SURVEY OF PERSONAL PROPERTY VALUATION METHODS

by

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I. Introduction

In 1992, Almy, Gloudemans & Jacobs undertook a survey of personal property valuation practices in states that assesses business tangible personal property, including the District of Columbia. Of approximately 40 states that assess such property, 30 responded to the survey (the District of Columbia is considered a state for purposes of this paper). This paper reports on results of the survey. Appendix 1 contains the questionnaire and appendix 2 shows results by state.

II. Methods Used to Value Personal Property

All 30 states indicated that they use the cost approach to value machinery and equipment (exhibit 1). In fact, 16 rely exclusively on the cost approach. Twelve use the income approach and three use the model method, in which the value of personal property is estimated from the type, size, and quality of real property. Ten respondents indicated that they use an "other" approach, which they described as a market approach, when adequate information is available.

III. Trend Factors

Twenty of the thirty states indicated that they apply trend factors to acquisition costs in application of the cost approach (exhibit 2). Of these, 11 indicated they develop trend factors in-house and 13 reported using Marshall & Swift (exhibit 3). Another four respondents indicated that they use other publications, namely the producer price index, the Hunnicut personal property manual, or blue books. Ten of the respondents do not trend acquisition costs.

IV. Depreciation Schedules

Seventeen respondents indicated that they use straight-line

depreciation schedules, thirteen exclusively (exhibit 4). Ten use declining balance schedules and 10 use "other" schedules. The "other" category includes Iowa survivor life curves, present worth tables, moving averages, and observed condition. Several respondents pointed out that practices vary locally.

With respect to the source of their depreciation schedules, 18 respondents reported that they develop schedules entirely or at least partially in-house (exhibit 5). Six use Marshall & Swift and 12 use other sources. The most frequently mentioned other sources were IRS and the Iowa life tables.

Depreciation floors (minimum percent good) range from zero (no floor) in two states to 30 percent in four states (exhibit 6). The average is approximately 20 percent. A number of respondents noted that the floor varies by type or class of property.

Only thirteen of the respondents ventured an opinion as to whether the rate of functional obsolescence had changed in the past 10 years (exhibit 7). Of these, six thought it had not changed (one of these thought it had accelerated for high tech equipment), six thought it had accelerated, and one thought it had slowed.

Economic lives used to depreciate computer equipment vary from three to 10 years with five years being most common (exhibits 9 and 10). In some cases, lives are shorter for PCs than for mainframe and mini computers.

V. Ratio Studies

Six states indicated that they perform ratio studies for personal property. One respondent commented that such studies were too few and far between. A seventh responded indicated that ratio studies were planned. In addition, two states indicated that they perform ratio studies for mobile homes or motor vehicles.

Appendix 1
Survey of Machinery and Equipment Valuation Practices

State: _____

Person Completing Questionnaire: _____

1. What method(s) are used in your state to value machinery and equipment (check all that apply):

   (a) ___ cost approach -- acquisition cost less depreciation

   (b) ___ income approach -- capitalized leases

   (c) ___ "model" method -- based on size and type of associated real property

   (d) ___ other -- please explain: _____

   _____

2a. In the cost approach, are acquisition costs trended for changes in price levels:

   (a) ___ yes (b) ___ no

2b. If yes, what is the source of your trend factors:

   (a) ___ developed in-house

   (b) ___ Marshall & Swift

   (c) ___ other -- please specify: _____

3. Describe your machinery and equipment depreciation tables:

   (a) ___ straight-line

   (b) ___ declining balance (accelerated depreciation in early years)

   (c) ___ other -- please specify: _____

4. What is the source of your depreciation tables:

   (a) ___ developed in-house

   (b) ___ Marshall & Swift

   (c) ___ other -- please specify: _____

5. What "floor" (minimum percent good) do your depreciation schedules use: _____ %.

6. In the last 10 years, do you feel that the rate of functional obsolescence for machinery and equipment has:

   (a) ___ remained unchanged

   (b) ___ accelerated (equipment is replaced more rapidly)

   (c) ___ declined (equipment is replaced less rapidly)

   (d) ___ no opinion

7. What life is used for computers?

   (a) mainframes and minis: ___ years

   (b) PCs: ___ years

8. Does your state conduct personal property ratio studies?

   (a) ___ yes (b) ___ no

   If yes, briefly describe: _____

   _____

   _____

9. Comments:

10. Would you like to receive a summary of the responses to this questionnaire?

    (a) ___ yes (b) ___ no

If possible, please attach a copy of your machinery and equipment trend or depreciation tables and any relevant rules or procedures for personal property appraisal in your state. Thank you for your assistance!

