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MONEY

WISE

REWARD YOURSELF

THROUGH FINANCIAL KNOWLEDGE

RICHARD P. BLOOM, CLU, ChFC, REBC

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DEDICATION

TO: THOSE WHO SERVE, TEACH AND PROTECT

ABOUT THE AUTHOR

RICHARD P. BLOOM is a well-known financial educator who has specialized in financial and retirement planning and employee benefits for over 30 years. Mr. Bloom is a Life Member of the Million Dollar Round Table and has received numerous sales and service achievement awards.

In addition to a BA and M.Ed., he holds the Chartered Life Underwriter, Chartered Financial Consultant, Registered Health Underwriter and Registered Employee Benefits Consultant designations from the American College. He is a contributor to the Jump\$tart Coalition for Personal Financial Literacy and New Age Investor and the author of the financial education books, IT'S IN YOUR INTERE\$T and INTERE\$T WISE.

A resident of Palm Beach Gardens, FL he may be contacted at rb4finplan@aol.com.

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PREFACE

During your lifetime, you will be confronted with having to make various financial decisions. Whether you invest or save, you need to become money wise, especially how interest affects your financial well being.

MONEY WISE has been written to provide you with easy to understand information on how to earn and keep more of your interest on your money and minimize taxes.

When presented with financial alternatives and strategies concerning interest, you will be able to make the right choice, rewarding yourself with hundreds and thousands of dollars in additional interest each and every year.

It is my hope that this book will help make financial plans and interest work for, not against you, by becoming a better informed investor, saver, taxpayer and financially wiser manager of your money.

2005

RICHARD P. BLOOM

INTRODUCTION

The role that interest plays in our everyday lives is fundamental to our financial well being.

Today, more than ever, consumers need to become money wise, especially information that will be financially beneficial to them in order to earn and keep more on what they save and invest, and pay less in taxes.

Banks, insurance companies and brokerage firms are all competing for your business. Each has a deal, making it difficult for you to determine which is best for you.

MONEY WISE is a guide for consumers who wish to understand and profit by how interest and taxes affect them. Making sense of the various alternatives with which you are confronted, you will come out the winner. My 30 years in the life insurance and financial service industry has made it very clear to me, that, when it comes to personal financial decisions such as choosing a savings account, after tax, tax deferred, tax-free or tax deductible investments, many consumers do not know how to maximize their financial gain and minimize taxes, costing themselves hundreds and thousands of dollars every year.

The interest rate you earn, the compounding method, the period of time involved, your tax bracket, rate of inflation, how early you start, the type of investment you choose, and your awareness of basic financial concepts, facts, and strategies will determine eventually how much you profit and how much you pay.

This book contains many easy to understand tables, examples and explanations on how to locate, use, and apply the data for specific situations to help you make the right choice.

You will be able to apply **MONEY WISE**, immediately and throughout your life, rewarding yourself with thousands, tens of thousands, and even hundreds of thousands of more dollars earned on your money, and saved on taxes.

**INCREASE YOUR WEALTH
BECOME
MONEY WISE**

CHAPTER 1

% THE WONDERS OF COMPOUND INTEREST %

WHAT IS INTEREST?

INTEREST is money paid for the use of money, expressed as a percent (%) or rate over a period of time. It is the amount of money paid each year at a declared rate on borrowed or invested capital.

Interest is paid to you for the use of your money or paid by you for using someone else's money.

Interest can be simple or compound.

Simple interest is interest earned only on the principal.

Compound interest is interest earned on the principal and added to the original principal as it is earned. You are therefore earning interest on interest as well as principal. The greater the period of time, the larger the difference becomes in favor of compound over simple interest. The more frequent the compounding period the higher your return. This larger amount is known as the **annual percentage yield (a.p.y.)**, defined as the actual interest rate your money earns at the stated compound interest rate for a full year on a deposit such as a money market or certificate of deposit.

Albert Einstein called compound interest the "eighth wonder of the world and the most powerful force on earth" for wealth accumulation.

For example, one dollar deposited at 3%, compounding annually from the time Columbus discovered America would have accumulated to over one million dollars.

.A sum of \$8,000 compounding annually at 5% for the past 100 years would likewise have accumulated today to more than one million dollars.

THE SECRET TO BUILDING WEALTH AND GROWING RICH IS TO LET YOUR MONEY COMPOUND, COMPOUND, AND COMPOUND, YEAR AFTER YEAR AFTER YEAR.

THE VALUE OF A SINGLE DEPOSIT OVER TIME

How can you easily determine what a lump sum will grow to at various interest rates and time periods?

The following table based upon the growth of a single deposit of \$1.00 provides annual compounding "**factors**" or "**multipliers**" which will enable you to obtain an answer for any amount of money.

COMPOUND INTEREST TABLE
HOW A SINGLE DEPOSIT OF \$1.00 WILL GROW AT VARIOUS INTEREST RATES COMPOUNDED ANNUALLY

END OF YEAR	INTEREST RATE								
	3%	3.5%	4%	4.5%	5%	5.5%	6%	6.5%	7%
1	1.030	1.035	1.040	1.045	1.050	1.055	1.060	1.065	1.070
2	1.061	1.071	1.082	1.092	1.103	1.113	1.124	1.134	1.145
3	1.093	1.109	1.125	1.141	1.158	1.174	1.191	1.208	1.225
4	1.126	1.148	1.170	1.193	1.216	1.239	1.262	1.286	1.311
5	1.159	1.188	1.217	1.246	1.276	1.307	1.338	1.370	1.403
6	1.194	1.229	1.265	1.302	1.340	1.379	1.419	1.459	1.501
7	1.230	1.272	1.316	1.361	1.407	1.455	1.504	1.554	1.606
8	1.267	1.317	1.369	1.422	1.477	1.535	1.594	1.655	1.718
9	1.305	1.363	1.423	1.486	1.551	1.619	1.689	1.763	1.838
10	1.344	1.411	1.480	1.553	1.629	1.708	1.791	1.877	1.967
15	1.558	1.675	1.801	1.935	2.079	2.232	2.397	2.572	2.759
20	1.806	1.990	2.191	2.412	2.653	2.918	3.207	3.524	3.870
25	2.094	2.363	2.666	3.005	3.386	3.813	4.292	4.828	5.427
30	2.427	2.807	3.243	3.745	4.322	4.984	5.743	6.614	7.612
35	2.814	3.334	3.946	4.667	5.516	6.514	7.686	9.062	10.677
40	3.262	3.959	4.801	5.816	7.040	8.513	10.286	12.416	14.974

