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October 14, 1997

The Honorable Ted Stevens
Chairman
Committee on Appropriations
United States Senate

Subject: Financial Management: Australia's Finance Information on Resource Management (FIRM) System and Lessons Learned

Dear Mr. Chairman:

This report responds to your request, made in your former capacity as Chairman, Senate Committee on Governmental Affairs, that we obtain and analyze information on Australia's governmentwide financial management system, the Finance Information on Resource Management (FIRM) system. Based on discussions with your staff, this report (1) summarizes the history of FIRM's development and implementation, (2) identifies the risks Australia encountered in developing a centralized system and the actions it took to mitigate those risks, and (3) surfaces key lessons learned from Australia's experience. The following discussion provides background on the FIRM system and answers your specific questions.

AUSTRALIA'S FINANCE INFORMATION
ON RESOURCE MANAGEMENT SYSTEM

FIRM, Australia's current centralized financial system, tracks cash- and budget-related activity for the whole government. It integrates budget and actual data, provides funds control on a near real-time basis, and assists in developing and monitoring budget estimates. FIRM consists of two fully integrated subsystems—Financial Exchange and Resource Management. The Financial Exchange subsystem is the core accounting system that processes all agencies' payment and receipt transactions and records them against Australia's primary bank account, the Commonwealth Public Account. Agencies operate their own comprehensive financial management information systems (FMIS) to fulfill individual accounting needs. Each agency's FMIS interfaces with FIRM to submit payment and receipt data using a standard format file. FIRM produces the Financial Exchange Confirmation file, which agencies use to confirm their

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payment and receipt amounts. The Financial Exchange subsystem also interacts with the Resource Management subsystem, which provides the funds control function of FIRM. Expenditures are controlled at the appropriation level, and FIRM suspends payments if an agency has insufficient appropriated funds.

In addition to facilitating the exchange of money, agencies' FMIS systems interface with FIRM to provide further information about resource use. This additional information is contained in the Resource Variance Advice file and the associated Resource Variance Reference files. Data contained in these files allow users to array payment information by various categories, such as program, activity, department, number of people, and square footage of space occupied. This information is aggregated and recorded in the second subsystem, Resource Management.

The Resource Management subsystem is the core budget system that fully integrates actual and budget data and tracks variances. It receives actual expenditure information from the Financial Exchange subsystem, which can be compared to budgeted data. Department of Finance budget officers input budget estimates as part of the budget process. Although the Resource Management subsystem records information only at the highest level needed by Department of Finance resource managers, it also gives agencies posting information on all resource variations it has processed, including variations processed by third parties on behalf of agencies. Agencies receive the detailed information from the Resource Variance Confirmation file, which is produced by the Resource Management subsystem.

FIRM uses the same charts of accounts for budget estimates and actual data, thus allowing the data to be reported by appropriation, functional class, economic type, or portfolio (agency) "views." Changes in resource levels are recorded in FIRM and linked to a multiple "resource view/chart of accounts" that reflects a breakdown of aggregate government activity. The "views" allow reporting of resource use (1) against the annual appropriation acts, which can be used to ensure funds availability (appropriation view), (2) by government objective, such as health, education, and defense (functional view), (3) according to economic nature and impact, such as clean air and safe food supply (economic type), and (4) by agency (portfolio view). This structure links budget data directly with the related expenditure information in one system. FIRM is also reportedly able to produce a statement of financial transactions for the whole Australian government within hours of fiscal year-end or at any given point throughout the year.

However, FIRM does not capture the full cost of government. First, it provides only a cash-based picture on a real-time basis and, thus, does not track accruals

or account for assets other than cash. For example, FIRM does not contain information about the cost of goods or services received but not yet paid for, nor does it contain details about the value of certain assets, such as physical property. As a result, FIRM cannot currently produce Australia's consolidated financial statements.¹

Second, FIRM does not track off-budget entities not funded by the Commonwealth Public Account, such as Telstra, the country's major communications company. Third, according to Department of Finance officials, FIRM does not yet strongly link the measurement of program outcomes with the budget. Doing so could provide information about what the government's programs achieved and how much they cost.

After the conclusion of our fieldwork, Australian officials stated that in 1997, the Australian government accepted the recommendations of the Commonwealth Budgeting, Reporting and Accounting (COBRA) Scoping Study to introduce a resource management framework using outcome- and output-based accrual budgets and estimates with accrual appropriations. This framework is scheduled for implementation, using commercial accrual accounting software to replace FIRM Resource Management, in time to prepare the first accrual budget for FY 1999/2000.² This change is expected to enable Australia to move closer to full accrual accounting and reporting.

