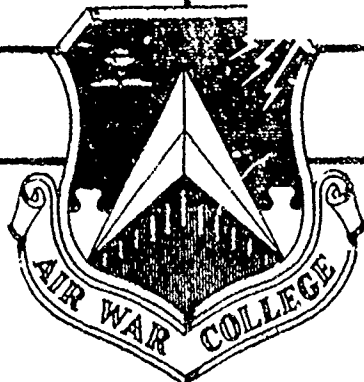


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AIR WAR COLLEGE

RESEARCH REPORT

THE SURVIVOR BENEFIT PLAN -- A MILITARY RETIREE'S DECISION

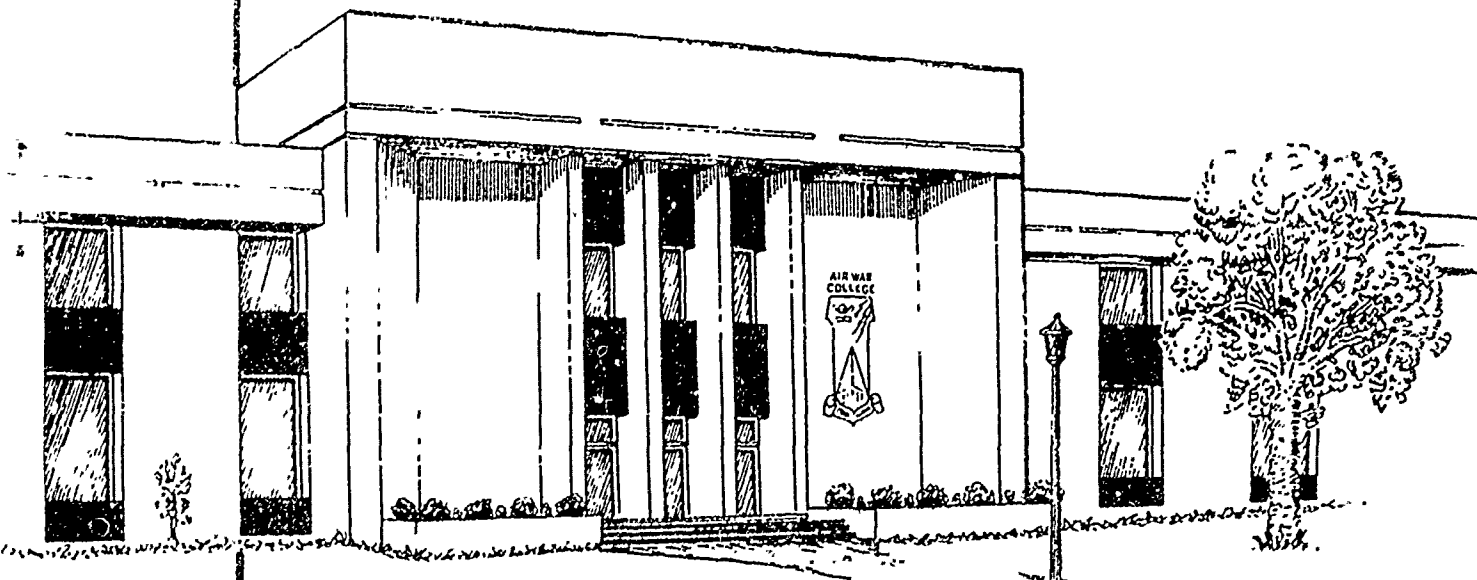
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LIEUTENANT COLONEL ROBERT E. LUNDIN

1990



AIR UNIVERSITY
UNITED STATES AIR FORCE
MAXWELL AIR FORCE BASE, ALABAMA

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EXECUTIVE SUMMARY

TITLE: The Survivor Benefit Plan--A Military Retiree's Decision. AUTHOR: Robert E. Lundin, Lieutenant Colonel, USAF

The Survivor Benefit Plan (SBP) is an often maligned, misunderstood program of great importance to all military retirees. The author endeavors to insure his readers understand financial planning and estate planning basics in order to fully comprehend the SBP's benefits. The 1 Mar 90 changes to the SBP cost structure (6.5% vs. the old 2.5%/10% calculation method) are incorporated into the study. The central theme is that SBP should be used as a foundation for financial planning, and that other alternatives such as insurance and investments should not compete with, but should supplement SBP.

BIOGRAPHICAL SKETCH

Lt Colonel Robert E. Lundin (M.A., Chapman College, B.A., Washington State University) is a career aircraft maintenance officer who has served also in intercontinental ballistic missile operations and international security assistance program management in the Yemen Arab Republic. His assignments have taken him to Illinois, California, Montana, Alabama, Georgia, Germany and North Yemen, and he has travelled throughout the USA, Europe, the Middle East and the Pacific Rim. He recently commanded a Strategic Air Command air refueling wing maintenance squadron that earned the Air Force Outstanding Unit Award. His military decorations include the Meritorious Service Medal with one Oak Leaf Cluster, the Joint Service Commendation Medal, the Air Force Commendation Medal with one Oak Leaf Cluster and the Combat Readiness Medal. In the past several years, Colonel Lundin has devoted much time to the study of financial management as a practical hobby and continuation of his formal education in business administration. He is a graduate of the Air Command and Staff College and Air War College, Class of 1990.

TABLE OF CONTENTS

DISCLAIMER.	ii
EXECUTIVE SUMMARY	iii
BIOGRAPHICAL SKETCH	iv
Chapter	
I. INTRODUCTION.	1
II. WHAT EXACTLY IS THE SURVIVOR BENEFIT PLAN?.	4
III. ALTERNATIVES TO SBP	10
IV. ASSUMPTIONS: THE KEY TO FINANCIAL ANALYSIS	20
V. BASICS OF ESTATE PLANNING	36
VI. COMPARATIVE ANALYSIS OF SBP	51
VII. TRYING TO KEEP IT SIMPLE--A GUIDE FOR SBP DECISION MAKING	60
VIII. CONCLUSIONS	62
BIBLIOGRAPHY/LIST OF REFERENCES	64

CHAPTER I

INTRODUCTION

I selected the topic of the Survivor Benefit Plan (SBP) for my Defense Analytical Study because I hoped to shed some light on a retirement decision situation that causes concern and confusion for a great many military personnel.

That retirement decision situation is simply: Should I buy into SBP or not? What is my most cost effective solution? Is it a good deal or not? In discussing this issue with many servicemen, the program is not understood and the predominant view by prospective retirees is that SBP is not a good deal. The predominant viewpoint is that SBP is too expensive and that SBP costs would be better spent on an alternative program of investments and commercial life insurance.

My research for this study underscored my personal concerns regarding this topic--that the information available on SBP is, in fact, confusing. Articles on SBP are either too simple to draw a credible conclusion, or overwhelming with a bewildering array of data and charts too difficult to follow.

Additionally, a 1 March 1990 change to SBP lowered the cost and rendered other articles obsolete. This study will reflect these changes and will be referred to as the NEW system.

My intent is to give the reader an indepth appreciation of

SBP and the commercial alternatives in order to make an informed, correct decision regarding SBP and their retirement future. The indepth appreciation will come through a detailed look at the program, an examination of the variable economic assumptions, the mechanical basics of developing a family estate plan, and comparisons of a computerized SBP program with some investment alternatives. The intent is not to make the reader a stock broker or professional family financial planner, but to fully understand SBP and its ability to provide income for a deceased retired member's family.

Along with the indepth analysis, I will attempt to simplify the decision making process by focusing on the highlights of SBP and the commercial alternatives. This is not an easy task because every individual has a unique personal financial situation that directly affects an SBP "GO-NO-GO" decision.

Another major goal of this paper will be to help the reader get their financial "apples and oranges" separated. A major factor that affects understanding of SBP, and ultimately a retiree's decision to participate or not, is faulty comparison of SBP benefits to other alternatives in family financial planning.

To save the reader's time, this study is organized into chapters that can be bypassed depending upon the reader's knowledge. Chapter overviews are as follows:

Chapter II--What Is SBP? SBP background, mechanics of establishing benefit amounts, old and NEW systems of calculating the benefit, and a discussion of SBP strong and weak points.

Chapter III--Alternatives to SBP: Back to Financial Basics. A basic review of financial instruments such as term, whole and universal life insurance, annuities, investments and risk, etc.

Chapter IV--Assumptions: The Key to Financial Analysis. Certain key assumptions will be examined such as interest rates, inflation rates, life expectancies, etc.

Chapter V--Basics of Estate Planning. Unless you are a professional estate planner, this is a good primer on what you need to do to safeguard your family's financial future. This chapter is key to understanding how to determine what a family's financial needs are, and how various financial alternatives fill those needs.

Chapter VI--Comparative Analysis of SBP. This chapter discusses a computer programmed analysis of SBP benefits and some alternative plans.

Chapter VII--Trying to Keep It Simple--A Guide for SBP Decision Making. Identification of some key elements that should strongly influence the retiree's yes/no decision on SBP.

Chapter VIII--In Conclusion. The author concludes with some philosophical approaches to SBP and financial planning.

CHAPTER II

WHAT EXACTLY IS THE SURVIVOR BENEFIT PLAN?

The Survivor Benefit Plan (SBP) was created by the 92nd Congress on 21 September 1972 (Public Law 92-245) as an improvement to the Retired Serviceman's Family Protection Plan which it replaced. SBP was designed to continue the tradition of providing a military retiree's survivors with an ability to continue receiving a percentage of the retired member's pension after his/her death. Retirees are automatically enrolled in SBP unless their spouse signs a written consent declining SBP prior to retirement--a reminder of the SBP law's intent to protect the spouse and family of the retiree.

The primary beneficiary of SBP is the spouse. However, at a slight additional cost, dependent children (up to age 18 or 22 if in college, or unlimited if permanently handicapped), an ex-spouse, or someone with an insurable interest, such as a close relative or business partner, can be the recipient. (13:3)

The government intended SBP to be self supporting, assuming 75 percent of retiring servicemen would participate. However, only 57 percent (48 percent of enlisted, 69 percent of officers) have participated, resulting in funding shortfalls. (12:1) The shortfall has resulted in government subsidies of

approximately 28 percent to SBP, which is a direct benefit to those enrolled in SBP. (5:8)

SBP provides the spouse with a monthly income that continues throughout their lifetime. The amount SBP pays is based on a base amount selected by the retiree. The minimum base is \$300. The maximum base is 100 percent of retired pay. This base amount represents the amount of retired pay covered by the SBP. The SBP pays 55 percent of the base to the designated survivor. The benefit is calculated as follows:

RETIRED PAY: \$2,000

MINIMUM SBP BASE AMOUNT: \$300

MAXIMUM: 100% X \$2,000 = \$2,000

MINIMUM SBP BENEFIT: 55% X \$300 = \$165

MAXIMUM: 55% X \$2,000 = \$1,100

Unfortunately, the SBP benefit is reduced when the spouse turns age 62 and starts receiving social security payments. This social security "offset" reduces the benefit to only 35 percent of retired pay. Other government benefits after age 62 added to the reduced SBP benefit should make up for the loss, however. For purposes of this analysis, however, it should be remembered that those added benefits were already "paid for" through social security taxes during the spouse's earning years. Simply put, you are paying the same SBP monthly "premium" for a 35 percent-of-pay benefit instead of 55

percent. The maximum benefit after age 62 is therefore calculated as follows: $35\% \times \$2,000 = \700 .

Fortunately, the SBP benefit is inflation proofed. When retired pay is increased, because of inflation-driven changes to the Consumer Price Index (CPI) and Cost of Living Allowance (COLA), SBP benefits are increased since they are a percentage of retired pay. (13:4)

What does SBP cost? SBP is a type of insurance/annuity and the cost is relative to the benefit. Effective 1 March 1990, the SBP cost structure was changed by presidential authority in the 1990 Defense Appropriations Bill. Because persons on active duty prior to that date can elect either the new or old systems of cost calculation when they retire, both will be illustrated. The differences must be understood. The OLD method cost 2.5 percent of the first \$349 and 10 percent of the remaining base of retired pay. (NOTE: Although \$300 is the minimum base you can elect under SBP, \$349 is the maximum amount that you pay only 2.5 percent. The \$49 difference reflects adjustments due to pay raises that have occurred since SBP began.) The old method is calculated in the following manner.

RETIRE PAY BASE: \$2,000

$2.5\% \times \$349 = \8.73

$10\% \times \$1,651 (\$2,000 \text{ less the 1st } \$349) = \$165.10$

TOTAL SBP COST FOR MAXIMUM COVERAGE: \$173.83

(NOTE: This report focuses on taking full SBP benefits. However, if a retiree plans to take less than full SBP, he/she should always take the first \$349 available at the low 2.5 percent rate, because it is unquestionably a superior benefit. For a monthly cost of only \$8.73, or \$6.29 after taxes at the 28 percent income tax bracket, a retiree's survivors would receive a \$192 monthly SBP benefit at the 55 percent level.)

The NEW method is a flat 6.5 percent of the base and is computed as follows:

$$6.5\% \times \$2,000 = \$130 \text{ (a significant improvement)}$$

Because current retirees have the choice to select either the old or new method of SBP calculation, the decision point is at \$720. That is, if you elect a base of less than \$720, choose the old 2.5/10 percent system. For any amount greater than \$720, the new 6.5 percent system will be cheaper. (2:4)

Now that the basics of SBP have been explained, a review of the pros and cons is in order. The following are SBP advantages:

1. No evidence of insurability (physical health) is required.
2. Benefits are tied to retired pay increases (inflation proof).
3. SBP costs are not subject to federal (or most states) income tax. That is, the real after-tax cost is less depending upon your tax bracket.
4. Benefits are not subject to federal (or most states) estate

and inheritance taxes.

5. Benefits are payable for life of beneficiary as long as they do not remarry before age 55. Also, if they do remarry, and it is subsequently terminated, SBP payments can be restarted.

6. If not married at retirement and retiree subsequently marries, SBP can be started if initiated within one year of marriage.

7. SBP cost deduction stops when there is no eligible beneficiary (e.g. death of spouse or divorce).

8. SBP can restart with remarriage after a one-year waiting period.

9. If SBP is started at an older age, near 60 or older, the cost to benefit received is clearly superior when compared with life insurance.

The SBP disadvantages are as follows:

1. If the retiree outlives the spouse, there is no survivor, and all the SBP premiums paid are "lost," unless children or other insurable interests were specified at extra cost.

2. SBP benefits go only to the spouse or named children/insurable interests. There is no residual estate after retiree's death or spouse's remarriage. In other words: if your wife remains a widow on into old age, you will receive an outstanding benefit. If she should remarry after your death, the SBP benefit will stop. In that case, your SBP cost

to benefit received was clearly inferior to a commercial life insurance alternative.

