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Role of Actuaries in Internal Control

- From the Information System Point of View -

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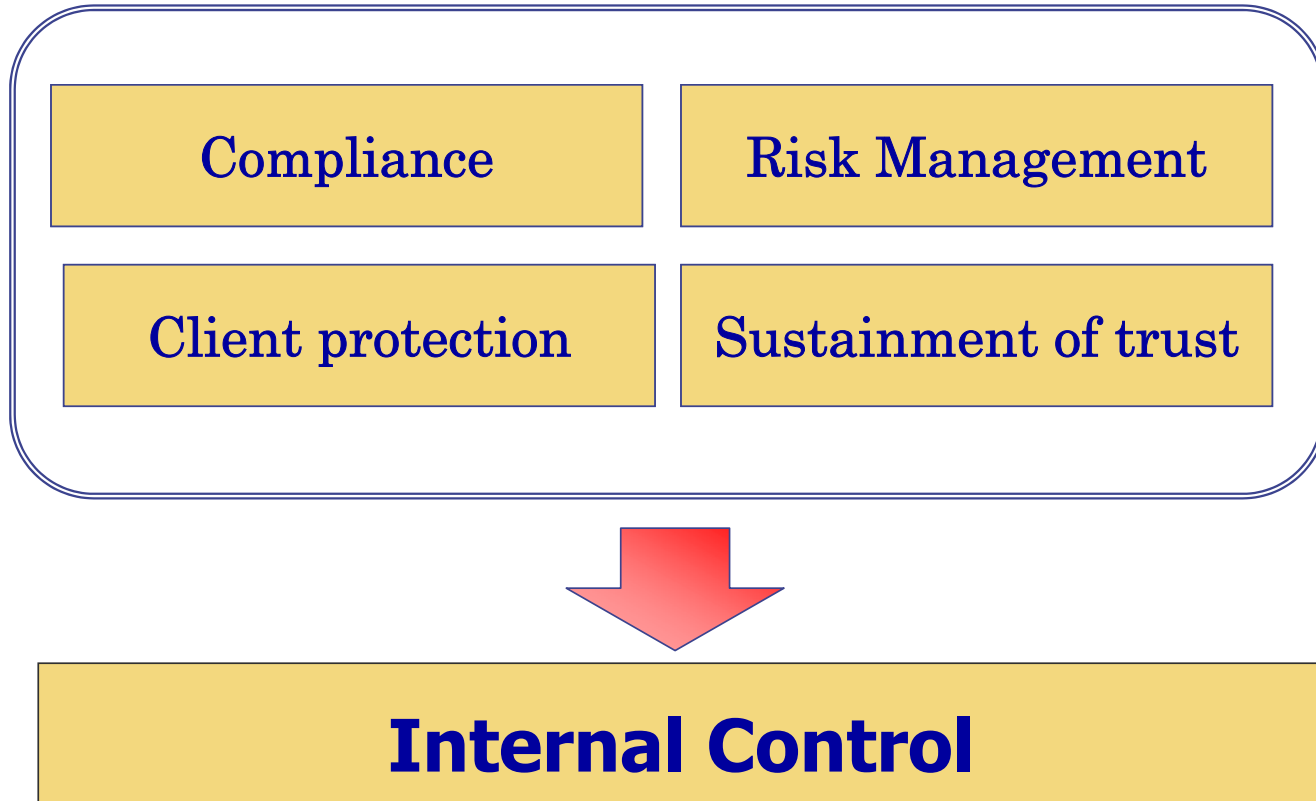
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1 Internal Control - A Brief Overview / Movements