END OF YEAR	INTEREST RATE							
	7.5%	8%	8.5%	9%	9.5%	10%	12%	15%
1	1.075	1.080	1.085	1.090	1.095	1.100	1.120	1.150
2	1.156	1.166	1.177	1.188	1.199	1.210	1.254	1.323
3	1.242	1.260	1.277	1.295	1.313	1.331	1.405	1.521
4	1.335	1.360	1.386	1.412	1.438	1.464	1.574	1.749
5	1.436	1.469	1.504	1.539	1.574	1.610	1.762	2.011
6	1.543	1.587	1.631	1.677	1.724	1.772	1.974	2.313
7	1.659	1.714	1.770	1.828	1.887	1.949	2.211	2.660
8	1.783	1.851	1.921	1.993	2.067	2.144	2.476	3.059
9	1.917	1.999	2.084	2.172	2.263	2.358	2.773	3.518
10	2.061	2.159	2.261	2.367	2.478	2.594	3.106	4.046
15	2.959	3.172	3.400	3.642	3.901	4.177	5.474	8.137
20	4.248	4.661	5.112	5.604	6.142	6.727	9.646	16.367
25	6.098	6.848	7.687	8.623	9.668	10.835	17.000	32.919
30	8.755	10.063	11.588	13.268	15.220	17.449	29.960	66.212
35	12.569	14.785	17.380	20.414	23.960	28.102	52.800	133.176
40	18.044	21.725	26.133	31.409	37.719	45.259	93.051	267.864

To find how much a single deposit of \$25,000 would grow to in 25 years, assuming a 5% compounded annual interest rate, locate the factor, 3.386, where the columns for 5% and 25 years intersect and multiply it by \$25,000. **Answer:** \$84,650.

To determine how much a single deposit of \$25,000 would grow to at the end of 25 years if the interest rate was 6% for the first 6 years, 8% for the next 9 years, and 7% for the remaining 10 years, you would first locate the factor, 1.419, where the columns for 6% and 6 years intersect and multiply it by \$25,000.

You would next multiply the answer, \$35,475, by the factor of 1.999, located where the columns for 8% and 9 years intersect. Finally, multiply the answer, \$70,915 by the factor, 1.967, located where the columns for 7% and 10 years intersect, to arrive at your answer of \$139,490.

HOW \$10,000 WILL GROW OVER TIME AT VARIOUS INTEREST RATES COMPOUNDED ANNUALLY

END OF YEAR	INTEREST RATE									
	3%	4%	5%	6%	7%	8%	9%	10%	12%	15%
5	11,592	12,166	12,762	13,382	14,025	14,693	15,386	16,105	17,623	20,113
10	13,439	14,802	16,288	17,908	19,671	21,589	23,673	25,937	31,058	40,455
15	15,579	18,009	20,789	23,965	27,590	31,721	36,424	41,772	54,735	81,370
20	18,061	21,911	26,532	32,071	38,696	46,609	56,044	67,274	96,462	163,665
25	20,937	26,658	33,863	42,918	54,274	68,484	86,230	108,347	170,000	329,189
30	24,272	32,433	43,219	57,434	76,122	100,626	132,676	174,494	299,599	662,117
35	28,138	39,460	55,160	76,860	106,765	147,853	204,139	281,024	527,996	1,331,755
40	32,620	48,010	70,399	102,857	149,744	217,245	314,094	492,592	930,509	2,678,635

To determine how sums greater than \$10,000 would grow, without using the compound interest table, multiply the figures in the table as follows:

SUM	FACTOR
\$12,000	x 1.2
\$15,000	x 1.5
\$20,000	x 2
\$25,000	x 2.5
\$50,000	x 5
\$100,000	x 10

To determine how sums less than \$10,000 would grow, without using the compound interest table, divide the figures in the table as follows:

SUM	FACTOR
\$1,000	--: 10
\$2,000	--: 5
\$4,000	--: 2.5
\$5,000	--: 2
\$8,000	--: 1.2

To determine what a deposit made every year would accumulate to, the table below provides the factors by interest rate and time period.

ANNUAL COMPOUND INTEREST TABLE
HOW \$1.00 DEPOSITED AT THE BEGINNING OF EACH YEAR WILL GROW AT
VARIOUS INTEREST RATES COMPOUNDED ANNUALLY

END OF YEAR	INTEREST RATE								
	3%	3.5%	4%	4.5%	5%	5.5%	6%	6.5%	7%
1	1.030	1.035	1.040	1.045	1.050	1.055	1.060	1.065	1.070
2	2.091	2.106	2.122	2.137	2.153	2.168	2.184	2.199	2.215
3	3.184	3.215	3.247	3.278	3.310	3.342	3.375	3.407	3.440
4	4.309	4.363	4.416	4.471	4.526	4.581	4.637	4.694	4.751
5	5.468	5.550	5.633	5.717	5.802	5.888	5.975	6.064	6.153
6	6.663	6.779	6.898	7.019	7.142	7.267	7.394	7.523	7.654
7	7.892	8.052	8.214	8.380	8.549	8.722	8.898	9.077	9.260
8	9.159	9.369	9.583	9.802	10.027	10.256	10.491	10.732	10.978
9	10.464	10.731	11.006	11.288	11.578	11.875	12.181	12.494	12.816
10	11.808	12.142	12.486	12.841	13.207	13.584	13.972	14.372	14.784
15	19.157	19.971	20.825	21.719	22.658	23.641	24.673	25.754	26.881
20	27.676	29.270	30.969	32.783	34.719	36.786	38.993	41.349	43.865
25	37.553	40.313	43.312	46.571	50.114	53.966	58.156	62.715	67.677
30	49.003	53.430	58.328	63.752	69.761	76.419	83.802	91.989	101.073
35	62.276	69.008	76.598	85.164	94.836	105.765	118.121	132.097	147.914
40	77.663	87.510	98.827	111.847	126.840	144.119	164.048	187.048	213.610