3. Benefit is reduced from 55 percent to 35 percent of selected base amount when the spouse turns 62 years old because of the "social security offset." However, it is important to note that other social security benefits will keep the spouse's total government income back up at the 55 percent level or greater.

4. SBP is not flexible. Irrevocable "lock-ins" fix the benefit, cost and beneficiary. The retiree must live with whatever he signs up for on the date of retirement.

5. Monthly benefit is subject to federal (and some states) income tax.

6. Preferred risks (healthy non-smokers) subsidize uninsurable risks. In other words, if you are in excellent health, your risk of death is less and you should be able to buy insurance at a significantly cheaper rate than an individual who is on their death bed. SBP treats both the same. Therefore, in effect, SBP charges the healthy preferred risks more to compensate (subsidize) for the poor risks.

7. SBP costs, benefits and provisions are subject to revision by legislative and administrative action. This could adversely affect any assumptions you make when planning your retirement future as to participating in SBP.

CHAPTER III

ALTERNATIVES TO SBP

SBP is a form of group (military retirees) annuity that pays a specified amount for a specified period of time. The source of funds for the payments is a larger sum that is "invested." The U.S. government provides the larger sum for this group annuity as individual retirees contribute monthly premiums. Instead of a fixed amount and time period, the "specified" benefits SBP provides are an ever increasing (CPI adjusted) monthly benefit and a lifetime benefit as long as the spouse remains single.

An annuity has a basic function of systematically liquidating a large source of funds at a contracted interest rate for a contracted period of time (NOTE: the mechanics and present value of an annuity calculations are discussed in detail in Chapter V, Basics of Estate Planning). In essence, an annuity is a "reverse mortgage." That is, in a mortgage payoff, you pay almost all interest at first, with very little principle. In the latter payments, most is principle with little interest. With an annuity, the bank/financial institution is the payer and the annuitant is the collector, taking back their lump sum of money just like the bank collects

a mortgage. It is mostly interest at first, then progressively more principle and less interest until the balance is zero. There are many different types of annuity contracts. Some pay for a lifetime, others for only a set period of time. For the purposes of this study, an annuity will represent a lump sum of money that purchases an annuity contract at an assumed rate of return.

So where does a beneficiary get a lump sum of money to start annuity monthly payments? The answer is life insurance.

For many who have had dealings with life insurance salesmen, the result is confusion. Confusion over the bewildering arrays of graphs, charts, product competition, etc. A simple understanding of what insurance does for you and how the companies do it is necessary. A life insurance company takes your money (premiums) and sets some aside for paying death claims, based on mathematical actuarial tables and state regulations, and invests the difference. Regulations basically require conservative investing such as bonds, stocks, real estate, etc. They are "betting" you will live at least as long as their actuarial charts predict, and that you will contribute a certain amount of money through your premiums. Their premium prices reflect their predictions of investment income and pay out of casualty benefits. How well they do this job determines how good their corporate status is. You are paying for the gamble that, if you die prematurely, the life

insurance company will pay you an "instant estate." The bewildering array of products comes through the evolutionary process of competition. A discussion of the basic types of life insurance is necessary.

TERM. Term insurance is the cheapest insurance. It is the closest product to pure insurance. The cost can be represented by a formula: C (cost of insurance) + A (administrative costs) = P (premium).

There are many varieties of term coverage with various premium prices. A popular form of term is annual renewable term. Each year the premium increases as the insured ages but the face amount remains the same. Another form is decreasing term which keeps the premium constant but the benefit declines with each year. The primary advantage of term is protection at the lowest cost. The primary disadvantages are that term is generally not renewable past age 70-75, and medical qualification and periodic requalification is often required. Therefore, an estate planner must have other assets available to compensate for the lack of lump sum insurance proceeds after age 70-75.

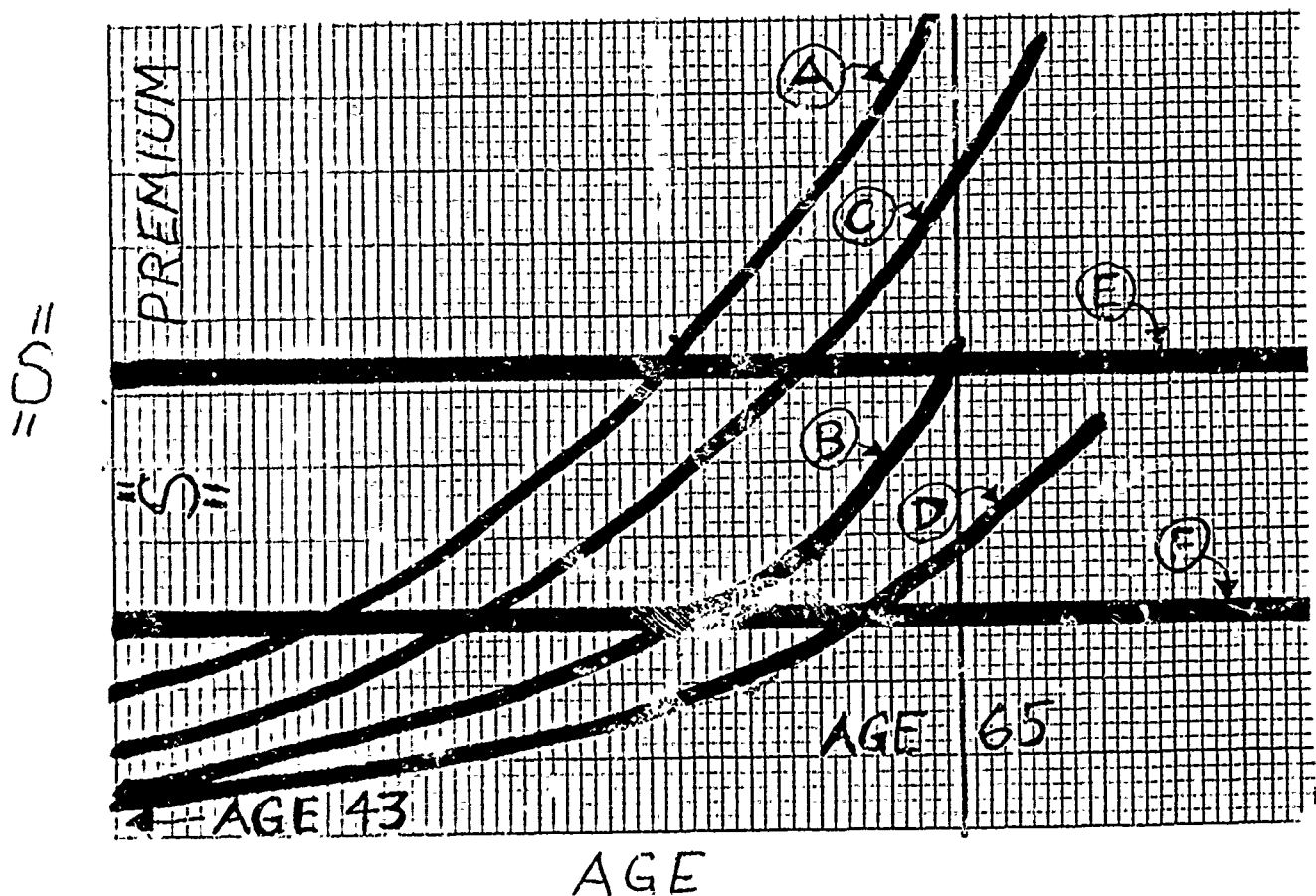
The following chart shows the relationship of insured's age to term insurance cost, and the disparity in different term products. Note that these rates, shown in cost per \$1000 of coverage, are for non-smoking preferred risks. Note also the least expensive insurance will require frequent physical

examinations. Nothing is for free--the insurance companies must make money. For example, if a company issues annual renewable term and keeps it in force without periodic physical exams over many years if you simply continue to pay the premiums, it charges extra to cover its increased risks of not knowing your health status. On the contrary, if a company periodically evaluates your health and can cancel your insurance if you become "unhealthy," it can afford to give you cheaper rates because you are less of a risk.

The cost curves on this chart reflect:

- A. One company's guaranteed "maximum" cost
- B. The same company's "current" cost
- C. Term costs reflected in the computer programmed calculations in Chapter VI of this study
- D. The lowest commercial term rates advertised
- E. A typical whole life policy started at age 42
- F. A typical whole life policy started at age 25

LIFE INSURANCE COST COMPARISON CHART



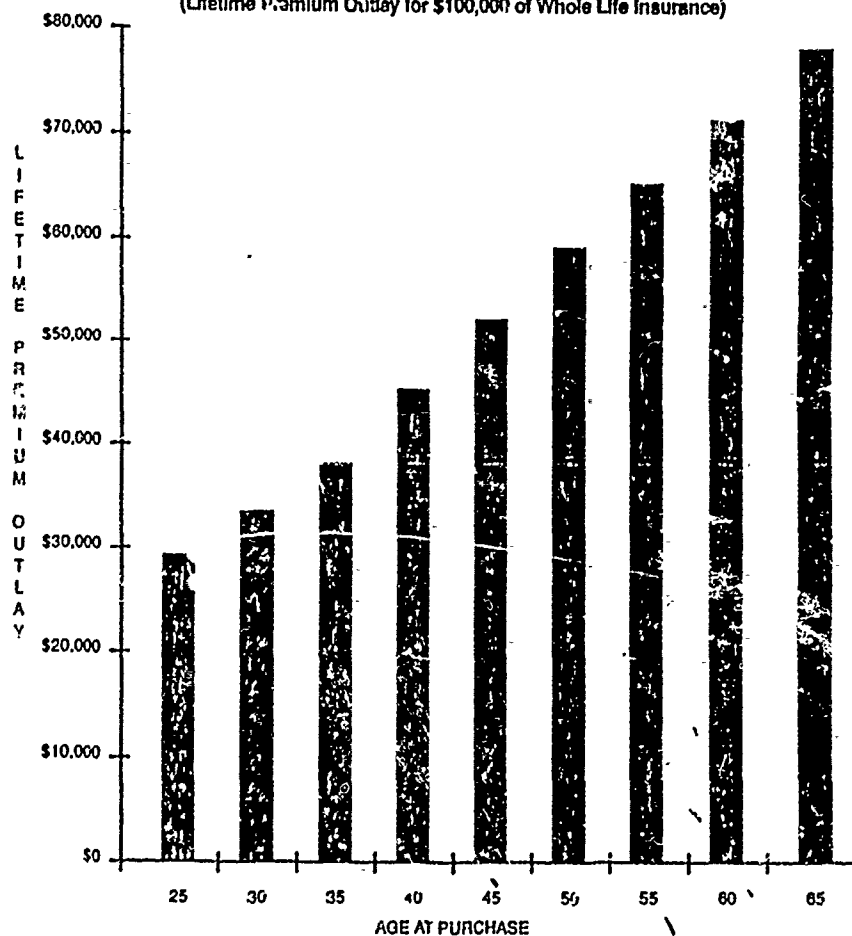
WHOLE LIFE INSURANCE. Whole life is a permanent insurance designed to cover your "whole life." Its cost includes a cash accumulation vehicle added to the cost of insurance plus administrative charges. Its formula is represented by: $C + A + CV$ (cash value component) = P .

From the day you buy your policy, you will pay a level premium based on your age at time of purchase. In essence, compared to term insurance, you pay more for whole life than term in the early years, but around 60 years of age, a cross-over takes place as noted in the cost comparison chart with whole life staying the same cost and term increasing astronomically. Advantages of whole life are a level premium for life, accumulation of significant cash value tax-deferred, flexibility in the use of that cash value (low interest loans, ability to surrender the policy for its cash value, etc), and no physical required after initially starting the policy. If you expect to live a long life and want the financial boost of the insurance payment at the end, then the cheapest form of insurance in the long run is whole life. However, the major drawback, subject to much debate, is that whole life is much more expensive than term in the early years. The phrase "buy term and invest the difference" stems from this argument.

Note the following chart that emphasizes the insurance buying power when whole life is purchased at an early age:

WHY BUY PERMANENT INSURANCE WHILE YOU ARE YOUNG?

(Lifetime Premium Outlay for \$100,000 of Whole Life Insurance)



UNIVERSAL LIFE. Another form of permanent insurance, universal life is often called flexible premium adjustable life. With universal life, the company credits your premium to your cash value, then deducts the cost of insurance and

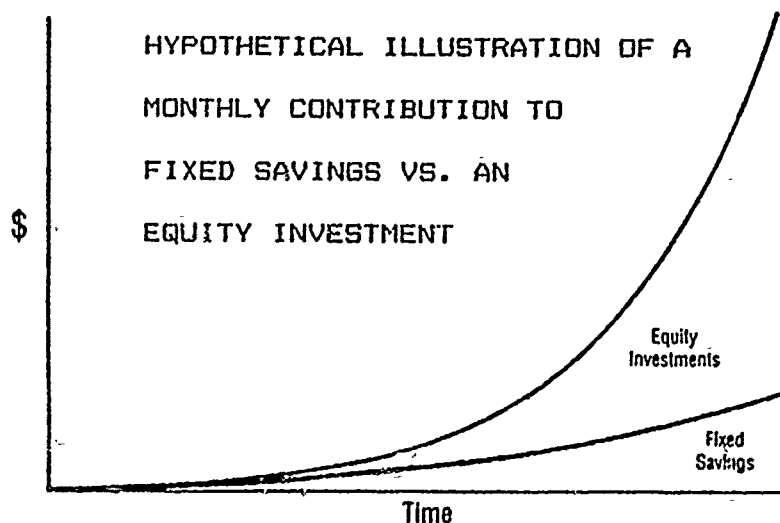
administrative charge. The balance grows tax-deferred and the cash value can be used similar to whole life. Although there is always a target premium designed to pay for the insurance and build cash value, the flexibility comes with a non-fixed premium. For example, if you wanted to double the premium, the excess would go to cash value. If you ran short of cash for your premium payment, you could let the internal policy cash value pay the premium. The advantage of universal life is the flexibility. The disadvantage is the internal costs of insurance go up with age, just like with term, and the increased costs start consuming the cash value. If the company does not pay an interest rate well in excess of the usual 4.5 percent guaranteed interest, the policy will consume itself and additional premiums will have to be paid, similar to term insurance. In the days of high 21 percent interest in 1979, universal life policy illustrations showed outstanding benefits. In today's lowered interest rate environment, one must exercise caution in selecting insurance programs that illustrate unrealistically high rates of return. Planning on any rate higher than the guaranteed rate is taking on risk. Remember: there is no risk with GEP.