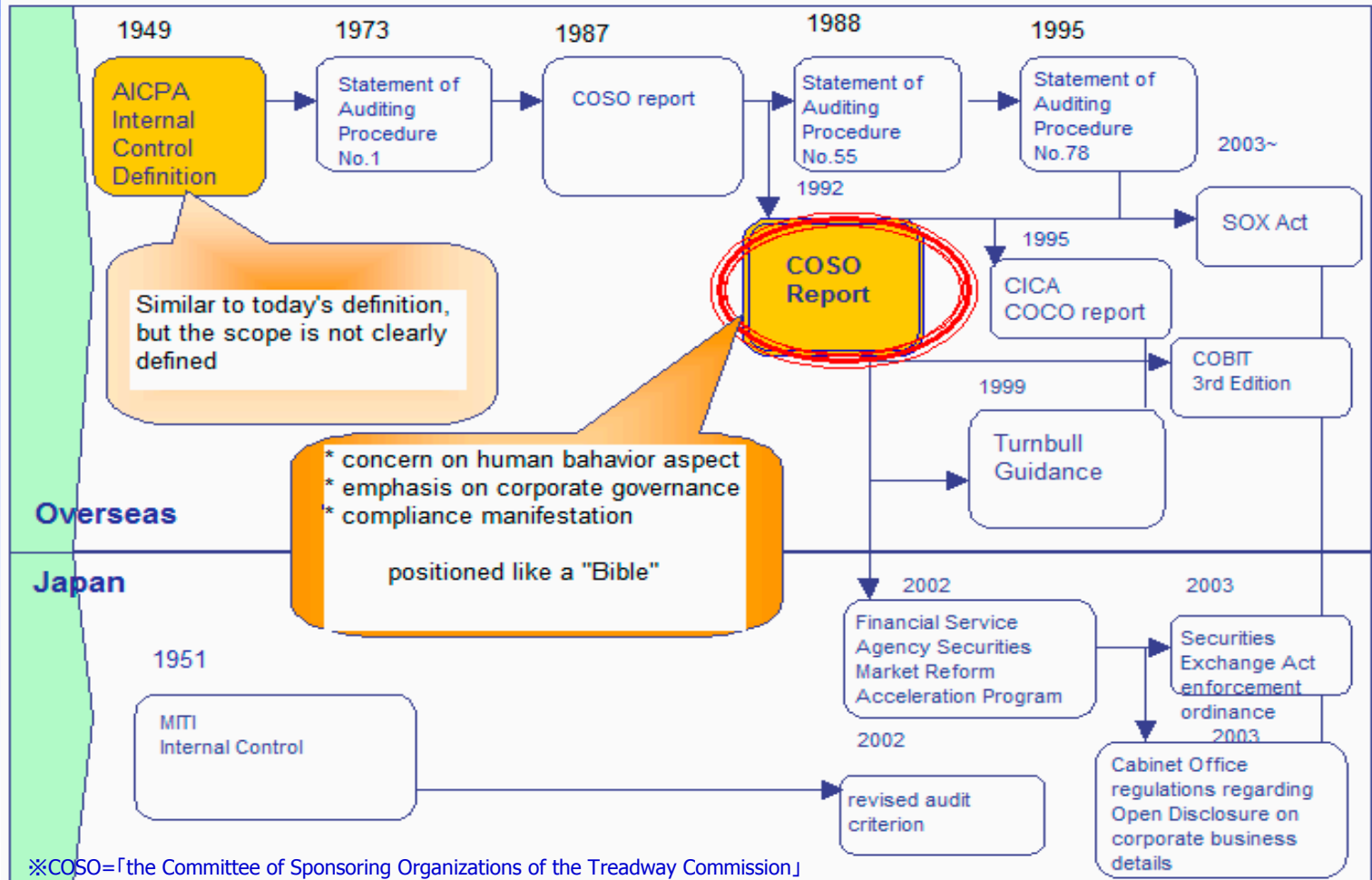
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Why Internal Control?



1.1 Guideline Movement (Internal Control)



1.2 COSO report-Definition

COSO report

Origin for the SOX Act

“Bible” on internal control

Internal Control

Definition:

"The plan of an organization and all of the coordinated methods and measures adopted within a business to safeguard its assets, check the accuracy and reliability of its accounting data, promote operational efficiency and encourage adherence to prescribed managerial policies"

1.3 COSO report-Objective

COSO report

**Origin for the SOX Act,
“bible” on internal control**

Internal Control

Objective:

Effective and efficient operation

Reliable financial reporting

Compliance to law and regulations

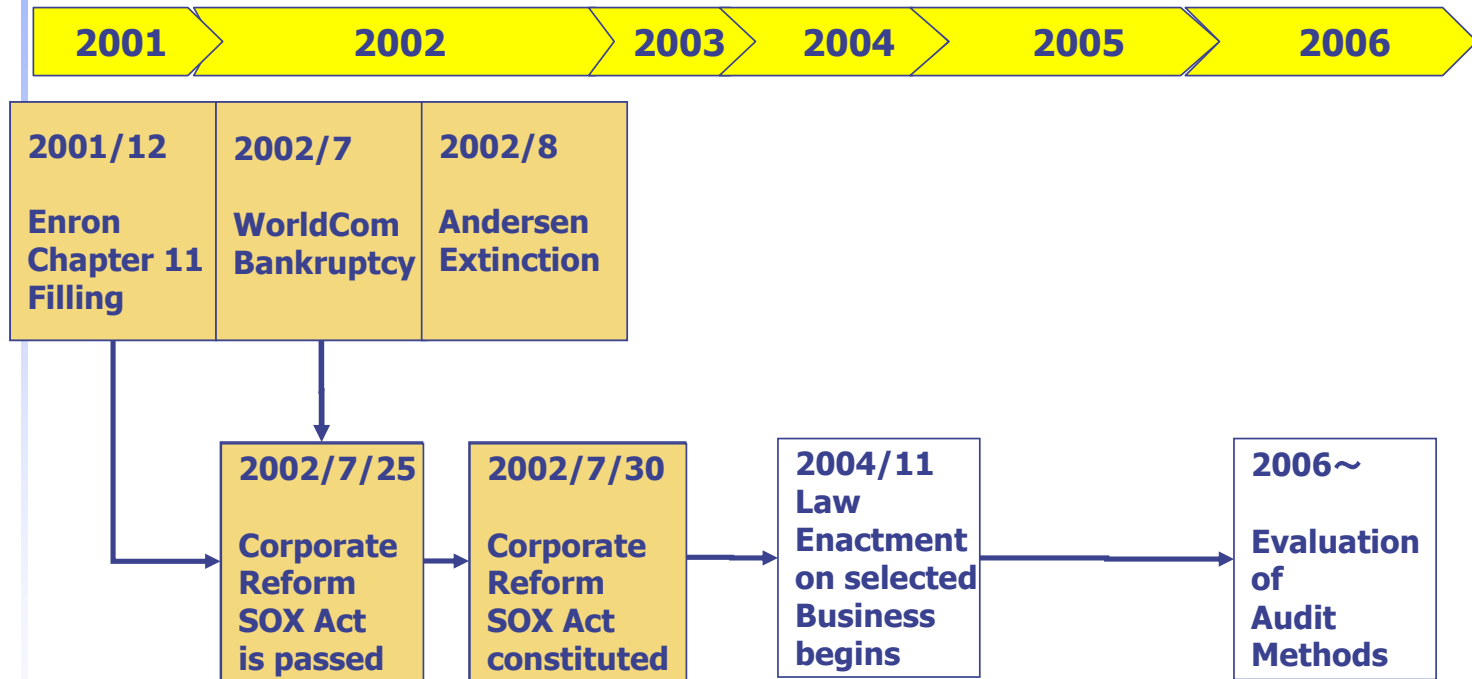
1.4 COSO re **Infrastructure to support other constituent factors** nts

Components	
Control Environment	Management principles, Ethical values of executives, Business creed and mission
Risk Assessment	Calculate operational risks, Prepare to manage the relevant risks
Control Activities	Independent checks on performance, Endorsement evaluation and comparison of achievements, etc
Information and Communication	message from manager, related through training
Monitoring	Indicates monitoring of day-to-day operations by the supervisor and internal monitoring and others

Infrastructure to support other constituent factors

The process of internal control itself

1.5 Movement (U.S)



1.6 Overview SOX Act

◆ SOX Act

The public company accounting reform and investor protection act (11 titles 69 articles)