END OF YEAR	INTEREST RATE							
	7.5%	8%	8.5%	9%	9.5%	10%	12%	15%
1	1.075	1.080	1.085	1.090	1.095	1.100	1.120	1.150
2	2.231	2.246	2.262	2.278	2.294	2.310	2.374	2.473
3	3.473	3.506	3.540	3.573	3.607	3.641	3.779	3.993
4	4.808	4.867	4.925	4.985	5.045	5.105	5.353	5.742
5	6.244	6.336	6.429	6.523	6.619	6.716	7.115	7.754
6	7.787	7.923	8.061	8.200	8.343	8.487	9.089	10.067
7	9.446	9.637	9.831	10.029	10.230	10.436	11.300	12.727
8	11.230	11.488	11.751	12.021	12.297	12.580	13.776	15.786
9	13.147	13.487	13.835	14.193	14.560	14.937	16.549	19.304
10	15.208	15.646	16.096	16.560	17.039	17.531	19.655	23.349
15	28.077	29.324	30.632	32.003	33.442	34.950	41.753	54.718
20	46.553	49.423	52.489	55.765	59.264	63.003	80.699	117.810
25	73.076	78.954	85.355	92.324	99.914	108.182	149.334	244.712
30	111.154	122.346	134.773	148.575	163.908	180.943	270.293	499.957
35	165.821	186.102	209.081	235.125	264.649	298.127	483.463	1013.346
40	244.301	279.781	320.816	368.292	423.239	486.852	859.142	2045.954

To find how much an annual deposit of \$2,000 will grow at an assumed 5% interest rate compounded annually for 20 years, locate the factor, 34.719 where the columns for 5% and 20 years intersect. Multiply the factor by \$2,000 to arrive at your answer, \$69,438.

WHAT A DIFFERENCE A RATE MAKES
HOW \$2,000 DEPOSITED AT THE BEGINNING OF EACH YEAR WILL GROW AT
VARIOUS INTEREST RATES COMPOUNDED ANNUALLY

TOTAL YEAR	DEPOSITS	INTEREST RATE						
		4%	5%	6%	7%	8%	9%	10%
1	\$ 2,000	\$ 2,080	\$ 2,100	\$ 2,120	\$ 2,140	\$ 2,160	\$ 2,180	\$ 2,200
5	\$ 10,000	11,266	11,604	11,951	12,307	12,672	13,047	13,431
10	\$ 20,000	24,973	26,414	27,943	29,567	31,291	33,121	34,077
15	\$ 30,000	41,649	45,315	49,345	53,776	58,649	64,007	69,899
20	\$ 40,000	61,938	69,439	77,985	87,730	98,846	111,529	126,005
25	\$ 50,000	86,623	100,227	116,313	135,353	157,909	184,648	216,364
30	\$ 60,000	116,657	139,522	167,603	202,146	244,692	297,150	361,887
35	\$ 70,000	153,197	189,673	236,242	295,827	372,204	470,249	596,254
40	\$ 80,000	197,653	253,680	328,095	427,220	559,562	736,584	973,704

From the above table, you can see how a small difference in interest can, through the power of compounding result in more money for you. The following table illustrates what a deposit made every year would grow to, if compounded monthly.

MONTHLY COMPOUND INTEREST TABLE
HOW \$1.00 DEPOSITED AT THE BEGINNING OF EACH YEAR
WILL GROW AT VARIOUS INTEREST RATES

END OF YEAR	INTEREST RATE				
	3%	4%	5%	6%	7%
5	\$ 5.475	5.645	5.822	6.005	6.195
10	11.834	12.535	13.293	14.105	14.976
15	19.221	20.947	22.882	25.030	27.426
20	27.800	31.216	35.188	39.767	45.074
25	37.766	43.752	50.982	59.644	70.093
30	49.341	59.055	71.249	86.455	105.561
35	62.785	77.736	97.260	122.620	155.840
40	78.402	100.541	130.642	171.401	227.118

	8%	9%	10%	12%	15%
5	6.392	6.596	6.808	7.256	7.996
10	15.914	16.923	18.009	20.439	24.481
15	30.101	33.092	36.438	44.387	60.339
20	51.238	58.409	66.760	87.894	135.140
25	82.728	98.045	116.649	166.933	292.760
30	129.644	160.104	198.731	310.523	624.896
35	199.541	257.269	333.781	571.382	1,324.770
40	303.677	409.399	555.980	1,045.283	2,799.537

To find how much an annual deposit of \$2,000 each year will grow to at an assumed 5% interest rate, compounded monthly for 25 years, locate the factor, 50.982 where the columns for 5% and 25 years intersect.

Multiplying the factor by \$2,000 gives you \$101,964.

If your \$2,000 annual deposit was compounding annually for 25 years at 5% interest, instead of monthly, you would have only \$100,227.

The following table will help you calculate what a monthly deposit will accumulate to in the future at various interest rates, compounded annually.

WHAT A \$1.00 MONTHLY DEPOSIT WILL GROW TO IN THE FUTURE AT VARIOUS INTEREST RATES COMPOUNDING ANNUALLY
--

END OF YEAR	INTEREST RATE				
	3%	4%	5%	6%	7%
1	12.195	12.260	12.325	12.390	12.455
2	24.756	25.010	25.266	25.523	25.782
3	37.123	38.271	38.855	39.445	40.041
4	51.019	52.062	53.122	54.202	55.300
5	64.745	66.404	68.103	69.844	71.626
10	139.802	147.195	155.023	163.310	172.084
15	226.814	245.489	265.956	288.389	312.982
20	327.684	365.079	407.538	455.774	510.599
25	444.621	510.579	588.237	679.771	787.767
30	580.182	687.601	818.859	979.531	1176.509
35	737.335	902.860	1112.980	1380.280	1721.090
40	919.518	1164.860	1488.560	1916.960	2485.520

	8%	9%	10%	12%	15%
1	12.520	12.585	12.650	12.780	12.975
2	26.042	26.303	26.565	27.094	27.896
3	40.645	41.255	41.872	43.125	45.056
4	56.417	57.553	58.709	61.080	64.789
5	73.450	75.318	77.230	81.189	87.482
10	181.372	191.203	201.608	224.273	263.441
15	339.945	369.507	401.922	476.435	617.356
20	572.940	643.850	724.529	920.830	1329.206
25	915.286	1065.961	1244.090	1704.007	2760.989
30	1418.306	1715.430	2080.849	3084.232	5640.818
35	2156.350	2713.050	3425.890	5516.660	11433.182
40	3241.800	4249.640	5594.610	9803.428	23083.693

Example: At 5% interest, how much will \$135 per month accumulate to by the end of 15 years? To find the answer, locate the factor at the columns where 5% and 15 years intersect. Multiply the factor by the monthly deposit of \$135 and you get \$35,904, the amount it would have grown to in 15 years.