APPENDIX 2
RESPONSES BY STATE

ST	METHODS	TREND COSTS	TREND SOURCE	DEPR TABLES	DEPR SOURCE	DEPR FLOOR	FUNC OBSOL	M/M LIFE	PC LIFE	RATIO STUDY
AL	C,I,M	YES	MS	SL	IH,MS	5%	NC	3	3	PLAN
AS	C,OTH	YES	IH	SL,DB	IH	VARIES	N.O.	VARIES	VARIES	NO
AK	C,M	NO	N/A	OTH	IH	VARIES	NC,ACC	6	6	YES
AZ	C	YES	MS	SL	OTH	20%	N.O.	5	3	MHs
CA	C,I,OTH	YES	IH,MS	OTH	OTH	NONE	N.O.	6	6	NO
CO	C,I,OTH	YES	IH,MS,OTH	OTH	OTH	15%	N.O.	4	4	YES
CT	C	NO	N/A	SL	IH	VARIES	N.O.	5,10	5,10	NO
DC	C	NO	N/A	SL	IH	25%	N.O.	5	5	NO
FL	C,I,OTH	YES	MS	OTH	MS	18-20%	N.O	6	6	NO
GA	C,I,OTH	YES,NO	MS	SL	IH	30%	N.O.	4	4	NO
ID	C	YES	MS	SL,DB	IH,OTH	20%	NC	6	5	NO
IN	C	NO	N/A	DB	IH	30%	N.O.	INCOME TAX LIFE		NO
KY	C	YES	IH,MS,OTH	DB,OTH	IH,MS,OTH	VARIES	N.O.	5	5	NO
LA	C,I	YES	MS	MS,OTH	MS	20%	ACC	5	5	NO
ME	C,I	YES	IH,MS	SL	IH,MS	30%	ACC	7	7	NO
MD	C	NO	N/A	SL	IH	25%	N.O.	5	5	NO
MI	C,I,OTH	NO	N/A	SL	IH	30-40%	ACC	7	7	YES
MI	C	YES	IH,MS,OTH	SL	IH,OTH	25%	ACC	5	5	YES
MO	C	NO	N/A	SL,DB	LOCAL	20-30%	NC	VARIES	VARIES	NO
MT	C	YES	IH	DB	OTH	26%	DEC	4	4	NO
NC	C	YES	IH	SL	OTH	25%	ACC	5	5	NO
OH	C	NO	N/A	SL	IH	VARIES	N.O.	7	7	NO
OR	C,I,OTH	YES	IH,MS	SL,DB,OTH	IH,MS	20%	ACC	5	4	NO
SC	C	NO	N/A	SL	OTH	20%	N.O.			NO
UT	C	YES	MS	SL	OTH	11%	N.O.	5	5	YES
VA	C	NO	N/A	OTH	LOCAL	VARIES	N.O.	VARIES	VARIES	NO
WA	C,I,OTH	YES	OTH	DB	IH	20%	NC	5	5	YES
WV	C,I,M,OTH	YES	OTH	OTH	OTH	VARIES	N.O.	5	5	MVs
WI	C,I,OTH	YES	IH	DB	IH	10%	N.O.	6	6	NO
WY	C	YES	IH	DB	IH	NONE	NC	10	5	NO

