce Fund-wide information standards.
- Establish departmental Senior Information Managers responsible for ensuring their department's adherence to Fund-wide standards, participating in Fund-wide IT and IM governance, and promoting the compliance with information management standards and practices within their departments.

- Re-commit to economic data management, including by developing data warehousing systems, increasing the role of STA in supporting Fund-wide standards, and increasing the number and effectiveness of research assistants.
- Streamline and rationalize various information management initiatives underway or planned to produce the maximum benefits.
- Strengthen management information systems, including by further integrating administrative, financial, and HR data systems.

8. **Achieving the objectives above may require further strengthening the Fund's IT governance.** The existing governance structure is based on cross-departmental consensus for decision-making and relies heavily on volunteer participation in committees and project implementation groups. This may weaken accountability and undermine both the scope and incentive for taking an institution-wide approach to the Fund's IT portfolio—i.e., the broad range of IT assets and projects. To address this issue, the consultants engaged by the taskforce suggest:

- Deepen management ownership of the IT strategy and portfolio, including by establishing an IT Executive Committee—chaired by management and including the Directors of TGS and OBP, as well as a small group of senior staff from TGS and user departments—that would meet regularly (e.g., quarterly) to review progress in implementing the Fund's IT strategy.
- Establish a Chief Information Officer (CIO)—i.e., at the Director level or its equivalent—with sole responsibility and high visibility for the Fund's IT and information management.
- Redesignating existing resources within TGS to clarify lines of authority and accountability.
- Streamline the role of the ITPC by ceding much of its present responsibilities for decision-making and IT implementation to the CIO.
- Ensure that budget systems and processes are strengthened to ensure the availability of coherent, timely, high-level information on the IT budget and its disposition.

II. BACKGROUND

9. **The Fund's IT outlays have been affected by important external drivers.** The IT revolution rendered most of the Fund's mainframe applications—especially those supporting the Fund's administrative and finance functions—obsolete and required significant replacement costs. Factors such as globalization and the Internet revolution, new software, wireless technology, and increased processor speed and bandwidth have also required continued upgrades to IT systems, while vastly increasing the volume of information that the Fund is required to monitor, produce, and disseminate.

10. **Fund-specific factors, including a succession of new mandates, have also driven IT spending.** For example:

- **Surveillance, capital markets, and new architecture.** New requirements include the increased focus that has been placed on regional and cross-country analyses; the identification and monitoring of vulnerabilities; low-income countries; and financial and capital market surveillance. These have significantly increased demands for data, publications, and communications.
- **Transparency and institutional memory.** The Fund's commitment to openness, as well as its new role in the area of standards and codes, has required substantial increases in the volume of publications; a greater emphasis on compound electronic documents; large investments in the Fund's websites; and the need for access to real-time information on global developments. Greater transparency has increased reputational risks for the Fund and has, therefore, raised the importance of the Fund's own information management and institutional memory.
- **Business continuity and security.** Transparency and the staff's increasing dependence on access to electronic documents and e-mail have raised the premium on the "high availability" of the IT network, while terrorist threats and computer viruses have required greater investment in network security and business continuity.
- **Internal management.** The growth of the Fund during the past decade, and more recent budget constraints, have led to an awareness of the need to upgrade budget systems, streamline transactional processes, and improve the delivery of HR services.

11. **The Fund has responded by seeking to improve the effectiveness of its IT outlays.** In order to increase user involvement in guiding IT, the Fund created the Information Technology Policy Committee (ITPC) in 1995.[2] The ITPC helps define the medium-term IT strategy, reviews and prioritizes capital investments prior to approval, and assists in developing IT policies and guidelines. The ITPC's three subcommittees also are heavily involved in sponsoring projects in their respective areas. OBP is actively engaged with the ITPC and TGS in defining the overall budget envelope, evaluating capital project proposals and funding releases, and monitoring ongoing project implementation and costs.

[2] The ITPC comprises selected senior representatives from area, functional, and support departments, and is currently chaired by the Director of TGS. The three subcommittees of the ITPC cover: the Economic Data Subcommittee, the Documents Subcommittee, and the Financial and Administrative Subcommittee. The terms of reference and membership for the ITPC and its Subcommittee can be found at: http://www-int.imf.org/depts/tgs/itpc/index.asp.

12. **TGS implements IT projects under the general oversight of the ITPC and in close collaboration with sponsoring departments.** In cases of institution-wide projects, TGS works with one of the ITPC Subcommittees on both development and implementation. OIA's Work Practices Section and HRD's Training Unit also assist project teams in streamlining work processes and in training staff. Project oversight was further strengthened in 2002, when the ITPC began post-implementation reviews of major IT projects and a two-person Business Project Team was created in TGS to improve project management.

13. **Significant progress has been made toward implementing the 2003 IT Strategic Plan.** Milestones include the implementation of several large application systems, enhancements in remote connectivity, and other IT initiatives. A number of major projects still underway also promise to further enhance the Fund's IT environment, including an information management program to help manage the Fund's intellectual assets; enhancements to the Fund's document management system; and improvements in economic data systems. IT planning and management are also being strengthened by the definition of IT output and performance indicators, the establishment of IT service level standards, a study to improve the availability and reliability of critical IT systems, the assessment of offshore outsourcing feasibility, and the performance-based outsourcing of the IT Help Desk.

III. WHERE IS THE MONEY GOING?

14. **The Fund's IT budget has been around $80 million in recent years, of which roughly two-thirds has been spent on administrative expenses and the balance on capital** (Chart 1 and Table 1). Key characteristics of the budget include:

- **Administrative outlays represent roughly two-thirds of the IT budget**: These include the ongoing costs of maintaining the Fund's major administrative and budget systems, as well as the network and individual workstations. Roughly 60 percent of administrative expenditures are for personnel, including the remuneration of vendors and contractual staff. Some 15 percent of administrative expenditures are for hardware and software; 10 percent are for telecommunications; and 15 percent are for services, mainly for consultants.
- **Capital outlays represent roughly one-third of the IT budget.** These outlays have been volatile, reflecting the lumpiness of costs related to developing new systems and replacing major equipment (Box 1). Personnel costs account for about one-third of the total, with 40 percent directed toward equipment and the balance for capital services.
- **The Fund has heavily "vendorized" its IT services.** Of the roughly 370 persons currently at work on IT, only 115 are regular staff, with almost all the remaining personnel under contract from several different vendor companies. ATK's analysis suggests that the proportion of nonregular IT staff is unusually high, and while this has yielded savings (reflecting a roughly 10 percent salary differential), a heavy reliance on external vendor companies to supply IT professionals also creates challenges that require careful management.