HOW \$100 PER MONTH WILL GROW OVER TIME AT VARIOUS INTEREST RATES COMPOUNDED ANNUALLY
--

END OF YEAR	TOTAL DEPOSITS	INTEREST RATE						
		4%	5%	6%	7%	8%	9%	10%
1	\$ 1,200	\$1,225	\$1,232	\$1,238	\$1,245	\$1,251	\$1,257	\$1,265
5	6,000	6,639	6,809	6,982	7,160	7,341	7,527	7,717
10	12,000	14,717	15,499	16,326	17,202	18,128	19,108	20,146
15	18,000	24,545	26,590	28,830	31,286	33,978	36,928	40,162
20	24,000	36,503	40,746	45,564	51,041	57,266	64,345	72,399
25	30,000	51,051	58,812	67,958	78,747	91,484	106,530	124,316
30	36,000	68,751	81,870	97,925	117,606	141,761	171,438	207,929
35	42,000	90,286	111,298	138,028	172,109	215,635	271,305	342,589
40	48,000	116,486	148,856	191,696	248,552	324,180	424,964	559,461

To find how much other monthly deposits will grow to, simply multiply by the appropriate ratio. For example, \$200 per month compounded annually, will accumulate to \$135,916 over 25 years. This is arrived at by multiplying by 2 the factor found where the 6% and 25 year columns intersect.

**RULE OF 72
WHEN MONEY DOUBLES**

**RULE OF 115
WHEN MONEY TRIPLES**

Instead of searching the compound interest tables for factors to help you determine how long it will take a sum of money to double or triple at an assumed interest rate, there is a much quicker method.

The **rule of 72** is a fast, though not a 100% accurate method, to determine how many years it will take money to double based upon an assumed rate of return. Simply divide 72 by the interest rate and you have your answer.

RULE OF 72

72 ÷ ASSUMED RATE OF RETURN = # OF YEARS MONEY DOUBLES
EX. 72 ÷ 5% = 14.40 YEARS EX. 72 ÷ 4% = 18 YEARS

**\$10,000 EARNING 6% COMPOUNDED ANNUALLY
WILL GROW TO \$20,000 IN 12 YEARS.**

Conversely, if you know that your money has doubled in a certain period of time, you can determine what your annual compound interest rate was by dividing 72 by the number of years it took your money to double.

72 ÷ # OF YEARS = RATE OF RETURN
EX. 72 ÷ 12 YEARS = 6%

The **rule of 115**, though also not 100% precise, is a shortcut to determine how long it will take a sum of money to triple based upon an assumed rate of return. Simply divide 115 by the interest rate and you have your answer.

RULE OF 115

115 ÷ ASSUMED RATE OF RETURN = # OF YEARS MONEY TRIPLES
EX. 115 ÷ 5% = 23 YEARS EX. 115 ÷ 4.5% = 25.56 YEARS

**\$10,000 EARNING 6% COMPOUNDED ANNUALLY
WILL GROW TO \$30,000 IN 19.17 YEARS.**

Conversely, if you know how long your money took to triple, you can determine the annual compound interest rate by dividing 115 by the number of years.

$$115 \div \# \text{ OF YEARS} = \text{RATE OF RETURN}$$

$$\text{EX. } 115 \div 16 \text{ YEARS} = 7.19\%$$

The following table shows the number of years it will take a sum of money to double and triple at various interest rates compounded annually using the two shortcut methods.

RULE OF 72 & RULE OF 115 TABLE			
INTEREST RATE	RULE OF 72	RULE OF 115	
1%	72 YRS.	115 YRS.	
2%	36	57.50	
3%	24	38.33	
3.5%	20.6	32.86	
4%	18	28.75	
4.5%	16	25.56	
5%	14.4	23.00	
5.5%	13.1	20.91	
6%	12	19.17	
6.5%	11.1	17.69	
7%	10.3	16.43	
7.5%	9.6	15.33	
8%	9	14.38	
8.5%	8.5	13.53	
9%	8	12.78	
9.5%	7.6	12.11	
10%	7.2		11.50
12%	6	9.58	

CHAPTER 2

PRESENT VALUE

To save a large amount of money may initially seem difficult to achieve. However, through the power of compounding over time, a single deposit or a series of sums of money will make your goal more attainable. How do you determine how much money you need to save over a given time period to reach your goal? By understanding how compound discounting or the present value of money works.

Present value is the value today of a future payment. In other words, finding the present value of a future amount, whether it is a single sum or a series of deposits.

The following tables will help you easily determine how much you need to save either by depositing a lump sum, monthly or annual deposits to reach a predetermined goal.

COMPOUND DISCOUNT TABLE										
WHAT \$1.00 TO BE PAID IN THE FUTURE IS WORTH TODAY										

END OF YEAR	INTEREST RATE									
	3%	4%	5%	6%	7%	8%	9%	10%	12%	15%
1	.971	.962	.952	.943	.935	.926	.917	.909	.893	.870
2	.943	.925	.907	.890	.873	.857	.842	.826	.797	.756
3	.915	.889	.864	.840	.816	.794	.772	.751	.712	.658
4	.888	.855	.823	.792	.763	.735	.708	.683	.636	.572
5	.863	.822	.784	.747	.713	.681	.650	.621	.567	.497
6	.837	.790	.746	.705	.666	.630	.596	.564	.507	.432
7	.813	.760	.711	.665	.623	.583	.547	.513	.452	.376
8	.789	.731	.677	.627	.582	.540	.502	.467	.404	.327
9	.766	.703	.645	.592	.544	.500	.460	.424	.361	.284
10	.744	.676	.614	.558	.508	.463	.422	.386	.322	.247
15	.642	.555	.481	.417	.362	.315	.275	.239	.183	.123
20	.554	.456	.377	.312	.258	.215	.178	.149	.104	.061
25	.478	.375	.295	.233	.184	.146	.116	.092	.059	.030
30	.412	.308	.231	.174	.131	.099	.075	.057	.033	.015
35	.355	.253	.181	.130	.094	.068	.049	.036	.019	.008
40	.307	.208	.142	.097	.067	.046	.032	.022	.011	.004

Example: How much money do you need to invest today at an assumed 6% interest rate, compounded annually, that will grow to \$100,000 in 15 years?