The following sections respond to your specific questions.

ADOPTING THE FIRM SYSTEM

Question

What was the impetus that resulted in Australia having a centralized financial management system and how long has Australia had such a system?

GAO Response

The Australian public sector has emphasized centralized funds control and fiscal accountability from its constitutional beginnings. The regulatory framework for

¹The Minister of Finance prepares the annual June 30 fiscal year-end financial statements for Australia, which are audited by the Australian Auditor General.

²The primary budget statements to be presented to Parliament include agency and consolidated budgeted operating statements, budgeted statements of assets and liabilities, and budgeted statements of cash flows and capital budgets.

the financial management of the federal government is based on the Australian constitution and the Audit Act of 1901.³ These provide that moneys may not be disbursed unless the Minister for Finance has signed an authorization confirming that funds are available to be drawn from the Commonwealth Public Account. In 1990, the Secretary of the Department of Finance made the final decision to develop FIRM from Australia's original centralized accounting system. Initially, a series of legislative reforms in the mid-1980s led to the original conceptual decision to develop FIRM as an integrated system.

In the 1960s, Australia implemented its original automated centralized accounting system—the Finance Ledger System—and a separate budget system—the Budget Management System. The Finance Ledger System recorded all payment and receipt transactions, and the Budget Management System tracked budget estimates and outcomes at a summary level. Aggregate payment and receipt data were uploaded to the Budget Management System from the Finance Ledger System on a monthly basis.

In the 1980s, a series of broad financial management and budgetary reforms were instituted, in part because of economic difficulties and a desire to restrain public sector spending and better align it with Australia's overall macroeconomic policy framework. The government party elected in 1983 issued a reform package to promote efficient and effective resource management in federal government administration. This encouraged the replacement of the Finance Ledger System and the Budget Management System with FIRM to give department program managers more detailed and flexible reporting and to encourage the linking of use and performance. The reform package called for budgetary changes, such as instituting a running costs⁴ concept, so that the full cash-based costs of an agency could be aggregated in a single appropriation. System designers thought it important that FIRM be linked to the budget in part by requiring that FIRM track an agency's running costs. Consequently, agencies must have individual ledger systems to account for their funds and detailed transactions by the various types of administrative expenses.

³The government has introduced a package of three bills to replace the Audit Act of 1901. The new bills, which are scheduled to take effect on July 1, 1997, are intended to provide additional financial management reforms.

⁴Running costs include salaries, travel, and other administrative expenses, but they exclude transfer payments, grants, or loans and allow up to 2 percent of unused administrative funds to be carried over to the following year's appropriation.

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AGENCY REACTION TO FIRM

Question

Did Australia's government agencies resist the move to the centralized financial management system?

GAO Response

According to officials in the Department of Finance, Australia has had a centralized payment process since 1901, and it instituted an automated centralized financial management system in the 1960s. Although agencies did not resist FIRM or the need for a centralized system, FIRM designers were concerned that users might resist using a new system since they were familiar with a system that had been in place for more than 20 years. FIRM designers ensured that users had adequate input into the system's design throughout the development process. As a result, implementing FIRM required no change in the government's fundamental philosophy of centralized funds control.

SYSTEM DEVELOPMENT

Question

How long did it take to develop Australia's current centralized system? What were the development costs?

GAO Response

It took approximately 5 years to complete the development of all phases of FIRM. However, before the Department of Finance began developing FIRM, it surveyed users to determine the type of information that should be maintained and how the information would likely be used. For example, designers interviewed potential users to understand the level of governmentwide information that needed to be maintained.

These informational needs were critical to decisions about FIRM's architectural structure. Because of its complex design, size, and many discrete user groups, FIRM was developed in three stages: (1) the Financial Exchange subsystem's payments and receipts functions were implemented in August 1992, (2) the Resource Management subsystem's core and "actuals" functions were implemented in July 1995, and (3) Resource Management's "estimates" function was implemented in January 1996.

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The Department of Finance estimated the cost to develop FIRM at \$6 million.⁵ According to Department of Finance officials, this in-house development cost is comparable to what it would have cost to modify a commercial product.

KEY PRACTICES, RISKS, AND MITIGATING ACTIONS

Question

What key practices from Australia's experience could provide a useful framework for the United States if the federal government were to adopt a similar centralized financial management system? Also, identify the risks encountered by Australia in pursuing a centralized system and the actions taken to mitigate those risks.