Chart 1: IMF IT Budget, FY2002-2005
(by major spending category)

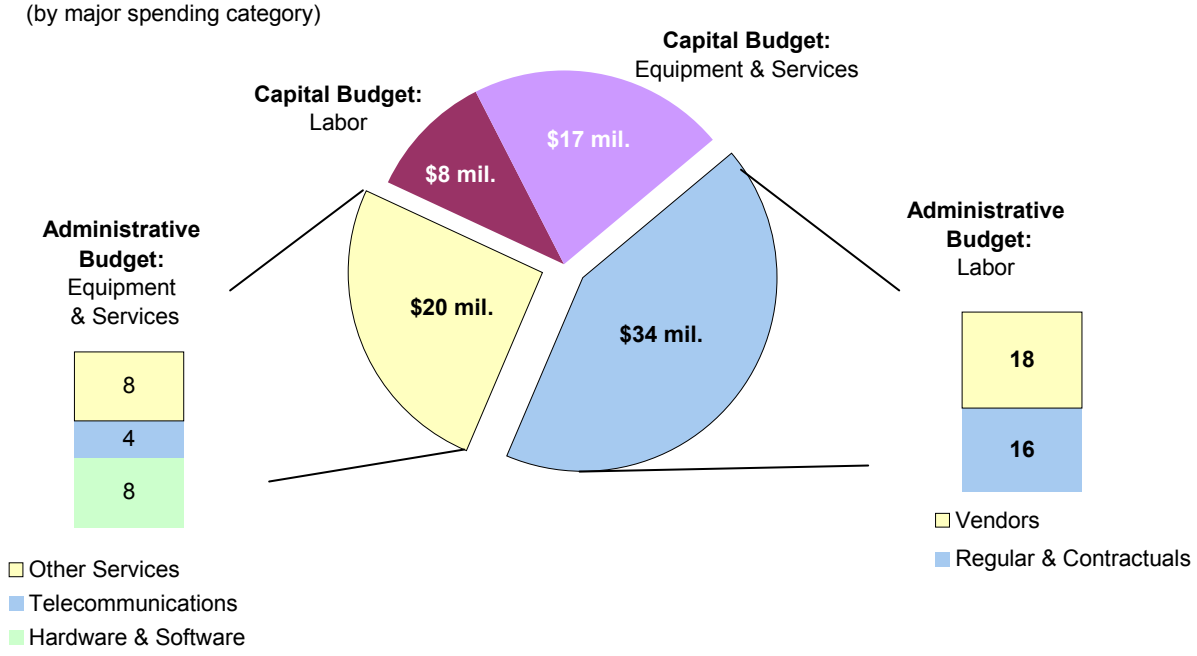


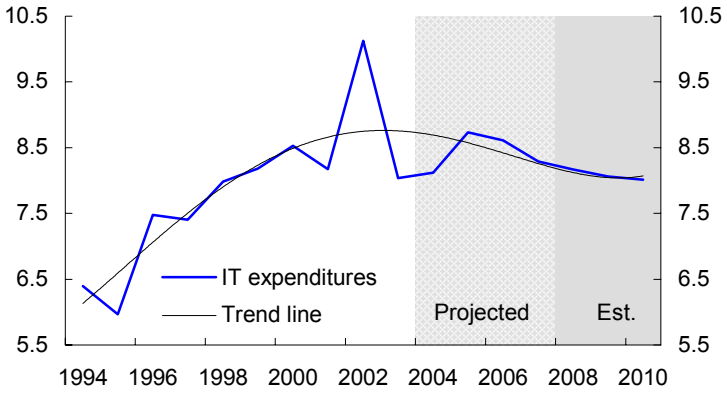
Table 1. IMF IT Spending by Function, FY2002-05
(in millions of U.S. dollars)

				Budget
	2002	2003	2004	2005
Total	**70**	**78**	**77**	**91**
Administrative	39	53	56	67
Labor	28	29	34	43
Regular Staff	10	11	15	22
Contractual Staff	2	1	1	0
Vendors	16	17	19	21
Equipment & Services	11	24	21	24
Hardware & Software	5	11	7	8
Telecommunications 1/	n.a.	6	6	6
Other Services	6	8	8	10
Capital	31	25	22	24
Labor	7	9	9	9
Equipment & Services	24	16	12	15
Memorandum items:				
Total Fund budget	730	757	781	917
Administrative 2/	677	720	748	850
Capital 3/	54	37	33	68

Source: OBP.
1/ Includes both equipment and services; not included in IT budget until FY2003.
2/ Net of receipts.
3/ Excluding major buildings.

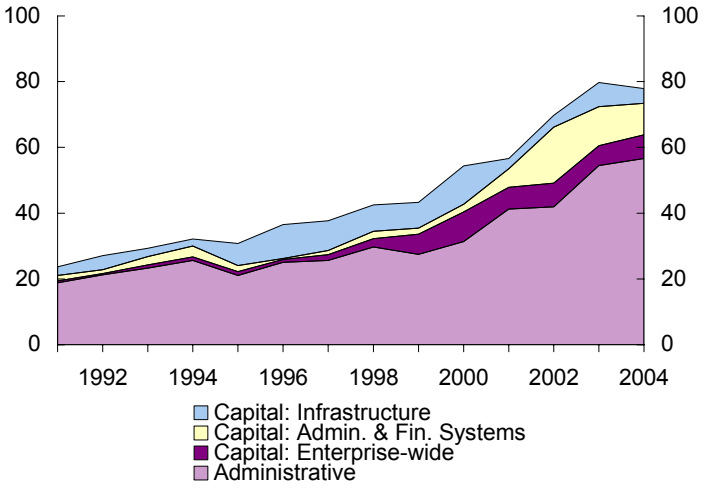
15. **The Fund's IT outlays have grown rapidly since the 1990s.** IT expenditures increased from about 6 percent of the Fund's total administrative and capital expenditures in the mid-1990s to a peak of about 10 percent of expenditures in FY 2002, and have leveled off at 8-9 percent of total expenditures currently (Chart 2).[3] The surge and subsequent decline in outlays during FY 2001–FY 2004 reflected the impact on the capital budget of large investments in new administrative and financial systems, including FACTS and iFIN, as well as the inclusion of telecommunication charges in the IT budget beginning in FY 2003. In addition, however, IT administrative outlays have also doubled since the mid-1990s, partly as a result of the cost of maintaining these new systems and increases in user support (Chart 3).

Chart 2. IT Administrative and Capital Expenditures
By fiscal year; as a ratio of total expenditures 1/



Source: Office of Budget and Planning.
1/ The ratio of total IT administrative and capital expenditures to net administrative and capital expenditures, excluding major building projects.