Locate the factor, .417 where the columns for 6% and 15 years intersect. Multiply the factor by \$100,000 for your answer, \$41,700.

The following table will help you determine the amount of money you need to save or invest each month to reach a specific goal.

WHAT YOU NEED TO SAVE EACH MONTH TO REACH A GOAL

END OF YEAR	INTEREST RATE					
	3%	4%	5%	6%	7%	
1	12.195	12.260	12.325	12.390	12.455	
2	24.756	25.010	25.266	25.523	25.782	
3	37.123	38.271	38.855	39.445	40.041	
4	51.019	52.062	53.122	54.202	55.300	
5	64.745	66.404	68.103	69.844	71.626	
10	139.802	147.195	155.023	163.310	172.084	
15	226.814	245.489	265.956	288.389	312.982	
20	327.684	365.079	407.538	455.774	510.599	
25	444.621	510.579	588.237	679.771	787.767	
30	580.182	687.601	818.859	979.531	1176.509	
35	737.335	902.860	1112.980	1380.280	1721.090	
40	919.518	1164.860	1488.560	1916.960	2485.520	
	8%	9%	10%	12%	15%	
1	12.520	12.585	12.650	12.780	12.975	
2	26.042	26.303	26.565	27.094	27.896	
3	40.645	41.255	41.872	43.125	45.056	
4	56.417	57.553	58.709	61.080	64.789	
5	73.450	75.318	77.230	81.189	87.482	
10	181.372	191.203	201.608	224.273	263.441	
15	339.945	369.507	401.922	476.435	617.356	
20	572.940	643.850	724.529	920.830	1329.206	
25	915.286	1065.961	1244.090	1704.007	2760.989	
30	1418.306	1715.430	2080.849	3084.232	5640.818	
35	2156.350	2713.050	3425.890	5516.660	11433.182	
40	3241.800	4249.640	5594.610	9803.428	23083.693	

Example: You have set a financial goal to accumulate \$50,000 in 15 years, and you want to determine how much you need to save monthly at an assumed 6% interest rate for 15 years. Locate the factor, 288.389, found where the columns for 6% and 15 years intersect. Divide the targeted amount of \$50,000 by the factor and you come up with the amount of \$173.38 that must be saved monthly to reach your goal.

**HOW MUCH YOU NEED TO SAVE EACH MONTH AT 6%
TO REACH A SPECIFIC GOAL**

YEARS TO SAVE	TO ACCUMULATE THIS AMOUNT						
	\$10,000	\$25,000	\$50,000	\$100,000	\$250,000	\$500,000	\$1,000,000
	YOU MUST SAVE THIS AMOUNT EACH MONTH						
5	\$143	\$358	\$716	\$1,432	\$3,580	\$7,160	\$14,320
10	61	153	306	612	1,530	3,060	6,120
15	35	88	176	352	880	1,760	3,520
20	22	55	110	220	550	1,100	2,200
25	15	38	75	150	375	750	1,500
30	10	25	50	100	250	500	1,000

Whether you are planning to save for a car, home, and child’s education or for retirement, the above table will quickly provide a reference point. To determine amounts not shown, for example, how much must be saved monthly at 6% to have \$30,000 at the end of 10 years. First locate the columns where 10 years and \$10,000 intersect and multiply the number 61 by 3 to get your answer of \$183 a month.

The earlier you start, the less money you need each month to reach your financial goal. For example, you need to save \$358 per month, earning 6% compounded annually, for 5 years, to accumulate \$25,000. However, if you started 5 years earlier, you would only need to save \$153 per month, at the same compound annual rate to reach \$25,000.

**AMOUNT REQUIRED TO BE INVESTED ANNUALLY
IN ADVANCE TO GROW TO \$1,000**

END OF YEAR	INTEREST RATE									
	3%	4%	5%	6%	7%	8%	9%	10%	12%	15%
1	970.87	961.54	952.38	943.40	934.58	925.93	917.43	909.09	892.86	869.57
2	478.26	471.34	464.58	457.96	451.49	445.16	438.98	432.90	421.16	404.45
3	314.11	308.03	302.10	296.33	290.70	285.22	279.88	274.65	264.60	250.41
4	232.07	226.43	220.96	215.65	210.49	205.48	200.60	195.88	186.82	174.14
5	182.87	177.53	172.36	167.36	162.51	157.83	153.32	148.90	140.55	128.98
6	150.09	144.96	140.02	135.25	130.65	126.22	121.95	117.82	110.02	99.34
7	126.71	121.74	116.97	112.39	107.99	103.77	99.72	95.82	88.50	78.57
8	109.18	104.35	99.74	95.32	91.09	87.05	83.19	79.49	72.59	63.35
9	95.57	90.86	86.37	82.10	78.02	74.15	70.46	66.95	60.43	51.80
10	84.69	80.09	75.72	71.57	67.64	63.92	60.39	57.04	50.88	42.83
15	52.20	48.02	44.14	40.53	37.19	34.10	31.25	28.61	23.95	18.28
20	36.13	32.29	28.80	25.65	22.80	20.23	17.93	15.87	12.39	8.49
25	26.63	23.09	19.95	17.20	14.78	12.67	10.83	9.24	6.70	4.09
30	20.41	17.14	14.33	11.93	9.89	8.17	6.73	5.52	3.70	2.00
35	16.06	13.06	10.54	8.47	6.76	5.37	4.25	3.35	2.06	.99
40	12.88	10.12	7.88	6.10	4.68	3.57	2.71	2.05	1.16	.49

Example: How much money do you need to invest annually each year that will grow to \$100,000 in 20 years at an assumed 6% interest rate compounded annually? Locate the factor (25.65) where the columns for 6% and 20 years intersect. Multiply the factor by 100, since the table is based upon factors per \$1,000, and you get \$2,565 per year.

