THE LIFE INSURANCE INDUSTRY:

A STUDY OF PRICE POLICY AND ITS DETERMINANTS

by

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ABSTRACT

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This study constitutes an attempt to infer principles of economic rationality in setting life insurance contract prices from characteristics of the market for insurance and to determine the extent to which these principles are followed by industry executives. Fulfillment of this latter goal relies on a study of trade literature, interviews with industry executives, and a statistical analysis of available price and cost data.

Chapters 1-4 deal with the environment within which price setting decisions are made. The first of these provides background on industry structure --- size, growth, concentration, market organization, and so forth. The second deals specifically with the life insurance buyer. The principal topic of discussion is the nature of rational consumer behavior in buying life insurance and the degree of rationality which consumers actually appear to exhibit. It is shown that a number of sub-markets for life insurance can be enumerated which differ substantially in cross elasticities of demand. The third chapter deals with the nature of life insurance selling. Its principal conclusion is that the personality configurations of life insurance agents serve to magnify cross elasticities of demand in those sub-markets for insurance where they are particularly high. Chapter 4 deals with state insurance commission regulation of price policy and concludes that it does not serve as an effective barrier to profit maximizing behavior on the part of life insurance company executives.

The fifth chapter treats the growth of what may best be termed quasi-price competition in the industry during the post war years. It also argues that, despite the fact that the industry is dominated by mutual concerns, it is legitimate to assume that what are in fact profit maximizing considerations enter into the decisions of industry executives.

The final two chapters deal directly with the price policies which have evolved in this environment. The sixth chapter discusses the trade literature on the subject and a series of interviews with industry executives. The seventh deals with a statistical analysis of the relationship between prices and costs in the industry. The principal conclusions of these chapters are that when the procedures involved can be justified as reflecting soundly conservative business procedures, life insurance companies appear to discriminate in an economically rational fashion in setting prices. However, some rational pricing procedures would involve violation of certain commonly held misconceptions as to what is and what is not sound business procedure. In these cases, the evidence is inconclusive as to whether or not companies do or do not behave rationally.

Thesis Supervisor: Robert M. Solow, Professor of Statistics.

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Preface

This is a study of price policy in the life insurance industry and of the economic environment which conditions it --- the character of demand, of the market place, and of insurance commission regulation. It is written from the narrow viewpoint of the classic economic theory of the firm --- that entrepreneurs attempt to maximize profits.[1] It is written, furthermore, from the economist's perhaps uncommon value judgement that profit maximization is a perfectly acceptable goal for a firm to adopt; that insofar as untrammeled profit maximization has consequences deemed not in the public interest, redress should be sought through legislation rather than through reliance on or appeal to the social consciousness of business leaders, great though this may be.

In writing, I am neither for the life insurance industry nor against it. I am only deeply interested in studying it. I have no axe to grind, except perhaps to prove that profit maximization, despite its long service in the economist's box of theoretical tools, is still a quite servicable instrument for investigating actual business behavior.

The life insurance industry can lay legitimate claim to being far more than an entirely economic institution. Both its clientele and per-

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1. Begging for the time being the criterion of profit maximization to be adopted in studying an industry dominated by mutual companies, i.e., by companies owned by their policyholders. This matter is treated at some length in Chapter 5.

sonnel tend to regard it as a fiduciary, occasionally even as a religion. Integrally associated with the industry is a highly developed set of values concerning the nature of the good life and the place of life insurance in it, together with a missionary zeal to spread these values. Coincident with this is a strong tendency to regard selfish economic motives on the selling side of the market as sinful, as existing only to a minimal extent, and as allowed to exist only as an expedient in further spreading the life insurance value system.

It is therefore only natural that those who have tried in the past to attribute profit maximizing rather than altruistic motives to the industry have found themselves subject to considerable vituperation and occasionally to abuse of a more concrete nature. Of course, many of the industry's attackers have started from value premises likely to stir the ire of even the most placid. Thus, if any other name were substituted in Life Insurance: A Legalized Racket,[1] one would reasonably expect those in the industry thus characterized to take umbrage. On the other hand, many whose biases have not been so obvious have been dealt with almost as harshly. Thus, the prospective publisher of a consumers' handbook on insurance was told by an industry trade group that the author's views on term insurance were faulty. Unless his views were changed to conform more closely to the accepted industry position, the letter went on to say, the book would not be used in a summer conference for teachers supported (nominally, at any rate, not conducted) by the trade association.

It is regrettable, the reasoning process goes, that steps of

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1. Mort Gilbert and E. A. Gilbert, New York: Farrar and Rinehart, 1936.

this nature occasionally have to be taken. However, they are necessary to protect the policyholders' interests. Life insurance is an extremely complicated business. Most people have neither the ability nor the training to understand the principles of insurance, let alone to put them into practice. Those who don't have this training are apt to misunderstand the principles we've established in answer to our problems and some of the practices we necessarily have to engage in --- such as charging interest on policy loans. When troublemakers or people who don't have the necessary technical background make incorrect interpretations or give unwise advise to policyholders, we try to explain their errors to them. When this fails, it's necessary to do as much as we possible can to prevent this information from causing trouble. After all, life insurance is built on trust. Anything which causes policyholders to lose faith in the soundness of company practices or in the advice of their agents is bad for policyholders and companies alike.

The life insurance industry is certainly not unique in having adopted this rather paternal attitude toward the public. Furthermore, it has considerable justification --- much more than most industries --- for so doing. Perfectly reasonable actions on its part are capable of being misinterpreted. Then too, the belief is widespread --- in industry and congressional circles as well as among the general public --- that "good" business firms set price and output policies to cover operating costs and to yield a small margin of profit. Good firms fill a higher order social role than that of being simply makers of goods and profits. They hold positions of trust. Most of them exercise their trusts in the best public interest. Since they are comprised of honorable men behaving

honorably, there is no need for public scrutiny of their actions. Only "bad" firms attempt to maximize profits --- or, as it is more commonly put, to engage in price gouging, to charge all the market will bear.

Again, it is not asserted that life insurance salesmen and company executives are unique in characterizing themselves as "good" firms. It is asserted, however, that the character of the business is such that this pattern of manifest values is far more intensely held than in many other lines of economic activity. Whether this pattern of values is genuinely held --- whether it is both manifest and real --- is a moot point. But that it is expressed both loudly and often cannot be denied.

The existence of this state of affairs poses a considerable dilemna for a traditionally trained economist --- for a person, to repeat, who regards profit maximization as a perfectly legitimate goal of business activity. Decisions may frequently be based on other than profit maximizing considerations. If so, an attempt to interpret industry behavior to economists from only a profit maximizing point of view runs a serious risk. Decisions may be attributed to economic incompetence when, in fact, they stem from a firm belief on the part of decision makers that their trust should be exercised in these ways regardless of the economic consequences to them.

Furthermore, to the extent that the manifest set of non-economic values is genuinely held, those with roots deep in the industry --- agents and company executives in particular --- have legitimate reason for being highly critical of the study. To those in this group who act in accordance with their values, I can only offer my apologies. In partial expiation, all I can say is that my parochialism --- my lack of objectivity

--- is such that I attribute to them the same motives I would have were I in their positions. To the extent that the motivation I ascribe to them does not apply, then I will be unable adequately to interpret their actions.

In point of fact, many characteristics of the industry's behavior do seem interpretable as reflecting profit maximizing motives. It may well be that the non-economic goals which are so frequently made manifest fortuitously produce results identical with those which would occur under a regime of profit maximization. On the other hand, the non-economic goals may simply be window dressing for what is really conscious profit maximizing behavior. If either of these latter alternatives is substantially correct, a profit maximizing model should be able to reproduce the industry price structure, given sufficient information on cost and demand curves. On purely pragmatic grounds, it would make no difference which alternative dominates. They would be operationally equivalent. As to which of them is actually the dominant one, I prefer to take an agnostic position. I use the terminology of profit maximization on the principle of Ocham's razor, not because I reject the notion of altruistic behavior.

This study could not have been completed in its present or any other form had it not been possible to rely on the aid of a number of people. Professors Robert M. Solow of MIT, Allen Mayerson of the University of Michigan, and Arthur Williams of the University of Minnesota both read and commented very helpfully on earlier versions of the study. Not all of their criticisms were heeded, however. Considerably more than a desire to preserve the customary amenities therefore demands that it be made explicit that they are not responsible for such short-comings as un-

questionably remain.

Professor Cecil Nesbitt of Michigan pointed out several flaws in the data reduction scheme initially planned for chapter 7 and suggested the approach finally used. Professor Mayerson and Mr. Charles Dubuar, Chief Actuary of the New York Insurance Department, generously devoted considerable time to discussing the operations of that organization. The interpretations placed on these conversations is entirely my own, however. Professor Mayerson disagrees in several respects with what I have said in Chpater 4, and Mr. Dubuar has not been given a chance to defend himself. Finally, Chpaters 3, 5, and 6 would not have been possible had it not been for the fact that a number of life insurance company and trade association officials willingly spoke with considerable candor and at considerable length about the life insurance industry and, in particular, about its pricing procedures. Their names are omitted here not from a lack of gratitude but rather out of respect for the fact that they may vigorously object to many of my interpretations of our conversations.

H. D. M.

Washington, D. C.

1958

Chapter I

The Industry: Its Size and Structure

Life insurance is a large and growing American institution. In early 1957, over 250 million policies were in force on the lives of American citizens. These policies had an aggregate face value of $413 billion.[1] In mid-1955, at least one member of 86% of all American families had some form of life insurance protection. Of these insured families, only about 15% had not been sold insurance by an agent for a legal reserve[2] company.[3]

By any criterion, legal reserve life insurance and the companies selling it have undergone considerable expansion in the post-war era. At the end of 1945, family life insurance coverage and disposable income both averaged around $3200. At the beginning of 1957, the latter figure was about $5300 a year; the former about $7600.[4] During that eleven year period, total insurance in force in this country more than doubled.

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1. Life Insurance Fact Book, 1957, New York: Institute of Life Insurance, p. 7.
2. Aside from policies issued by the Federal government, relatively little insurance is in force in organizations not considered "legal reserve" by at least one state. Burial associations and fraternal organizations which issue life insurance are the major groups not in this category.
3. From a survey of life insurance ownership among American families conducted by the University of Michigan's Survey Research Center for the Institute of Life Insurance in June and October of 1955.
4. Life Insurance Fact Book, 1957, p. 9.

Annual sales almost quadrupled.[1]

Three broad forms of life insurance coverage are written in the United States --- ordinary, industrial, and group.[2] Ordinary insurance, of which approximately 83 million policies were in force in early 1957,[3] is written on the lives of individuals generally in amounts of $1000 or more. Premiums are usually paid by mail on a monthly or less frequent basis. Industrial insurance --- 110 million policies in 1957 --- is normally sold in amounts not over $500.[4] Premiums are usually collected weekly or monthly by agents at the homes of insureds. Group insurance, as its name implies, consists of more or less blanket coverage of individual members of a group. Groups may be made up of employees of a business firm, of members of a union or trade association, of franchised dealers in a company's products, or of some other fairly close-knit collection of individuals. Certificates on individual lives --- some 35 million of them in 1957[5] --- are generally issued without medical examination, and are almost always at least partially financed by the employer or other holder of a master policy.

Some 500-800 American companies are actively engaged in selling

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1. Ibid., pp. 8, 18.
2. The Institute of Life Insurance also defines a fourth category --- credit life insurance. As the title implies, a credit life policy covers the amount of a loan --- in usual practice an instalment loan --- in the event of the borrower's death. The lender serves as agent in issuing these contracts and in collecting premiums. These latter are generally an integral part of instalment payments. In early 1957, 5.7 and 26.4 million credit policies were in force respectively on an individual ordinary and a group basis. These policies had an aggregate face value of $17 billion.
3. Life Insurance Fact Book, 1957, p. 10. Excludes individual credit policies.
4. Ibid.
5. Ibid. Excludes group credit policies.

life insurance. In addition, perhaps 50-75 foreign companies --- mostly Canadian --- are also licensed to do business in one or more of the United States. Of these, the modal firm writes either ordinary insurance exclusively or has both ordinary and group departments. Companies in one or the other of these two categories accounted for about 70% of the 164 companies operating in the United States or Canada which had over $150 million of insurance in force in January 1955.[1]

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1. Source: National Underwriter Company.

Industry Structure: Sales Organization: Among industry employees, selling is the predominant occupation. Including home office supervisory personnel, about 75% of the more than 400,000 present day industry employees devote their time directly or indirectly to sales work. In the typical ordinary only or ordinary-group company, individual agencies operate under the more or less strict supervision of a home office agency department. Each agency is responsible for recruiting, training, and administering soliciting agents in its area, generally an exclusive territory ranging in size from part of a city to an entire state. Agencies may also col-

Table 1: Life Insurance Personnel in the United States: 1939-56

	1939	1945	1950	1956
Home Offices	73,600	80,500	109,250	133,200
Agencies:				
Clerical	40,400	(30,000	38,250	44,500
Managerial		(22,000)	197,250	(41,000
Sales	132,200	128,700)		(195,800
Total	246,000	261,200	344,750	414,500

Source: Institute of Life Insurance and Life Insurance Agency Management Association. Estimates were based on reports from companies which write 90-95% of all insurance in force in the United States. They apparently do not include part-time agents.

lect premiums, pay death benefits, and perform other administrative functions.

Individual ordinary agencies may be set up either as branch offices or as general agencies. The latter form of organization is the more common, particularly among smaller companies. The head of a branch office is an employee of his company. He is paid a salary plus regular agent's commissions on his own sales. He may also get small "overriding"

commissions on sales of the agents he supervises. Agency operating expenses ----clerical salaries, rent, supplies, and so forth --- are generally paid directly by the company. The head of a general agency, on the other hand, is an independent contractor. The agents he supervises are under contract to him, not to the company. His pay consists of commissions on his own sales and those of his agents plus an expense allowance which is also partially or entirely based on sales.

Agency heads almost invariably rise from the ranks of successful insurance salesmen. Their personal production may be substantial. However, most insurance companies, particularly the larger ones, establish pay scales so as to discourage agency heads from devoting much time to personal sales work. The primary function of a branch office manager or general agent is generally taken to be selling people on selling life insurance, a job of salesmanship akin to but perhaps of a higher order than the selling of life insurance itself.

As a beginner, the soliciting agent frequently works on a straight salary or salary plus commission basis. This sort of arrangement may last for anywhere from a few months to as much as three years. Once established, however, his remuneration is almost entirely in the form of commissions on sales. Commissions generally involve a varying but substantial percentage of a policy's first year premium --- 45-75% on a whole life contract; 25-50% on a 20 year endowment --- plus a considerably smaller percentage of renewal premiums. In smaller firms, renewal commissions are generally vested. That is to say, they accrue to the agent even if he leaves the business. In most large companies, however, full vesting

occurs only after an agent has been under contract for a number of years. Only one large firm --- Northwestern Mutual --- is widely known to pay fully vested commissions to beginning agents.

The salesman of fire, casualty, and other forms of insurance is likely to have an agent's contract with a number of com panies, frequently as many as 10-20. Such multi-company relationships do exist in the life insurance industry. They are common, however, only among the small number of agents who sell the products of smaller firms. Large companies insist with varying degrees of vehemence and success that their agents place business with them whenever possible. An agent is, of course, free to go elsewhere when his company does not write a plan demanded by a client, when it regards the client as uninsurable, or has already sold him the maximum amount of insurance it will carry on one life. Some companies threaten to cancel the contracts of agents who go beyond these bounds --- and with them such renewal commissions as may not yet be vested. Even when this threat does not exist or is not vigorously enforced, agents generally prefer to stick with their own companies. This is partly a matter of loyalty. In addition, when agents place insurance outside of their own firms, they are generally regarded as brokers by the insurer, not as agents. Their commissions as brokers generally approximate those their own companies pay. However, the size, location, and furnishings of an agent's office, his secretarial help, trips to conventions, and pension benefits all depend only on sales placed with his own company.

Ordinary life insurance is also sold through general insurance brokers --- individuals who serve not as agents for insurers but rather

as intermediaries between insurers and insureds. In terms of the volume of business they generate, brokers are probably not as important in the life insurance business as they are in fire, marine, casualty, and other lines. Brokers generally sell to members of upper socio-economic status groups. For reasons that will be elaborated in chapters 2 and 5, their effect on industry price policy is therefore considerably more important than sales volume data alone might lead one to expect. Brokers generally have contracts with a number of different companies writing each of several lines of insurance. Having no strong connection with any particular company, they pride themselves on placing insurance with the company which best suits an individual client.

Life insurance companies vary considerably in their views toward brokerage business. In recent years, more and more firms have come to accept and, somewhat less frequently, actively to encourage business from brokers and agents of other companies. Prudential, for example, has salaried employees attached to many of its big city branch offices whose sole responsibility it is to encourage brokers to submit policies to it. Northwestern Mutual, at the opposite extreme, refuses to accept business from any other than its own exclusive agents.

Group insurance contracts may develop through brokers, agents, or by direct inquiry to a company or group of companies by a prospective master policyholder. There is a tendency for industrial concerns to establish borrowing ties with major insurance companies. More often than not, a substantial lender will also administer the company's group insurance plan. Regardless of the way in which the initial contact

is made, the final sales as well as the plan for setting up and administering the group plan is usually effected by a salaried employee of an insurance company's group department.

Industrial insurance is normally sold by "debit" agents (after the accounting procedures under which premiums are collected) who normally also sell ordinary insurance both to their industrial policyholders and to others. These people are usually paid a salary plus commissions on collections and sales. They are administered by district agencies which may be organized along either branch office or general agency lines.

Industry Structure: Geographical and Functional Specialization: In 1945, 463 American firms were considered to be legal reserve life insurance companies by at least one of the United States. By mid-1956, the number had grown to 1144.[1] If number of firms and freedom of entry were the only criteria available to judge the competitiveness of an industry, the life insurance business would of necessity have to be regarded as highly competitive. As predictors of the incidence of price competition, however, the numbers 463 and 1144 do poorly. This is true for several reasons. For one thing, substantial income and other tax advantages inhere to the operation of a concern as a life insurance company. The insuring of lives is therefore only the nominal function of many "legal reserve life insurance companies." Furthermore, among firms which do actively engage in selling life insurance, a considerable amount of geographical and class specialization exists. Then too, even on a nationwide basis, industry sales, assets, and employment are highly concentrated among relatively few companies. Concentration in individual markets --- which are, perhaps, of the order of magnitude of a county in size --- is, of course, much higher.

Tax Avoidance Companies: Of the 1144 life insurance companies in existence in mid 1956, 343 were incorporated in Texas. Of these, approximately 100 had been formed during the preceding two years.[2] It would appear that only the following steps were necessary to obtain a certificate of authority to operate as a life insurance company under Texas laws in effect until 1955: 1) Deposit of properly drawn articles

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1. Life Insurance Fact Book, 1951 ed., p. 44; 1957 ed., p. 48.
2. Ibid., 1955 ed., p. 46; 1957 ed., p. 48.

of incorporation together with a charter fee of $25 and 2) examination at company expense by the Board of Insurance Commissioners to assure that capital stock of $100,000 or more "in money or in such stocks, notes, bonds, or mortgages as are required by law" had irrevocably been deeded to the company. To continue in operation, an annual statement of prescribed content together with a $20 fee was required. If analysis by the Board showed the company to be able to meet its insurance obligations, the certificate of authority was renewed for one year upon payment of an additional dollar.[1] In short, it would appear that solvency was the only matter with which the Board might properly concern itself. Whether a life insurance company was actually engaged in the business of insuring lives appears to have been none of its business.

During the two or three year period preceding 1955, several Texas companies collapsed. Largely as a result, the state insurance law was amended to give the Board of Insurance Commissioners greater discretionary power over the granting of charters. Specifically, the Board was authorized to determine whether: "b) The proposed officers ... have sufficient insurance experience, ability, and standing to render success of the proposed company probable; c) The applicants are acting in good faith."[2] No tests were provided as to what acts constitute "good faith." However, it would appear to be well within the power of the Board to consider the establishment of a company solely as a tax dodge as not consti-

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1. Vernon's Annotated Texas Statutes, Insurance Code, Articles 3.02, 3.04, 3.06-3.08.
2. Ibid., Article 3.04 as revised June 7, 1955.

tuting good faith. Whether the Commissioners have adopted such a definition is not known.

Corporation income tax laws make this emphasis on form rather than substance of considerable advantage to Texas entrepreneurs in upper income tax brackets. Only the investment income of life insurance companies is taxed by the Federal government. Furthermore, an 87½% credit after investment expenses is allowed on the first $1,000,000 of this income, and an 85% credit on the remainder to meet interest requirements on policy reserves, dividends left on deposit, and so forth. The full credit was available even to life insurance companies which had only nominal amounts of insurance in force.[1]

Texas companies have also arisen to take advantage of life insurance and annuity connected loopholes in the personal income tax laws. For example, earnings on life insurance and annuity cash values are subject to personal income taxes only when paid out, not as accrued. Sam Houston Life therefore engages in selling what are nominally annual premium deferred annuities. An earnings rate of 3¼% is guaranteed on the annuity surrender values. At the time an annuity is applied for, the company is willing --- indeed, expects --- to grant a loan for the full

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1. In its slow but relentless quest for ways to spoil the artful dodges of imaginative tax lawyers, Congress attempted to deal with this particular class of psuedo-life insurance companies in 1956. The current tax law limits the investment income credit to roughly twice the amount needed for reserve, dividend, and other interest commitments. See HR 7201, PL 429, The Life Insurance Tax Act for 1955, March 13, 1956. Since the rate of increase in the number of Texas firms does not appear to have diminished appreciably, Texas entrepreneurs may very well already have found ways of circumventing this difficulty.

premium. This loan bears a tax deductable $4\frac{1}{4}\%$ interest charge. Furthermore, the company will also arrange for a third party to purchase the assets of an annuity contract at any time its purchaser desires, thus making the accumulated earnings subject only to capital gains rates.

The common stock of most insurance companies is closely held. Outside of New York, the published reports of state insurance commissions are generally not highly informative. It is therefore almost impossible to estimate the number of companies which exist primarily to satisfy a demand for ways to withhold income from the clutches of the Bureau of Internal Revenue. The number is unquestionably great, however. It may very well constitute a majority of the well over 200 companies formed in Texas since 1945.

Geographical Specialization: Of the perhaps 500-800 companies actively engaged in writing life insurance, relatively few sell in a majority of the United States, and only a handful in all of them. The statistical study of price policy described in Chapter 7 involved a stratified sample of 84 companies. In the largest size group --- 47 companies with over $1 billion of insurance in force in early 1954 --- 17 firms operated in all states and the District of Columbia, and 25 operated in 45 or more states. Of the 37 smaller firms studied --- all of them in the largest third of American companies --- only one operated in more than 40 states, and only 12 in a majority of the states.

Operating in a state does not, of course, necessarily entail coverage of the entire state. A single agency or branch agency has a marketing area of perhaps one or at most a few counties. As is the case

with most consumer goods, it is difficult to develop precise measures of an agency's market area. However, even if the sales force of the average agency or branch office ranged over a considerably wider territory than a single county, it would still be safe to say that many, perhaps most, spatially defined markets are covered by relatively few firms. For example, the Equitable Society, the largest company in the country which does not

Table 2: The Number of States in Which Sample Companies Operated in Early 1954

	Amount of Insurance In Force ($1,000,000)		
Number of States	Over $1,000	$400-999	$75-400
40 or more	30	--	1
30-39	5	3	1
20-29	4	6	6
10-19	6	3	7
1-9	2	2	7
Median No. of States	47	25	16
No. of Companies in Sample	47	15	22
Approximate Percentage of all companies in the size class	95%	50%	20%

For a full description of the way in which the sample was drawn, see Chapter 7.

write industrial insurance, had only 82 agencies in early 1955.[1] No attempt is made, of course, to equate number of agencies with number of

1. The Unique Manual, 1955 ed., Cincinnati: National Underwriter Co., p. 1118. Unless otherwise stated, information cited below on the structure and size of individual agency forces is from the "National Underwriter Life Insurance Reports" section of this volume, pp. 993-1528.

counties or anything of the sort. Equitable's 82 agencies administered about 7400 agents, many of whom covered territories fairly remote from th e agencies to which they were attached. On the other hand, it is reasonable to suppose that many of Franklin Life's 445 agencies serve overlapping territories. The company has a reputation for "rescuing" established agents from other companies. One of the inducements frequently given an agent who permits himself to be rescued is a general agent's contract --- a contract making him the head of an agency. Like most general agent's contracts, it provides expense allowances and higher commissions. Unlike other contracts, however, it does not contain other than a nominal obligation to recruit and to train soliciting agents.

Policy Type and Clientele Specialization: Forms of specialization other than spatial also exist. Companies may be categorized as specialists in types of insurance, in sales organization, and in socio-economic characteristics of clientele. Almost all American companies specialize at least partially along one or more of these lines.

Of the small group of companies which write only group insurance, most restrict themselves to limited classes of individuals. Thus, almost all of Cuna Mutual's $2 billion of insurance in force is group credit life insurance on borrowers from credit unions affiliated with the Credit Union National Association. Similarly, most of the insurance in both Amalgamated Life and Amalgamated Life and Health is group coverage on members of the Amalgamated Clothing Workers.

Excluding group certificates, just under 60% both of all insurance policies in force at the end of 1954 and sold during 1954 were

industrial contracts.[1] The number of individuals and, to an even greater extent, the number of families either partially or entirely covered by industrial insurance is undoubtedly considerably less than 60% of all insureds. The average industrial policyholder is considerably more likely to be covered by more than one such policy than is the average ordinary policyholder. Furthermore, coverage of all family members is far more common among families which have industrial contracts than among those which do not hold this type of insurance.[2] Although data are not readily available, it seems reasonably safe to assert that 15-25% of all insured American families are covered exclusively by industrial insurance. Most larger companies --- those with which this study is primarily concerned --- exclude themselves from this market. Of the 164 companies which had over $150 million insurance in force in early 1954, only 42 sell industrial insurance.

Almost all but the smallest industrial companies are actually "combination" companies. That is, they generally write both industrial and ordinary insurance. Agency organizations of combination companies

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1. Life Insurance Fact Book, 1955, pp. 8, 19.
2. See Table 3, Chapter 2. The TNEC investigations turned up what must be the classic case of multiple industrial insurance coverage. A family --- husband, wife, and son --- had accumulated 38 life insurance policies, 34 of them industrial, during the 18 year period 1919-36. Fifteen of these were on the husband, 13 on the wife, and 10 on the son. In addition, the husband was paying premiums on six of his brother's policies. All told, these 45 policies had face values amounting to $18,000 and bore annual premiums of $926.89 (about $51 a thousand of insurance). These premiums constituted about 55% of the father's annual income. Gessel and Howe, Study of Legal Reserve Life Insurance Companies, Temporary National Economic Committee Monograph 28, Washington:GPO, 1941, pp. 276-77.

are of two general types. Some companies, among them the Metropolitan, the largest insurance company in the world, employ only district agents. Others, such as the Prudential and John Hancock, have separate district and ordinary agency departments. Under either setup, debit agents can and generally do sell ordinary insurance both to their industrial policyholders and to others. Ordinary agents in the combination companies which employ them rarely if ever sell industrial insurance.

Industrial policyholders are predominantly members of lower income groups. Since a considerable volume of ordinary insurance is sold by debit agents, the average ordinary policy in force in a combination company tends to be both smaller and on a lower status individual than its counterpart in a company which does not write industrial insurance. Mortality and operating costs are greater; lapse rates[1] are higher. This is particularly true of companies which do not have separate debit and ordinary agency departments.

In the United States, by far the commonest type of life insurance firm consists of a group of ordinary agents operating either alone or --- with increasingly greater frequency --- in combination with a group department. The ordinary departments of almost all companies employ soliciting agents. Aside from the savings bank life insurance

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1. Industry terminology generally differentiates between policy lapses and policy surrenders. Both involve the non-payment of further premiums --- the former before the policy has accumulated any residual cash value, the latter after they have begun to accumulate. The two terms are used interchangeably in this study to denote any termination other than by death or maturity.

programs in Massachusetts, New York, and Connecticut, most of the few non-agent companies operate among strictly delimited population groups. For example, Teachers Insurance and Annuity, probably the largest of these non-agent firms, sells only to employees and present policyholders who once were employees of colleges, universities, nonprofit schools, and certain other nonprofit educational and research organizations. Postal Life floundered along without noticeable success for a number of years trying to sell insurance to the general public through the mails. It has since given up the attempt and now has an agency force.

Several types of socio-economic specialization are practiced by members of this class of companies which write ordinary and group insurance exclusively. Some forms have arisen by specific charter limitation, some by current operating policy, and some apparently as a consequence only of long standing historical precedent.

As is the case with most non-agent companies, several smaller firms sell only to members of strictly delimited population groups. Thus, policyholders in the Church Life Insurance Corporation are all clergymen, lay officials, or lay workers in the Protestant Episcopal Church or members of their families. Churchmembers' Life --- somewhat less selective --- sells to clergymen or laymen of any denomination.

The economic advantages of this form of specialization may be two-fold. Members of the selected groups are sometimes subject to lower mortality rates than the population as a whole. Also, and much more important, membership in a selected group offers a useful entree for a salesman. An agent for Churchmembers' Life might begin, "I may have a

wonderful proposition for you, Mr. Jones, but first I must ask you --- do you belong to a church?" (Knowing full well that Jones does since his name was obtained from a church roster.) "Then you're probably eligible for the unique plan of insurance our company writes!"

Creation of the belief that special requirements exist and that the prospect is in the select group meeting them is often of substantial help in overcoming sales resistance. Many companies have begun to write high minimum ($5000, $10,000, or more as opposed to the customary $1000) "preferred risk policies" during recent years. Preferred risk underwriting generally involves approval of an application at standard rates only if the applicant falls in a group subject to mortality of less than 110% of normal. The more usual underwriting procedures most frequently involve a cut off point at 125% of "normal" mortality. While other factors were unquestionably of greater importance in the development of PR policies, the opportunity afforded the agent to append a heavily stressed "if you're qualified" to his sales presentation has almost certainly played a role.

"Current operating policy" types of specialization are frequently of the gimmick variety. While College Life places no special restrictions on its clientele, a large portion of its business is written under a program whereby an insured, usually a college student, applies for a permanent form of insurance but pays approximately term insurance rates for the first few contract years. An automatic loan secured by the policy's cash value provides the difference between the two premiums. This loan is subject to repayment in instalments after graduation. An-

other company sells a somewhat similar scheme to churches engaged in expanding their facilities. Members pay premiums on individual policies to their churches. The churches, in turn, pay the company. Payment schedules are arranged to allow the churches to pay less than they receive during early contract years and more during later years. The loan involved is secured by a mortgage on church property.

Most companies do not specialize directly in particular socio-economic groups. However, either as a result of agent training, price policy, or because they issue contracts infrequently sold by other companies, some do tend to specialize in particular plans of insurance. As will be developed at length in Chapter 2, the popularity of different plans of insurance varies considerably with income, occupation, and other socio-economic variables. Endowment policies are purchased largely by low income - low status groups; term insurance by professionals and other high income individuals. This being the case, even though there may be neither charter provisions limiting coverage nor active cultivation of specific class or occupation groups, it is quite possible for strong emphasis on particular policy forms to result in a considerable degree of socio-economic specialization.

To cite one example, neither company officials nor agents generally like to write term insurance. The former see dangers of selection against them on renewals and conversions. As compared to permanent plans, term coverage entails greater difficulties in predicting future personnel and facilities requirements. Most companies therefore pay low commissions on term. And because of low commissions and/or

a genuine feeling that most insureds should have permanent insurance, agents avoid selling it. Until quite recently, Occidental Life of California was the only major company which had gone against this general practice. For a number of years, it has issued a wide variety of term contracts. While expensive on an actuarial basis, they involve both relatively favorable commissions scales and a number of not widely available features which are attractive to buyers. Term insurance has therefore consistently comprised a far larger proportion of Occidental's total sales than of the sales of almost any other company. As an example of a different sort of specialization along policy lines, the agent training course of Amicable Life places considerable emphasis on a high pressure method of selling "insured savings," i.e., 20 or 30 year endowments.

In these quasi-socio-economic forms of specialization, an attempt to identify that which came first is very much of a chicken and egg problem. Did Amicable Life find itself with an agency force which performed best among lower status groups and therefore develop approaches suitable for selling these groups? Or did the training methods develop the agency force? It is probably safe to say that Occidental's specialization in term insurance had its genesis in a direct decision by management to enter a field which most companies preferred to avoid. It is rarely so easy to label cause and effect, however.

It is equally difficult to suggest plausible hypotheses as to why specialization might exist among the majority of ordinary only and ordinary-group companies which do not fall into any of the above cate-

gories. However, many of these firms do show a high level of socio-economic specialization in their sales. Northwestern Mutual, Connecticut Mutual, National of Vermont, and a few others are commonly regarded as class companies. The average policy sold by them is large. Lapse rates are low. Managerial and professional groups predominate in their clientele. New York Life, Equitable, and Mutual of New York, on the other hand, may well be characterized as specialists largely in the lumpen bourgeoisie. This class specialization does not seem to be transitory --- quite the contrary. In many cases, it appears to have continued undiminished almost since the inception of the companies involved --- a period of 75-100 years.

While small amounts of life insurance have been sold in this country since colonial days, the industry did not begin to show substantial growth until midway through the Nineteenth Century. The beginning of the present era in American life insurance is probably best dated fro m 1843. In that year, Mutual of New York sold its first policy. It was the first American company to employ an aggressive sales force. Mutual's success was immediate and substantial. Its methods were soon emulated. During the 10 year period 1844-53, 42 life insurance companies commenced operation, almost all of them employing commissioned agents.

Shortly after it was founded in 1859, one of the most successful of these emulators, the Equitable Society, introduced a scheme which had almost as revolutionary an impact as that produced by the Mutual 20 years earlier. This was the tontine policy --- a system under which all policy proceeds other than death benefits were deferred for periods of

5, 10, or 20 years. Accumulated surplus and cash surrender values which, under non-tontine plans of operation, would have accrued to lapsing members were distributed among surviving members of a group at the end of the deferred period. Concomitant with the introduction of tontines came an expanded emphasis on aggressive selling. The key role of the agent in the business came increasingly to be recognized and his commissions increased accordingly. Frequently, initial commissions of more than 100% of first year premiums were paid.

The perversion of what started out to be purely an insurance (and savings) contract into a lottery and the sales methods which accomplished this development were not adopted with equal vigor by all members of the industry. Mutual of New York, The Equitable Society, and New York Life were in the vanguard. Northwestern Mutual, Connecticut Mutual, and Mutual Benefit as well as most of today's other leading class companies dragged their heels. It seems quite reasonable to suppose that the lottery element in tontine policies did not have universal appeal; that its attraction was much stronger, for example, among the lumpen bourgeoisie than among the upper bourgeoisie. Thus, it is quite likely that much the same form of specialization existed in the latter half of the Nineteenth Century as exists today.

That a considerable amount of socio-economic continuity should exist in life insurance markets is understandable. What is remarkable is that this continuity has continued for so long and with such intensity. A corporation is, after all, an entity whose existence generally extends beyond the lives of the individuals who comprise it at any given time.

High company officials are likely to surround themselves with junior officers who agree with them on policy matters. These juniors are likely to continue in their mentors' ways when they themselves gain control. This is particularly likely to be true when a firm is dominated by a single family --- as was the case with a considerable number of the largest life insurance companies until the first decade of this century and, in some cases, even beyond. Yet mutations do occur, even among tightly held firms. The post-1945 model Ford Motor Company is strikingly dissimilar in many respects to the firm in the latter days of its founder's life.

In the last analysis, the nature of a life insurance company's market is determined more by its agents than by the operating decisions of company executives. The character of life insurance agents is, in part, the topic of Chapter 3. Let it suffice for the moment, therefore, to make the rather banal comment that the typical life insurance salesman is a rather gregarious extrovert. With this sort of personality configuration, the importance a prospective agent would attach to having congenial office associates is probably far greater than that of the average individual. Undoubtedly there are considerable personality differences between agents who, on the one hand, operate most effectively in the high pressure routine of selling endowment policies on the lives of new-born babies and those who, on the other, program estates for corporation executives. At the same time, however, a successful life insurance agent is a rare individual. Of 100 new agents contracted by the average company, less than 50 survive their first year in the business, and only about 15 their first five years. With this sort of turnover, it is difficult to see

how a market pattern, no matter how firmly established, could maintain itself for the better part of a century.

Whatever the explanation may be, there is, to repeat, a substantial tendency toward specialization among the large group of "typical" companies --- companies which may be characterized as 1) selling a fairly standard group of ordinary insurance policies either alone or in conjunction with group insurance; and 2) selling to any physically qualified individual, regardless of socio-economic status.

To summarize the last several pages, while the number of firms which actively engage in selling life insurance is large --- perhaps 500-800 --- the amount of specialization along geographical, economic, and sociological lines is so great that most markets --- under any reasonable definition of the term --- are covered by relatively few firms. Few companies operate on a nationwide basis. Of those that do, none operates in every geographically defined market. And within geographic markets, a considerable amount of specialization takes place along either policy type or socio-economic status lines or both.

That firms are often highly specialized is not, of course, sufficient to prove that price competition is non-existent. Even though most markets may be served by few firms, geographical areas do exist in which considerable numbers of companies actively engage in selling a substantial variety of policies to members of a fairly broad stratum of society. Most of the more than 60 firms licensed to do business in New York State, for example, operate in New York City. A disproportionately large number of these New York firms operate on a nationwide or nearly

nationwide basis. Thus, if competition in New York and other large cities were to affect prices, the benefits would be felt throughout the country since geographical price discrimination[1] is both administratively difficult and legally impossible. To anticipate subsequent discussion, the fact that price competition does not play an important role in the industry --- or rather, that only a perverted form of price competition exists --- must be attributed in considerable measure to other causes.

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1. "Discrimination," that is to say, in the Robinson-Patman Act sense --- charging different prices to different buyers of the same commodity. See Chapter 4.

Industry Concentration: To resort in introduction to a banality, the numerical magnitudes one assigns to indices of industrial concentration depend both on the definition of market size accepted and on the variables on which percentages are based. If "the point at which buyers and sellers meet" is accepted as a definition of "market," then concentration in most life insurance markets is 100%, regardless of the variable used. That is to say, a majority of buyers come into contact only with that agent who actually sells them insurance. A perhaps more acceptable definition would deal with alternative possible sources of supply, i.e., with the number of firms potentially able to compete for the patronage of a single individual rather than with the number of firms actually realizing that potential. Under such a definition, the accepted index of concentration would perhaps be a function of sales or of number of agents operating in an area comprising one or a few counties. As might be expected, data are not available for areas of this size. An individual state is the smallest area concerning which relevant information is available in the public domain. These data are generally accessible only at the offices of individual state insurance commissions. Even on a nationwide basis, data on several frequently used variables, e.g., employment, value added, and assets employed in productive activities, are not available.

In brief, inadequate though they may be, it is necessary to restrict attention to a limited class of variables on a nationwide or international basis, all of them connected in one way or another with sales. The typical life insurance contract performs a dual function. It pro-

vides both an indemnity against death and a means of accumulating savings. Furthermore, it involves transactions extending over a considerable period of time. Thus, several available measures of concentration possess roughly equal advantages and drawbacks. A measure based on assets weights policies by their savings components, but only indirectly by the protection they afford. The reverse is true of measures based on insurance in force. Finally, measures based directly on sales are desirable --- and undesirable --- in that they deal with the current activities of companies not, as do the first two types mentioned, with a residual of their past histories.

Even on an international basis, the life insurance industry exhibits a high degree of concentration, regardless of the dimension along which it is measured. Ten American and Canadian firms --- somewhat less than 2% of all companies in active operation in these two countries --- had over 50% of all insurance in force, of all ordinary insurance in force, of all ordinary insurance sold, and of all admitted assets[1] in early 1956. It should be pointed out that this high level of concentration has resulted almost entirely from internal growth. Consolidations have been common among smaller companies in the industry. They have been rare among major firms, however. In fact, Prudential, John Hancock, Travelers, Mutual of New York, and probably others among the industry leaders have

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1. "Admitted" in the sense that state insurance commissions allow them to be reported as assets on annual statements. "Assets not admitted" include such things as office supplies and equipment and agents' debit balances.

never acquired business in this manner.

The industry has grown tremendously since the turn of the century. The number of American firms actively engaged in writing life insurance has grown almost ten-fold --- from 84 in 1900 to 500-800 in 1956. Total insurance in force has increased from less than $8 billion in 1900 to over $412 billion at the end of 1956.[1] Rates of growth have not been

Table 3: Percentages of All American Firms Having Various Percentages of Total Insurance in Force: 1900-1954

Year	Percentages of All Firms Having:[1] 10% Of All Insurance in Force	25%	50%	75%	Total No. of Firms
1900	1.2%	2.4%	4.8%	13.1%	84
1905	0.8	1.6	4.0	9.5	126
1910	0.4	0.7	1.8	4.2	284
1915	0.3	0.7	1.7	5.1	295
1920	0.3	0.6	1.8	4.8	335
1925	0.3	0.5	1.9	3.8	379
1930	0.2	0.5	1.4	3.7	438
1935	0.3	0.5	1.3	3.8	373
1940	0.3	0.4	1.1	3.3	444
1945	0.2	0.4	1.1	4.1	463
1950	0.1	0.3	0.8	2.7	655
1954	0.1	0.2	0.7	2.3	877

Sources:
1935 and before: J. Owen Stalson, Marketing Life Insurance, Cambridge: Harvard Univ., 1942, pp. 799-801.
1940 and after: Number of companies and total insurance in force from the Institute of Life Insurance. Individual company figures from the Unique Manual, Cincinnati: National Underwriter Co., various editions.

1. Actual concentration ratios in the United States are somewhat lower than those indicated above. In these calculations, the denominator is total insurance in force in the United States; the numerator, however, includes some insurance in force in foreign countries.

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1. Life Insurance Fact Book, 1957, p. 8.

particularly stable, either in insurance in force or in number of firms. While high, the correlation between growth in number of firms and insurance in force is by no means perfect. Under such circumstances, measures of trends in concentration are apt to produce conflicting results under different definitions of the term. For example, the percentage of all firms in the industry having any given fraction of total insurance

Table 4: Cumulative Shares of Ordinary and Total Insurance in Force, Insurance Paid For, and Admitted Assets of the Life Insurance Industry's 20 Largest Firms: 1955[1]

Company Rank	Insurance in Force Ordinary[2]	Insurance in Force Total[3]	Insurance Paid For[4]	Admitted Assets[2]
1	14.2%	18.0%	15.0%	15.4%
2	28.3	31.8	27.9	29.3
3	34.7	38.7	33.8	38.2
4	39.7	43.4	38.6	44.9
5	44.1	48.0	42.8	49.9
6	47.7	52.5	45.9	53.7
7	50.7	56.6	48.4	56.9
8	53.1	58.8	50.8	59.8
9	55.3	60.9	52.9	62.6
10	57.3	62.7	54.8	64.7
11	59.2	64.5	56.6	66.8
12	61.1	66.1	58.4	68.7
13	62.9	67.6	60.2	70.5
14	64.6	68.9	61.9	72.2
15	66.3	70.1	63.6	73.9
16	67.8	71.3	65.3	75.2
17	69.3	72.4	66.9	76.4
18	70.6	73.5	68.5	77.3
19	71.7	74.4	69.9	78.1
20	72.6	75.3	71.2	79.0

1. See footnote 1, Table 3.
2. As of December 31, 1955
3. As of January 1, 1955
4. Calendar Year 1955

Source: Unique Manual, 1955 and 1956 editions.

Table 5: Share of Total Insurance in Force of the Industry's Largest Firms: 1900-1954

Year	Shares of Total Insurance in Force Held By: Largest Firm	Largest 4 Firms	Largest 10 Firms	Largest 20 Firms
1900	14.0%	51.2%	74.9%	88.7%
1905	14.9	48.6	72.7	84.2
1910	13.5	46.2	72.6	84.8
1915	14.0	44.1	68.6	81.8
1920	15.1	41.8	65.5	78.7
1925	16.9	43.4	66.3	78.8
1930	17.4	45.3	66.8	78.8
1935	20.1	48.6	69.2	80.5
1940	20.3	48.0	68.3	79.3
1945	20.1	46.3	65.4	76.3
1950	19.4	45.5	65.0	77.5
1954	18.0	43.4	62.7	75.3

Sources: Same as for Table 3.

in force has decreased erratically but substantially. Naturally enough, decreases have been most substantial in periods when a considerable number of firms were being formed.

On the other hand, the largest companies account for a smaller percentage of sales of ordinary insurance than for any of the other measures developed in Table 4. Since this is the only one of these scales in which the activity of past years is not directly involved, there is indication of a decline in concentration during recent years. As a matter of fact, except during the 1930's, the share of total insurance in force held by the industry's largest firms had decreased gradually but persistently since the turn of the century.

This decline in the largest companies' share of the market may be traced to a number of causes. One of the most important of these, the

stringent regulation of companies which operate in New York State, is also if particular inportance in interpreting industry price policy. Fully to understand the basis of New York's regulation requires, in turn, a further brief excursion into the early modern history of American life insurance.

It is fairly well established that canons of business morality were not high in the latter part of the Nineteenth Century. The life insurance industry did not provide a large number of exceptions to this general rule. While perhaps not atypical, the financial skuldugery which characterized the management of the three firms which dominated the industry in the years from 1875-1905 received particular attention in the first decade of this century. Together, these three --- New York Life, Mutual of New York, and The Equitable Society --- accounted for just under 60% of all ordinary insurance in force in the country in 1900. Their operating areas and sales methods were quite similar. In particular, they all placed heavy stress on the sale of tontines. The Equitable devised this system in its early years as a measure to vitiate the effects of a rate war threatened by Mutual --- a company which then had a much stronger surplus position. Although the innovation was born at least partially of desperation, its success was immediate. New York Life, Mutual, and several other companies found themselves compelled to follow Equitable's lead.

Inherent in the tontine plan was the accumulation in company coffers of a substantial undistributed surplus; funds which could be utilized without in any way impairing the company's ability to meet either

insurance claims or the reserve requirements of the then existing insurance laws. Commissions to agents for new business increased substantially, as did compensation of company officers. Banks and other ventures in which officers had interests received deposits and loans on favorable terms. Companies frequently bailed offers and directors out of personal investments which had gone sour.

Perhaps because the four largest companies in the industry[1] were all domiciled in New York and perhaps for other reasons, a joint committee of the New York Assembly and Senate was appointed in 1905 "to investigate the affairs of life insurance companies." Its particular concerns were company investments and the relation of company officers to them, the costs of insurance, and the operating expenses of companies. By the time the smoke had begun to clear, New York had --- as it continues to have --- far more stringent life insurance laws than any other state, and one of the committee's counsels, Charles Evans Hughes, was governor of the state.

A number of key provisions in the New York Insurance Law apply to all of the business of all companies licensed to operate in the state --- not just to business written in New York or to business of New York domiciled companies. The law strictly limits the types of investments companies may make. It also sets forth a formula for the limitation of new business expense. It deals directly with tontine policies by making

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1. The Metropolitan in addition to the three already mentioned. At the time, it had about 10% of all insurance in force in the country. Some 75% of this was industrial --- roughly half of all industrial in force.

an annual distribution of surplus mandatory on participating policies. It deals indirectly --- and ineffectively --- with the problems of overly large surplus accumulations by limiting undistributed surplus to 10% of aggregate reserve requirements.

From the standpoint of the growth of firms which operate in the state, the most important characteristic of the New York Law is its direct and indirect limitations on agent compensation. Section 213 of the law states that first year commissions may not exceed 55% of gross premiums on ordinary insurance sales. An additional limitation on first year agency expenses necessitates that companies pay somewhat less than 55% on all but whole life contracts. Renewal commissions are also strictly limited. The payment of production bonuses or expense allowances based on production is expressly proscribed.

Most of the industry's largest firms were founded in the New England and Middle Atlantic States in the middle third of the Nineteenth Century. Most of them have operated in New York since shortly after their inception. When ranked by any of the variables used in Table 4, for example, 15 of the top 20 companies, 8 or 9 of the top 10 and all of the top 5 are licensed to do business in that state. Non-New York[1] companies do pay higher commissions than do their New York counterparts. This is particularly true in the South and Southwest. There, commissions of 75% and occasionally more on whole life contracts plus substantial

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1. Throughout this study, the term "New York company" refers to any company licensed to do business in New York regardless of where domiciled.

production bonuses are not at all uncommon.

The commission situation does place New York companies at a competitive disadvantage in recruiting new agents and, more important, in keeping successful agents. According to a home office agency executive of one large New York company,

> Not many agents shop around before they enter the business. Most of them are recruited by the general agent directly. ... Most recruits don't have any notion of the differences between commissions paid by section 213 and non-213 companies. They find out in two or three years, though, and we lose a lot of them then. Several companies do a good bit of recruiting from the well established companies in the Northeast. Franklin Life in particular concentrates primarily on established agents of ... and a few other large companies. They take what is, after all, a perfectly reasonable view: 'Why pay to train an agent when someone else will do it for you?'

Table 6: Ratios of 1954 Sales to Insurance in Force on January 1, 1954 for Sample Companies

Ratio of Sales to in Force	Companies with Insurance in Force of: Over $1 Billion			Less than $1 Billion		
	New York	non-New York	All	New York	non-New York	All
Under 10%	4	--	4	1	--	1
10-14.9%	17	9	26	3	6	9
15-19.9%	4	6	10	3	8	11
20% & Over	1	6	7	4	12	16
Median	12.1%	17.6%	13.5%	18.4%	18.8%	18.6%
Number	26	21	47	11	26	37

Sources: Unique Manual, 1954 and 1955 editions. See Chapter 7 for further information on the way in which the sample was drawn.

Companies which operate in New York, particularly the larger ones, do appear to be growing at a considerably smaller rate than those which sell exclusively outside that state. That a major reason for this is New York's compensation limitations seems indisputable. Perhaps the only real surprise is, in this connection, that New York companies have almost managed to hold their own growth-wise in the face of this substantial disadvantage.

Chapter 2

Industry Demand: The Life Insurance Buyer

Before proceeding to characterize the various markets in which life insurance is sold, it seems desirable briefly to outline a few principles of rational behavior in the buying of insurance --- life insurance in particular --- and to consider the structure of the average consumer's needs for insurance protection. The ability to characterize markets in terms of deviations from an established pattern of rationality will prove useful in discussing the market forces which determine industry pricing procedures.

Principle 1: It is unwise --- and generally illegal --- to insure against a contingent event in which one has no insurable interest, i.e., one which, if it occurred, would cause no financial loss to the prospective insured.

There are other forms of gambling --- dice, poker, roulette, even horse racing --- which provide more entertainment and, if honestly run, a smaller expected loss.

Corollary: It is unwise to insure the life of a child except, perhaps, for a small sum to provide burial expenses.

Principle 2: With two provisos, it is unwise to insure against an event which, if it occurred, could be born without undue

financial strain.

It is rarely possible (never in life insurance) to find policies for which the expected return is not negative, and substantially so. The costs of having an insurance company administer a pooled risk are substantial. Life insurance company operating expenses, dividends to stockholders, and premium and other taxes averaged just over 26% of total premium income in 1956.[1] Expense rates on fire, casualty, and other forms of insurance are even higher. Furthermore, there is a substantial tendency toward selection against the insurer on many coverages, although perhaps not on life. That is to say, the contingent event insured against occurs more frequently among those who are covered than among the public at large.

Proviso: Some people place very high premiums on reducing the variability of possible future losses. That is, some people have sharply declining marginal utilities of money. Those who greatly prefer the substitution of small but certain losses for large but uncertain ones may feel insurance desirable even for risks which can be born without undue strain. They should, however, recognize the relative costs of self-insurance as opposed to insurance through a company (see also the corollary to principle 3).

Corollary: A man should insure the life of his child only if his income is so small that funeral expenses would be a severe burden. If funeral expenses are not a major problem, the life of his wife should be insured only if the family is dependent to a substantial extent on her income or if her death would cause substantial expenses that would not otherwise occur.--- as, for example, if it would necessi-

1. Life Insurance Fact Book, 1957, p. 52.

tate hiring a housekeeper for a considerable period of time.

Principle 3: It is usually wise for a prospective insured to join a group such that his qualifications are those minimally acceptable. ("Usually," not "always" for reasons implied under principle 4.)

It is often possible to find such groups. Individuals charged the same premium for a coverage are often subject to substantial differences in administrative costs or in proneness to the event insured against. The standards of companies do vary considerably concerning their minimally acceptable applicants. Mutual casualty companies, for example, tend to be more selective than old line stock companies. Increasingly large numbers of life insurance companies are establishing special high minimum preferred risk policies.

Corollary: Principle 2 should, of course, be ignored if it is possible to find an insurance group for which the expected return on premium payments is positive.

A man of moderate means could, for example, probably afford to bear the maximum amounts payable under Blue Cross-Blue Shield group coverages. If he expects to have children in the near future, however, it might well be to his advantage to be covered. These insurance plans generally provide quite substantial maternity benefits. In Michigan as this is written, Blue Cross-Blue Shield premiums are smaller than the obstetric and hospital benefits provided if pregnancies are spaced less that 1 3/4 years apart.

Principle 4: Before buying any type of insurance coverage, it is wise to shop for low rates.

Premiums for the same coverage do vary substantially from company to company. Costs of automobile and fire insurance purchased from Allstate, Nationwide, and State Farm are often as much as 20-40% below rates charged by old line stock companies such as Aetna and Travelers, for example. A few telephone calls are usually sufficient to provide a wide variety of quoted rates. Much the same situation exists in life insurance. To take an extreme case, American National's rate for a nonparticipating 20 year nonrenewable term policy at age 25 is more than double the gross premium charged less the first year dividend paid by Teachers Insurance and Annuity on policies of $10,000 or more.

For other than term policies, intercompany comparisons of life insurance prices are difficult to make. At least three trade publications[1] do contain considerable information on policies --- their rates, cash values, and dividend scales. However, whole life, limited payment life, and endowment policies are joint products. They provide not only an indemnity from death and, quite frequently, other contingent events, but also a periodic planned savings program of considerable magnitude. Indeed, the typical life insurance contract is of a tri- rather than a bi-partite nature. The insured is free at any time to terminate the contract and to claim whatever cash value it may have accumulated. Many

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1. Unique Manual and Little Gem Life Charts, Cincinnati: National Underwriter Co., and Flitcraft Compend, New York: Flitcraft Co. All are published annually.

policyholders do just that.

The joint nature of the typical permanent life insurance contract makes it inevitable that comparisons of costs or benefits among contracts involve an element of arbitrariness. The patterns through time of cash surrender values and dividends do vary considerably from company to company.[1] Therefore, even ignoring the second mentioned type of contingent event --- the probability of lapse --- meaningful comparisons require at a very minimum the assumption of either an interest rate or a mortality table as well as formidably lengthy computations.

The sorts of problems to which superficial comparisons can lead are legion. If, for example, one were to ignore the probability of lapse, he would necessarily have to regard Mutual Benefit as an expensive company from which to buy. It pays full 2.25% net level premium reserves as cash values on its policies after then end of the third contract year. Most companies have reserves on a higher interest rate and hence have lower r reserves and lower required cash values. Few pay full net level premium reserves on surrenders occurring before the tenth policy year. Mutual Benefit's rates net of dividends --- with or without an interest discount --- naturally appear high in comparison to companies with less liberal cash values.

Again, if one ignores interest considerations, the rates of Metropolitan, John Hancock, New York Life and a number of others look low. All of these companies have highly tilted dividend scales --- dividends

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1. See chapter 6 for a description of life insurance principles, terminology, and accounting procedures.

are quite small in early policy years, and increase rapidly between the tenth and twentieth years. Furthermore, all of them pay "surrender dividends" in later policy years. These are apayable, as the term implies, when policies are surrendered for cash. When the dividend scales of these companies are not discounted by either interest or the probability of surrender, these surrender dividends appear quite large.

Finally, Franklin Life and a number of smaller companies in the Midwest appear to have quite high rates when both interest and the probability of lapse are considered. If one anticipates that the proceeds of his policies will be paid as annuities rather than in cash, however, these companies may still prove to be less expensive in the long run. Their annuity guarantees are from 5-25% higher than those of the major Eastern companies.

Principle 5: With two important provisos, the accumulation of cash values in level premium life insurance contracts is a poor way to save money.

All states levy taxes on life insurance premiums. These are generally a stated percentage --- most frequently 2% --- of gross premiums (i.e., of premium collections with no allowance for the portion of premiums later returned as dividends) regardless of plan of insurance. Renewal commissions to agents and general agents are also usually a flat percentage of premiums regardless of plan. These commissions range between 2-2.5% depending on policy year and company --- higher rates being paid in earlier contract years. Finally, first year commissions on term insurance are usually lower per dollar of premium payments than on all

other forms except short term endowments.

In brief, the portion of a life insurance premium left after insurance costs have been met is subject to a sizable discount before it becomes recoverable as savings. This discount amounts to 10-25% in early contract years and 2-5% in later years in most companies. Life insurance company earnings rates are not remarkably high --- in 1956, about 3 1/3% after investment expenses and Federal income taxes.[1] It would therefore seem reasonable to expect the effective rate of interest on the savings component (however measured) of a life insurance premium to be negative for a considerable period of time following a contract's inception. Even over long periods of time, it seems doubtful that earnings on life insurance contracts could approximate the $3\frac{1}{4}$% currently being paid on US Savings Bonds let alone the 4% currently available in many West Coast savings and loan associations.