Exhibit 1

METHODS USED TO VALUE MACHINERY & EQUIPMENT

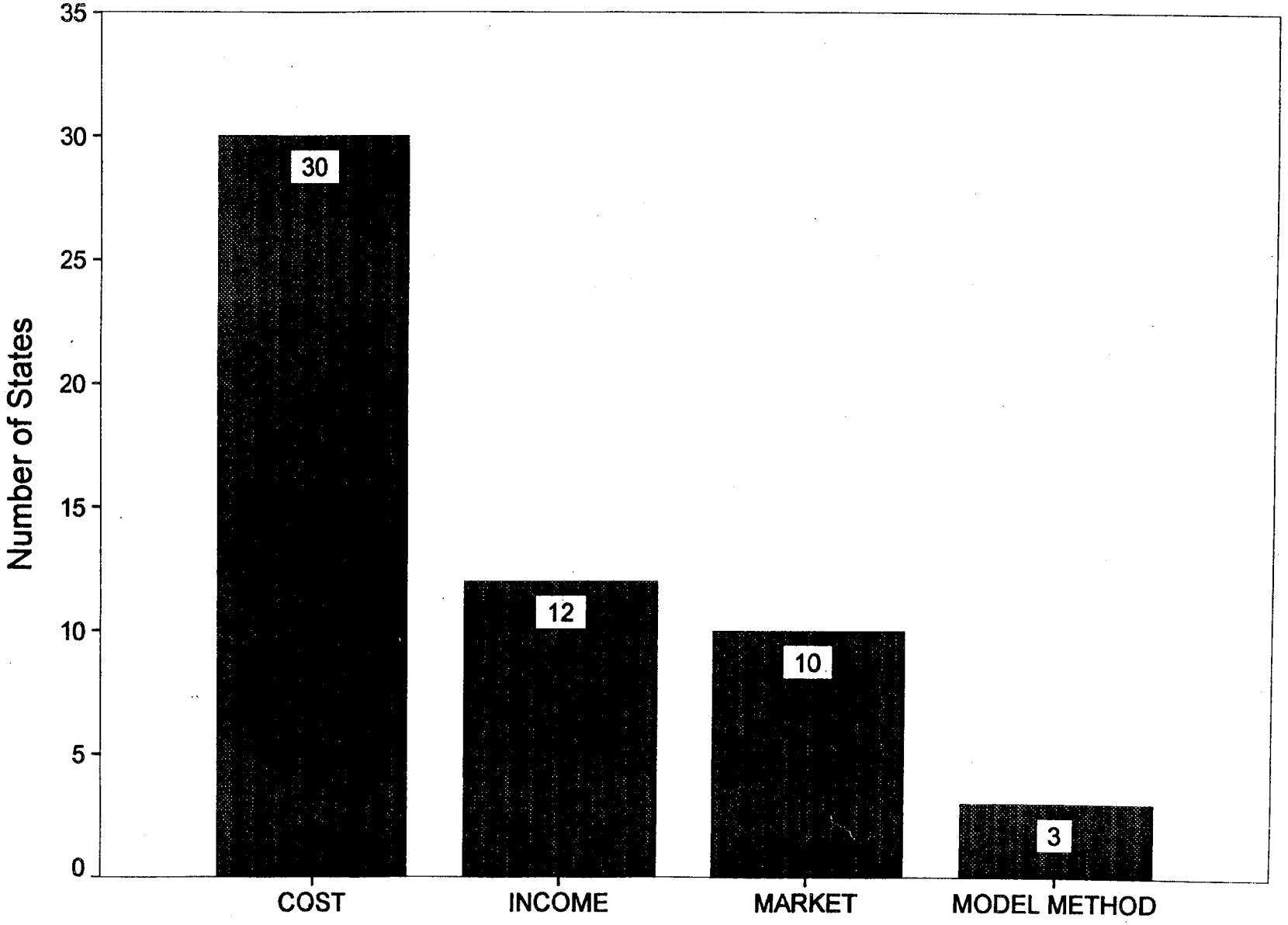


Exhibit 2