This next table will tell you how much you need to invest monthly at various interest rates to accumulate \$1,000 over a given time period.

MONTHLY INVESTMENT NEEDED TO ACCUMULATE \$1,000

END OF YEAR	INTEREST RATE									
	3%	4%	5%	6%	7%	8%	9%	10%	12%	15%
5	\$15.45	\$15.06	\$14.68	\$14.32	\$13.96	\$13.61	\$13.28	\$12.95	\$12.32	\$11.43
10	7.15	6.79	6.45	6.12	5.81	5.51	5.23	4.96	4.46	3.80
15	4.41	4.07	3.76	3.47	3.20	2.94	2.71	2.49	2.10	1.62
20	3.05	2.74	2.45	2.19	1.96	1.75	1.55	1.38	1.09	.75
25	2.25	1.96	1.70	1.47	1.27	1.09	.94	.80	.59	.36
30	1.72	1.45	1.22	1.02	.85	.71	.58	.48	.32	.18

Example: You want to find how much you need to invest monthly, to accumulate \$200,000 for retirement, 25 years from now, assuming 6% interest, compounded annually. Multiply the factor of 1.47, located where the columns for 6% and 25 intersect, by 200, since the above figures are per \$1,000 and you get \$294 per month.

Example: You want to determine how much you must invest monthly, at 5% interest, to accumulate \$80,000 in 15 years for a child's college tuition. Multiply the factor of 3.76 by 80 and your answer is \$301 per month.

Example: You want to save \$30,000 for a down payment on a house in 5 years. How much do you need to invest monthly, assuming a 7% annual return? **Answer:** Multiply 13.96 by 30 and you come up with \$419 a month.

This next table shows the amount of a single deposit, required to accumulate to \$100,000 over given time periods, at various interest rates.

SINGLE SUM REQUIRED TO ACCUMULATE TO \$100,000								
INTEREST	END OF YEAR							
RATE	5	10	15	20	25	30	35	40
3%	\$86,261	\$74,409	\$64,186	\$55,368	\$47,761	\$41,199	\$35,538	\$30,656
4%	82,193	67,556	55,526	45,639	37,512	30,832	25,342	20,829
5%	78,353	61,391	48,102	37,689	29,530	23,138	18,129	14,205
6%	74,726	55,839	41,727	31,180	23,300	17,411	13,011	9,722
7%	71,299	50,835	36,245	25,842	18,425	13,137	9,366	6,678
8%	68,058	46,319	31,524	21,455	14,602	9,938	6,764	4,603
9%	64,993	42,241	27,454	17,843	11,597	7,537	4,899	3,184
10%	62,092	38,554	3,940	14,864	9,230	5,731	3,558	2,210
12%	56,743	32,197	18,270	10,367	5,882	3,338	1,894	1,075
15%	49,718	24,718	12,289	6,110	3,040	1,510	751	373

To determine the amount required, that would grow to \$100,000 at the end of 15 years, if invested at 5%, compounded annually, locate where the 5% and 15 year columns intersect. **Answer:** \$48,102

The following table tells you how much is required to invest annually, each year at various interest rates to accumulate \$100,000.

ANNUAL INVESTMENT REQUIRED TO ACCUMULATE TO \$100,000								
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INTEREST RATE	END OF YEAR							
	5	10	15	20	25	30	35	40
3%	18,290	\$8,470	\$5,220	\$3,613	\$2,663	\$2,041	\$1,606	\$1,288
4%	17,751	8,009	4,802	3,229	2,309	1,714	1,306	1,011
5%	17,236	7,572	4,414	2,880	1,996	1,433	1,054	788
6%	16,736	7,157	4,053	2,565	1,720	1,193	847	610
7%	16,254	6,764	3,719	2,280	1,478	989	676	468
8%	15,783	6,392	3,410	2,024	1,267	817	537	357
9%	15,332	6,039	3,125	1,793	1,083	673	425	272
10%	14,890	5,704	2,861	1,587	924	553	335	205
12%	14,055	5,088	2,395	1,239	670	370	206	116
15%	12,898	4,283	1,828	849	409	200	99	49

To determine the annual amount required, that would grow to \$100,000 at the end of 20 years, if invested at 5%, compounded annually, locate where the 5% and 20 year columns intersect. **Answer:** \$2,880.

If instead of \$100,000, you wanted to determine the annual amount that would grow to \$50,000 at the end of 20 years, at 6%, divide the figure, 2,565 found at the intersection of the 6% and 20 year columns, in half. **Answer:** \$1,283 invested annually at 6% would accumulate to \$50,000 in 20 years.

To determine the annual amount that would grow to \$200,000, at the end of 25 years, at 6%, multiply the figure, 1,720, found at the intersection of the 6% and 25 year columns by 2. **Answer:** \$3,440 invested annually at 6% would accumulate to \$200,000 in 25 years.

The next table compares a fixed investment at a 5%, compound, annual interest rate over a 10 year period with an investment that produces various returns for the same period.

FIXED VERSUS VARIABLE

VALUES AT 5% FIXED RATE	END OF YEAR	VARIABLE RETURN	INVESTMENT VALUES
\$105,000	1	+22%	\$ 122,000
112,400	2	+10%	\$ 134,000
115,800	3	+ 3%	\$ 138,226
121,600	4	- 12%	\$ 121,639
127,600	5	+ 8%	\$ 131,370
134,000	6	- 3%	\$ 127,429
140,700	7	+15%	\$ 146,543
147,700	8	+ 5%	\$ 153,870
155,100	9	- 8%	\$ 141,560
162,900	10	+15%	\$ 162,794

Although the above table is purely hypothetical, it does point out that sometimes a smaller fixed return, will do as well, and perhaps better than a less conservative investment. The higher the interest rate and the longer the time it remains high, the more favorable the comparison.

