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Date: October 1997 e-mail:

CIRCULAR PF NO. 94

(To all self-administered funds, pension fund administrators and retirement annuity funds)

INFORMATION TECHNOLOGY - THE "YEAR 2000" CHALLENGE

EXECUTIVE SUMMARY

This circular serves to bring the technological challenge relating to the year 2000 to the attention of financial institutions, so that any risks that could result from computer-based solutions failing in the year 2000 can be identified, managed and resolved effectively, with a view to avoiding any possibility of systemic risk, which might cause an overall failure of the financial system.

Confirmation that "year 2000" compliance projects have been implemented will have to be furnished to this Office by financial institutions, as set out in paragraph 4 below.

1. BACKGROUND

The information technology world is currently faced with one of its greatest and most significant challenges yet. It is generally known that a large number of computer-based solutions will fail after midnight on 31 December 1999. Essentially, this is due to the fact that many computer systems have not been designed to store or use more than two digits to identify a year and are incapable of handling years beyond 99 (that is, 1999).

Thus, unless designed for this eventuality, the majority of

systems will not be able to distinguish between the years 1900 and 2000.

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Financial institutions are but some of the many organisations that must now take steps to ensure that all computer systems are prepared for the year 2000. It is in the best interest of every Organisation and computer user to ensure that systems are "year 2000" compliant as soon as possible, in order to avert a possible catastrophe.

The problem stems from two historical situations. Firstly, until the late 1980s, applications and operating systems were typically rewritten every five years. Few business transactions with an effective date beyond the year 1999 were being entered into at that stage. Capture and storage of the first two digits of a year served no purpose, and the intention was to incorporate full identification of the year into systems rewritten during the early 1990s. Unfortunately, the cost of manpower escalated, human resources became scarce and businesses needed new systems faster. Efforts were therefore concentrated on the development of new systems, and older systems were no longer being rewritten, thus extending their life expectancy to beyond 1999. Many systems currently do not accept a year of "00", and those that do can generally not distinguish between the years 1900 and 2000.

Secondly, the problem was exacerbated by the apparent short-sightedness of the original designers and implementers of personal computer technology in the early 1980s. Initially, this type of technology was extremely expensive and, in order to keep costs to affordable levels, it was essential to minimise the memory size and magnetic storage requirements of machines. It was therefore decided that capacity could be saved by not processing and storing the first two digits of a year.

At that stage, the total number of personal computers to be deployed worldwide was estimated to number thousands, and it was considered to be a relatively simple task to build in the first two digits of a year later. Unfortunately, personal computers now number over 60 million, and resolution of the problem has taken on mammoth proportions. Unless the problem is resolved, many personal computers will revert to an unknown year after midnight on 31 December 1999. The majority of systems will revert to the past, to 1900 or 1984, or leap into the future, to 2084 - only a few will "know" that the year is 2000. In all probability, files and data will be lost.

Within the next 24 months, all these computer systems must be enhanced and upgraded to recognise and correctly interpret the year 2000. If financial institutions do not ensure that their systems are "year 2000" compliant, the entire financial system could face a crisis, with catastrophic implications.

"Year 2000" compliance will require the replacement or enhancement of many computer systems, including hardware, operating systems, application packages, personal computer productivity tools (such as old versions of Lotus and WordPerfect), purchased applications (such as DBIT and TSP) and applications developed by an institution's own staff, as well as the inspection and, where

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necessary, the correction of every program and macro in use. In addition, data files that are stored anywhere on personal computers, file servers and mainframes will have to be expanded and updated to include the first two digits of a year. This is a daunting and costly task for both financial institutions and every other computer user, especially clients of financial institutions.

Not only will new computer systems have to be commissioned, but in many cases, the changes will be so significant that all skilled people will have to be retrained in the use of computer systems. Systems and productivity tools currently in use will no longer be accessible or operational. Every computer user will have to adapt to these changes, irrespective of personal preferences, the inconvenience that may be caused or the financial implications thereof. It is estimated that the cost of ensuring that all computer systems are compliant with the year 2000 will exceed US\$700 billion in the United States of America alone.