Internal control is a part of SOX method

◆ Major problems on SOX Act

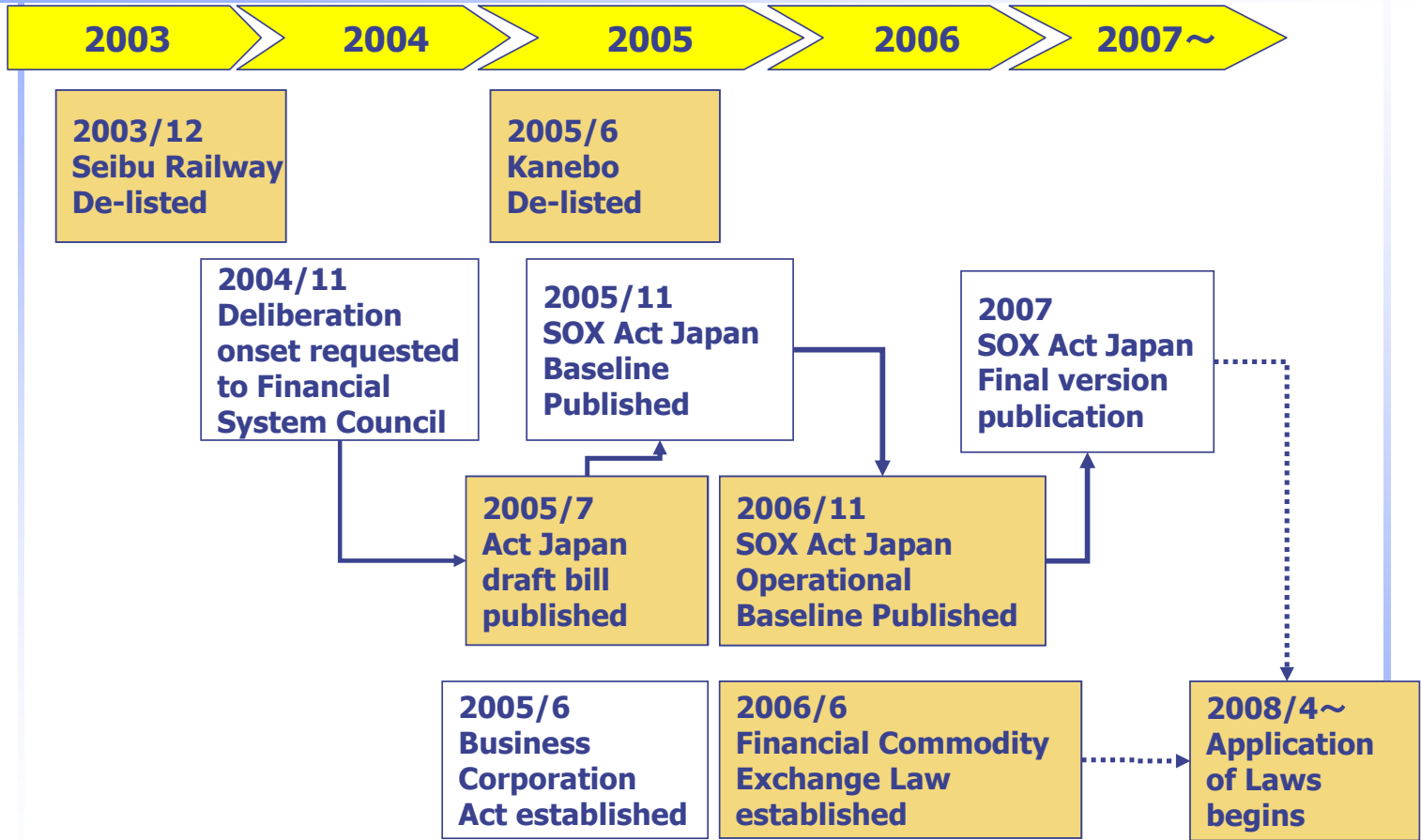
- Management's lack of awareness on IT
- Inadequate framework to sustain SOX Act activities

Enormous cost, especially for documentation

1.7 Movements (Overseas)

	Legislative bills and guidelines		Year Implemented
	Objectives	Implementation Process	
France	Financial Securities Law		2003
	<ul style="list-style-type: none"> ▪ modernization of transaction ▪ protection of general investors ▪ independent accounting audit 	<ul style="list-style-type: none"> ▪ target public & private companies ▪ reports on “purpose” and “process and effectiveness” of internal control to be submitted 	
England	Turnbull Guidance		1999 *revised in 2005
	<ul style="list-style-type: none"> ▪ operational effectiveness and efficiency ▪ credibility of financial statement, and related laws ▪ offer legitimate assurance 	<ul style="list-style-type: none"> ▪ review of board of directors and disclosure of that process 	

1.8 Movement (Japan)



1.9 Comparison-1 (U.S / Japan)

	SOX Act (U.S)	Financial Commodity Exchange Law (Japan)	Business Corporation Act (Japan)
Background	Fraudulent wrongful doings such as the Enron scandal	Fraudulent statements and fallacious records by Seibu Railway and Kanebo,	Synthesis of business laws to adjust to societal changes
Objective	Restoration of trust on corporations and capital market	Securing reliability of portfolio reports, protection of investors	Appropriateness of business activities in general
Extent	<ul style="list-style-type: none"> •Mandate internal control •Austerity of management responsibility •Stronger independence of auditors •Strengthening of criminal penalty 	<ul style="list-style-type: none"> •TOB revision •Reevaluation of reporting process on massive holdings •Reinforcement of internal control on financial reports 	<ul style="list-style-type: none"> •Simplification of business establishment •Mandate formulation of internal control system •Reinforcement of auditor's authority and independence

1.9 Comparison-2 (U.S / Japan)

	SOX Act (U.S)	Financial Commodity Exchange Law (Japan)	Business Corporation Act (Japan)
Targeted Business	Public companies in the US stock market	Public companies in Japan stock market	Companies with 500 million JPY in capital, 20 billion JPY in debt
Scope	Financial statements		All duties
Evaluator	Accounting auditor	Auditor	Auditor
Responsible official	Management	Management	Board of directors
Basis	"Audit of internal control on financial reporting inspected along with financial statement audit"	"Guidelines on Evaluation and Audit of Internal Control on Financial Reporting"	None
Punitive Clause	Yes	Yes	NO