Furthermore, the average consumer's need for life insurance is greatest when he has small children. At this time, he is likely to be in a state of chronic illiquidity. He is probably making a substantial investment in consumer durable goods, and may be buying a house. His opportunity costs are considerably higher than the long term rate of $2-2\frac{1}{2}$% he could earn on life insurance savings. This $2-2\frac{1}{2}$% rate must, after all, be compared with the $4\frac{1}{2}-6$% or 8-30% he could earn lending money to himself on mortgage account or as instalment credit.

<u>Proviso 1:</u> If one feels a need to be coerced into saving

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1. <u>Life Insurance Fact Book</u>, 1957, p. 55.

money and is willing to pay the costs entailed, purchase of level premium life insurance contracts may be desirable.

Many people find that money burns holes in their pockets. Payment of life insurance premiums provides a fairly painless way to convert money into what amounts to a psychologically illiquid asset. This asset can, of course, readily be converted back into cash. However, conversion entails considerable psychic barriers in addition to the financial costs of early surrender. The insurance portion of the contract must be terminated at the same time as the savings portion. Furthermore, the receipt of a premium notice is a form of coercion to save not normally provided by other savings institutions. Many find this coercion desirable and would be willing to pay the costs entailed even if they knew their magnitude.

Proviso 2: Members of upper income groups may find the tax advantages of level premium life insurance sufficient to outweigh its low gross returns.

There are substantial estate and income tax benefits associated with cash or annuity proceeds of life insurance policies or of policy loan values. Also, purchases of life insurance and annuity contracts can be effected in ways affording substantial tax savings. The deferred annuity scheme described in Chapter I (pp. 11-12) is one such method. Another gimmick currently much in vogue is known as the "split dollar plan." Under it, a business firm annually pays a portion of an employee's insurance premiumsequal to the annual increase in his policies' cash surrender values. The company becomes a beneficiary of the

policy to the extent of the loans extended --- accumulated without interest. As cash values and consequently earnings on them increase, the employee's contribution decreases, ultimately to zero. Thus, he gets insurance protection and ultimately an equity in the policies at considerably less than term insurance rates. Furthermore, the benefit does not require immediate income tax payments since earnings on insurance policy cash surrender values, if taxed at all, are taxed only when realized, not as they accrue.

Corollary: Except for the above two provisos, it is generally wise for a consumer to buy only term insurance.

That term insurance is a better buy is not, of course, a logical consequence of the fact that earnings rates on life insurance savings are low. Mortality experience is somewhat higher on term than on permanent plans. There is reason to believe that, at least until recent years, companies generally levied higher expense charges against term plans than against permanent ones. Thus, it is entirely conceivable that the interest rate required to equate the cash surrender value on, say, a whole life plan with the accumulated difference between premiums on a term policy and this whole life plan would be quite high despite the low earnings available on life insurance savings.

A number of methods can be devised meaningfully to compare term and permanent insurance rates in this respect. One of the simplest of these runs as follows: Accumulate the difference between premiums per $1000 on 5 year renewable term insurance and a permanent plan at X% per annum. At the end of five years, assume the term policy to be renewed

at the higher premium rate then in effect but for $1000 less the accumulated difference in premiums. Continue this procedure for any desired period of years. Determine X such that the accumulated difference equals the cash surrender value at the end of the selected period.

Table 1: Comparison between Whole Life Cash Surrender Values and the Accumulated Difference between Whole Life and 5 Year Renewable Term Insurance Premiums for $10,000 Insurance --- Adjusted for the Protection Afforded by the Accumulated Difference

	Whole Life Cash Value	Difference Between Term and Whole Life Rates Accumulated at: 2%	3%	4%
	Occidental[1]			
5 years	$ 510	$ 608	$ 626	$ 645
10 years	1360	1256	1329	1410
15 years	2260	1917	2090	2286
20 years	3210	2552	2884	3269
20 year payments at:		4461	4982	5574
	Metropolitan[2]			
5 years	$ 610	$ 728	$ 750	$ 771
10 years	1530	1520	1608	1701
15 years	2400*	2276	2484	2699
20 years	3530	2939	3330	3762
20 year payments at:		4488	5039	5669

1. Comparison based on 5 year renewable term and $2500 minimum whole life policies, both nonparticipating and both initially issued at age 30. Rates in effect during the first quarter of 1955.

2. Comparison based on 5 year renewable term and $5000minimum whole life policies, both participating and both initially issued at age 30. Rates in effect during the first quarter of 1955. Cash values include surrender dividends.

* Estimated --- actual figure not available.

Calculations of this nature do show substantial differences in company cost allocation procedures to be implicit in prices. That non-participating policies generally require higher interest rates to equate these two magnitudes than do participating might be expected. In most cases, however, the equating earnings rate is quite reasonable. In the rates of both Metropolitan and Occidental, the interest rate implicit in the whole life cash surrender values is negative for something more than the first five policy years. With Occidental, it climbs fairly rapidly to just under 4% by the end of 15 years. With Metropolitan it increases more gradually to only about $3\frac{1}{2}$% at the end of 20 years.

Life Insurance Needs: The insurance program requirements of individual families vary greatly. One characteristic is common to almost all programs, however: The amount of life insurance needed declines substantially as the family life cycle progresses. A newly married couple needs little or no insurance. After their first child is born, however, a very substantial need exists. As their children grow older, requirements decline --- slowly at first, then precipitously after the youngest becomes self supporting. Somewhere between the ages of 50-65, the amount of insurance needed again becomes negligible.

A concrete example may best serve to indicate the magnitudes generally involved. Consider, then, the following hypothetical situation: A man and his wife are both age 25. She has just given birth to their first child. If he lives, they expect to have two more children at about three year intervals. He wants to assure her an income of about $300 a month while their children are still under 18, and $200 a month thereafter. He is fully covered under Federal Old Age and Survivors Insurance, and expects that he will continue in covered occupations at salaries which will provide maximum OASI benefits. This means that if he dies, she will be eligible to receive $162.80 or $200.00 a month in Survivor's Insurance benefits while she still has respectively one or two children under 18. In addition, it will provide her with a pension of $81.40 a month beginning at age 65.[1] He is a Korean War veteran, hence has $10,000 of National Service Life Insurance which he plans to

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1. Or a somewhat smaller pension beginning at age 62.

keep in force. Finally, he has just become eligible for his company's retirement program. This provides joint contributions by employer and employee sufficient, together with OASI benefits, to provide an income at age 65 of $300 a month for him and his wife and $200 a month for either after the death of the other. Annual contributions to this fund are $333 and are accumulated at 3%.[1] If he should die, the total amount then accumulated in the fund becomes the property of his wife.

Under this set of conditions, the present value of all the benefits desired is over $84,000 at age 25. The present value of OASI, pension, and NSLI benefits is about $43,000, however. Thus, the additional amount of insurance needed is just over $41,000. Because of the increase in OASI benefits, this drops to $32,000 after the second child is born, and to $28,500 after the third child. Between then and age 49, requirements decline by about $9000 --- an annual rate of reduction of about $500. After that, the decline is about $2000 a year until, at age 58, no insurance other than National Service Life is needed.

If the husband wants to provide a larger income stream, a considerably larger fund would be required at age 25. Declines thereafter would be somewhat greater, however. If he expected that his wife would go to work after the children reached school age, or became self-

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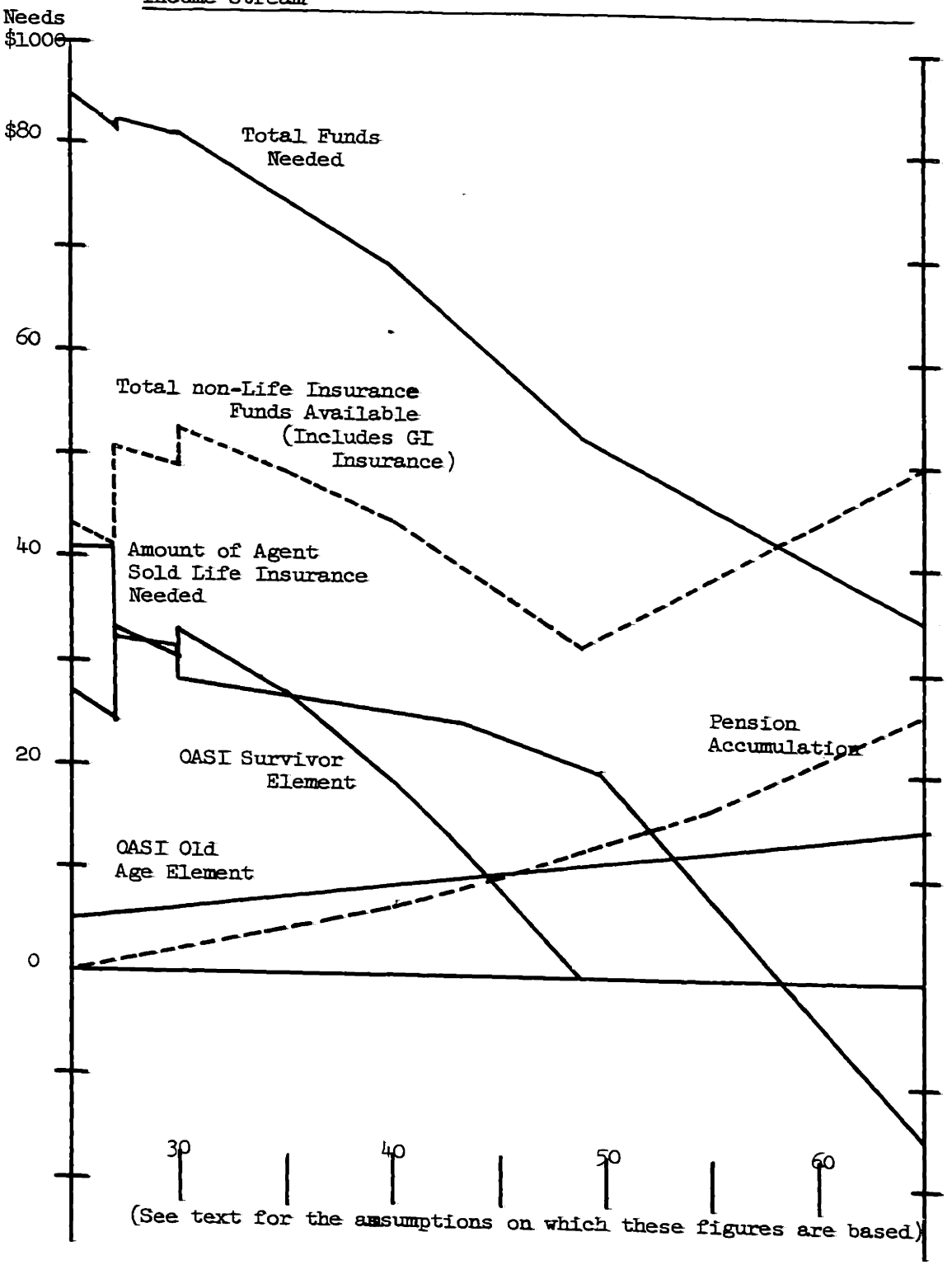
1. All accumulations illustrated in Chart 1 are at 3%. The annuity rates of Franklin Life were used in the calculations. It has among the lowest rates for this type contract in the country. At age 25, $333 at 3% accumulates to about $28,850 at age 65. This is sufficient to provide: 1) a joint and survivor annuity of $72.90 a month, and 2) life annuities of $18.60 and $45.70 a month on husband and wife respectively. These, together with OASI benefits of $162.80 a month on a couple over age 65, $81.40 on a widow, and $108.50 on a widower are sufficient to provide the desired income stream.

Figure 1: Sources and Requirements of Funds Needed to Maintain a Family Income Stream



(See text for the assumptions on which these figures are based)

supporting, the initial amount required would be somewhat smaller, and the annual decline somewhat greater. If he wanted to provide educational funds --- say $2-10,000 per child --- initial requirements would be somewhat greater, and the annual rate of decline somewhat smaller. Provision of an additional fund to retire a mortgage would involve a larger initial amount and a somewhat more rapid rate of decline. Regardless off the way the desired basic income stream is modified, however, the fundamental characteristic of each insurance program is the same: The amount needed declines moderately, then substantially as the family life cycle progresses.

No single life insurance policy is available to provide benefit patterns of this nature. Perhaps the easiest way to approximate such a program would involve the purchase of $30-40,000 of five year renewable term insurance. At the end of each five year period, the insured would renew his policy, but only for a reduced amount of insurance. In later years, when the required amount of insurance declines rapidly, reductions could be made at more frequent intervals. Methods might also be developed utilizing the so called "mortgage retirement" policies currently being issued by a small but growing number of companies. These are actually pure term insurance policies with a continually decreasing face value. Regardless of the data of death, they provide $X per month until some specified date in the future. Whatever the method used by a person desiring such a program, however, it would be necessary to include in it the judicious purchase and surrender of some form or forms of term insurance.

Who Owns Insurance? Life insurance is the most commonly held asset of American families. 76% of all adults and 62% of all children are covered by some form of life insurance. At least one member of 91% of all "complete"[1] families is covered. By far the most commonly held form of insurance is that sold by companies which employ soliciting agents. 74% of all American families have been sold insurance by a salesman for one of the 500-800 legal reserve life insurance companies which operate in the United States.

Table 2: Insurance Status of American Families: 1955

At least one family member has:			
Life insurance			86%
Agent sold life		74%	
Agent sold only	29%		
Agent sold and other types	45		
Other types only		12	
No family member insured			14
			100%
Number of cases			4175

Source: Life Insurance Ownership Among American Families, a survey conducted by the University of Michigan Survey Research Center in June and October 1955.

In complete families which have insured members, the chances are better than 50-50 that each member is insured. Complete coverage is particularly prevalent among families which have industrial policies. In well over three-fourths of the households which have industrial coverage, all members are insured. However, complete coverage is a

1. "Complete families," as the term is used in this section are those containing a husband and wife living together who may or may not have children under 18. Unless otherwise indicated, data in this section were developed from data obtained during a survey of Life Insurance Ownership Among American Families, Ann Arbor: Survey Research Center, 1955.

Table 3: Extent of Insurance Coverage among Families Grouped by Income and Whether or Not They Hold Industrial Insurance: 1955

Family Members Covered	Has Some Industrial Insurance: Family Income: Under $4000	$4000-7499	$7500- & Over	All Families	Has No Industrial Insurance: Family Income: Under $4000	$4000-7499	$7500- & Over	All Families	All Families
Families Without Children									
Husband Only	14%	10%	**	13%	30%	28%	26%	28%	24%
Husband and Wife	85	90	**	86	66	69	71	69	74
Wife Only	1	*	**	1	4	3	3	3	2
Not Ascertained	*	*	**	*	*	*	*	*	*
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
No. of Cases	91	71	16	181	154	147	102	415	596
Families With Children									
Husband Only	6	1	**	3	29	27	30	29	18
Husband and Wife Only	10	4	**	7	14	14	12	14	11
Husband, Wife, Some Children	3	6	**	4	3	3	3	3	3
Husband, Wife, All Children	71	81	**	76	41	45	41	43	56
Other Combinations	9	8	**	9	12	10	13	10	11
Not Ascertained	1	*	**	1	1	1	1	1	1
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
No. of Cases	145	183	33	370	160	224	77	476	846

Source: See footnote to Table 2.

Data pertain only to "complete" insured families. Whether any family members were covered by industrial insurance was not directly ascertained in the study. A question was asked, however, concerning the total amount of agent sold insurance on each insured family member. Ordinary life insurance is rarely sold in amounts less than $1000. Families which had one or more members insured by a policy with a face value less than $1000 were therefore classified in the "industrial" group.

* Less than 0.5% ** Too few cases to yield reliable percentages.

characteristic of only about 55% of all families which have no industrial insurance. Once the ownership of industrial insurance has been taken into account, the unwise (from a strictly economic point of view) tendency to provide coverage where no large insurable risk exists has no strong relation to income, occupation, education, or any other indicator of social status. High income families are about as prone to insure non-breadwinners as those with low incomes. Indeed, higher income families with industrial policies are more likely than their low income counterparts to insure all family members.

Other evidence of the prevalence of uneconomic patterns of insurance coverage is available. Regardless of income, heads of families in stages of the family life cycle where a substantial amount of insurance protection seems wise are only slightly more likely either to be insured or to be covered by considerable amounts of agent sold insurance than those who head families in which insurance needs are small or non-existent. The dollar figures in Table 4 apply, it should be emphasized, only to agent sold insurance. Between 5-33% of each of the groups enumerated are covered only by forms of insurance not sold by agents. In addition, considerably more than half of those who have agent sold insurance are covered by other types. However, only two of these other types --- GI and group insurance --- contribute significantly to the total coverage of those who have them. The heads of about 40% of all families have group certificates, and about 15% have government life insurance. GI policies are for a maximum of $10,000. Group certificates are generally small, except for holders in high income brackets. Only

Table 4: Amount of Agent Sold Insurance on Family Head within Groups Varying by Family Income and Family Life Cycle Characteristics: 1955

Insurance Characteristics of Family Head	Head Under Age 45				Head Over Age 45			
	Single	Married			Married		Single	All Families
		No Children	Have Children Youngest Under Age 4	Have Children Youngest 4 or Over	Have Children	No Children		
Family Income Less Than $4000								
Not Insured	20	13	21	17	19	25	43	26
Insured	80	87	79	83	81	75	57	74
Under $1000	28	13	9	7	17	16	18	15
$1000-4999	33	29	33	42	33	32	23	32
$5000-9999	5	5	14	10	3	4	2	6
$10,000 & Over	1	7	3	1	2	2	1	2
Amount NA	3	*	*	*	*	2	*	1
No Agent Sold Insurance	10	33	20	23	26	19	13	18
No. of Cases	105	55	177	92	90	251	238	1008
Family Income $4000-7499								
Not Insured	**	18	14	22	18	26	24	20
Insured	**	82	86	78	82	74	76	80
Under $1000	**	8	3	3	6	7	17	6
$1000-4999	**	25	33	30	29	32	36	32
$5000-9999	**	19	16	18	18	17	4	16
$10,000 & Over	**	6	16	16	15	5	6	11
Amount NA	**	*	*	1	*	1	*	*
No Agent Sold Insurance	**	24	18	10	13	12	13	15
No. of Cases	26	78	202	188	99	202	53	848
Family Income $7500 and Over								
Not Insured	**	**	24	20	30	25	**	24
Insured	**	**	76	80	70	75	**	76
Under $1000	**	**	*	4	3	3	**	3
$1000-4999	**	**	17	20	19	16	**	18
$5000-9999	**	**	13	20	5	13	**	15
$10,000 & Over	**	**	35	30	36	36	**	33
Amount NA	**	**	2	*	*	2	**	1
No Agent Sold Insurance	**	**	9	6	6	5	**	6
No. of Cases	3	34	46	50	64	106	35	338

Source: See Table 2 * Less than 0.5% ** Insufficient Cases.

What Do They Buy? In face value terms, whole life insurance is somewhat more popular than any other type of plan among those who own agent sold insurance. In 1954, just under a third of all agent sold insurance was on a straight life basis while 28% was in one or another form of

Table 5: Types of Agent Sold Life Insurance in Force in the United States: 1954

	Ordinary Policies		Industrial Policies	
Type of Policy	By Number (Million)	By Amount ($Billion)	By Number (Million)	By Amount ($Billion)
Whole Life	28%	35%	18%	16%
Limited Payment Life	34	22	54	63
Endowment	21	13	16	14
Term	3	7		
Family Income	7	16*		
Retirement Income	3	5		
Extended Term; Reduced Paid Up	4	2		
All Others			12	7
Total	100%	100%	100%	100%
Number (Amount)	75.7	($198.4)	111.1	($38.7)

Source: Life Insurance Fact Book, 1956, p. 12
* Family income amount percentages include both the decreasing term and permanent insurance portions of these contracts. Just over half the amount figure listed is decreasing term insurance.

limited payment life contract. In terms of number of policies issued, however, limited payment types are by far the most popular. They account for about 45% of all agent sold policies in force, as compared to only about 20% for whole life contracts.

The various major contract forms are by no means equally popular among all population sub-groups. Quite the contrary is true.

Table 6: Types of Policies Sold to Adult Males by Ordinary Agents: May 1949

	Annual Income of Insured						
Type of Policy	Under $2500	$2500-3999	$4000-4999	$5000-7499	$7500 & Over	Not Employed	All Sales
Whole Life	22%	31%	34%	40%	44%	24%	33%
Family Income	4	8	11	9	7	3	7
Limited Payment	31	20	17	14	13	36	20
Endowment	29	20	15	12	9	26	18
Term	4	10	12	17	18	5	11
Retirement Income	10	11	11	8	9	6	10
Total	100%	100%	100%	100%	100%	100%	100%
No. of Cases	1143	2583	930	1120	1237	520	7533

Source: Derived from Table 14, p. 11 of Persistency 1949-51: The Two Year Persistency of Ordinary Life Insurance, Hartford, Life Insurance Agency Management Association, 1952. The study used a sample of policies issued in May 1949 by 64 of the Association's member companies. Sales by ordinary agents to adult males constituted 37% by number and 62% by amount of all policies sold in the sample.

In general, both the insurance portfolios of lower status groups and additions to these portfolios consist of policy types having high savings elements. High status groups, on the other hand, concentrate largely on contract forms having relatively small savings components. In the sample from which Table 6 was drawn, 70% of the policies sold by ordinary agents to adult males in the lowest income grouping --- under $2500 a year --- were either limited payment life, endowment, or retirement income contracts. Of sales to those with incomes of $7500 or over, however, only 22% were on these three plans, while 62% were either whole life or term policies.

Among the major policy groupings, only whole life contracts appear to be in substantial demand by family heads in every income

Table 7: Types of Policies Owned by Members of Different Income Groups in the Northeastern and Northcentral States: 1950

Type of Policy	Annual Family Income: Under $3000	$3000-4999	$5000-9999	$10,000 & over	All Families	All Policies
Term	1%	5%	5%	11%	4%	3%
Whole Life	60	54	63	82	60	47
Limited Payment	29	30	33	41	31	24
Endowment	11	24	24	20	19	15
Annuities	1	6	8	17	5	4
Family Income	1	1	2	2	1	1
Don't Know	2	*	*	*	1	1
Not Ascertained	5	8	6	2	6	5
Total	**	**	**	**	**	**
No. of Cases	212	309	243	136	900	900

* Less than 0.5% ** Adds to more than 100% - many have more than 1 policy.

Data are based on only the answers of those with agent sold insurance. Source: Derived from data reported by Kent E. Winter and Morris A. Axelrod in Public Evaluation of Life Insurance, Ann Arbor: Survey Research Center, 1951. The sample included 1000 adults, most of whom were males and heads of their families. Half of the sample was a random cross section of the population as a whole; the remaining half of Northwestern Mutual policyholders. A weighting procedure was used to splice the two halves of the sample together. Data in this table pertain to the weighted sample.

group. This contract type comprised more than 20% of all policies sold to each of the income groups enumerated in Table 6, although sales were twice as common in the highest income group as in the lowest. Almost half of the term policies (as compared with only about 30% of all policies)- were bought by those with incomes of $5000 or more. On the other hand, over 70% of the limited payment life and endowment sales were to buyers with incomes of less than $4000.

No information is available to me on the policy size distribution within social status groups of industrial sales, of sales to fe-

males, or of ordinary sales made by combination agents. However, it seems reasonably safe to contend that sales to these other groups would show quite similar distributions. If anything, a stronger disposition to buy high savings plans might be expected. With respect to industrial policyholders, it may be noted once more that limited payment life and endowment policies accounted for 70% by number and 77% by amount of all industrial policies in force in 1954. And industrial policyholders are predominantly low income individuals. Sales of ordinary insurance by

Table 8: Types of Ordinary Policies Sold to Adults: 1949

	Ordinary Policies Sold By:			
	Ordinary Agents To:		Combination Agents To:	
Type of Policy	Men	Women	Men	Women
Whole Life	33%	21%	24%	14%
Limited Payment Life	20	35	26	49
Endowment	19	31	24	34
Term	11	2	9	1
Family Income	7	*	16	1
Retirement Income	10	11	1	1
Total	100%	100%	100%	100%
No. of Cases	9285	2035	5861	2187

* Less than 0.5%.

Source: The 1949 Buyer, Hartford: LIAMA, 1950, Tables 2 and 13.

combination agents and by ordinary agents to women show a considerably stronger concentration in high savings forms than do those to men by ordinary agents. At the same time, the income distribution of this latter group has a considerably higher mean than do those of the other three groups enumerated in Table 9. In fact, there is a quite high

Table 9: Income Distribution of Ordinary Life Insurance Buyers: 1949

	Ordinary Policies Sold By:			
	Ordinary Agents To:		Combination Agents To:	
Annual Income	Men	Women	Men	Women
Under $1000	1%	1%	*	1%
$1000-1999	6	33	6	40
$2000-2999	21	47	36	49
$3000-3999	25	12	35	8
$4000-4999	13	4	11	1
$5000-7499	16	2	8	1
$7500-9999	6	*	2	*
$10,000 and over	12	1	2	*
Total	100%	100%	100%	100%
No. of Cases	8502	1228	4499	935

Sales to housewives, people whose income was not ascertained, and those not gainfully employed are excluded.
Source: The 1949 Buyer, Table 5.
* Less than 0.5%.

positive correlation between the proportions of limited payment life and endowment sales to total sales on the one hand and the proportion with incomes of, say, less than $3000 on the other:

	Proportions which:	
	Bought LPL and End. Policies	Have incomes of under $3000
Males - bought from ordinary agents	39%	28%
- from combination agents	50	42
Females - bought from ordinary agents	66	31
- from combination agents	83	90

That people in low income groups tend to buy high savings (and hence high premium per $1000) forms of insurance and conversely for those in high income groups does not, of course, necessarily imply

that low income families spend greater sums or even greater proportions of their incomes on life insurance. While variations from the mean were substantial, families which paid life insurance premiums spent an average of about 3½% of their incomes for this purpose during the period 1949-53.[1] Among those premium payers whose total incomes were in the $1-999 range, average expenditures ranged between 7.2-10.6% of income during this five year period. For those in the $1000-1999 bracket, the range was 4.2-5.0%. In all of the four higher income groups enumerated, the ratios of premium payments to income ranged between 3.0-3.9% over the entire period. No clear trends were apparent in the ratios either through time within a given income group or among all income groups during any single year. In other words, except for the lowest income groups, the income elasticity of demand for insurance appears to be virtually unity. Furthermore, a very sizable group of those with incomes in the under $2000 range are elderly retired individuals. Few sales are made to individuals over 65 --- less than 1% of all the policies sold in the 1949 study cited in Tables 8 and 9. These people are demanders of life insurance only in a rather passive sense. That is to say, they continue to meet fixed claims incurred when their incomes were higher, but they rarely incur new claims.

To summarize briefly, higher incomes are associated with lower proportions of premiums devoted to savings and hence with lower premiums per $1000 of insurance. At the same time, except for the lowest

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1. Life Insurance Ownership Among American Families: 1954, Ann Arbor, Survey Research Center, 1955. This was a study done for the Institute of Life Insurance based on 1954 and preceding Surveys of Consumer Finances. See in particular Tables 9 and 20, pp. 9 and 21.

Table 10: Average Sizes of Ordinary Life Insurance Policies Sold to Adults by Type of Policy: 1949

	Ordinary Policies Sold By:			
	Ordinary Agents to:		Industrial Agents to:	
Types of Policies	Men	Women	Men	Women
Whole Life	$8180	$2600	$4670	$1270
Limited Payment Life	4750	1870	1880	1140
Endowment	3960	2240	2610	1410
Term	9580	6600	6090	3430
Family Income *	9840	4750	6540	5550
Retirement Income	5990	3290	5680	3400
All Policies	$6730	$2390	$3900	$1350

* Averages include both the permanent and term components of family income policies.
Source: See Table 8 above.

income groups, the proportion of income devoted to premiums is almost the same for each income group taken as a whole. It is therefore not difficult to understand why policies with high savings elements tend to have very low average sizes.

Thus far, this section has been concerned entirely with the purchase and ownership of life insurance by adult members of the population. While price policy in this market is of primary concern to this study, the juvenile market, i.e., the market for insurance on lives in the 0-14 year age bracket, is of sufficient interest in its own right to merit at least brief attention.

In the LIAMA study of 1949 sales cited above, 22% of the sample policies were issued on the lives of children. These policies accounted for 7% of the total face value of the sample. Buyers of these

Table 11: Income Distributions of Male Purchasers of Ordinary Life Insurance on Juvenile and Adult Male Lives: 1949

Income Level	Income Distribution of Males Buying Ordinary Insurance on the Lives of: Children Sold By: Ordinary Agents	Men	Children Sold By: Combination Agents	Men	All American Families In 1949
Under $3000	22%	28%	28%	42%	46%
$3000-4999	51	38	59	46	31
$5000 and over	27	34	13	12	23
Total	100%	100%	100%	100%	100%

Source: The 1949 Buyer: Juvenile Series No. 2, Figure 2, p. 7. 1950 Survey of Consumer Finances.

juvenile policies are typically fathers in the $3000-5000 income range. Men pay about 90% of the premiums on juvenile policies. Of these male purchasers, 55% had incomes between $3000-4999. Of the adult males who bought policies on their own lives, 40% were in this income bracket as were about 31% of all American families in 1949. The purchase of life insurance policies on children appears to be somewhat of a luxury --- but a luxury to which middle, not upper income groups are most strongly addicted.

As any recent parent must be painfully aware, one of the life insurance agent's best sources of leads is newspaper birth notices. A new father is more likely than most to act on a moving appeal to provide for his wife and children in the event that he meets an untimely death. In addition, each new life entails a new prospect to be introduced to the joint virtues of insurance and thrift. Thus, over one-third and one-half, respectively, of the juvenile policies submitted by ordinary and combination agents were on lives less than six months old. And

over three-quarters of them were on children less than $4\frac{1}{2}$ years of age.

Two motives appear to predominate in buying insurance on the lives of children. Juvenile policy buyers desire first and most importantly to provide burial funds, second, to save --- particularly for the accumulation of educational funds. Because of the desire to save's importance, juvenile policies are issued mostly on high premium forms. In the LIAMA sample, 55% of the juvenile issues were limited payment lifes, and an additional 35% were endowments. Only 9% were on a straight whole life basis. If life insurance can be presumed the only form in which those who buy juvenile policies save for educational purposes, their estimates of the costs of college education appear woefully inadequate. The typical juvenile policy is very small --- one reason why the father, not the child, is the primary target of the agent who follows birth announcements. In the LIAMA study, about three-fourths of the juveniles sold were for precisely $1000. The average size was around $1300.

Why Do They Buy It? In view of the apparently greater extent to which upper income groups follow the economic man's homily to the effect that life insurance is not a good way to save money, it would seem reasonable to expect lower income owners more frequently to emphasize thrift as a

Table 12: Reasons Given by Members of Different Income Groups for Carrying Life Insurance: 1955

Reasons Given for Owning:	All Income Groups	Family Income: Under $3000	$3000-4999	$5000-7499	$7500 & Over
To pay bills, debts, burial expenses	83%	88%	88%	80%	65%
Provide Support for dependents	86	78	88	90	91
To pay off mortgage	32	25	33	40	32
To enable borrowing	30	34	32	29	23
To provide old age income	43	46	41	44	42
To provide educational funds	40	34	42	35	29
A good way of saving money	40	40	38	41	45
No important reasons	2	3	1	1	1
Number of respondents	4175	1281	1304	912	564

Source: Same as for Table 2.
The questions were: "... Which would you say are the major reasons for carrying life insurance? ... Here is a card. It contains some answers people gave us when we asked them about reasons for carrying life insurance. Please tell me which of these reasons are of great importance to you ...."
The percentages listed are for those who either mentioned a category spontaneously or checked it on the card or did both.

reason for buying. Such does not appear to be the case, however. If questions such as "Which would you say are the major reasons for carrying life insurance?" are capable of eliciting motives, differences among income groups are small. Indeed, differences among groups ranked along any indicator of socio-economic status are negligible.

Few differences worthy of even passing mention are revealed by Table 12. As might be expected, lower income groups are somewhat less inclined than their upper income counterparts to mention the provision of an income stream and somewhat more inclined to mention the meeting of immediate expenses. Perhaps surprisingly, the borrowing feature of policies was mentioned or checked somewhat more frequently by those with lower incomes; the provision of educational funds somewhat more frequently by those in higher income groups. In the aggregate, many more people mentioned one or another aspect of protection than mentioned one or more savings feature. Almost every respondent checked or spontaneously mentioned at least one of the first three categories; only about 70% did this for the last four. This is perhaps not surprising --- "insurance" means protection against the losses associated with a contingent event. Life insurance happens to have an extra savings feature built in. While many may recognize this, there are unquestionably a considerable number who regard it as being of secondary importance. What is surprising, however, is that these aggregate frequencies of mention varied little among income groups. About as many upper as lower income respondents mentioned one or another savings feature. A quite similar pattern of responses resulted from a question which asked, "In some families, wife and children also have insurance. Do you think this is a good idea or not? .... Why is that?"

Why, then, is the distribution of policies purchased and, to a lesser extent, owned by different income groups so strikingly different? About the best one can do is to conjecture --- no data are available in

substantiation. The savings elements involved in the insurance policies most people buy differ only as a matter of degree --- not on a yes-no basis. After all, a whole life policy involves a savings element just as does a ten year endowment, only a bit less of it. Even in upper income groups --- where term ownership is most common --- those covered only by term are in a very small minority. In the sample on which Table 7 is based, most of the 11% of the $10,000 and over income group who owned term insurance also owned one or more permanent policies. These generally were whole life contracts, but frequently also included higher savings forms. Thus, both the high and low income respondents who regarded savings features as being of importance were simply recognizing established fact.

The insurance plans of the upper income individual are generally more ambitious than those of his lower income counterpart. He wants to protect an income stream --- the man with a lower income is content to meet burial expenses. For a young man, the present value of even a modest income stream is substantial. He may know this. If not, he most certainly will be made aware of it by his insurance agent. He is most generally unaware, however, of the extent to which its present value declines as his age increases. And few agents exist who will take the trouble to explain that. Assuming his ignorance on this latter matter to persist, he perceives himself as having two alternatives: He could buy as much term insurance as he needs and/or can afford as a stop-gap and plan to convert these policies as soon as his financial position makes this possible. Or, and this is more likely, he could

From Whom Do They Buy? As was mentioned in the first chapter, three principal groups of individuals purvey agent sold life insurance to the public. These are ordinary and combination life insurance agents and insurance brokers. Ordinary agents sell ordinary insurance either exclusively or in combination with group insurance. Some also sell

Table 13: Types of Insurance Coverage Held by Families in Different Income Groups: 1955

	Complete Families				Incomplete Families			
	Family Income				Family Income			
	Under $4000	$4000-7499	$7500 & Over	All Families	Under $4000	$4000-7499	$7500 & Over	All Families
Has Agent Sold Insurance	63%	84%	90%	76%	52%	69%	**	56
Has Industrial	34	37	20	33	25	18	**	23
No Industrial	29	57	70	43	27	51	**	33
Has Only Other Types	18	10	5	12	13	12	**	13
Not Insured	18	5	5	11	33	18	**	29
Not Ascertained	1	1	*	1	2	1	**	2
Total	100%	100%	100%	100%	100%	100%	100%	100%
No. of Cases	669	660	253	1623	354	82	28	480

* Less than 0.5% ** Too few cases to yield reliable percentages.
Source: Same as Table 2.

casualty, surety, and other lines. Combination agents are primarily sellers of and collectors for industrial policies and only secondarily sellers of ordinary insurance. Brokers may also sell casualty, fire, and other types of insurance in addition to life. More often than not, their life business is placed with more than one company; their non-life policies are almost invariably with more than one firm.

There is considerable evidence pointing to the conclusion that these three types of agents operate within different although overlapping socio-economic spheres. There is ample evidence, of course, of a differentiation between the markets of ordinary and combination agents. The industrial policyholder is generally although not invariable in a low income group. The individual who buys ordinary insurance from an industrial agent is also likely to be lower in social status than his counterpart who buys from an ordinary agent. (See Tables 8-11 above).

The broker has a relatively small share of the total market for life insurance. His market is an important one, however. First of all, he is primarily a big city phenomenon --- and big cities are the places where such limited price competition as exists in the industry is most intense. Secondly, he is a broker, not an agent --- he is nominally, at any rate, independent of all companies rather than attached to a single company as is the ordinary or combination agent. He is free to select not only the policy but also the company which best suits his client's needs. The statements of a number of company executives (see Chapter 5) attest to the fact that his judgement is frequently --- probably more frequently than not --- based on some measure of comparative costs. Finally, there is some indication that the broker deals with a generally higher status customer than does the ordinary agent. While the number of policies sold by the broker is small, they are generally of a somewhat larger size than are those produced by any other type of agent.

Table 14: Number and Average Sizes of Ordinary Policies Sold to Adults by Different Types of Agents: 1949

Type of Agent	Proportion of All Policies	
Combination	42%	
Ordinary Only	58	
Full time writing ordinary only		42
Full time writing ordinary life plus casualty, fire and/or surety		11
Part Time		2
Broker Placing all life business with one company		1
Other brokers		2
	100%	

	Average Policy Size	
Combination	$3200	
Ordinary Only	5950	
Full time writing ordinary only		$5800
Full time writing ordinary life plus casualty, fire and/or surety		6150
Part time		4510
Broker placing all life business with one company		6930
Other brokers		8930
All	$4810	

Source: The 1949 Buyer, Tables 2 and 20.

What Role Does Price Play? Evidence has already been cited suggesting that the income elasticity of demand --- roughly, the proportionate increase in expenditures associated with a doubling of income --- for life insurance is close to unity in all but the lowest income groups. That is to say, as their income levels change, households tend to change their expenditures on life insurance proportionately. Two additional elasticity concepts --- price and cross elasticities of demand --- are of particular relevance in evaluating price setting procedures. It makes considerable difference to the individual firm and to the industry as a whole whether general price increases result in increases or decreases in total expenditures on life insurance. Similarly, a firm considering retaliation to a competitor's price cut is likely to be considerably affected by whether or not this change has resulted in a substantial decline in sales.

While no evidence is available, some plausible conjectures lead to the conclusion that the price elasticity of demand for insurance is very close to one. That is to say, increases in prices result in decreases in amounts purchased such that total outlays remain nearly constant.

The notion that current saving by households is not highly responsive to real or dollar rates of return is so widely accepted that it seems unnecessary to present data in verification. It seems particularly unlikely that rates of return would strongly influence the whether-or-not-to-buy decision of those who are interested in life insurance primarily as a savings device. In particular, as long as an

agent can say, " After 20 years you get back more than you put in, and get free insurance besides!" a prospective customer is probably almost as likely to buy a 20 year endowment when the implicit rate of return is 1% as when it is 6%. The principal question affected by a premium rate increase is probably not "whether?" but rather "how much?" That is, the amount of insurance a saver decides to buy is probably a function of how much he feels he can put aside from his paycheck not, except implicitly, of the subjective rate of discount of future versus present consumption at the margin. An increase in premiums, then, is likely to be accompanied by a corresponding decrease in the average size of policy bought. The only saver who is probably strongly affected by rates of return is that relatively rare individual who is interested in life insurance as a tax saving vehicle. For him, "how much?" is largely subordinate to "whether?" The choice between buying a $100,000 five pay life or, say, putting $15,000 a year into tax exempt municipals may well be decided on quite close comparisons of yields.

A similar line of reasoning has already been introduced with regard to the primarily protection oriented individual. To repeat, he is, if young, quite well aware tnat assuring his present income stream to his dependents requires a very large amount of insurance. He may never have thought of buying term insurance. If he has, his agent has probably disabused him of the notion. His problem, then, is not that of determining how much insurance he needs but rather that of how much of his present income he can reserve from current consumption. He, too, is in a position where an increase in premium rates is likely to be met

by a proportionate reduction in face value purchased.

In the survey on which Table 7 was based, all respondents who had insurance on their own lives (most of them heads of their households) were asked, "How about the premiums you pay and what you get for them --- would you say that most insurance companies are pretty much the same, or are there differences among them?" In addition, all of those who were insured primarily or entirely with one company --- 88% of all privately insured families --- were asked questions concerning their choice of company and their feelings concerning its comparison with other companies.[1] The answers to these questions suggest that cross elasticities of demand are small in most segments of the market for life insurance. This suggestion is reinforced by the fact that about half the sample was drawn from policyholders of a company which, because of its generally low level of costs and high level of clientele, emphasizes comparative

Table 15: Comparison of Own with Other Insurance Companies: 1950

Own company compares:	
Very favorably	3%
Favorably	13
Neutral - No difference	48
Unfavorably	2
Very unfavorably	*
Don't know	25
Not Ascertained	10
	100%

Source: See footnote 1 below. Page IV-9. Percentages are of all privately insured individuals who carry their insurance primarily with one company.

1. Winter and Axelrod, Public Evaluation of Life Insurance. The footnote to Table 7 above gives information on the nature of the sample involved in the study.

prices in selling far more than do most firms.

Three-quarters of the respondents either gave neutral answers or expressed ignorance on the subject of the comparison between their company and others. For most of them, in addition, qualities of the company played little or no part in their initial choice of insurer. As might be expected, more heavily insured respondents more frequently

Table 16: Factors Associated with the Initial Selection of Insurance Company within Groups Differing by Amount of Insurance Coverage: 1950

Reasons for Selection of Insurance Company	All Amount Groups	Face Value of Insurance Held: Under $5000	$5000 -9999	$10,000 -19,999	$20,000 & Over
Price and related factors	5%	2%	2%	9%	11%
Prominence, prestige of company	10	10	8	9	15
Parents' company; Advice of parents, friends	26	29	28	21	11
Agent solicitation; Social or kinship relation to agent	49	45	51	48	59
Other reasons	11	10	12	11	8
Don't know	2	3	1	1	*
Not ascertained	7	6	6	12	5
Total	**	**	**	**	**

* Less than 0.5% ** Columns add to more than 100% because many respondents gave more than one answer.
Source: See Table 7.
The question was: "What company do you carry (most of) your insurance with? .... How did you happen to pick that particular company?" It was asked of --- and percentages above are based on --- only those respondents who carried their insurance primarily or entirely with one company.

mentioned price as a factor in selection. But even among the most heavily insured group, it had been a matter of importance to only a

Table 17: Feelings About Differences Among Insurance Companies Within Groups Differing in Income And Amount of Insurance Coverage: 1950

Feelings About Differences Among Insurance Companies	All Respondents	Family Income: Under $3000	$3000-4999	$5000-9999	$10,000 & over	Face Value of Insurance Held: Under $5000	$5000-9999	$10,000-19,999	$20,000 & over
Differences do exist:	19%	14%	16%	28%	31%	14%	20%	27%	31%
In price, related factors	11	8	9	15	13	9	8	14	16
In service	3	2	2	5	10	1	5	6	8
Not Ascertained; Don't know#	5	4	5	8	8	4	7	7	7
No Differences	67	68	70	61	62	67	67	67	66
Don't Know	13	17	12	10	6	17	13	6	2
Not Ascertained	1	1	2	1	1	2	*	*	1
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of Cases	900	212	309	243	136	320	155	161	232

* Less than 0.5%

\# The question was: "How about the premiums you pay and what you get for them --- would you say that most insurance companies are pretty much the same, or are there differences among them?" The questionnaire contained no probe concerning types of differences --- thus the fairly high proportion of respondents who said there were differences but who were categorized as NA or don't know on type of difference.

Source: See Table 7

small minority. By far the most frequently mentioned reasons for the choice of company related to the agent rather than to the company itself. Furthermore, only a minority of this agent influenced group had been sold simply by the persuasiveness of the agent. Solicitation was more frequently than not supplemented by a prior personal relationship --- the agent was not simply a salesman, he was also a friend and/or relative.

It is not surprising, then, that those who feel insurance companies do differ in any respect whatsoever --- price or non-price --- are in a small minority of the total population. Just about two-thirds of each income and each insurance coverage group thought that all insurance companies were pretty much the same. The proportion of respondents feeling moderate or large price differences to exist did increase with increases in both income and amount of insurance coverage. Even among those with both incomes of $10,000 and over and insurance of $20,000 or more, however, only 14% felt price differences to exist among firms in the industry.

It is tempting to infer an increase in price orientation among the insurance buying population from the fact that, in each insurance coverage group, a larger proportion felt price differences to exist at the time they were interviewed than said such a belief had affected their choices of companies. On the other hand, these same data provide equal apparent justification for the conclusion that a considerable proportion of that small minority of price conscious individuals feel price differences to be inconsequentially small. In any event, differ-

ences in the composition of the two groups compared and the smallness of the sample make any inference of either nature very tenuous.

In concluding, it should be noted that a general lack of price awareness among customers does not of and by itself imply that companies are unaffected by the prices their competitors charge. This for two reasons: First, it makes no real difference whether the clients of brokers are aware of intercompany price differences if the brokers themselves are affected by these differences. Second, as will be developed at greater length in the next chapter, agents are often highly concerned with price comparisons even when their customers are not. Brokers are influenced in their choices of companies by matters other than price, of course. Commission scales, friendships with and the promotional services provided by general agents, and many other factors serve to attenuate the influence of price. Nonetheless, as has been noted before, many executives are convinced that price does play a considerable role in brokerage sales. Whether this is in fact true is of no great consequence. That price setting is based on such an assumption is all that really matters.

A Quasi-Summary: The Markets for Life Insurance: On the consumer side, the market for insurance may conveniently be broken into a number of important sub-markets. Each of these differs in one or more vital respects --- in types of policies purchased, in patterns of motivation in buying insurance, and in degrees of awareness of inter-company price variations. Among the most important of these sub-markets are:

1) The Industrial Insurance Market: One or more members of about 25-40% of all American families is covered by industrial life insurance. These people are largely, although by no means entirely, in lower socio-economic status groups. The face values of their policies are usually determined by the amount of insurance a nickel, dime, quarter, or half-dollar a week or a month will purchase. Premiums are collected by company agents at the homes of insureds. Although companies writing industrial insurance use very simple contract forms, accounting schemes, and dividend allocation methods, the small amounts involved and the frequency of collections make this type of insurance very expensive.

Industrial companies used to provide free nursing and other health services to policyholders. The industrial agent frequently serves as confidant, expert, and general counselor to his clients on all matter of problems economic, political, legal, moral, and medical. In addition, the industrial policies themselves serve two basic functions for the groups they cover. First, and most important, they provide burial funds. In fact, a number of southern companies pay death claims directly in the form of funerals. The typical aspirations of

upper income groups to preserve income streams to dependents through life insurance are rarely encountered in industrial policyholding groups. There generally isn't much of an income stream to protect. And even if there were, doing so would be far beyond the family's resources. Thus, the typical industrial family has one or more small policies on each family member. These are typically on high savings forms --- over half the industrial policies in force in 1954 were limited payment lifes. The provision of a minimum funeral through insurance doesn't require too large an outlay. Better, then, to provide it through a type of policy in which money builds up fast. One never knows how long he'll be able to keep paying premiums. This, then, is the second basic function of industrial policies --- the cash values on them are one of the principal forms of lower income group savings. A nickel given to an industrial agent is a nickel that would otherwise be spent; a nickel salted away for a rainy day. Few industrial policyholders make even the crudest of analyses regarding the actual cost of their insurance protection. The difference between a nickel a week and a $500 funeral or $100 all in one lump sum 20 years from now is too large to make calculations worth while. And even if the calculations were made, many an industrial policyholder would be willing to pay the penalty to be coerced into saving.

In a market situation such as this, the only real competition that develops is that among agents to be the first to get to a family with a new child. Even though many industrial families simultaneously have policies with the Metropolitan, Prudential, and John Hancock (these three account for about 60% of the industrial insurance in force in the

United States), price comparisons are seldom made. One home office agency department executive in a large combination company estimated that an occasional industrial agent might once in his life lose a sale on price grounds. So the training of these agents never involves a lesson in meeting price comparison objections. If such an objection arose, the industrial agent would most likely meet it by shaking his head in amazement and going next door to sell an endowment to the proud new parents there.

2) The 20 Year Endowment Ordinary Market: Of the four most common contract types --- whole life, term, limited payment life, and endowment --- the latter two are most frdquently of small average size. In one large ordinary company, the average policy in force is for about $3600. At the end of 1953 for whole life, 20 year term, 20 payment life, and 20 year endowment contracts respectively, the averages were $5500, $12,000, $2800, and $1900.

The motivations of the buyer of a small limited payment life or endowment policy are in many respects similar to those of members of the industrial insurance market. In fact, the industrial agent frequently sells these contract types to his more prosperous clients. And sales of high savings policy forms by ordinary agents are typically both small in face value and on lower income members of the population. Low income families do, of course, buy low savings forms --- whole life and very infrequently term insurance. Indeed, whole life policies are somewhat more frequently sold to all but the lowest income groups than are either endowments or limited payment lifes. Nonetheless, the bulk

of endowment and limited payment life sales are to low income families.

As the industrial insurance buyer is primarily concerned with providing a burial fund, so too is the low income buyer of endowment and limited payment ordinary insurance primarily concerned with meeting the expenses incident on his death. While perhaps recognizing that death of the family bread winner will considerably reduce its income, protection of this income stream is generally felt to be financially out of the question. By purchasing endowment or limited payment life contracts and, to a lesser extent, whole life forms, lower income buyers are both able to fulfill their primary goal of providing funds to meet death expenses and to save money. The accumulation of savings through policy cash values is, after all, a form of saving not without its virtues. While a premium notice does not have the coercive impact of an agent waiting with hand outstretched for the weekly 50 cents, it does provide a degree of pressure to save not found in the simple existence of a savings account. And once a premium has been paid, regaining control of its savings component is considerably more difficult, more time consuming, and psychologically more painful than is the writing of a savings account withdrawal slip. Surrender is an all or nothing proposition --- one can get at the money only at the cost of terminating his insurance protection.

On logical grounds, a proud new father would best be advised to increase the insurance on his own life. The ability of a widow to support herself is greatly reduced when she has one or more pre-school children. However, logical criteria of the need for insurance, the insurability of risks, and so forth, do not play a dominant role in the

20 year endowment market, or, indeed, in many of the other markets for insurance. The frequency with which children are insured is considerably smaller among those who are primarily or entirely buyers of ordinary insurance than among those in the industrial market. Nonetheless, of families who have children and who are covered primarily or entirely by ordinary insurance, over 40% have insurance on all family members. This proportion varies little among income groups.

Thus, it is a fairly common procedure for new fathers more or less immediately to buy a 20 year endowment or 20 payment life on the child's life. The purchase is motivated both by a desire to provide burial funds and to save for the child, particularly for educational purposes. The insurance motive is paramount, but also very real is the highly desired feature of being forced to save at frequent intervals for the child's future.

3) The Family Protection Market: The buyers of policies in amounts between $5000-50,000, to set arbitrary limits, show somewhat more sophistication both in relating insurance purchases to insurance needs and in viewing the prices of protection from a relative rather than an absolute standpoint. This is by no means meant to imply that all members of this group buy from low price companies and carefully plan insurance coverage to meet family needs. Quite the contrary is true --- the fraction of the family protection market that shops around before buying is quite small. It is large relative only to the two above mentioned markets.

In the family protection market, aspirations for insurance

programs are considerably more grand than in either of these other two. The provision of burial funds is transmuted into the provision of "clean-up" funds. Not simply burial, but all of the expenses incident on death are included. Furthermore, the maintenance of the family income stream is seriously considered. While resources in this market are considerably greater, the perceived need for protection is still greater yet. Thus, families are forced into lower savings forms of insurance. As family income moves above $5000, whole life contracts become far more popular --- accounting for nearly half of all insurance sales. And term contracts move into second place in popularity --- far behind whole life policies, but somewhat ahead of either limited payment life or endowment forms. Furthermore, permanent forms of insurance, particularly whole life contracts, are coming increasingly to be sold with either decreasing term or level term riders. Most such term rider sales are to people with incomes of over $4000.

In the family protection market, a fairly sizable minority of insureds feel that a choice between insurance companies is not necessarily a choice between Tweedledum and Tweedledee. In a 1950 interview study, close to a third of those with incomes of over $5000 felt that insurance companies do differ --- if not in price, then in the quality of services rendered. And around 10% had actually taken comparative prices into account on past purchases in selecting companies. Furthermore, buying from brokers rather than agents is considerably more common among upper income group purchasers than among their lower income counterparts. While influenced by matters other than price in selecting com-

panies for their clients, brokers do normally take price comparisons into account.

Some of the increased awareness of price differences among those with substantial amounts of insurance may be attributed to the fact that they are more frequently contacted by agents of different companies. In the 1950 interview study mentioned above, 67% of the insured families carrying less than $2000 on the family head had been contacted by an agent since the end of World War II. Only 22% of these had been contacted by more than one agent. Among those with over $20,000 of insurance, however, the respective percentages were 78% and 59%. These cases where agents are in competition with each other do tend to breed awareness of inter-company price differences.

4) The Jumbo Risk and Business Insurance Markets: To avoid the financial disturbances frequently associated with the death of key men in small corporations or partners in unincorporated businesses, insurance on the lives of top executives applied for by the businesses themselves has become more and more frequent. In addition to the obvious advantages of insurance in such situations, contracts can often be taken out in such a way that substantial tax savings may result. Except for types of insurance on which premiums are paid for very short periods of time, the interest earned on life insurance and annuity contracts is, in most cases, free from Federal income taxes. In addition, the proceeds of life insurance policies are in many circumstances tax free to beneficiaries.

Relative prices are of some importance in the markets for ex-

tremely large individual insurance policies --- so called "jumbo risks" --- and for business insurance. One company executive stated, however, that "there is a middle range, say between $10,000 and 50,000 where price is very important. However, I was talking with one of our top agents in Detroit a couple of weeks ago. He's the sort of operator that would feel insulted if asked to sign an application for anything less than $50,000. He told me that price questions rarely arise among the people he deals with. What they're interested in is how much he can save them in taxes."

Ordinarily, the cash values on life insurance policies are substantially below the reserves carried by companies on these policies during early policy years. While such practices are justified by companies on the grounds that commission and administrative expenses are extremely high during the first few years of a contract's life, such reasoning does not satisfy the balance sheet mentalities of many cost accountants. A number of cases have been lost by companies with low prices through the competition not of lower prices but rather of higher early cash values.

The jumbo risk market is less often concerned, to repeat, with the protection of income streams than with the avoidance of income taxes. Tax savings are more easily afforded through the interest than through the death benefit features of life insurance policies. Hence, endowments and, to an even greater extent, limited payment life policies with short payment periods are quite popular in this market. Other peculiarities could also be noted. However, the main point has been established --- the jumbo risk and business insurance markets are more similar in two

important respects to markets composed of people at the opposite end of the income scale than they are to family protection market members. Comparative prices are of lesser importance and high savings forms of insurance are quite frequently bought. This similarity should not be over-emphasized, however. Brokers play a far larger role in these high status markets than in any of the previously mentioned three. Their concern with prices serves to offset the lack of concern of their clients to a considerable degree.

Chapter 3

Prices and the Agent

It is impossible fully to understand the price policy of life insurance companies without first obtaining a considerable degree of familiarity with the selling process and, more specifically, with the insurance agent. In initial partial justification of this claim, a few citations are in order.

The persistence over long periods of time of a considerable degree of socio-economic stratification in the clientele of many of the industry's major companies was dealt with at some length in Chapter 1. Survey results have been cited in Chapter 2 which suggest that the consumer's choice of insurer is dominated far more by agent than by company characteristics. Industry sources frequently mention the existence of similarities between customer and agent in age, background, and interests. If such similarities exist, continued patterns of specialization can only be explained by a persistent tendency for companies to attract the same sorts of agents.

It is quite understandable that life insurance agents and those who hire them should possess personality configurations placing greater than average stress on congenial office associations. At the same time, however, the turnover among life insurance agents is extremely high. A typical recruit has less than a 50-50 chance of surviving his

first year in the business and about a 15% chance of surviving his first five years.[1] Recruiting places considerably greater stress on obtaining potentially successful salesmen than on attracting congenial office mates. It would seem natural to expect these stochastic elements in the process of renewing an agency force to attenuate a company's socio-economic specialization over time. Yet such attenuations rarely seem to have occurred. The forces tending to attract similar personalities to a company's agency force must therefore be strong indeed.

In early 1954, New York Life drastically revised its premium schedules and, somewhat less drastically, its dividend scales. These revisions substantially improved the measures most commonly used in the industry to quote and to compare prices. The year 1954 was not a particularly good one for life insurance sales. Excluding New York Life, the industry's ten largest firms had gains in insurance paid for over 1953 ranging from 1% (Northwestern Mutual) to 13% (Sun Life of Canada)[2] --- a performance considerably below par for the postwar decade. For NYLIC, however, insurance paid for increased from $1.08 billion in 1953 to $1.51 billion in 1954 --- a gain of 39%.