CHAPTER 3

TAXES

Taxes and inflation are the two worst villains when it comes to reducing the value of money. While inflation reduces the purchasing power of money, we have no direct control over it.

Taxes on employment income, interest, dividends, and capital gains, fortunately, can be reduced through various tax savings strategies.

It usually is in your interest to convert taxable interest into tax-free or tax deferred interest. If you can also convert a non-deductible investment into any tax deductible retirement plan for which you qualify, you will certainly get more bang from each dollar.

What you get to keep is more important than what you earn on an investment!

That statement should be one of the guiding principles of any saving and investment plan.

This chapter will deal with tax-free, tax deferred and tax deductible savings strategies and the tremendous positive effect they have on your bottom line and in wealth building. By investing in tax advantaged plans and allowing the power of compound interest to work for you on your money, you will put yourself on the road to financial security. Easy to use tables and examples are provided to help you determine the right choice among investment alternatives.

Investing in tax advantaged plans is like borrowing tax dollars from the IRS at "0" interest and putting that money to work to earn interest and have that interest also compound for you, year after year.

One of the things you will enjoy most about tax-free and tax deferred investing is that you will not receive a 1099 tax form for your interest earnings.

Always consult with a professional advisor to determine the type of tax advantaged strategies and financial products most beneficial for you.

The following table illustrates how taxes reduce the amount of return on your money by showing the after tax yield on a taxable investment.

<u>AFTER TAX EQUIVALENT YIELDS</u>					
TAXABLE INTEREST	TAX BRACKETS				
	15%	25%	28%	33%	35%
3%	2.55	2.25	2.16	2.01	1.95
3.5%	2.98	2.63	2.52	2.35	2.28
4%	3.40	3.00	2.88	2.68	2.60
4.5%	3.83	3.38	3.24	3.02	2.93
5%	4.25	3.75	3.60	3.35	3.25
5.5%	4.68	4.13	3.96	3.69	3.58
6%	5.10	4.50	4.32	4.02	3.90
6.5%	5.52	4.88	4.68	4.36	4.23
7%	5.95	5.25	5.04	4.69	4.55
7.5%	6.38	5.63	5.40	5.03	4.88
8%	6.80	6.00	5.76	5.36	5.20
8.5%	7.23	6.38	6.12	5.70	5.53
9%	7.65	6.75	6.48	6.03	5.85
9.5%	8.07	7.13	6.84	6.37	6.18
10%	8.50	7.50	7.20	6.70	6.50
12%	10.20	9.00	8.64	8.04	7.80
15%	12.75	11.25	10.80	10.05	9.75

How do you determine the after tax equivalent yield on an interest rate or investment return? Multiply the interest rate by 1 minus your federal tax bracket. **Example:** What is the after tax rate equivalent on 4% for a person in the 25% tax bracket?

FORMULA

INTEREST RATE X 1 - INCOME TAX BRACKET = AFTER TAX EQUIVALENT YIELD

$$4\% \times (1-25) = 4\% \times .75 = 3\% \text{ AFTER TAX RETURN TO YOU}$$

From the above table you can determine the after tax equivalent yield on an interest rate by locating where the interest rate and tax bracket intersect. This does not take into consideration any state income tax.

TAX EQUIVALENT YIELDS

When does a 5% interest rate equal an 7.69% interest yield? The answer to that question is when you have an investment that provides a tax-free or tax-deferred yield and you are in the 35% tax bracket.

A tax-exempt or tax-deferred investment that pays the same interest as a taxable one, has a higher after-tax yield because you either never pay taxes on the interest or the taxes are deferred into the future.

If your after-tax yield on a tax-free/tax-deferred investment is greater than a yield from a taxable alternative, tax-exempt/tax-deferred investments such as annuities, municipal bonds, municipal bond funds and unit investment trusts that invest in municipal bonds may be the ideal financial product for you.

The following formula provides a quick way for you to determine whether a tax-free/tax-deferred yield is worth more than a taxable yield.

FORMULA

$$\frac{\text{TAX FREE / TAX DEFERRED YIELD}}{1 - (\text{YOUR FEDERAL TAX RATE})} = \text{TAXABLE EQUIVALENT YIELD}$$

Taxable equivalent yield is the yield you would have to earn on a taxable investment to match the after tax income you earn from a tax-free or tax-deferred investment.

Example: You are considering two investment opportunities. The taxable one has a 5% interest rate, the tax-free offers a 4.5% interest rate. You are in the 25% marginal tax bracket. To calculate the taxable equivalent of the tax-free yield, divide the tax-free rate by 1 minus your tax bracket.

$$\frac{4.5}{1 - .25} = \frac{4.5}{.75} = 6\%$$

The tax-free/tax-deferred investment's tax equivalent yield of 6% is higher than the taxable investment's 5% interest rate. If you are in the 28% tax bracket, the result would be even more in favor of the tax-savings investment.

$$\frac{4.5}{1 - .28} = \frac{4.5}{.72} = 6.25\%$$

The higher your tax bracket the better you are with a tax-savings investment

To determine the tax-exempt equivalent of a taxable yield, just reverse the above formula. Multiply the taxable yield by 1 minus your tax bracket.

FORMULA

$$\text{TAXABLE YIELD} \times (1 - \text{FED. TAX BRACKET}) = \text{TAX EXEMPT EQUIVALENT YIELD}$$

Example: You have a taxable investment of 5% and you are in the 25% tax bracket. What tax-free/tax-deferred yield do you need to get to equal the taxable yield?

$$5\% \times (1 - .25) = 5\% \times .75 = 3.75\%$$

The 5% taxable yield is equivalent to a 3.75% tax-free/tax-deferred yield.

By having a tax-free/tax deferred investment, you will increase your net after-tax income flow on the same amount of money in a taxable account which earns the same rate of interest, or you can reduce the amount of your tax-free/tax-deferred investment to obtain the same cash flow or growth from a larger, interest taxable account.

Either way, you come out ahead.

Example: A sum of \$50,000 is earning a 5% interest rate. How much needs to be invested in a tax-exempt account to create the same cash flow if you are in the 25% tax bracket and the tax-exempt yield is 4%?