1 Internal Control - A Brief Overview / Movements

2 Internal Control related to Insurance Companies

3 Role of Actuaries in Internal Control

2.1 Situation and challenges surrounding insurance companies (Japan)

Examples of Misconduct

Case	Event	Cause, Problems
Nonpayment of insurance coverage	Nonpayment of agreed sum in the terms and conditions.	Inadequate condition from product development to payment control.
Unrighteous release of insurance contract	Inappropriate handling of infringement of obligated disclosure	Inadequate condition to control payment
Violation of law in securing insurance contracts	Report holdup, special benefits such as advancement and discounts on insurance payment	Inadequate adherence to the law, unrealistic quota and demands from management to the job site
Leakage of individual information	Information leakage due to computer burglary and loss	Inadequate awareness on management of individual information, inadequate control over information flow

2.2 Situation and challenges surrounding insurance companies (Japan)

Insurance Companies (Japan)

Public companies (US Stock market)

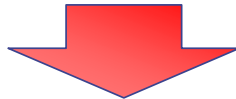
⇒ SOX ACT

Public companies (Japanese Stock market)

⇒ J-SOX, Business Corporation Act

Mutual insurance companies & public insurance companies

⇒ Supervision methodology, Inspection Manual



Need to integrate Internal Control !

2.3 Supervision Methodology (Japan)

Evaluation category perspective on audit methodology

Content on Healthiness of Finance	Content on Appropriateness of Operation
Appropriateness of liability reserve fund	Compliance condition
Appropriateness of Solvency margin ratio (early correction measure)	Supervision on misdoings and scandal
Early-warning system	Insurance recruitment condition
Precise accounting classifications of life insurance companies	Claim management condition
Implementation of stress test	Client protection
Risk management of reinsurance	Client information management condition
Internal control condition for product development	Identity verification and notification of suspicious transactions
Risk management condition for insurance underwriting	Securing appropriate denotation
Risk management condition for asset management	Affairs risk management condition
Liquidity risk management condition	System risk management condition
	Crisis management condition

2.4 Financial Statements and Operations-1

Assets	Liability
<ul style="list-style-type: none"> • cash and savings • call loan • money held in trust • stocks and bonds (government bonds, corporate bonds, • loan • real estate and personal property • 	<ul style="list-style-type: none"> reserve (liability reserve) fluctuation •
	subtotal
	Assets
	<ul style="list-style-type: none"> • fund (initial capital) • reserve for fund depreciation • surplus (accumulated earnings) •
	subtotal
total	total

2.4 Financial Statements and Operations-2

Ordinary Profit & Loss
1. profit and loss
● insurance cost income
● asset management earnings
2. ordinary expenses
● insurance payment
● liability reserve transfer
● asset management expenses
● operation expenses
profit or loss (1 - 2)
Special Profit & Loss
special profit
special loss
current period net surplus or net loss

2.5 Important account headings and related operational process

- ◆ General documentation procedure based on SOX Act requirements

1. Selection of important accounting headings as evaluation target



2. Association between operational process and accounting headings



3. Documentation of each process



4. Evaluation test on internal control process

2.6 Internal Control expected of Insurance Companies

Client protection

Credibility

Financial healthiness

Internal Control Expected of Insurance Companies

- Analyze and evaluate the risk (Finance, Operation etc.)
- Install a function by which misdoing (claim payments leak etc.) can be detected