Survey results have been noted suggesting that most consumers feel that prices vary little from company to company. Presumably in consequence, favorable price comparisons are rarely mentioned as having been a factor in recent insurance purchases. True, sales through brokers are considerably more sensitive to changes in comparative prices

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1. Company Recruiting Results to June 30, 1953, Hartford: LIAMA, 1954.
2. Flitcraft Compend, 1954, pp. 750-763; 1955, pp. 745-758.

than those made through insurance agents. New York Life's brokerage sales did expand considerably from 1953-54, but by nowhere nearly $430 million. It is unlikely that the burst of activity among NYLIC agents was primarily motivated by previously nonexistent personal economic considerations. If anything, in fact, the price change cost the agents money on each of their sales. It involved a substantial reduction in gross premiums and hence, under prevailing compensation schemes, a decline in dollar commissions per $1000 of insurance sold. Thus, the only plausible conclusion is that NYLIC agents became so enthused with their company's new and, on the surface, lower prices that they went out to sell insurance as they had never sold it before.

The New York Life experience in 1954 is made all the more intriguing by comparison with that of John Hancock during the same period. In April of 1954, Hancock also drastically altered its dividend and premium scales. The effect on conventional price measures was even more favorable than that which resulted from the NYLIC change. Yet while New York Life's 1954 insurance paid for increased 39% over 1953, John Hancock gained only about 7%. It would appear that something more than a prima facie lowering of prices is needed to stimulate an agency force into outdoing itself.

Agent Recruiting and Training: The median recruit to life insurance selling is a married man in his early thirties with two or more dependents.[1] He has had some college education but is not a college graduate. His past experience has included 5-10 years in a white collar occupation --- rarely does he come to life insurance directly from school. The occupational backgrounds of recruits are varied. As might be expected, however, the modal recruit enters life insurance from sales or sales related activities. Of an average year's newly hired agents, between 15-25% have had previous life insurance selling experience. Some of these men were marginal agents with their former

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1. Unless otherwise stated, data on recruiting and training are derived from two Life Insurance Agency Management Association bulletins: New Agent Characteristics: 1953 and Research Report 1953-2, Managerial Practices in Selecting and Training Agents. The former is a tabulation of characteristics of 7774 agents hired in 1953 by 58 American companies. The latter is based on answers of 757 ordinary agency managers to a mail questionnaire concerning recruiting and hiring procedures and characteristics of the most recently hired recruit.

Most of the remaining material in this chapter was derived from the following sources:

a) Sales training texts used by a group of approximately 15 life insurance companies. These firms differ widely among themselves in size, location, and type of clientele. Those who furnished these manuals requested anonymity both for themselves and for their companies.

b) Interviews with five life insurance agents covering sales and prospecting methods, reasons for joining their present companies, trade practices, and related matters. Two of these agents were highly successful specialists in tax, estate, and business situations. Three had had above average success in dealing primarily with the "family protection" market discussed in Chapter 2. Each of these agents was also promised anonymity.

c) Attempts by seven agents to sell this writer insurance during 1956. Most of them appeared to be moderately successful practitioners in the family protection market. Only one seemed reasonably classifiable as an endowment ordinary specialist. All of these agents remain anonymous for obvious reasons.

companies; their new employers enticed others away with more attractive financial and other rewards. Of those new to the industry, close to half had outside selling experience at some time in their careers, and about a quarter had left another sales job to become a life insurance agent.

The life insurance buyer is not alone in his naivete concerning the relative advantages of different companies. The typical new agent has equally limited knowledge of what different firms have to offer him. His life insurance career began more or less by chance --- it was normally thrust upon him rather than pursued by him. Some new agents do get into contact with the industry by answering advertisements, through employment agencies, or by going directly to a general agent. The vast majority, however --- in one study, 80% of all newly hired agents --- were contacted directly by a general agent or branch office manager through leads developed personally or by friends, relatives, or agents working under him. Of the nine agents interviewed on whom job histories were available, only one had actually made an intensive investigation of the industry before settling on one company.

In asking life insurance company executives about the factors they felt play a role in determining which company a prospective agent would enter, the following answer was representative:

> Of overwhelming importance is the character of the local general agent. While the prestige of the ... is great --- almost everyone has heard of it --- and while this would undoubtedly make a difference if other things were equal, if a small and unknown company has a crackerjack general agent operating against one of our poorer men, the other

> company's man would run rings around ours in both the quantity and quality of the men he recruited.
>
> Very few agents shop around before entering the business. Most of them are recruited by the general agents directly. In a few instances, a general agent may suggest that a recruit go see another company, but he'll only do this when he's sure he has his man completely sewed up.

A considerable amount of time --- 10 to 15 hours being about par --- is spent by a general agent recruiting and selecting each new agent. During the several interviews involved in this process, the general agent normally 1) talks to the prospect about life insurance and supplies him with literature on the subject, 2) interviews the recruit's wife, 3) checks his references, and 4) has him take one or more aptitude and interest tests. The aptitude test most frequently used was devised by the LIAMA. It involves questions concerning his previous job history, reasons for wanting to go into life insurance selling, ability to get along with people, the number of times a week he entertains or is entertained by others, and the incomes, hobbies, and political, professional and other associations and characteristics of his closest friends.

If on analysis by the home office, the candidate's tests indicate good material, he is offered a contract. Close to 90% of these contracts involve some sort of financing in addition to or in place of the agent's normal commission payments. Some companies offer straight salary arrangements during the training period. Others offer higher than normal commission rates, while still others offer a combination of the two. Continuation of the financing agreement is almost in-

variably contingent on some minimum standard of sales performance. Presuming these standards to be met, the financing agreement may last anywhere from 6 to 36 months and involve monthly payments averaging $300-350.

Before going into the field, the recruit is given preliminary training by his general agent. This may last a day to a week or more. It normally involves assignments and discussions of material in the company training manual dealing with insurance information, the rate book, selling techniques, work habits, and memorizing sales talks. The average recruit makes his first attempt at a sale within two weeks of the signing of his contract. His general agent normally accompanies him on this mission and a few subsequent ones to provide moral support, assistance in closing his sale, and advice on how to proceed in subsequent sales. Subsequent training may be supplemented by attendance at home office or regional schools lasting one to six weeks or more.

The training process and training materials are frequently highly inspirational in tone. To cite but one matter covered, consider the matter of sales to relatives or friends. Sales manuals are quick to recognize and to attempt to destroy a recruit's natural reluctance to attempt this sort of sale. According to one company's manual,

> As a rule, your friends are your best prospects.... The feeling (that you do not want to sell to them) will be erased completely when you become saturated with the greatness of life insurance and what it can do for you and your friends, and have mastered an interesting and friendly selling story.

Another states:

> At the moment, you are probably saying to yourself, "I don't propose to try to sell my friends.' That feeling grows out of the fact that one has not yet caught the full picture of all that life insurance can do for a man. Once you have caught that picture, ... you will feel a responsibility toward them and toward their families that will make you anxious and eager to interview them .... Until you feel strong enough to talk to your friends about life insurance, you are not likely to be strong enough to talk to strangers about it....
>
> You have a very definite responsibility toward your friends. In many cases, men have delayed buying life insurance until it was too late, putting off the solicitations of other underwriters by saying to them, 'My friend, John, is selling life insurance and I'll wait until he talks to me about it....' The friend can hardly be excused for the tragedy and suffering that are likely to follow.

It is not surprising, then, that about 30% of those interviewed in the Survey Research Center study mentioned in Chapter 2 selected the insurance company with which they had placed all or most of their insurance because an agent of the company was a relative or friend.

Agent Specialization: Throughout this chapter, reference has been and will be made to the background, interests, sales methods, and motivations of the "life insurance agent." An implication is present that those who bear this label differ little among themselves --- at least when compared to humanity in general. In some respects, this implication is valid. In others, as has already been suggested, it is one not in accord with the group's actual character. Rather, this implication is one forced by convenience or necessity. Trade statistics rarely differentiate among agents according to the consumer groups in which they operate. When differentiations are made, they are generally based on some criterion of success in the industry --- sales or perseverence being most common. There is a growing body of psychological tests developed to predict the occupational interests and aptitudes of men. When dealing with life insurance, those developed both within and outside of the industry invariably use collections of "successful" agents as criterion groups. No attempts have been made to develop scales predicting success in the various sub-markets for life insurance.

Skills necessary for success differ greatly from one sub-market to another. Ideally, the successful debit agent or specialist in the 20 year endowment ordinary market is an aggressive, verbally skillful, but not overly intelligent individual. He is able to assume a manner at the same time both folksy and slightly superior. He possesses a strong stomach and an unshakable belief in the eternal verity of his value system: Every normal man loves his wife and children. Every normal man therefore either knows of his need for insurance or can readily

be convinced of it. Those who cannot are either Communists or, at the very least, heathens.

For an agent dealing in these markets, the finding of prospects and access to them is a simple matter. Newspaper birth announcements and wedding and engagement notices offer an almost inexhaustible supply of potential buyers. Many of his sales are made on cold canvass --- he rings the doorbell and starts to talk. Unless the television program is very good, few of his prospects will prove unwilling at least to listen:

"Mr. Prospect, I'm Ozzie Smith of the Wild Life of Texas. I hear you folks just had a baby. I just dropped by to congratulate you and get acquainted. I was wondering what you had done about insurance protection for your son"; or

"Mr. Prospect, I'm Ozzie Smith. I represent Honest Abe Industrial Life in this neighborhood. I've heard a lot about you folks. That's why I just stopped by to meet you and see if I couldn't help you plan for the future"; or

"Mr. Prospect, I'm Ozzie Smith, one of your neighbors here in Sunnyview Acres. I just stopped by to welcome you and tell you about a wonderful new plan my company has. It will help you make sure your wife and children will always be able to live in this beautiful new home even if you meet an untimely end."

In the upper reaches of the family protection market or in the jumbo risk and business insurance markets, the agent specializing in these markets has as his primary task creating a need for <u>more</u> insurance in the mind of his prospect. Once this need has been created,

a sale will almost automatically follow. Present consumption plans of upper status buyers are rarely so urgent that some expenditure cannot be deferred for a time.

The agent specializing in lower status markets, however, more often than not must start with fundamentals. While perhaps acceptable, the belief that a need for insurance exists --- at least for agent sold insurance --- very often has not previously been accepted. Even when this belief is present or has been created, causing its effectuation through the purchase of a new policy requires overcoming considerable pressures to consume currently. The point is made at least once at every sales convention that the agent's real competition is not from other agents but rather from the pressures of unwise, short sighted demands for cars, furniture, television sets and vacations.

The most efficient processes for creating demand among lower status prospects differ considerably from those useful among upper status groups. This is particularly true in light of the fact that the typical sale in the debit and ordinary endowment markets is small. The specialist in these markets must make up in numbers for what each sale lacks in size. Since additional calls have little likelihood of increasing the size of the policy bought, getting a sale on the first call is very important. The sales pitch must therefore be simple, fast, and to the point. It must create the belief that the agent has with him the very plan which meets all the prospect's insurance needs --- that there is no point in looking elsewhere. Most important, it must create a feeling of urgency, a belief that to delay is to take the risk

of imminent catastrophe. Preparation for the possibility of death must be made equally as vital as purchasing the new refrigerator.

In lower status markets, presentations for contracts with high savings features are frequently visual. The magic of compound interest and the virtues of thrift are well adapted to graphic and pictorial illustration. Example: "Which of these men are you going to be in 30 years, Mr. Prospect?" The agent turns to the next page in his "Sure-Sale Insured Savings Plan" kit: In the foreground is an old man --- disheveled, alone, obviously forlorn. His ragged collar is turned up against the cold. He is looking toward the right background where a happy elderly couple is waving farewell to their assembled friends from the deck of the good ship SS Secure Retirement.

For plans that emphasize insurance rather than savings features, verbal pictures have to suffice. To repeat, success as a salesman in lower status markets requires a strong stomach or a weak mind --- preferably both. Insofar as generalization is allowed by one personal contact with a lower status agent in operation and study of the sales manuals on which this type of agent trains, sales pitches in the endowment and debit markets are generally compounds of gore and fatalism. Excerpt:

"You're right, the chance that your son will die in the next few years is small. But I believe in God, and if God calls you, your time is up. Just last week, there was a story in the paper about a woman who got killed by lightning in a boat --- did you read that story? --- there were five people in the boat out on the lake. A storm came up

and lightning hit. She got killed and the rest weren't touched. Her number was up, that's all there was to it. In the war, I was in the infantry. I spent 234 days in combat, and didn't get scratched. My number wasn't up then. But tomorrow, my number might be up. You never can tell. I might be walking down the street and a truck might pin me to a tree."

During an hour long sales talk for a juvenile endowment, this same agent discussed at considerable length the high cost of burial for both adults and children, a poliomyelitis epidemic then current in Chicago, and three reputed[1] case histories of child deaths and the medical and burial expenses entailed. Of the three deaths, one was of paralytic polio, one was of neck cancer (but only after several operations), and the third was of pneumonia. He then went on to describe in vivid even though hypothetical detail the death of my wife and then of my son ---first of an unspecified disease, later of pneumonia. "It's not pleasant, I know, but we have to think about these things that can happen. You can never tell when your number might be up." His final triumph had me sick and unable to work, two children dying after prolonged illnesses, and the birthright of an unnumbered group of additional children, all as yet unborn, robbed to provide burial and medical expenses. "Naturally you don't want to take away things that rightfully

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1. "And naturally, if you can take true stories involving well known individuals, your presentation is strengthened greatly because of the background of authenticity. This isn't absolutely essential, particularly if you have a good imagination. However, if you have your choice between a true story and an imagined one, take the true story every time." Mervin L. Lane, How To Sell Life Insurance, New York, Prentice Hall, 1947, p. 167.

belong to your other children." If double counting is allowed, somewhat more than eleven corpses had verbally been laid to rest before the interview terminated. All of them were buried with an assurance that could have been born only of long practice.

By associating aggressiveness and verbal skills with success as a lower status agent, no implication is intended that his upper status counterpart lacks these characteristics. It is true, however, that aggressiveness and verbal pyrotechnics --- particularly the intense stress on funerals and kismet --- are muted if not completely absent from his sales presentation. In further contract, he needs a considerable amount of intelligence or at least of quick wittedness. This is particularly true in finding prospects and even more true in getting them to listen. Perhaps indicative on this score is the fact that an apparently widespread "how to" book in the field devotes 35 pages to prospecting, 115 pages to approaching the prospect, and only about 95 pages to sales presentations and the close, i.e., the interval between the presentation and the hoped for signing of the contract.[1]

As for prospecting itself, requesting referred leads --- suggestions by present clients of people who might be in the market for insurance --- is by far the most highly recommended method for obtaining new customers:

> A. Morandi Bartlett of Boston ... asks policy owners in key positions for names of salesmen of commodities --- salesmen from whom the policy owner buys. This is "powerhouse stuff"

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1. Lane, Op. Cit.

> .... Mr. Bartlett ... goes to see (one of these prospects and) says he is calling at the suggestion of (the prospect's customer). This type of prospecting is so strong, so effective and so very sensible that the problem of "what to say" ... is practically eliminated.[1]

Referred leads may be friends of customers, business associates, relatives, anything --- just so long as "our mutual friend Joe Smith who's often mentioned your name," or words to that effect, can be brought into play in arranging an appointment.

The next most commonly used source of prospects is lists --- lists of all kinds: First, of course, are the old standbys --- wedding, engagement and birth announcements. In addition, Lane suggests inter alia: 1) Sports page listings of tournament winners at local golf clubs (likely to be at least moderately well off; flattered at being singled out for the quality of their games); 2) Authors of letters to the editor in local newspapers and magazines (proud of the appearance of their work); 3) Names of recently promoted businessmen from newspaper financial pages; and 4) Telephone listings of people with the same surname as that of the agent ("I closed a $25,000 policy on the life of a manufacturer who was a complete stranger to me and was afforded much amusement by the fact that we were not related."[2])

Prospecting done --- a name obtained together with as much personal information on it as is conveniently available --- the upper status agent's next problem is getting to see his prospect. According

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1. Ibid., pp. 49-50.
2. Ibid., Chapter 1.

to a Life Insurance Agency Management Association brochure aimed primarily at agents operating in upper status markets, "Actually, the approach is a separate sale in itself. The object of this sale (is) the granting of an interview .... (I)t must arouse interest, create a need, intensify that need, and provide the solution before the prospect will act."[1] To repeat, this preliminary sale is frequently an exceedingly difficult task. The higher a man's income, the more likely he is to have had several recent contacts with life insurance agents. And the more frequent his contacts, the less likely he is to regard another salesman as enjoyable for novelty's sake alone. An upper status agent with very good approach techniques does exceedingly well if he manages to convince 25-50% of his prospects to grant interviews.

Quick thinking is vital for a successful approach. Objections arise all too frequently --- "I don't need any," "I'm too busy now," "I'm not interested," or just plain "no." If these are not met immediately and effectively, the prospect will be lost. Sales manuals offer copious advice both on general approach techniques and on meeting specific objections: "'No' can be met with the inquiry 'Why not?' in answer to which the prospect will invariably hand you a hammer with which you may hit him --- a hammer that will beat him down and enable you to go right ahead to a successful close."[2] "I'm too busy" can be met with:

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1. The Approach as a Sale in Itself, Hartford: LIAMA, 1953, p. 2
2. Lane, Op. Cit., p. 93.

> I ... have an idea which ... I think ... can be of value to you. You can determine that very quickly by your answers to three (or two or four) simple questions.... (I)f after hearing my questions, you still would like to know more about my idea, then perhaps you would prefer that I come back later for a definite appointment.[1]

A multitude of answers have long since been forged to beat down at least the most common objections. The agent's difficulty arises in speedily selecting the one among this multitude most appropriate to the specific objection at hand. Is this objection real, or is it a smoke screen? Should it be met or ignored? Is a "yes but ..." answer called for, or a head on "I don't believe that's correct...."? Success very often hinges on the appropriateness of the choice.

Once an interview has been granted, the nature of the sales presentation depends largely on the characteristics of the prospective client. A man with young children and a $5000-7000 salary is almost automatically slated for a packaged talk on a high minimum whole life policy with a decreasing term rider. This approach is used regardless of the insurance protection he may already possess. It generally entails a graphically illustrated discussion of policy provisions, values, and costs together with an attempt to relate these features to the prospect's presumed needs. The value of the policy as the provider of an income stream is the dominant theme; while mentioned, savings features play a subordinate role.

As is true of people in the industrial and ordinary endowment

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1. m LIAMA, Op. Cit., p. 26.

markets, prospects in the lower reaches of the family protection market have limited cash resources. If a sales is made, the face value involved will be $5000-15,000 no matter how much time and energy the agent expends. That being the case, he has no economic reason to undertake an elaborate analysis to determine the best way of stretching a prospect's limited resources to provide a reasonable income stream to his dependents. In any event, the proferred plan will in most cases meet the prospect's requirements better than anything other than pure term insurance.

When dealing with the upper reaches of the family protection market and with the jumbo risk and business insurance markets, package selling rarely places heavy emphasis on income stream protection. The packages offered generally feature tax avoidance. Policies with substantial savings features are stressed --- retirement income policies, deferred annuities, 5 or 10 pay life contracts and so forth. Normally, however, canned sales presentations are not used in these markets. High status prospects are generally less concerned with the availability of ready cash than with the structure of their portfolios. Therefore the better the selling job --- the more hand tailored the presentation --- the larger the sale is likely to be. This being the case, the selling process frequently extends to two or more interviews. The first of these is devoted primarily to fact gathering --- present financial resources, income, pension plans, family status, and so forth. The second normally involves presentation of the agent's detailed suggestions for additions to the prospect's insurance portfolio. It may also involve a sales talk for these recommendations, or this may be deferred to a subsequent appointment.

Price Quoting and Price Comparing: From the standpoint of the agents involved, the sales interviews on which a large portion of this chapter is based were atypical. All of these interviews involved acceptance on the part of the "prospect" of a need for more insurance. This in itself was unusual, but even more unusual was the heavy stress placed on comparative prices --- a factor which infrequently enters the sales picture even among higher income prospects. This lack of regularity was intentional. While institutional background of interest would have been obtained had the role of a more typically naive prospect been played, this study is primarily concerned with price policy. Structuring the interviews to elicit both arguments in favor of (more) insurance and arguments against the desirability of making price comparisons did not seem desirable. This being the case, it seemed better to sacrifice background for data of more immediate relevance: How do agents handle nascent price competition? How are they affected by comparative prices? Are they likely to exert pressure on company officials responsible for price setting?

Before discussing the data available in answer to these questions, a few words are in order on the nature of the price of life insurance and the way in which prices are compared in the industry. Involving, as it does, indemnification against a contingent event which may occur anywhere from almost immediately to 100 years hence, the typical life insurance contract is an on-going thing. Furthermore, except for one year nonrenewable term insurance --- a contract type rarely issued --- all life insurance policies are joint products. In addi-

tion to providing an indemnity against death and perhaps other contingent events, they provide a planned savings program of considerable magnitude. That an element of arbitrariness be inherent in any comparison of costs and benefits among insurance contracts is therefore inevitable. Viewing it ex ante, a reasonable man would want to know not only the contingent payments required and received under a policy, but also their present values and the probabilities associated with making or receiving them. But opportunity costs and, indeed, even probabilities of death vary considerably from individual to individual.

Valuable as meaningful --- even if arbitrary --- ex ante measures of life insurance prices might be, they are rarely used in the industry. The average life insurance agent never comes closer to using such a measure than, "Expensive, Mr. Prospect? Expensive?! Well, let's look at it this way. If you pay me $216 today and you die tomorrow, your wife and children will get $10,000 --- almost 50 times the total cost of the policy to you. If you were to stop payments 10 years from now, you would have put in around $1700 net, and you could get a paid up policy for $3000. This policy isn't expensive; it's the biggest bargain you'll ever get!"

All of the devices widely used in the industry to compare or to quote prices are ex post concepts. They attempt to answer the general question, "What will the financial position of a buyer be at the end of X years if his policy is still in force and he is still alive?" These measures --- particularly those used in comparing prices --- differ in a number of ways. They are all alike in one respect, how-

ever: None involves an interest accumulation of the insured's premium payments. It is implicitly assumed, that is to say, that the opportunity costs of a buyer are nil --- that the savings component of a premium could not be invested by him to yield a positive rate of return. Since company earnings rates are considerably in excess of 0% a year, the greater the savings component, the greater is the extent to which these measures understate "true" prices. Furthermore, this 0% assumption means that, on any given measure, a company can substantially alter the comparison of its policies to those of a competitor by appropriately juggling policy cash values and dividends.

The measure almost invariably used in quoting prices --- or rather in promoting the belief that life insurance costs are low --- is what is generally referred to as a policy"s "20 year net cost." This is the sum of the policy's premiums less dividends (in the case of participating policies) during the first 20 policy years less the twentieth year cash value. A projection of the company's present dividend scale is almost invariably used in these presentations.[1] Although a host of other measures also come into play, price comparisons are also most frequently made on a projected 20 year net cost basis. These comparisons are normally converted to annual outlay or cost estimates.

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1. The table or graph used in this presentation almost invariably bears a legend to the effect that dividend projections are based on the company's current experience and are not guaranteed. About half the agents interviewed made no reference to this clause. Their statements about expected dividends were unconditional --- they never made an "if present dividend scales remain in effect" qualification. Only one agent qualified all of his statements about dividends in this manner.

Given an unfavorable showing, it is considerably easier for an agent to wave aside a difference of 50¢ or $1 per year per thousand of insurance than one of $10 or $20 over a 20 year period.

By appropriate choice of policies, comparison methods, and time periods, however, it is quite possible for many if not most companies to prove themselves among if not the cheapest. Table 1 illustrates how this might be done by each of seven of the eight largest American companies.[1] It must hastily be added that only the experienced ten year net cost figures actually come from data supplied by a company --- Northwestern Mutual, obviously --- to its agents. That such comparison methods might be used is not at all unlikely, however. Particularly suggestive in this respect was a comment made by a home office agency executive of a large Eastern company:

> Competition in the field mostly affects the young, new agent. He hasn't yet learned to emphasize the service of the company and its financial integrity. To help these agents, we do send out an analysis of net costs and things like that to each general agent. We're sorry to have to do this --- we'd prefer to have the customer buy from us on the basis of service. But since price does enter into sales sometimes, we give these comparisons to our general agents to use with discretion when necessary.

He paused for reflection and then continued with great earnestness:

> You know, I sometimes feel that a little misleading and misrepresentation isn't too bad when it results in protection for some widow or orphan.

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1. Prudential almost invariably ranks second on those scales for which Metropolitan ranks first. On scales where Pru ranks ahead of the Met, however, it is outranked by one or more of the six remaining companies.

Table 1: Price Comparison Measures on Whole Life Policies Issued at Age 35 by the Eight Largest American Companies

Twenty Year Net Cost Illustrations Based on Premium Rates and Dividend Scales in Effect:

January 1, 1955		July 1, 1954		January 1, 1954	
Equitable Society	- $ 7.53	John Hancock	- $ 5.86	New York Life	- $ 1.35
John Hancock	- 5.87	New York Life	- 1.35	John Hancock	8.15
New York Life	- 1.35	Northwestern Mutual	12.83	Northwestern Mutual	12.83
Northwestern Mutual	- 0.20	Metropolitan *	14.02	Metropolitan *	14.02
Metropolitan *	14.02	Prudential *	17.06	Prudential *	17.06
Prudential *	17.06	Equitable	39.37	Equitable	39.37
Aetna **	61.50	Aetna **	61.50	Aetna **	61.50
Travelers **	61.50	Travelers **	61.50	Travelers **	61.50

Experienced 20 Year Net Cost on a Policy Issued in 1935 Which Includes Disability Premium Waiver Benefit		Guaranteed 20 Year Net Cost for a Policy Including Disability Premium Waiver Benefit: January 1, 1955 rates		Experienced 10 Year Net Cost for a $1000 Policy Issued in 1945	
Metropolitan	$ 6.36	Aetna	$61.50	Northwestern Mutual	$44.75
Prudential	31.75	Travelers	61.50	Metropolitan *	59.64
John Hancock	69.00	Equitable	114.61	Equitable	69.10
Northwestern Mutual	79.66	New York Life	116.80	John Hancock	69.49
New York Life	80.81	Prudential	125.00	Aetna	70.94
Equitable	87.56	Metropolitan	133.00	Prudential *	77.50
Travelers **	108.75	John Hancock	151.57	New York Life	77.62
Aetna **	109.35	Northwestern	186.88	Travelers ***	100.89

* Includes disability premium waiver provision without extra cost.
** Nonparticipating policy; includes disability premium waiver provision without extra cost.
*** Nonparticipating policy.

The first three tables --- those favoring the Equitable Society, John Hancock, and New York Life --- simply illustrate the advantage of being the most recent company to have altered dividend scales at a time of rising earnings and falling mortality. The Equitable's substantial improvement stems directly for its being among the last major companies to hold out against issuing special high minimum policies. In August 1954, it finally succumbed to "competitive pressures." The January and July 1954 figures are based on its $1000 minimum whole life contract. Metropolitan and Prudential compare unfavorably partly because all of their contracts involve an automatic premium waiver if a policyholder becomes totally and permanently disabled prior to age 65. This benefit is optional with each of the four top companies on the first scale. For them, the extra premium involved is not included in the illustrations. These comments about the disability premium waiver also apply to the Aetna and Travelers policies. In addition, both of these contracts are non-participating --- a feature which inevitably produces poor net cost comparisons.

Metropolitan and Prudential come out well on the fourth scale for a combination of reasons. While their DPW benefits cease at age 65, their premiums are level throughout the lives of their contracts. When this benefit is an optional feature, however, both premium and benefit cease at age 65. Then too, the top three companies on this scale --- these two and John Hancock --- are the only firms listed which issued high minimum policies in 1935. Their policies all had $5000 minima. Those of the remaining companies were issued down to

$1000. Finally, the considerable difference between the Met and the Pru also arises from a combination of causes. Meaningful comparison methods generally show the former to be a cheaper company from which to buy than the latter. Furthermore, the Met's policy is a straight whole life contract, while that of the Pru is a so-called "modified 3" policy --- during the first three contract years, it involves a premium which is only 85% of the ultimate gross premium.

In comparing participating and non-participating contracts, the standard sales pitch of a stock company agent runs somewhat as follows: "With a so-called participating policy, the company charges you more and pays back part of your premium as a dividend. It all comes out the same in the end. And if things go bad for them, they can always cut their dividends. But our premiums are guaranteed. They can't go any higher." Whether any stock company backs up this sort of comparison by publishing "guaranteed net cost" comparisons isn't known. They well might, however.

The low prices charged by Northwestern Mutual have long been a subject of rueful contemplation by its competitors. With the almost universal adoption in recent years of high minimum "special" contracts having steeply tilted dividend scales, the company's price advantage has tended to become somewhat obscure. Northwestern has steadfastly refused to issue a policy with a minimum higher than $1000. It is only natural, therefore, that it should compare its $1000 minimum policy not with the cheapest policies issued by its competitors but rather with their $1000 minimum contracts.

Price in the Selling Process: When faced by nascent ("Before deciding, I want to talk with some other companies,") or actual ("This is what the agent from ... told me") price competition, the life insurance agent has two alternatives. On the one hand, he can attempt to meet it head on using whatever comparison tables his company may provide. On the other, he can try to avoid the issue through any one of a number of dodges. Considerable evidence is available suggesting the latter alternative to be far more frequently preferred. During its investigation of legal reserve life insurance companies, the Temporary National Economic Committee staff collected a considerable number of then current training manuals. With but few exceptions --- notably that of the Northwestern Mutual --- Gesell and Howe[1] found that these manuals strongly discouraged agents from taking the initiative in bringing price comparisons into a sales talk. The tenor of these admonitions were of two sorts: either 1) if you disparage other companies, prospects are more likely to attempt to learn from other agents what's wrong with your company, or 2) life insurance is too dignified a thing to be sold "as a mere commodity."

Some companies limited themselves to these general admonitions while others went on to provide specific techniques for handling prospects who insisted on making price comparisons before buying. Summarized,

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1. Gerhard A. Gesell and Ernest J. Howe in Study of Legal Reserve Life Insurance, TNEC Monograph 28, Washington: GPO, 1941, fn. p. 235 quote a Northwestern Mutual training manual as saying, "The important thing to realize ... is that competition is not an unmitigated curse, as the comments of some agents would lead us to think. It is not a curse at all. Active competition stimulates public interest and increases the sale of the best products."

one such technique suggested by the Travelers ran: I know what you mean, Mr. Prospect. If I were in your position, I'd probably want to be sure before I bought too. But even if you were only to get proposals from the 25 or 30 largest of the 300 or so companies writing life insurance in this country, it would take you several months. "During that time your insurability might change on account of a neglected cold, sudden illness or an accident.... Don't take a chance on becoming uninsurable while making this study of other companies' proposals. Let me have your check for the first premium on this contract. That will put the plan in force immediately."[1] Guardian Life suggested:

> Mr. Prospect, life insurance is not a commodity that can be bought at different prices at different stores. Life insurance is a service. All companies use the same or very similar tables in figuring actual rates for protection. You will get only what you pay for in every company. No company can give you greater protection for your money than another.

or alternatively:

> We get in this world, Mr. Prospect, just what we put into it and no more. All old line life insurance companies are on practically the same net cost basis. It stands to reason that with competition as keen as it is today one company cannot give you the same thing for less money than you get it elsewhere. If this were the case, the low cost company would soon be getting all the business.[2]

Material on meeting price objections is surprisingly scanty in present day training literature --- considerably less prominent than

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1. Ibid., p. 237.
2. Ibid.

it appears to have been 20 years ago. Most manuals, however, continue to admonish their agents not to knock other companies. On this point, one company says:

> Be fair with your competitors --- recognize that other life underwriters are also working toward great goals.... If you encounter competition, make your sale on the basis of superior service, not on the basis of knocking others.... Whenever a life insurance man casts doubt on another underwriter's motives, he casts doubt on all life underwriters.
>
> Most of your competition will be from the world outside of life insurance; the competition for the dollars of your prospect by the tug of the new car, the pull of a vacation, the longing for luxuries. You will seldom find yourself in competition with other underwriters. But when you do, be big. Tell the prospect that "Mr. So and So" is a good underwriter and that his company is a good company. All men respect fairness in others. Build for yourself the kind of reputation that will enable you forever and a day to meet every fellow underwriter on an honorable basis.

while another claims:

> The new salesman is sometimes tempted to believe that life insurance is sold in competition with other insurance companies. The truth of the matter is that real competition is not so much between companies as between appeals for the buyers' dollars.
>
> Since all legal reserve companies operate on identical principles in so far as the fundamentals are concerned, any attempt to disturb the prospect's confidence in his life insurance companies will reflect on his confidence in the soundness of the business as a whole. We are living in the same house. Even though we feel that the particular room in which we are living is by far the most attractive and livable room in the house, that belief should not lead us to tear down the walls in the other rooms.

Had a regular agent employing life insurance company been used as a nascent competitor, the pressures on the agent interviewed

to avoid direct price comparisons would have been somewhat smaller. Teachers Insurance and Annuity Association, the company which was used, presents obstacles not normally encountered. Since it has no agency force, its prices are generally considerably lower than those of any agent employing concern. The only TIAA price data available to agents cover a ten year period --- the company does not publicize its current dividend scales for more than the first ten years. Since commissions to agents are particularly high in these early years, 10 year comparisons are even more unfavorable to commercial companies than the more frequently used 20 year illustrations.

At the same time, however, a few characteristics of Teachers' pricing procedures can be put to good advantage by an agent willing to indulge in some mild misrepresentation or to commit a few errors of omission. The company is one of that small minority which includes a disability premium waiver benefit in its basic premiums. In addition, all of the company's contracts are, for technical reasons, written on a nonparticipating basis. In the Flitcraft Compend, one of the two price compendia most widely used in the industry, the table of TIAA rates is headed, "NON-PAR. PREMIUMS (CSO $2\frac{1}{4}\%$) PER $1000 --- SINCE JAN. 1, 1948." It is possible to infer that the company's contracts are actually if not nominally participating only from a note in small type at the bottom of the page reading "Dividend Scale: Decreased in 1932; increased 1935; ...."[1] No information on actual dividends is given --- the Compend's

1. Flitcraft Compend, 1954, p. 539.

standard treatment of companies in TIAA's general size class. The other widely used compendium, the Unique Manual, heads its table of TIAA rates with "PREMIUM RATES PER $1000 (Non-Participating; Divs. Voluntary)."[1] In addition, it contains brief ten year net cost illustrations for ordinary life and 10 year term contracts. If TIAA rates were nonparticipating in fact as well as in name, the company's policies would be no bargain. While its gross premiums are somewhat below those of most large mutual companies, they are somewhat above the nonparticipating premiums of the major stock concerns. Thus, if an agent normally attempts to meet price competition head on and is willing to indulge in a modicum of dishonesty, TIAA does not present insurmountable obstacles to using his regular routines.

In discussing the industrial market in Chapter 2, reference was made to a comment by a home office executive in a large combination company. According to him, industrial agents so rarely meet price competition that they are never trained to cope with it. This being the case, the rare debit agent who does run into it is likely to be so overwhelmed that he will give up without a fight. Much the same sort of reaction might be expected of those who specialize in the endowment ordinary market. During the course of this study, only two contacts --- one very brief --- were made with this sort of specialist. Such a limited sample is unquestionably incapable of sustaining generalization. Nonetheless, both agents exhibited the expected reaction --- collapse in the face of competition with TIAA. One telephoned, extended congratulations on the birth of my son, and expressed a desire to talk about in-

1. Unique Manual, 1955, p. 598.

surance plans with his father. Willingness was expressed together with the intention of checking TIAA prices. "Oh," he replied, "that's a very good company. Thanks for your trouble. Good night." The second agent --- the one quoted at length above --- also allowed as how TIAA was a very fine organization. "It's a bargain like GI insurance and some deal the doctors have. You just can't beat it. But," he continued, "they don't sell insurance to children, do they? I'd like to talk to you about that."

Specialists in the family protection market generally met the TIAA threat with claims --- sometimes substantiated with data, more frequently not --- that price differences among good companies are insignificant when placed alongside the services to be rendered by the chosen agent. The nature of these services generally remained unspecified, however. Increases in apparent agent status seemed to be associated with increasing emphasis on the importance of these unidentified services.

The assertion that such inter-company price differences as exist are small seemed to represent a genuinely held belief of these upper status salesmen. Casual statements concerning the magnitude of price differences were vigorously contradicted even by those agents who knew the purpose of this study and who were neither trying nor hoping for a sale. In part, this was a matter of the difference in dimensions used in making comparisons. Fifty cents per thousand per year does seem smaller than $100 over a twenty year period on a $10,000 policy. Something more was involved, however. All of these men appeared to

have accepted their companies' price comparison sheets without question.

Even the endowment ordinary agent did not appear visibly shaken to discover that TIAA 20 year term net premiums at young ages were less than half those charged by his company. College personnel were simply blessed with a good deal. That the relationship between the TIAA "deal" and his company's prices might pose serious questions about the reasonableness of the latter apparently did not occur to him. Indeed, he went on to maintain that his firm compared favorably with any of the industry's leading companies --- a claim patently at variance with the facts.

To repeat, the characteristic response of industrial and endowment ordinary agents to price competition appears to be utter collapse. The methods their upper status counterparts use to combat it are perhaps best illustrated by reference to a few actual interviews. The first of these is quoted less for its typicality than for its perfection. Of those interviewed, the agent involved was by far the most accomplished craftsman. He managed with great effectiveness to ring in almost all the arguments used by one or another of his fellows to convince a prospect that he need search no further for an insurer. Summarized, the relevant portions of this conversation ran somewhat as follows:

"Yes, but as I told you, before I make a definite decision, I want to do some figuring of my own and some checking with TIAA."

"Oh, yes, we were going to look into that, weren't we?"

He thereupon produced a copy of the Unique Manual for 1953. Whether this was the latest volume available to him or was chosen by de-

sign is a moot point. It was, at any rate, a most fortunate choice. TIAA substantially revised its dividend scales in early 1954 for the first time in five years. After finding the TIAA rates he commented, "You know, it's difficult to make comparisons between the two companies. We write our plans on a different basis. Our policies are participating while theirs are nonparticipating."

"Oh," with innocent surprise, "they don't pay dividends?"

"Well yes, they do, but ...." The tenor of the remarks that followed was that the TIAA dividends were somehow of a lower order than those of his company. Participating policies have to pay dividends. Since TIAA's contracts were written on a nonparticipating basis, the company wasn't required to pay dividends if it didn't want to.

He then referred to the Manual's ten year net cost illustrations, and did some interpolating between the values shown to come out with an appropriate estimate. That considerable conceptual and logical difficulties were involved in this process was apparent from the look of concentration on his face and the half muttered phrases, "Now let's see.... That would mean.... Yes, that's about right." Finally looking up from his scratch pad, he said, "As nearly as I can figure it --- they don't publish a figure for age 27 here --- their 10 year net cost would be around $2.34 a thousand. That compares with ... (pause to consult his current rate book) with $2.95 for our policy." There was a brief pause for reflection by both parties, then, "So you see, there isn't a great deal of difference."

That the basic TIAA premium includes a disability premium

waiver while his company includes this feature only at an extra premium of 45¢ per thousand per year was not mentioned. That the figures cited were average annual rates and not totals for ten years was also not made explicit.

After a further pause for reflection, he continued, "There are 1,060 companies selling life insurance in this country as of the beginning of the year. Someone who knows how to use this book (pointing) can learn quite a bit about all of the 60 or so companies which you might like to deal with. The ... is one of them; so is TIAA. It stands to reason that TIAA just couldn't be so much cheaper than the rest of these companies or else all of the college faculty would be insured with them --- and they're not."

"Maybe that's because they don't know about it."

"I don't think so. I've sold insurance to a considerable number of people on the faculty and almost every one has pulled out a TIAA rate card --- they all knew about it.

"It's true that TIAA doesn't pay commissions to agents, but agents don't get commissions for nothing --- they get them for the services they render. If TIAA renders these services at all, it has to do it by mail. That certainly isn't as satisfactory as having a person to person discussion with the client. I'm sure they do attempt to render some services, but this must cost them something. And the company's administrative expenses and earnings should be about the same --- they both fall under the regulation of the New York Insurance Commission and therefore have to be about the same." Another pause for reflection and

then, benevolently, "You look a little uncertain."

"Well, yes. After all, TIAA doesn't pay commissions, and I understood that commissions amount to well over half the administrative costs of companies."

"Oh no, not that much. Over twenty years, they amount to roughly one annual premium. Yes, that's right, exactly one annual premium --- about $20. How much would TIAA's services cost them? Half maybe? At least that I should think. So it reduces to about 50¢ a year. Are my services worth that much?" Pause, and then with modesty, "I honestly think so. There are a great many things I can help you with. For example, have you changed the beneficiary on your GI insurance? How about trustees? What do you know about contingent life trusts? How about your insurance program? Just what do you want to accomplish? These are the problems I've been trained to help solve."

"Yes, I see," and now with some slight desperation, "but still, just for my own peace of mind, I'd like to check with TIAA."

Sensing that he had struck a tender spot, he drove in for the kill. "Why not let me do that? There'd be no obligation, of course. After all, it's my business --- what I enjoy doing, what I'm qualified to do." There followed a further discussion of the insurance program needed --- clean up funds, educational funds for the children, and basically, of course, an income stream to the wife. Of course, you don't want her to be dependent on her children. Now how much of this do you want? Do you want to add anything? Take anything out? How much do you want to provide her?"

By this time, it was barely possible to subdue the tone of desperation. "Honestly, I'm just not sure at the moment." Then with more courage, "Really, I wouldn't want to put you to any trouble, because if I find that TIAA is substantially cheaper, I'll buy from TIAA regardless. I'd feel guilty about having put you to all that trouble, but I'd still buy from them."

Sensing that his prey had eluded him, at least for the time being, he backed off. "Oh, no trouble at all. That's my job. But do whatever checking you want to do. And if I can be of service, don't hesitate to call on me. Whether you buy from me or from TIAA, I'd be happy to be of service --- honestly. After all, life is not bread alone, you know. (This last with just the proper shade of sincerity and self deprecation.) I'd be particularly happy to get questions of beneficiaries straightened out if you'd like me to." The interview terminated shortly thereafter.

Two additional interviews deserve mention not because of their representativeness, but because of the elements of atypicality present. As has already been mentioned, it is a cardinal rule in almost all training manuals that other companies and agents are not to be vilified. This principle was honored scrupulously by almost all of the agents contacted. When TIAA entered the discussion, one agent did, however, attempt to deal with his competition by traducing it. He didn't know much about the company, he allowed, but it's probably "like one of these fraternal organizations." They sometimes offer low cost insurance, but you have to be careful with the provisions of their policies. Some

of them pay dividends but won't give them to you until you die; some of them don't even pay cash values. And generally, you can't buy more than $10,000 or so from them. Furthermore, it's safer to buy from a large company such as his. Most insurance companies are safe, of course. But every so often.... At this point, he produced a clipping which traced the career of a man who had once been convicted of embezzlement and was now president of a small casualty company.

This agent appeared to be unique in at least one other respect --- his lack of emotional involvement in his work. After making his sales pitch, he talked with considerable frankness of his career in the life insurance industry. After several years as an architectural draftsman, he had decided to go into sales work. This decision was prompted largely by the fact that, as a youth, he had spent a few summers working with a traveling team of magazine subscription salesmen and had enjoyed the work very much. He settled on life insurance selling only after looking into the opportunities in a number of other lines. His choice was prompted by economic --- not altruistic --- considerations. The fact that renewal commissions are paid made this occupation unique. Even if you don't make a sale for weeks, you always have your renewals to fall back on. The bases of his choice of company were equally economic. Because of its size and prominence, he anticipated that overcoming the nostility of some of his prospects would prove easier. Furthermore, the company didn't object to his brokerage activities.

At the same time, however, being an agent for a large New York

company had its disadvantages. It's so big that you're continually running into competition with other of its agents. When this happens with another company, you can always say, "But you haven't heard about what we have to offer." There's not much you can do, though, in competition with one of your own men. And then, too, commissions are low. As a result, he was seriously thinking of transferring his allegiance to a non-New York firm --- Franklin Life.

A Northwestern Mutual representative exemplified the opposite extreme of emotional involvement. The interview in question was also somewhat unique in that the agent involved attempted to meet a price issue --- although not the one raised --- head on:

"Yes. Well, there's no question but what that's a good company.... The main difference between TI and A and the Northwestern is that we are strictly on our own and we have built up these wonderful results without any subsidation (sic) or anything of that type like they had originally.... They operate with no agents which --- maybe it's a savings, but on the other hand, if there wasn't room in the insurance business for an agent then a lot of us are wasting our time. Because a lot of my work is service, not selling... I hire a girl full time and pay her pretty good wages just to help me service my policyholders and there's a great deal of service to be done, I can assure you that.... In competition with the other good companies, of which there are a good many, we certainly have arrived at a very low cost type of insurance." He then displayed an expanded table of the sort listed for Northwestern in Table I above. "This is, I think, quite a

fair comparison of actual costs over the past ten years from 1945 to 55 and this is published not by us but we buy it from the Flitcraft people who publish ... the Flitcraft Compend (showing his copy) which is just all the insurance companies in here with cash values and everything on them. TI and A is in here, but there's so little about them that it's hard to make comparisons ... because I don't know what the dividends are ... but the point is that in competition with many of these top companies, as you can see, ... as far back as you can go, the Northwestern has the enviable number one ranking on what they've done over a ten year period."

A question was asked here concerning whether the comparison table under scrutiny included high minimum contracts.

"Well, uh, I'll tell you this, that uh, you mean these $10,000 specials and so forth. Well, my way of looking at it is this.... That's something that has been in the business for a very short period of time[1] .... It's a sort of a merchandizing scheme ... to make people feel that they are getting more for their money than they would otherwise. Now there are some savings, of course, in writing a $10,000 policy as against 10 ones, ... but (for) most of the companies writing that now --- and there aren't very many of them --- it's just a sales leader. We've been able to hold our own ... in competition with companies that do write these special policies because ... in many cases they're not the best policies because they have some things taken out of them --- cash values and things like that. I know here a year or so ago one of our men in the home office made some studies of these policies and we've

1. The Metropolitan issued the first "special" in 1909.

got some stuff from one of them. One of the companies is New York Life." He then produced a comparison with the NYLIC special at a young age of issue. It showed Northwestern to have far lower 1, 5, and 10 year net costs and a slightly lower 20 year net cost even with a substantial surrender dividend included in the NYLIC illustration.

"Well, we aren't concerned about competing with those companies even with their special policies.... Now another thing is, if they show a reduction in cost in a $10,000 policy, well, what's to stop them a few years from now from bringing out a $25,000 special and giving some of those fellows a break that the $10,000 boys don't get ... But .... if it's accepted by the insurance industry and the commissioners approve of it, ... we have a higher average case than almost any company --- there's no reason why we couldn't do it too. But I think that our company feels that maybe these fellows that can only buy 3 or 4 thousand need a bigger break on costs than the fellows that can buy $10,000 policies --- maybe need it more, and we want their business because if they're buying threes or fives now, if we get them started with us, they may be buying their tens and twenties from us ten years from now."

Throughout this portion of the interview, he appeared far more concerned with defending the ethical soundness of his company's pricing procedures than with convincing his prospect that Northwestern was the best company from which to buy.

Price and the Agent: The number of agents interviewed during this study was of necessity limited. Even if a considerably larger group had been contacted, the verity of statements on so touchy a matter as reactions to intercompany price comparisons would have been suspect. Nonetheless, the agents contacted were, whenever possible, queried on the frequency with which prospects raised price comparison objections, reactions to price comparisons, views of company price and other policies, and similar matters. Some quite revealing comments were elicited. Fortunately, it was also possible to draw on other material to supplement these interviews.

Clinical psychologists have developed a considerable body of tests aimed at determining personality orientations, the existence of psychological disorders, and occupational interests. Sufficient time, financial resources, and subjects were not available to allow intensive use of these tests. However, one of them, the Strong "Vocational Interest Blank," has been scored specifically for life insurance agents.

The person being tested with the "Strong" is asked to check "like," "indifferent," or "dislike" for each of 400 items. These items consist of the work done in 100 occupations (actor, advertiser, ... worker in YMCA); 36 school subjects (algebra, agriculture, ... zoology); 48 types of amusement (golf, fishing, conventions, "Time," making a radio set); 48 activities (repairing a clock, teaching children, saving money); and so forth. The test has been scored by comparing the responses of a group of "men in general" with those of successful practitioners of given occupations. The scores are based on the relative

frequencies with which individual responses were checked. Thus, if 80% of the criterion group of life insurance agents had checked "like" for "conventions" as compared to only 60% of the men in general, a score of "2" would have been assigned this response on the life insurance agent scoring key; if 10% of the life insurance agents but 20% of the men in general had indicated dislike of "fashionably dressed people," a scoring key value of "-1" would have resulted; and so forth.[1]

Copies of the Strong blank were marked to indicate those responses scored positively by the keys for life insurance agent and real estate agent --- the only other selling occupation for which a scoring key is available. Without revealing the occupational groups giving rise to these responses, the marked blanks were given to a panel of eight clinical and three social psychologists. All were asked roughly the following questions: "Suppose these responses were given by an individual taking the test. What can you say about his personality? In particular, how personally involved is he in his work? What are his relations with his work peer group and his superiors like? How does he differ in this respect from this individual (the real estate agent)?"

After members of the panel had responded dto these questions, two additional answers were requested if they had not already been given spontaneously: "How important is it to them to have congenial office associates?" and, "If they were selling something, how would they feel about passing off what they felt to be an inferior product? About selling something which they felt their customers could get for less from some other source?"

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1. See Edward K. Strong, Jr., Vocational Interests of Men,and Women, Stanford, Stanford Univ. Press, 1943, Chapter 5, for scoring methods. A facsimile of the blank used appears following page 726.

Even to the untutored mind, these scoring keys reveal a number of very clear preference patterns. Naturally, both life insurance and real estate agents strongly prefer occupations and activities which stress personal interactions. Both groups strongly dislike occupations and activities which involve detailed or routine work, particularly when done in isolation from people. Both dislike creative activities. The life insurance agent and, to a lesser extent, his real estate counterpart, tend positively to emphasize activities involving power and authority over people. The life insurance agent, but not the real estate agent shows some positive feelings toward both altruistic and exhibitionistic activities --- giving first aid, organizing charities, leading cheers, being an actor, and so forth. The real estate agent uniformly rejects artistic and literary pursuits; the life insurance agent does not.

The panel members showed a surprisingly high degree of uniformity not only in their enumeration of these preference patterns but also in the personality sketches they drew from them. In describing the life insurance agent's personality and contrasting it with that of the real estate agent, the consensus ran somewhat as follows:

They're very likely salesmen.[1] At any rate, they're both in occupations demanding considerable verbal skills. They both have much

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1. Most of the clinicians ---even those not familiar with the Strong --- came very close to identifying the groups correctly. How much of this group portrait is based on stereotypes rather than clinical evaluation is therefore, to a certain extent, a moot point.

Willie Loman and George Babbit in them. Their value systems are rigid, narrow, and probably somewhat inconsistent. A (the life insurance salesman) considers himself to be progressive, liberal. Both have definite ideas on what is right and what wrong. Both are extremely intolerant of people with views that diverge from those of the grade A all-American boy. They have the same pathology, but B (the real estate salesman) carries it to an extreme. If A is a salesman, he probably sells things which involve a continuity of customer-client relations --- insurance, stocks and bonds. B sells automobiles or cemetery plots --- his sales are all single shot affairs.

Both appear to be extremely dependent, extremely passive. That is to say, neither has a strong system of internal rewards. Gratification can only come from external sources --- they need to be loved by others, fed by others. And this external gratification must be constantly renewed. So inwardly they're raging --- they can't find anyone to sit around feeding them all day. They both go to extremes to deny this basic insecurity. The process of selling provides them with a means of proving their worth. Through it, they can demonstrate their powers over others. By forcing the client to buy, they force him to admit their worth.

Two parenthetical notes are perhaps in order here. In substantiation of the "passivity" characterization, the nature of the typical new agent's contact with the industry should once more be noted. Rarely does the prospective salesman take an active role in this process. He is, rather, contacted --- recruited --- by the industry.

Someone tells him that he would like life insurance selling and he agrees. He does not independently arrive at this judgement and thereupon seek the business out. Secondly, comments to the effect that fits of depression were occupational hazards were common among those agents with whom sufficient rapport was established to elicit feelings concerning their work. Examples: "You can go for weeks without a sale, and boy does that make you feel low." "It's wonderful what an easy sale can do for you sometimes."

Both of them, then, are continually striving for power over others. But they strive in different ways. B simply wants to conquer --- clients, fellow salesmen, the boss, everyone. He's more overtly, more predatorily competitive, a lone wolf, a shyster --- he'll do anything to come out on top. Making the sale transcends all else. Actually, he's afraid of being in a position of control, of being out there in front of people --- he's afraid he'll fall down, afraid he'll get caught. His insecurity is greater --- and his denial of it far stronger --- than is A's.

A is more civilized. He has a better cultural veneer. He likes to compete, to excel, but likes to think of his competition as being for sport, not for blood. He's more sensitive to people's feelings, less manipulative, less aggressive. He likes to think of himself as performing an altruistic service. His ego ideal is that of being a real pillar of society. He strives to satisfy his need for power more through applause and gratitude than through naked force. He attempts to convert his business dealings into personal relationships.

Whereas B likes to create his domination of people by himself, A can successfully dominate only if he has a considerable number of status props. He likes to deal with those he feels to be in positions of dependence, people of whom he feels he has the right to demand they buy, people with whom he can become affectively involved. Whereas B is afraid of responsibility, A craves some types of managerial authority. He wants to manage people, particularly when his control is non-economic. He would like being an athletic director, a clergyman, a president of a club. He likes to be sitting there, having people come to him with problems he can solve. Whereas B is a lone wolf, A would be likely to seek and to find gratification in a bureaucracy. He likes to play boundary roles --- to deal with individuals as a representative of a bureaucracy, of a system. And he particularly likes to play these roles when he is able to deal from a position of strength --- preferably moral strength.

Among panel members, the only serious divergence of opinion occurred in response to the question of relationships between life insurance agents and their work peer groups. According to one clinician, both A and B would be nasty and authoritarian to their subordinates; fawning and obsequious to their superiors. In dealing with peer groups, he continued, A would suffer from an approach-avoidance conflict --- he would like to become more friendly with them, but he would fear their excelling him, fear their advancing over him in the hiearchy. According to another, however, A, as a boss, would be a real "one of the guys" types. He'd be wonderful handing out gold watches to elderly

employees with 50 years service in the company.

With respect to the life insurance agent's relations with his superior, however, there was a considerable degree of unanimity. All but one panel member felt that, for one reason or another, the agent's satisfaction with his job, even his choice of work group would be dependent on the character of the boss. According to one panelist, A would particularly desire "fairness" in his boss. He would continually seek opportunities to show his boss what he really can do. His most frequent complaint would be that the boss doesn't appreciate him, doesn't realize all of his problems, all of the bad luck he has faced, doesn't understand how hard he really tries.

If this is, in fact, the case --- that life insurance agents are more deeply concerned with the characteristics of their superiors than are members of most occupational groups --- it affords some explanation of the surprisingly high degree of continuity firms appear to exhibit in clientele characteristics. While agents come and go, the general agent or branch office manager is a permanent fixture. He attains his office only after several years as a successful salesman, and generally does not leave it except for death, retirement, or promotion within the company hierarchy. If sympathy and understanding are important to the recruit, it is difficult to conceive of him finding it in a general agent with a background vastly different from his. That a potential upper status agent, for example, could find solace in dealing with a graduate of the gore-and-kismet, if-they-seem-reluctant-to-buy-take-revenge-by-(verbally)-killing-off-their-family school of salesman-

ship seems highly doubtful.

Particularly important for the purposes of this study was the high degree of unanimity among panelists concerning the feelings of agents toward their product. B, the consensus ran, would sell anything regardless of his personal feelings toward it. The conquest, the money --- these are the important things. Who cares whether it's good or not? A, on the other hand, has a considerable emotional involvement with his product. He's comfortable selling only when dealing from a position of strength, only when he's able to feel he's doing his customers a favor. He likes to think of himself as a good guy --- he's not basically a hypocrite. The notion that he was palming something off would be repugnant to him. Most of the panelists made one very strong proviso to their comments on this score, however. Convincing an agent that he's selling an inferior product is not easily done. The life insurance agent finds it easy to fool himself, easy to convince himself that he's doing the right thing.

The agents interviewed offer a not inconsiderable amount of substantiation for these conclusions. Only one of them could definitely be classified as regarding life insurance selling as simply an occupation. Other of his responses rather clearly placed him on the magazine, automobile, cemetery plot end of the salesman personality continuum. Most of the remaining respondents did exhibit varying degrees of emotional involvement with the industry and, in particular, with their companies. The Northwestern Mutual agent quoted at length above was unquestionably the most deeply involved, but others were not far behind.

The comments of several agents --- particularly those of the endowment ordinary specialist --- serve to substantiate the conclusion that it is difficult to convince a life insurance agent that he is selling an inferior product. However, as will be discussed in Chapter 5, the opportunities to develop this conviction have improved considerably in recent years. It seems clear that, once developed in the mind of a salesman, this belief might well have disastrous consequences. Once convinced of the inferiority of his company's product, an agent would be strongly tempted to join a company with a better deal or to leave the business. True, he has strong reasons for not doing this. Leaving his company would, in general, entail a considerable loss of renewal commissions. He'd stay put, but reluctantly. His new found conviction would cause him to anticipate rejections. A considerable amount of his effectiveness would be lost.