GAO Response

Based on our review of FIRM, we identified the three practices discussed below that should be considered in any attempt to modify financial management systems. These are consistent with the best practices of leading organizations' strategic information management and technology reported by GAO.⁶

***Practice 1:** High-level support for good financial management is essential for the success of a centralized financial management information system.*

FIRM had high-level support in the Department of Finance, the Cabinet of Ministers, and the Parliament. The two deputies of Australia's Secretary of Finance are the "owners" of the system,⁷ thereby ensuring high-level interest in FIRM's success. Also, financial management reforms have been successful due to strong support from various elected parties and their ministers, which have been supportive regardless of the party in power. This high-level support helps ensure buy-in by the agencies and other affected parties.

⁵The estimate is shown in U.S. dollars.

⁶Executive Guide: Improving Mission Performance Through Strategic Information Management and Technology, Learning From Leading Organizations (GAO/AIMD-94-115, May 1994).

⁷As owners of the system, these individuals' primary responsibilities are to oversee FIRM development, ensure that FIRM is maintained and updated, and provide users with proper training and input into system changes.

Practice 2: System flexibility is essential to meet individual information needs and requirements.

FIRM has been designed to provide the flexibility needed to adapt to changing business requirements for resource management. Whenever possible, system parameters were implemented by data-driven tables, which increases the system's flexibility. For example, FIRM is able to accommodate resource variations in any specified currency and adjust prices to facilitate budget analysis for future years. Also, FIRM's forward estimates system, which is part of the Resource Management subsystem, allows the government the flexibility to estimate the level of budget outlays for 3 years. These estimates record the expected levels of expenditure the government proposes for future years based on (1) relevant economic, demographic, and other forecasting assumptions and (2) the minimum cost of continuing all existing policies and programs. The system allows decisionmakers to create various scenarios by adjusting any of the elements for the impact of policy changes on present and future budgets. FIRM also gives managers the flexibility to create reports that meet their specific management needs.

Practice 3: The centralized system should provide operational efficiencies and economies of scale.

According to Department of Finance officials, FIRM system users benefit from the following operational efficiencies and economies of scale.

- Essentially all government payments are managed by one payment system.
- FIRM interfaces with approximately 80 stand-alone, fully integrated departmental systems.⁸ Australia's individual agencies operate their own comprehensive financial management information systems to meet their more detailed individual accounting needs. According to system designers in the Department of Finance, FIRM can be linked with these systems by either mainframe-to-mainframe or dial-up links. System users interface with FIRM in a variety of ways, including through graphical user interfaces that allow users to link individual separate analytical spreadsheets and FIRM tables, thereby eliminating the need for users to rekey information. Also, system users can download data from the mainframe into end-user tools to update data and send them back to the mainframe.

⁸Since many agencies use the same departmental systems—referred to as the Financial Management Information Systems (FMIS)—FIRM actually interfaces with only 30 different systems.

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- FIRM's standard charts of accounts for budget and actual data are complementary and data can be reported by appropriation, functional class, economic type, or portfolio.
- FIRM records aggregate resource use rather than duplicating the detailed information maintained at the agency level. Efficiencies can be achieved by aggregating payment information at the payee level and issuing one check to vendors. FIRM's confirmation output files are the only source of transactional information. These confirmation output files allow agencies to verify that payments have been made as requested.

In addition to identifying key practices from Australia's experience, we identified various risks the Australian system developers recognized and actions designed to reduce such risks. Table 1 lists the risks and the actions designed to address them.

Table 1: Risks Faced by FIRM System Developers and Mitigating Actions Taken

Risk	Action designed to reduce risk
Users might resist using FIRM if it did not meet their unique needs.	Australia (1) undertook extensive user consultation before and during design and development to be flexible and user responsive, (2) developed a trial prototype and emphasized user involvement, (3) developed a "usability laboratory" for users to review prototypes, and (4) surveyed users and modified the prototype based on user feedback.
Users might not be willing to commit necessary resources.	Australia (1) emphasized user involvement at every stage of development, (2) made the highest levels of management responsible for the system (for instance, system ownership resides within the Department of Finance at the Deputy Secretary level), and (3) organized user forums to obtain user input and validate work done by the project team.
Users might resist using FIRM or not use it to its fullest capabilities if they did not know how to use it properly.	Australia provided training uniquely designed to meet the needs of each group.
Staff involved in the development of the system might not understand how to use all the development techniques and available tools for new applications.	Australia provided adequate training to staff involved in the development of the system to ensure that they understood the development environments of new applications.