FIXED INCOME ASSETS. These financial instruments pay a generally guaranteed rate of interest for the use of your money. There is a wide array including certificates of deposits, US Treasury bills, mortgage financing contracts, bank

accounts, money market funds, and government and corporate bonds. The advantage is that you know what your return will be, relatively risk free. Only in the higher paying, lower grade (because of risk) corporate bonds is there risk to be considered. However, risk and reward go hand in hand in the financial world, and a financial portfolio of fixed income assets will barely outpace inflation.

EQUITY INVESTMENTS. Owning an equity asset means you physically own something--a common stock, real estate, gold, etc. There is risk in owning things for the purpose of capital appreciation. Conversely, there is the opportunity to far outpace any rate of inflation and become financially successful. The advantage: you can make money. The disadvantage: you can lose it all. It is generally accepted that a good financial portfolio should contain a good share of equity investments in order to grow relative to inflation.

The following graph represents the philosophy behind owning equity investments:



Investment in mutual funds offer individuals an opportunity to participate in the stock market and have a professional investment advisor manage the fund's assets. Through diversification of assets (not all eggs in one basket) and professional management, mutual funds provide three very important investment objectives: safety, liquidity (turning assets into cash quickly) and yield. (3:3) The following is a list of some of the better performing mutual funds, showing net gain (interest, dividends and capital gains reinvested) over a 10-year period:

FUND	CATEGORY	10-YEAR	AVERAGE/YR
Bond Fund of America	Bonds	225.6%	22.6%
Fidelity Magellan	Aggressive Growth	1,124.1%	112.4%
Templeton World	International	404.1%	40.4%
Fidelity Government	Government	185.9%	18.7%
Washington Mutual	Growth and Income	510.6%	51.1%

These mutual funds are representative of the different categories of funds, and show the potential for return. There is risk involved, however, and an investor should select mutual funds with care.

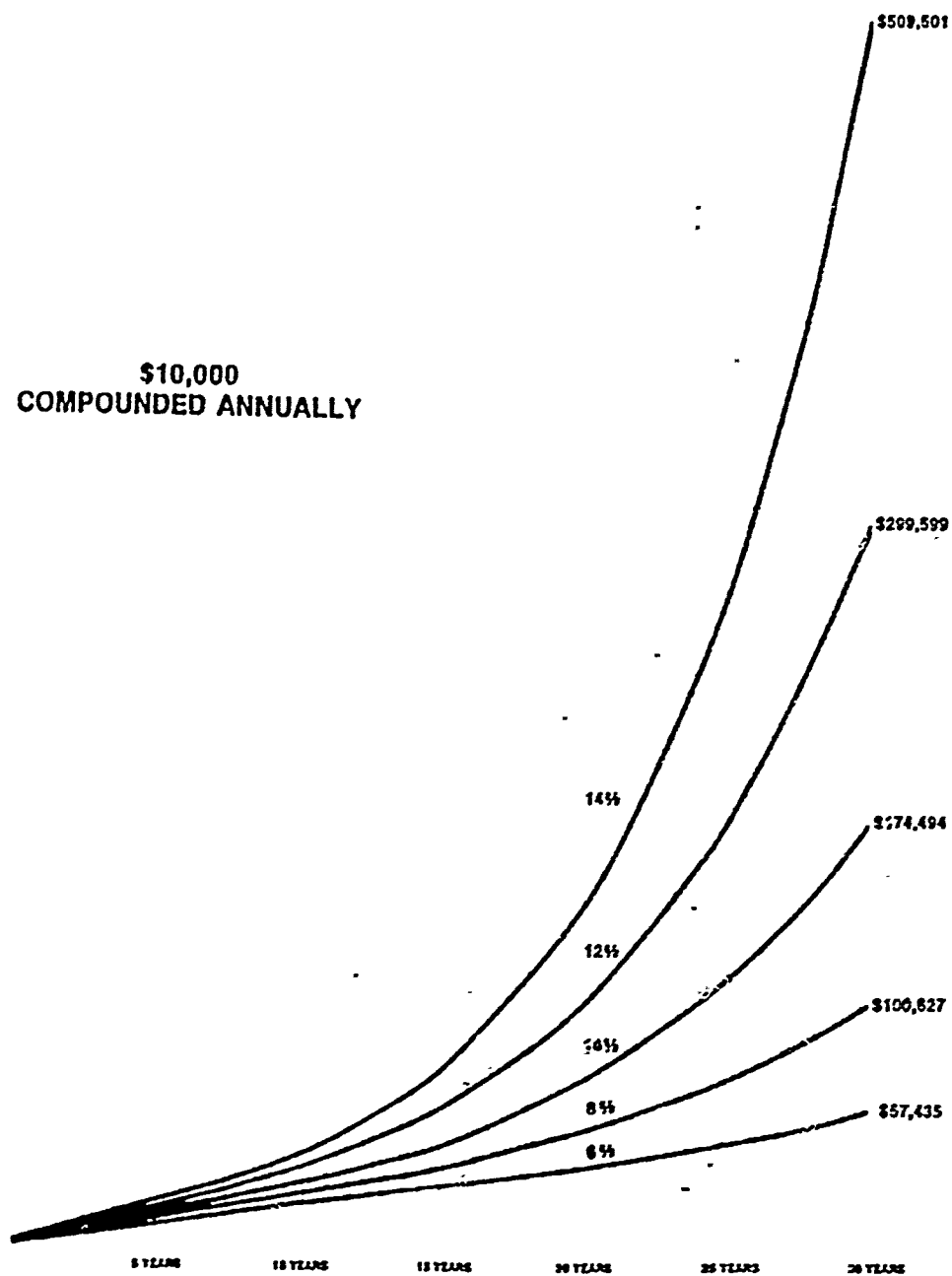
CHAPTER IV

ASSUMPTIONS: THE KEY TO FINANCIAL ANALYSIS

When a financial prediction is made, it must be made in light of assumptions regarding interest and inflation rates. When a financial plan is formulated, it must make predictions of life expectancies. This chapter will outline some graphical economic data to provide a historical performance of the US economy so certain assumptions can be accepted, or argued. It will also provide data on life expectancy and the extra insurance costs associated with smoking.

RATES OF RETURN--A REFLECTION ON THE US ECONOMY. The interest or investment rate of return on one's invested money is by far the key assumption. Note the effect of a few percentage points of interest rate difference, over time, on the following graph:

**\$10,000
COMPOUNDED ANNUALLY**



In our SBP comparisons, we are creating lump sums of cash through insurance proceeds or investments, to set aside in

interest bearing annuities, or investment equivalents. We expect these sums of money to last a long time. In the following graph, note the difference that a percentage change in earnings makes. Example: If you invested \$100,000 at 10% earnings, and paid out \$12,000 to yourself (12%), the money would last only 18 years.

NUMBER OF YEARS MONEY WILL LAST

%
P
A
Y
O
U
T

R
A
T
E

1																
2	69.4															
3	40.6	55.0														
4	28.8	34.7	46.3													
5	22.3	25.6	30.6	40.3												
6	18.2	20.3	23.2	27.6	35.9											
7	15.5	16.9	18.7	21.2	25.2	32.6										
8	13.4	14.4	15.7	17.4	19.7	23.2	29.8									
9	11.8	12.6	13.6	14.7	16.3	18.4	21.6	27.6								
10	10.6	11.2	11.9	12.8	13.9	15.3	17.2	20.2	25.7							
11	9.6	10.1	10.7	11.3	12.2	13.2	14.5	16.3	19.1	24.1						
12	8.7	9.2	9.7	10.2	10.8	11.6	12.6	13.8	15.5	18.0	22.7					
13	8.1	8.4	8.8	9.2	9.7	10.4	11.1	12.0	13.2	14.7	17.2	21.5				
14	7.4	7.8	8.1	8.5	8.9	9.4	10.0	10.7	11.5	12.6	14.1	16.3	20.4			
15	6.9	7.2	7.5	7.8	8.2	8.6	9.1	9.6	10.2	11.1	12.1	13.5	15.6	19.5		
16	6.5	6.7	7.0	7.2	7.6	7.9	8.2	8.7	9.2	9.9	10.7	11.7	13.2	15.0	18.7	
17	6.1	6.3	6.5	6.8	7.0	7.3	7.7	8.0	8.4	8.9	9.6	10.2	11.2	12.5	14.4	
18	5.7	5.9	6.2	6.3	6.6	6.8	7.1	7.4	7.7	8.2	8.7	9.2	9.9	10.8	12.1	
19	5.4	5.6	5.7	6.0	6.2	6.4	6.7	6.9	7.2	7.6	7.9	8.4	8.9	9.7	10.5	
20	5.2	5.3	5.5	5.7	5.8	6.0	6.2	6.4	6.7	7.0	7.3	7.7	8.2	8.7	9.3	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

IF EARNINGS RATE IS
EQUAL TO OR GREATER
THAN PAYOUT RATE
MONEY CAN LAST
INDEFINITELY

% EARNINGS ON INVESTMENT

In financial planning, it is necessary to know the effects of time and interest on any lump sum or periodic investments.

Glance at these compound interest charts to see the effect:

Investment of \$10,000

Rate %	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
2	\$11,041	\$12,190	\$ 13,459	\$ 14,859	\$ 16,406	\$ 18,114
3	11,593	13,439	15,580	18,061	20,938	24,273
4	12,167	14,802	18,009	21,911	26,658	32,434
5	12,763	16,289	20,789	26,533	33,864	43,219
6	13,382	17,908	23,966	32,071	42,919	57,435
7	14,026	19,672	27,590	38,697	54,274	76,123
8	14,693	21,589	31,722	46,610	68,485	100,627
9	15,386	23,674	36,425	56,044	86,231	132,677
10	16,105	25,937	41,772	67,275	108,347	174,494
11	16,851	28,394	47,846	80,623	135,855	228,923
12	17,623	31,058	54,736	96,463	170,001	299,599
13	18,424	33,946	62,543	115,231	212,305	391,159
14	19,254	37,072	71,379	137,435	264,619	509,501
15	20,114	40,456	81,371	163,665	329,189	662,118
16	21,003	44,114	92,655	194,608	408,742	858,496
17	21,924	48,068	105,387	231,056	506,578	1,110,648
18	22,878	52,338	119,737	273,930	626,686	1,433,706
19	23,864	56,947	135,895	324,294	773,881	1,846,753
20	24,883	61,917	154,070	383,376	953,962	2,373,763

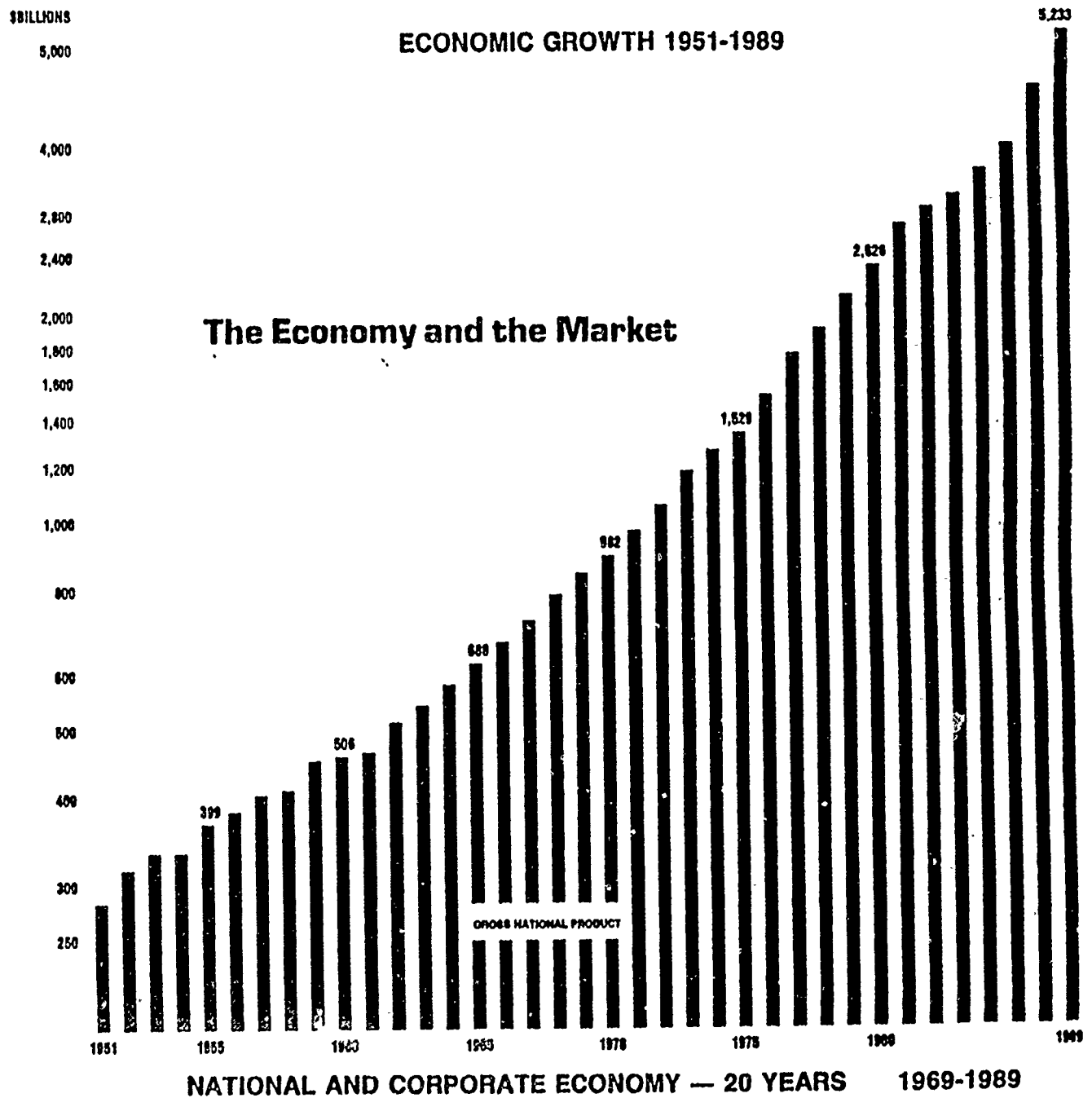
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Investment of \$1,000 Per Year