Only one clear example of this sort of disaffection developed during the course of the agent interviews. In discussing the New York Life change a few months after its inception, one agent respondent complained rather bitterly, "Our dividends look pretty good during the first few years, but boy, after 10 or 15 years the dividends they pay! I don't see why we can't pay higher dividends, too. we've got all that surplus. Oh, well. I'm just an agent, I suppose." His company's sales have been slipping in recent years. A lack of care in convincing its agent os the superiority of its products may very well be the cause.

Chapter 4

Life Insurance Regulation: Pricing and Selling

That the writing of insurance is a business affected with the public interest is not a belief of recent origin. As early as 1523, the city magistrates of Florence vested considerable powers over insurance in a body of commissioners.[1] In this country, state legislatures began to enact passive regulatory laws --- requirements that financial statements be publicized and centrally filed --- in the first decade of the nineteenth century. The vesting in regulatory bodies of control over insurers dates from about 1850.[2] Today, each of the United States empowers an individual or board to supervise the affairs of insurance companies operating inside its borders.

Within his narrow purview, the insurance commissioner is a man of considerable power. At periodic intervals, he must satisfy himself as to the financial soundness of each company under his jurisdiction. He has at least some control over the wording of policy forms, the charges made for these contracts, the way in which they are sold, and the way in which claims arising from them are paid. While the bases of his judgements are nominally prescribed by statute, insurance laws

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1. Edwin W. Patterson, The Insurance Commissioner in the United States, Cambridge: Harvard, 1926, p. 515. The introductory portions of this chapter borrow heavily from chapters 5 and 6 of this study.
2. Ibid., pp. 525, 534.

are rarely so precisely worded as to make these judgements perfunctory. Much more frequently than not, the phrase "which in the judgement of the superintendent is reasonably necessary to protect the interest of the people of this state" or words to that effect is all that guides the commissioner in determining right from wrong. In arriving at his judgements, the commissioner normally has power to write what amount to his own search warrants when and where he pleases. The laws of most states grant him free access to books, papers, records, and so forth of the companies under his jurisdiction. They also frequently subject company officers to drastic penalties for failure to furnish whatever documents the commissioner deems necessary to the performance of his duties.

In enforcing his judgements, the commissioner has one overwhelmingly important weapon: His is the power to determine whether an insurer ahd each of its agents may commence to do business in his state and continue to transact it once established. His decisions are, of course, subject to judicial review and, quite frequently, to some amount of control by other state officials --- most frequently the attorney general. But court tests of a commissioner's decisions are not too frequent --- surprisingly infrequent, in fact, considering the vagueness with which most statutes are worded. Recently, the New York Department has been involved as middle man in a number of cases brought by old line fire and casualty companies against the premiums charged by cut rate mutuals and direct writers. Aside from these, its judgements have been subjected to court tests only three times in the past five years.

A full study of the regulatory powers possessed by state insurance departments and the exercise of them is far beyond the scope of this study. So, too, is a complete analysis of their control of life insurance companies. This chapter purports only to treat the controls available to and exerted by insurance departments over the relations between buyers and sellers of life insurance --- a study of the insurance department's role in determining the rules of the marketing game and the price of what the buyer buys.

What may seem undue emphasis is placed on the New York Insurance Department. This is justifiable on several grounds, not the least of which is the fact that all this writer's personal contacts with insurance regulatory bodies are with members or former members of that department's staff. New York's Insurance Department is by far the largest, best financed, and --- it would probably be admitted by most if not all other departments --- the most able in the country. Patterson cites the fact that, in 1919, insurance regulation cost all of the states about $1.8 million. Of this, just over 25% was accounted for by the New York Department. The budget of the Massachusetts Department --- next highest on the 1919 lest --- amounted to less than 30% of its New York counterpart.[1] While exact data are not available, it is quite safe to say that the New York Department's budgetary pre-eminence remains in effect today. New York has on its staff approximately eight fellows and associates of the Society of Actuaries. No other state has more than two, and more than 40 have none.

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1. Ibid., p. 54.

Only 27 of the thousand odd life insurance companies which operate in the United States are domiciled in New York. And only 41 additional "foreign" companies are licensed to do business there. However, these 68 firms account for perhaps 75% of all insurance in force in this country and close to 70% of all insurance sold. The New York Insurance Law is, in many particulars, considerably more stringent than that of any other state. Its provisions apply to all business of the 27 domestic companies --- not just that written in New York itself. And section 42 of the law states,

> No foreign insurer ... shall be ... authorized to do any insurance business in this state if it fails to comply substantially with any requirement of this chapter, applicable to similar domestic insurers hereafter to be organized, which in the judgement of the superintendent is reasonably necessary to protect the interests of the people of this state.

Other insurance departments appear to have a somewhat ambivalent attitude toward New York. Its comparative fiscal strength and near monopoly on technical personnel make its opinions carry considerable weight with other members of the National Association of Insurance Commissioners. In 1956, for example, considerable sentiment existed in favor of adopting a new mortality table as a permissive standard for the determination of net premiums[1] on life insurance contracts. Most commissioners were all in favor of the change. New York had reservations, however. Largely on the basis of these, final action on a resolution before the NAIC recommending positive steps by the state legis-

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1. That is, the premiums determined by interest and mortality considerations only, with no allowance for operating expenses.

other states in which the company is licensed. During the 20 year period preceding 1957, the New York Department did not participate in these convention examinations. Thus, it has no first hand knowledge of the operations of most foreign companies --- including those licensed in New York. Furthermore, the substance of the New York Law differs little if at all from the laws of the remaining states in many respects. For practical purposes, the New York Department's jurisdiction on these uniformly treated matters is limited to the 27 New York domiciled companies.

Take, for example, the matter of price policy. The New York Department might consider the dividend allocation methods of a foreign company to be discriminatory. To authorize an investigation would be well within the powers of the Superintendent. The New York Law forbids discrimination in pricing. It demands an equitable distribution of surplus to participating policyholders. So too, however, do the laws of all other states. The company's home department would regard itself as having jurisdiction over the matter. While it might not be exercising this jurisdiction,--- few departments keep any sort of watch on dividend allocation methods --- it would regard an investigation by the New York Department as an unwarranted usurpation of its prerogatives. As a result, even though better equipped to police these and other more or less uniform requirements of the state laws, New York Superintendents have been exceedingly reluctant to step across state lines. Most of the few cases in which they have done so have involved imminent danger to the solvency of companies. New York might investigate a foreign com-

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pany's price policy at some future date. It seems safe to say, however, that it would do so only if the discriminatory procedures were gross and of long standing and if its case seemed almost air tight.

Regulation of Agent-Buyer Relations: All states license insurance agents. The laws of a few allow their commissioner little or no room for the exercise of discretion in granting a license --- licensing is primarily a registration and revenue producing device. Much more common, however, are statutes which allow complete or nearly complete freedom in this respect. A few states provide no standards whatsoever for the commissioner's exercising of the power to refuse. Others set vague tests of competence and moral integrity.

The development of a test of competence as part of a licensing procedure is difficult at best. Knowledge of life insurance principles is a test considerably less frequently applied than at least one other by those few states which attempt any test at all. Many insurance departments are reluctant to issue a license unless the applicant is willing to swear that he plans immediately or ultimately to make life insurance selling a full itime occupation. Patterson cites the fact that, as late as 1922, the New York Department still enclosed a copy of a 1909 ruling stating this to be its policy with application forms for agent licenses. This was done even though a 1912 decision of the New York courts declared unconstitutional a statutory provision requiring an applicant for a broker's license to state that he planned to engage principally in the insurance business. The court held this to be a "purely arbitrary restriction" not in the public interest but rather in the interests of insurance brokers.[1]

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1. Ibid., pp. 173-174.

The statutes generally make grounds for revocation of a license considerably more explicit than for refusal to grant an initial application. Neither incompetence nor inadequate knowledge are frequently among these grounds, however. Much more common are two pairs of presumed evils --- discrimination and rebating on the one hand misrepresenting and "twisting" on the other. Strictly defined, this last mentioned is an attempt to get a prospect to cancel one contract and to apply for another by overstating the virtues of the latter and understating those of the former.

That misrepresentation and twisting are forms of behavior not in the public interest seems clear. Also, "discrimination" has an ugly sound. Insofar as it is simply a synonym for rebating, however, it is not entirely obvious why this should be regarded as contrary to the commonweal. It could well have been so regarded in the latter part of the nineteenth century. Then, rebating was a common device. First year commissions were so high --- frequently exceeding the first year premium --- that an agent could well afford to return a substantial portion of a client's premium or even to waive it entirely. Many if not most did just that. This naturally led to high lapse rates. Why should a policyholder keep his policy in force when he could get a new one for next to nothing? And high lapse rates, in turn, resulted in considerable loss to companies.

This sort of danger to the solvency of insurers exists only to a very small extent today. Except in the South and Southwest, commissions are sufficiently low so that first year lapses do not cause

losses to insurers except on policies with quite low premiums. This being the case, rebating by an agent has little or no effect on the solvency of an insurer. The agent's pocketbook is all that really suffers.

One might argue along lines that allowing rebates would tend to favor the economically powerful against the weak. An agent might very well be willing to share a large commission but not a small one. Some court decisions supporting anti-rebate provisions seem to have taken this tack.[1] How serious the possible consequences of this favoritism might be seems debatable, however. The conclusion that the anti-rebate statutes are less successful in protecting the buyer from the agent than vice versa seems justified.

The temptation is even stronger to draw this conclusion with regards the prevailing preference of insurance departments for full time agents. Two arguments are used with frequency in justifying such rulings. The first is that full time agents are likely to be more competent advisers than their part time counterparts. Second, part time agents may well be engaged in an illegal rebating scheme as, for example, was held to be the case when members of a trade association paid the salary of its secretary (a licensed agent) by purchasing their fire insurance through him.[2]

If anti-rebate provisions are of dubious value, so too are the devices used to enforce them. In addition, the competence arguments in favor of full time agents are debatable on the facts alleged. This seems particularly true since few insurance departments seem deeply

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1. See Patterson, pp. 309 ff. 2. Ibid., p. 181.

concerned with the insurance knowledge of those they license. The genesis of these statutory provisions and rulings seems clear. After all, when the lambs are disinterested, unorganized, and unappreciative, who is to blame the shepherd for siding, on occasion, with the vocal and unified wolves? If this is, in fact, what has happened, insurance agents would not be the only regulated group to have received such benefits.from their regulator.

Regulation of Selling Costs: Three states --- New York, Illinois, and Wisconsin --- have statutes limiting the expenses life insurance companies may incur in getting new business. Only the New York Law offers a really effective limit to these outlays, however. The Illinois statute[1] states, in effect, that "acquisition expenses" may not exceed the first year gross premiums on a contract. No limitations are placed on gross premiums, however, and acquisition expenses are not defined with particular rigor.

Wisconsin's law[2] is considerably more complicated, but equally ineffective. It requires that no policy be issued at a premium greater than a) the net premium for that particular contract type and age at issue developed on the assumption of American Experience mortality and 2% interest plus b) an allowance for expenses the present value of which is equal to one-third the American Experience 3% net single premium for a whole life contract at the given age at issue. First year expenses --- again, a concept not defined with particular rigor --- are not to exceed this total expense allowance. The American Experience Table was based on mortality rates of the period 1843-1858. Between ages 0 and 40, the probabilities of death enumerated by it range anywhere from 3 to 10 times those currently being experienced by American life insurance companies on ordinary policies.

Particularly since its most recent revisions in 1953 and 1954, the expense limitation portions of the New York Law, Section 213, is an

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1. Illinois Revised Statutes, 1955, Chapter 73, Section 856.
2. Revised Wisconsin Statutes, Section 206.26.

exceedingly complicated piece of legal artistry. Spelling out in detail all of its numerous limitations and allowances and their implications would serve no useful purpose. What follows is therefore a rough summary of what appear to be its most important provisions.[1] Section 213 provides restrictions which may conveniently be classified into three broad groupings: 1) Three formulae limiting various classes of expenses; 2) Direct and indirect limitations on first year and renewal commission scales; and 3) A group of miscellaneous restrictions and allowances --- some qualitative, some quantitative.

The expense limitation formulae are interdependent. At the base of these is the "first year field expense limit." While it does involve a few other costs, it is essentially a limit on total first year commission payments to soliciting agents. Next in line is the "total field expense limit." It restricts aggregate outlays for a) first year and renewal commissions, collection, and service fees, and training allowances to soliciting and general agents, b) salaries, rent, and other branch office expenses, c) salaries and expenses of certain home office and field supervisory personnel, and d) 60% of advertising expenses. Finally, but only for companies which write participating policies, there is a total expense limit. Taxes, license fees, and investment expenses are the only expense items excluded from this limit.

As for the limitation formulae themselves, the first year

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1. See Allen Mayerson, "A New Look at the New York Expense Limitation Law," Transactions of the Society of Actuaries, 1957, pp. 258-303, for a complete analysis of its provisions.

field expense limit is based on a portion of total first year premiums plus 50¢ per $1000 of insurance paid for during the calendar year in question plus 50¢ per $1000 of that insurance still in force at the end of the year. The specific portion of premiums depends on the types of policies sold. For whole life contracts, 55% is allowed. For contracts with gross premiums greater than those which apply to whole life, the limit is 20% of the gross premium plus 35% of the whole life gross premium at the same issue age. Different allowance factors are provided for term and single premium life contracts and annuities.

The total field expense allowance consists of the first year field expense limit factors plus dollar and percentage allowances based on total sales during the past year, total first year premiums during the last five years, total renewal premiums, and total premium paying insurance in force. Increased allowances are granted small companies and companies in the process of changing from a general agent to a branch office form of field organization. The total expense limit consists of the field expense limit plus additional allowances based on insurance paid for and insurance in force plus an additional small company allowance. From the respective standpoints of the total field and total expense limits, a "small company" is one with less than $2.6 or $2.9 billion of insurance in force.

Of these three formulae, the first year field limit appears to cause New York companies the greatest trouble. For 1954, the latest year available, Table 1 lists the "safety margins" --- the ratio of expense limit less actual expenses to the expense limit --- for each of

Table 1: Section 213 Expense Limits and Safety Margins for the Largest 15 New York Companies: 1954

Company	Safety Margins: First Year Field Limit	Safety Margins: Total Expense Limit	Safety Margins: Total Expense Limit ($1,000)
Metropolitan	5.2%	13.3%	$120,594
Prudential	4.6	6.2	138,982
Equitable	8.8	11.0	77,996
John Hancock	24.6	17.7	48,356
Travelers	11.0	---	---
Aetna	10.4	25.6	23,859
New York Life	7.4	11.5	91,871
Northwestern Mutual	9.2	35.9	49,708
Connecticut General	13.7	21.2	12,191
Mutual of New York	12.7	14.1	31,289
Massachusetts Mutual	6.8	19.7	29,567
New England Mutual	12.1	22.5	31,160
Penn Mutual	17.4	11.1	24,793
Mutual Benefit	10.7	17.2	24,348
Continental Assurance	7.7	18.9	9,628
All Agent Employing New York Companies	10.2	15.9	$884,607

Source: New York Insurance Report, Volume I, 1955, pp. 187a-190a. The New York Report does not publish complete information on the total field expense limit.

the fifteen largest New York companies. Only two of the fourteen firms required to meet the total expense limit had safety margins on it lower than those for the first year field limit.

The law contains only two specific limitations on commissions agents may be paid for individual sales. Under the first of these, a soliciting agent may not be paid a first year commission exceeding 55% of the sale's gross premium. This same provision of the law also allows a general agent 60% --- this to include both his own overriding commis-

sionsand that to his soliciting agent. The second set of specific limitations pertains to renewal commissions. A general agency company may pay total renewal commissions of 7½% in the second through tenth policy years and of 5% during the eleventh through fifteenth years to its soliciting and general agents. A branch office company may pay its soliciting agents two-thirds of this amount. Collection and service fees not to exceed 3% of gross premiums may be paid in the sixteenth and subsequent years by both types of company. Additional small allowances are granted in policy years 2-9 for pension and other security benefits.

To repeat, 55% and 60% first year commissions to soliciting and general agents respectively are the only specific first year commission limitations in the New York Law. However, the graded total first year commission allowance contained in the first year field expense limit forces companies to pay less than 55% on other than whole life contracts. If this graded scale were to apply to the individual contracts of Northwestern Mutual, a company with relatively high gross premiums, and to Travelers' and Aetna's nonparticipating contracts, roughly the following maximum first year commission scales would result:

	Northwestern		Travelers, Aetna	
	Age 25	Age 45	Age 25	Age 45
Whole Life	55%	55%	55%	55%
20 Pay Life	44	49	43	48
20 Year Endowment	36	45	34	44

No New York company operates as if these implied maximum

commissions actually applied to individual contracts. The standard procedure among both New York and non-New York companies is to pay a flat commission rate regardless of age on all policies of a given type. Some companies do, however, reduce commissions on policies issued at ages 55 or 60 and over. Some also pay reduced commissions on small policies and on special high minimum contracts. With these provisos, however, most New York firms appear to operate with only a small margin between actual and allowable commission scales. A plurality if not a clear majority pay a maximum of 55% on whole life contracts. Most of the rest pay 50% --- only a very few go as low as 45%. On 20 pay life contracts, commissions range between 40-50%, with a majority of firms paying between 45-50%. The range on 20 year endowments is about 30-40%.

Among the miscellaneous restrictions and allowances in section 213 are the following: No New York company may pay bonuses, prizes, rewards, or any increased or additional compensation based on the volume of new business or the number of new policies written. It may conduct contests among agents, but the rewards for winning must be of small intrinsic value. A departmental ruling based on this provision allows companies to pay agents' expenses in attending convention and business meetings, but forbids them also to pay the expenses of wives, relatives, or friends. It is very common for non-New York companies to give agents and their families paid vacations in the form of trips to company conventions. It is also common among these companies to give cash prizes for winning contests and to pay bonuses or "expense allowances" based on business written.

To aid new soliciting and general agents to establish themselves, section 213 was amended in 1954 to provide compensation over and above that allowed for established agents. Payments to new general agents are not restricted in amount, but are restricted to their first five years with the company. Training allowances may be paid during the first three years an agent is under contract. In the aggregate, they may not exceed 5% of the first year field expense limit (as long as this 5% is less than $700,000) or 30% of the first year premiums written by new agents, whichever is greater.

Finally, subsection 10 of section 213 states,

> No ... company shall issue any life insurance or annuity contract which shall not appear to be self supporting on reasonable assumptions as to interest, mortality, and expense.

Just what place this provision has in a section dealing with expense limitation is not clear. It is, after all, primarily a restriction on price policy, not one on selling costs. It would appear more properly to belong to section 209 of the law --- a section dealing with discrimination although in considerably more general terms.

Just what effect does section 213 have on the life insurance business in the United States? Price competition of a sort has developed in the industry during the recent past. That this price competition would, by itself, serve as an effective limit on selling costs is very much to be doubted, however. Its genesis, to repeat, is rather bizarre. It is attributable, not so much to reactions of sellers to demand structure as to characteristics of the sellers themselves. Low

comparative prices do serve to attract price sensitive buyers on occasion. Their effect on agent morale is of far greater importance, however. That an increase in commission scales would be an equally efficacious means of stimulating agent morale seems entirely possible. Indeed, a series of competitive commission rate increases which extended over the last two decades of the nineteenth century are directly responsible for passage in 1906 of the predecessor of today's section 213.

An increasing shortage of actual and potential agents has been strongly lamented by industry spokesmen during the past few years. That a wave of commission increases has not developed seems at leat partially attributable to the existence of section 213. While, to repeat, only 68 of the 1000 odd American companies are licensed in New York, these 68 number among themselves most of the giants in the business. Of the industry's 20 largest firms in early 1955, all but five were licensed in New York. Non-New York companies --- companies which account for roughly 30% of all ordinary life insurance sales --- are not restricted by section 213, of course. Almost all do pay commissions higher thanthe scales allowable in New York. All are free to raise their scales whenever they feel it advantageous. Whether commission increases have been general among these firms is not known. Commission scale data are rather closely guraded by all companies --- New York and non-New York. But the fact that New York law controls agent compensation of most of the giants has unquestionably limited whatever pressures to increases their scales non-New York firms might otherwise have felt.

As was developed in Chapter I, the market share of the indus-

try's largest firms has declined slowly but perceptibly over most of the past half century. This decline is in large measure attributable to section 213. Many non-New York firms recruit large portions of their agency forces from New York concerns through the lure of higher commissions. These are generally agents who have had at least a moderate amount of success --- agents who have stood the gaff of their first few years in the business. "Why train agents when someone else will do it for you?" seems to be a fairly frequent watch word --- one that causes the agency administrators of New York companies considerable concern.

That this decline in market shares has been slow is attributable to several factors, most of which have already been alluded to. Section 213 does not cause New York companies serious trouble in recruiting agents. The typical new agent does little checking before entering the business, and is rarely aware of the non-New York-New York difference in commission scales. If he does learn of its existence, it is likely to be only after several years in the business. It is by no means certain that he will even then. When questioned on the matter, two of the agents interviewed --- both quite successful --- expressed doubt that a difference in commission scales existed. One even took quite strong umbrage at the suggestion that his company paid less than some others. By the time the New York company agent learns of commission scale differences, he is likely to have developed strong attachments to his company. These attachments are both emotional and economic. He will very likely have convinced himself that his company is really the best. He would feel uncomfortable working for any other. Furthermore,

over the 15 years or so during which they are paid, renewal commissions on sales generally add to more than first year commissions. Among large companies, renewals are almost invariably not vested beyond the first two or three policy years. That is, they are normally not paid to agents no longer under contract. A moderately successful agent therefore normally suffers a quite considerable loss when he switches companies. Unless the advantages are great, he is unlikely to make the change.

Regulation of Price Policy: The Definition of Class: Section 209 of the New York Insurance Law states in part:

> No life insurance company ... shall make or permit any unfair discrimination between individuals of the same class and of equal expectation of life in the amount of payment or return of premiums, or rates charged by it ..., or in the dividends or other benefits payable thereon, or in any other of the terms and conditions thereof;

The statutes of all other states have similarly worded provisions. All use the phrase "of the same class and (of) equal expectation of life." Such differences as occur are primarily in the words leading up to this phrase, and these differences are generally of small import. For example, Alabama, Delaware, Illinois, New Jersey, Texas, and Wisconsin, among others, proscribe "any distinction or discrimination" rather than unfair discrimination. Before "shall make," Minnesota adds a qualifying "all other conditions being equal." The Nebraska statute adds a permissive definition of class, "that in determining the class, consideration may be given to the nature of the risk, plan of insurance, the actual or expected expense of conducting the business, or any other relevant factor." Guidance of so specific a nature is rare, however. Most anti-discrimination laws simply enjoin companies to be good. As in many other matters, most state legislatures have left specification of the acts which constitute "good" behavior to the discretion of the insurance department. Neither "class" nor "discrimination" is ever clearly defined.

Interpretive rulings by insurance commissioners are not published. In attempting an historical reconstruction of their rulings, it

is therefore necessary to rely largely on hearsay. One interpretation of the anti-discrimination laws which has gone unquestioned until very recently should be noted at the outset. Stated succinctly, this long standing belief is that if A has the same contract form and the same life expectancy as B, both should be charged the same rate per thousand even though B's policy has a much higher face value than A's. This has been held to be true even though expenses per thousand are demonstrably higher on the smaller policy. How this interpretation came to be commonly accepted is not known. None of the informed sources interviewed was able to recall ever having read a departmental ruling in which it was made explicit. It appears always to have been there --- to have been accepted without question by companies and commissioners alike.

The earliest known explicit interpretation of an anti-discrimination law of relevance to this study was made in 1909. In that year, the Metropolitan applied to the New York Department and presumable to others for permission to issue a $5000 minimum whole life contract to members of selected occupation groups. The proposed policy was characterized by low first year commissions --- 35% as opposed to 50% on the nearest comparable policy, a life paid up at 85 --- issuance on an annual premium basis only, and considerably lower gross premiums. The reasons stated by the company for desiring to issue the policy were quite simple. It wanted to provide something its industrial agents (the Met does not now and did not then have any ordinary agents) could sell in competition with agents better established in upper income groups.

After due deliberation, the New York Department approved the policy. With New York as champion, other departments followed suit,

although a number of them had serious reservations. The reluctant commissioners appear mainly to have felt that the actuarial value of the difference in benefits between the LP at 85 and the whole life contract was too small to warrant the considerable difference in gross premiums. New York regarded the contract as being non-discriminatory partly on the grounds that anyone who had the required premium and the preferred occupational rating could buy it. Its approval appears primarily to have been based, however, on the understanding that the company planned to set up a new "class" of preferred risk policyholders. This class was to be treated separately from other ordinary policyholders for accounting and cost assessment purposes. It was perfectly acceptable to New York and all other departments to charge different rates to industrial and ordin ary policyholders for essentially the same contract benefits. The mortality benefits paid these two groups did differ substantially. New York apparently could see no reason why a super-ordinary group should not be treated in an analagous fashion. That the policy was issued as a technically separate plan of insurance does not appear to have weighed heavily in the department's deliberations. Had it been the only difference between it and the LP at 85, it is doubtful that this difference would have been held sufficient justification for the new policy at that time.

Thus, "class" appears to have been regarded as solely a function of life expectancy. Marked differences in the premiums for policies with similar benefits were possible only if the groups involved were subject to different mortality experience. Once mortality experience

differences had been shown, however, it was perfectly permissable to have premiums take account of differences in administrative costs as well.

In at least one respect, this view of the definition of "class" was in force as late as early 1954. In 1953, John Hancock applied to the various insurance departments for permission to break its ordinary insurance issues into two groups --- "ordinary" and "select ordinary" classes. While the contracts to be issued these two groups would differ in several respects, the basic dichotomizing characteristic was policy size. "Ordinary class" policies would be issued only for amounts less than $3000; "select ordinary" only for $3000 or more. John Hancock's reasons for planning this change were closely akin to those of the Met 50 years before. As with all combination companies, debit agents regularly account for a considerable volume of the company's ordinary sales. Individually, these sales are generally of small size, and hence have quite high administrative costs per thousand. By splitting its ordinary business into two parts, the company would be exchanging mediocre comparisons across the board for terrible price comparisons in an area where comparisons are almost never made, and quite excellent ones where they would be of real value.

After considerable deliberation, the New York Department approved the split. It did so, however, only after John Hancock was able to prove that it had experienced higher mortality on small than on large policies. The fact that ordinary class policies were to include benefits in the basic premium which select ordinary policies would include only

at an extra premium was not weighed heavily by the department. A difference in class entailed a difference in mortality experience, and that was all there was to it.

The Metropolitan's early innovation was slow in being imitated. By 1935, only 8 of today's largest 20 firms were issuing whole life contracts with minima higher than $1000. Only two additional members of this group --- New York Life and Mutual of New York --- joined the fold during the next ten years. Of the eight large "special" issuers in 1935, five were not licensed in New York. The three New York firms --- John Hancock and Prudential in addition to Metropolitan --- were all combination companies and hence were subject to quite similar pressures. With but one exception, the approximately 12 high minimum whole life contracts issued in 1935 by today's top 20 differed quite substantially from their $1000 minimum counterparts. Life paid up at 85 or endowment at 85 policies predominated among the $1000 minimums. Five of the 12 specials were preferred risk whole life policies. Four were modified fives, i.e., contracts for which premiums doubled at the end of five policy years. One was a mod 3 --- premiums increased by approximately the amount of the third year dividend at the end of three policy years. Finally, one was the only participating contract in the whole life area issued by its company.[1]

Continental Assurance --- now, but not then licensed in New York --- accounted for the single exception. It sold both a $2500 mini-

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1. Unless otherwise noted, the data on special policy issue practices cited here were obtained from the 1935, 45, and 55 editions of the Unique Manual.

mum contract with standard underwriting and a $1000 minimum endowment at 85. That it was allowed to do this is indicative of the gradual but general relaxation in standards which had taken place over the years since the Metropolitan special was first approved. The actuarial differences in benefits required had become much less substantial. Furthermore, requirements for completely separate accounting had either been relaxed or completely eliminated.

For reasons which will be treated at some length in the next chapter, the post-World War II decade saw a tremendous burgeoning in the number of special policies issued. Whereas ten among the top 20 companies had issued a total of 15 whole life specials in 1945, 17 of these firms were issuing 28 such policies in 1955. In 1938, the 30 largest New York companies issued a total of 16 specials in all policy areas. Ten of these were whole life or modified whole life contracts. By 1954, the same 30 firms were issuing 45 specials, 35 being whole life or modified whole life policies.[1] By 1955, only Connecticut General, Mutual Benefit and Northwestern Mutual among the largest 20 American companies had not come out with at least one special. The Equitable Society, long adamantly opposed to them, had capitulated the year before, and Connecticut General was to enter the fold in 1956.

By 1950, to set an arbitrary date, approval of a special by all departments, including New York, had become perfunctory as long as it was written on a plan of insurance technically different from all

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1. Cited by Robert E. Dineen in Cheaper by the Dozen? New York: American Management Association, 1954, p. 18.

others issued by the petitioning company. The New York Department, and perhaps others, had become increasingly unhappy about the position in which its relaxed standards had placed it. To maintain that a $10,000 minimum whole life policy issued at a gross premium $3-4 lower than that on a $1000 minimum whole life policy constituted discriminatory pricing was perhaps reasonable. But to act as if this presumed discrimination disappeared when either of the two contracts was made an endowment at 95 --- a contract with a difference in net annual premiums of less than a dime --- seemed just the least bit silly.

The matter appears to have come to a head when the Equitable applied for permission to issue a special. Its proposed $10,000 minimum did contain some conversion options not included in its $1000 minimum, but these, if anything, added to its cost. Both policies were whole life contracts pure and simple. Neither had any preferred risk features. It is not clear why Equitable insisted on two whole life contracts when so simple an alternative was available, but insist it did. With considerable logic, the company maintained that if New York would approve a $3-4 difference in gross premiums on the basis of a 5¢ difference in net premiums, it had no justification for refusing to approve the same difference in gross premiums on the basis of a 0¢ difference in net premiums. After several months of soul searching, New York reluctantly agreed with Equitable's line of reasoning.

It was at about this time that the New York Department came to the conclusion that a thorough study of its position on specials was in order. It would appear, however, that factors other than the lack

of substance in the difference in policy forms insisted upon by state departments entered into New York's decision to act. In November 1954, the Department held a conference on specials. Most of the major Eastern companies attended --- a majority to defend the practice; some to express violent opposition. In calling the meeting to order, Deputy Superintendent A. G. Straub stated,

> the increasing number of (specials), together with the various forms they have taken and the type of their advertising, are developments giving us cause for concern. In recent issues of national magazines, as many as four full pages of ads have been run in a single issue by insurance companies in which were accentuated what appeared to be sale of policies at a lower rate. Our concern is that the public may be influenced to change its attitude toward the life insurance institution as a result of this type of advertising.[1]

What importance the New York Department actually attached to the supposed nature of public reaction to company practices is not known. However, such expressions of concern frequently emanate from insurance regulatory bodies. In many cases, this expressed concern is undoubtedly genuine. In others, it is designed to mollify in advance an expected violent reaction to a proposed new regulatory procedure by those regulated.

Partly as a result of this conference, the Department announced in May of the following year that it had come to a change of heart concerning the definition of "class." Its 1954 decision on the John Hancock split to the contrary notwithstanding, the circular letter

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1. Eastern Underwriter, November 26, 1954, p. 1.

announcing the changed view stated in part,

> The statute does not require that classes shall be limited to groups based on differences in mortality only. On the contrary, the term 'class' is to be construed broadly to take account of all elements involving common characteristics of the class....
>
> Therefore, ... it is our opinion that it is permissible under the statute for a company to adopt premium rates which, within a policy plan and issue age, vary by amount of insurance. As to non-forfeiture values and dividends, they should conform with principles of equity.[1]

A year later, the National Association of Insurance Commissioners approved a report by a special subcommittee which concluded:

> 1. It is in the best interest of the insuring public to recognize that life insurance companies, which desire to do so, may graduate their premiums or dividends by policy size for the principal plans of insurance, subject to the responsibility on their part to show that any system of groupings of premium rates or dividend classifications is reasonable, equitable, and non-discriminatory.
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> 2. Any differential in premium rates charged for any special policy or in dividends paid thereon, should be justified on the basis of a demonstrated differential in expense, mortality, or other relevant factors.[2]

It has long been the practice of many Europeon companies to allow quantity discounts on life insurance purchases. Such discounts are also common in certain lines of insurance in this country --- workmen's compensation, in particular. The Dominion (of Canada) Insurance Act expressly provided that premium rates per $1000 were applicable pro rata until this provision was eliminated in 1932. When additional

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1. Eastern Underwriter, May 6, 1955, p. 1.
2. Report of the Special Policies Subcommittee of the Life Committee (of the NAIC), May 28, 1956, p. 7.

doubts stemming from vagueness in the criminal code treatment of discrimination were resolved a few years ago, a number of Canadian companies also began to grant quantity discounts.

As the special system developed, differences among contract forms grew so small that the typical high minimum contract was little more than a thinly veiled device for granting a quantity discount. Despite the foreign precedents, however, American life insurance companies placed little if any pressure on insurance departments for approval of the logical next step. Two of the leading antagonists of specials --- Northwestern Mutual and National of Vermont --- frequently propounded the view that if lower prices were to be allowed for large policies in particular policy areas, they should be made across the board. With both companies, however, the argument was used against specials, not in favor of quantity discounts. Manhattan Life was perhaps the only company to have shown any positive interest in the system. In 1953, it had applied to the New York Department for permission to institute a policy fee system, i.e., permission to charge a flat amount for each policy regardless of size plus an amount for each $1000 insured. But the company had not pushed its application very hard, A final decision on it was still pending at the time the Department issued its quantity discount ruling.

The typical course of events leading up to approval or disapproval of a company practice by an insurance department runs somewhat as follows. A letter is written asking for a ruling on the legality of the proposed practice. If the issues involved are broad, the depart-

ment is likely to defer judgement. It is the nature of a bureaucracy --- even a small one --- to avoid making decisions whenever possible. To insure a quick and favorable response in such circumstances, pressures of various sorts are likely to be applied by the company --- volumes of statistics, legal briefs, frequent telephone calls and letter, in some cases even dinners, dancing girls, and retainers to the commissioner's brother's law firm. The department finally approves or disapproves, bearing in mind that if it does the latter, it may be in for a court test. Gratuitous ruling by insurance departments are very rare. The New York Department's quantity discount pronouncement is one of these rare cases. What, then, were the considerations leading up to so unusual a step?

As has already been noted, the New York Department had come to feel that specials were getting out of hand. The long honored definition of "discrimination" was being violated in fact if not in name. Something had to be done. Two alternatives seemed open. On one hand, the long honored definition could be made a matter of substance onee more. All high minimum contracts could be disallowed. Less drastically, subsequent applications could be disapproved, or approval could be granted only to specials which differed substantially from their nearest $1000 minimum counterparts. On the other hand, de facto recognition could be given to the quantity discount practice. A new definition of "discrimination" could be adopted in name as well as in fact.

The first alternative seemed objectionable on a number of grounds. New York companies would undoubtedly suffer hardships of

various sorts. Then too, stare decisis is not a principle to be overturned lightly, particularly when the past decision in question has been reaffirmed again and again. Thus, formally to recognize the legality of quantity discounts was the path of least resistance. It was not without its drawbacks either, however. For one thing, simplicity is not a virtue lightly to be compromised. In general, the more complicated the rate structure, the more costly it is to devise. Furthermore, the thickness of a rate book is not necessarily strongly correlated with the equity of the rates it contains. While the proliferation of specials has made the structure of life insurance prices increasingly more complicated, it is still simplicity itself in comparison to that in fire, casualty, and other lines of insurance. The addition of a fairly complicated quantity discount scheme to a rate book would add appreciably to its volume.

The New York ruling did not limit itself to quantity discounts alone. It stated, to repeat, "the term 'class' is to be construed broadly to take account of all elements involving common characteristics of the class." Now that size has been added to age, plan, and life expectancy as a "class" determining variable, the door is opening to admit a host of other variables. Mortality experience is considerably more favorable among women than among men. Negroes have higher death rates than whites. Interstate differences in mortality are very substantial. If equity demands the admission of size as a variable, does it not also demand the admission of these and other factors? A number of people in the New York Department appear seriously to have questioned

whether the buyers of insurance should not be protected against a too great reduction in "discrimination." The great majority of policyholders might well lose more through the costs of added complexity that they gain through the increased equity of their treatment.

Members of the New York Department's staff claim that "what's right?" is almost always asked before "how hard will it be to police?" This is not the place to gainsay the wisdom of this approach. Regardless of which question is normally asked first, however, a quantity discount scheme is quite likely to be easier to administer than a large number of specials. Furthermore, there is reason to suppose that the New York Department took account of this fact before making its ruling. To pass on the legitimacy of a quantity discount system, an insurance department would have to determine once and for all a) those expense items which are incident on a policy rather than an amount basis, and b) reasonable estimates of the costs of these items. Once these factors have been ascertained, the appropriate quantity discount pattern would fall out almost automatically. It would, presumably, apply across the board. A company desiring to vary the discount by policy type would have to bear the onus of proving this procedure to be reasonable. To assure itself of the equity of the price charged for a special, however, an insurance department would have to make the same sorts of checks over and over again for each policy type issued.

Whatever the reasoning process behind its ruling, New York did decide to redefine "class." Quantity discounts --- labeled as such --- are now allowable in the 48 states. A number of companies have adopted

this system. Quantity discounts seem to have done quite well by these innovators. Since opposition to quantity discounting has been dropped very recently, however, it is too early to evaluate the results of this change in the rules of the pricing game on industry pricing procedures.

Regulation of Price Policy: Discrimination: That a good company sets prices according to full costs is a doctrine to which all insurance departments and insurance companies would almost certainly subscribe. A good company, that is to say, determines its premiums, cash values, and dividends by assessing to each class of policies the direct, marginal, or added (call them what you will) costs of writing and maintaining it plus its "fair" share of overhead costs. As a "practical matter," of course, there are classes of policies to which the full force of this principle admittedly is not applied, even by very good companies. Juvenile policies form the prime example. They are generally of very small size. To assess full costs to them would make them prohibitively expensive. The assignement of less than a full share of overhead is therefore openly and almost universally practiced. This practice is, furthermore, condoned and perhaps even encouraged by insurance departments.

"Practical matters" also arise which sorely tempt even quite good companies to transgress against the full cost principle in ways not condoned by insurance departments. The desire to make a good showing on a special may lead to such transgressions, in particular. An insurance department cannot be certain that all its licensed companies will obey the full cost pricing precept if their only coercion is the desire to do good. Few commissioners have the staff to do an effective job of policing price policy, however. And those which do do not regard price policy to be a matter of primary concern. New York is one of the very few departments --- perhaps, in fact, the only one --- which goes

deeply into dividend and expense allocation methods in its triennial examinations of domestic companies. Without an intensive investigation of dividend formulae, a belief that prices are, by and large, based on full costs can only be regarded as hopeful thinking.

Even for a department as comparatively well staffed as that of New York, an intensive study of price policy is a formidable task. As a prelude to a discussion of New York Department procedures in examining life insurance company dividend scales, one member of the department's staff stated:

> Theoretically, ... surplus distribution is quite simple. A company must merely calculate in retrospect for each group of policyholders that premium which it should have charged on the basis of its actual experience and then refund the balance.
>
> In practice, however, this cannot be done. It is physically impossible to keep accounts separate for each group of policyholders in a modern life insurance company. For example, if a company issues 20 plans of insurance at ages 0 to 60, and has been operating for 50 years, it may have about 60,000 groups. Furthermore, even if it could keep careful track of the funds in each group, this might not be desirable, since certain groups might dwindle to so few members that the law of averages would no longer apply.[1]

And this was written before individual policy size graduated to the status of a full-fledged class determining variable. Thus, some amount of averaging, of lumping together of classes must be condoned. Indeed, insofar as simplicity and flexibility of allocation procedures is desired --- New York appears to regard "practicability" to be nearly as equal in importance to equity as a standard for dividend distribution methods[2] --- less than complete accounting for each class is an absolute

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1. Allen L. Mayerson, "Dividends: Life Companies" in A. G. Straub, ed., Examination of Insurance Companies, Vol. 3, pp. 605-606.
2. Ibid., pp. 610-611.

necessity.

It would appear inevitable, then, that small inequities are likely to be found in every company's dividend allocation procedures. The department feels these must be condoned for the greater good. Furthermore, companies must, it feels, be allowed considerable flexibility in grouping policy classes. Accounting systems differ, and honest disagreements do exist concerning the definition of an "equitable distribution of surplus." The New York Department therefore draws the line dividing a small and allowable inequity from an "unfair discrimination" with thick chalk. It is difficult to make concrete statements about the coordinates of this line (or rather plane) in each of the several dimensions through which it passes. No one in the Department has ever attempted the formidable task of codifying the host of sometimes conflicting rulings, circular letters, and statements in triennial reports dealing with surplus distribution and related matters. In attempting to describe the New York Department's definition of "discrimination," about all one can therefore do is draw some limited inferences from scattered bits and pieces of information. Most of this information was obtained through conversations with department personnel and company officials. A limited amount of published material is also available in the area.

a) <u>The degree of refinement of surplus distribution methods:</u> As has already been noted, too refined a dividend allocation procedure is not welcomed by the New York Department. Just what constitutes "too refined" is not clear, however. Dividend formulae must not be so unwieldy that changes in the factors comprising them will be

difficult and expensive. They must not apply to such small groups of policyholders that unstable factors are likely to result. Thus, in converting per policy expenses to a per $1000 of insurance basis, "the use of an average size policy varying by age at issue ... adds to the complexity of the formula and violates to some extent the principle of averaging which is basic to life insurance."[1] Many New York companies do allocate per policy expenses by age and plan, however. This statement therefore cannot be regarded as setting an outer limit to the permissable degree of refinement.

While too much complexity in dividend formulae is regarded as being undesirable, so too is too much simplicity. Again, however, how much is "too much" is not entirely clear. Prudential has always paid dividends on industrial policies in the form of additional paid up insurance. The Metropolitan also does this now, on current issues. Prior to 1948, however, the Met's standard industrial contract provided that dividends would be paid in the form of premium credits. For all policies of a given duration, regardless of policy type and age at issue, the same number of premiums was waived. Regarding the distribution of surplus to industrial policyholders, the Department feels that "because of the larger number of policyholders and the much smaller average size policy, ... a broader view of equity"[2] is justified. It nonetheless demanded that the Met alter its method of determining premium credits. That the company was consciously attempting to discriminate against a particular

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1. Ibid., p. 626.
2. Ibid., p. 632.

class of industrial policyholders was not claimed. The Department simply felt its methods to involve too broad a view of equity. The company argued that any other procedure would involve a great deal of costly and unnecessary administrative work. It argued in vain, however, and now varies credits with duration and plan on pre-1948 industrial issues.

Few concrete illustrations are available with regard to ordinary dividends suggesting how simple "too simple" is. "Any method which distributes surplus as a flat percentage of premiums or as a percentage of the face amount of insurance will not, except by sheer coincidence, result in an equitable distribution of surplus."[1] But allocation methods would presumably have to be considerably more refined than those mentioned before they ceased being unacceptable.

About all one can say with respect to the degree of refinement required of dividend formulae, then, is that they must bear a moderately close relationship to the principal sources of surplus --- savings on mortality and administrative expenses and excess interest. The degree of refinement with which surplus from these three sources is related to individual groups of policies and the way in which these groups are defined are matters over which companies appear to have a considerable degree of control.

b) Equity among lines of insurance: The New York Department appears to recognize that buyers of different lines of insurance --- group, ordinary, industrial, accident and health --- differ

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1. Ibid., p. 611.

considerably in their sensitivity to price differences. It further recognizes the temptations these differences in cross elasticities of demand offer companies to allocate expenses unevenly among lines of insurance. This being the case, company inter-departmental cost allocation procedures are checked with considerable care. Again, however, criteria of equity are necessarily vague.

In 1952, the Department undertook a study of life insurance company income and expense allocation procedures, partly at the behest of a committee of the National Association of Insurance Commissioners. This study resulted in the promulgation of Regulation 33, Reporting and Allocation of Income and Expenses of Life Insurers, in 1954. The regulation is commendably precise in its treatment of direct income and expense items. Thus, "premiums or considerations shall be allocated directly, either through the books of account or by memorandum records, to major lines." (p. 34) And, "commissions on premiums and considerations shall be allocated directly to major lines of business (p. 35)." In dealing with overhead items, however, the wording changes from compulsive to permissive. When it really counts, the regulation simply enjoins companies to use reasonable and sophisticated allocation methods and to keep accurate records of the way in which these methods were developed. Thus, "general indexes such as premium volume, number of policies, and insurance inforce shall not be used as bases for distributing indirect costs ..., except where the incidence of cost is closely related to such indexes, or except where there is no more appropriate basis for measurement. (p. 38)" New York Life is now one of the few American com-

panies of any size which has effectuated a comprehensive cost analysis and control system. One of its former employees maintained that until about 1948, however, the company allocated all operating expenses solely on the basis of premium revenue. Whether it stopped allocating expenses in this fashion (if, in fact, it ever did so) at the behest of the New York Department or on its own initiative is not known.

One further point is of interest in this respect. The Department is quite amenable to a company's taking an infant industry approach to a new line of business. Thus, when a company entered the group business a few years ago, it announced that it planned to allocate no general overhead to this new department in its first year, 20% in its second year, and so forth until, at the end of five years, it would bear its full share of these costs. New York raised no objections to this plan. The company later announed, however, that competitive conditions made it necessary to defer the time at which its group department would become fully self supporting. When it further appeared that this time might never come, the Department girded its collective loins to do battle.

c) Equity between new and old policyholders: In the 1920's, 3 to $3\frac{1}{2}$% was regarded as a reasonably conservative rate for the valuation of policy reserves and for the determination of premiums. Investment yields have declined considerably, however, from 1930 or thereabouts to the present. Few New York companies now earn $3\frac{1}{2}$% on their portfolios, and earnings below 3% were quite common a few years ago. Continuing to value reserves at rates more than 3% has at least two undesirable con-

sequences. First, of course, it stends to overstate a company's solvency. Second, and perhaps more important, from the company's viewpoint, the resulting negative excess earnings may produce a decreasing dividend scale as reserves increase with policy durations. The necessity of defending such dividend scales to agents and policyholders has little appeal to company executives.

This being the case, companies with 3%, $3\frac{1}{4}$%, and $3\frac{1}{2}$% business on their books have frequently undertaken to strengthen reserves. They have, that is to say, carried reserves on this business at assumed earnings rates lower than those contractually required. Mechanically, this is done in either of two ways. Speaking roughly, one involves a simple writing down of general surplus while the other entails actually withholding dividends from the affected groups over a period of years. Reserve strengthening is not invariably a reaction by a company to reserve bases which turn out to be not sufficiently conservative. In at least one case, a plan to strengthen reserves and a new premium rate schedule were instituted concurrently. In 1942, Metropolitan revised its premium rates and cash surrender values. The latter were on a 2 3/4% valuation basis. Fearful of the course future yields would follow, however, the company decided to carry reserves on these new policies at $2\frac{1}{4}$%.[1] Neither New York nor any other department has discouraged the strengthening of reserves. Quite the contrary is true. This procedure has

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1. Horace R. Bassford, "Premium Rates, Reserves, and Nonforfeiture Values for Participating Policies," Transactions of the American Society of Actuaries, 1942, pp. 328-364.

generally met with approval and even strong encouragement by insurance departments. However, insofar as reserves are strengthened by withholding dividends, New York has insisted that earnings be credited on the basis of the strengthened rather than the contractually required reserves.

The Department does appear to recognize that in pursuing greater sales in the here and now, companies may well be tempted to treat policyholders of long duration somewhat cavalierly. The Mayerson article cited above concludes with suggestions as to major points the Department's examiners should study in their triennial examinations of companies. One of these is, "Equity between American Experience and CSO policyholders, to be sure the company is not favoring new policyholders at the expense of old."[1]

The Department's concern for old policyholders is not unlimited, however. In the 1930's, Mutual of New York had very poor luck with its real estate and mortgage investments. While the company was not in great danger of failure, it would have been technically insolvent if assets had been valued realistically. It therefore asked the Department for permission to use different earnings factors for old and new policyholders. After all, it argued, policyholders who had no part in the company when these losses were incurred should not be forced to bear them. New York agreed, albeit somewhat reluctantly. So too did the other states in which MONY operated, many of them also reluctantly.

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1. Mayerson, Op. Cit., pp. 633-634.

d) Equity between terminating and continuing policyholders: The New York insurance law takes a rather ambivalent position with respect to life insurance company surplus and reserves. In the latter part of the nineteenth century, surplus funds were put to rather unsavory uses by many of the larger New York companies. As a result, the statutes limit undistributed surplus to 10% of policy liabilities and reserves. At the same time, however, the law has always insisted on conservative policy valuation standards. At present, the statutory minimum is CSO mortality at 3% (American Experience at 3½% for policies issued prior to 1948).

The New York Department considers its paramount responsibility to be the enforcement of solvency. This being the case, it raises no objections to valuation bases more conservative than the statutory minima. Furthermore, as has already been noted, it has encouraged voluntary strengthening of reserves on policies with high contractually specified valuation interest rates. Thus, the Department is in the position --- a rather peculiar one --- of, on the one hand, enforcing a statutory limitation of surplus and, on the other, encouraging companies to go through a bookkeeping operation which converts surplus into policy reserves.

Naturally, the notion of insolvency does not appeal to insurance company officials. This is not, however, the only reason why a company might desire to value policy reserves conservatively. Its valuation basis can play a major role in determining its "net cost" position. In general, the lower the valuation rate, the more steeply

tilted a company's dividend scale will be, i.e., the lower will be the ratio of its early to its late dividends. Going onto a more conservatime valuation basis, then, is a fairly certain way for a company to improve its competitive price showing. It is, furthermore, an almost certain way of insuring against having to reduce dividend scales in times of stress to the point where some policies may receive a lower dividend in year X than in X-1.

Decreases in contractually specified valuation rates are associated with increases in statutory minimum nonforfeiture values. On balance, then, a lapsing policyholder is little affected by such decreases. While his outlays net of dividends are likely to be larger, so too are the proceeds of his surrendered policy. Companies on an ultra-conservative reserve basis do, however, charge those who die early more than they really need to be charged. Neither the New York Department nor any of its NAIC confreres has ever taken action to reduce this very real discrimination against those unfortunate enough to die (or lucky enough to collect, depending on one's point of view).

When reserves on policies having high valuation rates have been strengthened by withholding dividends from the class of insureds involved, the Department has demanded the payment of surrender dividends. It has required, that is to say, that terminating policyholders be paid on the basis of reserves actually held, not on the basis of contractually guaranteed values. It goes without saying that more obvious forms of discrimination against lapsing policyholders are proscribed. Thus, a fraternal insurer announced to its policyholders that dividends were

being allocated. The policyholders had no options, however. Their dividends were accumulated to be paid on death. If a policy lapsed, the accumulated dividends were forfeited. The Department ended this practice as soon as it got wind of it.

e) The treatment of additional coverages: The practice of attaching a disability income rider to life insurance contracts at a moderate extra premium ddeveloped during the 1920's. In its most common wording, these riders provided a life income of $10 per month for each $1000 of basic life insurance protection upon proof of total and permanent disability. During the 1930's, experience on these riders became very sour indeed. Most companies stopped issuing them. Most large companies took the quite reasonable position that disability income losses should be charged only against policies having these riders, not against general surplus. New York approved, but with limitations. It held that, if a policy termanated which had a disability income rider, its share of the losses previously incurred which had not been amortized should be charged off against surplus. It should not, as some companies argued, remain a liability of persisting policyholders in this class.

Even during the 1930's, experience on additional coverages other than disability income was favorable. Double indemnity and disability premium waiver riders have always been quite profitable. Some companies have used a dual standard in treating both these extra coverages and the extra premiums charged substandard risks. When losses were incurred, they were charged only to those with the added coverages. If profits resulted, as was much more frequently the case, they were re-

garded as part of general surplus funds. In recent years, at any rate, the New York Department has fought for an end to this practice whenever it has been uncovered. Its rulings, however, also appear to have followed a dual standard. Companies which did not allocate negative dividends to policies with disability income riders during the 1930's were considerably less likely to be forced to pay special dividends on DPW and double indemnity riders than those which did.

f) Equity among policy size groups: Few companies of any size have elaborate cost analysis and control systems. Metropolitan, Mutual of New York, Prudential, John Hancock, and New York Life are probably the only major companies with such systems. The existence of this situation appears to be recognized and condoned by the New York Department. Its recent regulation on expense and income allocation contained a strong implication that development of detailed cost accounting systems was desirable. It did not state such systems to be mandatory, however.

Lacking detailed cost information, price setting is apt to be an inexact science at best. This is particularly true in determining the price advantages granted buyers of large policies. Different companies use widely varying mechanical processes in setting dividend scales. Somewhere in the course of applying all of them, however, total operating expenses are segregated into those assumed to vary with policy size on the one hand and, on the other, those assumed to vary only with the number of policies regardless of their individual sizes. The latter costs are used as a basis for a quantity discount schedule by the growing number of companies which has gone into this scheme. Those which have not adopted it convert these costs to a per $1000 of insurance basis

through the use of an appropriate average policy size. The averages used may be for all policies issued on a particular plan or may vary by plan and/or age. While this all sounds very objective, which functional costs are assigned where and the dollar magnitudes associated with each obviously has considerable effect on the price advantage allowed on large policies.

The New York Department's examiners have been apprised of the fact that companies may be tempted to grant unwarranted price advantages to specials:

> The possibility that a life insurance company may obtain a net cost advantage on preferred risk policies at the expense of adequate dividends to its other policyholders was pointed out by Allen L. Mayerson, principal actuary of the New York Insurance Department's Life Bureau. He spoke before the examiners of the department, saying that careful scrutiny of the basis of the expense charge and of the mortality tabke used for these policies is needed to disclose such practices. The problem has been made more urgent in recent years, he indicated, since some companies have begun to issue preferred risk policies.[1]

When accurate cost information is not available, however, it seems doubtful that average cost pricing can be enforced by even the most careful scrutiny of expense charges.

In summary, it seems reasonably safe to say that the New York Department's examinations of dividend allocation procedures and related matters are reasonably effective in eliminating some of the more subtle forms of discriminatory pricing as well as most of the more obvious types. Thus, a company is not likely to be able to get away for long with the assignment to general surplus of the frequently considerable

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1. Eastern Underwriter May 7, 1954 p. 14.

profits derived from disability premium waiver and double indemnity coverages. It is exceedingly doubtful, however, that the Department is able to compel companies to design dividend scales so "that each policyholder will receive a dividend proportionate to the excess of his payments over the true cost of insurance."[1] It is doubtful, in fact, that the Department really wants to do this. At the time this statement was written, New York was wstill insisting that premiums per $1000 of insurance be charged pro rata regardless of policy size. The Department tolerates open discrimination in favor of juvenile policyholders. Regarding the maintenance of solvency as being the most important matter for regulatory concern, it tolerates --- indeed, encourages --- reserve valuation standards such that those who die early tend to be discriminated against. It recognizes that complete equity would entail such costly accounting procedures that few if any policyholders would be benefited. Finally, information on operating costs is so inexact that rigorous policing of price policy would be impossible even if this were the Department's primary concern.

All of the above comments on price policy regulation apply, it should be noted once more, only to New York domiciled firms --- not to all firms doing business in that state. Few other departments look into dividend allocation formulae at all. Of the few that do, none delves into them with anywhere near the intensity characteristic of New York examinations. Even in New York, an adverse finding is not made

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1. Mayerson, op. cit., p. 611.

casually. For obvious reasons, a company will almost invariably fight when one of its practices is disapproved. Liking neither turmoil nor being overruled by his superiors, it is only natural to expect the typical New York examiner to make an adverse finding only when he is certain that most of the facts are on his side. Then too, while gigantic in comparison to other departments, even New York's staff is small in relation to the role it is required to fulfill. With a modicum of ingenuity, a company desiring to indulge in what it thinks might be regarded as a questionable procedure is generally able to hide its transgression. Even if it is found out, Departmental standards are sufficiently vague that ignorance may be an acceptable plea if combined with an expressed willingness to drop the offending practice. Thus, while average cost pricing is de regle in the industry, it seems safe to say that life insurance companies actually have considerable freedom to set prices according to their best economic interests. New York domiciled companies are more restricted in this regard than others, but even the New York Department is far from being able to enforce full compliance with the average cost pricing precept.

Chapter 5

Motivation, Growth, and Competition

Preceding chapters have dealt with the institutional environment within which those who set prices in the industry operate. Before proceeding to a discussion of the pricing procedures which have evolved in this environment, two additional factors which bear directly on the pricing process must be treated. The first of these is the matter of corporate motivation. The second --- previously alluded to on several occasions --- is the present state of competition in the industry.

The Role of Growth: In principle, the management of a profit seeking corporation owes its allegiance to a body of stockholders. While the stockholders themselves may change, the certificates which represent their ownership are immutable. They may be bought and sold. Presumably, the consideration for which such an exchange is made is based on the buyer's and seller's subjective valuations of the firm's future profit stream.

Such is not the case with a mutual insurer, however. Ownership rights are gained simply as an adjunct of purchasing a policy. They are terminated by death or surrender, not by the sale in some market place of a certificate representing an equity holding. This being the case, the owner of a mutual insurer is reasonably concerned with a considerably shorter time period than is his stock company counterpart. There is no reason, after all, why a policyholder should be interested in what happens

to his company's surplus account after his policy terminates.