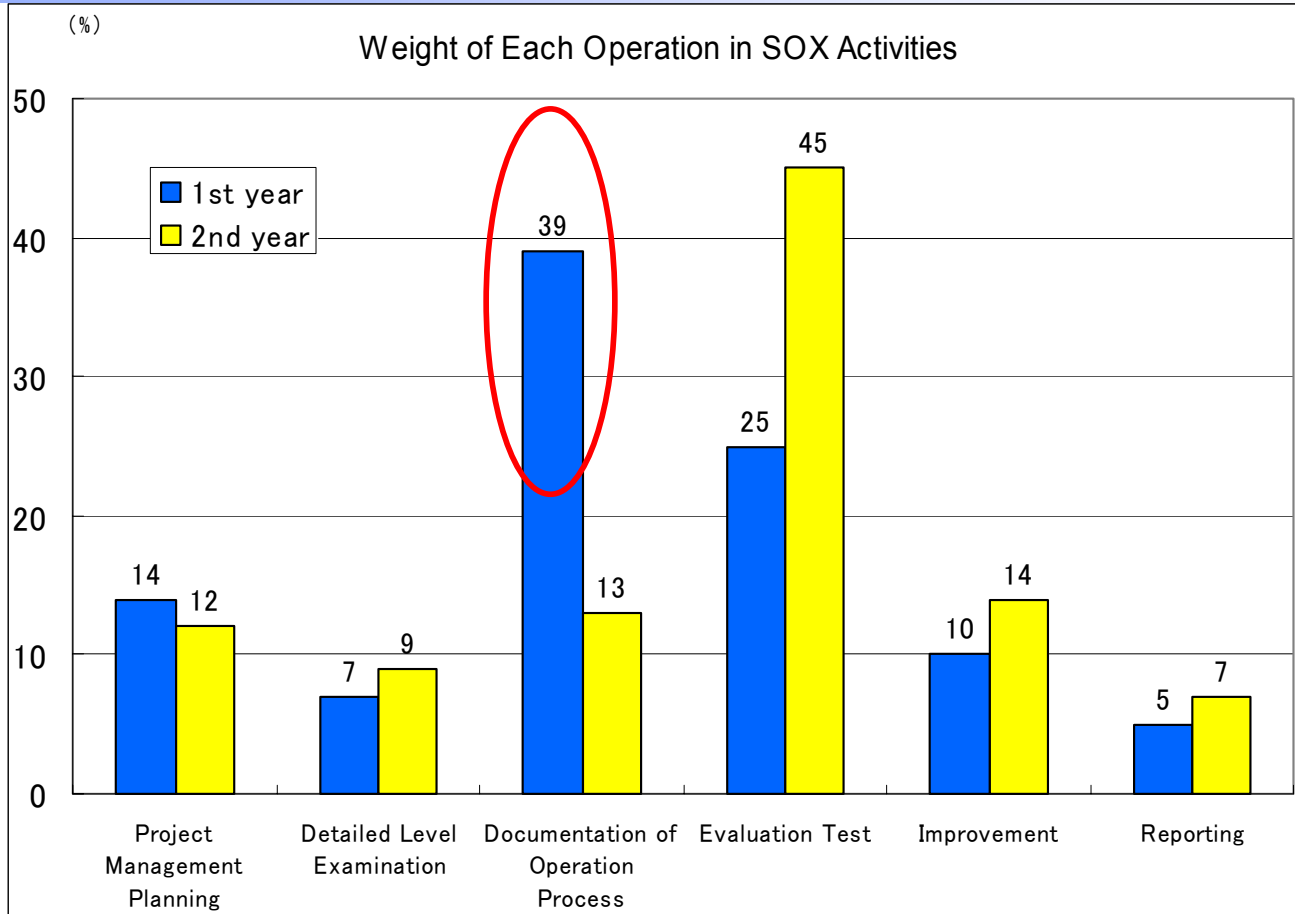
Information System

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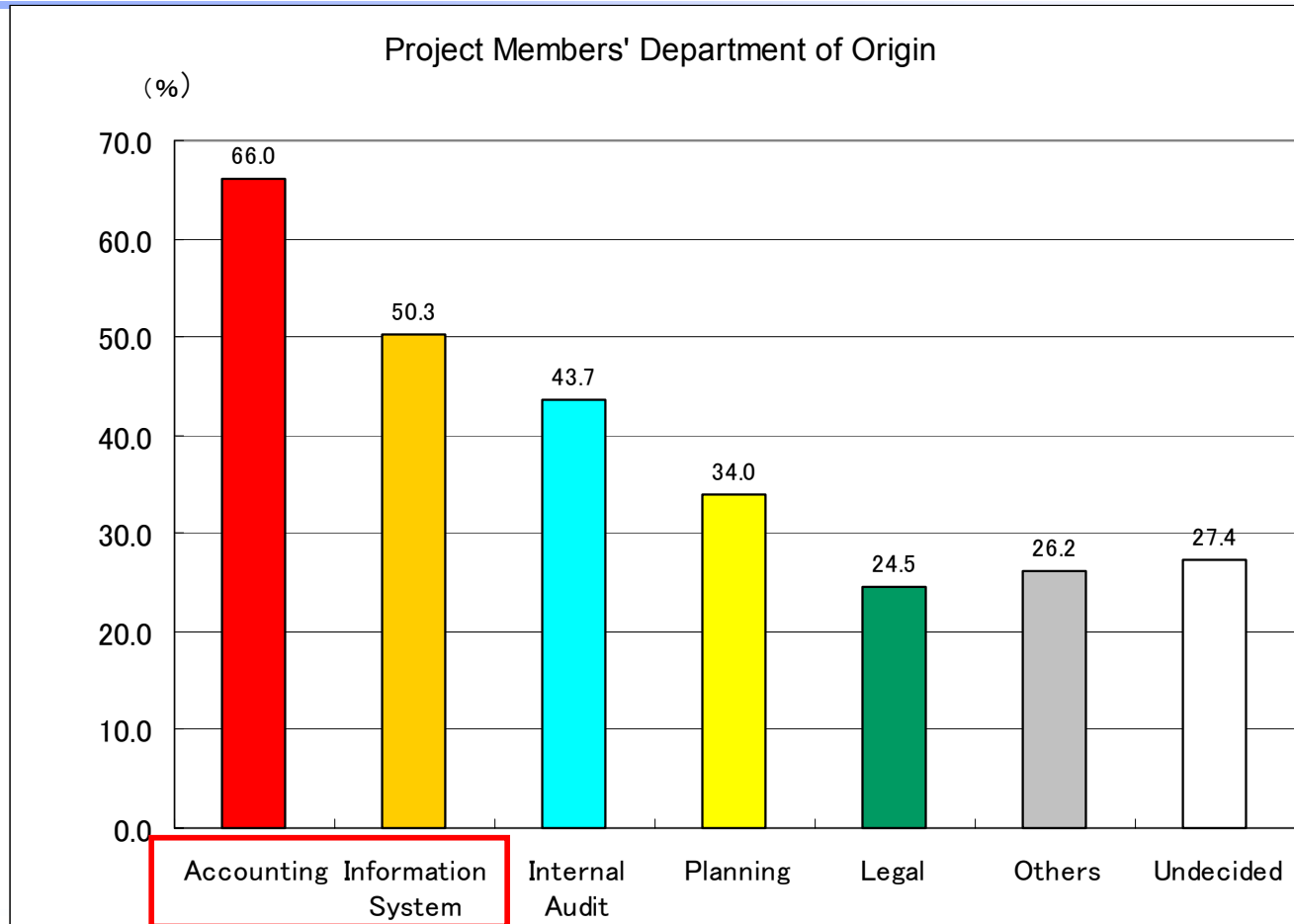
3.1 Current situation (U.S.A)



(Emerging Trends in Internal Controls Ernst & Young, May 2004)

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3.1 Current situation (Japan)



KPMG Azsa & Co. "Research on Internal Control Involvement related to Financial Statements"

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3.2 Problems and challenges

◆ Problems of internal control

- Expertness of operation
- Complexity of operation

◆ Challenges of internal control

- Comprehension of operation process and overall picture
- Structure of consistency