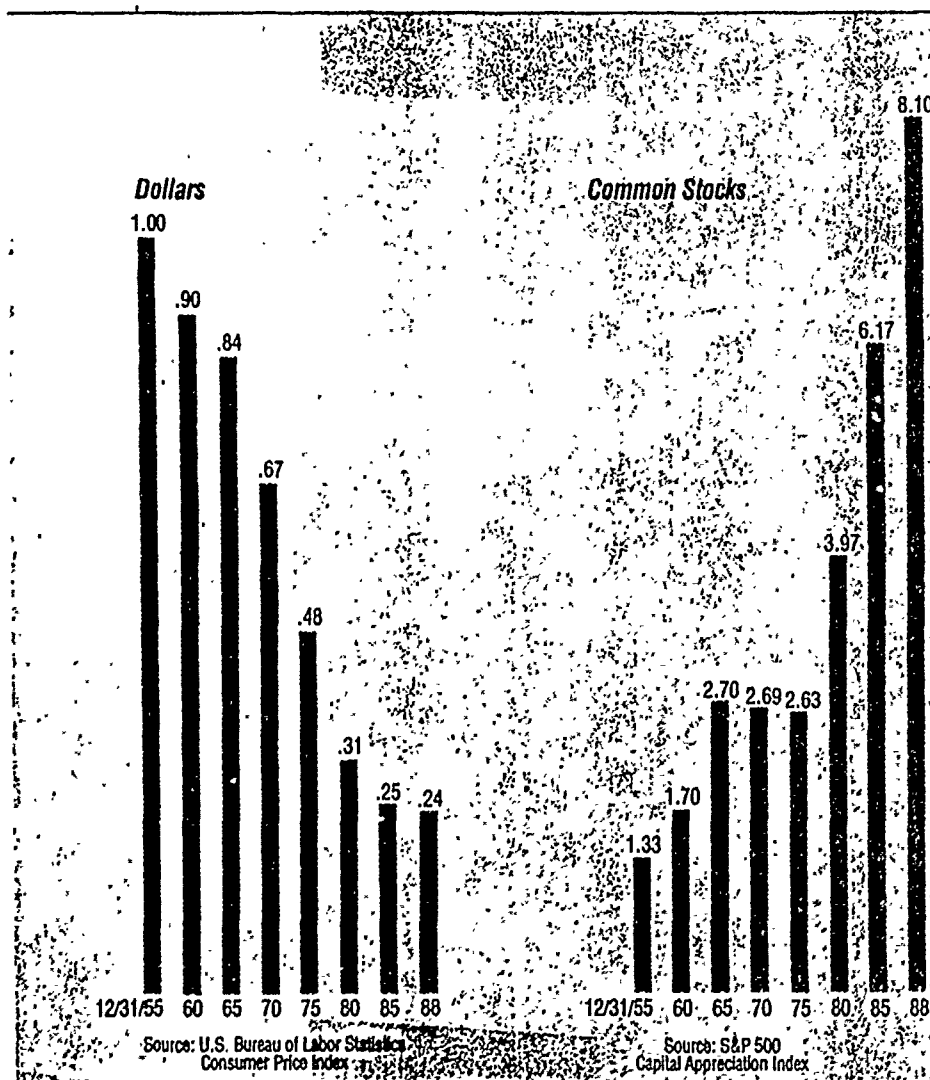
Rate %	5 Years Total Invested \$5,000	10 Years Total Invested \$10,000	15 Years Total Invested \$15,000	20 Years Total Invested \$ 20,000	25 Years Total Invested \$ 25,000	30 Years Total Invested \$ 30,000
2	5,308	11,169	17,639	24,783	32,671	41,379
3	5,468	11,808	19,157	27,676	38,553	49,003
4	5,633	12,486	20,825	30,969	43,312	58,328
5	5,802	13,207	22,551	34,719	50,113	70,761
6	5,975	13,972	24,673	38,992	58,156	83,802
7	6,153	14,784	26,888	43,865	67,676	101,073
8	6,336	15,645	29,324	49,423	78,954	122,346
9	6,523	16,560	32,003	55,765	92,324	148,575
10	6,716	17,531	34,950	63,002	108,182	180,943
11	6,913	18,561	38,190	71,265	128,999	220,913
12	7,115	19,654	41,754	80,699	149,334	270,292
13	7,322	20,815	45,672	91,470	175,850	331,315
14	7,535	22,044	49,980	103,769	207,333	406,737
15	7,754	23,350	54,718	117,810	244,712	499,957
16	7,977	24,733	59,925	133,841	289,088	615,161
17	8,207	26,120	65,649	152,139	341,762	757,503
18	8,442	27,755	71,939	173,021	404,272	933,318
19	8,683	29,404	78,850	196,847	478,431	1,150,387
20	8,930	31,150	86,442	224,026	568,377	1,418,258

Should a financial planner have faith in the economy? You really cannot afford not to. Glance at the following graphs that depict economic performance in this country over time.

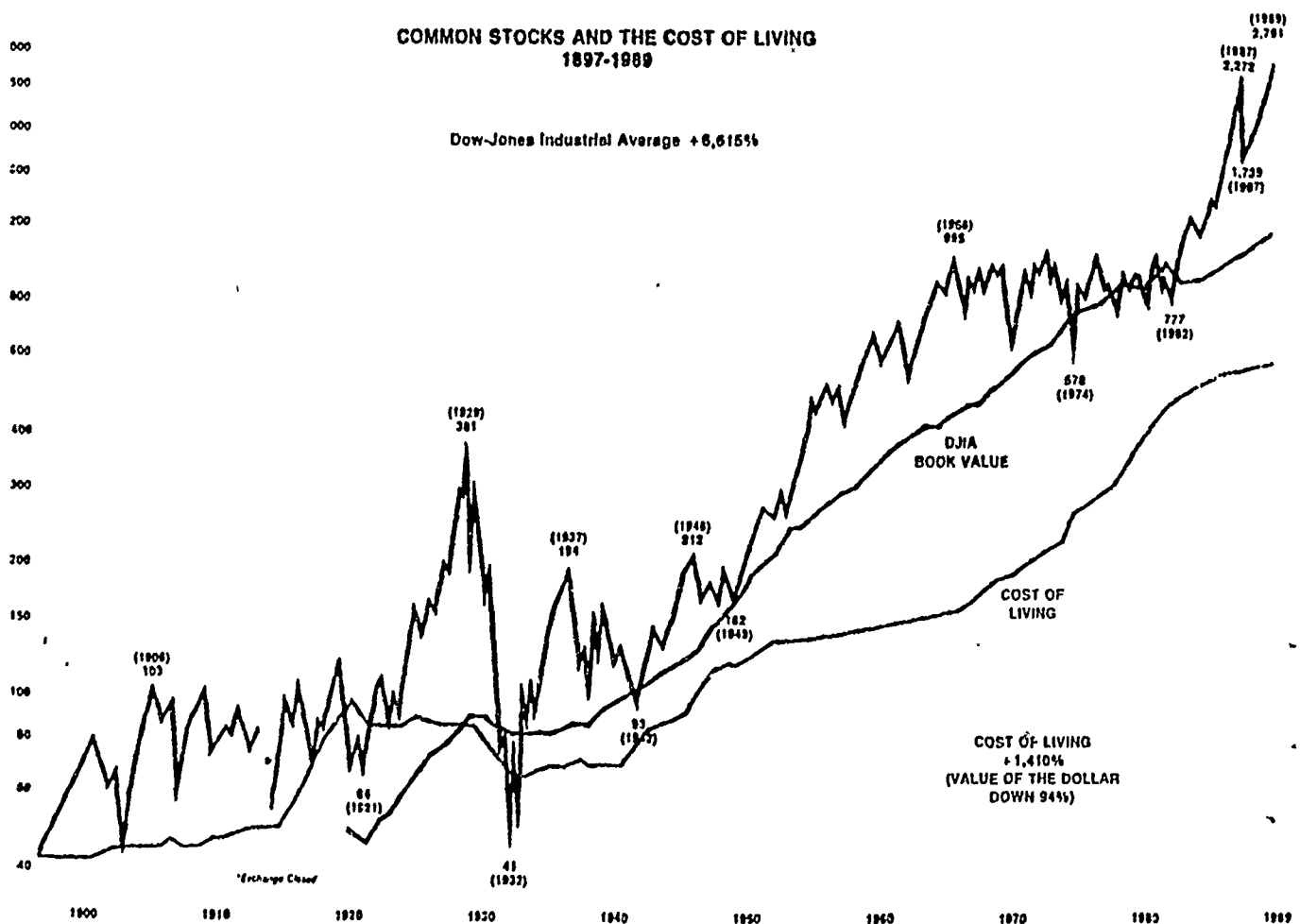
This graph depicts the ever increasing GNP:



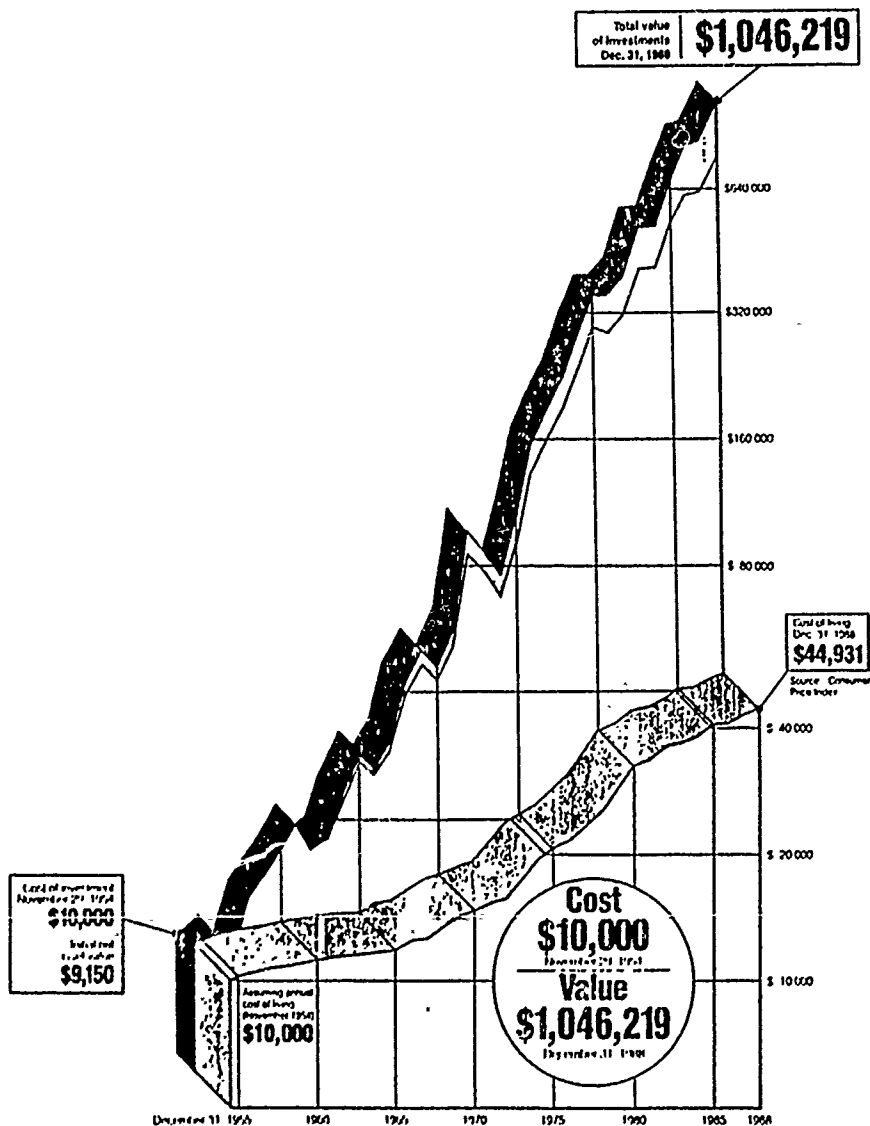
This bar graph depicts why financial experts say you must have a portion of your financial portfolio in equities. The bars on the left show the decline of the purchasing power of the dollar because of inflation. The bars on the right show the capital appreciation of Standard and Poor's 500 common stocks. If you play devil's advocate and correct the stock price for inflation, that is $8.10 \times .24 = 1.94$, the 1.94 still reflects an increase in value of 45%.



This graph shows the value of equity investing relative to the cost of living and inflation adjustment. Note the jagged graph line representing the value of the Dow-Jones Industrial Average group of stocks in relation to the lower line representing the cost of living. Analysis of this graph indicates ownership of equity assets is necessary to stay substantially ahead of the eroding effect of inflation.



These two charts show the details of a major mutual fund that concentrates its efforts on equities for growth potential. It shows the dividends of successful investing, directly compared to the conservative 6% return I use often in this paper. I will also use illustrations with 10% rates of return, reflecting equity investments.