Chart 3. IT Expenditures (Actual), FY1991-2004
Adminstrative and Capital (investment) spending
(in millions of dollars per fiscal year)



16. **The Fund's IT services compare well with other IFIs.** TGS's recent survey of staff indicates that the Fund has kept pace in terms of office environment, access to home computing, support for traveling staff, infrastructure connectivity, and software, and the Fund surpasses the other IFIs in terms of access to statistical software and external data sources, desktop operating system, and hand-held devices (e.g., Blackberries). However, the Fund has lagged in providing overseas offices with broadband remote access capabilities and in equipping staff with flat LCD monitors. The Fund has a major challenge in improving remote access due to the lack of reliable, cost effective communications in many parts of the world. LCD monitors will be provided during the regular three-year replacement of workstations.

[3] Total administrative and capital spending excluding major buildings, including the current HQ2 project.

Box 1. The Fund's IT Capital Budget: An Overview

Responsibility for the IT program in the Fund resides with the Information Technology Policy Committee (ITPC) which has developed a series of IT strategic plans for the following three components:

- Projects in the **Enterprise Information Program** are dedicated to the core work of the Fund, such as economic time series, document management and production, publications and information services, including communications and transfer information with member countries are also included. Recent large projects have included:
  - EDF─replacement of the Economic Information System (EIS)
  - Enterprise information portal
  - Information management strategy and architecture
  - New archive system

- The **Administrative and Financial Information Program** comprises projects that support the Fund's administrative, financial, and human resource application systems. Recent large projects in this envelope have included:
  - PeopleSoft Financials (FACTS accounting systems, budget planning and execution, and technical assistance projects modules)
  - iFIN─ financial information system (financial transactions between members and the Fund)
  - Annual Meetings information systems
  - Financial and administrative systems architecture
- The **Infrastructure and Connectivity Program** is designed to sustain and improve the Fund's network, remote access capabilities, and overseas IT connectivity. This program also covers the purchase of new and replacement desktop and network computing equipment and communications links. Major projects include:
  - Connecting HQ1 and HQ2
  - Resident representative dedicated connectivity
  - Microsoft Exchange/Outlook upgrade
  - Telecommunication engineering (remote computing and remote access for staff at home, on mission, and in resident representative posts)
  - Desktop and network equipment

The purchase of IT microcomputers, servers, and other infrastructure equipment has been a part of the capital budget since FY 1988. Some other large IT projects (e.g., introduction of word processing) were also included. Since FY 2000, the Board approved the inclusion of major software development projects in the capital budget, in line with standard public and private sector practice.

Current procedures have been in place since the capital budget reforms of FY 2003. Executive Board members are informed of the total expected cost of a capital project when an appropriation is first sought; project duration and funding are limited to three years; any funds not spent within this time-frame lapse. However, with proper justification, unspent funds may be reappropriated by the Board. For projects that extend longer than three years, it is necessary to make separate appropriations; for these projects, information on their full cost is provided to the Board when appropriation requests are first made.

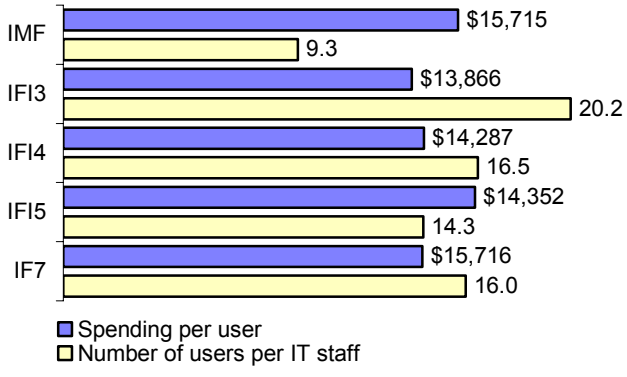
Cost benefit analysis (CBA) and other related requirements are applied to major IT system development projects (with a value in excess of $500,000). Even if projects qualify as eligible capital expenditures and have been satisfactorily appraised under a CBA and other tests, they are only included in the capital plan to the extent that the resource envelope allows.

17. **The most commonly used metric suggests that Fund's IT outlays are substantially lower than in benchmark institutions.** Although differences in budget conventions and capital replacement cycles make comparisons difficult, the Fund has aimed in recent years to contain IT spending as a share of the total operational budget to under 10 percent, a level considered broadly consistent with private industry benchmarks. Over the past three years, the Fund's IT outlays averaged only 8¼ percent of its total budget, compared with the 11 percent rate among the other IFIs (2002-2004 average) and benchmark private U.S. financial institutions (2002). The Fund's spending ratio is projected to decline over the medium term with the completion of several major projects.

18. **However, on a per user basis the Fund's IT outlays appear slightly higher than the IFIs, and are significantly above industry benchmarks.** This per user comparison offers a useful alternative benchmark since the Fund's total operational budget is relatively high, including relative to other IFIs. Fund's IT outlays per user has averaged $15,716 during the past three years, 7 percent higher than the IFI average and 13 percent higher than the U.S. private sector benchmark (Chart 4, Table 2).

- **The high per capita IT budget reflects personnel costs.** For example, Fund IT staff (regular and vendor) costs per user averaged $12,568 during the past three years, compared with $9,073 for the other IFIs surveyed, and the margin is even wider when the Fund is compared with U.S. firms in the financial and professional services sectors.
- **The gap reflects the large number of IT staff at the Fund.** Each IT staff member supports nine users at the Fund, compared with an IFI and industry average of 14 users (Chart 4, Table 3).
- **The gap also reflects higher Fund outlays on customer service.** At the Fund, 22 percent of the IT budget is geared toward customer service—including Help Desk and other user support (including for OED)—compared with ratios of 13 percent and 7 percent for the IFI average and the industry benchmarks, respectively (Table 3).
- **High labor costs are reflected in the functional allocation of the IT budget.** The Fund devotes a larger proportion of its staff to "customer service" relative to its peers, and a lesser proportion to "administration and planning" and "infrastructure." The Fund also spends less on IT hardware and software on a per user basis than its peers.

Chart 4. IFI Spending and Staffing, FY2002-2004
Average spending (per user) and average number of users (per central IT staff member) 1/



1/ IFI2 and IFI6 were dropped owing to apparent data anomalies.