Financial institutions that are already entering into or that intend entering into business transactions with an effective date beyond 31 December 1999 (for example, forward selling of products, long-term investments, long-term financial planning) are cautioned to ensure that such transactions are not prejudiced by existing software, applications and data that may have date constraints. Failure of computer systems to handle dates correctly could well jeopardise the very existence of an institution.

2. ACTION REQUIRED

Successful completion of "year 2000" compliance projects is critical to the survival of most organisations, especially

financial institutions. It is therefore of the utmost importance that the systems of financial institutions be "year 2000" compliant within the very near future.

Concern has been expressed abroad that some clients of financial institutions that do not take adequate steps to rectify the problem in advance might choose to go into voluntary liquidation in the year 2000, as a result of their inability to deal with the ensuing crisis. Financial institutions and their clients might be unable to acquire or retain the skills required to change their programs. Given the nature of the problem, the manpower resources required to effect the necessary changes are expected to be in extremely short supply, and there is no guarantee that financial institutions and their clients will have the ability to implement the necessary changes unless adequate planning and preparation are undertaken. Should clients of financial institutions be affected in this way, there will obviously be implications for financial institutions with regard to the quality of institutions' exposures to such clients.

It is essential that financial institutions that have not already done so start planning to ensure that there is adequate time to resolve the "year 2000" problem effectively. Completion dates of projects in this regard should be as soon as possible, preferably before the end of 1998, in order to allow a full year for the commissioning and testing of amended systems and to leave enough time to resolve problems arising therefrom.

Many of the larger computer-service providers and contract-staff providers have trained staff available to assist companies with their "year 2000" compliance projects. Accounting firms and management consultants should also be able to assist. A "year 2000" information-centre home page has also been set up on the World Wide Web, at <http://www.year.2000.com>, in order to promote consultation on a global basis and to set a standard approach to solutions, as well as to share knowledge on the subject.

3. OTHER AREAS AFFECTED

The "year 2000" problem is by no means confined to computer-based systems. In our daily lives, there are many instances in which there is no provision for the year 2000.

A large number of other critical and non-critical areas will also require corrective action. Pre-printed forms that allow only two digits for the year, cheque books on which "19.....@" has been printed, time locks for safes, building management and maintenance systems and automated telephone exchanges are but a few examples of other areas that will have to be enhanced long before the year 2000.

4. CONFIRMATION OF "YEAR 2000" PROJECT IMPLEMENTATION

In order to ensure that the necessary steps are being taken, the chairperson of the Board of Management or the chief executive officer of each financial institution is required to provide this Office with written confirmation, by 31 December 1997, that the institution concerned has implemented a project to ensure "year 2000" compliance. Furthermore, the Board of Management or the board of directors of each financial institution will be required to certify that such a project has been completed to its satisfaction and that the systems of the institution concerned address the "year 2000" compliance problem and ensure that the risks undertaken by the institution can be identified and managed.

The "year 2000" compliance problem is currently being highlighted by the media. This Office, therefore, regards it as essential that financial institutions should pro-actively implement measures to counter any potentially negative perceptions, in order to avoid the risk of the public losing confidence in the financial sector.

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5. ACKNOWLEDGEMENT OF RECEIPT

Two additional copies of this circular are enclosed for the use of your institution's independent auditors and valuator (where applicable). The attached acknowledgement of receipt, duly completed and signed by both the chairman or chief executive officer and principal officer, or another director if a principal officer is not applicable, should be returned to this Office as soon as possible.

THE REGISTRAR OF PENSION FUNDS

PF 93 was addressed to all self-administered funds or their administrators (where applicable) and custodian banks.

(Afrikaans beskikbaar op aanvraag)

The Registrar of Pension Funds
PO Box 35655
MENLO PARK
0102

I acknowledge receipt of two copies of Circular PF No. 94 of October 1997, and confirm that a copy of this circular has been handed to the auditor and valuator (where applicable).

Signature of the Chairman / Chief Executive Officer :
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Signature of the Principal Officer / Director :
.....

Name of Fund / Administrator / Retirement Annuity Fund :
.....

Date :

Executive Officer: R G Cottrell