Year Ended Dec. 31	\$10,000 IN A GOOD GROWTH FUND With All Distributions Reinvested								\$10,000 AT 6% INTEREST With All Interest Compounded Quarterly 6% Interest		
	Cost of Investment			Value of Investment					6% Interest		
	Income Dividends Reinvested		Total Cost of Shares	Value of Original Shares	Capital Gains Reinvested	Sub- Total	Income Div. Reinvested	Total Value of Shares	Annual	Cumulative	Total Value
	Annually	Cumulative									
1954	\$ —	\$ —	\$ 10,000	\$ 9,296	\$ —	\$ 9,296	\$ —	\$ 9,296	\$ —	\$ —	\$10,000
1955	—	—	10,000	9,950	—	9,950	—	9,950	614	614	10,614
1956	—	—	10,000	10,412	—	10,412	—	10,412	651	1,265	11,265
1957	—	—	10,000	8,651	—	8,651	—	8,651	691	1,956	11,956
1958	—	—	10,000	12,873	—	12,873	—	12,873	734	2,690	12,690
1959	—	—	10,000	14,675	—	14,675	—	14,675	779	3,469	13,469
1960	—	—	10,000	16,706	—	16,706	—	16,706	826	4,295	14,295
1961	—	—	10,000	19,762	—	19,762	—	19,762	877	5,172	15,172
1962	—	—	10,000	17,091	—	17,091	—	17,091	931	6,103	16,103
1963	—	—	10,000	17,969	—	17,969	—	17,969	988	7,091	17,091
1964	238	238	10,238	22,818	—	22,818	207	23,105	1,049	8,140	18,140
1965	352	590	10,590	27,484	—	27,484	738	28,222	1,113	9,253	19,253
1966	357	947	10,947	25,709	—	25,709	1,017	26,726	1,181	10,434	20,434
1967	476	1,423	11,423	28,765	—	28,765	1,633	30,398	1,254	11,688	21,688
1968	483	1,906	11,906	39,103	—	39,103	2,773	41,876	1,331	13,019	23,019
1969	692	2,598	12,598	46,057	—	46,057	4,054	50,111	1,413	14,432	24,432
1970	757	3,355	13,355	42,397	—	42,397	4,487	46,884	1,499	15,931	25,931
1971	773	4,128	14,128	50,046	983	51,029	6,135	57,164	1,591	17,522	27,522
1972	732	4,860	14,860	81,885	3,527	85,412	10,942	96,354	1,689	19,211	29,211
1973	646	5,506	15,506	67,063	10,216	77,279	9,514	86,793	1,792	21,003	31,003
1974	1,362	6,868	16,868	56,999	10,126	67,125	9,193	76,318	1,902	22,905	32,905
1975	1,753	8,621	18,621	76,761	14,023	90,784	14,220	105,004	2,019	24,924	34,924
1976	1,502	10,123	20,123	110,064	21,792	131,856	22,227	154,083	2,143	27,067	37,067
1977	2,049	12,172	22,172	123,239	34,969	158,208	27,270	185,478	2,275	29,342	39,342
1978	1,790	13,962	23,962	145,105	42,032	187,137	33,968	221,105	2,414	31,756	41,756
1979	3,346	17,308	27,308	178,683	56,088	234,771	45,677	280,448	2,562	34,318	44,318
1980	5,170	22,478	32,478	208,326	85,210	293,536	59,513	353,049	2,719	37,037	47,037
1981	6,977	29,455	39,455	203,934	83,413	287,347	64,854	352,201	2,886	39,923	49,923
1982	9,481	38,936	48,936	207,228	105,363	312,591	77,674	390,265	3,063	42,986	52,986
1983	9,304	48,240	58,240	270,083	137,321	407,404	111,283	518,687	3,251	46,237	56,237
1984	10,015	58,255	68,255	261,574	149,663	411,237	118,698	529,935	3,451	49,688	59,688
1985	13,346	71,601	81,601	311,803	208,723	520,526	156,651	677,177	3,663	53,351	63,351
1986	24,463	96,064	106,064	353,248	265,624	618,872	202,110	820,982	3,887	57,238	67,238
1987	28,068	124,132	134,132	321,958	311,881	633,839	212,639	846,478	4,127	61,365	71,365
1988	35,179	159,311	169,311	377,402	383,884	761,286	284,933	1,046,219	4,379	65,744	75,744

INFLATION. Inflation undermines our investment dollars. If we earn 6% and inflation is 3%, the net gain is only 3%. Note the effect of inflation from the following two charts. Example: If a college education costs \$10,000 today, and we have 5% inflation for 5 years, the education will cost \$10,000 X 1.28 = \$12,800.

FUTURE INCREASE IN COST OF LIVING

Average Annual Rate of Inflation

Years	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	1.03	1.04	1.05	1.06	1.07	1.08	1.09	1.10	1.11	1.12
2	1.06	1.08	1.10	1.12	1.14	1.17	1.19	1.21	1.23	1.25
3	1.09	1.12	1.16	1.19	1.23	1.26	1.30	1.33	1.37	1.40
4	1.13	1.17	1.22	1.26	1.31	1.36	1.41	1.46	1.52	1.57
5	1.16	1.22	1.28	1.34	1.40	1.47	1.54	1.61	1.69	1.76
6	1.19	1.27	1.34	1.42	1.50	1.59	1.68	1.77	1.87	1.97
7	1.23	1.32	1.41	1.50	1.61	1.71	1.83	1.95	2.08	2.21
8	1.27	1.37	1.48	1.59	1.72	1.85	1.99	2.14	2.30	2.48
9	1.30	1.42	1.55	1.69	1.84	2.00	2.17	2.36	2.56	2.77
10	1.34	1.48	1.63	1.79	1.97	2.16	2.37	2.59	2.84	3.10
15	1.56	1.80	2.08	2.40	2.76	3.17	3.64	4.18	4.78	5.47
20	1.81	2.19	2.65	3.21	3.87	4.66	5.60	6.73	8.08	9.65
25	2.09	2.67	3.39	4.29	5.43	6.85	8.62	10.80	13.60	17.00
30	2.43	3.24	4.32	5.74	7.61	10.06	13.27	17.40	22.90	29.96

Or referenced from the future value chart, \$1 today will be worth only $\$1 \times .78 = \$.78$ in 5 years with 5% inflation each year.

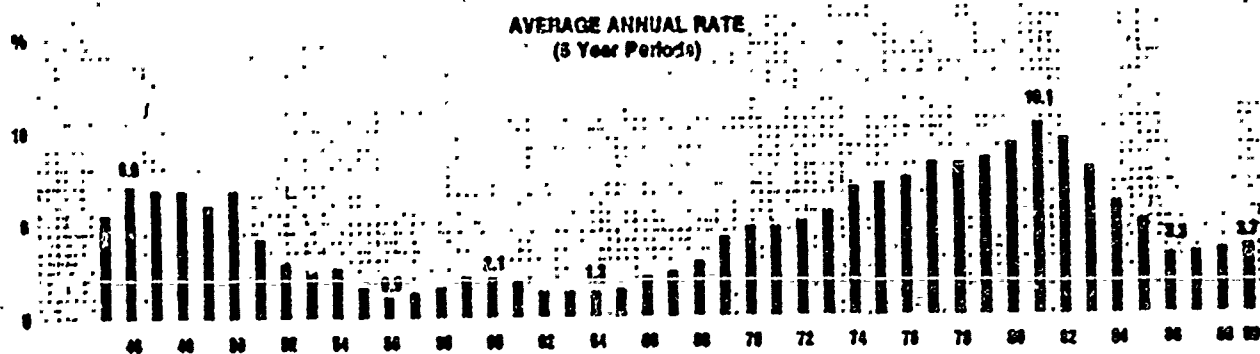
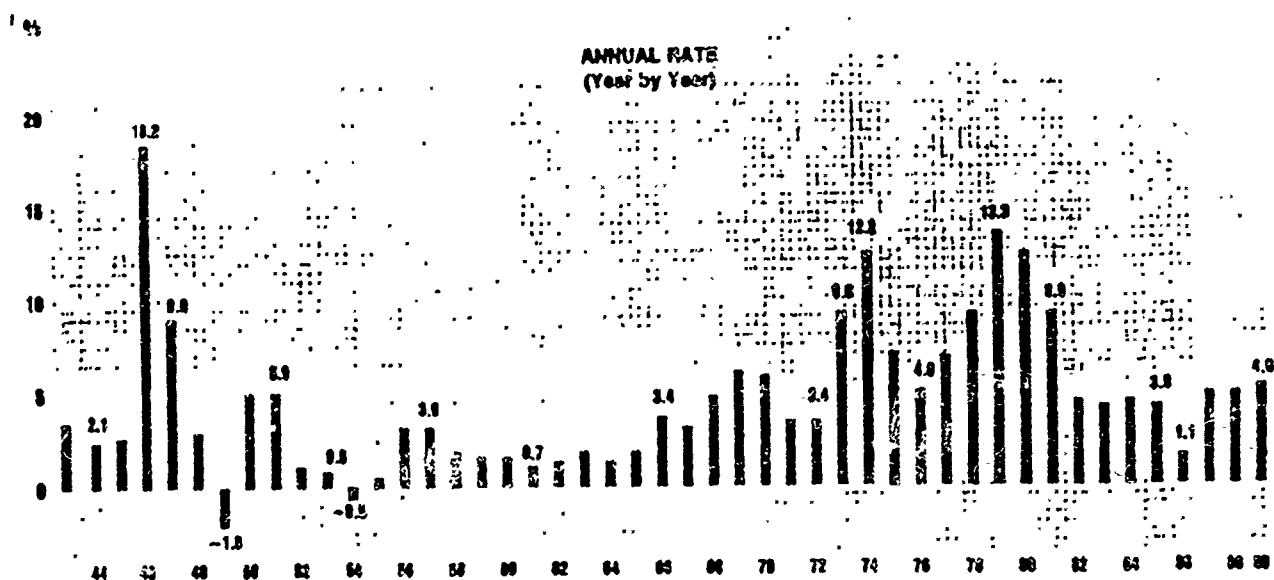
Average Annual Rate of Inflation

Years	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
5	\$0.88	\$0.82	\$0.78	\$0.75	\$0.71	\$0.68	\$0.65	\$0.62	\$0.59	\$0.57
6	0.84	0.79	0.75	0.70	0.67	0.63	0.60	0.56	0.53	0.51
7	0.81	0.76	0.71	0.67	0.62	0.58	0.55	0.51	0.48	0.45
8	0.79	0.73	0.68	0.63	0.58	0.54	0.50	0.47	0.43	0.40
9	0.77	0.70	0.64	0.59	0.54	0.50	0.46	0.42	0.39	0.36
10	0.74	0.68	0.61	0.56	0.51	0.46	0.42	0.39	0.35	0.32
15	0.64	0.56	0.48	0.42	0.36	0.32	0.27	0.24	0.21	0.18
20	0.55	0.46	0.38	0.31	0.26	0.21	0.18	0.15	0.12	0.10
25	0.48	0.38	0.30	0.23	0.18	0.15	0.12	0.09	0.07	0.06
30	0.41	0.31	0.23	0.17	0.13	0.10	0.08	0.06	0.04	0.03
35	0.36	0.25	0.18	0.13	0.09	0.07	0.05	0.04	0.03	0.02
40	0.31	0.21	0.14	0.10	0.07	0.05	0.03	0.02	0.02	0.01
45	0.26	0.17	0.11	0.07	0.05	0.03	0.02	0.01	0.01	—
50	0.23	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.01	—

Note the historical trends of inflation since the 1940's on the following charts.

INFLATION (COST OF LIVING INCREASE)

47 Years -- 1943-1989



Although it is reasonable to assume a five percent inflation rate, I have selected a three percent inflation rate for analysis assumptions in this study because the assumed inflation rate drives the computer model's (in Chapter VI of this study) Consumer Price Index/Cost of Living Allowance increases, which lag the actual rate of inflation. COLAs have averaged three percent since 1982, including no COLA in 1986 due to the Gramm-Rudman-Hollings Amendment to the Budget Deficit Reduction Act of 1985. (B:19)

LIFE EXPECTANCY. How long will you live? If you are a man, will you outlive your female spouse? When considering SBP, you need to think more about life expectancy than you need to with other insurance programs, because of the fact that SBP pays the spouse after you die. Scan the following table and note that females statistically live longer.

LIFE EXPECTANCY TABLES

Life Expectancy No. of Years			Life Expectancy No. of Years			Life Expectancy No. of Years			Life Expectancy No. of Years		
Present Age	Males	Females	Present Age	Males	Females	Present Age	Males	Females	Present Age	Males	Females
20	52.1	56.7	35	38.2	42.8	50	25.5	29.6	65	15.0	18.2
21	51.1	55.8	36	37.3	41.9	51	24.7	28.7	66	14.4	17.5
22	50.2	54.9	37	36.5	41.0	52	24.0	27.9	67	13.8	16.9
23	49.3	53.9	38	35.6	40.0	53	23.2	27.1	68	13.2	16.2
24	48.3	53.0	39	34.7	39.1	54	22.4	26.3	69	12.6	15.6
25	47.4	52.1	40	33.8	38.2	55	21.7	25.5	70	12.1	15.0
26	46.5	51.1	41	33.0	37.3	56	21.0	24.7	71	11.6	14.4
27	45.6	50.2	42	32.1	36.5	57	20.3	24.0	72	11.0	13.8
28	44.6	49.3	43	31.2	35.6	58	19.6	23.2	73	10.5	13.2
29	43.7	48.3	44	30.4	34.7	59	18.9	22.4	74	10.1	12.6
30	42.8	47.4	45	29.6	33.8	60	18.2	21.7	75	9.6	12.1
31	41.9	46.5	46	28.7	33.0	61	17.5	21.0	76	9.1	11.6
32	41.0	45.6	47	27.9	32.1	62	16.9	20.3	77	8.7	11.0
33	40.0	44.6	48	27.1	31.2	63	16.2	19.6	78	8.3	10.5
34	39.1	43.7	49	26.3	30.4	64	15.6	18.9	79	7.6	10.1
									80	7.5	9.6

Source: Internal Revenue Code

Longevity is affected by many variables including health, genetics and occupation. If there is any reason you do not think your spouse will outlive you, SBF is not a prudent choice, unless you have children or other permissible beneficiaries.

AIDS AND INSURANCE. The AIDS epidemic may prove expensive to the insurance industry, and it behooves financial planners to consider this problem when assumptions are made regarding rates of return on insurance policies. Consider the effect of AIDS (Acquired Immune Deficiency Syndrome). As of 30 June 1989, the US reported 99,936 cases of AIDS with 58,014 deaths. The World Health Organization predicts that 5.5 million new cases of AIDS will show up in the next decade. To the contrary, there are some 25 potential anti-AIDS compounds being tested in laboratories with the hope of keeping the disease in check. The higher mortality cost from AIDS deaths reduces insurance company profitability and can potentially affect rates of return on policies, especially universal life. Refer again to the Insurance Cost Comparison Chart on page 13 depicting one company's "maximum" versus "current" rates for term insurance. If that company is hit hard by AIDS death claims, it will be forced to charge more for their term insurance. My assessment, however, is to assume insurance companies are acutely aware of their potential AIDS problems,

and are controlling it with increased physical exam precautions. Although the jury is still out, I believe the companies' health control measures will counter the increased death claims so policies will deliver as promised. Consider the following medical requirements table for one such company:

MEDICAL REQUIREMENTS

		\$ AMOUNT										
		\$1,000 - 10,000	10,001 - 25,000	25,001 - 100,000	100,001 - 150,000	150,001 - 200,000	200,001 - 249,999	250,000 - 300,000	300,001 - 500,000	500,001 - 1,000,000	1,000,001 - 2,000,000	2,000,001 +
AGE												
	60+											
	51-59											
	46-50											
	41-45											
	36-40											
	20-35											
	0-19											

LEGEND:

 Routine exam not required

 Individual consideration

 Blood Profile

 Exam by Paramed, Blood Profile

 Exam by MD at paramedical service, Blood Profile

 Exam by MD at paramedical service, Blood Profile, Resting EKG

 Exam by MD at paramedical service, Blood Profile, Resting EKG, HOS

 Exam by MD at paramedical service, Blood Profile, Exercise EKG, HOS, Chest X-Ray

BLOOD PROFILE

Blood Profile includes the following tests:

Glucose
BUN
Creatinine
Uric Acid

Alkaline Phosphatase
Total Bilirubin
SGOT
SGPT

GGTP
LDH
Albumin

Globulin
Cholesterol
Triglycerides

HDL
T-Cell Subset/HIV**
**in states where approved

SMOKERS VS NON-SMOKERS. Smokers are treated differently by insurance companies. They pay more premiums for the same insurance. Statistics indicate that smokers die sooner. Note the following rate differences reflected in the premiums.