Table 2. Comparison of IT Spending per User, 2002-2004
(in dollars per user)

	2002	2003	2004	Avg. 2002-04
from the 2004 IFI Benchmark Survey of IT Spending:				
	dollars per user			
IMF	14,441	16,131	16,574	15,716
Labor 1/	11,549	12,900	13,254	12,568
Equipment & Non-labor services	2,893	3,231	3,320	3,148
IFI Average 2/	14,595	14,769	14,855	14,740
Labor 1/	8,983	9,091	9,144	9,073
Equipment & Non-labor services	5,611	5,678	5,711	5,667
from the ATK Review of Information Technology Outlays at the Fund				
		dollars per employee		
IMF 3/		17,344	18,342	17,843
Non-depository institutions 4/		15,069	16,532	15,801

Source: OBP, TGS, Gartner, and ATK.
1/ Defined as spending on staff compensation and external services.
2/ Weighted by total IT spending; excludes two IFI institutions that are revising data.
Note: the World Bank has over 10,000 users, giving it a heavy share in these data.
3/ Data reorganized to put it on a consistent basis with the ATK data.
4/ ATK's data from 2003-2004 Gartner IT Spending and Staffing Survey Results.

Table 3. Comparison of IT Spending and Staffing for 2004
(in percent of total IT spending/users or numbers of staff)

	IMF	IFI Average 1/	Industry Avg. 2/
1. Distribution of IT spending by category 3/		(in percent of total IT spending)	
Applications	48	49	48
Infrastructure	21	27	35
Customer service	22	13	7
Administration	9	11	10
Other	0	1	0
2. Level of IT staffing		(in percent of total users)	
IT staffing levels	11	7	7
3. Overall staffing data		(numbers of staff/FTEs)	
Number of users	4,285	7,476	
FTEs	2,986		

Source: 2004 IFI Benchmark Survey of IT Spending, OBP, and A.T. Kearney.
1/ Excludes spending by two IFIs because of data problems.
2/ Courtesy of ATK from Gartner and META benchmark surveys for 2003/2004.
3/ IT spending categories are as follows:
Applications = development, maintenance, and database administration.
Infrastructure = operation of servers, desktops, support, networks, and communications.
Customer service = help desk operations, marketing of IT operations.
Administration = IT planning and process management, and CIO front office.
Other = spending not elsewhere classified.

IV. HAVE THE FUND'S IT INVESTMENTS PAID OFF?

19. **Assessing the return to IT investment is a challenge for any institution.** Productivity gains are difficult to measure since they often result in quality or service improvements, rather than tangible cost saving, and these gains often occur only after a considerable lag as users adapt to new technology.[4] These problems are compounded in the Fund for several reasons:

- **The Fund's "output" is difficult to measure.** This problem is common to many knowledge-based institutions, such as consultancies, but is compounded in the Fund by the absence of a clear "bottom line" or profit motive. Notwithstanding the recent efforts toward budget reform, defining useful output indicators has proven difficult.
- **Expected returns on IT investments are defined inconsistently.** Despite efforts to strengthen the Fund's project management—including the adoption of an Integrated Project Approach (IPA),[5] the assignment of dedicated professionals to the Business Project Team in TGS, and the requirement of standard cost-benefit analysis—these tools and processes are not applied uniformly.[6]
- **Ex-post evaluation of IT projects is also inconsistent.** Although the ITPC has sought to introduce this type of analysis in recent years, these reviews rely on staff volunteers and only two or three have been completed.
- **The Fund's portfolio of IT projects is not clearly defined against a clear set of institutional/strategic objectives.** Despite efforts to develop and update regularly a medium-term IT strategy, senior management is typically not actively involved in this process or in prioritizing IT investment alternatives.[7]

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[4] Indeed, the PA Consulting Group study, "Getting Out of the Cost Box: Managing Information Technology for Long-Term Value" (July 2004), documents that firms that rely on mechanical ROI or cost minimization tend to report lower satisfaction with their IT investments than firms that focus to a greater extent on "shareholder value." Moreover, E. Brynjolfsson and L. Hitt, "Computing Productivity: Firm Level Evidence" (*REStat*, November 2003), show that the yield from computerization increases significantly over a seven-year period.

[5] Projects undertaken using the IPA are evaluated on the basis of "business need," employ an integrated project team led by a senior business representative, and utilize Fund-standard project management methodologies.

[6] ATK's survey of 38 projects concluded that only four contained well-defined cost-benefit analyses. OBP has recently included language (in both the CBA guidelines and as a standard phrase in funding release memos) to ensure that sponsoring departments are aware that they will be held accountable for benefits claimed in the CBA upon the completion of the project, and that savings may be deployed within or outside the sponsoring department.

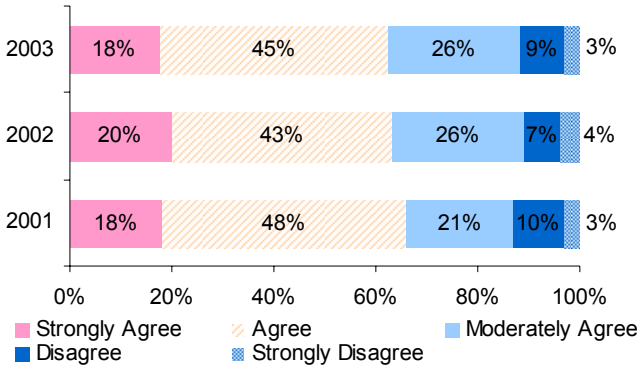
[7] The importance of senior leadership's involvement in IT governance is emphasized by M. Broadbent and P. Weill in "Effective IT Governance, By Design," The Gartner Group (2004).

20. **Subject to these caveats, the available evidence suggests that the Fund's IT investments have yielded solid returns.**

- **ATK's user survey suggests that IT investments yielded productivity growth of 15 percent, over three years ending in 2004.** ATK's review of four major IT projects (EDMS, FACTS, iFIN, and EDF) suggested that cumulative productivity gains were $10 million in the same three-year period, on an initial investment of $50 million.
- **Basic activity indicators also point to significant productivity gains during the past decade that are likely related to IT.** The number of staff increased by around 15 percent during FY 1994–FY 2004, while the two most commonly used measures of staff "output"—the number of Board papers produced and mission days—rose by 52 percent and 108 percent, respectively.
- **These productivity estimates are broadly in line with the 2002 LMI study.**[8] This earlier analysis calculated a 35 percent increase in productivity in FY 2001 over the FY 1991 level.

21. **The Fund's IT investments have also yielded relatively favorable levels of customer satisfaction, although pockets of concern remain.** In annual surveys, the share of Fund staff indicating satisfaction has held steady at around 88 percent (Chart 5). However, roughly 12 percent of staff indicated dissatisfaction and concerns included the need for: (i) better user equipment, including more powerful PCs, flat screen monitors, portable e-mail devices, etc.; (ii) more effective remote access, especially on mission and by resident representatives; and (iii) improved network reliability, particularly given recent incidents of downtime.