STATES THAT TREND COST SCHEDULES

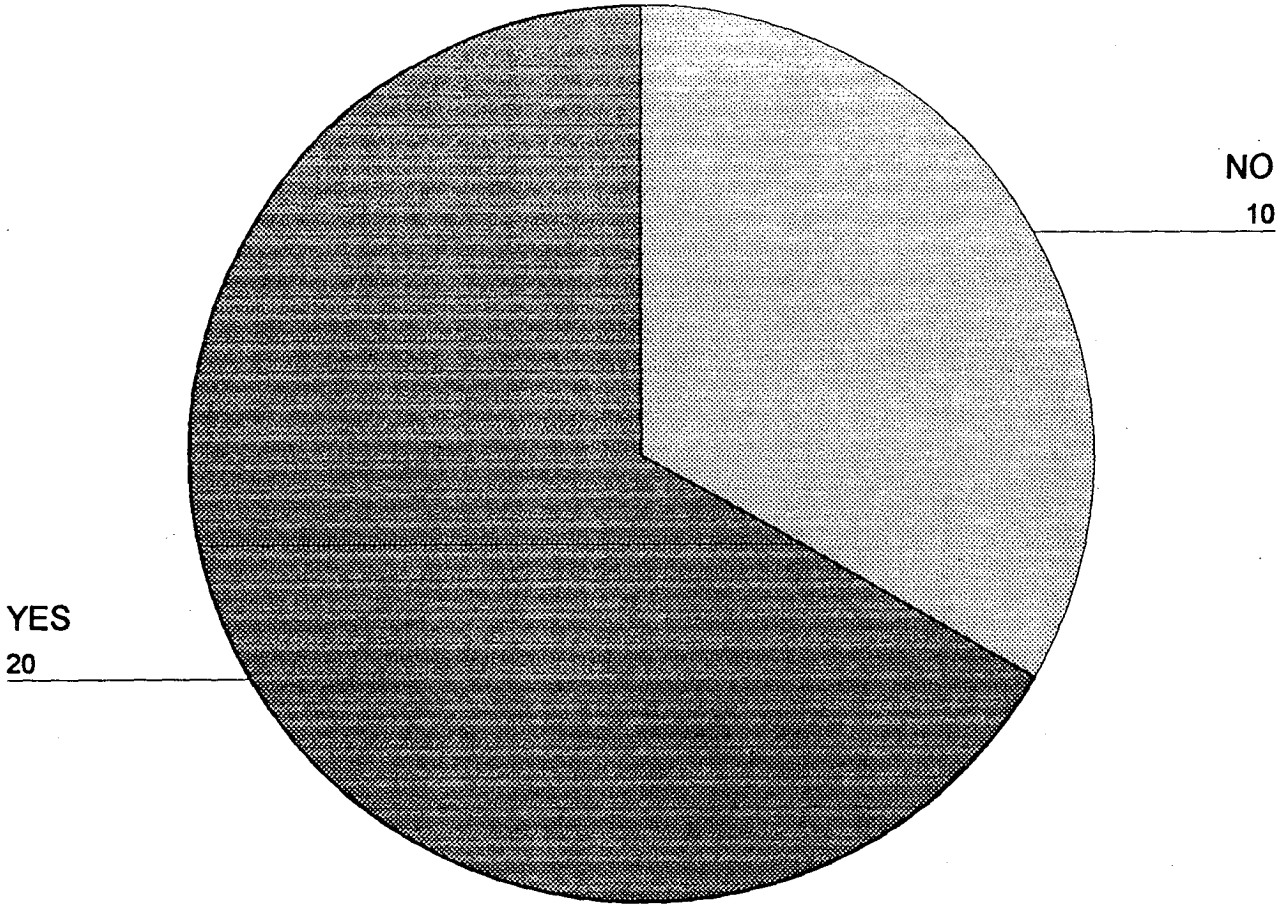


Exhibit 3

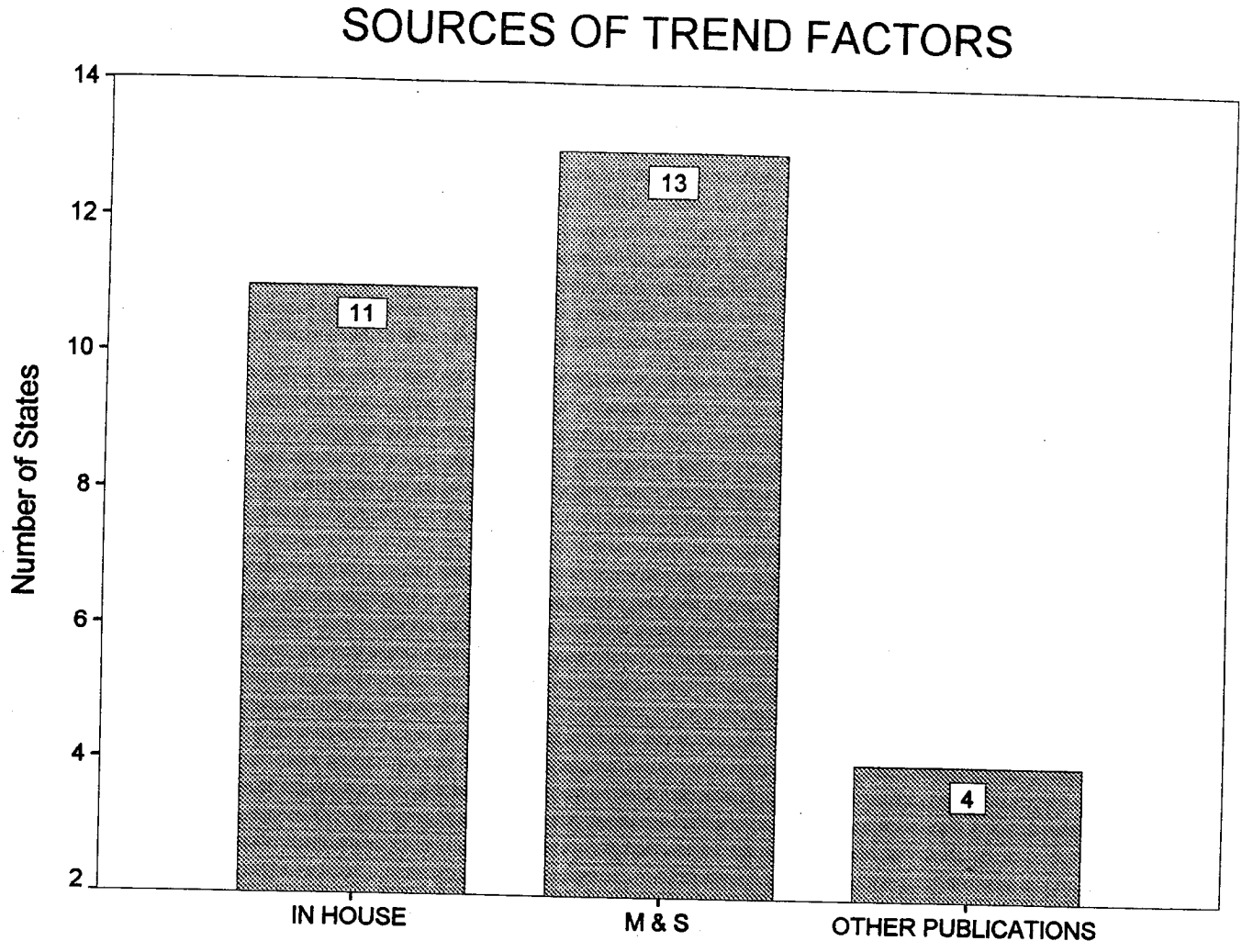