3.2 Problems and challenges

◆ Problems of internal control

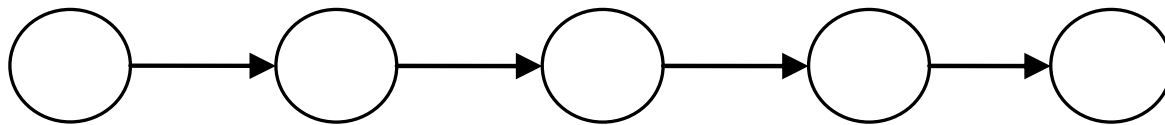
- Expertness of operation
- Complexity of operation

◆ Challenges of internal control

- Comprehension of operation process and overall picture
- Structure of consistency

3.3 Process of Operation Systematization - 1

Operation flow in the beginning

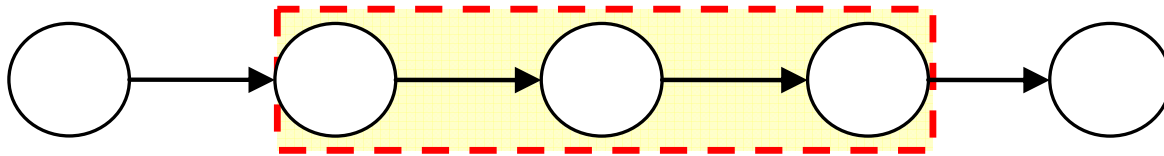


Each department has a good comprehension of details and is easily understood by the external sectors.

○ Operation □ System processing

3.3 Process of Operation Systematization - 2

Dotted area is systematized

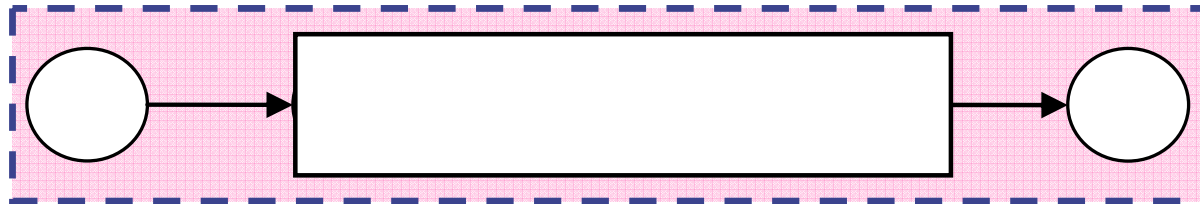


System department gets a grasp of the systematized portion.