Chart 5. IT Service Satisfication, 2001-2003
Results from TGS Surveys of Fund Staff



22. **However, ATK also suggests that productivity gains could have been greater.** In the case of the four large IT projects examined above, some $5 million of potential productivity gains were left unrealized, and recent internal reviews of major projects by the ITPC have also raised doubts about the yield of a number of major projects. Factors that may explain these unrealized gains include:

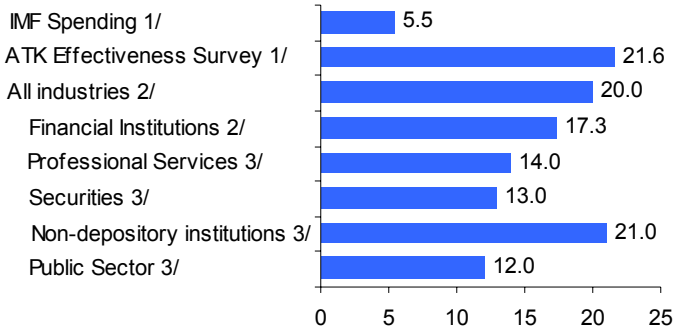
[8] *Transitioning to the Information Age: Information Technology Investments at the International Monetary Fund*, Logistics Management Institute, February 2002.

- **Weakly-defined institutional objectives.** As noted in the ATK and LMI reports, IT investments in the Fund have not been guided by an overall strategic plan, which may have limited the extent to which the Fund's portfolio of IT projects has aligned with the broader goals of the organization.
- **Decision delays.** The Fund's business culture and governance structure requires interdepartmental consensus at virtually all stages of decision-making. While increasing the degree of "buy in," this approach has tended to slow decision-making and places a premium on risk avoidance, slowing the adoption of new technologies.
- **Weaknesses in project management.** Although the Fund has made important strides in strengthening project management, these processes have been applied unevenly. Such gaps have manifested themselves at all stages of the project lifecycle, causing delays in completion and lower-than-expected returns on investment.[9]
- **Inconsistent project implementation.** A lack of effective "change management" has undermined the Fund's ability to reap the full rewards of its investments, especially with regard to the establishment and enforcement of institution-wide standards. Similarly, the despite the considerable resources devoted to work practice reviews around new IT projects, there has been insufficient commitment to ensuring that the results of these reviews have been implemented.

V. Are Allocations Appropriate Between New Investments versus Exploiting Existing Technologies?

23. **The Fund appears to slightly under-spend on "new" IT capital relative to its benchmarks.** ATK notes that benchmark institutions have tended to devote 12-22 percent of their IT budgets to acquiring or creating new capabilities, while the Fund's ratio was only 5½ percent during FY 2003–FY 2004 (Chart 6). Concomitantly, the Fund devoted a larger share of its IT budget—80 percent—to maintaining and enhancing existing systems. ATK suggests that this may reflect both post-implementation pressures following the replacement of mainframe systems, as well as the tendency for internal customer satisfaction to drive the Fund's investment decisions.

Chart 6: Spending on New Capabilities
(in percent of total IT spending, by industry)



1/ ATK reviewed IMF's actual capital budget for spending on "new technology," the Effectiveness Survey data are perceived spending trends, not actuals.
2/ A.T. Kearney/HarrisInteractive Survey of firms.
3/ Gartner survey data, by industry.

[9] The *Background Papers* and the May 2003 Gartner Group report, "IT Project Implementation Benchmarking Study" detail the weaknesses in Fund project management.

24. **At the same time, there are also indications that the Fund has not utilized existing technologies to their fullest.** ATK's survey indicated that a third of users did not use the tools at their disposal or were not fully exploiting the capabilities of the tools that they did use. Several systems were singled out: EDMS, the Fund's document management system; AREMOS, the Fund's economic time series software; and PeopleSoft (HR and Financials), the system used by support and selected managerial staff (e.g., SPMs and SBMs). Although system design may have contributed to weak utilization, perhaps more has been owing to an inadequate commitment by user departments to developing and adhering to Fund-wide standard usage of these systems, as well as to training staff.

25. **Nonetheless, the Fund has achieved some success in exploiting the capabilities of its IT investments.** Improvements in work practices and/or budgetary savings are typically most evident for projects in cases where (i) there is a strong sponsorship by the leadership of a single department; (ii) budgets explicitly account for "change management," including the personnel needed to manage the project to its completion; (iii) expected productivity gains and/or staff savings are explicitly defined at the outset; and (iv) mechanisms are put in place to enforce effective adoption of the new system. For example, iFIN enabled the transformation of TRE's business processes and organization, with measurable staff savings. SEC's Executive Board Document system also appears to have been effective in delivering its objectives as a result of the careful solicitation of user needs, an extensive redesign of work practices, and strong sponsorship by the senior level of SEC.

26. **The Fund has struggled to exploit fully existing technologies when the benefits are diffuse.** Adopting new systems typically imposes an up-front cost on users, who are required to learn new skills while continuing to perform their usual duties. In the absence of strong leadership to see a project through to completion and to enforce Fund-wide standard use of systems, users have tended not to adopt effectively new platforms. Examples include:

- **Information management (IM).** The 2004 report by the Patricia Seybold Group (PSG) consultancy identified major weaknesses in the Fund's information management and institutional memory, and stressed the need to shift the Fund's focus from managing technology to managing information. By contrast, the Bank appears to have been more effective in developing an Intranet and related systems that allow staff to access information and best practice on macroeconomic and other policy issues (albeit at a start up cost of $56 million).[10]
- **Document management.** Although EDMS provided improvement in the ability to search and track documents, the system caused the abandonment of well-defined network file structures without providing a convenient alternative interface for "filing" documents. The inconsistent use of the system has led to an erosion of work practices and significant risk of loss of institutional memory. In addition, despite considerable investment in compound document tools, staff still does not have access

[10] See R. Asthana, "Medium-Term IT Strategy for the Bank: E-Business Transformation," PowerPoint presentation (April 2004).

to satisfactory means for combining text, charts, and tables, requiring excessive staff resources (including economist staff) devoted simply to assembling documents.

- **Economic data management.** Notwithstanding the significant investment in economic data systems, data management within the Fund leaves much to be desired. As noted by PSG, this exposes the Fund to both reputational risk and productivity losses (see Box 2).
- **Intranet.** Consultants (including the 2004 PSG report and a 2002 study by the Nielsen Norman Group, NNG) have expressed concern with weaknesses in the Fund's Intranet.[11] NNG (page 4) noted, for example, the "morass of inconsistently designed pages of highly varying quality and with weak navigation." These reports suggest significant costs in terms of productivity and the need for strengthened and centralized governance structures.
- **Management information.** Despite progress toward integrating the Fund's various administrative systems, the need remains for a cross-departmental revamping of work processes; a broad agreement on data definitions; and increased compatibility of platforms.