GROUP RATE SCHEDULES

For Male U.S. Veterans, Spouses
and Widowers

Male Non-Smoker Rates					
Monthly Premium*					
Age	\$50,000	\$40,000	\$30,000	\$20,000	\$10,000
18-34	\$ 9.98	\$ 9.22	\$ 7.05	\$ 4.88	—
35-39	12.95	11.71	8.91	6.12	—
40-44	18.94	18.63	14.10	9.58	—
45-49	28.92	25.72	19.43	13.13	\$ 6.83
50-54	44.22	40.09	30.20	20.31	10.42
55-59	65.73	63.15	47.50	31.84	16.19
This offer available to applicants 18-59.					
The following rates are for renewal only.					
60-64	109.41	96.68	72.65	48.61	24.57
65-69	165.29	142.45	106.97	71.49	36.01
Premiums increase upon entry into each 5-year age bracket.					

Male Smoker Rates					
Monthly Premium*					
Age	\$50,000	\$40,000	\$30,000	\$20,000	\$10,000
18-34	\$ 14.06	\$ 12.77	\$ 9.71	\$ 6.65	—
35-39	17.83	16.14	12.24	8.34	—
40-44	26.03	25.72	19.43	13.13	—
45-49	40.00	35.48	26.74	18.01	\$ 9.27
50-54	61.29	55.53	41.78	28.03	14.28
55-59	91.01	87.46	65.73	44.00	22.26
This offer available to applicants 18-59.					
The following rates are for renewal only.					
60-64	151.77	134.11	100.72	67.32	33.93
65-69	229.38	197.62	148.35	99.08	49.81
Premiums increase upon entry into each 5-year age bracket.					

For purposes of this paper, all rates will be for non-smokers because it is assumed that smoker rates will disadvantage commercial alternatives to SBP.

CHAPTER V

BASICS OF ESTATE PLANNING

This chapter will be a primer on family financial/estate planning. Everyone should take the time to become familiar with basic estate planning--both before and after retirement. We will confine this study to retirement and the planning considerations for SBP. I will approach this subject at a level that will benefit a reader who may be unfamiliar with these basics.

EVALUATE YOUR FINANCIAL RESOURCES. Consider all your sources of retirement income: retired pay, a planned post-retirement job, investment interest and dividends, rental properties, accumulations of cash in whole/universal life policies, planned withdrawals from savings/mutual fund accounts, etc., and after age 65 Social Security. Below is a table projecting primary Social Security benefits. Most military retirees would qualify for the maximum benefit. (NOTE: To obtain an estimate of your future Social Security income, call your local Social Security Administration office, or call (800) 234-5772, and ask for a Personal Earnings and Benefit Statement.)

PROJECTED PRIMARY SOCIAL SECURITY BENEFITS

Maximum Monthly Benefits at Age 65

Age 1986	Year of Retirement at Age 65	Worker Alone	Worker With Non-employed Spouse	Worker and Employed Spouse (Both 65)
64	1987	\$ 742	\$1,113	\$1,484
63	1988	758	1,137	1,516
62	1989	786	1,179	1,572
61	1990	778	1,167	1,556
60	1991	784	1,176	1,568
55	1996	869	1,304	1,738
50	2001	971	1,457	1,942
45	2006	1,079	1,619	2,158
40	2011	1,189	1,784	2,378
35	2016	1,297	1,946	2,594
30	2021	1,395	2,093	2,790
25	2026	1,497	2,246	2,994

**Maximum benefits based on 1985 projections by the Social Security Administration.*

Since our topic is survivors' benefits, let's discuss what Social Security benefits a surviving spouse would receive. Basically, an unmarried spouse with dependent children (less than 18 years old, or 22 if a full-time student, or one who became disabled before 22) will receive 150 to 188 percent of the decedent's primary Social Security benefit (from the table above). However, when the spouse no longer has qualified dependent children under her/his care, the benefit stops. (7:48-49) We will refer to this as the Social Security "blackout" for future income planning.

EVALUATE YOUR EXPENSES. Now that you have your resources outlined, and are considering the impact of SBP, evaluate your

expenses. Many financial planning experts recommend planning for 60 to 80 percent of pre-retirement income. This recommendation is based upon the assumption most debts will be paid off, the children will be independent, etc. However, most military retirees, especially at the 20-year service point, are not in that situation. A prospective retiree must carefully plan his/her expenses for retirement, and have an estate plan to cover those expenses in case of his/her death. The following list of typical expenses may prove helpful:

Mortgage payment/rent	Life insurance
Real estate taxes	CHAMPUS supplemental insurance
Income taxes	Car payment/Gas/Insurance
Savings/Investments	Charitable contributions
Home/Car maintenance	Gifts
Utilities	Travel and entertainment
Food	College education for children
Clothing	Misc. loans/Credit cards
Medical/Eyeglasses/Teeth	Piano and karate lessons
Allowances for teenagers	Other/Miscellaneous expenses

A recommendation: prior to retirement, track your expenses methodically for a year or more. Break expense categories down into recognizable categories for your family, and quarterly, or more often, scan your checkbook, mastercard bills, etc., to determine your spending habits. Get a feel for

what you spend your "\$100 check for CASH" for. Then, and only then, can you get a handle on what your real income needs will be for retirement. If you have small children growing into teenagers, it would benefit you to think seriously about adjusting your "clothing" account upward.

EXPENSES INCIDENT TO DEATH. It costs money to die. Funeral and burial, family travel, last illness hospital bills, possible moving expenses, lawyers, etc. If you have major holdings in real estate, a business, or other non-liquid assets, you will need funds to pay possible estate taxes and to insure liquidity. What you don't want is to force your survivors into selling off your valuable fixed assets, perhaps at a loss, to cover those expenses incident to death. This is one important role of life insurance--to provide that immediate cash resource immediately upon death.

CONSTRUCTING AN ESTATE PROGRAMMING CHART. This requires careful reading. This process is crucial to estate planning and recognizing the income producing qualities of SBF.

Now that you've determined how much your expenses will be, you know the approximate amount of monthly income your family will need. That's your target goal. Since everyone's situation changes, this type of estate programming should be reaccomplished every two or three years. Also, do not forget to factor in inflation, both for income and expenses.

For purposes of constructing this example estate planning

chart, we will ignore inflation. All values will stay relative. The procedure for factoring in inflation could easily be accomplished by adjusting the "gaps" upward at convenient intervals, using average estimated inflation. That however, would unnecessarily complicate the following instructions. The principles and basic procedures are what is important here.

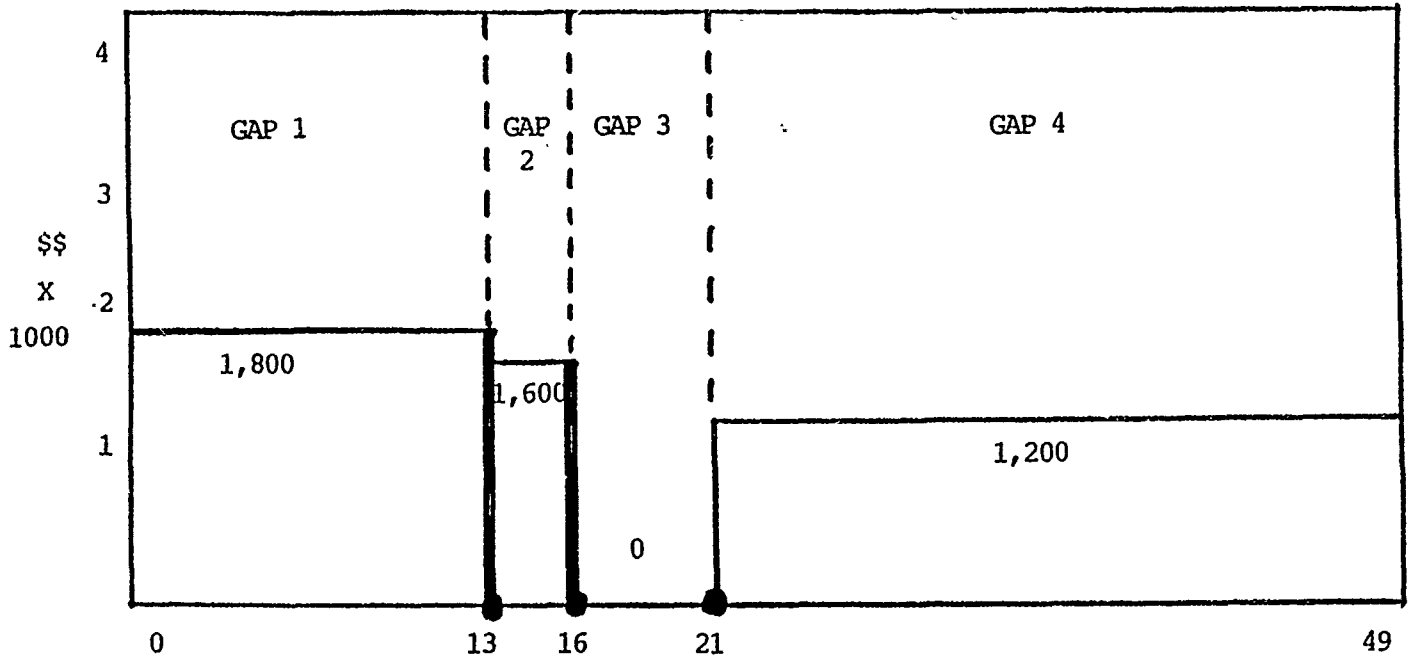
A Simple Example Estate Plan

Our Lt Col Example will retire with 20 years service at age 43. His wife Debbie will be 41. His children Eric, Laura and Robert are age 9, 5 and 2 respectively. They have decided \$4,000 per month is needed. He elects not to participate in SBP. He does not have any investment or outside income other than his retirement pay. He will rely on his new airline pilot job, retirement pay and Social Security. His estate planning task is to figure out how much insurance he will need to keep his family at their desired \$4,000 level in case he dies. Here's how you do it--scientifically.

Using the the Present Value of Annuity and Present Value charts at the end of this chapter, construct Lt Col Example's chart with the procedures in the following steps.

LT COL EXAMPLE'S ESTATE PLANNING CHART

\$ 4,000 MONTHLY INCOME TARGET



YEARS FOLLOWING RETIREMENT

NOTES: Eric 18 at Year 9; Laura 18 at Year 13; Robert 18 at Year 16; Debbie 62 at Year 21, 90 at Year 49.

Step 1. On the vertical scale, annotate dollars and draw a horizontal target line at \$4,000 as indicated on Lt Col Example's Estate Planning Chart.

Step 2. On the horizontal scale, annotate years. Plot Eric's 18th birthday at Year 9 ($9 + 9 = 18$), Laura's 18th at Year 13, and Robert's at Year 16. Plot Debbie's 62nd birthday at Year 21 ($41 + 21 = 62$). Since Debbie comes from hardy stock, Example thinks she'll live to 90, so plot her death at Year 49 ($41 + 49 = 90$). Those are the key years for our chart. (It is prudent to estimate life expectancy by referring to a life expectancy chart such as in Chapter IV and add five or ten years for safety).

Step 3. If Lt Col Example dies as soon as he retires, at Year 0, which is what we are constructing this chart for, his only income will be from Social Security. Social Security (SS) will pay his wife, with two or more kids, approximately \$1,900 per month. When Eric turns 18, she will still have two kids remaining, so the benefit continues. When Laura turns 18, however, Debbie's benefits will drop slightly. For the first 13 years, until Laura is 18, the family will get \$1,800 from SS. Plot this on the chart.

Step 4. With only one child, SS pays approximately \$1,600. Debbie will get this for three years, until Robert turns 18. If Robert decides to attend college, he remains eligible for SS, therefore, Debbie could receive four more

years of SS for him. For planning, however, plan for the worst case. Plot the \$1,600 block for the three years to Year 16.

Step 5. With no children, and Debbie younger than 62, she is on her own in the SS "blackout." Plot zero income for five years to Year 21.

Step 6. At age 62, Debbie will receive SS of approximately \$1,200 per month for the rest of her life. Plot that to Year 49 when she theoretically dies.

Step 7. Obviously, we aren't making enough money to provide \$4,000 per month. We have 4 distinct "gaps" or financial shortfalls from the target. Gap 1 is \$2,200 ($4,000 - 1,800 = 2,200$); Gap 2 is \$2,400; Gap 3 is \$4,000; and Gap 4 is \$2,800.

Step 8. To figure out how much money Lt Col Example needs when he dies at Year 0, several calculations are required. To factor in the time-value of money earning interest, we use the Present Value of Annuity (PVA) chart. To compensate for Gap 1, Example needs \$2,200 monthly or \$26,400 annually for 13 years. At the end of 13 years, this money used to plug the gap will be gone. This is an annuity in essence. Since it is spent monthly, however, the remainder will be earning interest. Assuming 6% for the entire planning chart, go to the PVA chart and reference 6% for 13 years. The PVA is 8.8527. $PVA \times \$26,400 = \$233,711$. If Example has \$233,711 in insurance when

he dies, and earns 6%, Debbie can withdraw \$2,200 monthly but will have zero income or principle remaining after 13 years. Now we move to Gap 2.

Step 9. Gap 2 is \$28,800 annually for three years. PVA for three years at 6% is 2.6730. $PVA \times \$28,800 = \$76,982$. BUT, Debbie receives the money when Example dies at Year 0. Since that would be 13 years earlier, the \$76,982 will earn interest for 13 years before she uses it.

Step 10. Go to the Present Value (PV) chart, and reference 6% for 13 years. $PV = .4688$. $PV \times \$76,982 = \$36,089$. That is, Debbie only requires \$36,089 of insurance proceeds when Example dies, to put in the bank at 6% interest for 13 years. This amount will produce the \$76,982 Debbie needs to pay her \$2,400 per month to fill Gap 2.

Step 11. Gap 3. Using the same methodology, $\$48,000 \times PVA$ (6% paying for 5 years) 4.2124 = \$202,195 $\times PV$ (6% earning for 16 years) .3936 = \$79,584. This amount is needed to fulfill Debbie's requirement during the SS blackout.

Step 12. Gap 4. Calculate similarly. $\$33,600 \times PVA$ (6% for 28 years) 13.4062 = \$450,448 $\times PV$ (6% for 21 years) .2942 = \$132,521. This amount is needed to earn interest for 21 years, then start paying Debbie \$2,800 per month until she "dies" at age 90.