The statutes of none of the United States allow a life insurance company to enter office furnishings and equipment as assets on its balance sheet. Thus, the purchase of such new accounting machines, desks for newly hired underwriters, and so forth, as are required to process an expanded volume of new business must be charged as an operating expense of the year in which these investments are made. Much the same statement is true of the costs of recruiting and training the new agents needed if sales are to be expanded. These investments must also be written off in the year in which they are made.

Most of the major Eastern companies elect to carry full net level premium reserves rather than the minimum standards required by law. On most policies, the difference between the first year premium and first year expenses is nowhere nearly as great as the first year net level premium reserve. It can therefore only be provided by an accounting transfer from surplus. This being the case, the greater is the volume of new business, the smaller are additions to surplus in any given year.

To stockholders, these vagaries are of no particular consequence. Securities markets tend to value earnings plowed back into a business almost as highly as an equivalent increase in dividend rates. Not so, however, with the owners of mutual companies. To them, the aggregate addition to surplus is the important matter. True, the aggregate contribution of a class of policyholders (a group having policies on a given plan and with a common issue age, and number of years in force) is --- in principle --- the sole determinant of the dividends to be distributed to the members of the class. If a company is growing rapidly, however, this

principle cannot be made fully operative. Aggregate contributions to surplus form an upper bound to aggregate dividend distributions. Whether the smallness of an annual distribution stems from, on the one hand, the accounting quirks used or required in treating investments in new business or, on the other, from investment losses, increases in mortality, or reduced operating efficiency really makes no difference. Whatever their cause, small additions to surplus imply small dividends. And it is dividends which determine the cost of insurance.

These considerations do not, of course, necessarily imply that growth in a mutual company's insurance in force is undesirable from the standpoint of the present policyholder. They most assuredly do not imply a complete cessation of sales to be in his interests. If replacements for retiring policyholders were not provided, costs to the remaining policyholders would very likely increase. If economies of scale exist, some growth would be desirable, even from the short run point of view of the individual policyholder --- the greater his life expectancy, the greater the desired rate of growth.

These considerations do imply, however, that a slower rate of growth for a mutual than for a stock company is desirable from the points of view of their respective owners. Stock companies are in fact currently growing considerably more rapidly than mutuals. This phenomenon seems largely if not entirely attributable, however, to factors other than an overriding concern on the part of mutual company executives with the best interests of their respective policyholders. Most large companies are mutuals. Most large mutuals operate in New York. Most small concerns are stock companies. The vast majority of them are not licensed in New York.

Due mainly to section 213 of the New York law, companies licensed in that state --- both stock and mutual --- are growing at substantially lower rates than their non-New York counterparts.

Growth does appear to be a phenomenon much desired by agents and executives of mutual as well as of stock companies. Company press releases to trade periodicals appear to emphasize most heavily such records as may recently have been set in sales, in force, assets, and payments to policyholders. Agents particularly seem to regard "size" as synonymous with "goodness" and "growth" with "progress." Even those of the agents interviewed who represented small companies seemed willing to accept both of these semantic extensions. Statements implying, "We're not as big as they are, but we're just as good," were made spontaneously by each of the small company salesmen.

No claim is made that the life insurance is unique in this respect. To the contrary, it is perhaps inevitable in a dynamic culture that size and growth be accepted as virtues in their own rights. After all, one need seek no further than Middle Western university presidents to find a body of executives of non-profit institutions most of whom exhibit this pattern of beliefs.

The subject of growth arose --- sometimes spontaneously, if not, then by design --- during interviews with a number of mutual company executives which have been conducted during recent years.[1] These officials

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1. Much of the remainder of this and the following chapter is based on interviews with 11 upper level executives, most of whom are actuaries with large mutual companies in the Northeast. These interviews took place mostly during the summer of 1954. Anonymity was promised --- although not

were unanimous in making statements of one sort or another from which a perceived desirability of a substantial growth rate could easily be inferred. As one of the reasons why their companies had recently entered the group life business, the fact that firms with group departments appeared to be growing faster than those not having them was mentioned by two of these executives. Some expressed considerable pride in the expansion of sales they attributed to recent changes in company policy. Others expressed concern over recently experienced declines in sales relative to those of competitors. Still others mentioned such a decline as the primary reason for recent changes in company policy.

At the same time, however, some of these respondents did appear to hold mildly ambivalent views toward growth. One of these men was questioned about the remarkable expansion during the last two decades of one large stock company, the Lincoln National. The question was innocent in both wording and intonation. It nonetheless evoked a response highly defensive of that company. A large part of its growth had come from reinsurance. It has a fine, upstanding, capable group of executives. Its net costs are low. In short, its growth has most certainly not come about as a result of anything underhanded. Three additional respondents spontaneously referred to the existence of a conflict between the best interests of present policyholders and what they perceived as an industry wide desire for substantial growth. They quickly went on, however, to

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demanded by --- each of these respondents. Since many of their statements are interpreted in ways of which they would undoubtedly disapprove, it is even more than normally important that this promise be kept. To preserve the anonymity of either a respondent or his company, it has occasionally been necessary to disguise some of the background information associated with a statement.

justify this apparent poor faith with their companies' owners on a number of grounds.

That responses to general questions reflect the way people really feel and act is often an assumption of dubious validity. Such an assumption is particularly questionable when stereotypes concerning what constitutes good behavior or acceptable feelings are widely held. General questions in areas such as these are almost inevitably loaded --- implicitly if not explicitly. "How do you feel about hiring Negroes?" is just as likely to evoke a highly defensive response as, "In hiring, do you discriminate against Negroes?" More germane, "How do you feel about growth?" is just as likely to result in a stereotyped answer as, "You've frequently mentioned a strong desire for your company's growth. How do you justify this in light of the fact that considerable growth is contrary to the best interests of mutual company policyholders?"

While the inevitable limitations of statements dealing with this topic were recognized, it was nonetheless introduced toward the conclusion of most of the executive interviews. While by no means the most frequent response, answers stressing economic or quasi-economic factors were quite common. One respondent even went so far as to refer to something "akin to the profit motive" with regard to executive salaries. Part of a second executive's comments were phrased in terms which might be subsumed under either profit maximization or need achievement depending on one's point of view. "Simply from the standpoint of the performance of its employees," he maintained, "I can't see how a company that doesn't grow can be a good company. A company that doesn't grow doesn't open up the opportunities that its employees want and need for development and

advancement. There just aren't incentives for effective work."

These and similar comments concerning the economic motivations of managers were considerably less common than statements dealing with the production function dynamics of firms in the industry. "It's a well known fact of American business life," one executive insisted, "that a company has to grow or it will slip.... It is possible for a company to stand still and remain perfectly sound, but it can't do this as a result of a conscious policy on its part. It must still have a conscious policy of wanting to advance." If a company wasn't growing, he continued, and its agents weren't able to sell sufficient new business to make a living, they would soon leave the company, thus making a contraction of its operations necessary. The reduction in staff, facilities, and office space involved in such a contraction would be very trying.

An assertion that a decline in growth generates a cumulative process were frequently made. According to one respondent, "If a rate of growth slows down too much, ... it's possible to cut down overhead commensurately only after considerable time has elapsed. Thus, unit costs become poorer and poorer.... You have two courses of action --- take corrective steps and attempt to improve your rate of growth, or attempt to cut overhead. The latter is the defeatist attitude."

Referring specifically to Mutual of New York as one company which had gone through such a cumulative process of decay, a second executive made almost identical comments. In addition, he added, "of course, a company wants to spread its overhead further and to obtain cost advantages in this respect." He was the only one, however, to allude to the existence of economies of scale.

Far more frequent than these economic or quasi-economic references were answers which fell into either of two general groupings. On the one hand, a number of executives seemed genuinely to feel that companies were serving a vital social need by expanding as rapidly as possible. On the other hand, several regarded growth as fulfilling a strongly felt need for achievement --- apart from personal economic considerations --- on the part of executives and agents alike. References to the desire to be on a "winning team" were frequently made. For example,

> Essentially, it's a matter of pride.... It's like being in a race or in a baseball game. You want to be a winner. You want to show a 10% increase in sales over the other company over last year. In short, you want to be the best. And you know that the board of directors will be asking at each meeting how we're doing on sales. Essentially, though, it's a matter of wanting to do a good job.

A second respondent commented,

> It's human nature among people in the business to want to excel --- to do a better job. And one of the indications of this is the rate of growth.... It's accepted as a job well done to maintain or preferable to increase the size of the percentage of the market served by the company....
>
> We compare our rate of growth with that of ... and three or four other companies of about our own size and type of business. If we're doing a better job --- growing faster --- we're happy. And for the past three or four years, we've been doing a better job. However, checking our sales this year, we've discovered that our rate of growth in in force is only about 1%, and this has a number of people from the president on down a bit upset, has them asking 'why?'

This same respondent went on to refer to the development of "friendly competition" among company presidents and agency vice presidents.

> They [agency vice presidents] get together over lunch and one

> mentions that he is up 2% over the preceding year. They agree to exchange sales figures, and over a time, a friendly rivalry builds up....
>
> One [president], in a game of golf, mentions that his company has been doing thus and so. When the second comes back to his company, he wants to know why his company hasn't been doing this.

Similar statements were made regarding the feelings of agents, particularly with respect to entering new lines of insurance. The consensus appeared to be that agents are particularly prone to regard entering new lines as progress. And naturally, all agents want to work for progressive companies. A number of life insurance companies have started to write individual accident and health insurance in recent years. Such phenomena inevitably produce substantial numbers of "if they can do it, why can't we?" letters from the field. "If we find that we can't give a particularly good answer," one respondent commented, "we usually find ourselves in the business in rather short order."

The belief that growth served a vital social need was expressed with particular frequency by executives of companies which had recently gone into the A and H business. As one of them put it,

> Actually, the primary reason for the company's going into the business was a social one. The company felt that if private enterprise didn't accept the challenge in this area, the government would have to. And many of our top people genuinely felt that this would not be in the public interest.
>
> Of course, our agents were happy to have the plan and it did help to round out our sales package. But to all intents and purposes, there was really no more reason for our going into the field that for us to start writing automobile insurance.

Expressions of the feeling that expansion contributed to the commonweal were by no means restricted to justifying entry into new lines.

And accident and health insurance was by no means the only area in which respondents claimed responsibility for keeping a misguided public from demanding more socialism. One executive referred to Northwestern Mutual as being "rather a sport in the industry." A sense of trusteeship, he maintained, had developed in that company to the exclusion of all other considerations. His company was willing to admit that it tempered its sincere desire to be a good trustee with a desire to serve a wider and wider market. "I don't hold anything against specialty companies like Northwestern Mutual and Home Life," he continued," "but if everyone operated the way these companies do, the government would be in the business in no time."

To summarize, the intensity with which growth is stressed by both mutual and stock company executives may stem from a profit maximizing motive --- more accurately, a salary and perquisite maximizing motive --- on their part. As one who is reluctant to play the currently fashionable game of denigrating the efficacy of profit maximization as a predictive tool, it would be comforting to think so. A proponent of the economic man point of view can find considerable support. When disputes arise on which practices are "equitable," "just," or "in the public interest," companies are more often than not found supporting that side which is in their economic best interests. On the other hand, this stress may have developed largely from non-economic causes --- the existence of a genuine (albeit myopic) sense of altruism or of intense needs for achievement, needs for the acquisition of blue ribbons.

Which, if any, of these factors dominates is an interesting subject for speculation. Short of a mass psycho-analysis of agents and

executives, however, the results of this speculation cannot be verified. But in the last analysis, which motives dominate is really of no great importance. An intense desire for growth does pervade the industry. This desire is perfectly understandable on economic grounds, both from the standpoint of managers and of the firms they represent. In stock company terms, growth is profitable. Even with increased investment yields and inflated costs of recruiting, the investment in new agents required to produce an expanded volume of sales is generally well worth while. In mutual companies, a strong positive correlation does exist between company size and executive salaries as well as between size and the number of high level executive positions open.

If growth is understandable in economic terms, it does not seem unreasonable to expect that the means taken to achieve it would sustain economic interpretation. To anticipate subsequent discussion, this expectation is frequently fulfilled. Companies have, on occasion, been found to act against their economic best interests. Such actions are infrequent, however.

The Growth of "Net Cost" Competition: At one time or another in the past, price competition has developed in many lines of insurance. In most cases, this unpleasant situation was ameliorated shortly after its development. For a brief period in the first decade of this century, competitive price cutting reached epidemic proportions among surety companies. The establishment in 1909 of a rating bureau to which most of the leading surety companies subscribed served effectively to terminate this rate war.[1]

The first group life insurance contract was written in 1911.[2] As early as 1917, the actuaries of the principal companies operating in this line --- often accompanied by a representative of the New York Department --- had begun to meet informally to discuss underwriting and rate making practices. By 1920, these informal meetings had led to general acceptance of a uniform schedule of minimum gross premiums. During the years that immediately followed, commission scales, underwriting rules, and a number of other trade practices became the subject of gentlemen's agreements. Around 1924, however, a few companies --- notably the Aetna --- began to break away from the agreed upon rules and rates. Seeing the advantages rate cutting seemed to afford, several others either broke away or threatened this action. By early 1926, survival of the informal association was seriously threatened. A formal organization, the Group Association, was thereupon constituted. As a result of pressures of various sorts --- the threat of retalliation presumably a major one ---

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1. Jules Backman, Surety Rate Making: A Study of the Economics of Suretyship, New York: Surety Association of America, 1948, Chapter 1.
2. By the Equitable Society on employees of Montgomery Ward.

all of the major companies joined. Perhaps fortuitously, the New York Legislature considerably enhanced this organization's powers to police rate making practices shortly after it came into being. Later in 1926, the Superintendant of Insurance was granted authority to establish minimum gross premiums on group life contracts. The association promptly recommended the rates which had been adopted informally six or seven years earlier. These were accepted by the superintendent without alteration.

Under the aegis of the Group Association, the writing of this line soon became a quite gentlemanly business. It continued as such during the remainder of the 1920's and throughout the 1930's. Largely as a result of the harsh treatment it received at the hands of the Temporary National Economic Committee, however, the organization disbanded in 1942. Minimum gross premiums on group life are still established by the New York Department. Many non-New York companies also abide by these limits. Despite the New York controls, however, price competition has again become quite intense, particularly during recent years, and particularly on group accident and health insurance. At the root of this phenomenon, of course, is the fact that group insurance buyers are generally highly price conscious. In addition, a number of major firms have recently established group departments --- New York Life, New England Mutual, Massachusetts Mutual, and Mutual of New York, to name only a few. Some of these have been extremely aggressive in using price to attract established groups from their competitors.[1]

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1. See: Davis W. Gregg, An Analysis of Group Life Insurance, Philadelphia: University of Pennsylvania Press, 1950; Gerhard A. Gesell and Ernest J. Howe, Study of Legal Reserve Life Insurance Companies, US TNEC, Monograph 28, pp. 141-149; TNEC Hearings, Part 10, pp. 4153-4222, 4687-4716.

Rate structures for casualty and particularly for fire insurance are vastly more complex than those for life insurance. Largely for this reason, it would appear, multi-company rating bureaus developed in these lines at a fairly early date. In 1911, the existence, desirability, and dangers of these bureaus were recognized in the New York Laws. The Superintendent was given broad powers to determine both the reasonableness and the adequacy of bureau rates. Most states soon adopted similar statutes. By 1920, only a few continued to maintain that the public interest was best served by preventing rather than by regulating collusive pricing. By the end of the 1920's, regulation of rating bureaus had become universal.

The vast majority of fire and casualty companies belong or subscribe to rating bureaus. This has naturally led to a considerable uniformity of rates. No company is prohibited from basing its rates entirely on its own experience, however. Furthermore, a company may deviate --- either up or down --- from the rates set by the bureau to which it belongs. Many do so. Companies which set rates below the prevailing rating bureau standards have been particularly successful in automobile insurance. One of these, State Farm, has been the country's largest automobile insurer since 1941. Another, Allstate, has occupied a more or less close second for a number of years.

Fire and casualty contract forms are generally highly comparable. Thus, meaningful comparisons of prices can easily be made. This being the case, it would seem reasonable to expect that companies which do not deviate from bureau rates would find themselves seriously hurt by this competition. This has happened, but only during quite recent

years. Allstate entered the fire insurance market in 1954 and has made rapid advances. Its automobile business has grown considerably since 1950 or thereabouts --- so considerably, in fact, that it seriously threatened to take over the number one position in 1954. This threat, in turn, led State Farm to embark on an expanded advertising and agency building campaign. These measures have apparently proved successful. The gap between State Farm's and Allstate's automobile insurance sales has steadily widened. The recent sales increases have not, it should be noted, come about as a result of increases in their effective discounts from rating bureau prices. Rather, the position of old line stock and casualty and fire companies appears to have been undermined almost entirely by an increasingly aggressive selling policy on the part of the cut-raters.

"Mr. Prospect, with competition what it is today, ..." long appears to have been a favorite introduction to a life insurance agent's attempt to convince a reluctant buyer that searching for lower prices would be pointless. This allegation that competition is intense in the industry has had a substantial basis in fact only since about 1948, however. Even now, such competition as exists can reasonably be referred to as psuedo-price competition.

Reasons for the peculiar nature of competition in the industry are not hard to find. Most buyers of life insurance have been and are now unconcerned with comparative prices. Even if substantial buyer concern were present, development of meaningful price measures presents formidable logical and computational problems. Even if such measures were available, explaining them to the uniniated --- a group which includes most life insurance agents --- would prove exceedingly difficult. In any

event, their use would generally not be expedient. Meaningful price measures have a tendency to make clear the fact that life insurance protection is not cheap --- something the typical net cost illustration most emphatically does not do. As a result of all these factors, only the simplest of measures are generally quoted and compared. All of the ones commonly used have at least one serious drawback. All make it possible for a company to alter its competitive standing considerably without making any substantive changes in its prices.

To repeat, even such distorted price competition as presently exists has developed largely, to set an arbitrary date, since 1948 --- the year in which the CSO mortality table became the official standard for policy reserve valuation. Once started, however, this wave of competition seems to have gained force rapidly. It does not appear to have been associated with any substantial increase in buyer awareness or concern with intercompany price differences. It does appear, however, to have been accompanied by a substantial increase in the concern of agents with these matters.

The genesis of this peculiar state of affairs is not clear. The nature of competition in the industry was one of the subject discussed with the panel of company executives mentioned above. Most of these men spontaneously mentioned a considerable growth in competition during the postwar era. Some of them were at a loss to account for this phenomenon. As far as they could see, all of a sudden it was there. Of those who did have definite opinions, no two were in agreement on specific causes. The comments of this latter group are, however, amenable to classification into four broad categories.

1) "Somebody did something": The immediate response of many of these executives was to catalogue specific actions of individual companies during the recent past. The first company to be mentioned was very frequently the respondent's own. "In 195X, we issued thus and so policy (generally a high minimum whole life contract). It went over well. They wouldn't like to admit they were following our lead, but A issued one with a net cost a few cents below ours and then B undercut them. Now everyone seems to be doing it." Apparent in many of their voices was the slightly rueful pride of the innovator who finds himself so widely imitated that his novelty seems likely to get out of hand.

One actuary attributed the start of the current competitive wave "in a quiet way" to Connecticut Mutual. Over the course of several years, it had considerably improved its investment returns and was then (mid-1954) earning perhaps 1/4% more than most of the major Eastern companies. It had used these higher yields to sweeten dividends across the board. At the same time, it had gone through a substantial agency building campaign. Its sales had expanded considerably. Then, he continued, several companies made substantial improvements in their net cost pictures beginning in early 1954. New York Life started off by substantially reducing its gross premiums and altering its dividend scale in such a way that it made a considerably better showing. It also instituted a $10,000 policy which really looked good. Its sales went up 50%. Then in April, John Hancock broke its ordinary business into two parts. Finally in August, the Equitable Society came out with its first special. This policy looked even better than the New York Life's $10,000 minimum.

NYLIC and, to a lesser extent, Equitable entered these dis-

cussions considerably more frequently than any other companies. On the surface, this seemed a bit surprising. After all, other companies had issued $10,000 minimum policies before them, and others had recently made fairly drastic revisions in their premium and dividend scales. At the time most of these interviews took place, however, these two changes were among the most recent. More important, the Equitable Society had long been adamantly opposed to specials. As for New York Life, it had commonly been regarded as moribund. It was fairly well known that a process of revivification had begun. However, its altered price structure and, more particularly, the phenomenal spurt in sales that accompanied it were the first major illustrations of the success of this rejuvenation.

Even more important than the changes themselves were the sales campaigns that accompanied them. Advertising net costs and rates in the insurance press --- particularly the brokerage press --- had long been a fairly common practice. However, such advertising as had been done in the mass media --- there has not been much of it --- was entirely institutional: "Prudential has the strength of Gibralter," "The New York Life agent in your community is a good man to know," an Equitable agent's reminiscences of how he helped Jim Jones send his son to college, and so on into the night. In introducing its change, NYLIC expanded its advertising schedule considerably. Furthermore, it took the unprecedented step of advertising specific plans with a heavy emphasis on low net costs, and even went so far as to include brief net cost and net payment illustrations. Equitable took similar steps when it issued its $10,000 minimum. John Hancock belatedly but no less emphatically followed suit in October, six months after its price revision had taken effect.

These innovations were not widely adopted, and were certainly not highly appreciated. As one agency executive put it, "In our general advertising, we've gone to great pains to educate buyers to the importance of the company, its integrity and financial soundness. We don't approve of anything that would destroy this feeling by giving them the notion that prices might differ among companies. We just don't think the Equitable and New York Life were wise."

Whether these advertising campaigns produced eagerness in a large number of buyers to purchase from the NYLIC, Equitable, and John Hancock is debatable. It is undoubtedly true, however, that many agents assumed this to be the case, particularly in light of NYLIC's considerable expansion in sales. Thus, these campaigns unquestionably caused a furor in the agency departments of many home offices. The volume of "if they can do it, why can't we?" letters undoubtedly increased considerably. As will be developed at greater length below, letters of this type are not taken lightly.

2) Corporate Changes: Several respondents mentioned upper level managerial changes as one factor contributing to increased competition in the industry. Some of these comments were of a more or less general nature. One vice president associated the increased level of competition with, in part, a growing number of actuaries and other technical personnel who were becoming sales oriented. "More and more young executives don't feel that it's beneath them to go out and slug for business," he elaborated, and further indicated that he felt himself to be among this group. Another respondent mentioned the fact that a large number of com panies had experienced changes in chief executives

during the postwar decade. Many of these people saw an expanded level of sales as being a way of making their mark, of establishing themselves.

Several respondents referred to changes in individual companies. As has already been mentioned, New York Life was commonly regarded as having fallen rather badly during the 1940's --- "almost dead" and "moribund" as two of them put it. A great deal of dead wood had accumulated in both the agencies and the home office. Shortly after the war, however, the company began to accumulate a "new, younger, and more dynamic staff." The prices it had paid and was continuing to pay for executive talent were frequently the subject of indignant --- and wistful --- comments. Its 1954 change in price policy was regarded as simply a reflection of this process of revivification.

Mutual of New York had also slipped badly during the 1920's and 1930's. Sales had dropped considerably, and its agency force declined in both numbers and quality. Added to this were more than typically severe real estate losses during the 1930's. It, too, had started a long range revitalization program in the 1940's and this program was also at long last beginning to bear fruit. Several other firms were mentioned as recently having gone through a process of corporate rebirth. Most notable among these were Prudential in the early 1940's and John Hancock at a somewhat later date.

3) <u>Improvements in the economic outlook:</u> During the 1930's, financial reverses were widespread in the industry. In severity, these ranged from mild to insurmountable, although relatively few firms failed. Investment losses were almost universal. Companies which had invested heavily in mortgages, particularly farm mortgages, were especially

hard hit. Many firms had written large amounts of disability income insurance during the late 1920's, and this had turned very sour. During the early 1940's, the possibility of catastrophic war losses was present, and investment yields continued to decline until 1947 or 1948.

One respondent felt that the financial beatings of the 1930's had forced many firms either consciously or unconsciously to reduce sales activity. Statutorily required accounting procedures are such that a high level of sales places a substantial drain on surplus. To reduce this drain --- indeed, to build up surplus rapidly --- all a company need do is fire all of its agents or, more realistically, discourage recruiting. Once able to recuperate from these financial reverses, he continued, an affected company would very likely show a substantial burst in sales activity.

The industry's outlook began to improve in the late 1940's. Mortality losses continued to decline. Disability income policies were gradually being written off the books, and experience on those that remained improved considerably. Holdings of low yield government obligations were being reduced. Many companies began to move back into mortgages. True, operating expenses were increasing, but these were more than offset by continuing improvement in earnings and mortality. For most companies, recuperation from the losses of the 1930's had all but been completed. Mutual of New York, for example, had vastly improved its formerly rather shaky surplus position by cutting dividends to the bone throughout the 1940's. It also appears to have made its agents' contracts somewhat less attractive. By 1950, it had approached very close (9.8%) to the New

York law's 10% surplus limitation.

The increased financial strength of most companies together with the generally growing margins between gross premiums and actual operating costs made increasingly unnecessary the highly conservative interest and mortality assumptions that had so long prevailed. As the 1950's progressed, more and more companies began to relax these assumptions. Many companies increased the proportions of annual contributions to surplus which were actually being paid out as dividends. Mutual of New York, Equitable, and New York Life had long charged high gross premiums and paid correspondingly high dividends. MONY substantially reduced its premium schedule in 1951 and both Equitable and NYLIC followed suit in 1954.

Since the future was becoming continually brighter, each company that made a change in premiums, dividends, policy forms, or any other aspect of its operations was generally able to outdo the company which had made the immediately preceding change. It, in turn, was likely to be outdone by the company which succeeded it. Only a catalyst was needed to convert these successive liberalizations into a race.

4) Changes in market structure: This catalyst was provided to a considerable measure by the peculiar relationship that has long existed between companies and their agency forces. Its effects were strengthened by an increase in the implicit power position of the latter group during the postwar era. In the 1930's, prospective life insurance agents were very easy to find. The labor market being what it was, many were willing to try their hands at anything for a while. At the same time, the market for insurance was, if anything, contracting. Even if a substantial unrequited demand for life insurance had existed, reasons were

numerous why companies might not be too eager to satisfy it. To repeat, the surplus positions of many were weak. The bitter taste of disability income insurance was still strong on the figurative tongues of many firms. Decreases in yields and in annuity mortality made losses on annuity business imminent. Investment yields and, for a brief period, life insurance mortality experience were such that a similar experience with ordinary insurance seemed possible if not likely.

In the postwar era, however, the situation was precisely reversed. Most companies had surplus positions capable of sustaining substantial increases in new business. Yields had begun to increase or appeared likely to do so and mortality appeared to be decreasing steadily. Thus, the desire to expand sales had no major deterrents. Buyers seemed limited only by the availability of agents to contact them. Potential agents, however, were in increasingly short supply. To produce a respectable number of recruits, a general agent had to expend considerably more effort than had been necessary during the '30's. The financial rewards to successful recruiters were therefore increased considerably. Contracts making it economically more worth while for a general agent to emphasize personal production rather than agency building became increasingly rare. Both New York and non-New York companies enticed recruits themselves with more liberal training allowances. These additional allowances made the meeting of Section 213 limitations a touch and go matter for a number of companies. "We took the money involved out of our skins," as one New York company agency executive put it. A 1954 revision of Section 213 did grant a specific extra allowance for the payment of training allowances. Try as they might, however, few companies were able to satisfy their demand for

new agents.

Perhaps mainly for this reason, sales through brokers began to gain favor with companies which had long been reluctant to deal with them. This type of business does have a number of advantages. Most important among these, its initial costs are low. The broker is there --- he does not have to be trained. He pays for his own office space.

On the other hand, the broker tends to be fickle in his dealings. When net cost comparisons are favorable, he submits cases with little coaxing. When comparisons become poor, however, he tends to bestow his favors elsewhere. Factors other than net cost comparisons do enter into a broker's decision on where to place a case. Comparative costs are among, if not the most important of these factors, however. Thus, the increasing regard many companies have for brokers almost automatically entails an increased emphasis on net cost comparisons. Several executives commented on the growing willingness of life companies to do brokerage business. Most of them went on to associate an increased level of competition with this phenomenon.

The fact that brokerage sales are unpredictable can have serious administrative consequences particularly for companies such as Prudential and National of Vermont which do a substantial volume of this business. It is far easier to predict machine, space, and personnel requirements needed to process sales produced by an agency force than those obtained through brokers.

Lack of predictability is by no means the only drawback to brokerage sales. In the late 1920's and early 1930's, mortality experience appears to have been particularly bad on brokerage sales. Brokers' cli-

ents seem to have been strongly suicide prone. Furthermore, and perhaps most important of all, the fact that a company accepts business from other than its own licensed agents has a tendency to depress the morale of these agents. In dealing with its field force, Northwestern Mutual has long made much of its refusal to deal with brokers. This practice appears to account in considerable measure for the peculiarly fierce devotion to the company prevalent among its salesmen.

As has already been developed at length in Chapter 3, success as a life insurance agent demands a considerable emotional attachment to the institution of life insurance and to the agent's own company. If he is to sell effectively, the typical agent must genuinely believe that his company offers a superior product. Net cost competition is not entirely new to the industry, of course. Northwestern Mutual has emphasized its favorable comparisons for years. When asked why this had not long since led to a competitive situation similar to that existing at present, one executive replied,

> Well, there was always the hope that Northwestern would fall flat on its face. It doesn't seem to have done so, nor does it seem likely to. Nonetheless, there was always that hope. Furthermore, Northwestern has achieved its position only by refusing to allow a number of things most of the rest of us allow. As a result, they've always written a relatively low volume of business in comparison to their in force. Most of the rest of us haven't been willing to go that far to achieve low net costs, and that would be the only way we could do it.
>
> We viewed the Northwestern Mutual picture with a certain amount of resignation. Furthermore, we felt that one swallow doesn't make a summer or, possibly more accurately in this case, one snowflake doesn't make a winter. But when a large number of companies began to show low net costs on one policy or another, we had to do something about it.

It was quite possible, that is to say, for a few firms year in and year out to charge considerably lower prices than any others without unduly disturbing agents. It was not low prices per se that disturbed agents. It was, rather, the fact that the boat had been rocked. Low net costs were now being flaunted by companies which long had only mediocre positions on the net cost comparison lists. The New York Life, John Hancock, and Equitable advertisements appear to have been particularly strong in their effects on salesmen. After all, agents read the mass media too. It was these shifts in position that caused the proliferation of "if they can do it, why can't we?" demands from agents.

To summarize the preceding pages, industry executives are strongly motivated by a desire for company growth. During the 1930's, however, factors existed which served to attenuate its desirability. The weak surplus positions of many companies together with the accounting procedures in common use made it impossible for many to support a substantial volume of new business. New business was not an unmixed blessing even for companies with fairly strong surplus positions. Investment yields were declining steadily. Despite declining mortality, reduced yields had already served to make some old business unprofitable. It seemed entirely possible that even the highly conservative factors on which business wthen being written was based would not prove adequate.

By the late 1940's, these attenuating factors had all but disappeared. By and large, company surplus positions had improved to the point where substantial increases in new business could easily be supported. The decline in earnings had, at long last, begun to reverse

itself. The future looked bright. Company executives were, if anything, more strongly than ever imbued with a desire to grow.

The potential demand for insurance seemed almost unlimited. Only the fact that agents were in short supply inhibited the expansion of sales. Both recruiting and being recruited therefore became increasingly more lucrative. Furthermore, the favor of brokers --- a group which had become unpopular during the 1930's --- came increasingly to be curried. Brokers tend to place heavy emphasis on comparative costs in placing policies. Growth in the number of firms seeking their patronage therefore almost automatically led to increased concern with comparisons on the part of price setting officials.

"Net costs," the standard basis of comparison, would have declined under any circumstances. Yields continued to increase, and mortality to decline. Even if this had not been the case, however, improvements would have been possible. A change in the time pattern of surplus allocations can be equally as effective in reducing these measures across the board as a genuine sweetening of dividend formulae. Whether or not price setting officials have always been aware of this fact, its use came increasingly into vogue in the late '40's and early '50's. In consequence, many firms produced quite frequent and quite considerable reductions in their net cost illustrations.

These reductions were not kept secret. Indeed, this would not have been possible even if the companies involved had so desired. For the largest companies and the most common plans, at any rate, compendia such as the Unique Manual and the Flitcraft Compend have long provided current informaiton on cash values, dividends, and premium rates. Most

agents have copies of one or both of these volumes, and many have occasion to refer to them when competition develops. Partly to attract brokers and partly, perhaps, to encourage those rare prospective agents who compare companies, the leading cutters of net costs considerably expanded their trade journal advertising. Three of them --- New York Life, Equitable, and John Hancock --- even went so far as to emphasize low net costs in mass media advertising.

In at least one respect, life insurance agents are atypical salesmen. Most of them are believers --- believers in the institution of life insurance and in their companies. Money matter, of course. But it is the combination of making money and doing good which makes their jobs irresistable to them. The increasingly frequent appearance of attractive net cost illustrations on competitors' policies unquestionably shook many agents' faith in their own companies. Their effectiveness as salesmen diminished. "If they can do it, why can't we?" letters to home offices increased in volume. Thus, companies which had not engaged in a drive to improve brokerage business, or which regarded as inequitable some of the devices used to improve net cost showings --- specials, surrender dividnends, steeply tilted dividend scales, and the like --- were forced more or less against their will to adopt one or more of these devices. Equitable at long last issued a special. When quantity discounts were legitimized, Northwestern Mutual adopted the procedure. As a result, competition --- net cost competition --- developed a degree of intensity formerly unknown in the industry.

Chapter 6

Price Policy and the Market Place

Some Principles of Price Policy: That life insurance prices should, above all else, be "equitable" is a canon held by the vast majority of both company and regulatory body officials. As to an acceptable semi-operational definition of "equity," most would agree with both the following set of principles enunciated by E. W. Marshall, a prominent American actuary, and the priorities implied in the order of their listing:

> (1) The safety and integrity of the company and the interests of the policyholders as a whole take precedence over considerations of strict equity between policies.
>
> (2) Subject only to principle (1), equity should be maintained between blocks of policies with materially different premium scales or basic guarantees. To the extent practicable, each such block should always have the benefit of and be kept self-supporting from, its own surplus margins, with its reserves against future obligations and dividends fixed accordingly.
>
> (3) Within each such block of policies, equity should be maintained so that each policy will receive dividends approximately in proportion to its contributions to distributable surplus, taking into account plan, age at issue, policy duration, and any special benefit provided.
>
> (4) Popular expectations regarding dividends [e.g., that they increase with policy duration] should govern only to the extent consistent with the three foregoing principles.
>
> (5) Broad equity is all that can be attained.[1]

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1. "Surplus Distribution under Ordinary Insurance in United States and Canada," Proceedings, Centenary Assembly of the Institute of Actuaries, Volume 2, pp. 286-88.

A policy group's "contributions to distributable surplus" are, in turn, generally felt to be equitably determined only when operating costs are allocated on a "full" or "average" basis. To maintain equity, that is to say, a policy group must bear not only the costs to which it directly gives rise, but also its "fair" share of general overhead. Thus, equitable pricing is very nearly the antithesis of what an economist might regard as discriminatory pricing. "Might" is used advisedly. Both of the by now classic treatments of discrimination --- those of Pigou[1] and Robinson[2] --- discuss the subject only in terms of identical products sold in separable markets. To Robinson, price discrimination is "the act of selling the same article, produced under a single control, at different prices to different buyers."[3] Pigou never defines the term precisely. However, his treatment implies it to be without meaning in comparing other than identical products or, more precisely, in compari ng products whose prices would not be the same under "simple competition."[4]

Perhaps the simplest extension of the Pigou-Robinson definition to related but not identical products is, "Discrimination exists whenever similar commodities are sold at prices which yield different (rates of) return to the seller over his marginal costs." It is a moot point whether "rates of" should, on the one hand, be eliminated from the definition or, on the other, be relieved of its partial state of oblivion by removal of the parentheses. Does the Detroit dealer who sells both Cadillacs and

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1. The Economics of Welfare, Chapters 17 and 18.
2. The Economics of Imperfect Competition, Book V.
3. Ibid., p. 179.
4. See, in particular, his discussion of whether "joint costs" play a role in railway transportation. Op. Cit., pp. 297-99.

Chevrolets to automobile bootleggers at invoice cost plus $50 discriminating against the Chevrolet market? I am inclined to answer "yes," i.e., to remove the parentheses. It seems wise to defer a semantic debate as to whether or not this preference is justifiable. In the present context, such a debate will prove necessary only if policy groups with high marginal costs appear generally to make a greater absolute but smaller proportionate contribution to overhead and surplus than those with low marginal costs. If high or low marginal cost groups contribute more both relatively and absolutely, the assertion that discrimination exists seems entirely justifiable.

One difficulty in determining whether equitable --- non-discriminatory --- pricing prodedures are generally followed in the industry should be mentioned at the outset. Only a very few companies possess cost information of sufficient accuracy to make possible computation of reliable rates of return on individual policy groups. The names Prudential, Metropolitan, Mutual of New York, and lately, John Hancock and New York Life very nearly exhaust the list. Most of the rest have only the crudest of notions concerning the functional genesis of their costs.

Even if all firms did have accurate cost data, overhead in a multi-product firm is, by its very nature, allocable only arbitrarily. Wheter "rate of return" or simply "return" is the basis on which the existence of discrimination should be judged is, to repeat, a moot point. It is therefore quite understandable that the existence of honest differences of opinion concerning the way in which general overhead should be allocated to preserve equity should be both recognized and condoned. For example,

there is nothing absolute about the concept of equity of dividends among classes of policies. One may be able to insist that mortality rates used in the asset share calculation be those that are currently experienced, and that the rate of interest be that currently earned; but when it comes to unit expenses, honest opinions may differ widely. Equity, as revealed from asset-share results, is a function of the chosen basis of expense assessment and is therefore no more absolute than the expense basis is unique.[1]

Evidence does exist that discriminatory pricing is consciously practiced. Prices are charged, that is to say, which could not result from any reasonable full cost system of allocation. In some cases, most notably in the procedures followed in pricing juvenile policies, these violations defy explanation in terms of rational economic behavior, at least on the surface. In many others, what are essentially marginal cost-marginal revenue considerations appear to prevail. Formal recognition of either the use or the usefulness of the marginal calculus as a price setting tool is infrequent, however. Whether or not justifiable on rational economic grounds, violations of the full cost principle are normally defended as stemming from "practical considerations."

Reference to a distinction between the theory and the practical aspects of pricing are frequent in the trade literature. Thus, in describing a technique for the development of dividend scales, E. W. Marshall concluded,

> The actuary then has before him on one sheet a schedule of (1) contributions indicating approximately the maximum dividends theoretically payable at the various points; (2) dividends ac-

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1. Edward H. Wells and Charles B. Laing, "Methods of Calculating Unit Expenses for Asset Shares," Record, American Institute of Actuaries, 1940, pp. 265-295.

> cording to the old dividend scale; and (3) the corresponding dividends of other companies. With this information he is in a position to write down 'model dividends' which reflect the trend of the contributions as well as the commercial practice indicated by the dividends of other companies.... This is the point in the whole operation where both theory and practical considerations can be given their proper weight in the determination of the new dividend scale.[1]

According to another actuary,

> it may be found that if we attempt to assess all the expenses which vary by number of policies on the basis of the true average policy under each plan, the resulting expense rates per thousand might be so high under plans with a low average policy as to be impractical. In that case, again, some compromise between theory and common sense must be made.[2]

In describing the cost allocation procedures of the Mutual of New York, this same writer stated,

> The other half [of a block of expenses] was expressed in terms of dollars per thousand of new business, term insurance, juvenile, and the term portion of family income being counted for one-half of their volume, since these plans cannot support the same rate of expense as the regular plans. Some companies might prefer to count these plans for their full volume unless there is definite reason to believe that they give rise to less expense of this type than do other plans.[3]

In short, the ethic would appear to be that the full cost pricing precept is something one violates only under compulsion, not of one's own free will. Discriminatory pricing --- naturally enough, the

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1. "Supplementary Note on the Practical Determination of the Dividend Formula," in J. B. Maclean, Distribution of Surplus, New York: Actuarial Society of America, 1937, pp. 138-39.
2. C. F. B. Richardson, Proceedings, Life Office Management Association, 1942, p. 67.
3. C. F. B. Richardson, "Cost Analysis," Record, American Institute of Actuaries, 1946, p. 58.

phrase is rarely used --- is generally regarded as unsound ethically and poor business procedure to boot. Some few industry executives have maintained publicly that the shading of full cost prices may on occasion be defensible theoretically as well as justifiable practically. The preachings of these few bold spirits have been anything but enthusiastically received, however.

If the actuarial journals afford a representative sample of industry opinion, the most outspoken proponent of marginal cost-marginal revenue pricing procedures would appear to be Manuel Gelles of the New York Life. In the latter of two recent papers[1] on the subject, he quoted with approbation a statement of the chief of the New York Department's Uniform Accounting Bureau to the effect that,

> the buying public and the companies are best served when rates are set at levels calculated to result in the largest possible market and a fair contribution to over-all profits. Rates should not necessarily be based on company cost allocations.... Discrimination which can be removed only by pricing desirable risks out of the market is not unfair discrimination.[2]

The writer was careful to add, however, that his "exposition does not represent the adoption of an official position by the New York Department."

In terms suggestive of J. M. Clark's Economics of Overhead Costs (he quoted Clark liberally in his earlier paper), Gelles went on to discuss the conditions under which it might be desirable to allocate

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1. "Actuarial Considerations in Cost Analysis," Transactions, Society of Actuaries, 1953, pp. 621-48, and "Overhead and Unit Costs," Transactions, Actuarial Society of America, 1946, pp. 286-303.
2. J. J. Higgins, "Problems in Expense Allocation," Proceedings, Insurance Accounting and Statistical Association, 1951. Cited by Gelles in "Actuarial Considerations ...," p. 634.

less than a full share of overhead to a new or special plan. The essence of his argument was that if operating "costs are increased by less than the amount available in the new plan's premiums[,] company operation as a whole is improved if the new plan is issued.... It is important," he continued, "to recognize limitations in the application of this idea." The only limitation explicitly recognized, however, was that "if the addition of the new plan is made at the expense of business customarily written, the cost picture could be altered considerably."[1]

One of this paper's discussants felt that "it deals boldly and untraditionally with an area of particular importance to the insurance business." He regarded with approval what he interpreted as being Gelles" contention "that overhead expense should be allocated with skill and flexibility so as to make the company price structure an effective instrument in carrying out company objectives."[2] He had expressed very similar views in commenting on Gelles earlier paper, as had another of this earlier paper's discussants.[3]

In the view of the three remaining discussants of these two papers, however, Gelles' "added cost" doctrine had little to recommend itself. One of them argued that,

> use of the added cost theory[presents] serious theoretical problems for the actuary. Just which of the plans offered are to be considered as added plans to bear only the additional costs incident to their issue?

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1. Op. Cit., pp. 633-634.
2. Irving Rosenthal, "Discussion," Transactions, Society of Actuaries, 1953, pp. 643-44."
3. Edward A. Lew and Rosenthal, "Discussion: Overhead and Unit Costs," Transactions, American Society of Actuaries, 1949, pp. 510-523.

He went on to consider a hypothetical case in which addition of a new line hastened the time at which a new office building would be needed.

> Logically, then, if our new line has hastened the date of transfer to a new, more expensive, home office building, must it not from the date of change to the new quarters, until such time as that change would normally have been required, bear more than a proportionate share of the additional cost required to operate the building, thereby balancing off any 'savings' during the tenancy of the old building?[1]

Another quite reasonably argued that "when a company is composed of a large number of work units at different stages of full utilization, one might wonder whether the discontinuity of each unit does not add up to approximate continuity of the company as a whole." Less reasonably, however, he continued,

> There is some ground for the standpoint that a new plan should be scrutinized more carefully than existing plans as to the adequacy of its loading. As to an existing plan, the agency force and to some extent the public have a vested interest, so that the company is perhaps morally bound to continue its issuance even when competitive conditions interfere with getting an adequate rate. As to a new plan, however, there would seem little ground for introducing it unless it will pay its own way....
>
> It would seem to me that the criterion for a new plan is, what would be the effect on actual expenses if this plan came to form a high proportion of the total business?[2]

The remaining discussant, E. W. Marshall, used what he appeared to regard as a <u>reductio ad absurdum</u> attack. If it is a good idea to assign only added costs to one new group of policies, he argued, then logically,

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1. Robert T. Jackson, "Discussion," <u>Transactions</u>, Society of Actuaries, 1953, pp. 642-643.
2. James E. Hoskins, "Discussion: Overhead and Unit Costs," <u>Transactions</u>, American Society of Actuaries, 1946, pp. 509-510.

it would be a good idea to do it for all new policies issued. But after a while, the business originally on the books --- that which bore most of the overhead at the time the added cost doctrine was put into effect --- "will be greatly reduced and ultimately disappear. What business then would bear the overhead expense which still would go on?"[1]

True, the profit maximizing principle of pricing which Gelles appears to espouse was neither as clearly nor as precisely stated in his second paper as it might have been. Marshall's rejection of it nonetheless seems particularly surprising in light of his previous statements concerning price policy. After all, Gelles' papers do nothing less than supply a theoretical basis for what Marshall appeared to regard as an integral part of the pricing process --- giving "both theory [i.e., the full cost principle] and practical considerations ... their proper weight." His rejection of marginal cost-marginal revenue pricing might have stemmed from a variety of causes --- a lack of comprehension, an age associated increase in conservatism, or simply an unwillingness to substitute a firm principle for his informed judgement regarding practical matters. Which, if any, of these causes predominated is not known.

The subject of "Gelles' theories" of pricing was raised in several of the executive interviews. One respondent clearly understood and, perforce, agreed with his argument. The consensus is perhaps best suggested, however, by an incident that occurred during an interview with officers of two of NYLIC's competitors. In discussing New York Life's $10,000 minimum whole life contract, one remarked that while NYLIC's agency expenses were a little lower than his company's, the two had about the same mortality and home office expenses, and, if anything, his firm

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1. "Discussion," Transactions, Society of Actuaries, 1953, pp. 640-41.

had a bit higher earnings rate. "Apparently," he concluded with clear disapprobation, "our friend Gelles is applying his marginal theory. I can't see how they could do it otherwise." His colleague nodded in emphatic agreement.

The Mechanics of Price Setting:[1] Imagine the existence of a large group, l_x, of people all age x. Each of them desires to provide \$1 to his dependents at the time of his death. To guarantee this benefit, all agree to make annual contributions of a constant amount to an insurance pool. Assume, furthermore, that this pool is formed under the following conditions: 1) Its members have perfect knowledge of the mortality rates to which they will be subject --- although not, of course, of precisely who will die at what times; 2) Deaths of group members will occur just prior to anniversaries of the pool's inception; 3) Any funds in the pool which have not been paid out as death benefits will earn a guaranteed rate of i% a year; and 4) Costs of administering the pool are nil.

The first task of the group is to determine what each member's annual contribution to the pool, P_x, must be. At the inception of the pool, the present value of these contributions is:

$$P_x \left(l_x + v\, l_{x+1} + v^2\, l_{x+2} + \ldots + v^{x+z}\, l_{x+z}\right) = P_x\, (1+i)^x \sum_{k=x}^{x+z} L_k \qquad (1)$$

where $v = 1/(1+i)$, $L_x = v^x\, l_x$, and x+z is the terminal age of the mortality table, i.e., the age beyond which no member of the group will live. The present value of these contributions must equal the present value of the benefits to be paid from the pool. This latter present value is:

$$v\, d_x + v^2\, d_{x+1} + \ldots + v^{x+z+1}\, d_{x+z} = (1+i)^x \sum_{k=x}^{x+z} D_k \qquad (2)$$

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1. Much of the following material is discussed at greater length and in more elementary terms in Chapters 5-8 of Joseph B. Maclean, Life Insurance, (Eighth Edition), New York: McGraw Hill, 1957.

where $d_x = l_x - l_{x+1}$ and $D_x = v^{x+1} d_x$. This being the case, P_x can be determined simply by dividing the sum in equation (2) by the sum in equation (1):

$$P_x = \sum_{k=x}^{x+z} D_k \Big/ \sum_{k=x}^{x+z} L_k \qquad (3)$$

As thus determined, P_x is called the i% net level premium for the whole life contract on the mortality table to which the group is subject. Simple modifications to equation (3) enable determination of the net level premium on any other plan of insurance. The ten year term premium, for example, could be obtained by summing both numerator and denominator from x to x+9 rather than from x to x+z. A 20 pay life net level premium would result if the denominator was summed from x to x+19. Summing both numerator and denominator within this limit and adding $v^{20}\, l_{x+20}$ to the numerator would result in a 20 year endowment premium, and so forth.

It is a characteristic of adult human mortality that d_x increases steadily with increases in x. Thus, at any time prior to that at which surviving members of the group have attained age x+z, the pool will have some invested funds at its disposal. By appropriate manipulation of equations (1) and (2), the magnitude of these funds can readily be determined. Just prior to payment of the (n+1)st premium by the group members who are still alive, all contributions to the pool less all benefits paid have a value of:

$$l_{x+n}\, {}_nR_x = (1+i)^{x+n} \sum_{k=x}^{x+n-1} (P_x L_k - D_k) \qquad (4)$$

${}_nR_x$ is called the n-th year whole life <u>i% net level premium terminal re-</u>

serve[1]. Reserves on other than whole life policies can be determined simply by substituting the appropriate P_x in equation (4) and adjusting the range over which the sum is taken.

The significance of a net level premium reserve may be explained in a number of alternative but equivalent ways. At any point in time, it is the present value of each surviving member's unexpended contributions to the pool. That is to say, it is a measure of the pool's liability to each individual participant --- a measure of the amount it should pay him if he decides to terminate his participation. In short, it is his cash surrender value. Alternatively, it may be remembered that the pool's assets will be completely expended when its last surviving member dies. This being the case, the reserve is also the amount by which the present value of each surviving member's share of the future benefits to be paid exceeds the present value of his future contributions. Thus, it represents the lump sum a late comer to the pool would have to contribute to achieve parity with its remaining members.

Net level premiums and net level premium terminal reserves form the basis of the accounting systems used by most major American life insurance companies. Accounting is complicated by the fact that none of the four assumptions on which these computations are based is actually fulfilled in the operations of any firm. Neither mortality nor earnings rates can be predicted with complete accuracy. Administrative costs are substantial. Deaths occur throughout policy years, not at their anniversaries. This last is not a major distorting factor, however, and hence is generally ignored in the computations of most companies.

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1. It is the n-th year "terminal" reserve since it is derived from the amount left in the pool after all deaths occurring in the n-th year have been indemnified.

The possibility that earnings and mortality rates may move adversely is generally compensated for by use of somewhat more conservative assumptions than seem required at the time insurance premiums and cash surrender values are computed. That is to say, the mortality and interest rates assumed are respectively somewhat higher and somewhat lower than those likely to be experienced. Alterations of this nature result in increased values of P_x. In addition, a lowering of interest assumptions produces increased net level premium reserves regardless of the mortality table used. No such simple statement may be made, however, about the effect of mortality assumption alterations on the level of reserves. It is entirely possible, for example, for an increase in assumed mortality rates to produce lower net level premium reserves on most plans of insurance. Indeed, such seemingly pathological occurrences are not at all unusual. To cite one important recent example, the Commissioners Standard Ordinary mortality table replaced the American Experience table as a compulsory standard for determining policy reserves in 1948. At all ages, death rates on the former table are considerably lower than those on the latter. Nonetheless, the change in valuation standards resulted in an increase of about 5% in the typical company's aggregate required reserves.

Most major companies compute gross premiums --- the premiums actually levied on policyholders --- by adding an <u>expense loading factor</u> to conservatively developed net level premiums. This factor provides in a rough way for the administrative costs which arise in the operation of life insurance pools. "Rough" is used advisedly. Administrative expenses --- particularly commission costs --- are much greater in early than in later policy years. However, premium loadings do not, in general, vary

with policy duration --- they are the same in the first policy year as in the fifteenth. Thus, expenses develop over time in nowhere nearly the same manner as the loadings meant to provide for them.

This fact is of particular importance in early policy years. Once first year commissions, administrative costs, and insurance expenses have been deducted from a policyholder's initial premium, the remainder is rarely equal to the first year net level premium reserve. And the "rarely" applied only when expense loadings are very high and mortality assumptions extremely conservative. Most of the industry's major firms do carry net level premium reserves. When sales are growing at a substantial rate, however, they are able to do this only by making regular transfers from surplus account to reserve account. That is to say, to carry net level premium reserves, a company must annually reduce surplus by an amount sufficient to overcome the difference between policyholders' net contributions to reserves and the net level premium reserves themselves. For an established company, it should be noted, the amounts involved need not be great. While net contributions of new policyholders are negative, those of long standing policyholders are normally positive.

Alternative procedures are available for companies which do not have strong surplus positions or which desire to have reserves more nearly reflect actual policyholder contributions. The most frequently used of these alternatives is to carry some sort of what are known as preliminary term reserves. A "full" preliminary term system would involve computing reserves as if all policies issued were automatically convertible one year term contracts. That is to say, in the notation of equations (1) and (2), the whole life payment benefit equality is treated

as if it were:

$$v\, d_x + P'_x \quad (1+i)^x \sum_{k=x+1}^{x+z} L_k = (1+i)^x \sum_{k=x}^{x+z} D_k \qquad (5)$$

For this contract type, then, P'_x is simply the whole life net level premium at age x+1 --- i.e., P_{x+1}. For a limited payment life or endowment contract, P'_x is equal to the P_{x+1} on a policy which is identical to the one in question except for its having a payment period one year shorter. For example, on a 20 year endowment policy issued at age 35, P'_x equals the net level premium on a 19 year endowment issued at age 36.

If a company were to compute all policy reserves on a full preliminary term basis, the extra first year expense margins available would be quite high on policies with substantial savings components. For three common plans of insurance, computations using CSO mortality at 2 1/2% yield the following results:

	Whole Life	20 Pay Life	20 Endowment
Net Level Premium	$20.50	$30.30	$41.98
Less: Net One Year Term Premium	4.48	4.48	4.48
First year Expense Margin in Addition to Premium Loading	$16.02	$25.82	$37.50

In most states, such substantial expense margins on high savings forms are regarded as excessive. In consequence, some plans of insurance must be valued on a higher than full preliminary term basis in most states. The single most common legal standard requires somewhat higher reserves on plans with savings components greater than those on 20 pay life contracts.

To repeat, modified preliminary term valuation systems are al-

lowed because most firms have operating expenses in early policy years which exceed the expense loadings in their gross premiums. Because expenses are incurred in this fashion, the fact that many companies carry them on all policies does not mean that net level premium reserves --- or reserves carried on any other system --- actually reflect the difference between a policyholder's contributions to an insurance pool and his share of the operating costs and benefits paid out of it. That equity may demand paying less than the full policy reserve as a cash surrender or nonforfeiture value to a surrendering policyholder is therefore recognized by all state laws.

Prior to 1948, the nonforfeiture laws of most states provided that 1) cash values should equal the reserve (NB: the reserve held, not necessarily the net level premium reserve) less a surrender charge not to exceed $25 per $1000 or insurance; except that 2) no cash value was required on either a) policies for which less than three annual premiums had been paid or b) term insurance of 20 years or less. This system had a number of obvious defects. From the company point of view, one of the most important of these was the use of "surrender charge." This term was open to misinterpretation by the public. It encouraged the view that companies were allowed by law to keep something which rightfully belonged to the surrendering policyholder.[1]

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1. The preferred description is considerably more cumbersome. Therefore, despite the legitimate disfavor into which use of the term has fallen, "surrender charge" is used throughout this study as a convenient shorthand for that difference between a cash surrender value and a net level premium reserve which reflects the portion of high expenses in early policy years which have not as yet been amortized.

From the point of view of regulatory authorities, the system seemed deficient both because of its arbitrariness and because of the linkage established between reserve basis and minimum cash values. The more conservative were a company's procedures for valuing policy liabilities, the greater was the minimum schedule of cash values it was required to maintain. Thus, this system placed a very real penalty on conservatism. Since conservatism in valuation procedures (as in most other matters) has long been regarded as virtuous by regulatory bodies, the then existing law seemed to reward rather than to penalize sin. The anomaly of this state of affairs was widely recognized. A change therefore appeared in order.

The introduction in 1948 of the CSO mortality tade as a standard for the valuation of policy liabilities was accompanied by a new set of standards for nonforfeiture value computation. Under this new system, it was assumed that first year expenses exceed the first year premium loading by a constant per $1000 of insurance, as well as percentages of the "adjusted premium" on the policy in question and on a whole life contract at the same age at issue. It was further assumed that these excess expenses would be amortized over the policy's entire premium paying period out of the expense loadings in renewal premiums. Expressed arithmetically, K_x is determined such that:

$$C_x = K_x \sum_{i=x+1}^{?} v^i \, l_i \qquad (6)$$

where C_x is the excess first year cost and where the sum is taken over the entire premium paying life of the policy. K_x is added to the net level premium for the policy in question to obtain the <u>adjusted premium.</u>

As has already been noted, the net level premium reserve, ${}_nR_x$, is equivalent to the difference between the present (interest and mortality) value of future net level premiums and the present value of future benefits. This relationship is used in arriving at minimum cash values. The only difference involved is that the present value of adjusted premiums rather than that of net level premiums is subtracted from the present value of the benefit stream. CSO mortality and 3 1/2% interest assumptions are used in all of these computations --- not the reserve basis of the individual company in question.