27. **Thus, the Fund has been conservative in its capital spending and has had a mixed record in exploiting existing technologies.** The iFIN project illustrates the benefit of professional project managers, in lieu of "volunteers" from user departments, to lead implementation and follow-up of IT solutions. However, in cases where the potential benefits of projects are diffuse and spread across departments, effective and sustained implementation remains a significant challenge. Key prerequisites appear to include: early user engagement to ensure that their needs are met; greater commitment by user departments to training staff (including new staff) on new systems; and strong leadership to establish and enforce consistent, Fund-wide use of IT tools.

28. **The cause of these apparent inefficiencies remains unclear.** Although there are indications that the Fund has not reaped the gains that should be expected from relatively high per user IT outlays, it is not possible to distinguish the extent to which this reflects a misdirection of resources into relatively low-return activities, or weaknesses in the management of the IT budget. This underscores the importance of developing better metrics for gauging performance in all Fund activities, including in the context of well-specified service-level agreements for IT.

[11] Nielsen Norman Group, "IMF Intranet Design Review," April 2002.

Box 2. Data Management Practices and Spending

Six reports on the Fund's data management practices (over the past 15 years) largely come to the same conclusion: the Fund's practices are overly decentralized, inefficient, and uncoordinated—raising the risk that Fund publications contain inconsistent or inaccurate data. All of the reports note that significant savings could be realized by centralizing, even somewhat, the data management and collection process. For example, few desk economists use data collected by STA, and STA databases and publications are not coordinated or reconciled with desk data. As a result, the Fund is running the risk of publishing different, or wrong, data for the same concept in different publications.

These reports have made similar suggestions to improve the data management, but a review of their implementation suggests that little progress has been made. There have been eight major recommendations that have been consistently suggested across all of the reports. Substantial progress has been made on only one (improving the data of member countries) and limited progress on two others (improving the tools and training). Progress is less obvious on the other six (establishing data management guidelines, increasing incentives to follow the guidelines, shifting responsibility to RAs, reconciling STA/country data, and centralizing data collection process).

Background analysis indicates that the Fund's spending on data tends to be concentrated. Almost one-half of Bloomberg terminals and nearly one-third of all data services spending is dedicated to ICM, reflecting both needs and the restrictions that are applied by vendors of high frequency data. Similarly, one-third of the RAs are located in STA and RES—even though these departments account for just over 10 percent of the economists on staff.

To help compare the Fund with its peers, Task Force members surveyed staff from other institutions (Federal Reserve, World Bank, OECD, and the ADB). Staff from these institutions affirmed that data management is difficult, and that any change in work practices requires a sustained, multi-year commitment at a high level. They also provided similar examples of "best practices:"

- One unit is responsible for an "official" database that provides inputs to all or most publications.
- This division is also responsible for collecting data, validating and documenting the data, and providing tools to access data for official publications.
- A common nomenclature is used across all series stored in official databases, and this nomenclature is maintained by the centralized data division.
- Desk economists use the "official" data because they are mandated to do so, and—more importantly—because they receive the array of tools and the support to access the data. These tools can also be used by desk economists to access and organize data for specific projects.

Thus, the Fund has components of each of these. However, the Fund is distinct in that all data collection and management responsibilities are done on a volunteer basis, with no one office that can provide guidance, enforce the guidelines, or provide assistance to economists in accessing data.

The task force members suggest that the Fund follow its peer institutions and create a plan for phasing-in a central database ("data warehouse") for all data used in official publications. This plan would involve a short-term plan for expanding the resources available to manage data by: (i) appointing a data management champion to shepherd the process; (ii) expanding the number of RAs (by using inexpensive recent graduates) to help manage data; (iii) increase the amount of training, seminars, and CATS support by using the data management officers. These steps would help prepare desk economists for the transition by improving the current state of their data. In the medium term, the Fund should move to a system with a single database for official publications (more detail is in the background paper).

VI. DOES THE FUND MAKE INVESTMENT DECISIONS EFFECTIVELY?

29. **The Fund's IT governance structure has helped increase user involvement in decision-making, but still suffers from shortcomings.** These challenges, many of which are overlapping, are described below:

- **Reliance on volunteers/committees.** LMI and PSG cautioned that the ITPC and its subgroups operate on a committee/consensus-building basis, and are principally staffed with "volunteers" that may lack the necessary time and expertise to perform effectively. Moreover, as ATK notes, that volunteerism and committee-based decision-making tends to undermine accountability.
- **Institutional alignment.** The ITPC has relied on the Board's work program and related documents to define proxy goals for IT projects but, as ATK notes (para. 43), there is no formal alignment of the Fund's institutional objectives with the IT strategy and modest involvement of management in IT decision-making.[12]
- **Adherence to project guidelines.** IT budget requests often omit the information related to non-technical requirements, such as work practices, training, and change management. In addition, despite increased effort toward meeting the Fund's requirement that standardized cost-benefit analyses (CBA) accompany all project requests, the quality and consistency of these analyses is questionable, partly reflecting that these requirements were only stiffened in 2003.[13]
- **Management information.** While standard templates exist to support documentation and quality assurance of budget requests, templates do not exist for initial user needs collection and portfolio-level budget prioritization. The existing IT Budget Submission system provides a single source for budget collection, but is not supported by automated workflow for prioritization and approval, which would increase the efficiency by which budget requests are evaluated. The Fund also has more work to do to measure staff output and departmental performance.[14]

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[12] PA (ibid) notes that almost 40 percent of firms surveyed were cited as taking primary responsibility for driving improvements in IT business value, and this study stresses the importance of CEO leadership in IT.

[13] As a result of 2003 capital budget reforms, projects either originating or seeking the release of funds after the adoption of these reforms are required to produce a CBA.

[14] TGS is introducing a Balanced Scorecard approach this year for performance, using industry performance indicators or benchmarks; over time, each of TGS's core services (administrative, IT, and languages) will have service measurement in terms of volume, cost, quality, and customer satisfaction. The "Report of the Task Force on Performance Indicators" (EB/CB/04/3, July 27, 2004) called for a four-year project to develop a system of performance targets in departmental business plans.

- **Ongoing and *ex post* project reviews.** The ITPC has sought to enhance its role in reviewing projects with the aim of drawing lessons from *ex post* reviews and to facilitate "stop-loss" decisions in the case of projects that appear unlikely to meet their objectives. However, resource constraints (related to the volunteer nature of the committee) has limited the ability of the ITPC to perform this role effectively.
- **A stovepipe view.** In the past, projects have often served overlapping (or competing) objectives. To address this issue, steps are under way to develop a rigorous cross-functional business architecture—i.e., a well-defined map of the Fund's institutional objectives and how IT serves these objectives.
- **Dealing with the "public good" problem.** With investment decisions governed by part-time committee members, and in the absence of clearly defined institutional goals, the risk is that funding may be directed toward projects that have well-defined benefits for a sponsoring department, rather than on Fund-wide projects that may have more diffuse (but possibly greater) returns. The IT administrative budget would similarly be directed toward maximizing short-term customer satisfaction.