Step 13. Add all four amounts needed to cover the gaps: $\$233,711 + \$36,089 + \$79,584 + \$132,521 = \$481,905$.

This amount is needed in a lump sum (a large insurance policy or a lot of liquid assets) to begin earning 6% in order to provide Debbie \$4,000 each month.

Step 14. This example is how to build a simple program to provide a monthly income. However, Lt Col Example's next step is to add \$150,000 to buy his family a house, \$30,000 for the kids' college education, and perhaps another \$50,000 for expenses incident to death, training Debbie for a new job and an orthodontist for Eric, etc. So the actual amount of assets Lt Col Example needs at his death is $\$481,905 + (\$150,000 + \$30,000 + \$50,000) = \$711,905$. It should be readily apparent now how each individual family's situation is different.

Also, it should be noted that Lt Col Example needs \$711,905 worth of assets. If he had \$20,000 in savings, a \$150,000 house that had only a \$75,000 mortgage, and \$50,000 worth of mutual fund shares, that would reduce his assets needed at the time of his death by $\$20,000 + \$75,000 + \$50,000 = \$145,000$.

The following calculation chart can be used for estate planning:

ESTATE PLANNING CHART CALCULATIONS

	(a) Monthly require- ment	(b) Annual require- ment (12) × (a)	(c) Length of gap in years	(d) PVA factor (at 5%)	(e) Amt. needed when gap commences (b) × (d)	(f) Nr. of years before gap	(g) PV factor (at 5%)	(h) Amt needed at year 0 (e) × (g)
Gap 1								
Gap 2								
Gap 3								
Gap 4								
Gap 5								

Amount needed \$ _____

The following list is a good guide to determining your net estate needs:

EXPENSES:

1. Capital needed to supplement income
2. Expenses incident to death
3. Outstanding indebtedness (mortgage, etc)
4. College
5. Death taxes and administrative costs

GROSS ESTATE REQUIRED. \$_____

ASSETS:

1. Life insurance at face value
2. Securities at present market value
3. Savings
4. Real estate at present market value
5. Other

TOTAL ASSETS. \$_____

ESTATE PLANNING DEFICIENCY \$_____

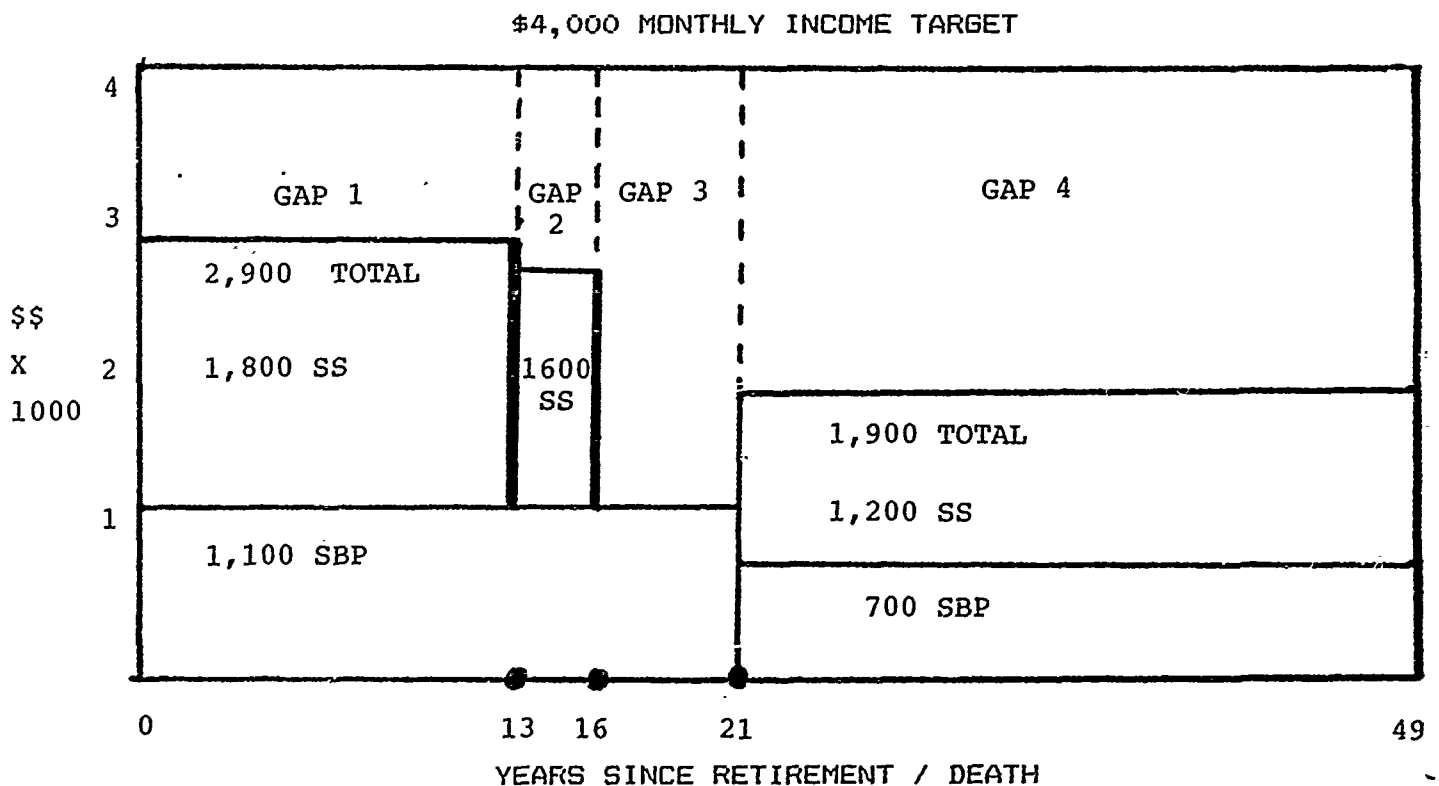
What if Lt Col Example participated in SBP? To provide an asset base upon which to build his estate planning, assume all assumptions remain the same. The calculations for PVA and PV have been completed. Lt Col Examples retired pay is \$2,000, of which SBP will pay a maximum of \$1,100 until Debbie is 62 years old.

LT COL EXAMPLE'S ESTATE WITH SBP INCOME

MONEY REQUIRED TO FILL GAPS:

1. \$116,855 2. \$19,550 3. \$57,700 4. \$99,390

TOTAL NEEDED: \$293,495



Note that the net difference in assets required at death between the estate with SBP is \$188,410 less than the non-SBP plan.

PRESENT VALUE OF ANNUITY TABLE (PVA)

Interest Rates Paid

Years	.05 (5%)	.06 (6%)	.08 (8%)	.10 (10%)
1	0.9524	0.9434	0.9239	0.9091
2	1.8594	1.8334	1.7833	1.7355
3	2.7232	2.6730	2.5771	2.4869
4	3.5460	3.4651	3.3121	3.1699
5	4.3295	4.2124	3.9927	3.7908
6	5.0757	4.9173	4.6229	4.3553
7	5.7864	5.5824	5.2064	4.8684
8	6.4632	6.2098	5.7466	5.3349
9	7.1078	6.8017	6.2469	5.7590
10	7.7217	7.3601	6.7101	6.1446
11	8.3064	7.8869	7.1390	6.4951
12	8.8633	8.3838	7.5361	6.8137
13	9.3936	8.8527	7.9038	7.1034
14	9.8981	9.2950	8.2442	7.3667
15	10.3797	9.7122	8.5595	7.6061
16	10.8378	10.1059	8.8514	7.8237
17	11.2741	10.4773	9.1216	8.0216
18	11.6896	10.8276	9.3719	8.2014
19	12.0853	11.1581	9.6036	8.3649
20	12.4622	11.4699	9.8181	8.5136
21	12.8212	11.7641	10.0168	8.6487
22	13.1630	12.0416	10.2007	8.7715
23	13.4886	12.3034	10.3711	8.8832
24	13.7986	12.5504	10.5288	8.9847
25	14.0939	12.7834	10.6748	9.0770
26	14.3752	13.0032	10.8100	9.1609
27	14.6430	13.2105	10.9352	9.2372
28	14.8981	13.4062	11.0511	9.3066
29	15.1411	13.5907	11.1584	9.3696
30	15.3725	13.7648	11.2578	9.4269
31	15.5928	13.9291	11.3498	9.4790
32	15.8027	14.0840	11.4350	9.5264
33	16.0025	14.2302	11.5139	9.5694
34	16.1929	14.3681	11.5869	9.6086
35	16.3742	14.4982	11.6546	9.6442
36	16.5469	14.6210	11.7172	9.6765
37	16.7113	14.7368	11.7752	9.7059
38	16.8679	14.8460	11.8289	9.7327
39	17.0170	14.9491	11.8786	9.7570
40	17.1591	15.0463	11.9246	9.7791

PRESENT VALUE TABLE (PV)

Interest Rates Paid

<i>Years</i>	<i>.05 (5%)</i>	<i>.06 (6%)</i>	<i>.08 (8%)</i>	<i>.10 (10%)</i>
1	.9524	.9434	.9259	.9091
2	.9070	.8900	.8573	.8264
3	.8638	.8396	.7938	.7513
4	.8227	.7921	.7350	.6830
5	.7835	.7473	.6806	.6209
6	.7462	.7050	.6302	.5645
7	.7107	.6651	.5835	.5132
8	.6768	.6274	.5403	.4665
9	.6446	.5919	.5002	.4241
10	.6139	.5584	.4632	.3855
11	.5847	.5268	.4289	.3505
12	.5568	.4970	.3971	.3186
13	.5303	.4688	.3677	.2897
14	.5051	.4403	.3405	.2633
15	.4810	.4173	.3152	.2394
16	.4581	.3936	.2919	.2176
17	.4363	.3714	.2703	.1978
18	.4155	.3503	.2502	.1799
19	.3957	.3305	.2317	.1635
20	.3769	.3118	.2145	.1486
21	.3589	.2942	.1987	.1351
22	.3418	.2775	.1839	.1228
23	.3251	.2618	.1703	.1117
24	.3101	.2470	.1577	.1015
25	.2953	.2330	.1460	.0923
26	.2812	.2198	.1352	.0839
27	.2678	.2074	.1252	.0763
28	.2551	.1956	.1159	.0693
29	.2429	.1846	.1073	.0630
30	.2314	.1741	.0994	.0573
31	.2204	.1643	.0920	.0521
32	.2099	.1550	.0852	.0474
33	.1999	.1462	.0789	.0431
34	.1904	.1379	.0730	.0391
35	.1813	.1301	.0676	.0356
36	.1727	.1227	.0626	.0323
37	.1644	.1158	.0580	.0294
38	.1566	.1092	.0537	.0267
39	.1491	.1031	.0497	.0243
40	.1420	.0972	.0460	.0221

CHAPTER VI

COMPARATIVE ANALYSIS OF SBP

In this chapter, a computer program analysis of SBP compared with alternative commercial term life insurance will be accomplished. The computerized data is listed on page 54. The program was designed by the government to help prospective retirees compare SBP costs with costs for a one-year term policy that would yield the lump sum amount needed to invest, at an assumed interest/investment return rate, to provide the same monthly annuity SBP would provide. The printout displays the present and future value of retired pay and SBP annuities. The figures shown for the replacement value of retired pay and SBP annuities represent the amounts that would have to be invested, at the assumed rate, to yield the annual retired pay or annuity, increasing at an annual rate of assumed inflation/COLA, shown for the member or spouse at any given point in their lives.

The program used for this data is unique. Using the government's basic program, available at any Retirement/Separation Section of the Consolidated Base Personnel Office, which reflects the OLD system of calculating SBP costs, I had the Air War College computer staff reprogram it to reflect the NEW 6.5 percent system.

The personal data for this example program is based on

the following: Lt Col, retiring in 1991 at age 43, nondisabled, spouse age 41, with a monthly retired pay of \$2,000. Economic assumptions are: marginal income tax rate of 28%, interest rate of 6%, and inflation (based upon CPI COLA driven data in SBP program) of 3%.

The SBP cost is 6.5% of \$2,000 or \$130 per month. The SBP benefit is \$1,100 per month at 55% of the retired pay base of \$2,000. Inflation will drive both benefit and cost up annually at the 3% assumed rate.

A short explanation of the data columns is necessary. YEAR and AGE are self explanatory. ANNUAL RETIRED PAY is inflation adjusted. LUMP SUM VALUE OF RETIRED PAY is amount needed to invest at 6% to yield the ANNUAL RETIRED PAY shown. ANNUAL SBP COST is self explanatory. AFTER TAX NET COST OF SBP is the ANNUAL SBP COST adjusted for the 28% tax bracket, that is, since the SBP payment is tax deductible, its real cost is 28% cheaper. In this example, the \$130 really costs the retiree only \$94. CUMULATIVE NET COST AT INTEREST is the after-tax SBP net cost if invested at 6% which amounts to \$94 per month. This total amount would be available, after taxes, to invest in an alternative to SBP. SPOUSE AGE and ANNUAL SBP BENEFIT ($12 \times \$1,100 = \$13,200$) are self explanatory. FACE VALUE OF SURVIVOR BENEFIT is amount surviving spouse would need to invest at 6% to yield the ANNUAL SBP BENEFIT. ONE-YEAR TERM PREMIUM is

cost of term insurance with a face value equal to FACE VALUE OF SURVIVOR BENEFIT. A review of the term/whole life comparison chart in Chapter III shows that the cost of insurance used in this computer program does not appear to be the least expensive. Notice by the year 1999 there has been a cost cross-over with SBP becoming cheaper. CUMULATIVE TERM PREMIUMS AT INTEREST is accrual of the term premiums invested at 6%. Compare these figures with those in the CUMULATIVE NET COST (column 7). That comparison is a quick reference showing how much total cumulative dollars would have been spent on SBP or term to date. Note the cumulative cost cross-over point is in Year 2007.