As has already been suggested --- perhaps too many times --- life insurance gross premiums are designed to be redundant. Implicit in their development, that is to say, are factors which intentionally overstate the costs of providing insurance protection. The profits of stock insurance companies accrue out of the relatively small redundancies inherent in nonparticipating premiums. Policyholder dividends are based on the larger redundancies contained in participating premiums.

The stated goal of life insurance price setting is a complete lack of discrimination. In principle, that is to say, each policyholder is charged only for the benefit stream to which his policy stream gives rise plus his share of the costs of administering this stream. Thus, the stated goal of a dividend schedule is to return to each policyholder the share of his company's operating surplus which he has contributed. All of the various methods used in distributing surplus therefore have much in common. It is nonetheless useful to distinguish three different ways of developing dividend scales. These are: 1) "N" factor methods, 2) asset share methods, and 3) experience premium methods.

tribution to surplus, the difference between the tabular mortality rate --- that on which premium and reserve computations were based --- and the rate actually experienced was first determined. This difference was then multiplied by the amount at risk. Adding to those noted under 1) above the additional assumption that experienced mortality follows Table X-18 rates,[1] contributions to surplus from mortality savings would be approximately:

Age at Issue	Years in Force	Whole Life	20 Pay Life	20 Endowment
25	10	$2.76	$2.41	$1.80
	20	2.88	1.80	----
45	10	5.46	4.69	4.06
	20	6.60	2.96	----

3) After interest and mortality contributions were deducted from total allocable surplus, any of a variety of methods were used to distribute the remainder to reflect the difference between policy loadings and policy expenses. To take one very simple possibility, the percentage of total operating expenses to total expense loadings --- say X% --- could be determined with no great difficulty. Each individual policy's contribution to surplus might then be regarded as (100-X)% of its expense loading.

As time progressed, recognition grew that actual contributions to surplus developed in a considerably more complicated manner than the simple three factor system described above might suggest. Allocation

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1. Table X-18 was developed in 1956-57 by a committee of the Society of Actuaries from the recent experience of a number of large American companies. See "Digest of Presentation and Discussion of Report on the Need for a New Mortality Table," Transactions, Society of Actuaries, 1957

systems were therefore made more realistic by adding more factors. For example, medical and other examinations are frequently used to weed out applicants for insurance whose prospects for long life are poor. At any given age, therefore, mortality experience is generally an increasing function of policy duration. Accounting for this fact in the allocation of surplus was accomplished simply by adding a policy duration factor to age as a determinant of the mortality contribution.

No matter how many factors were added, however, "N" factor systems were generally deficient in one important respect. They generally failed adequately to account for variations in the incidence of operating expenses both over time and among different policy classes. Today, the majority of companies have supplemented pure "N" factor systems by asset share computations --- a method which is better able to overcome these deficiencies. "N" factor systems are still used, but only because asset share computations are so complex as to militate against making them on all policy classes. The standard procedure is to run asset shares on a sample --- perhaps 20% or less --- of all ages at issue on each contract type. The pattern of contributions exhibited is then normally summarized by one or a series of "N" factor formulae. These formulae are used to interpolate values for those classes on which asset shares were not run.

Basically, an asset share computation involves the application of a more or less complicated "N" factor formula to each successive year in the existence of a policy class. Undistributed contributions to surplus and reserves are normally carried forward at interest as assets of the class. The factors themselves vary realistically --- and hence substantially --- from year to year. The aims of an asset share computation

are, of course, no different from those of an "N" factor computation. By explicitly taking into account the time pattern of receipts and expenditures, however, they are able to approach more closely to the common goal.

The belief that policyholders expect dividends to increase with policy duration seems deeply ingrained in life insurance executives. This belief is not without considerable foundation. When interest rates are declining rapidly as they were during the 1930's, it may be difficult to fulfill this expectation, while using "N" factor or asset share allocation methods. The mortality contribution to surplus tends to decrease with policy duration. This phenomenon is due primarily to the fact that the amount at risk --- the amount by which mortality rate savings must be multiplied --- declines continually as policy reserves increase. True, policy reserves do increase with duration. However, it is perfectly possible for a decline in earnings experience to result in an interest contribution which does not increase as rapidly as the mortality contribution decreases.

To avoid the unpleasantness associated with having dividends which decrease with policy duration, some companies have adopted "experience premium" surplus allocation systems. The experience premium on a class of policies is based on the same interest assumption as was the initial gross premium computation. The mortality and expense rates used, however, are those actually experienced by the company. Thus, the experience premium is normally smaller than the policy's actual gross premium. The difference between these two premiums forms the basis for annual dividend distributions. To this difference is added the interest contribution to surplus. To repeat, this contribution is the product of the

excess earnings rate and the policy reserve. Since reserves increase with policy duration, this product will decline over time only if an exceedingly rapid decrease in interest rates is experienced.

One additional feature of the experience premium dividend scale is worth noting. The experience premium itself, it should be emphasized, is a level premium. Implicit in its computation is the amortization over a contract's life of the high early commission and operating expenses. Experience premium dividends therefore tend to be considerably higher than their asset share counterparts in early policy years but to increase much less rapidly with policy duration. In consequence, 20 year experience premium net costs invariably appear inferior to their asset share counterparts. From the company point of view, this is a very high price to pay for insurance against dividend scales which decrease over time. Most of the few companies which once operated on this basis have therefore abandoned it.

The Mechanics of Price Policy --- A Case Study: Since it deals with a 1942 revision of the Metropolitan's rates and values, the trade literature's only extended treatment of participating insurance pricing is by now somewhat dated. The major problem which appears to have led up to this revision --- the chronic decline in investment yields during the then preceding decade --- is no longer a matter of concern. Nonetheless, the paper which the then actuary of his company, H. R. Bassford,[1] wrote to describe this revision is well worth summarizing here. There is reason to suppose that it describes the ultimate extreme to which any company might go in attempting to base its prices on average costs. It therefore serves as a convenient frame of reference for discussion of the modifications to which the full cost and other principles of equity have been subjected.

It is doubtful, of course, that a spokesman for the Met or any other company would willingly broadcast word of the ways in which it had violated the full cost pricing precept --- if he in fact felt this principle to have been violated. There is strong reason to suppose, however, that Bassford omitted mentioning such violations as a matter of fact rather than of prudence. In 1942, pressures to meet or to improve upon competitive psuedo-prices were small. Furthermore, the Met has long had the reputation of being a "good" company price policy wise. That is, its devotion to the canons of average cost pricing have long involved considerably more than lip service. It is more likely than almost any other com-

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1. "Premium Rates, Reserves, and Nonforfeiture Values for Participating Insurance," Transactions, Actuarial Society of America, 1942, pp. 328-64.

pany to have withstood the pressures to violate these canons inherent in today's relatively competitive market.

In the late 1920's, the Met's portfolio was earning just over 5%. By 1941, the overall earnings rate had declined to about 3 1/2%, and new investments were yielding only about 2.6%. That substantial improvements in earnings on new investments would be forthcoming in the near future seemed highly unlikely. Hence, average yields were expected to decline steadily. Earnings on its entire portfolio approximating those on then current new investments seemed entirely possible. The company therefore decided to compute gross premiums under the assumption of a 2 1/4% yield. Reserves were also effectively to be carried on a 2 1/4% basis at least for the time being. Nonforfeiture values, however, were based on only a 2 3/4% assumption.

This prodedure had several advantages, the most important of which was the simple matter of flexibility. If the then bleak earnings picture improved, 2 1/4% reserves would be unnecessarily conservative. The interest margin could then be used to sweeten dividend scales. If no such improvement took place, the company could continue to accumulate surplus. Presuming the latter possibility to eventuate, it was contemplated that surrendering policyholders would be paid termination dividends "based on any funds which are available in excess of the cash value and no longer needed."[1] By effectively accumulating reserves on a 2 1/4% basis, furthermore, the company guaranteed a dividend scale which would increase rapidly with policy duration. Having such a steeply tilted divi-

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1. Ibid., p. 360.

dend scale virtually eliminated the possibility that yields would decrease so precipitously as to necessitate dividends which would decline as policy durations increased.

Until about 1948, the laws of most states established American Experience mortality and either 3.5 or 4% interest as a minimum basis for the valuation of policy reserves. The American Experience Table grossly overstates current mortality experience and hence implies higher net level premiums than would exist uunder more realistic assumptions. Of and by itself, this posed no problems. Overly high net level premiums can easily be compensated for by using small expense loadings. However, use of an outdated table will very likely result in an uneven release over time of the mortality margins contained in gross premiums. An even mortality contribution to surplus by policy duration is highly desirable. It is possible, however, only if valuation reserves are similar to those which would exist if the company's actual mortality experience were used to compute reserves.

Under the Metropolitan's experience, the mortality margins released by American Experience reserves would have been fairly substantial in early policy years but relatively meagre at higher durations. Use of this table therefore required either withhholding the distribution of early mortality gains or dividend scales which would come perilously close to declining with policy duration. Neither alternative was desirable to the company. It therefore decided to adopt the American Men Ultimate Table as a basis for premium, reserve, and nonforfeiture value computations. This latter table was based on experience at the turn of the century, while the American Experience Table dates from the 1850's. Aside from

being somewhat more realistic, American Men mortality assumptions yield reserves considerably closer to those which would have been required on the basis of the Met's own recent mortality experience.

Unfortunately, Bassford barely touches the allocation of expenses for dividend purposes. He does, however, discuss at considerable length the way in which expense loadings were developed for the calculation of gross premiums. The loading formula itself was quite simple. For most policy types, 10% of the basis American Men 2.25% net level premium plus, depending on age at issue, $3-4 per $1000 of insurance was added to the basic premium. The process by which this loading formula was developed involved a rather complicated series of steps. The results of one of these steps was presumably used in computing tentative dividend scales. Regrettably, which one was so used is not known.

The Met's well developed cost analysis and control system was used to allocate expenses among the various lines of insurance written --- group, industrial, and so forth. Investment expenses were charged against interest income. Insurance expenses were divided into what the company regarded as being three natural classes. Tax, commission, and similar expenses were allocated as incurred. A second group of expenses were felt to apply to specific operations --- underwriting, paying claims and surrender values, and so forth. These were distributed on an appropriate policy basis, e.g., the number of policies written, the number of claims paid, or the number of loans granted. The third expense grouping consisted basically of general overhead. Included were items such as sales promotion, agency supervision, and accounting, actuarial, and other general home office expenses. The first mentioned were distributed on the

basis of first year commissions. Agency supervision costs were allocated on the basis of total field compensation. Home office overhead was allocated essentially as a flat charge per thousand of insurance, regardless of plan.

Policy surrender expenses were regarded as being a proper charge in determining surrender values and surrender dividends. To the remaining items, a safety margin was applied. These items were then combined and translated to produce expense rates for each policy year which varied either per thousand or by the amount of premium. Unfortunately, the way in which what are essentially per policy expenses were converted to a per $1000 of insurance basis is not discussed. These varying annual expense rates were used to develop constant annual loading factors for each of a test group of policies. The loading formula noted above was a summarization of these loading factors.

In discussing nonforfeiture values, Bassford quoted with apparent approval a statement that the ideal cash value is "the maximum amount which can on the average be paid without increasing the premium rate or net cost above what it would be if all policies were continued until death or maturity."[1] This means, he continued, that a participating policyholder should receive on surrendering: a) his policy's share of the reserves and surplus accumulated under its class less b) the costs of handling the surrender transaction and c) "an amount sufficient to provide for any mortality or financial selection against the company at the time of surrender."[2] To put this principle into operation, asset shares

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1. Ibid., p. 234.
2. Ibid.

were computed for all principal plans of insurance. These computations revealed that, in general, a sufficient fund would be available to pay both a second year dividend and a second year cash value. The amount available for this latter payment "could be expressed with reasonable accuracy" as the second year net level premium reserve less the smaller of a) $25 or b) 40% of the net level premium plus $7.50 per thousand of insurance.

A number of factors cause a policy class to have asset shares which differ from its net level premium reserves. In early policy years, the most important of these is unamortized first year expenses --- commissions, underwriting costs, and so forth. The shorter the period over which these expenses are amortized, the smaller are the surrender charges which must be levied against full net level premium reserves in computing equitable cash surrender values. On the other hand, the longer the amortization period, the higher are the dividends that can be paid in early policy years. The relative degree of primacy to be attached to these two desirable alternatives is not a logical derivative of the average cost pricing precept. It is, rather, a matter for company policy decisions. The Metropolitan chose to amortize these costs over a relatively long period of time in computing surrender values. Full net level premium reserves were not guaranteed until the fifteenth policy year.

This procedure was justified on several grounds. At longer durations, it was reasoned, there is probably some selection against the company on the part of retiring policyholders. That is to say, those who surrender after their policies have been in force for a considerable period of time are likely to have longer life expectancies than those who

continue as policyholders. Surrender may also involve some financial selection against the company. Thus, it was felt that surrendering policyholders should be penalized to a certain extent. Conservatism appeared to be the root cause of this decision to amortize initial costs over a long period, however. In general, if no penalty is exacted for delay, the longer a decision or a commitment can be postponed, the better off one is.. If the future turns out to be brighter than anticipated, surrender dividends can always be paid. A guarantee cannot be revoked, however. Much the same line of reasoning appears to have applied to guaranteed nonforfeiture values other than cash surrender values. Guaranteeing too much seems to have been regarded as considerably more undesirable than guaranteeing too little.

In summary, two characteristics of the Metropolitan's revision of premium and nonforfeiture values seem worth stressing --- simplicity and conservatism. As regards simplicity, gross premiums were set by applying a fixed percentage of the base premium plus a constant amount per $1000 almost across the board. The same sort of procedure was followed in developing surrender values. As for conservatism, gross premiums were based on mortality (American Men Ultimate) and interest (2.25%) assumptions which were respectively considerably higher and considerably lower than were then being experienced by the company. Plans called for reserves to be held on effectively the same basis, at least for the time being. Nonforfeiture values, however, were based on an interest rate 1/2% higher than that used in computing premiums. Furthermore, full net level premium reserves were not scheduled to be paid until the fifteenth policy year.

Information of this sort is available to me on only a small

group of companies. If these data are capable of sustaining generalization, methods which are both simple and conservative are widely used in setting participating policy gross premiums and nonforfeiture values. Conservative reserve bases are also common, at least among the fairly large companies outside the South and Southwest. Of the seven companies on which data are available, five use premium computation formulae of the following sort:[1]

CSO 2.25% (2) or 2.5% (3) net level premium

plus X% of the policy's net (3) or gross (2) premium

plus Y% of the corresponding premium on a whole life policy (4)

plus $Z per $1000 of insurance (5).

In these formulae, X and Y vary respectively between 10-15% and 5-6%. In three of them, Z is alternatively $2.50, $2.80, or $3 regardless of age or plan, while for the two remaining, it varies by both age and plan. The two remaining companies --- both small, non-New York firms --- use higher base premiums and somewhat smaller loading factors.

All seven of these firms base both reserves and cash values on CSO mortality at 2.5%. The first five mentioned concerns carry full net level premium reserves. As cash values, they pay the full net level premium reserves at the end of 10 (2 cases) or 20 (3 cases) years. Deductions of varying degrees of complexity and magnitude are made in earlier policy years. Both of the two remaining firms hold the minimum CSO 2.5% reserves allowable under the laws of most states. One pays these reserves as cash values during all policy years. The other pays the minimum allowable nonforfeiture values.

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1. The numbers in parentheses refer to the number of companies which use each factor or base in their premium formulae.

Even from the point of view of one deeply committed to average cost pricing, the use of simple loading techniques seems perfectly defensible in developing participating gross premiums. After all, the gross premium alone does not determine the ultimate cost of a policy to the consumer. Company cost factors --- mortality, interest, and the rest --- all may change in the future. These changes can never be perfectly predicted. No matter how refined the cost factors initially used may have been, frequent adjustments must necessarily be made if equity is to be claimed for the resulting dividend scales. Thus, the use of complicated cost allocation procedures in setting gross premiums is, to a large extent, wasteful. A similar line of comment is applicable to the use of crude formulae in computing cash values. The future is likely to prove at least slightly at variance with even the most complex of present assumptions. Crude formulae are capable of yielding perfectly equitable results providing that annual dividends are such as to maintain a close relationship between cash values and asset shares or that, as appears to be the case with Metropolitan, surrender dividends based on a reasonable allocation of costs are paid.

Simplicity in dividend allocation methods is considerably less defensible, however. It is, of course, generally true that as cost allocation methods become more refined, they also become more costly. It is quite conceivable that refinement could be carried to a point where the vast majority of policyholders would be better served by more simplicity. At the same time, however, simplicity almost inevitably involves discrimination for or against some policyholders. While some such discrimination may be desirable for the greater good, there is always the danger that a virtuous simplicity may also serve other and less laudable ends. It is

quite possible, for example, that gross over estimation of the operating expenses incident on a per policy basis might either implicitly or explicitly be involved in a simple allocation procedure. A system which treated all expenses other than commissions or premium taxes as incident on a per policy basis would probably have such an effect. Just the reverse effect probably would result from a system which allocated expenses in proportion to premium revenue. The former procedure would have the highly desirable characteristic from the standpoint of a company's market position of making policy groups with high average sizes considerably lower in price than they would be under more exact --- although more expensive --- allocation systems.

As for conservatism in computing nonforfeiture values, gross premiums, and tentative dividend scales, many of the comments made regarding simplicity seem equally applicable. For a company to guarantee less and to charge more than seems immediately necessary can be perfectly defensible. After all, if premiums prove excessive, dividend scales can always be increased. If cash values turn out to be overly conservative, surrender dividends can be introduced or increased. Even failure to take such steps when they appear in order can, on occasion, be quite defensible. It is difficult to disagree with Marshall's first principle of equity --- that solvency should take precedence over considerations of strict equity among individual policyholders. At the time of Metropolitan's 1942 change, it is understandable that this principle would have assumed considerable importance. Under today's favorable conditions, however, the necessity of introducing inequities to assure solvency does not seem great.

Just as is the case with simplicity, what pretends to be a

virtuous conservatism can serve other and less laudable aims than the maintenance of solvency. Consider the case of a company faced with an accumulation of surplus greater than initially anticipated. One might reasonably expect it to increase its dividend scales. It might genuinely expect the future to be somewhat less bright, however, and therefore decide that prudence demands refraining from the immediate distribution of this unexpected surplus. To maintain equity, it therefore decides to institute a program of termination dividends.

Such a procedure has advantages other than those normally associated with prudence. To the company, if not to its policyholders, a dollar today is worth more than a dollar tomorrow. Hence, a given amount of surplus to be allocated will produce lower net costs if paid in the form of termination dividends than if paid as annual dividends. This advantage might not have been considered by the company in making its decision. Then again, it might have been. It is difficult to conceive of an insurance company management that is unaware of the fact that the more conservative its decisions in this regard, the better its pricing system is likely to appear under the comparison devices currently in vogue.

If a system of termination dividends or, for that matter, any other conservative pricing procedure maintains equity, an insurance department has little cause for complaint unless the company misrepresents the benefits to consumers of these procedures. The real difficulty is that when conservatism is untrammeled, i.e., when it is accompanied by discrimination against certain classes of policyholders --- normally those who terminate early --- price comparison measures are likely to be particularly good. Thus, those whose partial function it is to enforce an equitable treatment

of policyholders are well advised to view procedures justified only in terms of a vaguely specified conservatism with at least some suspicion.

To repeat, it is illegitimate automatically to equate simplicity or conservatism with discriminatory pricing. The existence of inequities can be proved only by reference to a company's dividend scale and the cost allocation methods underlying it. Unfortunately, information on cost allocation procedures is exceedingly difficult to obtain. Without exception, the executives interviewed refused to discuss the methods used by their companies in other than the most general terms. "This is highly confidential proprietary information," their statements generally ran, "--- information which we cannot divulge."

Companies are required to list sample dividends and to describe the methods used in their development in Schedule M of the standard form used in submitting reports to regulatory bodies. Regrettably, however, Schedule M is of little use to an analysis of patterns of discrimination. Generally, the methodological note simply summarizes the dividend formulae in more or less vague terms. In John Hancock's 1953 statement, for example, the following procedure was stated to have been used in arriving at the "distribution from loading and incidental gains":

60¢ per $1000 of insurance

plus 4¢ times the age at issue

plus (if the issue age is over 35) 6¢ times the difference between the issue age and 35

plus 1% of the net annual premium increased by 1/3% for each policy year after the second

plus additional stated adjustments for the company's preferred risk whole life contract and for contracts on which the premium paying period is less than the period of coverage.

Such complete statements about the numerical factors used in allocating gains from expense loadings are rare. References are never made to the underlying cost allocation techniques.

Thus, the degree to which discriminatory pricing procedures prevail in the industry must be inferred --- it cannot be determined directly. In attempting to draw inferences on this score, two general approaches are possible. From knowledge of the structure of the demand for insurance, the patterns of discrimination which would exist if prices were set in an economically rational fashion can be ascertained. The degree to which these rational pricing processes are used can then be inferred either from a statistical analysis of prices themselves or from an analysis of the trade literature and of the comments of industry executives. A statistical analysis of prices is the subject of the following chapter. The remainder of this chapter is devoted to the latter sort of analysis.

Some Principles of Rational Pricing: The ways in which a rational --- i.e. profit maximizing --- entrepreneur who was unfettered by state administrative controls would price life insurance policies to maximize profits have been alluded to on several occasions. The matter is of such great importance, however, that is seems worth the risk of being overly repetitious to make these principles of rational discrimination and their bases explicit at this point in the discussion. The extent to which each of these principles have been adopted in the industry will then be discussed separately.

Two important characteristics of the demand for insurance are of particular importance in this regard. First, cross elasticities of demand vary considerably among the various sub-markets for insurance. Sales to members of upper income groups are more frequently affected by inter-company price comparisons than are sales to their lower income counterparts. True, such comparisons are made by only a minority even of upper status buyers. This minority is sufficiently large, however, to make many insurance agents aware of their companies' comparative showings on the types of policies bought by their upper status clients.

The life insurance agent has a rather strong emotional attachment to his product. He has to believe in it and in his company if he is to perform effectively. When his company's price comparisons are unfavorable, his ability to sell is likely to diminish. Thus, the cross elasticity of demand as felt by a life insurance company's home office is likely to be greater than might be suggested by the responses of upper income buyers to questions on awareness and concern with inter-company price comparisons. Even if this were not the case, the desire for brokerage business is sufficiently great to make price comparisons a matter

of considerable concern to many firms. Insurance brokers --- a group with a predominantly upper status clientele --- are strongly influenced by these comparisons.

Socio-economic status groups differ not only in their responsiveness to price comparisons. Considerable inter-group variation also exists in the popularity of the various life insurance policy forms. While they also buy considerable numbers of whole life contracts, low status buyers form most of the market for high savings forms of insurance --- limited payment life and endowment forms in particular. As might be expected, they also tend to buy policies with low face values. Their upper status counterparts, on the other hand, buy policies with large face values. Except for those with very high incomes --- people for whom the tax advantages of life insurance are considerable --- members of this latter group do not appear to favor high savings forms. Rather, upper income purchases are primarily restricted to large whole life contracts and to term insurance.

To put it in slightly different terms, the markets for endowment, limited payment life, and term insurance are each fairly homogeneous. Most sales of both of the first two policy types mentioned are of small size and to people whose concern with comparative prices is minimal. Most term insurance sales, on the other hand, are both for large face values and to more sophisticated buyers. Only the market for whole life insurance shows a considerable degree of heterogeneity. Both naive low income buyers and sophisticated high income buyers purchase large numbers of whole life contracts.

This sort of demand structure seems to invite discrimination

against buyers of high premium forms of insurance. The profit maximizing entrepreneur, that is to say, would set prices so as to yield higher rates of return on limited payment life and endowment contracts than on term policies. The heterogeneity of the market in which whole life policies are sold would suggest fractionization of this market. Prices would then be set to yield higher rates of return on small than on large whole life policies.

The second characteristic of the demand for insurance which is of particular importance in suggesting an economically rational price policy is the way in which prices are commonly quoted and compared in the industry. By far the most frequent basis for both price citations and price comparisons are so-called 20 year net cost projections --- the undiscounted sum of premiums less the twentieth year cash surrender value less dividends (if any). A few companies include a disability premium waiver benefit in their basic premiums. Naturally enough, the comparison sheets issued to their agents by these firms add the extra premiums for DPW protection to the basic premiums charged by their competitors. Price comparisons made by other than these few companies are almost invariably based only on the premium for the basic life insurance contract itself. Extra premiums for disability premium waiver, double indemnity, disability income, decreasing term, or any other optional form of protection are rarely included. Since the premiums for these optional benefits are invariably small relative to those on the basic contract and since they rarely enter into price comparisons, a profit maximizer might reasonably be expected to establish relatively high profit margins on these provisions.

As has already been mentioned on several occasions, it is possible for a company to vary its net cost illustrations over a considerable range without in any way affecting meaningful ex ante measures of its prices. To produce low net costs, all a company need do is defer the distribution of accumulated surplus. The fact that a company has revised the time pattern of its distributions to policyholders in such a fashion does not necessarily imply that it has started to discriminate. However, by both deferring dividends and appropriately discriminating, net costs can be improved considerably more than is possible through the distribution of any given amount of surplus in an equitable fashion.

Thus, in addition to adjusting profit margins in the ways noted above, a profit maximizing entrepreneur would very likely take some or all of the following steps upon coming into control of a company with an equitable surplus allocation procedure: 1) Reduce cash surrender values and dividends in early policy years. 2) Increase dividend scales from roughly the fifteenth policy year on. 3) Institute a system of surrender dividends taking effect at or just prior to the twentieth policy year. These dividends would be paid only to policyholders who surrender their policies for cash or whose endowments mature. They would not be paid to those who die or who take advantage of the extended term insurance, reduced paid up insurance, or other nonforfeiture features.

Discrimination by Policy Size and Plan: Specials, Quantity Discounts, and Cost Allocation Procedures: A segment of the American life insurance industry has long recognized and acted upon the advantages associated with a fractionization of the market for whole life policies. Until very recent years, fractionization has been effected entirely through the issuance of special policies --- high minimum contracts frequently written on a preferred risk basis.

The genesis and history of specials have been discussed at some length in Chapter 4. To summarize briefly, this breed of policy was originated in the early part of this century by the Metropolitan. It desired to furnish a contract which would compare favorably with such competition as might be met by those of its agents who sometimes dealt with upper income prospects. As late as the middle 1940's, only a comparative handful of companies had followed the Met's lead. Of these firms, most were, like the Metropolitan, combination companies. As the 1940's progressed, however, the practice spread both to more and more firms and, to a limited but growing extent, to policy areas other than whole life.

For various reasons, the New York Insurance Department began to develop misgivings about this state of affairs. It therefore held a hearing in late 1954 with the possibility in view of revising the conditions under which it would permit the issuance of specials. At these hearings, three related but distinguishable arguments were presented by the minority group of companies which still opposed this practice. All members of this minority recognized that costs do vary with policy size. Several took the view, however, that if this fact was recognized in pricing, it should be recognized across the board, not capriciously. If the

buyer of a $10,000 whole life policy was to be granted a lower rate than the buyer of a $1000 whole life policy, the same treatment should be given the buyer of a $10,000 20 pay life. Furthermore, they claimed, the buyer of a $9,000 policy should be charged a rate only slightly higher than that charged a $10,000 buyer, not the same rate charged a $1000 buyer.

Some appeared to feel, however, that a different rate per thousand for what was in fact if not in name the same policy was incontrovertible evidence of discrimination. This was held to be true regardless of how widely the implicit discounts were applied and regardless of the incidence of costs. Expression of this view was generally coupled with statements of concern for the social responsibilities of life insurance companies. For example,

> [We] believe the adoption of a 'special' policy ... will not appreciably change the aggregate expense of the company except perhaps by reducing the commissions.... We conclude, therefore, that the adoption of a lower cost for one type of contract would necessarily mean a shifting of cost to other policy forms....
>
> The widespread marketing of life insurance on a basis that is more fav orable to the larger buyer may some day be seized upon as meaning that the small buyer cannot get the same break. If we have any conviction whatever about the broad social purpose we are trying to serve, we must not let the erroneous impression be gained that the life insurance business is catering only to the large buyer.[1]

The spokesman for the Connecticut Mutual expressed many of the same opinions and went on to conjure up that perennial bugbear, socialism:

> the small buyer of insurance ... contributes a good deal to the

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1. Statement by H. Bruce Palmer, President of the Mutual Benefit. Quoted in the Eastern Underwriter, November 26, 1954, p. 3.

> life insurance business which perhaps cannot be measured in dollars and cents. We can sharpen our pencils too fine. Those who do not qualify for specials --- particularly the small buyers --- may well wonder whether or not they should turn elsewhere for their needs. If so, may we not expect further pressure for life insurance coverage under some form of social insurance provided by the Federal Government?[1]

It is well worth noting that, both at the New York Department's hearings and elsewhere, those who have been most stern in rebuking their confreres for having an insufficiently paternal attitude toward the little man have been those who least frequently have dealings with him. Mutual Benefit, Northwestern Mutual, Connecticut Mutual, National of Vermont, and most of the remaining opponents of specials all have extraordinarily large average sales. Each has a prevailingly upper status clientele. Consequently, these firms are among those who would have had the least to gain from instituting specials. Conversely, if the New York and other insurance departments were to forbid specials, they would be the ones who would gain most.

No claim is made that hypocrisy was necessarily involved in these firms' forceful expressions of concern for the little man. At the same time, however, few firms which had compelling reason for issuing them maintained a strong opposition to specials. Certainly the most striking --- if not the only --- example of such uneconomic behavior is furnished by the Equitable Society. Even it had found itself compelled to issue a special in 1954, strong as were its views against them. According to its spokesman at the hearings,

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1. Statement by Leslie R. Martin, Vice President, Eastern Underwriter, November 26, 1954, p. 4.

> The Equitable ... has long held the view that the services of life insurance should be extended, as economically as possible, to the insuring public generally, rather than confined primarily, as a matter of policy, to purchasers of insurance in the large amounts. In light of the recent extension of the use of special policies ... it was concluded that the Society would be in a position to continue its services to the whole field of ordinary insurance and to preserve its agency force as an effective organization only by giving recognition to the incidence of lower unit administrative costs that attach inherently to a class of policies [with high average size].[1]

Naturally enough, all arguments alleging the inequitableness of specials were rejected by the companies which then issued them. If touched upon at all, the notion was quickly brushed aside that any variation in premium rates by policy size was inequitable per se. According to a representative of the Metropolitan,

> There is nothing inequitable to policyholders in having a company reflect in its premiums the difference in cost occasioned by a difference in size of policy so long as that difference is in keeping with the company's actual experience.[2]

And that was that. A Phoenix Mutual Actuary was just as emphatic:

> It is normal actuarial practice in arriving at a premium schedule ... to take into consideration the average policy size.... If a policy ... is issued with a minimum which sharply raises the average size under the plan, it would therefore seem in violation of actual fact to ignore the resultant average size in determining the net cost for those who take this plan.[3]

Although equally firmly rejected, considerably more attention was paid to the suggestion that policy size as a basis for variation of

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1. Statement by Walter Klem, Senior Vice President and Actuary, Eastern Underwriter, November 26, 1954, p. 4.
2. Statement by Malvin E. Davis, Vice President and Chief Actuary, Eastern Underwriter, December 3, 1954, p. 3.
3. Statement of John R. Larus, Eastern Underwriter, November 26, 1954, p. 4.

rates should be recognized across the board or not at all. The basic view appeared to be that it was a management prerogative to decide which policy areas should and should not be fractionized. The Phoenix Mutual representative continued,

> Within a particular policy form, standard applicants of the same age are treated alike; to do differently would bring up the question of unfair discrimination. The insured under a large policy on a plan for which there is no special minimum therefore obviously has no cause for complaint.... It seems irrelevant to argue that because his policy is of equal size with the higher minimum established under another form, he should be given special consideration.[1]

All of the executives interviewed in 1954 were associated with companies which then issued at least one policy in the whole life area with a minimum higher than $1000. At some time during the more or less recent past, each of these companies had altered its procedures with regard to specials in one way or another. A few had just recently joined the growing body of firms which issue specials. Others had raised the minimum amounts for which existing specials would be issued. Still others had added new and generally higher minimum specials to those already in their sales kits.

Each executive respondent was questioned concerning his company's most recent alteration of practice in the special policy area. The import of these series of questions was somewhat as follows: "On January 1, 195X, you announced the issue of a $Y,000 minimum whole life contract. How did you happen to decide to do this?... Why did you issue it at the time you did?... Why haven't you issued specials in other policy areas?

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1. Ibid.

It is perhaps well to recall that in discussing in general terms the current wave of competition in the industry, several of these respondents claimed an initiatory role for their companies. "Competition (if not carried to extremes) is a good thing," the feeling seems frequently to have been, "and I'm proud of our role in furthering it." One respondent expressed the same sentiment in discussing specific recent practices of his company.

> About two years ago, the executive vice president and I came to the conclusion that we were due for a recession in the next year and a half or so [i.e., early 1954]. We asked ourselves how we would fare in the competitive situation that would naturally develop, and came to the conclusion that we wouldn't do too well. This was the solution we arrived at. We weren't following anyone's lead in particular. We wanted to get out in front of the field and feel that we have.

This expression was unique, however. In discussing specific recent decisions regarding specials --- decisions intrinsically related to this recent wave of competition --- expressions of pride were generally absent. More often than not, the answers to the first two of these questions were rather defensive. A few respondents insisted that considerations of equity were dominant in their issuance of a special. For example,

> It's a matter of equity. The New York laws [as interpreted in 1954] don't allow quantity discounts. It obviously costs less to write and service a large whole life policy than a small one. We issued it to eliminate the inequity of large policyholders paying the same as small.

However, equity, if mentioned at all, was normally referred to has having a passive rather than a causal role. A statement suggesting that "we felt

we could do it because the insurance departments have approved the procedure as being equitable," was considerably more common than one implying, "we did it because it was equitable."

Most of the reasons for issuing specials and, for that matter, for a number of other practices fell into a "he did it first" category. The respondent just quoted continued,

> Of course, competition figured into the thing too. [How was that?] Well, the largest portion of our business is on whole life contracts, including our largest policies, and it's on these that we get the most competition.

This rather negative causation was most vigorously expressed by an official of a company which had only recently gone into the special field:

> It was frankly a competitive move. In fact, we've been in opposition to this tendency for a long time. Our president felt that it was inequitable and possibly even illegal. He regarded it as an unjustifiable break to the big policyholders. And furthermore, he felt that it was just a subterfuge to get around the anti-discrimination laws.
>
> But we lost a lot of business particularly to ... when it went into this area and, of course, due to the fact that many other companies had been issuing high minimum specials for some time. In the face of this, we had to overcome our objections.

Other respondents who alleged a "he did it first" sort of causation state d,

> It was primarily a matter of meeting competition. The degree of awareness of company price differences varies directly with policy size, and since a rash of companies had gone into these high minimum policy forms, we had to do it too.
>
> As for going from a $5000 to a $10,000 minimum, the reasons were pretty much the same. A number of other companies have gone up to this level. We felt it necessary to follow.

Or again,

> Because of the importance of brokerage business in the American trade, net cost is a much more important thing than in other countries.... Our net cost showing, while not bad, still compared rather unfavorably with some of the best, notably Northwestern Mutual and Connecticut Mutual. So as soon as the new CSO rates came out, we went into the high minimum area.... The policy is sort of a showpiece to which we can point and say, "See, we're really up with the best of them.'

As for the third question --- why fractionize only the whole life market?---- the answers were in some respects quite disparate. At one extreme was a rather tightly reasoned analysis of market structure which ran somewhat as follows:

> Suppose that we had written a high minimum 20 pay life. The most reasonable minimum for this would have been $5000. At present, we have an average policy size of approximately $4500 on this plan. We might figure that everyone that would otherwise buy a $3500 or larger policy would increase this to $5000 to take advantage of the lower rate. We probably couldn't get more than a $5500-6000 average policy size on the preferred plan. The difference between this and $4500 wouldn't make a great deal of difference as far as costs are concerned.
>
> Furthermore, the average policy size on what's left would be very low. We'd be trading an average performance on one policy for a slightly better than average one on another and a very much worse one on a third. It isn't worth it. It might be possible for a specialty company lie the Home Life to do something with this sort of thing, but we have too broad a base to accomplish anything worth while with it.
>
> Not much consumer and broker awareness is met on these plans. They're not the sort that are sold primarily by brokers....
>
> Finally, you have to remember that every time a company adds a plan, it increases its overall costs. Rates have to be computed, asset shares run, policy forms printed, and so forth. A new policy form has to show real advantages to offset these costs. The advantages don't seem to exist in these areas.

At the opposite extreme was the answer of the respondent quoted

above who insisted that equity was the primary reason for issuing whole life specials. "Well, if we did that," he stated, "it would drag down our average policy size in these areas, and this would be rather inequitable to the small policy buyers."

"But isn't this true in the case of whole life contracts, too?"

"Yes, but our very large policies are on a whole life basis, and it would be inequitable to penalize them."

Additional questions in this area were asked of him, but the responses proved no less contradictory.

While the answers to this third question did differ in several respects, three reasons for the lack of specials in areas other than whole life were mentioned with some frequency. These were possible legal difficulties, lack of market pressures, and problems in pricing small policies. As for the first of these, several respondents expressed worry that some insurance department might some day come to the conclusion that specials were discriminatory. The more specials companies issued, the feeling ran, the more likely this possibility would become. As one actuary put it, "if we're going to be black sheep, we'd prefer not to be too black."

As for market pressures, the consensus appeared to be that price comparisons were rarely made on limited payment life contracts and on endowments. There was little demand from the field for specials in these areas. Thus, there were few positive reasons for issuing them. It might be noted in passing that this situation appears to be changing. The tax advantages associated with insurance ownership are coming to be increasingly widely recognized. These advantages are particularly great for contracts with a high savings component. Thus, non-whole life price com-

petition may very well be on the increase, particularly on sales of limited payment life contracts. Around 1950, several firms in the Midwest began to issue high minimum 20 pay life contracts. This practice has begun to find adherents in the East. In 1954, Prudential announced a $5000 minimum 20 pay life contract, and in 1955, Connecticut General came out with a $25,000 25 pay life.

With respect to pricing problems, issuing specials on other than whole life contracts would result in problems of, as one respondent put it, "Accomodating the residue." It would not be possible, that is to say, to allocate costs "correctly" and still to have the low minimum contracts salable on reasonable terms. For reasons that remained unclear, these policies would have to be subsidized. Having them subsidized by larger policies of the same contract type --- the present procedure --- seemed to be regarded as preferable to their subsidization by the body of policyholders as a whole.

In summary, life insurance companies have fractionized the market for whole life policies in an economically rational way and for economically rational reasons. This does not, of course, imply that they have taken the next logical step in developing a rational price policy --- discrimination in favor of high minimum policies. Administrative costs per $1000 of insurance are lower on large than on small contracts. Presuming fractionization to have just barely taken this fact into account, it has reduced rather than increased discrimination under most reasonable definitions of the term.

In addition to administrative cost considerations, there are a number of other reasons why lower prices may equitably be charged the

buyers of high minimum than of small policies. At least until the early 1950's, lower commission rates were generally paid on specials than on $1000 minimum contracts. Early specials were almost all written on a preferred risk basis. Many companies still follow these practices. Specials which are written on a preferred risk basis would be expected, on this score alone, to bear somewhat lower rates than policies sold under standard underwriting procedures.

Of these savings on specials, those on mortality and commissions are allocable in a straight forward fashion. Such is not the case with administrative expense savings. For the purpose at hand, administrative costs may conveniently be classified into three broad groups: 1) A body of expenses which varies with some measure of policy size --- either the amount of insurance or the premium revenue involved; 2) A body of expenses which are incurred as a result of a policy's existence and which are independent of its size; and 3) General overhead, i.e., expenses which are not affected in any way by the existence of a contract except perhaps, in the very long run.

For a company which maintains neither select underwriting procedures nor which pays reduced commissions on specials, only the existence of costs falling into group 2) can justify lower rates on these policies. Even for companies which follow both of these procedures, per policy expenses account for a large part of the discount. Naturally, the greater these expenses are, the greater is the justifiable discount on a special. Thus, a company desirous of instituting a rational system of price discrimination and forced to justify the resulting premium or dividend scales to an insurance department would find it vital to make these

group 2) expenses appear as large as possible.

Determining whether or not a company's pricing procedures discriminate in favor of high minimum contracts is therefore a simple operation --- in principle. All one need do is to perform an appropriate series of manipulations on its group 2) costs, taking into account any commission or mortality savings that may exist. The results may easily be compared with the quantity discount implicit in the rates and dividends on its special contract. Regrettably, to operationalize this principle is virtually impossible.

First of all, just how large these costs are relative to those in groups 1) and 3) is a subject of conjecture for many industry executives, not just for outside investigators. Few companies have accurate cost information. Those which do jealously guard both these cost data and the allocation techniques through which they were obtained. Even firms which have highly developed cost control systems appear to be somewhat uncertain regarding which of their costs arise from group 1) and which from group 2). One of the executives interviewed mentioned a study he had recently completed comparing the aggregate expense rates of a group of companies. He had used a modification of his own firm's highly developed cost allocation system to reduce annual statement data. He exhibited a graph of the resulting expense rate estimates against average policy size in force. The coordinates on this graph all fell very close to a line running from Southwest to Northeast. "It would appear," he quite reasonably concluded, "that our present allocation methods tend to overestimate per policy expenses." He seemed both surprised and chagrined at this fact.

Then too, whatever their precise relationship to group 1) expenses, those in group 2) are unquestionably substantial. In consequence, the lapse of a small, low premium contract can result in actual out of pocket losses to a company. That is to say, the premiums paid on a small contract lapsed in the first or second policy year may very well be less than the total direct expenses incurred for taxes, administration, and commissions. Since lapses in early policy years are particularly frequent on small sales, these losses may very well be substantial. A company would seem to be entirely justified in regarding them as benefits to the class of policyholders from which they arose rather than as general overhead expense. On specials, such losses on early lapses are rare except in concerns which are exceedingly inefficient or which pay exceedingly high commissions.

The fact that losses on early lapses can occur implies that equitable quantity discounts could not be obtained simply by dividing per policy expenses by average policy sizes. Equitable discounts would be somewhat larger than indicated by such a division. Furthermore, per policy expenses vary substantially with policy duration. By far the largest group of expenses --- group 1) and group 2) alike --- occurs during the first policy year. Thus, if annual discounts were varied to correspond with actual expense savings, the first year discount would be substantially larger than those in renewal years. If adopted, such a procedure would violate a fundamental canon of participating insurance pricing --- that annual outlays should decrease as time progresses. To avoid such a canonical violation, a company would likely choose to allocate these firmst year savings over a period of years. Equity would presumably demand that early

cash values on specials be somewhat larger than those on policies with lower minima. In brief, the development of an equitable discount for a special policy would not be a straight forward process even if the relevant cost information were available.

The possibility that cost allocation methods in vogue discriminate in favor of specials is a touchy matter with industry executives. Even very cautiously worded statements implying that this might be the case met with vehement denial on the part of the executives interviewed. It is not surprising, then, that the trade literature contains little which is directly useful in determining the extent to which this form of discrimination takes place. Some scattered bits of information can be found in trade periodicals and other sources, but they are hardly conclusive.

Information happens to be available on the general cost allocation procedures followed by two companies. Both are licensed in New York, but neither is domiciled there. One is fairly small --- less than half a billion insurance in force --- the onther is considerably larged --- over $3 billion in force. Aside from commissions and taxes, both firms allocate almost all operating expenses on a per policy basis. The larger of the two uses an average policy size which varies by age and plan to convert these expenses to a per $1000 of insurance basis. The smaller differentiates between juvenile and adult issues, but otherwise uses average policy sizes varying only by plan to make these conversions.

Commissions and premium taxes unquestionably form the bulk of all expenses in group 1. They are by no means, however, the only expenses which vary by policy size. Underwriting procedures used on large policies are almost invariably more complicated than those involved in small sales. Once issued, large contracts more frequently involve cor-

respondence and changes in beneficiary and modes of settlement than do small. Payments of death benefits more frequently involve investigations. Instalment rather than cash settlements are also considerably more frequent. Thus, it seems reasonably safe to say that both of these companies do discriminate in favor of large buyers. Regrettably, whether this discrimination is conscious or stems entirely from ignorance and/or a desire for simplicity is not known. Equally regrettably, how widespread is the use of such techniques is also unknown.

A few additional bits and pieces of information --- gossip would perhaps be a better term --- suggest that at least some of the companies involved in the executive sample use cost allocation methods which favor high minimum policies. In discussing one of his company's specials, an actuary mentioned that sales of the policy averaged over $20,000. "When sales get <u>that</u> large," he claimed, " many costs vanish --- <u>literally vanish.</u>" He paused, reflected for a moment, and then continued, "But I wouldn't want you to quote me on that." His company, it might be added, would probably rank close to the top in the results of an industry poll to select firms which use the most equitable pricing procedures.

A second executive maintained that the goal of cost allocation procedures should be to have each class of policies bear its own share of total costs. Since differences in premium rates stem from both age and policy form differences, he continued, each age at issue on each policy form should be regarded as a separate class for these purposes. He made some invidious statements about the procedures of other companies and went on to maintain, "We don't have a class that doesn't stand on its own feet." He hastily added, however --- perhaps in response to a look of disbelief

--- "Of course, some don't contribute as much to surplus as others do."

In discussing his company's cost allocation procedures, a third actuary stated, "We allocate more heavily on average policy size than most other companies do. This makes us look bad at lower ages, but we think we're right, so we keep on doing it."

"But you've got to remember," a colleague of his interrupted, "that this makes us look better on higher ages --- ages where we run into competition more frequently."

In 1955 and 1956, respectively, the New York Department and the National Association of Insurance Commissioners revised their interpretations of the anti-discrimination provisions in state laws. Since that time, several companies have adopted one or another form of direct quantity discount. Table 1 below enumerates the formulae adopted by the three major companies --- Mutual of New York, Continental Assurance, and Northwestern Mutual --- and two of the smaller concerns which had adopted this procedure by early 1957. Comments in the trade literature suggest that each of these companies plans to differentiate among policy size classes only through a variation in the discount. That is, a company which gives a premium discount plans to pay the same dividends and cash values on all contracts of a given class regardless of size. A company which plans to vary dividends by policy size plans to collect the same premium and to pay the same cash value.

Before proceeding to a discussion of the actual discount formulae used, a few words are in order on the adoption of quantity discounts by one of these companies --- Northwestern Mutual. Both MONY and Continental Assurance have long been part of the special issuing group of

companies. For them, the new procedure simply involves the substitution of an explicit discount for the one implicit in the rates and dividend scales of their former specials. Their basic change in marketing strategy is really slight.

Such is anything but the case for Northwestern Mutual. As has already been noted, it is a rather unique company in many respects. According to an executive of one of its competitors, it is a firm which has made a dominant concern of stewardship. It has often been a champion of causes which were not in its short run best interests. For example, it began to issue insurance on substandard lives only in 1956 despite persistent strong demands from its field force to enter this line. It has consistently led the industry on most price comparison measures. Presumably largely for this reason, both in its dealings with agents and, to a lesser extent, in its advertising, costs to the consumer have been heavily emphasized. Because of this heavy concern with price, the growing number of specials has undoubtedly had a painful effect on the company. Making its $1000 minimum contract appear superior on a price basis to the $10,000 minimums of its competitors has become increasingly more difficult. As one Northwestern agent put it, "I can still beat most of the competition I meet, but I sometimes have to sharpen my pencil to do it." This difficult has been compounded by the company's refusal to indulge in some of the practices --- notably the payment of surrender dividends --- which its competitors have used to reduce net costs.

Because of the prevailingly high status of its clientele and its consequent large average sale, the company has had relatively little to gain from the issuance of a special. Whether for this reason or for

lessselfish motives, the company has vehemently opposed these policies. During the past few years, however, the character of its opposition appears to have shifted. Formerly, its spokesmen generally expressed the view that granting lower rates to the buyers of big policies constituted discrimination per se. Of late, however, they have maintained only that discrimination occurs when lower rates are granted to the buyers of some but not all big policies. This change in view may simply have resulted from the adoption of an economically more meaningful definition of "discrimination." Such an interpretation would presumably be claimed by the company. As is so often the case, however, the change in definition makes considerable sense from the standpoint of long range marketing strategy.

To repeat, as the number of specials in existence grew, Northwestern found it increasingly more difficult to maintain its leading net cost position. Furthermore, as the insurance departments approved more and more of these policies, the likelihood increased that failure would crown the efforts of its confreres and itself in the fight against specials. Two courses of action seemed possible. On the one hand, the company could follow the course of the Equitable and others. It could, that is to say, swallow its pride, capitulate to the trend, and issue a special. The loss of face would have been considerable, but the company would have quickly regained an undisputed number one position on the net cost lists. The other alternative --- the one adopted --- was to switch to a new crusade, a crusade more likely to meet with success. Such a procedure was risky, but if successful, promised considerably greater rewards. Needless to say, the gamble paid off. Thus, in announcing its new QES --- Quantity Earned Savings --- plan, a spokesman for the Northwestern was able to say,

> Some of these companies [which now issue specials] did not believe in them. In fact, a few had given in quite reluctantly.
>
> We could have done the same thing. It was the easiest way. But to us, it seemed wrong, indefensible, and non-mutual to give the buyer of one plan a price based on size and not to the buyer of another plan....
>
> Today, every Northwestern Mutual agent can face his clients, new and old, and tell them that this development is one more evidence of the character that Northwestern has displayed for over a century. We never yielded to expediency. When we moved, we did it the right way.[2]

As this is written, results from the year 1957 are not yet in. Thus, the effect on their sales of the adoption of quantity discounts by these companies cannot be assessed. It seems reasonably safe to predict, however, that, because of the strong moral tone Northwestern was able to associate with its change, its sales will improve relative to those of either MONY or Continental.

Table I: Quantity Discount Systems Adopted by Five American Companies

	Discount per $1000 of Insurance from Annual Base Premium			
Policy Size	Northwestern Mutual	Mutual of New York	Teachers Ins. & Ann.[1]	Companion Life
Under $2500	None	None	None	None
$2500-4999	None	None	None	$0.50
$5000-9999	$1.00	$1.25	$1.00	$1.00
$10,000-14,999	1.25	2.00	1.50	1.25
$15,000 & Up	1.25	2.00	1.75	1.25

Continental Assurance: Annual rate per $1000 for the first $4000 purchased is $2.50 above the rate for each additional $1000 purchased.

1. Paid as an increase in annual dividends rather than as a deduction from gross premiums.

2. Statement by Robert E. Dineen, vice president. Quoted in National Underwriter, January 11, 1957, pp. 2,3.

Each of the quantity discount schemes adopted by these five firms contravenes principles of strict equity in a number of obvious ways. For example, under all but the Continental scheme, the buyer of a $9,999 policy pays precisely the same rate per $1000 as the buyer of a $5000 contract. In addition, high first year expenses would be expected to comprise a greater proportion of total per policy expenses on policies of short than on those of long duration. This being the case, as the duration of a contract decreases, the average annual per policy expenses on it would be expected to increase. Other things being equal, strict equity would appear to demand high discounts on short than on long duration contracts.

To a certain extent, at any rate, the various obvious and not so obvious forms of inequity inherent in these systems tend to offset each other. Even if they did not, simplicity is a virtue not to be too heavily discounted. True, discount systems with finer size gradations, with variations by policy type and age, and other modifications would, strictly speaking, be more equitable. At the same time, however, as the number of refinements increases, the rate book becomes thicker and more costly to print. The more refined is the system, the greater are the expenses associated with computing rates and dividend scales. Perhaps most important of all, the more complicated the rate structure is, the greater are the difficulties associated with policing it.

If only for the sake or argument, it seems reasonable to grant that the discount procedures enumerated above are potentially capable of meeting practical standards of equity. In order to convert this potentiality into actuality, these quantity discounts must meet at least

one condition.[1] The following relationship must hold among the discounts granted the various size groups:

$$X/A - X/B = D(b) - D(a)$$

Where:

X is the average annual per policy expense for all policies issued;

A and B are the average sizes of all policies in size groups a and b respectively; and

D(a) and D(b) are the discounts per $1000 of insurance granted policies in size groups a and b respectively.

Expressed verbally, the difference between the discounts granted any two size groups should equal the difference between their per policy expenses converted to a per $1000 of insurance basis --- the average policy size of each group being used to make this conversion. Rough estimates of the possible range of average policy sizes within size classes can easily be made. Under the assumption that these companies' discount systems do in fact fulfill the above equation, it can be used to estimate ranges of the underlying average annual per policy expenses.

It is quite understandable that some disparities should exist among the per policy expenses of these companies. Both the efficiency with which various accounting and underwriting procedures are performed and the procedures themselves vary considerably from company to company. However, disparities of the magnitude indicated in Table 2 very strongly suggest that somewhere along the line the buyers of large or small policies --- perhaps both --- are being discriminated against.

There is considerable reason to suppose that discrimination

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1. Assuming that the early lapse of a small policy does not result in an out of pocket loss.

Table 2: Ranges of Values of Average Annual Per Policy Expenses Implied by the Table 1 Quantity Discount Formulae

	Average Annual Per Policy Expenses	
Company	Minimum	Maximum
Companion Life	$2.50 (1.33-2.5-5-10)	$3.75 (2.5-3.75-7.5-15)
Northwestern Mutual	$3.00 (2-6-12)	$8.00 (4-8-11.67)
Teachers Ins. & Ann.	$5.00 (2.5-5-10-20)	$9.33 (4-7-11.2-16)
Mutual of New York	$5.11 (2.25-5-18.75)	$10.71 (4-7.5-15.8)
Continental Assurance	$10.00	$10.00

The figures in parentheses are those alternative estimates of average policy sizes (in $1000) within successively larger size classes which imply the listed per policy expense estimate.

against large buyers is in fact being practiced by those companies having the lowest per policy expense estimates listed in Table 2. Companion and TIAA were respectively the first and second American companies to grant quantity discounts. Both are New York domiciled companies and both were then licensed to do business only in that state. In approving Companion's application and very likely that of TIAA, the New York Department appears to have taken particular care to assure itself that discount formulae were developed "conservatively." In this instance, conservatism appears to have been defined as synonymous with underestimation of per policy expenses. To put it less harshly, the Department appears to have demanded that proposed discount procedures be fully defensible; that they involve no greater reductions than could be fully justified by such cost data as the applying companies possessed.

Much the same sorts of considerations may very well apply to Northwestern's discount procedure. The evidence is less clear on this point, however. It was the first company operating on a nearly nationwide basis to institute a quantity discount procedure. To please the various insurance departments with which it had to deal, it may therefore also have felt itself compelled to use conservative estimates of the savings associated with sales of large policies. The fact that its estimate of per policy expenses appears to be somewhat lower than that of Teachers suggests this to be the case. There is reason, however, to believe that this sort of relationship would exist even if both companies had in fact established completely equitable discount systems. Economies of scale do exist in the industry. They are particularly important in such routine operations as billing, paying dividends, and writing policy forms. Furthermore, since Teachers does not employ agents, most of its selling costs are incident on a per policy basis. Thus, its per policy expense rate is almost unquestionably larger than that of the Northwestern.

In a paper discussing the theory of quantity discounting and its practice in other countries, Elgin G. Fassel, Northwestern's Senior Actuary, arrived at the conclusion that his company's first year and renewal costs incident on a per policy basis amounted respectively to $30.87 and $7.82 in 1955.[1] He went on to express the feeling that the difference between the first year and renewal expense figures should not be used as a basis for computing discounts. "This is for the reason that annual flat variation in premium or dividend rates by policy size should

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1. "Premium Rates Varying by Policy Size," Transactions, Society of Actuaries, 1956.

preferably be justified by recurrent margins."[1] It would therefore seem reasonable to conclude that first year expenses were in fact excluded in developing his company's quantity discount formula.

Even discounts based on the $7.82 figure would seem to be excessive. Despite the fact that they are normally based on amounts of insurance in force or premium revenue, overriding commissions to general agents were included in Fassel's per policy expense estimates. These commissions accounted for over half the aggregate expenses on which his published estimates were based. A rather dubious chain of logic is responsible for his inclusion of these commissions. The way expenses are customarily paid or assessed is irrelevant, he argued. What really counts is the underlying functional origin of these costs. Payments to general agents really stem from the number of policies because,

> if for some reason all policies were divided into halves with twice as many to handle, with the same amount insured and premium revenue as now, does anyone doubt that general agents' margins for expense provision would soon be expanded to reflect that fact, no doubt on their prompt initiative? Likewise, in case of important change in the contrary direction company management would necessarily bring about a like recognition in due course, mindful of the pressure of competition to reduce costs to policyholders.[2]

Fassel's fellow actuaries apparently did not receive this line of argument very warmly. Their criticism may very well have led him to exclude all or a part of these agency expenses in the actual process of computing his company's quantity discount formula. If they had been elimi-

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1. Ibid., p.
2. Ibid., p.

nated entirely, 1955 first year and renewal expense figures would have been $14.52 and $3.68 respectively.

Both $7.82 and the more reasonable $3.68 figure fall within the range estimated in Table 2. So too would an average annual per policy expense estimate which included both the latter figure and a portion of the $14.52 first year expenses. Thus, insufficient information is available to determine whether or not Northwestern's discount system is discriminatory and, if it is, against whom.