SOURCES OF TREND FACTORS
Number of States
14
12
10
8
6
4
2
11
13
4
IN HOUSE
M & S
OTHER PUBLICATIONS

Exhibit 4

DEPRECIATION TABLES

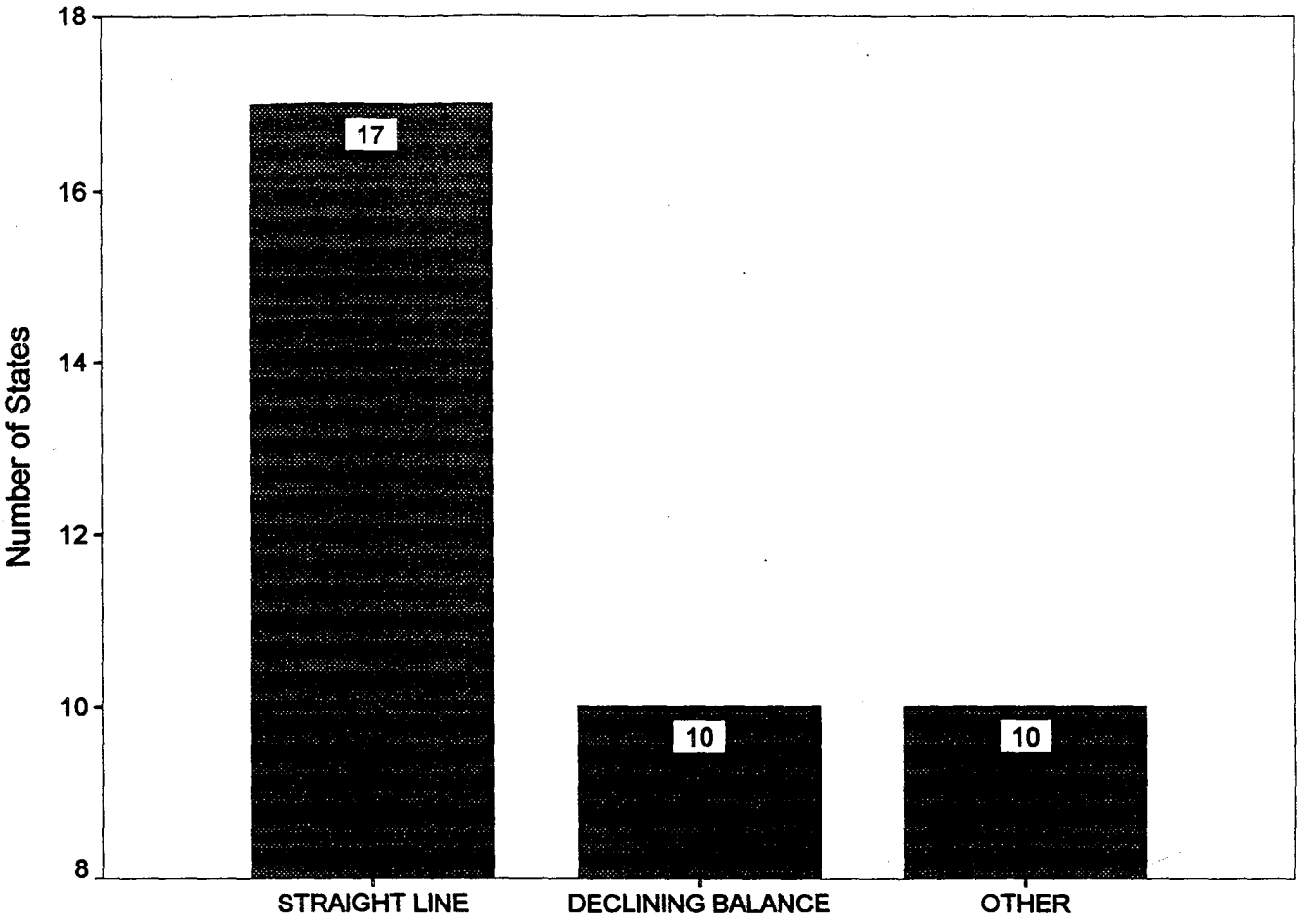
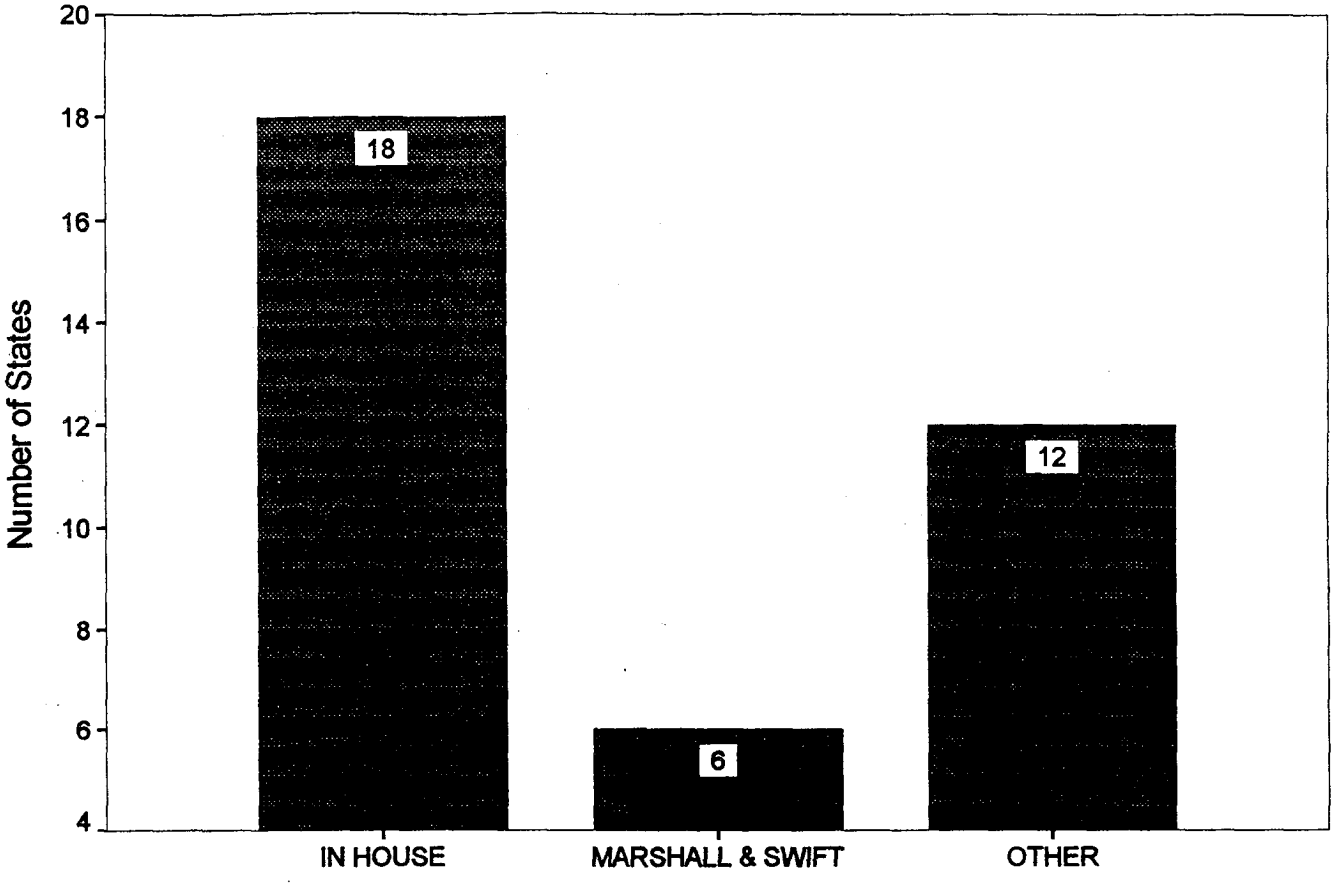