YEAR	AGE	ANNUAL RETIRED PAY	LUMP-SUM VALUE OF RETIRED PAY	ANNUAL SBP COST	AFTER TAX NETCOST OF SBP	CUMULATIVE NETCOST (INTEREST)	SPS AGE	ANNUAL SBP BENEFIT	FACE* VALUE OF SURVIVOR BENEFIT	ONE YEAR TERM PREMIUM	CUMULATIVE TERM PREMS (INTEREST)
1991	43	24000	514240	1560	1123	1156	41	13200	275218	681	701
1992	44	24720	521196	1607	1157	2417	42	13596	278335	745	1511
1993	45	25462	527931	1655	1192	3789	43	14004	281281	816	2441
1994	46	26225	534421	1705	1227	5280	44	14424	284006	897	3511
1995	47	27012	540647	1756	1264	6898	45	14857	286510	995	4746
1996	48	27823	546599	1808	1302	8652	46	15302	288723	1099	6163
1997	49	28657	552250	1863	1341	10552	47	15761	290618	1214	7783
1998	50	29517	557577	1919	1381	12608	48	16234	292175	1342	9631
1999	51	30402	562559	1976	1423	14829	49	16721	293367	1475	11728
2000	52	31315	567163	2035	1466	17228	50	17223	294167	1624	14193
2001	53	32254	571370	2097	1509	19816	51	17740	294546	1781	16784
2002	54	33222	575147	2159	1555	22605	52	18272	294469	1949	19798
2003	55	34218	578464	2224	1601	25610	53	18820	293901	2123	23171
2004	56	35245	581282	2291	1649	28845	54	19385	292808	2312	26942
2005	57	36302	583576	2360	1699	32325	55	19966	291146	2514	31147
2006	58	37391	585318	2430	1750	36066	56	20565	288869	2724	35820
2007	59	38513	586470	2503	1802	40086	57	21182	285929	2949	41006
2008	60	39668	587008	2578	1856	44402	58	21818	282269	3184	46744
2009	61	40858	586898	2656	1912	49035	59	22472	277834	3426	53076
2010	62	42084	586107	2735	1970	54005	60	23146	272558	3681	60051
2011	63	43347	584616	2818	2029	59334	61	23841	266372	3950	67721
2012	64	44647	582411	2902	2089	65045	62	15716	259196	4230	76139
2013	65	45986	579487	2989	2152	71164	63	16187	260218	4678	85523
2014	66	47366	575833	3079	3079	78603	64	16673	260995	5180	95988
2015	67	48787	571455	3171	3171	86584	65	17173	261509	5738	107654
2016	68	50251	566360	3266	3266	95142	66	17688	261748	6362	120663
2017	69	51758	560569	3364	3364	104315	67	18219	261699	7052	135163
2018	70	53311	554103	3465	3465	114141	68	18765	261347	7818	151322
2019	71	54910	547000	3569	3569	124664	69	19328	260682	8665	169323
2020	72	56558	539302	3676	3676	135929	70	19908	259699	9593	189359
2021	73	58254	531053	3787	3787	147983	71	20506	258395	10609	211644
2022	74	60002	522310	3900	3900	160878	72	21121	256766	11710	236399
2023	75	61802	513124	4017	4017	174666	73	21754	254814	12891	263855
2024	76	63656	503538	4138	4138	189406	74	22407	252541	14165	294270
2025	77	65566	493623	4262	4262	205158	75	23079	249959	15526	327911
2026	78	67533	483442	4390	4390	221987	76	23772	247076	16980	365068
2027	79	69559	473077	4521	4521	239961	77	24485	243909	18516	406035
2028	80	71645	462599	4657	4657	259154	78	25219	240477	20149	451142
2029	81	73795	452116	4797	4797	279641	79	25976	236798	21851	500707
2030	82	76009	441704	4941	4941	301506	80	26755	232900	23382	554823
2031	83	78289	430978	5089	5089	324836	81	27558	228803	24975	613826
2032	84	80638	419947	5241	5241	349722	82	28384	224529	26618	678061
2033	85	83057	408596	5399	5399	376264	83	29236	220108	28054	747628
2034	86	85548	396371	5561	5561	404565	84	30113	215568	30597	823987
2035	87	88115	385252	5727	5727	434736	85	31016	210947	32994	907396
2036	88	90758	375109	5899	5899	466893	86	31947	206274	35243	998124
2037	89	93481	365822	6076	6076	501163	87	32905	201600	37339	1096455
2038	90	96285	357249	6259	6259	537676	88	33892	196957	39376	1202782
2039	91	99174	349428	6446	6446	576574	89	34909	192174	41205	1317371
2040	92	102149	342197	6640	6640	618004	90	35957	187256	42866	1440547
2041	93	105214	335468	6839	6839	662125	91	37035	182194	44354	1572645
2042	94	108370	329151	7044	7044	709105	92	38146	176743	45622	1713974
2043	95	111621	323202	7255	7255	759121	93	39291	171785	46893	1865092

Comparison--Invest the Entire SBP Premium

One option to compare with the computerized analysis would be to take all the SBP premiums, after taxes, and place them in a 10% investment. Review the computer data on the following page. The CUMULATIVE NET COST AT INTEREST column reflects the after tax SBP premiums accumulated and earning 10%. The FACE VALUE OF SURVIVOR BENEFIT reflects the amount needed at a 6% yield to equal the SBP benefit. When the NET COST column grows to equal the VALUE column, the 10% investment has the financial power to equal the SBP benefit. Note that it takes until Year 2020, or age 72 to have enough cash on hand to start an income stream similar to SBP. This is obviously unsatisfactory. Insurance, or other liquid assets, must be used to make up the difference.

YEAR	AGE	ANNUAL SBP COST	AFTER TAX NETCOST OF SBP	CUMULATIVE NETCOST (INTEREST)	FACE* VALUE OF SURVIVOR BENEFIT
1991	43	1560	1123	1178	275218
1992	44	1607	1157	2509	278335
1993	45	1655	1192	4010	281281
1994	46	1705	1227	5698	284006
1995	47	1756	1264	7594	286510
1996	48	1808	1302	9719	288723
1997	49	1863	1341	12097	290618
1998	50	1919	1381	14756	292175
1999	51	1976	1423	17724	293367
2000	52	2035	1466	21033	294167
2001	53	2097	1509	24720	294546
2002	54	2159	1555	28822	294469
2003	55	2224	1601	33384	293901
2004	56	2291	1649	38452	292808
2005	57	2360	1699	44080	291146
2006	58	2430	1750	50323	288867
2007	59	2503	1802	57246	285929
2008	60	2578	1856	64917	282269
2009	61	2656	1912	73414	277834
2010	62	2735	1970	82822	272558
2011	63	2818	2029	93231	266372
2012	64	2902	2089	104746	259196
2013	65	2989	2152	117478	260218
2014	66	3079	3079	132455	260995
2015	67	3171	3171	149026	261509
2016	68	3266	3266	167354	261748
2017	69	3364	3364	187618	261699
2018	70	3465	3465	210014	261347
2019	71	3569	3569	234759	260682
2020	72	3676	3676	262091	259699
2021	73	3787	3787	292271	258395
2022	74	3900	3900	325589	256766
2023	75	4017	4017	362361	254814
2024	76	4138	4138	402937	252541
2025	77	4262	4262	447700	249959
2026	78	4390	4390	497074	247076
2027	79	4521	4521	551523	243909
2028	80	4657	4657	611560	240477
2029	81	4797	4797	677747	236798
2030	82	4941	4941	750703	232900
2031	83	5089	5089	831111	228803
2032	84	5241	5241	919719	224529
2033	85	5399	5399	1017353	220106
2034	86	5561	5561	1124920	215568
2035	87	5727	5727	1243419	210947
2036	88	5899	5899	1373949	206274
2037	89	6076	6076	1517716	201600
2038	90	6259	6259	1676052	196957
2039	91	6446	6446	1850418	192174
2040	92	6640	6640	2042424	187250

Comparison--Buy Cheap Term and Invest the Difference

Another alternative is to purchase the lowest cost term insurance and invest the difference of SBP cost and term premium. A 10% return will be assumed. The Insurance Cost Comparison Chart showed that the cost of term insurance used in this computer program does not appear to be the cheapest available. The following rate data is provided by the First International Life Insurance Company:

ANNUAL PREMIUMS FOR:			
AGE	\$100,000	\$250,000	\$500,000
40	114	210	341
45	124	235	386
50	179	372	546
55	254	525	792
60	383	875	1,408
65	643	1,525	2,550
70	1,073	2,600	5,161

To determine the cost of insurance needed to equal the SBP benefit, the FACE VALUE OF SURVIVOR BENEFIT column from the computer data on page 55 was used. For arithmetic simplicity, five-year averages were used.

BUY CHEAP TERM AND INVEST THE DIFFERENCE

YEAR	SBP COST	TERM NEEDS	COST OF TERM	DIFF TO INVEST	INVEST EARNES	CUM INVEST
1991	1123	280K	260	863	86	949
92	1157	"	"	897	185	2031
93	1192	"	"	932	296	3259
94	1227	"	"	967	423	4649
95	1264	"	"	1004	565	6218
1996	1302	291K	430	872	709	7799
....						
....		(calculations continue--not all shown for simplicity)				
....						
2000	1466	"	"	1036	1487	16358
2001	1509	293K	615	894	1725	18977
....						
....						
2005	1699	"	"	1084	2993	32918
2006	1750	280K	980	770	3369	37057
....						
2010	1970	"	"	990	5349	58841
2011	2029	262K	1600	429	5927	65197
....						
2015	3171	"	"	1571	9130	100425
2016	3266	262K	2720	546	10099	111068
....						
2020	3676	"	"	956	15148	166628

Note the cheap term premium is still less than the SBP premium (increasing with COLA increases in retired pay) at Year 2020, age 72. However, even cheap term will go off the

charts cost wise and will not be affordable beyond approximately age 72. Although an impressive cash/investment buildup of \$166,628 has been accumulated, in addition to enough insurance to equal SBP, term insurance is unaffordable beyond the Year 2020. Also, will the cash buildup be enough to continue an annuity for the spouse equal to SBP? On the computer schedule, starting at 2020 for approximately 20 years to spouse age 90, a rough average of SBP income would be about \$28,000 annually. Refer again to the Present Value of Annuity table. PVA for 20 years at 10% is 8.5136. $PVA \times \$28,000 = \$238,380$ required to provide such an annuity. Therefore, SBP is superior in this comparison in providing a guaranteed cash flow for the survivor.

But what if the investment rate turned out to be 20%? Then again, what if it was only 6%? How much risk are you, the retiree, going to assume? As you age, are you going to systematically invest those extra dollars? Will your health continue to warrant the cheap term rates? All these questions are very serious because of the dramatic impact of faulty assumptions on a family financial plan. SBP takes the worry totally out of the formula. The only worry might be..."could I have done better with investments?"

CHAPTER VII

TRYING TO KEEP IT SIMPLE--A GUIDE FOR SBP DECISION MAKING

The following is a list of "bottom line" statements and special cases that may simplify SBP decision making:

1. SBP is a superior guaranteed cash flow device to provide an inflation proof monthly income to a spouse and/or dependent children. It does not leave a residual estate for grown up children and other relatives. It is designed to protect those who need the protection the most.
2. Learn the basics of estate planning in Chapter V. You cannot fully understand what is required without it.
3. ALWAYS participate in SBP at the 2.5% of \$349 base.
4. If you are relatively wealthy and have accumulated a sizeable estate for your survivors that is liquid for their immediate use upon your death, and you are satisfied with your estate plan, explore more aggressive, higher yielding equity investments for your SBP dollars.
5. If you are relatively poor asset wise, and you want to provide for your dependents, take SBP.
6. If you are somewhere between poor and rich, estate plan carefully.
7. If you are uninsurable, or have health problems that would affect your insurance coverage, take SBP.

8. If you are a smoker with significantly higher insurance premiums, take SBP.
9. Bachelors: do not take SBP. You can get it later if you marry.
10. Divorcees: consider children coverage.
11. Female retirees (especially those with older husbands): Because statistics say you will outlive your husband, you probably should not get SBP unless children are involved.
12. Handicapped children: If you have one, take SBP. A handicapped child is not cut off from SBP at 18/22 years old.
13. Retiring Reservists: take SBP. You will draw retired pay near age 60, when term insurance rates are rising rapidly.
14. A wife who is much younger than her husband has a longer time to draw SBP benefits and avoid the age 62 offset.
15. If your age is close to 60, get SBP. Term premiums are too high. (10:20)

CHAPTER VIII

CONCLUSIONS

I hope the reader now has a solid understanding of exactly what SBP is, how it works, what it costs, what it pays, what the alternatives are, key economic assumptions, a feeling for the historic dynamics of the economy, and the basics of family financial planning. I believe it takes this understanding to make an informed decision regarding SBP.

If a retiree wants his/her spouse and dependent children to receive a straight cash flow of guaranteed, inflation proofed, no investment management headache money, then SBP cannot be beat. SBP is NEVER a BAD deal.

If a retiree expertly managed his SBP premium every month, and continued to do so on into his old age, it is possible for him to buy term protection and invest the difference AT HIGH RATES OF RETURN, and beat SBP. But not likely. And it would entail considerable risk. When financial planning to provide a basic floor of cash flow for monthly income to survivors, a retiree should be conservative.

In 1987, the Department of Defense had a research firm (Resource Consultants, Inc. and the Hay/Huggins Company of Washington D.C.) study SBP and many alternatives. A quote from their report cover letter follows: "As you requested, Hay/Huggins actuaries and benefits professionals have compared the cost and benefits of the SBP to the costs and benefits of

other estate-building options. These include term life insurance, investment and a recently developed form of combined investment and insurance often called universal life insurance.

We compared the options.....and found that, in every case, SBP provided the best benefits for the least cost. SBP has advantages that simply cannot be matched by alternative investments or insurance programs." (11:34)

However, it must be noted that SBP is not a replacement for other financial programs. It is NOT enough by itself. SBP should be used as a FOUNDATION of one's family financial and estate planning, as in the Lt Col Example plan. SBP should be supplemented with savings, investments, real estate holdings and additional life insurance. Likewise, because of SBP's ability to provide that floor of financial protection, any decision to replace it with alternatives should be very carefully weighed.

Don't get apples and oranges mixed up. SBP is an excellent foundation for your estate planning--not a competitor against your investment strategies. That is where the bulk of the confusion enters when Air Force members discuss the plan. I hope this report has shed some light on the reader's understanding of SBP and its role in financial planning.

11. SBP--It's Your Choice. Uniformed Services Survivor Benefit Plan, Department of Defense Brochure. Washington, D.C., 1987.
12. Survivor Benefit Plan. Letter, Deputy Assistant Secretary of Defense for Military Manpower and Personnel Policy to the Assistant Secretaries of Army, Navy and Air Force. Washington, D.C., September 4, 1987.
13. United States Air Force Regulation 211-14. Survivor Benefit Plan. Washington, D.C. Department of the Air Force, 1986.
14. USPA and IRA Newsletter, January 1990. Fort Worth, TX: United Services Planning Association and Independent Research Agency, Inc., 1990.