○ Operation □ System processing

3.3 Process of Operation Systematization - 3

Operation flow after systematization

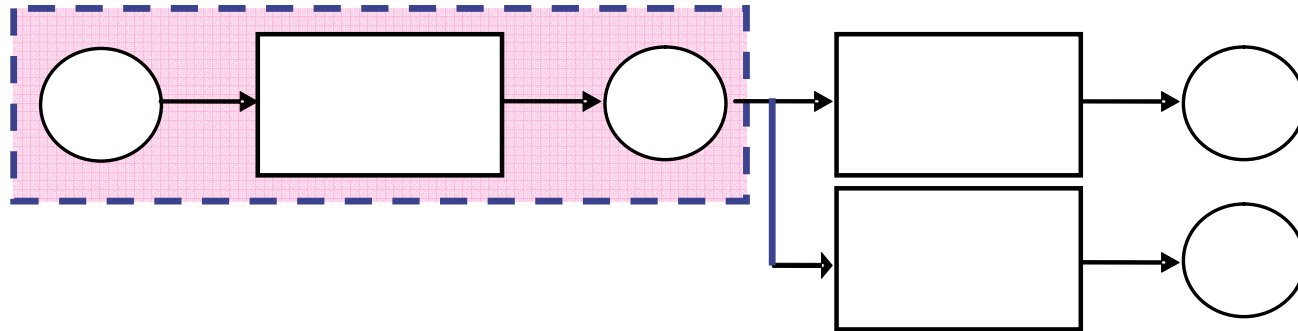


Departments in charge understand the processed data, but not the processing details.

○ Operation □ System processing

3.3 Process of Operation Systematization - 4

Coalition with other systematized operations



Combination with other operations expand, making it increasingly difficult to understand the overall picture

○ Operation □ System processing

3.4 Actuaries' involvement with Information System in Japan - 1

Transition of Information System

◆ 1950s

Insurance companies adopted PCS (punched card system) and used computers to calculate mathematical statistics.

Computers were used for specific tasks.

◆ 1960s

Computers changed their makeup as general-purpose machines and were adopted in many businesses. Financial institutions and large corporations began running online systems.

3.4 Actuaries' involvement with Information System in Japan - 2

Transition of Information System

Involvement with Information System

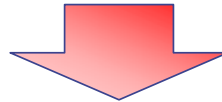
- ◆ 1959 “Electrical Computer Practice Research Group”
(The Institute of Actuaries of Japan)
- ◆ 1965 “EDP Special Committee”
- ◆ 1970 Annual conference theme “Online system”

3.5 Actuaries' role

- Computation of liability reserve
- Computation and validation of insurance premium
- Product development and validation of profitability
- Validation of adequacy and fairness of policyholder's dividend
- Statistical analysis of underwriting
- Analysis and validation of adequacy and fairness of policy contracts
- Investment planning and validation of asset management
- Logic design of system development etc.

3.6 Actuaries involvement with Internal Control - 1

- ◆ Role of The Institute of Actuaries of Japan and Actuaries
The Institute of Actuaries of Japan and Actuaries had played a major role in adopting and using information systems in insurance companies when computers were first adopted into the Japanese business world.
Actuaries not only validated the financial health represented in the financial statements, but also inspected the company's general business operation and content through the financial statements and checked the insurance risks through documents, calculation methods and business process.

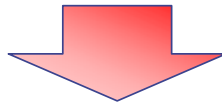


Actuaries had already been practicing internal control

3.6 Actuaries involvement with Internal Control-2

Internal Control

- ◆ Comprehend operations and risks
- ◆ Build a structure to solve and manage risks



Need for...

- ◆ Multiple operational experience and knowledge
- ◆ Information technology

3.7 Role of Actuaries in Internal Control

Role of Actuaries

- ◆ The operation expert approach
The actuary as the expert in insurance business
- ◆ The advice on information system approach
Check the data process flow
- ◆ The approach to perform the required role
Coalition with information system department

Conclusions

- ◆ Internal Control
Originality, Aggressively
Actuaries face
Information System

It would be great if this document could contribute to the structural development of the Actuarial Institutes and their research on the topic and provide an insight on how actuaries will be involved in information systems in the future.

Thank you for your attention...

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