Exhibit 5

SOURCE OF DEPRECIATION TABLES



BASED ON 29 RESPONSES

Exhibit 6
DEPRECIATION FLOORS

Minimum % Good	Number of States
0	2
10	1
11	1
15	1
18-20	1
20	6
25	5
26	1
30	4
Varies	7
Total	30

Exhibit 7

OPINIONS OF FUNTIONAL OBSOLESCENCE

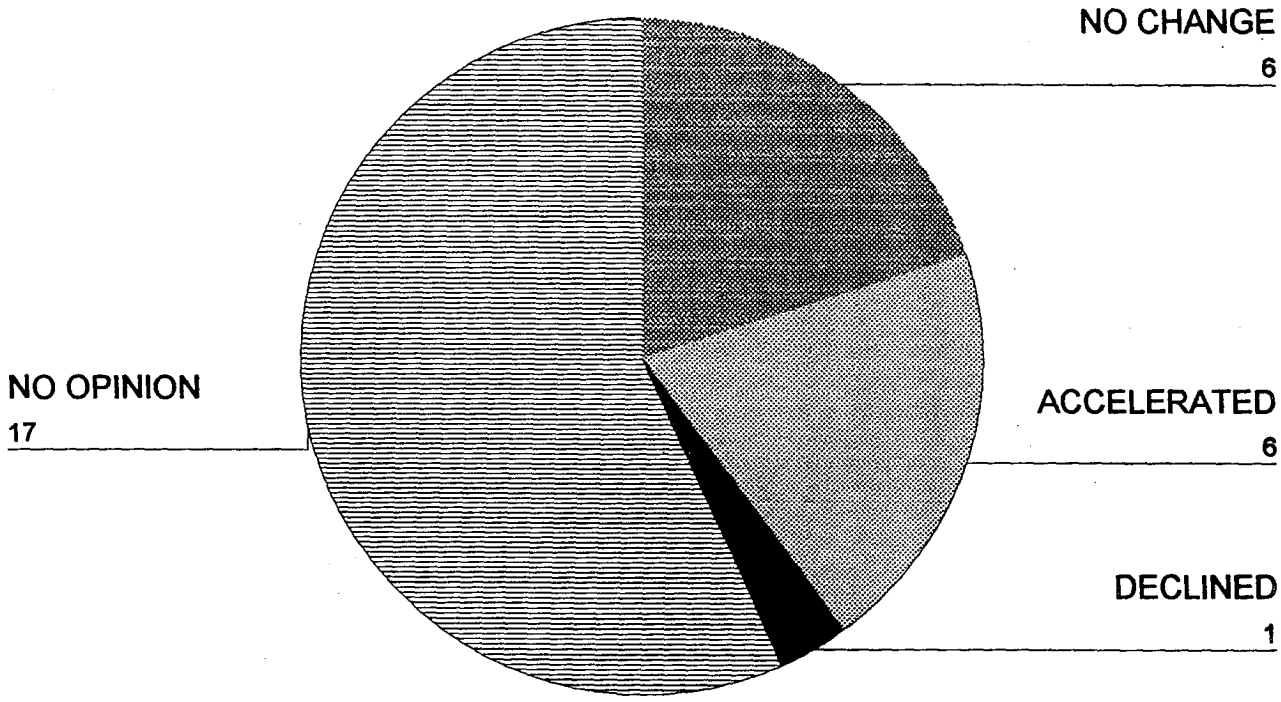
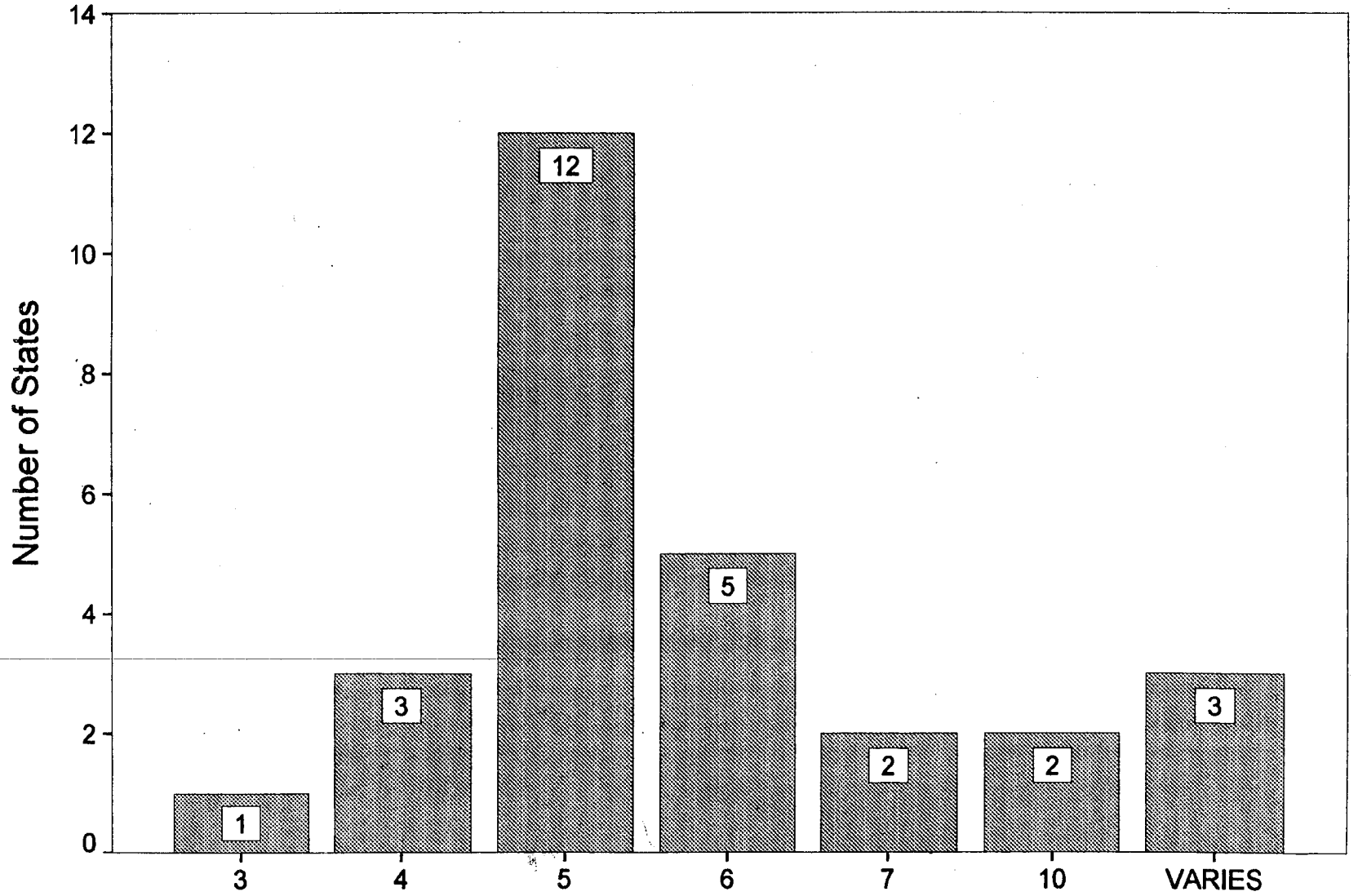


