Preface

The future of the computer in business operations is very bright. However, this is not an unmixed blessing: as business data-processing systems rapidly become more complex, the problems of control multiply at an even greater pace. The development and control of business-oriented computer systems are separate problems which suggest conflicting solutions. The logical objective is to maintain some sort of balance between the technological innovations and the use of acceptable control criteria.

The purpose of this book is twofold: (1) to examine the environment within which business data-processing systems function, and (2) to explore possible solutions to the problems which the auditor faces in reviewing these systems. The auditing profession is at a crossroads. We can either inhibit change by demanding adequate safeguards in terms of familiar evidence, or we can attempt to seek new ways of reviewing business data-processing systems which will not interfere with technical progress.

Much of the discussion which has centered around this problem has been at a theoretical level. The chief difficulty with dealing with the issue in the abstract is that doing so focuses the effort on attempting to evolve general criteria that may be applicable to all business data-processing systems. Unfortunately, these attempts cannot possibly succeed in any meaningful sense, as we do not have an underlying generally accepted theory of business information systems. Since business data-processing systems are not homogeneous, the auditing procedures and techniques applicable to these systems must also vary.

The methodology employed in this presentation combines what has been said and done in the past with some suggestions of what should be done in the future to attempt a reconciliation between developmental and control criteria for business systems. My basic dissatisfaction with the situation several years ago (which dissatisfaction, on the whole, persists today) gave rise to an exploratory study, including development of an experimental computer model, in connection with a course that I was taking in preparation for my doctoral qualifying examinations. This original study led to two years of additional research and study in connection with the writing of a doctoral dissertation on the subject.

This present work retains some of the ideas I developed in those earlier studies, but also adds the perspective that comes with time. It is evident to me that this attempt is merely the first in a long progression of studies on the subject—studies sorely needed in our present dilemma.

This study would not have been possible without the support and encouragement of my colleagues on the faculty of the School of Business Administration at the University of California, Berkeley. In particular, I would like to express my appreciation for the encouragement and assistance of Professor William J. Vatter in the review of numerous drafts and revisions. Professor Austin C. Hoggatt provided valuable suggestions in reviewing the computer programs and in criticism of the manuscript. Professor Mason Haire of the Department of Psychology aided in the development of the survey questionnaire and in the preliminaries of the organizational aspects of the study. The facilities of the Computer Center of the University of California were of vital importance in developing and “debugging” the computer programs.

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In view of the rapid developments in computer technology as related to auditing procedures, it is perhaps appropriate to remind the reader that references to “at present” throughout this text indicate the date below.

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