As was the case with Companion and TIAA, Mutual of New York also had to contend primarily with the conservatism minded New York Insurance Department in seeking approval of its quantity discount formula. Unlike these other two companies, however, MONY has a well developed cost allocation system. It thus would have been in a considerably better position to back up its claims about savings on large policies. The difference in discounts granted the $5000-9999 and $10,000 and over group does seem suspiciously great, particularly in comparison with the allowances made by the remaining Table 1 companies. However, this was just the sort of favoritism with which the New York Department was particularly concerned. Thus, it seems highly unlikely that MONY would have been able to grant an overly generous discount to this group.

Continental Assurance is domiciled in Illinois. The insurance department of that state is by no stretch of the imagination among the nation's stronger regulatory bodies. Had it wanted to do so, the company would not have found it too difficult to gain approval of a discount formula which was, at least to a moderate degree, rationally discriminatory. True, Continental is licensed to do business in all the United States.

Any insurance department would have been within its rights to refuse the company permission to use this discount system. However, even the New York Department is reluctant to deny its approval to schemes already passed on by a company's home state unless the provocation is extremely great. It may be that none of the discount formulae listed in Table 1 discriminate in an economically rational fashion. But if some of them do, these considerations together with the bottom position on Table 2 strongly suggest that Continental Assurance is among them.

Adding up the score, the limited information available suggests that two or possibly three of the five firms listed in Table 1 discriminate in their quantity discount systems, but in favor of small rather than large buyers. One or two seem to have adopted an equitable system, while the fifth appears fairly likely to be discriminating in an economically rational fashion. Of course, even if sufficient data were available to enable definite characterization of existing quantity discount systems as discriminatory or not, these characterizations would not prove much. It may be a fact that the quantity discount systems of 80% of the Table 1 firms do not discriminate in an economically rational fashion. All this really proves is that 80% of these companies did not get rationally discriminatory discount systems approved by regulatory bodies. There is no way of know ing whether some or all of these concerns a) wanted to apply rational systems but were rebuffed, b) wanted to be rational but feared being rebuffed and hence did not try, or c) felt that the greater good demanded being irrational.

Discrimination by Policy Duration: Tontines, Surrender Dividends, and the Tilting of Dividend Scales: The practice of deferring in one way or another the distribution of surplus to holders of participating policies has a long history in the American life insurance industry. As was noted in Chapter 1, so called tontine dividends were pioneered in the United States by the Equitable Society in 1868. As originated, this scheme involved withholding for 10, 15, or 20 years the funds accumulated on a group of policies. Policyholders who died before the specified period expired received only the face value of their contracts. Those who surrendered received nothing. The amount available for distribution to surviving policyholders was naturally quite considerable, including, as it did, a part of the reserves which had been accumulated on lapsed policies.

At the conclusion of the investigations during the first decade of this century by the New York Legislature's Armstrong Committee, the tontine system and its modifications were thoroughly damned. The committee found that seductive misrepresentations of the benefits which would accrue to surviving policyholders were the rule rather than the exception. The uses to which the considerable funds accumulated by tontine companies were put by their managements were generally unenlightened. To end these abuses, the Armstrong Committee recommended that companies be compelled to distribute surplus annually and prohibited from accumulating contingency reserves in excess of a stated proportion of liabilities and policy reserves.[1] The substance of these recommendations was adopted by New York and most other states.

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1. See New York Legislature, Joint Committee on Investigation of Life Insurance, Report, Assembly Document 41, Albany, 1906.

The Armstrong Committee found considerably less fault with the Metropolitan than with any other major New York domiciled company. Nonetheless, it was highly critical of the cost of insurance to the Met's industrial policyholders. Perhaps for this reason, the company began in 1909 to pay mortuary dividends and endowment dividends --- i.e., special dividends on matured policies and policies terminated by death --- on industrial contracts. It extended this system to its ordinary business in 1915 and, in 1928, began to pay terminal dividends on surrendered policies. The company seems to have regarded payment of these dividends simply as a final settling of accounts with insureds. The New York and other insurance departments may very well have accepted this view. At any rate, no regulatory body appears to have expressed reservations concerning this procedure, legal strictures against deferred dividend schemes to the contrary notwithstanding.

During roughly the same period as the Metropolitan adopted termination dividends, New York Life instituted an "extra dividend" system. Extras were paid at the end of the fifth policy year and quinquennially thereafter. These dividends were quite considerable. On whole life and 20 pay life contracts issued in 1935, for example, dividends in the tenth, fifteenth and twentieth policy years were respectively approximately double, triple, and quadruple those paid in the ninth, fourteenth, and nineteenth years. The New York Department questioned the propriety of this system on several occasions. A vigorous assault on it in 1939 was blocked by a NYLIC backed recodification of the New York law granting companies specific permission --- subject to Insurance Department approval of schedules --- to pay extra or terminal dividends. Perhaps because of

the somewhat dubious legal status --- at least before 1939 --- of these arrangements and perhaps for other reasons, neither the Met nor NYLIC found its innovation widely imitated.

Shortly after this recodification, however, those who might have desired to pay terminal dividends were given limited additional support by the National Association of Insurance Commissioners. The NAIC committee whose deliberations led to the CSO mortality table went on to study nonforfeiture values and matters related to them. Among the views it expressed on this subject was one to the effect that, under certain conditions, equity not just allowed but actually demanded that surrender dividends be paid. If a class of policyholders had had reserves on their contracts strengthened by withholding from them amounts which otherwise would have been paid as annual dividends, the committee held, those members of the class who later surrendered their policies should be returned their share of the sums withheld.[1] The committees views, it should be emphasized, applied only to surrendered policies belonging to classes on which reserves were being carried at lower interest rates than those contractually required. These views were by no means intended to constitute blanket endorsement for surrender dividend systems.

Termination dividends had, however, been duly certified to be equitable, if only under restricted conditions. A good man could easily could easily find justification for extending this certification to areas

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1. National Association of Insurance Commissioners, Reports and Statements on Nonforfeiture Benefits and Related Matters, New York (?): Actuarial Society of America and Institute of Actuaries, 1942, Chapter 6.

not specifically covered in the Committee report. Whatever the immediate cause, beginning in 1948 --- the year in which the CSO mortality table became the compulsory standard for valuation of ordinary life insurance contracts --- the practice of paying surrender dividends began to gain a growing body of adherents. New York Life adopted the practice in that year. Equitable followed suit in 1949. By 1955, at least ten of the small group of New York licensed companies alone had announced adoption of one or another form of termination dividend.

As might be expected, when executives of companies which had recently instituted terminal dividend systems were asked about the reasons for adopting the practice, equity and conservatism were heavily stressed. As one executive put it,

> It's primarily a question of equity. The company has used its surplus to finance growth, in part. Growth isn't directly to the benefit of present policyholders. The company therefore regards it as being equitable to pay at least some of the accumulated surplus to terminating policyholders.
>
> Termination dividends do help to improve the net cost showing, it"s true. But this is of secondary importance.

According to a second respondent,

> Basically, there are two reasons for this. First, is the fact that as a matter of conservatism, it's wise to hang on to some money just in case. Then too, if you have a termination dividend, it's possible to cut this out before touching the regular dividend scale.
>
> It is true, of course, that termination dividends are a convenient way of improving a company's net cost illustrations. And a number of companies are conscious of this fact and act upon it on occasion.

A third executive maintained,

> Part of the premiums paid are reserved by the company for contingencies and operating reserves. Policies that are lapsed haven't done what they were initially intended to do --- pay dependents in the event of death. So it's only right that people who surrender their policies --- and we pay special dividends only in the event of cash surrender --- receive back part of their contributions to these special operating funds.
>
> Then too, but this is definitely secondary, it does help to improve our net cost showing. A friend of mine, an actuary with ..., was kidding me about paying special dividends only on surrendered policies. But he had to admit that you couldn't have an equitable dividend scale without them.

As might be expected, executives of companies which have <u>not</u> adopted terminal dividends tend to view the reasons for their adoption somewhat differently. Concerning terminal dividends, a vice president of a company with a good net cost showing and a more or less elite clientele remarked,

> We don't have them. We feel that they're just a talking point --- nothing more nor less than a gimmick to improve net cost showings, and that's about all. Companies issue illustrations with that whopping big extra at the end of 20 years, and this enables them to make a comparable showing.
>
> Actually, our agents don't want the things. Wouldn't touch them with a ten foot pole. They much prefer a relatively stable dividend scale. They seem to find that it pays much better in the long run in the sort of market they have.

It may very well be that much of his righteous indignation on the subject stems from the fact that his agents wouldn't touch them "with a ten foot pole." Be that as it may, it seems difficult to gainsay this last quoted executive's feelings about the basic reason for the widespread adoption of the practice. No two ways about it, the payment of termination dividends is a cheap way to improve net cost showings. Discounting by both CSO mortality and 3% interest, the present value to a

policyholder now age 35 of a dollar payable if he is still alive at age 55 is about 48¢. Taking into account the probability that he will lapse his policy before the 20 years expire, the present value drops to about 30¢. And if the dollar is paid him only if he surrenders his policy for cash after it has been in force 20 or more years, its present value is something less than a dime.

The conditions under which many companies pay termination dividends add to the suspicion that their effect on net costs is a matter of considerable if not dominant importance. The New York Department has recently begun to crack down on some of these practices. However, as recently as 1955, New York Life and at least one other company maintained that equity conveniently demanded that terminal dividends commence in the twentieth policy year. On NYLIC's $10,000 minimum whole life special, the anticipated twentieth year terminal dividend presently amounts to just under 20% of the total annual dividends projected for the preceding years. Several additional companies planned to pay these dividends beginning in the twentieth year, but lowered the starting date at the insistence of the New York Department. In 1955, and perhaps still, John Hancock interpreted equity as requiring payment of surrender (not mortuary) dividends only on policies issued after May 1, 1954. Thus, it was in the convenient position of being able to illustrate terminal dividends without ever having paid one. Again, in 1955, Continental Assurance illustrated a surrender dividend on a $12,500 minimum life paid up at 90 contract, but on none of its other policies.[1]

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1. See the 1955 Unique Manual dividend illustrations for the companies mentioned. Some of the information cited in this and the succeeding

All of the companies which pay terminal dividends grant them in the event either of cash surrender or of the maturity of a policy as an endowment --- the two sorts of terminations which figure into net cost illustrations. Of eight New York companies on which information is available, three pay them only when policies terminate for these two causes. Only two pay them in the event of death --- by far the most common reason for policy termination except during early policy years.

The fact that a company chooses to reduce its net cost illustrations through the payment of termination dividends by no means indicates that its pricing procedures discriminate against those who terminate early. Much the same comment applies to the payment of special dividends on some but not all types of termination. The existence of such a practice constitutes neither a necessary nor a sufficient condition for asserting the existence of discrimination.

To cite but one example, the Metropolitan stopped paying special dividends on termination by death in 1948. Nonetheless, it seems reasonably safe to say that its terminal dividend scheme is quite equitable. As of a year or two ago, at any rate, surrender and endowment maturity dividends were paid on most policies which had been in force eight years or more. In developing annual dividends, all policyholders were charged an amount sufficient to provide the difference between claim payments and the funds accumulated on the policies of those who die. These

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paragraph is taken from a circular letter dated January 25, 1956 "Re: Terminal Dividends on Ordinary Insurance," from the New York Department to "all authorized life insurance companies."

accumulated funds included a pro rata share of accumulated surplus. When policies were surrendered for extended term insurance rather than cash, any surrender dividends which would have been available were applied to extend the term insurance period. No terminal dividend was credited to a policy surrendered for reduced paid up insurance until such time as it was actually terminated by cash surrender or maturity --- again, a perfectly equitable sounding procedure.

It is difficult, on the other hand, to see how the New York Life's 1955 terminal dividend system could have involved other than discrimination against those who terminated their policies early. This is true despite the fact that the company pays these dividends on death as well as on endowment maturities and surrenders for cash. To repeat, it paid them only on policies in force for 20 or more years. It is questionable that any equitable scheme of surplus distribution could suddenly generate termination dividends of the size paid by NYLIC between the nineteenth ahd twentieth policy years.

It is entirely possible for a company to improve its net cost illustrations by deferring the payment of dividends without at the same time instituting a system of termination dividends. A terminal dividend system, that is to say, is not a necessary condition in order to be justified in charging a company with discriminating against some or all of those who terminate early. Part of Northwestern Mutual's superior net cost showing, for example, is attributable to the fact that it has long carried reserves on an ultra-conservative basis --- presently CSO 2%. This virtuously conservative sounding reserve basis makes it exceedingly difficult to conceive of the company's ever failing. It also results in

a rather steeply tilted dividend scale. Annual dividends increase substantially with policy duration since the excess interest component in its dividend formulae increases rapidly with increases in policy reserves. In helping to create these conservative reserves, those who win --- the ones who die early --- have actually paid in more than would be necessary if reserves had been carried on a more realistic basis. They have, that is to say, been discriminated against.

Carrying highly conservative reserves is not the only way by which a company can achieve steeply tilted dividend scales and hence improved net cost showings. To improve its illustrations, all it need do is to defer the payment of accumulated surplus. Rather than pay out funds available today, a company can hold them in reserve, accumulate them at interest, and pay them out tomorrow to a group of people smaller by the number of those who have died or surrendered in the meantime. Such a procedure discriminates not only against those who die early, but also against those who surrender early.

As has already been noted, the New York Department had exhibited considerable concern over the possibility that companies are discriminating in favor of high minimum contracts. Its concern in this regard has been so strong, in fact, that it appears to have compelled at least one company which adopted a quantity discount system to discriminate against buyers of large policies. In the more or less recent past, it has attempted to force companies to pay dividends on disability premium waiver and similar coverages when they appeared warranted. It has recently begun to question company termination dividend practices. Its concern in this respect, however, appears to have stemmed as much from the possibility of misrepresentation

as from that of discrimination. It does not appear to have been particularly concerned about the very real discrimination that can take place as a result of extreme conservatism or the tilting of dividend scales.

Perhaps largely for this reason, several of the executive respondents were surprisingly lacking in reluctance to talk about this practice. One claimed that his company instituted termination dividends to meet competition. "Competition" in this sense was not primarily net cost competition, he insisted. Rather, the company simply wanted to provide its field force with the same talking point possessed by agents of companies which had already begun the practice. He went on to suggest that settlement dividends weren't the only way in which net costs could be improved. It was a more or less general practice in the industry as well as in his own company, he felt, to compute asset shares, develop tentative net cost comparisons, and, if these turned out to be unfavorable, then to tilt the dividend scale a bit more. Several respondents freely volunteered the information that dividend scale tilting was a practice used with some frequency by their companies.

Again in connection with settlement dividends, one actuary went on to say,

> It is, of course, also true that termination dividends are a convenient way of improving a company's net cost showing. Many companies are conscious of this fact and act on it on occasion. It's possible to go too far in this direction, though. Policyholders do want dividends now, and if a company tilts its scale too much, it will have trouble. What really counts is the first check the policyholder has to write.
>
> With this limitation, though, it is almost certainly true that if we run an asset share and find that the dividends determined on that basis don't look well against competition, we'd be sorely tempted to tilt our dividend scale just a bit.

How much "just a bit" constitutes was not discussed. Concrete statements concerning the prevalence and magnitude of this form of discrimination must await Chapter 7's statistical analysis.

Discrimination Against Special Coverages: The Disability Premium Waiver Provision: In addition to standard contract provisions providing payment of the face value of a policy in the event of death, many life insurance contracts are written to include various peripheral benefits. Among the most common of these is the so-called disability premium waiver (DPW) benefit. On contracts containing this provision, subsequent premiums are waived when the insured becomes totally and permanently disabled prior to his sixtieth (occasionally sixty-fifth) birthday. A few companies --- notably Prudential and Metropolitan --- include DPW in their standard contract form as a basic feature. One industry executive estimated that, depending on company, between 25-75% of all policies which do not include this provision automatically are issued with a rider providing it at an extra premium. Because of its popularity, more information is available in the trade publications on DPW premiums and provisions than on any other form of additional coverage. Only this feature is discussed here since the principles of rational pricing for it are essentially the same as for any other form of added coverage.

A few mutual companies charge redundant premiums on DPW with the expectation that dividends will be paid. This is not a normal procedure, however. In most firms, mutual and stock alike, added coverages are issued under the expectation that they will actually be nonparticipating features. If the information in trade periodicals is accurate on this score --- a not always valid assumption --- DPW benefits do not vary substantially among companies. Some differences in underwriting procedures do exist. Disability experience also differs to some extent from company to company. None of these differences is sufficiently great, however, to invalidate

Table 3: Additional Premiums Charged for Disability Premium Waiver Benefit on Whole Life Contracts Issued at Age 35 by the 20 Largest American Companies: 1954 & 1955

Company	Type of Policy	1955 Issues $1000 Min.	1955 Issues Special	1954 Issues $1000 Min.	1954 Issues Special
Aetna	Par	$0.80	---	$0.80	---
	Non Par	.63	*	.63	*
American Nat.	Non Par	1.05	$0.58	1.05	$0.58
Conn. General	Par	.77	---	1.27	---
	Non Par	.56	.42	.95	---
Continental Assurance	Par	.74	.63	#	#
	Non Par	.59	.57	.91	.88
Equitable	Par	1.13	.87	1.13	---
John Hancock	Par	.79	.74	1.43	1.33
Lincoln Nat.	Par	1.07	#	1.07	#
	Non Par	.81	#	.81	#
Mass. Mutual	Par	#	.63	#	.63
Metropolitan	Par	*	*	*	*
Mutual Benefit	Par	1.59	---	1.59	---
Mutual of NY	Par	#	.82	1.31	1.22
National L&A	Non Par	.57	.52	.76	1.00
New England	Par	.75	.70	.75	.70
NYLIC	Par	1.19	.80	1.19	.80
Northwestern	Par	.74	---	.74	---
Occidental	Par	#	.74	#	#
	Non Par	.80	.66	1.36	1.06
Penn Mutual	Par	.73	.65	1.37	1.28
Prudential	Par	.76**	.76**	.76**	.76**
Sun	Par	.80	.76	1.27	1.19
	Non Par	.67	#	1.04	#
Travelers	Non Par	.60	*	.60	*

* Included in basic premium. ** Included in basic premium. Figures are the company estimate of the value of the provision. # Data not available.

Sources: 1954-5 editions of the Unique Manual and the Flitcraft Compend

such conclusions as may be drawn from direct comparison of gross DPW rates.

During the 20-25 year period preceding 1953, the disability premium waiver rates charged by most American companies remained virtually unchanged. This was true despite the fact that disability experience had declined very substantially since the 1930's. In consequence, DPW rates were generally highly redundant in 1953. Yet few companies either paid dividends or reduced their charges. The most frequently claimed justification for not doing so appears to have been that the funds involved were really too small to make bothering with them worth while. In point of fact, the redundancies in annual DPW rates at higher ages were frequently on the order of 50-75¢ per $1000 of basic coverage. Dividends increases of this order on the basic contracts themselves would have resulted in substantial improvements in net cost comparisons. But then, to repeat, DPW premiums rarely figure into these comparisons.

In 1953, the results of a Society of Actuaries study of disability experience were published. These were the first industry-wide data on the subject to become available in about 25 years. In 1952, the New York Department began a small scale campaign to get companies to reduce DPW and double indemnity rates and to begin to pay dividends on these provisions in outstanding policies. Whether the New York Department's action or the new data was more important is not known. At any rate, during the period 1953-55, most of the largest companies made substantial reductions in their DPW rates.

Whether these changed rates were based primarily on industry-wide data on on the experience of the individual companies is also not known. The former seems more likely, however. Total and permanent disa-

bility is a rare phenomenon. Thus, only the very largest companies would have sufficient experience to compute reliable rates. If the industry wide data were in fact used by most companies, the variations in rates exhibited in Table 3 are particularly striking, even if attention is restricted only to those firms which appear to have reflected recent disability experience in their rates. On participating whole life specials issued at age 35, the DPW rates charged by the largest 20 companies vary from 63¢ to 87¢ a thousand. On non-par specials, the variation is from 42¢ to 66¢.

These variations point up what appears to be a fundamental dichotomy in the industry executives' views of pricing these provisions. Two of the executives interviewed exemplify these polar views. One is a vice president of a company whose DPW rates have been among the highest in the industry in the recent past. According to him, the company had previously taken the view that this was really marginal business. For example, the marginal costs of collecting a DPW or double indemnity premium were nil since the premium on the basic policy had to be collected in any event. So these added coverages got off free. He went on to say that he had fought against this point of view and had ultimately won out. His argument was that, "in the auto business, it's the FOB Detroit price for the stripped model that counts in price competition." The companies actually make more on the extras than they do on the car itself. "Just between us girls," we now allocate a "full share" of costs to these provisions.

The second executive is a vice president of a company whose DPW rates have always been among the lowest in the industry. During the

three year period preceding the interview, his company had made two additional reductions in these rates. When questioned about this, he replied in essence, "The money was there. We felt premiums could be reduced, so we reduced them." A large number of companies charge these lines all the traffic will bear, he claimed, "but that isn't right." He decried, in a restrained manner, the fact that so few companies --- Northwestern Mutual and Metropolitan were the only ones specifically mentioned --- seemed to agree with his organization on this matter.

The Pricing of Juveniles: Economically Irrational Discrimination? Policies on juvenile lives are generally very small. In a sample of about 5000 juvenile sales in 1949, the average face value and annual premium were respectively $1360 and $44.[1] If juveniles and, for that matter, all other policy groups with small average sizes were priced to bear both the per policy costs they generate directly and a full share of overhead, they would not, in the words of several industry executives, "be salable on reasonable terms." Their prices would compare very unfavorably with those charged by other firms. Furthermore, the ratio of the actuarial value of the benefits on these policies to their prices would be small --- "too small."

Most industry executives readily admit that juvenile policies are not priced to "stand on their own feet." One or both of these reasons are generally cited. Regulatory authorities appear both to recognize and to condone this state of affairs. Discrimination which involves allocating less than a full share of costs to policies which have high administrative expense rates per $1000 is not "unfair discrimination." Indeed, one regulatory official interviewed did not regard such practices to involve discrimination of any sort, either fair or unfair.

If companies do discriminate in favor of juveniles, they are committing what is, on the surface, at any rate, an obvious violation of the precepts of economically rational pricing. The adults who buy policies on their children's lives are largely members of what have been referred to above as the industrial and endowment ordinary markets. Com-

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1. Life Insurance Agency Management Association, The 1949 Buyer: Juvenile Series Number One, Hartford, 1950, pp. 1, 13.

parison of prices by buyers in these markets is a very infrequent phenomenon. Generally, the first agent to contact a proud new parent is the one who makes the sale. It would thus seem reasonable on economic grounds to expect juveniles to be priced to carry not only their own weight but that of others as well.

Since price comparisons are rarely demanded by buyers of juveniles, the typical agent is very unlikely to have investigated his company's competitive standing at young ages. Indeed, even if he were interested in making such comparisons, it would be difficult for him to do so. The Unique Manual, for example, rarely lists even whole life contract net costs at issue ages below 15. Comparison tables on the single contract most frequently issued on juvenile lives --- 20 pay life --- normally begin at age 25. One practical difficulty would still arise, however, if companies were to discriminate against juveniles or even to make them stand entirely on their own feet.

A typical agent would likely be aware of the general relationship among net costs on policies issued by his own company at young and somewhat older ages. It might very well cause him considerable uneasiness to see net costs which declined substantially between, say, 10 and 25 years of age. After all, in dealing with a procrastinating adult client, one of his principal weapons against delay is that costs will never again be lower than they are today. Why should the same argument not apply to juvenile policies as well? It would seem difficult for most if not all of the companies listed in Table 4 to allocate costs on juveniles much more heavily than they presently do without producing a seemingly anomalous pattern of prices.

Table 4: Ten Year Net Cost Illustrations on $1000 Minimum Whole Life Contracts Issued at Young Ages: 1955

Company	Age at Issue 10	15	20	25
Northwestern Mutual	*	$1.19	$1.20	$1.29
Mutual Benefit	$1.74	*	2.20	2.63
Massachusetts Mutual#	*	2.37	2.24	2.14
New England Mutual	*	3.37	3.29	3.28
New York Life	*	4.26	4.24	4.36
Aetna (Par)	4.63	4.52	4.55	4.52
Metropolitan ##	4.39	4.68	5.06	5.33
Prudential ##	*	7.05	7.27	7.55

* Data not published #$2000 minimum ## Includes DPW

To repeat, most of the executive respondents were quite willing to admit that their juvenile issues did not stand on their own feet. Although the reasons given for this state of affairs varied considerably, the claim of basically altruistic motives predominated. One respondent, for example, maintained that the industry had a social obligation to provide policies in small amounts at reasonable rates to people who needed them. To do this necessarily entailed allocating expenses less heavily on a per policy basis than a strict analysis of costs would appear to justify. If the companies did not provide small policies at reasonable rates, the government would very surely assume the obligation to do so. This would be bad not only for the industry but also for the country as a whole. With respect to juveniles, he added, low rates can be justified as a promotional expense. One of the reasons buyers very frequently give

for their choice of company is a previous parental association with that company. His company, it should be noted, is one of those which issues relatively few small policies. It has a predominantly upper status clientele. It seems entirely possible that the company's executives would not be quite so far in the vanguard of those who fight socialism with low rates on small policies if this were not the case.

Once altruistic motives had been claimed and presented, several of the respondents went on to mention additional more practical reasons for discrimination in favor of juveniles. Only one of them reasoned entirely along economic grounds, however. He insisted that, for competitive reasons which never became clear, it is necessary to price juveniles at levels reasonably close to those prevailing in the rest of the industry. True, if a company were to write nothing but juvenile business at prevailing rates, it could not help failing. In a very real sense, however, this business is marginal.

> An agent enters a house intent on selling the old man a $5000 policy. He makes the sale and then senses a juvenile situation. With a little extra effort, he sells a policy for a $15 premium and picks himself up an additional $7.50 commission. Just that much gravy.
>
> A company would be foolhardy to give higher commissions on juvenile policies than on regular forms. It would find itself in considerable difficulty if it did. But by setting a reasonable commission rate, it can do better with this marginal juvenile business than it could if it didn't accept it.

It has many costs, he concluded, which would not change significantly by the fact of having written the juvenile policy. Excluding these, the return from the juvenile sale is greater than its costs.

Summary: Many of the pricing procedures adopted by life insurance firms do seem interpretable as reflecting profit maximizing behavior. There does, for example, seem to be strong economic justification for the fractionization of the whole life market by those who have done so, their failure to issue specials in other areas, and the strong stand against high minimum policies by those who do not yet issue them. Furthermore, the reasons for fractionization given by industry executives --- at least the small group questioned --- can more often than not be translated into profit maximizing terms.

Most companies which have had strong objections to specials but which have also have had much to gain from issuing them have been forced to over-come their objections. The few firms which do not issue them are among those which would have least to gain from the practice. As long as a reasonable possibility existed that insurance departments could be convinced that these policies were inequitable, it was worth their while to remain in opposition. Maintaining a position of opposition while at the same time issuing specials would have been hard to justify to their agents, if to no one else.

As for those companies which have issued specials, "frankly competitive" considerations most frequently entered into their stated reasons for so doing. If their rates --- discriminatory or otherwise --- were based on their prevailing average whole life sales, the Northwestern Mutual and other companies with select clienteles would show superior comparisons. Company officials are generally quite familiar with the fact that such price competition as exists is found primarily among either buyers of large whole life contracts or their representatives. These

officials feel themselves under considerable pressure to meet and preferably to beat the whole life prices of upper status companies. Without a fractionization of the whole life market, it would be impossible to meet these pressures.

Although several other reasons were cited by industry executives, the basic cause of the failure to fractionize policy areas other than whole life also appears to be a lack of pressure to do so. Competition is infrequently met in these areas. Very few large 20 pay life or 20 year endowment contracts are sold. Furthermore, the variability in size of sales in these policy areas is small, at least in comparison to that which exists in the whole life area. In consequence, fractionization --- whether or not accompanied by discrimination --- would in general not have a substantial effect on the rates for high minimum non-whole life contracts.

The aspects of pricing which seem to reflect economic rationality are by no means limited to the fractionization of individual policy areas. While superficially irrational, the pricing of juvenile policies does, on further consideration, appear to be influenced by factors as much economic as altruistic. This conclusion is made particularly convincing when the agent's importance in the industry is remembered. If the average cost principle were completely to dominate the pricing of juveniles, these policies would be very expensive. Indeed, despite lower mortality rates, juvenile rates would likely be higher than those on corresponding contracts issued on young adult lives if this principle were to be fully applied. Such a price structure would unquestionably raise doubts in the minds of salesmen if not in the minds of those who buy

juveniles.

It is clear, to repeat, that companies have gone to considerable effort to make prices attractive in policy areas where cross elasticities are high. That purely economicconsiderations have had an effect on industry pricing procedures does not, however, imply that they completely dominate these procedures. In particular, it does not imply that companies have added to the attractiveness of policies sold in markets where cross elasticities of demand are high by discriminating in their favor.

If life insurance company entrepreneurs were motivated solely by the desire to maximize profits, they would find it desirable to operate in accord with three basic principles of price discrimination. These are: 1) Establish premium rates and dividend scales in such a manner that policies with low face values and/or high savings components yield greater rates of return than those with high face values and low savings components. 2) Regardless of plan, establish nonforfeiture values and dividend scales in such a way that higher rates of return are experienced on policies which terminate early than on those which continue in force for a substantial period of time. 3) Establish premiums on optional benefits --- disability premium waiver, double indemnity, and the like --- to yield higher rates of return than prevail on the basic life insurance contracts to which these riders are attached.

Fairly clear evidence exists that discriminatory practices falling into the second and third of these categories are common. This evidence is derived both from data published in trade journals and from statements made during the course of interviews with industry executives. Many of these executives freely admitted that dividend scale tilting was

a widespread practice --- and one to which their firms resorted on occasion. The way the procedures involved in tilting were described makes it difficult to conceive of their not involving discrimination. As reflected in published data, the pricing procedures of many firms do seem to discriminate in one way or another against those who terminate their policies early. Those who lapse their policies early do seem to be discriminated against by the once and perhaps still prevalent policy of commencing to pay substantial terminal dividends during the twentieth policy year. The holding of policy reserves on ultra-conservative bases does seem to penalize those who win, i.e., those who dies after their policies have been in force for a short period of time.

Both stock and mutual companies treat as nonparticipating premiums the considerations paid for peripheral policy benefits such as the disability premium waiver provision. Nonetheless, substantial disparities do exist in the rates charged for this provision by different companies. Furthermore, many companies have not altered DPW rates for 20 or more years despite a substantial decline in the incidence of total and permanent disability. Many firms have accounted for the failure either to reduce rates or to pay dividends on this provision by claiming that the sums involved are too small to make bothering them worth while. This may be true. Even so, the most that can reasonably be claimed in their behalf is that the discrimination involved is relatively small.

Evidence of the widespread practice of the first mentioned type of discrimination is considerably more difficult to come by. This may be a result of the fact that state insurance commissions --- particularly the New York Insurance Department --- are more concerned with this

type of discriminatory behavior than with any other. Then again, it may simply be a reflection of the fact that little discrimination of this sort takes place in the industry.

What little evidence has been adduced in this regard has been contradictory. On the one hand, most of the five companies which had introduced quantity discount schemes by mid-1957 appear, if anything, to be discriminating against policies sold in markets where cross elasticities of demand are high. On the other hand, the only two companies on which data of this nature are available appear to assess expenses in a manner which results in a rational pattern of discrimination. Whether these assessment procedures are the result of ignorance or of design is not known. A few executives let slip remarks suggesting that their companies discriminate in favor of high minimum contracts. Whether the inferences drawn from these remarks were warranted by the actual behavior of these concerns is also not known. Finally, it is most emphatically not known whether a large number of companies use such discriminatory procedures. The only basis on which even moderately informed general statements about these matters can be made is a detailed analysis of the relationship between prices and costs in the industry. As has already been mentioned, an attempt at this sort of analysis is the subject of the following chapter.

Chapter 7

Price Policy: A Statistical Analysis

An operational definition of discrimination was suggested in Chapter 6. It was, "discrimination exists when similar commodities are sold at prices which yield the seller different (rates of) return over marginal costs." Accepting both this definition and the characterization of all ordinary life insurance contracts as "similar commodities," three maxims of rational --- i.e., profit maximizing --- discrimination were suggested for life insurance companies. These maxims entail establishing lower profit margins on 1) contracts in force for substantial periods of time than on those which terminate early; 2) the basic life insurance contracts themselves than on riders providing such peripheral benefits as disability premium waiver, double indemnity, and so forth; and 3) policies with large face values --- particularly term and whole life contracts --- than on those issued in small amounts.

Evidence has been adduced which strongly suggests that a majority of life insurance companies follow the first of these maxims. Pricing procedures which have this effect are frequently justified as being motivated by conservatism. At some times in the past, such a justification has had considerable merit. Many firms also appear to follow the second maxim. Some --- perhaps many --- do not. Executives of firms in

this latter group sometimes admit their economic irrationality --- although not in these words --- but justify it on grounds of social obligation.

As for the degree of acceptance of the third maxim, the evidence is much less clear. If companies do follow it, this lack of evidence is understandable. Regulatory bodies are more on guard against this form of discrimination than any other. It is only natural, then, that executives of companies which do discriminate among policy size groups should be reluctant to discuss or to write about these activities.

There is considerable reason to believe, however, that the failure of executives to admit this type of discriminatory practice stems, in many cases, from actual fact rather than from a lack of candor. Many executives appear to regard average cost pricing as being not only a social obligation but good business practice as well. Speaking loosely, discrimination under maxims 1 and 2 involves the intersection of marginal cost and marginal revenue curves in such a way that prices above average costs result. Such charges can always be defended as being motivated by conservatism. Discriminating under maxim 3) poses different problems, however. It involves --- again speaking loosely --- the establishment of prices <u>below</u> average costs. It is not too difficult to see how someone untutored in economic principles could regard such a pricing procedure as being dangerously unsound, even when it happens to maximize profits or contributions to surplus. Determining the extent to which maxim 3 is followed is, then, the principal goal of this chapter.

The Analysis Plan: In broad outline, the statistical analysis of price policy to be discussed below is quite straight forward. By use of appropriate interest and mortality factors, the payment streams --- premiums, cash values, and anticipated dividends --- on a group of life insurance policies were reduced to present values. Estimated present values of marginal selling expenses and state insurance premium taxes were then deducted from these payment stream present values. The two expense categories considered account for most --- not quite all --- of the operating expenses incident on an amount of insurance or premium revenue basis. For each of the individual policies, the results of this second discounting operation constitute estimates of allocations on a per $1000 of insurance basis of overhead costs and those marginal expenses which are incident on a per policy basis. These estimates of allocated expenses form the dependent variables in a regression analysis.

In greater detail, with any insurance policy, a company may be regarded as having available at the beginning of each policy year the sum of that year's premium and the preceding year's cash value. During the following year, the two must, by definition, be sufficient to meet: 1) payment of the policy's face value if the insured dies; 2) payment of its cash surrender value if his policy is lapsed; 3) payment of a dividend (if any) and establishment of a new cash value if the policyholder neither dies nor lapses; and 4) payment of administrative expenses --- "expenses" being taken to include not only a company's marginal outlays for premium collections, dividend payment expenses, commissions to agents, and so forth, but also any positive or negative contributions to overhead and

surplus that may arise.[1]

It is necessary at this point to establish the following notation:

G_x: The gross premium on a policy issued at age x;

v: 1/(1 + the assumed rate of interest);

q_{x+t}: The probability of death during the x+t-th year given survival to the beginning of that year;

r_{x+t}: The probability that a policy issued at age x will lapse during the t-th year of its existence given that the policyholder has neither lapsed nor died previously;

${}_tCV_x$: The cash value at the end of the t-th year for a policy issued at age x;

${}_tD_x$: The dividend at the end of the t-th year for a policy issued at age x;

${}_tE_x$: Expenses incurred during the t-th year of its life on a policy issued at age x;

${}_tp_x$: $\prod_{i=0}^{t-1} (1 - r_{x+i} - q_{x+i})$ --- the probability that a policy issued at age x will not be terminated either for death or for surrender during the first t policy years;

${}_{t|}q_x$: ${}_tp_x \, q_{x+t}$ --- the probability that a policy issued at age x will continue in force until the t-th policy year and will terminate in that year by death (and similarly for ${}_{t|}r_x$).[2]

If the unrealistic simplifying assumption is made that death

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1. Alternatively, the company may be regarded as having available the policy's asset share --- its share of the accumulated difference between premium and interest contributions and deductions for expenses, death benefits, dividends, and so forth. "Expenses" would then be defined to exclude contributions to surplus. Under the simplifying assumption leading up to equation 3) below, either formulation would have the same end result.

2. This notation is roughly in accord with standard actuarial notations. See C. W. Jordan, Life Contingencies, Chicago: Soceity of Actuaries, 1953.

or lapse, if they occur, take place at the ends of policy years, the equality described above may be written:

$$
\begin{aligned}
G_x + {}_tCV_x = {} & v \cdot q_{x+t} && \text{(mortality element)} \\
& + v\,(1 - r_{x+t} - q_{x+t})\,({}_{t+1}CV_x + {}_{t+1}D_x) && \text{(survival element)} \\
& + v\, r_{x+t}\,({}_{t+1}CV_x + {}_{t+1}D_x) && \text{(surrender element)} \\
& + {}_{t+1}E_x \qquad (1) && \text{(expense element)}
\end{aligned}
$$

Using as an integrating factor $v^t\ {}_tp_x$, i.e., discounting by both interest and the probability that the policy will remain in force, summing over the first n years of the policy's life, rearranging terms, and simplifying as far as possible, this equation becomes:

$$
\begin{aligned}
\sum_{t=0}^{n-1} v^t\ {}_tp_x\ G_x = {} & \sum_{t=0}^{n-1} v^{t+1}\ {}_{t|}q_x + \sum_{t=1}^{n} v^t\ {}_{t-1|}r_x\ {}_tCV_x + v^n\ {}_np_x\ {}_nCV_x \\
& + \sum_{t=1}^{n} ({}_{t-1|}r_x + {}_tp_x)\ {}_tD_x\ v^t + \sum_{t=0}^{n-1} v^t\ {}_tp_x\ {}_{t+1}E_x \qquad (2)
\end{aligned}
$$

Given information on the paremeters implicitly and explicitly involved --- mortality and lapse rates, average policy sizes, the distribution through time of marginal cost elements, cash values, premium rates, and dividend scales --- a complete picture of such patterns of discriminatory pricing as exist in the industry could be taken. Regrettably, much of the data necessary to perform so complete a reduction is simply not available.

Considerable data of recent origin are available on company lapse experience during the first two or three policy years. These data are generally not given in sufficient detail, however, to enable adequate treatment of the considerable differences that exist among policy type and age groups. Furthermore, lapse rates vary considerably among companies. They vary so widely, in fact, that the application of data developed from

the operations of one or a small group of companies --- the type of experience generally involved in recent studies --- would yield results of questionable value.

Lapses in later policy years have rarely been treated in the trade literature. Studies by the trade requiring lapse rate assumptions almost invariably use "Linton A Rates." These were based indirectly on the experience of Massachusetts Mutual during the period 1903-17[1]. Whether these rates are reasonably close approximations to current experience at higher durations is not known. It can safely be said, however, that they are at least somewhat lower than the majority of companies currently experience in early policy years.

To reduce individual policy data in the manner suggested by equation (2) would require knowledge of three groups of data in addition to the discount factors themselves: 1) gross premium rates, 2) annual dividend scales, and 3) cash surrender value scales. Trade publications[2] give fairly complete information on the gross premiums charged by the 200 or largest companies in the industry for the more popular plans. For the largest 100 or so firms and for some of the smaller ones, dividend information is sufficiently complete to enable the derivation of reasonably accurate scales for the first 20 policy years. Cash surrender values are not extensively tabulated, however. Generally, only three or four of the first through fifth and the tenth, fifteenth, and twentieth year values

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1. M. A. Linton, "Returns Under Agency Contracts," Record, American Institute of Actuaries, 1924, pp. 286-7, 316-9. These rates were based on material in A. T. Maclean, "Comparative Rates of With drawal," Transactions, Actuarial Society of America, 1923, pp. 64-76.
2. In particular, Flitcraft Compend, New York, Flitcraft & Co., and The Unique Manual, Cincinnati: National Underwriter Co., both published annually.

are available, when any are published at all. Non-linearities in the methods used for cash value computations are of sufficient magnitude to make feasible interpolation methods of dubious value. For these reasons, it was decided to eliminate consideration of lapse rates from the method used to reduce policy values.

The way of achieving this end involves, in effect, the assumption --- contrary to fact --- that discrimination maxim 1 is violated in the pricing of all policies by all companies. It involves, that is to say, the assumption that companies do not discriminate against those whose policies terminate soon after their inception. If this assumption were true, the present value of premium payments less cash surrender values, dividends, expenses incurred, and insurance protection afforded would be zero regardless of policy duration. Thus, accepting the universal violation of maxim 1 amounts to saying that quite general statements about price policy can be made while dealing with only an arbitrarily selected set of values of r_{x+t} in equation 2.

Because of the widespread availability of twentieth year cash value information, it was decided to work with n=20 and to set $r_{x+t}=0$ for t less than 20. Equation (2) then reduces to a far more manageable form:

$$\sum_{t=0}^{19} v^t \, {}_tp_x \, G_x = \sum_{t=0}^{19} v^{t+1} \, {}_{t|}q_x + v^{20} \, {}_{20}p_x \, {}_{20}CV_x + \sum_{t=1}^{20} v^t \, {}_tp_x \, {}_tD_x + \sum_{t=0}^{19} v^t \, {}_tp_x \, {}_{t+1}E_x \qquad (3)$$

where ${}_tp_x$ is now simply the probability that a policy initially issued at age x will not terminate by death during the first t policy years. The first sum on the right of equation (3) is the present value of a payment

of 1 to those who die at age x+t, the payment being made at the end of that policy year. That is, it is the net single premium on a 20 year term policy --- an easily computed quantity. The last three elements on the right of equation (3) are simply the present (mortality and interest) values of the twentieth year CSV, policy dividends, and expenses allocated to the policy. Only the twentieth year cash value is of relevance, to repeat, since lapses are assumed not to occur during the first 20 policy years. Once more, twentieth (and tenth) year CSV's are quite widely tabulated.

Use of equation (3) in discounting life insurance policy payment streams results in an overstatement of the present value of future payments. This is of particular importance in view of the apparent frequency with which maxim 1 is obeyed. To obtain the actual present value of a future dividend, it must be discounted to take account of three factors: 1) interest, 2) mortality, and 3) the probability of lapse. Equation (3) takes only the first two of these factors into account. Thus, as the degree to which a policy's dividend scale is tilted increases, the estimate of expenses allocated to it decreases when this equation is used. In an attempt partially to take account of this possible source of distortion, estimates of total expenses allocated were computed for both 10 and 20 year periods. The ratio of ten to 20 year expense estimates was then used to form an independent variable in the regression analysis.

The Sample of Policies: The policies analyzed consist of almost all contracts issued in the whole life,[1] 20 pay life, and 20 year endowment areas[2] at ages 25, 35, and 45 by 84 companies which write life insurance in the United States. Gross premiums, dividend scales, and cash surrender[3] values used were those in effect during the first quarter of 1954. The firms studied were selected from a list of all American and Canadian domiciled companies ranked by total life insurance (ordinary, industrial, and group) in force on January 1, 1954. Excluded from the list were companies: a) which employ no agents; b) whose business is largely or entirely industrial, group, or reinsurance; c) which operate largely or entirely outside the United States; and d) which do not make dividend scales public. Selected from the remaining companies on the list were a) all of those with $1 billion or more of insurance in force (47 firms); b) every other one of those with between $400-999 million in force (17 firms); and c) every fifth one of those with between $75-399 million (20 firms). The companies sampled are representative of less than 40% of all firms writing

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1. "Modified 2" and "modified 3" type contracts were included, but "modified 5" types were excluded. The former are contracts on which the premium for the first two or three years is 10-25% below the gross premium in the following policy years. Dividends --- generally not paid until the end of the modified period --- are usually large enough to make subsequent net outlays fall below the initial level. "Modified 5" types involve premiums during the first five policy years which are about 50% of their ultimate amount. This contract form is really more similar to automatically convertible term insurance than to standard whole life contracts.
2. Data were also accumulated on 5 year renewable and non-renewable term policies, the most frequently issued types of term contracts. However, the number of these policies issued was so small and elements of incomparability so great that it was felt impossible to include them in the subsequent analysis.
3. When surrender or termination dividends were contemplated, the amounts were added to cash surrender values.

life insurance in the United States. They account, however, for considerably more than 95% of all insurance in force.

Even for many of the largest companies, complete dividend scales for the first 20 policy years are not published. However, a straight forward linear interpolation between known points on the dividend scales yielded sufficiently accurate results. For only about 5% of all policies covered did the sums of 10 and 20 year interpolated scales differ by more than 50¢ --- 0.5-3.0% --- from published sums. For these policies, additional adjustments were made on an ad hoc basis. When trade publications or local agents were unable to supply sufficient information, letters were sent directly to the companies. These letters went mostly to smaller firms, and generally concerned dividend scales. Of approximately 35 firms interrogated, only two failed to reply.

A small minority of the sample companies include a disability premium waiver benefit in some or all of their standard contract forms. Most firms, however, provide this benefit only on payment of an extra premium. The development of disability premium waiver net premiums would have required lengthy computations. The number of policies affected was felt to be too small to warrant such an expenditure of time. It was therefore decided to deduct the lowest extra premium charged for the DPW benefit by any sample company from the annual premium on those policies which included this benefit. At age 35, these deductions amounted to 56¢, 39¢, and 48¢ respectively on whole life, 20 pay life, and 20 year endowment contracts. The rates at age 25 were about 60% of those at age 35, while those at age 45 were $1.15, $1.15, and $1.34 on the respective policy types.

Discount Factors: a) Mortality and Interest: Since about 1948, the laws of almost all states have required that policy reserves and cash values be based on the Commissioners 1941 Standard Ordinary Mortality table. The CSO table was developed from the experience of a group of major companies during 1930-40 on policies in force for at least five years. Since the basic mortality experience iused was then of recent origin, the committee which produced the table felt an additional element of conservatism to be necessary. A factor amounting to 5% of the reciprocal of the life expectancy was therefore added to the basic probability of death at each age.[1] Thus, even if no intervening improvement in mortality experience had taken place, the CSO table would unquestionably show higher mortality rates than are currently being experienced by most American companies. Furthermore, as Table 1 illustrates, mortality has declined very considerably since the 1930's. The improvement has been so great, in fact, that considerable pressure has developed to adopt a more realistic mortality table --- this despite the fact that the CSO table has only been in wide use for ten years.[2]

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1. John S. Thompson, "The Commissioners' Standard Ordinary Mortality Table," Transactions: American Society of Actuaries, 1941, pp. 327-328. The rationale behind the loading procedure used is by no means intuitively obvious. The method was chosen, first of all, because higher mortality assumptions yield higher --- more conservative --- net level premiums. At the same time, however, such a loading procedure does not appreciably affect net level premium reserves.
2. As a deterrent to the development of "ruinous" competition, the laws of most states require so-called deficiency reserves. These come into play if a company charges gross premiums which are lower than the net level premiums inherent in the interest and mortality bases used to value policy liabilities. This special reserve is equal to the accumulated difference between aggregate gross and net level premiums on the class of policies involved. These reserves can be very considerable for low premium stock insurance companies. One such company was reported to have been required to set up deficiency reserves equal to about 60% of its statement earnings in 1956. See "Digest of Presentation and Discussion of Report on the Need for a New Mortality Table," Transactions: Society of Actuaries, 1957.

Table 1: Expected Deaths Per Thousand Per Year Under Commissioners Standard Ordinary and Table X-18 Mortality

Age	CSO Mortality (1930-40)[1] Loaded	CSO Mortality (1930-40)[1] Unloaded	Table X-18 Mortality (1950-54)[2]
15	2.15	1.29	0.55
25	2.88	2.00	0.93
35	4.59	2.79	1.41
45	8.61	6.22	4.02
55	17.98	15.40	10.91
65	39.64	36.11	27.61
75	88.64	81.09	63.80

1. Sources: Thompson, Op. Cit., and John H. Miller, "A Method of Analyzing Select Mortality Experience," Transactions: American Society of Actuaries, 1942, pp. 26-31.
2. Source: "Digest of Presentation ..." Op. Cit.

Table X-18 --- the one on which discount factors used in this study were largely based --- was constructed by a special committee of the Society of Actuaries from the experience during 1950-54 of 15 large American companies on policies which had been in force at least five years. This table was, in turn, adjusted to provide safety margins. The result --- Table X-17 --- was recommended by the Society to the National Association of Insurance Commissioners as a new permissive standard for policy valuation.

As a result of medical and other selection procedures, new policyholders experience lower mortality rates than do those of the same age whose policies have been in force for a number of years. "Select" mortality rates --- rates which give experience in early policy years ---

are not available for the Table X-18 data. Such rates are available, however, for the basic CSO mortality data.(See Miller, Op. Cit.). Ratios of select to ultimate mortality from this latter table were applied to Table X-18. The modified Table X-18 rates and a 3.25% interest assumption were used to develop the following discount factors. The rate of interest chosen was slightly below the after tax rate experienced by the industry in 1954, the year to which the basic policy data apply.

Table 2: Modified Table X-18 3.25% Net Single Ten and Twenty Year Term Insurance Premiums

	Age at Issue		
	25	35	45
Ten Year Term	$ 8.55	$18.22	$ 50.60
Twenty Year Term	22.22	55.77	140.89

Table 3: Present Value of a Payment Made or Received 5, 10, or 20 Years Hence: Table X-18 Mortality (Modified) at 3.25%

Age at Issue	5 Years	10 Years	20 Years	Interest Only --- 20 Years
25	0.849	0.719	0.510	0.528
35	.846	.711	.483	.528
45	.834	.682	.416	.528

b) Marginal Costs: Many of the life insurance industry's operating expenses can be traced directly to the existence of one or another individual policy. These variable operating costs can usefully be dichotomized. One class --- the larger --- is closely related to the size of of individual policies. State insurance premium taxes, commissions to soliciting agents, and commissions and expense allowances to general agents

(frequently including an allowance for premium collection) all bear a proportionate relationship to either a policy's face value or its gross premium. Over a somewhat longer period, the salaries of branch office managers also vary with the amount of insurance sold. In addition, both initial underwriting expenses and the costs of investigating death claims increase with policy values, although generally not proportionately.

A second group of costs is directly allocable to individual policies, but is independent of policy size. Included in this group are outlays to establish policy records and to issue policy forms, to pay dividends and surrender values, to collect premiums (when this is done by the home office rather than the agency), and parts of the costs of underwriting and meeting death claims on policies.

Unfortunately, reliable data in sufficient detail to be of use in this study are not available for several of these items of expense. Data on per policy expenses and on those partially size related expenses which occur only once during the typical policy's life --- underwriting, surrender, and so forth --- are particularly scanty. Without exception, the few companies which have well developed cost analysis and control systems are exceedingly reluctant to release data to people not associated with the industry.

The public domain contains only one relatively recent block of information in this area. During the late 1940's and early 1950's, several committees oof the Life Office Management Association (LOMA) conducted studies of home office operating expenses. Use of these data would

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1. See Proceedings...: Life Office Management Association, 1946-53.

have presented certain obvious price level adjustment problems. More important, overhead allocation procedures differ from company to company. Recognizing this difficulty, the LOMA committees restricted themselves to the study of very short run marginal costs to assure comparability of data. For example, the basic data collected by the committee on dividend payment costs included only the following items: direct and supervisory labor, stationery and printing, postage, and depreciation and/or rental charges on acoounting equipment. [1] Charges for such quasi-overhead expenses as janitorial services, heat, light, office space, and depreciation of other office equipment were excluded. In the short run, these excluded costs are certainly fixed. But since a life insurance contract extends over a considerable period of years, long run rather than short run marginal costs are appropriate in a study of discriminatory pricing procedures. And these costs are definitely marginal in the long run. If a dividend clerk has a desk, it would seem only reasonable that depreciation on it and charges for the heat, light, and floor space it and she absorb be allocated as expenses of paying dividends. One might very well quibble about details of the allocation methods employed, but that an allocation can reasonably be made seems unquestionable.

One further complicating factor bears mentioning in this respect. Perhaps 15% of an average life insurance agent's sales are "not taken." That is, after triumphantly marching away with a signed application, the agent comes back a few weeks later to deliver the newly underwritten and duly issued policy only to find that the prospect has had a strength-

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1. Ibid., 1950, pp. 116-123.

ening of will, doesn't have the money to pay the premium, or won't accept the policy for some other reason. Many companies pro-rate the costs attributable to not takens among policies which are both issued and placed. Rather than regarding these expenses as part of general overhead, that is to say, the probability that an applicant will fail to pay his first premium is treated, in effect, as one of the contingent events against which he is applying to insure himself. This would hardly seem to be an unreasonable procedure.

Because of these two complicating factors, the available marginal per policy cost data unquestionably understate the levies a company might reasonably assess on a per policy basis. Accounting for the not taken complication presents no serious problems. However, no concrete information is available concerning the magnitude of expenses which are fixed in the short run but variable in the intermediate or long run. About all that can be said is that they are substantial. It therefore seems inadvisable to attempt the development of discount factors purporting to show an "average" firm's long run marginal per policy expenses. It was decided, rather, to use the limited data available in this area only as an aid in interpreting the results of the regression analysis to be described below.

Fortunately, considerably more information is available on those expense items which vary with policy size. This group of costs, it should be emphasized, contain by far the most important expenses of a life insurance company's operations. The computations leading to the factors used were lengthy, complicated, and dull. Little would appear to be served by going through the extended discussion that would be required to

explain them in detail, let alone necessary to justify them. Only the results will therefore be presented together with some indication of their limitations.

1) Soliciting Agent First Year Commissions: Information on field expenses --- first year and renewal commissions to soliciting agents and general agents --- was obtained from a variety of sources. Among them were a) publications of the Life Insurance Agency Management Association furnished by one life insurance company, b) the agents' and branch office managers' contracts of a second company, and c) several soliciting agents. Most of these sources requested anonymity. Sources of individual items of information are therefore not further identified.

The following first year commission scales were used:

Whole Life Policies (other than Mod 2 & Mod 3):	50%
Modified 2 and Modified 3 policies:	55%
20 Pay Life Policies:	45%
20 Year Endowment Policies:	35%

These percentages most closely represent the scales employed by companies which write in New York States. Only 68 companies are licensed in that state. These firms account for 37 (44%) of the companies in the sample, however, as well as for the lion's share of all insurance in force in the United States. First year commission rates of New York companies range from 5-15% below those of non-New York firms. They are particularly low on high savings forms of insurance. Furthermore, bonuses related to sales volume are commonly paid, particularly in the South, but are forbidden by the New York law.

Many companies vary commission rates with policy sizes. For

individual sales under an established minimum, commission scales are 5-10% below those for sales over the minimum. Depending on company, these reduced commission rates take effect on sales of under $1500-4000. Also, many companies --- particularly the smaller ones --- pay lower commission rates on "specials" than on lower minimum policies. When made, reductions on these policies are most frequently 5%.

No attempt was made to take account either of the size-commission rate interaction or the non-New York-New York differences in scales. With respect to the former, too little of the necessary information was available. As for the latter, non-New York companies vary considerably in their scales; to a substantial extent on a regional basis. It was felt desirable to treat these variations as an additional independent variable rather than to make further adjustments in the dependent variable.

2) Agent Renewal Commissions: The assumption was made that companies pay commissions amounting to 5% of the first 9 renewal premiums and 2% of all subsequent premiums. This appears to be the single most common scale of both New York and non-New York companies. Complicated adjustments were made to take account of the facts that: 1) Among large companies, at any rate, renewal commissions are generally not fully vested --- i.e., are not the agents' property when they leave the service of their companies --- until agents have been under contract for several years; 2) Termination rates among new agents are high --- more than 50% of newly hired agents do not survive their first year in the business; 3) Lapse rates on business written by new agents are higher than on policies sold by established agents; and 4) a considerable proportion --- often as much as 50-60% --- of a company's sales is written by agents in their first

few years under contract. These adjustments reduced estimated renewal commissions somewhat below the scale initially assumed. Discounting these commissions by interest and mortality yielded the following values. Percentages are of one annual premium for level premium contracts. Appropriate adjustments were made for modified 2 and modified 3 tope policies.

	Age at Issue:		
In Force:	25	35	45
10 Years	37.4%	37.3%	36.6%
20 Years	49.8	49.3	47.9

3) General Agent Commissions and Expense Allowances: Of the 71 companies in the sample for which this information was available, 43 (61%) operate largely or entirely on a general agency as opposed to a branch office basis. In these 43 firms, that is to say, sales offices are headed by independent contractors rather than company employees. Their earnings are based on their own sales and those of soliciting agents under contract to them. These "overriding commissions" are normally supplemented by expense allowances which are usually based on a formula which takes into account insurance in force in the agency, number of premium collections, sales, commissions to agents, and/or other factors. Most formulae enable allocation of expenses directly to individual policies. Although an increasingly large number of companies collect premiums in their home offices, collection by individual agencies is still the most common method. General agents are normally reimbursed for premium collection expenses, as for other expenses, on a formula basis.