30. **These factors illustrate that the Fund lacks a robust framework for making and implementing investment decisions.** The overarching need remains a clear definition of the Fund's broader strategy and how it will be supported by IT, as well as a mechanism for making sure these IT objectives are fully shared by the Board, management, departments, and staff. To help frame this strategic vision and to ensure its effective implementation, it may be helpful to consider whether the ITPC has taken on a decision-making role that exceeds its capacity and expertise. Alternative governance structures—which are discussed below—could help improve accountability and the alignment of IT spending with broader institutional objectives.

VII. Is the Fund Effectively Identifying the Scope for Applying New Technologies?

31. **The Fund has improved the pace of adoption of new technology.** LMI had found that during the 1990s the Fund adopted operating systems, administrative systems, data management tools, etc., 2–5 years behind its peers. Although these delays had been reduced more recently, LMI noted several factors that could continue to slow adoption, including: the Fund's consensus-based decision-making processes; an institutional bias against risk taking; and the focus in the IT budget on operations and maintenance rather than new investment.

32. **ATK's analysis suggests that these factors remain important, but generally scored the Fund well with regard to its ability to identify new technology.** Systems are in place to solicit user needs, and TGS is effective in engaging with consultancies, peer organizations, and the private sector to gauge what technologies might be useful to explore, and which providers have the financial, technological, and other capacities to act as useful partners for the Fund.

33. **At the same time, ATK also identified opportunities for strengthening the ability of the Fund to take advantage of new technologies.** In particular, ATK cautioned that innovation efforts may be driven too frequently by individual user requests rather than on the basis of the needs of the Fund's broader IT portfolio, and that spending on "new capabilities" was only 5.5 percent of total IT outlays, compared with 12–22 percent among industry benchmarks. Against this background, consideration could be given to: (i) formalizing the new capability identification and prioritization process; (ii) defining more clearly the "innovation" objectives (and related benchmarks for success) for TGS's Advanced Technology Group; (iii) providing a more detailed analysis of the business triggers that would drive new technological needs and the associated budget and other implications; and (iv) strengthening user sponsorship for new technologies.

VIII. Conclusions and Recommendations

34. **This review suggests that the Fund's IT outlays have paid substantial dividends.** ATK's analysis confirms the results of the earlier LMI study, which identified significant boosts to staff productivity on the basis of broad activity indicators as well as case studies of specific projects. These gains have been coupled with a significant strengthening of IT governance in the mid-1990s, with the establishment of the ITPC and its subcommittees and the more recent improvements in IT project and budget management.

35. **Nonetheless, the taskforce's analysis suggests there may be scope for further improving the return on the Fund's investments.** On the budget front, IT outlays appear to be somewhat higher than comparator institutions on a per capita basis, seemingly reflecting the Fund's emphasis on customer service. At the same time, the Fund's IT outlays may not be fully aligned with the institution's broad strategic objectives and past investments have not been implemented in a manner that maximizes their return. This suggests that strengthening project management, information management, and IT governance could help improve the efficiency and effectiveness of the Fund's IT outlays. Some specific recommendations—many of which are already in train—are provided below.

36. **Steps to increase cost effectiveness.** Although comparisons are difficult, the Fund's IT outlays appear somewhat high on a "per seat" basis. This appears to reflect various factors including: high IT staff count, compensation policies, and a customer-centric service approach. Although this has yielded high user satisfaction, the effect may have been to skew resources toward user support and applications development (especially for the functional and support departments) rather than to infrastructure. Looking ahead, consideration could be given to the following next steps:

- **Establish service level agreements for all IT services.** At present, there are only a limited number of formal service level agreements (SLAs) for IT services, which makes it difficult to manage user expectations and provide a consistent basis for

measuring satisfaction levels. A concerted effort is needed to establish SLAs, which should be structured, where possible, against external benchmarks.[15]

- **Further review IT staffing levels and costs.** A detailed analysis of TGS staffing is beyond the scope of the present study, but ATK analysis suggests that further study and effort to increase efficiency is warranted. Ongoing efforts by TGS to establish a "performance-based contract" for the vendor supplying the Fund's Help Desk and related user support appear to be steps in the right direction. Consideration should also be given to paring service levels and to the potential benefits from outsourcing other business functions (rather than simply hiring staff substitutes through vendors on a time-and-materials basis).
- **Explore scope for offshoring.** As noted by ATK, at least some budget resources could be freed by offshoring, and TGS's ongoing exploration of options in this area warrants support. However, as ATK suggests, the emphasis should be on new applications development, rather than on core/mission critical functions.
- **Undertake regular benchmarking.** The difficulty in the past in obtaining consistent data from IFIs to enable comparative benchmarking has been a major frustration and the progress made this year (including as a result of the taskforce's background work) represents a major step forward. This exercise—conducted in the context of the existing framework for IFI budget collaboration—should be a permanent feature of the annual budget process.
- **Contain pressures for customization.** Presently, despite the emphasis on off-the-shelf applications, the Fund's customer-centric approach makes pressures for customization difficult to resist, and a more rigorous screening of such requests could yield savings.
- **Provide additional support for infrastructure.** Although benchmarking is difficult because the data are distorted by mismatching of hardware replacement cycles, the Fund appears to have spent significantly below its peers on hardware. Recent studies also suggest the need for a greater priority to be attached to infrastructure, including the high availability and reliability of critical IT systems.
- **Improve change management.** Major IT investments have long required careful review of work practice implications and have included budget resources for training. However, follow-through and championing by departmental leadership and Fund management has often been less visible. As a result, attendance at training courses is uneven, and departments do not always budget the staff time needed to ensure effective implementation of new systems. A clearer commitment at all levels to new systems is needed to ensure that they yield their anticipated returns.

[15] Examples of services for which SLAs could be defined include: access to 24x7 Help-Desk support; number of hours for recovery of critical IT system; and the extent to which e-mail messages are archived and retrieved upon request from staff.

- **Targeted assignment of IT staff to user departments.** Best practice is for IT staff to be employed centrally, including to maximize synergies and fungibility of staff. However, there may be some departments where IT needs are particularly acute and full-time re-assignment of existing IT staff may be appropriate.