Exhibit 8

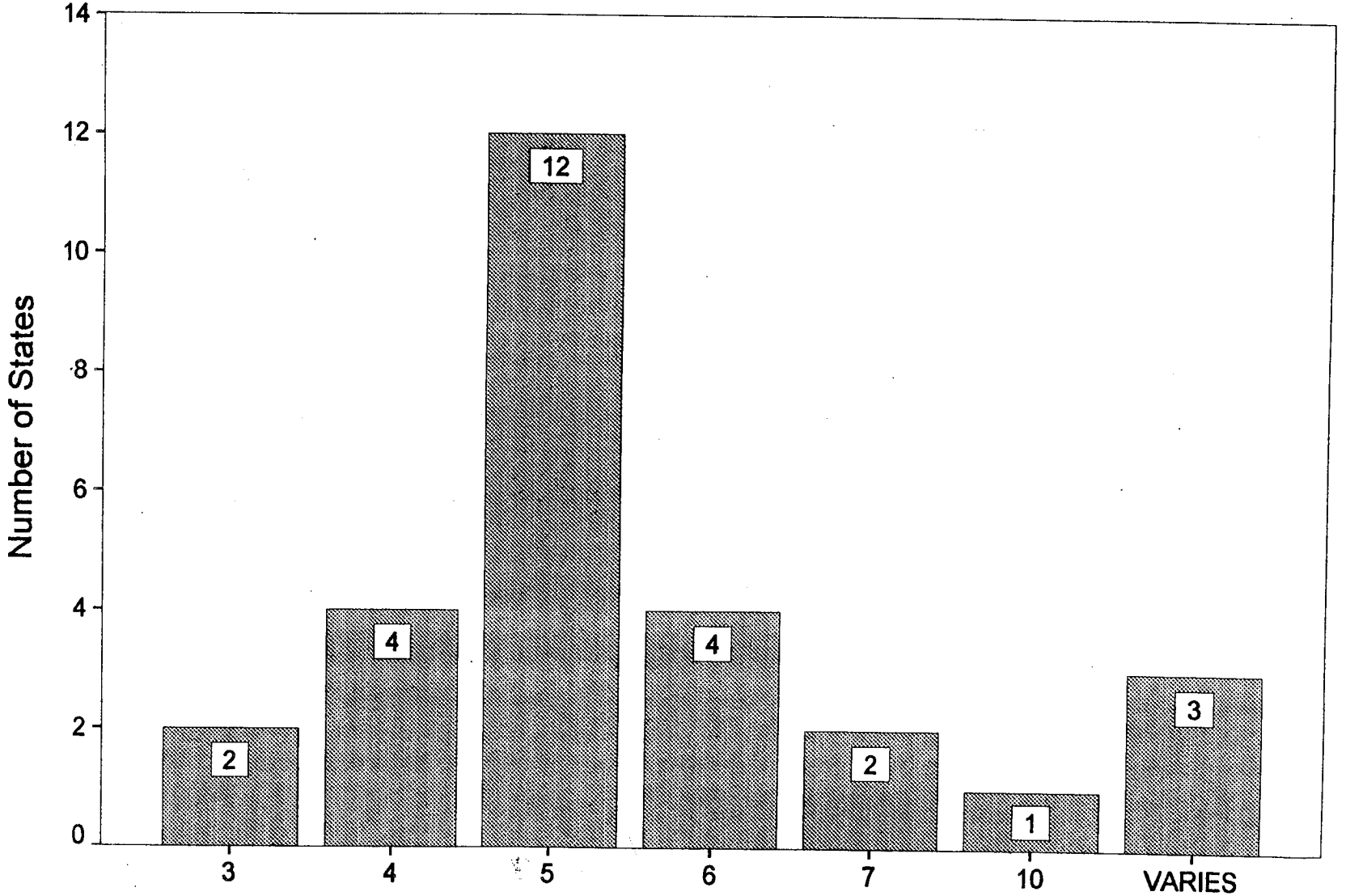
COMPUTER LIVES - MAINFRAME & MINIs



BASED ON 29 RESPONSES

Exhibit 9

COMPUTER LIVES - PCs



BASED ON 29 RESPONSES

Exhibit 10

PERSONAL PROPERTY RATIO STUDIES