Risk	Action designed to reduce risk
Requirements of different stakeholders might conflict with one another.	Australia (1) established a formal mechanism to assist in resolving conflicts in stakeholder requirements, (2) surveyed stakeholders to understand their concerns and requirements, and (3) allowed stakeholders to determine if proposed resolutions adequately addressed their needs by having stakeholders use the system's prototype.
The FIRM project might be developed without considering the changing legislative environment and technology.	Australia (1) maintained close contact with individuals responsible for the development of new financial legislation, (2) ensured that FIRM could be modified for future financial needs, (3) educated project developers about new technologies, and (4) monitored project development to reduce the risk of delays.
Verification and approval procedures might slow the decision-making process.	Australia delegated the verification and approval procedures to the systems managers as much as possible.

Australia's experiences with a centralized financial management system may provide insights about lessons learned and practices to consider, such as clearly defined systems requirements, high-level support for systems development, and system flexibility. However, it is important to note that the differences in the size and structure of the Australian government and the United States government should be considered if a similar system were to be developed by the United States.

Australia, with a population of 18.4 million people,⁹ had total federal outlays of approximately \$100 billion for fiscal year 1996 as compared to total outlays for the U.S. government of \$1.7 trillion dollars. Table 2 compares outlays for the five largest Australian departments and the comparable agencies in the United States.

⁹As of December 1996.

Table 2: Outlays for Australian and U.S. Governments for Fiscal Year 1996

(Dollars in billions)

Australia		United States	
Five largest agencies	Outlays for fiscal year ended 6/30/96	Comparable agencies	Outlays for fiscal year ended 9/30/96
Social Security	\$30	Social Security Administration	\$375
Treasury	\$18	Department of the Treasury	\$365
Health and Family Services	\$16	Department of Health and Human Services	\$320
Employment, Education, Training, and Youth Affairs	\$11	Departments of Labor and Education	\$62
Defense	\$9	Defense	\$286

Note: Amounts are shown in U.S. dollars. Australian dollars were converted at the February 26, 1997, exchange rate (\$1.28 Australian = \$1 U.S.).

Australia's¹⁰ national government's executive branch is comprised of the Prime Minister and the Cabinet, or Ministry. The Prime Minister presides over the Cabinet of Ministers, which is made up of elected Members of Parliament and is the government's major policy-making agency. The Ministers oversee the government's departments. Because, under Australia's Parliamentary system, members head the various departments, Parliament was a stakeholder in the process and it helped in gaining consensus to develop and implement a centralized system for the government.

¹⁰In 1901, Australia's colonies federated, becoming states within the Commonwealth of Australia. Australia operates a three-tiered system of government—the federal, state, and local levels. The Australian Parliament and the national government deal with federal matters. The six state governments and their legislatures and Australia's two territories administer education, transportation, law enforcement, health services, and agriculture. There are approximately 900 local government bodies with varying levels of responsibility.

SCOPE AND METHODOLOGY

To address your questions, we (1) reviewed detailed documentation on the FIRM system (2) observed the FIRM system and reviewed reports generated by the system, and (3) interviewed officials in the Australian government, including the FIRM system designers; persons responsible for maintaining and modifying FIRM; budget officials responsible for developing and monitoring budget estimates; auditors and system users in the Australian National Audit Office; certain front-end users in the Department of Finance; other departmental FIRM system users; and Members of the Australian Parliament.

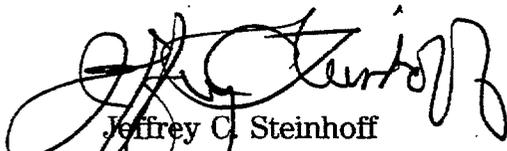
We did not verify the figures cited in this report—such as the costs of Australia's financial management systems—that various Australian officials provided to us. In addition, we did not verify that FIRM functioned as reported.

We conducted our review in accordance with generally accepted government auditing standards. We requested comments on a draft of this letter from officials in the Australian government—the National Audit Office and the Department of Finance—and their comments have been incorporated where appropriate.

We are sending copies of this report to the Chairmen and Ranking Minority Members of the Senate Committee on Governmental Affairs and the House Committee on Government Reform and Oversight; the Secretary of the Treasury; the Director, Office of Management and Budget; and other interested parties. We also will make copies available to others upon request.

If you have any questions about this report, please contact Deborah A. Taylor, Assistant Director, at (202) 512-4476. Other major contributors to this letter were Margaret A. Sherry and Sabrina L. Springfield, senior audit managers.

Sincerely yours,



Jeffrey C. Steinhoff
Director of Planning
and Reporting

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