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ELAPSED EXAMINATION TIMES

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This is a tabulation, for all our new Fellows who qualified in the May and November 1983 examinations, of the years that elapsed from the date when each wrote his or her first examination.

STUDY OF ELAPSED TIMES BY ALL (211) 1983 NEW FELLOWS

Years	From First Exam Written to A.S.A.		From A.S.A. to F.S.A.		From First Exam Written to F.S.A.	
	N	Cumulative Frequency	N	Cumulative Frequency	N	Cumulative Frequency
Less than 2	8	3.8%	7	3.3%	0	0 %
2.0	19	12.8	7	6.6	0	0
2.5	17	20.9	13	12.8	1	0.5
3.0	36	37.9	36	29.9	1	0.9
3.5	33	56.4	32	45.0	1	1.4
4.0	32	68.7	46	66.8	1	1.9
4.5	14	75.4	6	69.7	3	3.3
5.0	12	81.0	17	77.7	12	9.0
5.5	11	86.3	6	80.6	14	15.6
6.0	7	89.6	7	83.9	21	25.6
6.5	5	91.9	8	87.7	18	34.1
7.0	4	93.8	5	90.0	22	44.5
7.5	4	95.7	6	92.9	13	50.7
8.0	1	96.2	3	94.3	17	58.8
8.5	2	97.1	2	95.3	14	65.4
9.0	1	97.6	2	96.2	8	69.2
9.5	2	98.6	1	96.7	10	73.9
10.0	3	100.0	3	98.1	9	78.2
10.5		100.0	1	98.6	13	84.4
More than 10.5		100.0	3	100.0	33*	100.0
	211		211		211	
Median, yrs.	3.5		4.0		7.5	
Mean, yrs.	3.96		4.38		8.27	

*Elapsed times for these 33 persons were: 11.0 or 11.5 yrs., 9; 12.0 or 12.5, 5; 13.0 or 13.5, 8; 14.0 or 14.5, 5; 15 yrs. or more, 6. The longest elapsed time was 20.0 yrs. (1 person).

In interpreting this, one must keep in mind that the candidates whose elapsed times were relatively long don't represent a homogeneous population; not all of them had trouble with one or more exams, rather some ceased for various reasons and for various periods to sit for examinations. Note also that the clusterings of candidates around the medians and means in the two partial segments differ substantially from each other. The diversity, perhaps naturally, is greater in the "A.S.A. to F.S.A." segment when mathematical skills become less critical to success.   □

HE THAT RUNS MAY READ

We gladly draw attention to the first issue of a highly specialized journal, ACTUARIAL MARATHONERS NEWSLETTER. For a copy, write to Michael J. Cowell at his Yearbook address.

Its title page depicts a crowd running along a q_x-curve, but only through its nearly level segment, to age 35 or so. After that the runners seem to establish a mortality curve of their own, rising, apparently, to no more than one per thousand at age 70.

The editorial message asserts that close to one person in 200 among North America's adult population has run a full marathon course, an extraordinarily large number of these being actuaries.

This is followed by speculation on what makes actuaries such dedicated runners.

Appended is a Directory listing the names and records of more than 40 actuarial marathoners of whom the editor has personal knowledge, and a form, by completion of which others may join that list in future issues.

E.J.M.

Taxes and Profit Discounting

taxes are less than profits.) This will happen only when the discount rate equals or exceeds the assumed earnings rate. The after-tax rate will usually be less than the assumed earnings rate, causing the absurdity of higher reserves, yet

higher profits. The conclusion—profits must be discounted at the pre-tax rate.

Can This Paradox Be Resolved?

One possibility is that there is no right answer. Different discount rates may be appropriate in different circumstances. Perhaps the most valid use of a discount rate with a new product is to determine an equivalent level profit; then any reasonable rate might suffice with proper disclosure. In valuing a company, the selection of discount rate might reflect the investor's intention; an after-tax rate would be used if profits were to be left in the company, and a pre-tax rate if they were to be withdrawn as earned (thus taxed to the investor). Disclosure in this case is of paramount importance.   □

STOCK MARKET VALUES, 1871-1983 ("S & P 500")

For the convenience of readers who may want to trace the peregrinations of an accepted index of U.S. stock market prices (with allowance for dividends paid) for any considerable part of the past 113 years, we have again prevailed upon Mr. Herbert W. Hickman to give us the extension of his table printed in TASA XXII (1970), 197. The complete extension, including values we previously published, follows.

Year	Average Value	December Value
1969	1,601.87472	1,515.62979
1970	1,415.12817	1,556.59853
1971	1,717.15898	1,757.34050
1972	1,954.79661	2,128.67577
1973	1,975.88887	1,770.96944
1974	1,593.23823	1,323.39147
1975	1,722.84816	1,808.61154
1976	2,105.07925	2,196.79755
1977	2,109.49992	2,061.48770
1978	2,161.81552	2,218.19567
1979	2,429.96712	2,605.89674
1980	2,926.26361	3,368.67049
1981	3,300.35715	3,279.03126
1982	3,258.80565	3,892.65850
1983	4,524.94941	4,740.06634

In our next issue we will show what these figures tell about growth in common stock values, and its relation to growth in the Consumer Price Index in the United States.

E.J.M.