Branch office managers are employees of their companies rather than independent contractors. They are generally paid salaries which are

supplemented by commissions on their own sales and on those of the soliciting agents they supervise. Operating expenses are authorized and paid directly by the home offices. Thus, the typical branch office operation is one for which only a relatively small proportion of field administrative expenses can be directly allocated to individual policies. Partly because the general agency is the basis of operation of a majority of companies and partly because more information was available on this form of field organization than on the other, it was decided to apply general agency factors to all companies, regardless of their actual agency structure.

Probably largely as a result of restrictions in the New York law, companies operating in that state tend to pay higher expense allowances and overriding commissions which are somewhat lower than those paid by their non-New York counterparts. Although companies vary considerably in total payments, there appears to be little difference on the average between companies which do and do not operate in New York. The following factors were therefore used for all companies. The time stream is more similar to that of New York than non-New York firms.

Overriding Commission Scales:

1st Year	5%
Second Year	7.5%
3rd-10th years:	2.5%
11th and subsequent years:	2%
Annual Collection Fee:	0.5%

When discounted, these scales produced percentages of first year gross premiums amounting to from 32.9-33.3% for 10 years and 46.9-48.8% for 20 years depending on age at issue. In addition, an expense

allowance of $3 per $1000 of insurance plus 10%, 9.5% and 9% respectively of whole life, 20 pay life, and endowment first year premiums was also used.

4) State Premium Taxes: All states levy taxes on insurance premiums collected within their borders. Both the base and the level at which these taxes are computed vary from state to state. Furthermore, almost half of the United States levy lower taxes on in-state than on out of state and foreign companies. Most states have retalliatory provisions in their laws --- a company domiciled in a state which levies at, say, 3% is subject to a rate of 3% on its business in a state with a retalliatory provision even though the latter state may normally tax foreign companies at 2%. To take account of company by company variations in the incidence of retalliatory provisions and of domestic-foreign rate differences was felt to be an unwarranted refinement. In mid-1956, 28 states levied on foreign companies at 2% either of gross premiums or of premiums net of dividend payments. The levies of the remianing states were roughly evenly distributed above and below this rate. It was therefore decided to use 2% as an estimate of the average tax burden on the premium collections of all companies. When discounted for 10 and 20 year periods, this levy is equivalent to 17-17.5% and 28-30% of first year premiums respectively.

Table 3: Summary of Cost Allocation Factors

	Percentages of First Year Gross Premium: Whole Life[1]		
	Age at Issue		
In Force	25	35	45
10 Years	148.0%	147.8%	146.6%
20 Years	188.4	187.0	183.0

Plus: $3.00 per $1000 of insurance.

1. Percentages are respectively 5.5% and 16% lower on 20 pay life and endowment contracts. Modified contracts were treated on an individual basis.

The Regression Equations: As initially conceived, the regression analysis was to serve two purposes. First and most obviously, the regression coefficients themselves give an indication of "average" industry behavior. They either directly provide or suggest answers to such questions as: How large are the quantity discounts granted by firms in the industry? Does the average cost pricing ethic justify these discounts? How extensive is the practice of dividend scale tilting? Is it more pronounced on some plans than on others? Do economies of scale appear to exist in the industry? How substantial are they?

Second, this analysis was intended to serve as an intermediate step in determining the effects on industry structure of economically rational pricing procedures. Limitations of the available data make it impossible on any absolute basis to classify the price policies of individual companies as discriminatory or not. If a few working hypotheses are correct, however, it is possible to develop measures of relative degrees of rationality through use of regression equation residuals. In explanation, consider a company all of whose whigh minimum-low savings policies have negative residuals from an appropriate set of regression equations, but whose low minimum-high savings contracts all have positive residuals. Consider, in other words, a situation in which the company and policy characteristics involved in the regression analysis lead to predictions of higher prices on the former group of contracts and lower on the latter than are actually charged by the company. It may be assumed, if only for the sake of argument, that the fundamental principles of economically rational discrimination outlined above are correct and that the regression equations do reflect industry pricing procedures. If so, it is

safe to say that this company's pricing procedures are more rational than those of a firm whose policies yield residuals with opposite signs.

An appropriate classification of regression equation residuals, then, ought to yield a "relative rationality" scale of individual company pricing procedures. Through use of such an index, it was hoped that it would be possible to answer questions such as: Is economically rational pricing associated with high growth rates? More generally, does greater rationality in pricing seem to be associated with a closer approach to maximum profits? Or are even the most price sensitive of insurance markets so lacking in effective concern for inter-company differences that price policy has only a minor role in determining the success of a company?

Regrettably, both human shortcomings and those of data processing machines --- primarily the former --- prolonged far beyond initial expectations the amount of time consumed by the regression analysis. A desire to bring this study at least temporarily to a conclusion made it impossible to proceed with the more interesting latter part of the initial analysis plan.

All told, nine independent variables entered into the regression analysis. They are described briefly below. Table 4 lists the resulting regression equations and their standard errors. For convenience in interpreting the results, portions of this table together with supplementary information will be repeated as the discussion proceeds. The lack of parsimony in introducing independent variables can be explained --- admittedly not justified --- by the availability at no cost of a moderate sized digital computer which had already been programmed to perform regression computa-

tions. The use of a smaller number of better chosen variables would unquestionably have produced aesthetically more pleasing results. At the same time, however, most of the variables chosen were not highly intercorrelated. Consolidating them might therefore have covered up some interesting inter-relationships. Since, to repeat, a free machine was available, the marginal cost of an additional variable was small. Use of so large a number of variables therefore seemed at least partially justifiable.

Policy Variables: 1) The Tilt Index: Only mortality and interest --- not lapse rate --- factors were used to discount the policy payment streams. Thus, under the discounting system used, the greater the extent to which a company tilts its dividend scale --- i.e., defers the distribution of surplus beyond the date at which it accrues --- the lower will be the prices it appears to be charging. Inter-company variability in the extent of dividend scale tilting was anticipated. To take this into account, the following sum was calculated for both ten and twenty year periods on each sample policy: The present value of a) premium payments less b) dividends; c) end of period cash value; and d) insurance benefits paid. The "tilt index" itself was simply the ratio of the sum for ten years to that for twenty years. These sums do not, it should be noted, reflect the operating expense factors which were used to develop the dependent variable. Use of a ratio based on these variables and their ten year counterparts would have been desirable. The cost factors used frequently led to small or even negative values of the dependent variable, however, particularly on large policies. Ratios based on these values were therefore rather unstable. Their use was consequently rejected.

2) Estimated Policy Size: Accurate data on the average sizes of individual contracts sold by American companies are nowhere available in the public domain. About all that can be found are limited bits of information on average policy sizes within broad plans of insurance --- whole life, limited payment life, and so forth --- and a few size distributions of all ordinary sales of large groups of companies. Inspection of these limited data led to the conclusion that for the purpose at hand, a negative exponential distribution characterized the size distribution of sales with sufficient accuracy. That is to say, it was assumed that x, the size of a sale on any given plan of insurance, is distributed as:

$$f(x) = (m - 1000) \cdot e^{-(x - 1000)/(m - 1000)}$$

where m is the size of the average policy sold on the given plan and x assumes values greater than or equal to $1000. Values of m for whole life, 20 pay life, and 20 year endowment contracts were taken respectively to be $5000, $3000, and $2500. These values approximate data supplied by a large company in the Northeast with a predominantly lower status clientele.

In using this distribution for assignments to individual contracts, it was further assumed that buyers never purchase policies with minimum face values lower than the maximum available to them. Thus, a man buying a $15,000 whole life policy was assumed never to buy a contract with a $1000 minimum when the company involved also issued a $10,000 minimum. This assumption together with that of an underlying negative exponential distribution led to a quite simple procedure for estimating the average

size of the highest minimun contract issued by a company on any given plan of insurance. It is: estimated size equals m plus the plan's minimum face value less $1000. When companies issued policies with minima higher than the one under consideration, it was decided not to go through the integration involved. The average size assigned in these cases was one-third the range between the given policy's minimum and that of the policy with the next higher minimum.

Per policy expenses form the major block of costs not taken into account in developing the factors used to reduce policy data. Letting K represent per policy expenses, the average cost pricing ethic requires that

$$C = K/X$$

where C and X are respectively per policy costs allocated on a $1000 of insurance basis and average policy size. The relationship between C and X is linear in their logarithms. For this reason, common logarithms of the policy size estimates (in $1000) rather than the size estimates themselves were used as independent variables.

3) Is This Policy a Special? As defined for the purposes of the regression analysis, a company's "special" is a contract which is issued only in amounts of $5000 or more. If a company issued more than one such contract in a given policy area, only that with the highest minimum was regarded as a "special." "Specials" in this sense of the word were assigned a value of 1. All other contracts were given a value of 0.

4) Is This a Participating Contract? If the answer was "yes," this variable was given a value of 1; if "no," a value of 0.

5) Earnings Rate-Terminal Reserve Interaction: Life insurance

company earnings and mortality rates both have improved since the end of World War II. On the other hand, expense rates have increased during that period. The first two have more than offset the third, however. Thus, the shorter the elapsed time since a company last revised its dividend or premium schedules, the lower its prices would be expected to be, other things being equal. To take this fact into account, it seemed desirable to include an earnings rate variable in the regression analysis.

The effect of inter-company differentials in earnings depends not only on the magnitudes of the differentials themselves, but also on the size of the savings element involved in the contracts being compared. A 0.25% difference in earnings rates would be expected to have a substantially greater dollar impact on a 20 year endowment than a whole life contract. This being the case, the earnings rate used --- that in effect in the year prior to the last dividend (or, in the case of non-par policies, premium) revision --- was multiplied by the CSO tenth year 3% net level premium terminal reserve for the given plan.

Company Characteristics: 6) Insurance in Force: The common logarithm of total insurance in force (in $10,000,000) --- ordinary, industrial, and group --- was included as an independent variable in an attempt to infer the magnitude of such scale economies as exist.

7) Growth Rate: The growth rate variable used was the ratio of ordinary life insurance sales during 1954 to total ordinary insurance in force on January 1, 1954.

8) Average Sale: As with earnings rates, the pre-1954 decade saw a substantial increase in the size of the average policy sold by most companies. At any given point in time, furthermore, inter-com-

Table 4A: Regression Coefficients and Standard Errors: Whole Life Policies

	Age 25		Age 35		Age 45		All Policies	
	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Dependent Variable Mean	$36.55	$22.13	$39.02	$24.79	$46.11	$28.56	Not Computed	
Int. Rate x Res. Mean	$ 3.92		$ 5.52		$ 7.43			
Total Correlation Coeff.	0.87		0.88		0.89			
Regression Coefficients								
Policy Variables								
1) "Tilt Index"	-34.03	11.44	-33.58	12.53	-124.64	21.16		
2) Log of Policy Size	-31.88	3.36	-35.45	3.82	- 35.24	4.35		
3) "Special?"	- 5.74	2.10	- 6.70	2.39	- 8.32	2.72		
4) "Par Policy?"	-17.61	2.14	-21.05	2.36	- 14.07	2.95		
5) Interest Rate x Res.	- 1.74	2.16	- 3.02	1.69	- 2.56	1.43		
Company Variables								
6) Insurance In Force	- 3.56	1.03	- 7.69	1.60	- 8.72	1.81		
7) Growth Rate	29.40	10.22	17.18	11.79	68.64	13.45		
8) Company Average Sale	- 1.60	0.55	- 1.03	0.63	- 0.99	0.71		
9) "New York?"	- 1.95	1.92	- 3.19	2.12	- 8.40	2.42		
Constant Term	114.74	10.87	140.11	12.06	205.20			

Table 4B: Regression Coefficients and Standard Errors: Twenty Pay Life Policies

	Age 25		Age 35		Age 45		All Ages	
	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Dependent Variable Mean	$52.38	$23.27	$53.52	$24.57	$57.97	$25.68	$54.62	$24.64
Int. Rate x Res. Mean	6.86		8.70		10.54		8.70	
Total Correlation Coeff.	0.82		0.83		0.81		0.81	
Regression Coefficients								
Policy Variables								
1) "Tilt Index"	-71.50	28.11	-89.43	27.04	-61.28	35.16	-65.56	17.66
2) Log of Policy Size	-49.57	8.95	-49.19	9.24	- 8.16	3.45	-15.69	2.93
3) "Special?"	2.82	5.58	3.13	5.82	-16.59	5.06	-12.05	2.95
4) "Par Policy?"	-19.14	3.97	-19.07	3.86	-23.65	4.28	-21.56	2.40
5) Interest Rate x Res.	- 1.04	1.86	- 0.74	1.50	- 1.33	1.39	1.45	0.45
Company Variables								
6) Insurance In Force	- 3.44	2.24	- 6.50	2.31	- 9.32	2.54	- 6.37	1.41
7) Growth Rate	27.20	15.38	27.20	15.76	22.02	17.94	27.48	9.74
8) Company Average Sale	- 2.13	0.87	- 1.99	0.89	- 2.16	0.98	- 2.48	0.53
9) "New York?"	- 5.70	3.21	- 6.08	3.28	- 4.80	3.74	- 3.47	1.98
Constant Term	158.69	22.47	178.16	22.73	159.61	26.00	128.51	11.81

Table 4C: Regression Coefficients and Standard Errors: Twenty Year Endowment Policies

	Age 25		Age 35		Age 45		All Ages	
	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Dependent Variable Mean	$47.82	$26.46	$48.54	$25.34	$53.16	$24.72	$49.84	$25.63
Int. Rate x Res. Mean	$14.04		$14.05		$13.97		$14.02	
Total Correlation Coeff.	0.90		0.89		0.88		0.88	
Regression Coefficients								
Policy Variables								
"Tilt Index"	-96.72	18.41	-86.44	20.14	-86.77	22.89	-79.29	11.61
Log of Policy Size	- 5.36	18.44	- 2.98	18.96	-12.10	19.04	- 5.69	11.12
"Special?"	---	---	---	---	---	---	---	---
"Par Policy?"	-29.79	3.53	-28.61	3.53	-24.55	3.50	-29.01	2.05
Interest Rate x Reserve	- 2.11	0.94	- 2.43	0.97	- 2.56	0.98	- 2.55	0.57
Company Variables								
Insurance in Force	- 3.73	2.23	- 6.79	2.27	- 9.68	2.32	- 6.67	1.35
Growth Rate	25.64	15.44	25.95	15.68	30.20	16.32	25.87	9.35
Company Average Sale	- 0.98	0.84	- 0.63	0.86	- 1.08	0.86	- 0.79	0.51
"New York?"	- 7.11	3.14	- 7.42	3.24	- 8.14	3.28	- 7.12	1.90
Constant Term	174.95	19.02	178.03	19.91	194.30	21.67	177.14	11.76

Table 4D: Regression Coefficients and Standard Errors: All Policies

	Age 25		Age 35		Age 45		All Ages	
	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Dependent Variable Mean	$43.74	$24.56	$45.40	$25.66	Not Computed		Not Computed	
Int. Rate x Res. Mean	7.10		8.38					
Total Correlation Coeff.	0.86		0.87					
Regression Coefficients								
Policy Variables								
1) "Tilt Index"	-64.03	9.97	-59.20	10.26				
2) Log of Policy Size	-33.30	3.39	-36.32	3.57				
3) "Special?"	- 4.86	2.17	- 5.86	2.28				
4) "Par Policy?"	-21.07	1.77	-22.99	1.79				
5) Interest Rate x Res.	- 0.46	0.17	- 0.70	0.21				
Company Variables								
6) Insurance In Force	- 3.80	0.95	- 7.37	1.18				
7) Growth Rate	28.14	7.94	22.66	8.32				
8) Company Average Sale	- 1.72	0.42	- 1.41	0.44				
9) "New York?"	- 3.64	1.54	- 3.97	1.57				
Constant Term	137.49	7.29	148.88	7.75				

Par-Nonpar Cost Differences: Under a nonparticipating contract, the premium rates and cash values that will prevail throughout the life of the contract are fixed at the contract's inception. Participating policies, however, involve a very real element of coinsurance. The premiums and cash values specified in these contracts respectively set only upper and lower limits to the payments which will be made and received by insureds. The safety margins inherent in premiums are almost invariably sufficiently great so that the likelihood is very small that the contractually specified maximum costs will actually be borne by policyholders.

Thus, the risks borne by a writer of nonparticipating insurance are considerably greater than those assumed by its mutual counterpart. It would therefore seem reasonable to expect lower costs to prevail on participating policies than on their nonpar counterparts. This expectation is fulfilled in the regression equations. In each of these equations, the sign of the "participating policy?" variable is negative. Over a twenty year period, it would appear that a prospective insured could expect to save something over $1.00 a year per thousand by buying a participating policy rather than its nearest nonparticipating counterpart.

Table 5: Coefficients and Standard Errors of the "Par Policy?" Variable

Age at Issue	Whole Life	20 Pay Life	20 Year Endow.	All Types
25	-17.61 (2.14)	-19.14 (3.97)	-29.79 (3.53)	-21.07 (1.77)
35	-21.05 (2.36)	-19.07 (3.86)	-28.61 (3.53)	-22.99 (1.79)
45	-14.07 (2.95)	-23.65 (4.28)	-24.55 (3.50)	Not Computed
All Ages	Not Computed	-21.56) (2.40)	-29.01 (2.05)	Not Computed

Differences in the apparent magnitudes of participating policy superiority seem discernible among policy types. The "participating policy?" coefficients seem to be somewhat greater among 20 year endowments than among 20 pay lifes and somewhat greater, in turn, among 20 pay lifes than among whole lifes. It is entirely possible that stock company price setting officials attempt, by and large, to establish prices in areas where cross-elasticities of demand are high at levels closer to those prevailing for participating policies than they do in areas where elasticities are low. It is entirely possible, that is to say, that stock company officials tend to be more rational pricers than their mutual company conterparts. However, it is largely possible to account for the existing pattern of "participating policy?" coefficients as a reflection of factors other than the conscious decisions of pricing officials.

The discount factors used overestimate the present values of future life insurance contract payment streams for at least one and perhaps two reasons. First, these factors do not take lapse rates into account. Second, Table X-18 mortality rates are more likely to under- than to over-estimate the actual mortality experience of sample companies. Then too, time lags in making adjustments to altered events are inevitable in the industry. They tend to be particularly great when the events are favorable. Thus, even if Table X-18 rates do closely reflect the actual experience of companies, it is quite likely that dividend rates in effect in 1954 were computed on the basis of mortality assumptions somewhat higher than those involved in Table X-18.

Participating policy cash values are generally larger than their nonparticipating counterparts. Aetna and Connecticut General, for example,

Table 6: CSO 2.5% and 3% Net Level Premium 20 Year Terminal Reserves

Age at Issue	Whole Life 2.5%	Whole Life 3%	20 Pay Life 2.5%	20 Pay Life 3%	20 Year Endowment 2.5%	20 Year Endowment 3%
25	$282.81	$263.69	$551.37	$494.97	$1000.00	$1000.00
35	362.44	344.95	653.56	604.67	1000.00	1000.00
45	451.07	436.30	753.73	715.31	1000.00	1000.00

Table 7: Present Value of Differences Between 2.5% and 3% CSO 20 Year Reserves When Valued at Unloaded CSO and Table X-18 Mortality Rates and 3.25% Interest

Age at Issue	Whole Life Contracts CSO	Whole Life Contracts Table X-18	20 Pay Life Contracts CSO	20 Pay Life Contracts Table X-18
25	$9.49	$9.76	$28.00	$28.78
35	8.06	8.45	22.54	23.61
45	5.61	6.15	14.59	15.99

pay full net level premium 2.25% reserves at the end of 20 policy years on participating policy surrenders. On nonparticipating contracts, however, reserves are carried on a 2.5% basis. And full net level premium reserves are paid as cash values only at the end of the premium paying period. It seems reasonably safe to say that, on the average, non-par cash values reflect the equivalent of at least a 0.5% greater interest assumption than that entailed in participating values.

The regression equation dependent variable is based in part on the present values of twenty year cash surrender values. Obviously, the greater the rate of discount used, the smaller will be the present value of any given payment made 20 years hence. Therefore, since nonpar cash values are generally smaller than their participating counterparts, use of more realistic discount rates would tend to diminish the apparent partici-

pating policy cost advantage, particularly on 20 pay life contracts.

Dividend payments increase with policy duration. They also are larger on high premium than on low premium contract forms. By use of essentially the same argument, it can easily be shown that the application of higher --- more realistic --- discount rates to dividend streams would also serve to attenuate the apparent cost advantage of par policies. Furthermore, the higher the absolute level of future dividends, the greater would be the degree of this attenuation in cost advantage.

Discrimination by Policy Size, Type, and Age: If a firm believes in the average cost pricing ethic, it should allocate per policy expenses, K, to individual contracts in such a manner that

$$C_i = K/X_i \qquad (4)$$

where C_i and X_i are, respectively, per policy expenses allocated on a per thousand of insurance basis and average policy size (in $1000). Taking logarithms, equation (4) yields a linear relationship:

$$\log C_i = \log K - \log X_i$$

Had this relationship been used as the basis for a regression analysis, the following would have been true of the resulting equations:

$$\overline{\log C} = \log K - \overline{\log X} \qquad (5)$$

To repeat, each value of C_i', the regression equation dependent variable, was developed by deducting estimates of a major block of those operating expenses which vary with policy size from the payment stream per thousand of insurance on each individual contract. The C_i' estimates are comprised not only of per policy expenses --- the C_i values --- but also of some costs which vary with policy size. Each C_i' should therefore be greater than its corresponding C_i. How much greater is not known. If the average cost pricing ethic is followed, however, it seems reasonably safe to say that a relationship of approximately the following nature ought to prevail between these two magnitudes:

$$C_i = C_i' - d \qquad (6)$$

In estimating K from equation (5), three alternative values of d were assumed --- zero, $5.00, and $10.00. As an approximation to the $\overline{\log C}$, the following relationship was used:

Table 8: Estimates of Per Policy Expenses Developed Through Use of Equation (5)

Age at Issue	Alternative Assumptions on the Amount of Dependent Variable Expenses Per $1000 which Vary with Policy Size		
	None	$5.00	$10.00
	Whole Life Policies		
25	$178.38	$144.63	$109.98
35	186.93	152.93	118.12
45	223.17	189.36	154.86
	20 Pay Life Policies		
25	$167.93	$148.51	$128.98
35	170.74	151.29	131.52
45	200.80	179.96	158.83
	20 Year Endowments		
25	$105.03	$ 90.56	$ 75.79
35	108.12	93.82	79.25
45	123.43	109.39	95.10

$$\log_{10} C = \log_{10} (\overline{C'} - d) - \log_{10} e \, [S^2_{C'}/2(\overline{C'} - d)^2] \qquad (7)^1$$

The results of these calculations are enumerated in Table 8.

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1. From the Taylor Series expansion for the log X:

$$\log_{10} X = \log_{10} \bar{X} + \log_{10} e \, [(x - \bar{X})/\bar{X} - (X - \bar{X})^2/2\bar{X}^2 + \ldots]$$

Therefore:

$$\log_{10} C = \log_{10} (C'_i - d)$$

$$= \log_{10} (\overline{C'} - d) + \log_{10} e \, [(C_i - \overline{C'} + d)/(\overline{C'} - d) - (C_i - \overline{C'} + d)^2/2(\overline{C'} - d)^2 + \ldots]$$

Upon summing over i, the first term in the brackets on the right drops out. Dividing through by n produces equation (7) above.

Of the policy areas considered, the cross elasticities of demand are least in the 20 year endowment market. Therefore under a regime of rational discrimination, the difference between marginal cost and price should be greatest in this area. On similar grounds, one would expect this difference to be considerably smaller for whole life than for 20 pay life contracts. Price competition is most intense in the 40-50 age bracket. Smaller profit margins should therefore prevail on policies issued at age 45 than on those issued at either of the younger ages considered.

The Table 9 values do not fulfill either of these expectations. Indeed, these values appear to be consistent only with the hypothesis that such discrimination as takes place is economically irrational. The whole life and 20 pay life estimates of K fall in the same general range, while the 20 year endowment values are less than two-thirds as large. Furthermore, the estimates tend to increase with age at issue.

It is, of course, true that a variety of magnitudes enter into these estimates of per policy expenses and that all of them are subject to errors of estimation. It is therefore possible that pricing procedures are by and large economically rational, and that the perversity of the estimated K values stems entirely from an accumulation of the errors inherent in the estimating procedures. Three of these possible sources of bias deserve explicit attention.

Table 10 suggests that economies of scale do definitely exist in the industry. On the surface, however, it appears to present conflicting evidence as to the precise magnitude of these economies. The respective coefficients at ages 25, 35, and 45 are approximately $3.50,

Table 10: Coefficients and Standard Errors of Log_{10} of Total Insurance in Force: January 1, 1954

Age at Issue	Whole Life	20 Pay Life	20 Endowment	All Policies
25	-3.56 (1.03)	-3.44 (2.24)	-3.73 (2.23)	-3.80 (0.95)
35	-7.69 (1.60)	-6.50 (2.32)	-6.79 (2.27)	-7.37 (1.18)
45	-8.71 (1.81)	-9.32 (2.54)	-9.68 (2.32)	Not Computed
All Ages	Not Computed	-6.37 (1.41)	-6.67 (1.35)	Not Computed

$7.00, and $9.00. The apparent perversity of these values can be accounted for on several grounds.

For one thing, in allocating per policy expenses to individual policy forms, some sort of average policy size assumption is generally used. Specific information on how these averages are constructed is available for only two firms. Within policy types, the large one varies averages by individual ages at issue. The small one computes only two averages for each policy type --- one based on all adult issues, the other on all juveniles. Up to about age 50, at any rate, the average sale on a given contract form increases with age at issue. Since they gloss over this fact, the small company's pricing procedures are irrational --- they discriminate against the buyers of large policies. It therefore seems safe to say that a comparison between its prices and those of the larger firm would be less favorable on high issue ages than on low. More generally, it is likely that size of firm and complexity of cost allocation techniques are positively related. It is therefore entirely possible that policy size groupings of the sort cited above are widely used by small

companies. If so, the anticipated comparison between prices of the two companies mentioned is likely to apply generally.

Then too, most of the small companies involved in the sample are not licensed in New York. Among non-New York firms, a fairly strong negative correlation exists between commission scales and company size. First year commissions, for example, average 5-15% higher for small than for large firms. Gross premiums increase with age at issue. Percentage differentials in commission rates therefore produce differences in dollar commission outlays which also increase with age at issue.

Thus, the apparent age associated increases in scale economies are both spurious and real. On the one hand, they stem from the fact that small companies tend to use somewhat more irrational cost allocation techniques than large. On the other, however, they are in part accounted for by commission costs --- a quite real age associated increase in the operating costs of small companies.

A difference of only about $5 in the values of "d" used in equation (7) would almost suffice to equate estimates of "K" in Table 8 for ages 35 and 45. That the company size-commission rate interaction was not taken into account in discounting policy values suggest that age group differences in values of "d" do exist. Other factors tend to strengthen this suggestion. Many of the administrative expenses --- both size rebated and per policy --- which were not taken into account in the discount factors do increase with age at issue. For example, a large and growing number of companies do not require medical examinations for small and moderate sized policies issued at young ages. While mortality experience on these contracts is somewhat greater than it would otherwise be, the ad-

ditional benefit payments involved are considerably less than the savings entailed in examination fees. Non-medical issue is a practice normally restricted to ages below 40, however. Then too, since mortality increases with age, the frequency with which death claims must be processed also increases. Thus, both underwriting and settlement costs are generally considerably higher for old than for young policyholders. Biases in the estimating procedures may therefore well account for the age associated increase in K estimates.

It is considerably more difficult to explain away the differences among policy types in these estimates. It is true that the data on which policy size estimates were based are far from being completely reliable; It is therefore conceivable that the apparent irrationality of the differences among policy types is due at least in part to underestimation of the actual average sizes of 20 pay life and particularly of endowment sales. For these respective contract forms, average sales of $3000 and $2500 were assumed for $1000 minimum contracts when the company in question issued no contract with a higher minimum. To produce estimates of K which approach the levels of those associated with the remaining two contract types, the 20 year endowment assumption would have to be increased to approximately $4000. It is quite unlikely that any company achieves an average 20 year endowment sale of this magnitude. Furthermore, the typical endowment sale is smaller than its limited payment life counterpart, not substantially larger as such an alternative estimate would imply.

In summary, confrontation with Table 3's estimates of per policy expenses is sufficient all but to destroy the belief that life insurance companies discriminate in an economically rational fashion among policy

groups as such. A position that rational discrimination takes place among age groups is somewhat less difficult to maintain. But these data hardly offer support for such a contention.

These conclusions are, of course, based only on the relationships among estimates of K for individual age and policy groups. The hypothesis that policies in the whole life area would have lower values of K than those in the remaining areas considered did not stem from characteristics intrinsic to the entire whole life market. It was, rather, based on the facts that most large sales are in this area and that such price competition as exists in the industry appears to be most intense among buyers of large policies. If rational discrimination among policy size groups takes place, it ought to be reflected through over-estimation of per policy expenses and underestimation of those expenses which vary with policy size. It is entirely possible, then, that the apparent perversity of Table8"s policy group comparisons stems entirely from a chain of events of the following nature: 1) Per policy expenses are overestimated by most firms. 2) Individual sales on low premium forms of insurance are sufficiently large so that allocating to them all of the estimated per policy expenses causes no problems. 3) However, practical or altruistic considerations make it necessary to allocate less than a full share of these expenses to high savings contracts. For example, the great appeal of an endowment policy appears to be the fact that you get more money back than you put in and free insurance beisdes. The effective earnings rate on premium payments may be small, but it is positive. A full allocation might, however, actually result in negative earnings rates. That is to say, net premiums --- premiums less dividends --- summed over

the life of the individual contract might be greater than the policy's maturity value. Such a phenomenon would certainly make high savings contracts less marketable.

To determine whether such a state of affairs does in fact exist requires analysis of the absolute levels of the individual estimates of K. As has already been mentioned, little information is available in the public domain on the magnitudes of per policy expenses. Reports of various committees on costs of the Life Office Management Association during the 1947-50 period constitute about the only sources of this sort

Table II: Life Office Management Association Estimates of Short Run Marginal Costs of Per Policy Operations: In 1953 Dollars

	Per Transaction	20 Year Present Value at Age 35
First Year Expenses (Per Policy Paid For)		
Policy issue and records[1]	$ 3.50	$3.50
Underwriting, Medical fees, etc.[1]	11.00	11.00
Recurring Expenses		
Dividend payment[2]	0.20	3.00
Premium billing and collection[3]	0.50	7.40
Death claim inspection and payment[1]	13.40	1.10
Total		$26.00

Sources: Reports of various committees on costs, Proceedings of the ... Life Office Management Association, (1) 1947, pp. 130-171; (2) 1950, pp. 112-139, (3) 1948, pp. 184-210.
Costs were inflated to 1953 dollars through use of Department of Commerce Estimates of average annual wage and salary payments per full time employee by insurance carriers. See US Department of Commerce, Survey of Current Business, National Income Supplement, 1954, pp. 184-210.
The present value of death claim inspection and payment costs was estimated by multiplying the cost of a death claim by the probability that death will occur in 20 years and the (interest) present value of $1 payable in the expected year of death (14 years hence at age 35) if it is known that it will occur in 20 years.

of information. Data on what appear to be the most obviously relevant expense items are summarized in Table 11.

Some of the listed expense items vary to a certain extent with policy size. Notable among these are underwriting and death claim inspection costs. When the cost estimates of each sample company were classified by the size of the average policy written, the following tabulation (in 1946 dollars) was obtained:

Size of Average Policy Written or Death Claim Paid by Company	Costs of Underwriting, Inspection, etc., per Policy Taken	Costs of Death Claim Inspection per Death Claim Paid
Less than $2000	$ 4.33	$ 7.30
$2000-2999	5.29	11.10
$3000-3999	5.62	12.63
$4000 and over	11.05	11.78

On the other hand, it should be emphasized that these data purport to represent only short run marginal costs. The bases on which the costs of these operations were estimated differed in detail. However, most of the estimates exclude allocations for overhead, general administration, pension and other insurance benefits, free lunches, office furniture and equipment, rent, and other expenses which are marginal only in the long run. Thus, Table 11 unquestionably substantially understates the allocations an average cost pricer might reasonably make to individual policies to reflect the expenses of performing the functions listed. The differences between $21.00 and the values tabulated in Table 8 seem entirely too great, however, to reflect only the difference between long run and short run marginal costs. It therefore seems reasonable to assert that such disparities could stem only from either (or both) of two phenomena: 1) that economically rational discrimination is widely practiced, or 2) that a very substantial block of per policy expenses exists in addition to the Table 11 listing.

As for the second of these alternatives, life insurance companies do perform many functions in addition to those reflected by this table and by the cost factors used in discounting policy payment streams. For example, considerable actuarial work is involved in computing premium rates, dividend scales, and cash values. Letters from policyholders must be answered. When these involve applications for policy surrender, cash value loans, or the reinstatement of lapsed policies, requests for changes to higher or lower premium forms of insurance, or for alterations in beneficiaries or in the way in which death benefits are to be paid, special computations must be made and records must be consulted. The costs of performing these additional operations might be regarded as part of general overhead. As such, it would seem most reasonable to allocate them to individual policies on an amount of insurance or premium revenue basis. On the other hand, it might be possible to trace many of them directly to individual policies. Analysis of functional cost records might indicate the relevant basis for allocation to be the policy itself rather than some measure of its size.

In brief, then, the limited information available is not sufficient to sustain a charge that economically rational discriminatory pricing is widely practiced in dealing with policy size groups. However, the available data by no means preclude the possibility that such pricing procedures are followed. And they do very strongly suggest that if discrimination does in fact take place, it is rational, not irrational.

Thus far, consideration has been restricted to policy size as a possible basis for discrimination. One closely related matter deserves explicit attention. What about special policies? There is reason to sup-

Table 12: Coefficients and Standard Errors of the "Special?" and Log_{10} of Policy Size Variables

Age at Issue	Whole Life	20 Pay Life	20 Endowment	All Policies
	Log of Policy Size (in $1000)			
25	-31.88 (3.36)	-49.57 (8.95)	- 5.36 (18.44)	-33.30 (3.39)
35	-35.45 (3.82)	-49.19 (9.24)	- 2.98 (18.96)	-36.32 (3.57)
45	-35.24 (4.35)	- 8.16 (3.45)	-12.10 (19.04)	Not Computed
All Ages	Not Computed	-15.69 (2.93)	- 5.69 (11.12)	Not Computed
	"Is This Policy a Special?"			
25	- 5.74 (2.10)	2.82 (5.56)	--- ---	- 4.86 (2.17)
35	- 6.70 (2.39)	3.13 (5.82)	--- ---	- 5.86 (2.28)
45	- 8.32 (2.72)	-16.59 (5.06)	--- ---	Not Computed
All Ages	Not Computed	-12.05 (2.95)	--- ---	Not Computed

pose that the pressures to discriminate in favor of them would be particularly strong. Do companies succumb to these pressures?

The relationship postulated in the regression analysis was:

Policy Expenses Per $M

= Constant - A Log of Policy Size + B "Special?" + Error (8)

Under a regime of average cost pricing, however, the following linear relationship would exist:

Log (Policy Expenses per $M)

= Log (Total per Policy Expenses) - Log (Policy Size)

Thus, is such a regime does prevail, the relationship between policy expenses per $1000 and the log of policy size ought to be curvilinear. More specifically, it ought to have a negative slope and a positive second derivative. "A," the coefficient of the Lcg (policy size) in equation 8, ought to bear a close relationship to the slope of $C_i = K/X_i$ for an X_i value equal to that of the average size of the non-special contracts in the policy sample. For whole life and 20 pay life contracts respectively, these average sizes were approximately $4000 and $3000. Thus, one would expect smaller values of "A" for whole life than for 20 pay life policies if average cost pricing prevails. Such a relationship does in fact exist.

If the relationship between policy expenses per $1000 and the log of policy size is curvilinear, the error term in equation (8) --- ignoring the "special?" variable for the moment--- should be correlated with policy size. It should be positive for both small and large policies and negative for those of medium size. Therefore, since specials are, by definition, large contracts, the coefficient of the special variable ought to be positive. That such is not the case for whole life policies may reflect either of two alternatives. On the one hand, this result could stem from a biased estimating procedure --- one which substantially underestimates the sizesof large relative to small policies. On the other, it could simply mean that companies do discriminate in favor of specials --- i.e., in an economically rational fashion.

The average of the estimated average sizes of the whole life specials sampled was $12,000. For non-specials, it was $4200. There is in fact some reason to suppose that the methods used in arriving at these estimatesboth understate the true size of the former group of policies and

overstate that of the latter. It is worth recalling in this regard the arguments presented by one of the actuaries interviewed concerning the reasons for his company's failure to issue a 20 pay life special. He regarded the logical minimum for such a contract, if issued, to be $5000. Everyone who would otherwise have bought a $3500 or larger 20 PL would, he felt, up the size of his purchase to $5000 to take advantage of the lower rate. If buyers do act in this way, one might reasonably suppose the average size of a non-special to be quite close to the minimum amount for which it is to be issued. The average size of a special undoubtedly suffers for the same reason. Short of the maximum amount a company will write on one life, however, there is no upper limit to the size of these contracts. Thus, estimates derived from an assumed negative exponential distribution of policy sizes may well underestimate the actual average sizes of specials.

If a company follows the average cost ethic in its pricing, differences in its rates per thousand on any two whole life contracts should be a result only of differences in the ratio of "K" to average policy size, differences in commission rates, and differences in mortality. Ignoring these latter two sources of possible rate variations, then,

$$C_{ns} - C_s = K/X_{ns} - K/X_s \qquad (9)$$

where "ns" and "s" refer respectively to non-special and special.

Depending primarily on the proportion of the dependent variable which was assumed to depend on policy size, estimates of "K" ranged roughly between $100 and $200. For a $4200 policy, these extremes imply alternative C_{ns} values of $23.80 and $47.60. For a $12,000 policy, the alternative C_s's are $7.90 and $15.80. The respective $C_{ns} - C_s$ differences, then, are $15.90 and $31.80. The coefficients of the "special?" variable

imply the prevailing differences actually to be at least \$5-10 greater than these, however. Assuming prices to be nondiscriminatory, such differences could stem only from the existence of greater special sales sizes, than those assumed, smaller non-special sizes, or, of course, both.

Table 13 suggests alternative average policy size assumptions which would have reduced the coefficient of the "special?" variable approximately to zero. For each combination of K and the value of this coefficient considered, three pairs of average policy size assumptions are tabulated. The "low" entry involves the assumption that the apparent discrimination in favor of specials is actually only a reflection of systematic over-estimation of the average sizes of non-special policies. That is to say, the X_{ns} entry under K = \$100 and "special?" coefficient = \$5 is that X_{ns} such that

$$C_{ns} = \$100/X_{ns} = \$23.80 + \$5.00$$

Underlying the high entry, on the other hand, is the possibility of a downward bias in the assumed average special size. Finally, the "medium" entry involves the assumption that both sorts of bias were involved in the estimating procedures. In the example cited above, the "medium" entry for X_{ns} is that X_{ns} such that

$$C_{ns} = \$100/X_{ns} = \$23.50 + \$2.50$$

The X_s entry assumes that the "true" C_s is \$7.90 - \$2.50.

It is almost impossible to conceive of any company --- even one with a very elite clientele --- averaging \$34,500 on a \$10,000 minimum special. Even an \$18,500 average sale on such a contract would be unusual. The number of companies which now issue specials with minima higher than \$10,000 is quite small, and it was even smaller in 1954. However, relatively small absolute changes in assumed X_{ns} values produce quite sub-

Table 13: Policy Size Assumptions Which Would Have Reduced the "Special?" Variable Coefficient to a Value of Approximately Zero[1]

Special Variable Coefficient		"K" = $100		"K" = $200	
		X_{ns}	X_s	X_{ns}	X_s
$5.00	low	$3500	$12,600	$3800	$12,600
	medium	3800	18500	4000	15,000
	high	4200	34,500	4200	18,500
$10.00	low	$3000	$12,600	$3500	$12,600
	medium	3500	34,500	3800	18,500
	high	4200	---	4200	34,500

1. See text above for explanation of column entries.

stantial changes in C_{ns}. An average issue size on non-specials of $3800 or even $3500 is conceivable although not too likely.

The average cost pricing ethic, it should be emphasized, requires that coefficients of the "special?" variable be positive. Table 13's policy size estimates would be sufficient only to reduce them to approximately zero. To produce positive coefficients would require X_{ns} values even smaller and/or X_s values even larger than those listed. Since even the listed values are only conceivable --- not likely --- it seems reasonably safe to say that discrimination in favor of specials --- rational discrimination --- is a prevalent practice in the industry.

Discrimination by Policy Duration: To repeat, the "tilt index" was developed by computing the present value of anticipated payments by a policyholder less his receipts for 10 and 20 years. The ratio of the 10 to the 20 year present value constitutes the index. Values of this variable are quite high --- the average for all policies is about 70%. Since a very large part of the operating expenses entailed in servicing a policy occur during the first policy year, however, high values are to be expected.

Table 14: Means and Standard Deviations of the "Tilt Index"

Age at Issue	Whole Life Mean	Whole Life S. D.	20 Pay Life Mean	20 Pay Life S. D.	20 Endowment Mean	20 Endowment S. D.
	All Policies					
25	72.4%	8.8%	69.4%	6.4%	70.4%	8.8%
35	72.5	8.3	70.8	6.4	72.0	8.1
45	71.4	7.6	72.1	5.7	73.5	7.1
	Participating Policies					
25	76.0%	9.0%	73.6%	6.4%	74.5%	9.1%
35	76.1	*	74.6	*	75.6	*
45	74.4	*	75.3	*	76.4	*
	Nonparticipating Policies					
25	67.3%	3.3%	65.3%	2.3%	64.8%	3.9%
35	67.5	*	67.0	*	66.9	*
45	67.2	*	68.9	*	69.7	*

Dividends almost invariably increase with policy duration. Thus, annual net outlays on participating contracts decrease as time progresses. Outlays on nonpar policies are constant through time, however. It is therefore not surprising that the tilt index is higher for the former than for the latter group of contracts. That the difference is not substantially greater is largely attributable to the fact that participating

policy nonforfeiture values are generally greater than those on their non-par counterparts. The difference in surrender values is particularly great during early policy years.

The procedures used to discount these payment streams do not take policy lapses into account. It would therefore seem reasonable to expect an increase in the value of the tilt index --- i.e., increases in the proportion of expenses which are allocated during the first ten years of a policy's life --- to be associated with a decrease in the value of the dependent variable. This expectation is borne out, particularly for whole life and 20 year endowment contracts. In each of the nine policy type and age group regression equations, the coefficient of this variable is both negative and substantially greater than its standard error.

The dollar magnitudes on which the tilt index is based increase with increases in premium outlays. A 1% increase in the value of the index for a whole life policy therefore implies a smaller dollar shift from the second to the first 10 years in residual cost allocations than does a similar percentage shift in a 20 year endowment policy's index value. Similarly, the dollar magnitudes associated with a 1% change in

Table 15: Coefficients and Standard Errors of the "Tilt Index"

Age at Issue	Whole Life Policies		20 Pay Lifes		20 Year Endowments	
	Coef.	S. E.	Coef.	S. E.	Coef.	S. E.
25 (all)	-34.03	11.44	-71.50	28.11	-96.72	18.41
(par)[1]	-21.07	12.17	-23.58	28.03	-68.11	21.98
(NP)[1]	-36.99	41.33	13.35	31.92	-145.36	29.82
35	-33.58	12.53	-39.43	27.04	-86.44	20.14
45	-124.64	21.16	-61.28	35.16	-86.77	22.89

1. Developed from an equation which included only policy size, company size, and the tilt index.

Table 16: Correlation Coefficients Between the "Tilt Index," the Log of Estimated Policy Size, and "Is This Policy a Special?"

Age at Issue	Correlation Coefficients Between the "Tilt Index" and: Log (Estimated Pol. Size)		"Is This Policy a Special?"	
25 (all)	Whole Life	20 Pay Life	Whole Life	20 Pay Life
25 (all)	0.26	0.06	0.23	0.12
(par)	0.26	-0.01	0.22	0.26
(nonpar)	0.47	0.35	0.42	0.30
35	0.23	0.08	0.19	0.13
45	0.18	0.20	0.16	0.17

This is true for both whole life and, to a somewhat lesser extent, 20 pay life contracts.

That this practice --- the tilting of dividend scales --- serves to improve net cost comparisons has already been well established. Most companies both recognize this fact and act upon it on occasion. The pressures to improve net costs are particularly strong for large contracts. That companies might meet these pressures by discriminating even more heavily against early lapsers of specials than they do against those who terminate smaller contracts is therefore quite understandable.

To repeat, differentials in the intensity of net cost competition among policy size groups appear to have produced corresponding differentials in the degree to which tilting is practiced. There is every reason to suppose that the postwar era has seen a steady growth in this form of competition. It therefore seems reasonable to expect that the degree to which tilting is practiced would have increased over time. The increase in the number of companies which pay termination dividends is only one of the available indications suggesting that the expected phenomenon has in

fact taken place.

Even under a system of average cost pricing, the tilt index should have increased during the decade following World War II. Two factors account for this. Operating costs --- particularly labor costs --- have increased steadily since 1946. Since labor intensive operations are concentrated in early policy years, the proportion to total expenses of those costs which are incurred during the first ten policy years has increased. In addition, between 1948 and 1953, average earnings rates in the industry increased by about 0.25%. For participating policies, this phenomenon would imply an increase in the excess interest components of dividend formulae. Since reserves and cash values increase with policy duration, these increased earnings rates would imply relatively greater increases in dividends at higher than at lower policy durations. As for nonparticipating policies, the post-war increase in earnings rates has been associated with increases in the rates at which policy liabilities are valued. The ratio of the tenth to the twentieth year policy reserve decreases as valuation rates increase.

Interest rates, operating expenses, and competitive pressures all, to repeat, have increased during the postwar era. There is therefore strong reason to suppose that a fairly strong positive relationship would exist between the tilt index and the earnings rate variable.[1] The

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1. The simple correlation coefficient between the tilt index and the earnings rate variable --- or, indeed, any of the other company variables --- must be viewed with a certain amount of caution. Expenses during early policy years are particularly great for companies which are not licensed to do business in New York. The first year commissions paid by them are generally substantially higher than those granted by their New York licensed counterparts. It would therefore seem reasonable on average cost pricing grounds to expect the tilt index to have somewhat smaller values for New York than for non-New York firms. Such a relationship does appear to exist.

Table 17: Correlation Coefficients between the "Tilt Index," Whether a Company Operates in New York, and Company Earnings Rates for Policies Issued at Age 25

	Correlation Between "Tilt Index" and "New York?"		Partial Correlation Between "Tilt Index" and Earnings Rate[1]	
Policy Type	Participating	Nonpar	Participating	Nonpar
Whole Life	-0.30	-0.09	-0.03	0.16
20 Pay Life	-0.45	-0.38	+0.05	0.13
20 Endowment	-0.47	-0.46	+0.14	0.23

1. Holding "New York?" constant.

policy data do not appear to reflect this tendency, however, at least not among participating policies. Indeed, among par whole life policies --- the area in which this tendency would be expected to be most strongly felt --- a weak negative correlation exists.

Other Regression Variables: As has already been noted, economies of scale do appear to exist in the industry. Most of its smaller firms are not licensed in New York; most of its largest ones are. On size grounds alone, then, one would expect the average price to consumers to be lower for New York than for non-New York concerns. In addition, regulation by the New York Department is unquestionably more strict than that by insurance commissions in other states.

Table 18: Regression Coefficients and Standard Errors of the "Does this Company Company Operate in New York?" Variable

Age at Issue	Whole Life	20 Pay Life	20 Endowment	All Policies
25	-1.95 (1.92)	-5.70 (3.21)	-7.11 (3.14)	-3.64 (1.54)
35	-3.19 (2.12)	-6.08 (3.28)	-7.42 (3.24)	-3.97 (1.57)
45	-8.40 (2.42)	-4.30 (3.74)	-8.14 (3.28)	Not Computed
All Ages	Not Computed	-3.47 (1.98)	-7.12 (1.90)	Not Computed

In particular, Section 213 of the New York law strictly limits commission payments to agents. The effects of this limitation are not at all clear on purely a priori grounds, however. On the one hand, it unquestionably forces New York firms to incur lower direct commission costs. On the other, it enables non-New York firms to profit by honoring the "why pay to train an agent when someone else will do it for you?" dictum. Their direct outlays for first year and renewal commissions, and other emoluments specifically proscribed by the New York law are unquestionably higher than the comparable direct costs of New York firms. It seems safe

to saythat this disadvantage is at least partially offset by the lower costs of recruiting, training, and financing agents which stem from these higher payments. Just how large these offsetting benefits are is suggested by a comparison of rough estimates of a typical New York company's cost advantage (if it is such) on first year commission payments with coefficients of the "New York?" variable. The coefficients of this variable are uniformly negative. Except on whole life policies issued at age 45 and to a lesser extent on 20 year endowments, they very closely approximate these first year commission savings. Thus, the price advantage of New York firms is nowhere nearly as great as a simple comparison of direct payments to established agents might indicate.

Table 19: Approximate Differences in the Commission Costs of New York and Non-New York Firms[1]

Policy Type	Approximate Average Commission Rates		Approximate Gross Premiums			Difference in Commission Rates Times Approximate Premium		
	NY	non-NY	Age 25	Age 35	Age 45	Age 25	Age 35	Age 45
W. L.	50%	63%	$16.80	$23.60	$34.50	$2.18	$3.07	$4.48
20 P.L.	45	60	27.30	34.80	44.60	4.17	5.22	6.70
20 E.	33	45	46.40	48.30	52.10	5.56	5.80	6.25

1. Assuming CSO 2.5% net level premiums and a 15% expense loading.

The differences between Tables 18 and 19 may well be accounted for by errors in the assumed commission rates. It is nevertheless worth noting that accepting the differences between these two tables at face value leads to conflicting conclusions about the comparative degrees of rationality entailed in the pricing procedures employed by New York and non-New York companies. To discriminate in favor of older buyers of whole

life policies is quite in accord with the canons of rationality in pricing. Discrimination in favor of 20 year endowment buyers is most assuredly not, however.

High rates of growth necessitate or are brought about by high rates of accumulating assets --- accounting machines, desks, trained agents, and so forth --- which arenot admitted to be such by state insurance laws. Hence, the greater the rate at which a company is growing, the smaller will be its annual additions to surplus as defined in these laws, regardless of the efficiency at which it operates. Over the long run, dividend payments are effectively limited by these annual contributions to surplus. Thus, to the extent that effective price competition exists in the industry, high growth rates would appear to sow the seeds of their own destruction.

That genuine price competition is not a dominant force in the industry should come as no surprise at this point in the discussion. Table 20 amply illustrates this fact. High costs do not appear to deter growth. On the average, each 1% increase in a company's growth rate is associated with approximately a 25¢ increase in the level of its prices.

High growth rates are by no means inconsistent with profit maximization. Quite to the contrary, growth is profitable. This being the

Table 20: Coefficients and Standard Errors of the Growth Rate Variable

Age at Issue	Whole Life	20 Pay Life	20 Endowment	All Policies
25	$29.40 (10.22)	$27.20 (15.38)	$25.64 (15.44)	$28.14 (7.94)
35	17.18 (11.79)	27.20 (15.76)	25.95 (15.68)	22.60 (8.32)
45	18.64 (13.45)	22.02 (17.94)	30.20 (16.32)	Not Computed
All Ages	Not Computed	27.48 (9.74)	25.87 (9.35)	Not Computed

Table 21: Partial Correlation Coefficients Between the "Tilt Index" and the Growth Rate Variable

Age at Issue	Whole Life	20 Pay Life	20 Endowment	All Policies
25	-0.09	-0.16	-0.07	-0.11
35	-0.12	-0.14	-0.07	-0.13
45	-0.15	-0.21	-0.11	Not Computed
All Ages	Not Computed	-0.17	-0.08	Not Computed

case, it would seem reasonable to expect their price policies to be economically somewhat more rational than those of their slow growing counterparts. No evidence supporting this expectation is found in the policy data, however. The growth rate coefficients do not differ significantly among policy type or age groups. Furthermore, companies with high growth rates appear, if anything, to tilt dividend scales to a somewhat lesser degree than those with low growth rates.

Summary and Conclusions: From at least one point of view, the regression study discussed in this chapter produced quite gratifying results. Nine independent variables and the dependent variable were chosen with sufficient care to yield total correlation coefficients of 0.8-0.9. Indeed, the record is even better than that. Four of these variables alone --- company size, estimated policy size, the "tilt index," and "par policy?" --- would have yielded total correlation coefficients of better than o.85 in each of the nine policy type-age groups.

In broad outline, furthermore, almost all of the regredsion coefficients make sense. Economies --- not diseconomies --- of scale appear to exist in the industry. Par policies appear to be cheaper than non-par. Increases in dividend scale tilting appear to result in reduced values of the dependent variable. Large policies are less expensive than small. All in all, viewed purely as an exercise in curve fitting, this is a considerably above average performance.

The primary goal of this analysis was not, however, the generation of high correlation coefficients. Rather, the regression analysis was aimed primarily at testing a number of hypotheses dealing with life insurance company pricing procedures. Stated as a question, the most important of these was: Are industry pricing procedures economically rational? More specifically, do those who set prices in the industry discriminate in favor of those policy type, size, and age groups where cross-elasticities of demand are highest?

The answers provided by the regression equations are at best ambiguous and at worst contradictory. It does seems safe to say that the profit margins on whole life and 20 pay life specials tend to be lower

than those prevailing on other policies in these areas. If the average cost pricing ethic does in fact dominate pricing decisions, the simple geometry of the regression equations would require positive coefficients for the "special?" variable. However, the values of these coefficients are significantly negative for whole life contracts and close to zero for 20 pay lifes. In addition, prevailing values of per policy expenses were approximated by manipulation of the dependent variable values. These estimates are somewhat higher than the average cost pricing ethic and the limited available cost information would suggest to be reasonable. Contrary to expectations based on the average cost pricing principle, furthermore, values of the tilt index increase rather than decrease with policy size. Dividend scale tilting does, of course, involve discrimination among policy durations rather than among policy types. Since this practice does improve net cost comparisons, however, the differential use of it does represent at least quasi-rational economic behavior.

On the other hand, the implied values of expenses allocated on a per policy basis are highest in those policy and age groups where cross elasticities of demand are greatest. The most successful companies --- those which are growing most rapidly --- do not, furthermore, appear to resort to those forms of discrimination dealt with in the regression analysis to any greater degree than their slower growing counterparts. In addition, the degree to which dividend scale tilting is practiced does not seem to have increased during the last decade despite the fact that net cost competitionhas intensified considerably during that period.

Thus, to repeat, the regression analysis provides answers to the questions raised above which are ambiguous at best. It most assuredly does

not serve as justification for assertions that profit maximizing criteria are the sole determinants of pricing procedures or that the most successful concerns are those which behave most rationally.

Why should this be the case? The most obvious answer is that the economic pressures normally relied upon to force firms to behave rationally are weak in the life insurance industry. The commonly used price comparison measures are several steps removed from what a rational man would ideally like to base his purchasing decision on. Even in those markets where quasi-price competition is most intense, furthermore, price comparisons are a factor in only a minority of sales. Thus, a considerable element of monopoly power (as Chamberlain uses the term) is inherent in the operations of any life insurance company. Failure is therefore <u>not</u> the price of a moderate degree of irrationality in the industry.

That they need not be entirely rational does not, however, explain why industry executives might choose to behave irrationally in allocating expenses among policy type, size, and age groups. Their pricing procedures do, after all, appear to be largely rational in the two areas considered at length in Chapter 6. That is to say, dividend scale tilting is widely --- perhaps universally practiced, and many if not most firms appear to establish higher profit margins on peripheral benefits than on the basic contracts to which they are attached.

There is at least some evidence to support the contention that industry executives do in fact allocate expenses irrationally among policy type and age groups. As was noted in Chapter 6, the views of the one actuary who has taken a forthright stand in favor of marginal cost-marginal revenue approaches to pricing problems have met with considerably

more censure than praise in the industry. That this censure was directed more at his candor than at his views themselves is possible but unlikely. That discriminating among policy type, size, and age groups is not only unethical but poor business procedure to boot appears to be a widely held view. There is a plausible reason why this view might be held. The types of discrimination discussed in this and the preceding chapter do have basic qualitative differences. Discriminating against early lapsers and, to a lesser extent, against purchasers of peripheral benefits is both economically rational and conservative to boot. At the heart of the former sort of discrimination is holding in reserve funds which are available for distribution to policyholders. Although there is no reason why this need be the case, discrimination of the second sort has followed precisely the same sort of historical pattern. Discrimination among policy size, type, and age groups, however, almost inevitably involves setting prices below "average costs" for some policies. More accurately, it involves setting prices below those required to yield the contributions to overhead and surplus dictated by the cost allocation standards in use.

That such procedures would normally be economically rational is clear. Economies of scale do exist in the industry. Excess capacity also appears frequently to occur. Long run marginal costs are therefore normally below long run average costs at current operating rates. The importance of this fact in determining an optimal price policy may well be lost, however. Overhead does somehow have to be allocated to individual contracts. It is perhaps only natural to expect the method chosen for allocation to become sacrosanct --- to be accepted as <u>the</u> way in which these costs arise rather than simply as a convenient way of distributing them. If

this is in fact the prevailing state of affairs, the life insurance industry would by no means be the only one which operates in such a fashion.