37. **Steps to reduce costs and maximize productivity by raising the quality of project management.** The *Background Papers* and ATK illustrate that project management in the Fund suffers from inconsistent application of existing methodologies, weak accountability and ownership by user departments, and a lack of clarity on how projects fit with the Fund's overall strategic goals. Possible avenues for addressing these shortcomings include:

- **Strengthen accountability.** User departments should be held more accountable for the success/failure of projects, and for ensuring that new IT solutions are coupled with the process and organizational changes needed to yield expected returns.
- **Rigorously enforce existing guidelines.** TGS and OBP scrutiny of project proposals has increased, and requirements for cost-benefit analyses and integrated project approach assessments have intensified, but more regular assessment of performance against these metrics would be useful.
- **Adopt an Enterprise Architecture.** This framework—which is already being developed by TGS—will help define a Fund-wide business, data/information, application/systems, and technology infrastructure architecture and will help ensure that projects are framed and prioritized against a clear statement of departmental and Fund-wide strategic plans.
- **Develop IT portfolio and program management tools.** Presently, there is a lack of access to accurate and timely information on the status of projects. IT portfolio and program management tools would ensure the availability of the information needed to better manage IT projects and programs.
- **Enhance the role of the Business Project Team (BPT) in project management.** The BPT could be given greater responsibility for monitoring project implementation and adherence to estimated timelines, budgets, and business objectives.
- **Enhancing IT project management mentoring and training.** Greater commitment to mentoring, training, and developing IT project managers could improve the return and cost effectiveness of IT projects.

38. **Steps to adopt a more determined focus on information and budget management.** Absent this re-orientation, the Fund faces reputational risks relative to peers that are better able to leverage internal and external information and data, as well as lost productivity as staff struggle to keep pace with the increasing demands that are placed on the institution. TGS has taken the initiative to implement an information management strategy, but sustained management support is also required to encourage departmental buy in. Key areas where emphasis should be laid include:

- **Fund-wide information standards.** It is critically important to establish and enforce Fund-wide information standards and practices, an area where implementation in the past has been inconsistent. In addition, an information standards officer should be assigned responsibility in TGS for ensuring that projects are mutually supportive and for helping to establish Fund-wide information standards.
- **Senior Information Managers.** As suggested by the Seybold Report, departments should move to define (and budget for) "Senior Information Managers"—i.e., B-level staff that would be responsible and accountable for their departments' adherence to Fund-wide standards, for participating in Fund-wide IT and IM governance, and for promoting information management within their departments. [16]
- **Economic data management.** The weaknesses in the Fund's data management are well known and—as suggested in the *Background Papers*—improvements could involve: (i) developing data warehousing systems; (ii) increasing the role of STA in championing Fund-wide standards and supporting departments' adherence efforts; and (iii) increasing the number and effectiveness of research assistants. Periodic reports to management would help ensure that the appropriate priority is attached and help improve prospects for success.
- **Integrated information management initiatives.** The Seybold report recommends that various information management initiatives currently underway or planned be streamlined and rationalized to produce the maximum benefits. The objectives, scope, and intended outcomes of these efforts should be thoroughly analyzed to ensure that these efforts are well integrated and achieve cost effective improvements in the Fund's information management program.
- **Budget and management information systems.** The Fund's key operational systems are poorly integrated and frequently provide inconsistent or incorrect administrative, financial, and HR data. Stricter budget constraints and ongoing budget reform have placed a greater onus on departments to manage their resources, but a priority needs to be attached by OBP and others on improving the quality and timeliness of the IT

[16] As envisaged by PSG, Senior Information Managers would coordinate the work of existing departmental IT and IM staff, which would not necessarily be a full-time responsibility. However, to be effective, adequate staff time would need to be allocated by departments to this function and to those responsible for implementing information management at the departmental level.

and other budget-related information for departments and management, as well as to developing effective indicators of performance.

39. **Steps to further strengthen IT governance.** Limitations of the existing governance systems include: (i) the relatively modest involvement of management in strategy building, decision making, and championing of IT/IM; (ii) the Fund's consensus driven approach to decision making, which undermines accountability and delays decision making; and (iii) weaknesses in budgeting systems and processes, which can impede effective and timely decision making. ATK has suggested a number of areas where further improvements might yield gains:

- **Deepen management ownership of the IT strategy and portfolio.** Involving management at an early stage in framing the priorities for the medium-term IT strategy would help ensure that it aligns well with the Fund's broader institutional priorities and would enhance ownership at all levels. These objectives could be furthered by establishing an IT Executive Committee—chaired by management and including the Directors of TGS and OBP, as well as a small group of senior staff from TGS and user departments—that would meet regularly (e.g., quarterly) to review progress in implementing the Fund's IT strategy.
- **Establish a Chief Information Officer (CIO).** ATK and Seybold have called for a senior-level staff member—i.e., at the Director level or its equivalent—to be designated as CIO with sole responsibility and high visibility for the Fund's IT and information management. There is no single "best practice" for where this responsibility should lie. However, ATK (paras. 58 and 59) suggests that this role should continue to be played by the head of TGS, and also suggests that the CIO's ability to focus on IT would benefit from shifting TGS's other functions to a separate department or bureau. However, the arguments in favor of moving in this direction would need to be weighed carefully against the budgetary and other benefits from the earlier creation of a single department focusing on Fund-wide services.
- **Clarify responsibilities for IT within TGS.** Presently, these responsibilities are somewhat diffuse and lack visibility outside the department. To address this issue and help support the CIO, ATK (para. 57) suggests a redesignation of existing TGS resources to provide clearer lines of authority and accountability. This would involve formalizing and consolidating existing tasks and responsibilities and defining: (i) a Chief Technology Officer (CTO), i.e., the person responsible for IT operations and the Fund's technology architecture; (ii) an IT budget manager, i.e., with responsibility for developing and monitoring the IT budget; and (iii) an IT portfolio manager responsible for monitoring the alignment of the IT portfolio with institutional needs and for guiding IT project management.
- **Recast the role of users.** The ITPC's involvement in IT governance has grown considerably beyond that originally envisaged in the 1996 CSC report, which had called for a high-level advisory group to exercise oversight rather than be heavily involved in budget and project-related issues. ATK (para. 62) questioned whether the

ITPC can be an effective operational and decision-making body, given that its participants typically have neither the time nor the expertise for such activity. Consideration could be given, therefore, to redefining the ITPC as an IT Advisory Committee (ITAC), chaired by someone other than the CIO and composed of Senior Information Managers from user departments.[17]

- **Strengthen budget systems and processes.** There is room for improvement in the systems and processes that support the budget formulation, reporting, and decision-making. The main areas for improvements include: (i) integrating IT budget processes with the Fund's business planning and budget framework, (ii) clarifying the roles and responsibilities of OBP and TGS regarding budget decisions and ongoing project management, (iii) enhancing tools for conducting budget consolidation and portfolio level prioritization, and (iv) developing automated workflow for budget submission, review, and approval.

[17] The chair of the ITAC could be designated as a member of the IT Executive Committee described above.