FORMULA

$$\text{SUM OF MONEY} \times \text{TAXABLE YIELD} \times (1 - \text{TAX BRACKET}) = \text{NET CASH FLOW}$$

$$\$50,000 \times 5\% \times .75 = \$1,875$$

$$\text{CASH FLOW} \div \text{TAX EXEMPT \%} = \text{\$\$ NEEDED TO INVEST ON A TAX FREE BASIS}$$

$$\$1,875 \div 4\% = \$46,875$$

You can therefore have the same income flow on \$46,875, allowing you to either earn more money on the extra \$3,125 or use it for some other purpose.

The following table will provide you with a quick reference guide in comparing tax-free yields to their taxable equivalent yields.

Taxable equivalent yield is the yield you would have to earn on a taxable investment to match the after tax income you earn from a tax free investment.

FORMULA

$$\frac{\text{TAX FREE YIELD}}{1 - (\text{YOUR FEDERAL TAX RATE})} = \text{TAXABLE EQUIVALENT YIELD}$$

$$\text{Example: } \frac{3\%}{1 - .25} = \frac{3\%}{.75} = 4\%$$

TAXABLE EQUIVALENT YIELD

TAX-FREE YIELD	TAX BRACKETS				
	15%	25%	28%	33%	35%
3%	3.53	4.00	4.17	4.48	4.62
3.5	4.12	4.67	4.86	5.22	5.38
4	4.71	5.33	5.56	5.97	6.15
4.5	5.29	6.00	6.25	6.72	6.92
5	5.88	6.67	6.94	7.46	7.69
5.5	6.47	7.33	7.64	8.21	8.46
6	7.06	8.00	8.33	8.96	9.23
6.5	7.65	8.67	9.03	9.70	10.00
7	8.24	9.33	9.72	10.45	10.77
7.5	8.82	10.00	10.42	11.19	11.54
8	9.41	10.67	11.11	11.94	12.31
8.5	10.00	11.33	11.81	12.69	13.08
9	10.59	12.00	12.50	13.43	13.85
9.5	11.18	12.67	13.19	14.18	14.62
10	11.76	13.33	13.89	14.93	15.38
12	14.12	16.00	16.67	17.91	18.46
15	17.65	20.00	20.83	22.39	23.08

Most people do not think in terms of tax equivalent yields when it comes to choosing an appropriate investment. If you are one of them, you may be negatively impacting both your current income and long term accumulation objectives. Everything depends upon the yields being compared and the effect one's tax bracket has on determining the tax-equivalent yield.

You must be an informed investor to make the correct investment choice that will have the greatest positive effect on your money.

DOUBLE TAX-FREE

If the state in which you reside also taxes your investment income, you may find a tax-savings investment to be even more rewarding.

To determine the tax equivalent yield for your combined state and federal tax rate, the following formula applies, since you do not simply add the two, and any city tax rate, if applicable, together. This is because state and city taxes are deductible on your federal income tax return if you are itemizing deductions, and therefore must be taken into account in arriving at one's true combined tax rate. You must first multiply your state tax rate by 1 minus your federal tax rate. Then add the result to your federal tax rate to arrive at your total combined effective rate.

FORMULA FOR EFFECTIVE STATE TAX RATE

A) STATE TAX RATE x (1 - FEDERAL TAX BRACKET) = EFFECTIVE STATE RATE

FORMULA FOR COMBINED EFFECTIVE FEDERAL / STATE TAX RATE

B) EFFECTIVE STATE RATE + FEDERAL TAX RATE = COMBINED EFFECTIVE FEDERAL/STATE TAX RATE

EXAMPLE: Your state tax rate is 6% and your federal tax rate is 25%.

A) 6% x (1 - .25) = 6% x .75= 4.5% EFFECTIVE STATE RATE

B) 4.5% + 25% = 29.5% COMBINED EFFECTIVE FEDERAL/ STATE TAX RATE

Once you have found your combined effective rate, you can utilize the following formula to determine tax equivalent yields.

FORMULA

$$\frac{\text{TAX-FREE YIELD}}{(1 - \text{COMBINED TAX RATE})} = \text{TAX EQUIVALENT YIELD}$$

In this case, 1 minus your tax rate means, 1 minus your combined tax rate.

If you were comparing two investments, the taxable one had a 6% yield and the tax-free/tax-deferred one was 5% and your federal tax bracket was 25% and your state rate was 6%, which one provides the best net return?

Your combined effective tax rate, as determined above, is 29.5%.

The tax equivalent yield formula provides the answer.

$$\frac{5\%}{(1 - 29.5)} = \frac{5\%}{70.5} = 7.09\% \text{ TAX EQUIVALENT YIELD}$$

Since 7.09% is greater than 6%, the tax-free/tax deferred investment is the better choice.

The table below shows what a taxpayer would have to earn from a taxable investment to equal a double tax-free yield.

TAX EQUIVALENT YIELDS									
TAX-FREE	COMBINED STATE AND FEDERAL TAX BRACKETS								
YIELD	18%	20%	29%	30%	35%	36%	38%	39%	40%
3%	3.66	3.75	4.23	4.29	4.62	4.69	4.84	4.92	5.00
3.5	4.27	4.38	4.93	5.00	5.38	5.47	5.65	5.74	5.83
4	4.88	5.00	5.63	5.71	6.15	6.25	6.45	6.56	6.67
4.5	5.49	5.63	6.34	6.43	6.92	7.03	7.26	7.38	7.50
5	6.10	6.25	7.04	7.14	7.69	7.81	8.06	8.20	8.33
5.5	6.71	6.88	7.75	7.86	8.46	8.59	8.87	9.02	9.17
6	7.32	7.50	8.45	8.57	9.23	9.38	9.68	9.84	10.00
6.5	7.93	8.13	9.15	9.29	10.00	10.16	10.48	10.66	10.83
7	8.54	8.75	9.86	10.00	10.77	10.94	11.29	11.48	11.67
7.5	9.15	9.38	10.56	10.71	11.54	11.72	12.10	12.30	12.50
8	9.76	10.00	11.27	11.43	12.31	12.50	12.90	13.11	13.33
8.5	10.37	10.63	11.97	12.14	13.08	13.28	13.71	13.93	14.17
9	10.98	11.25	12.68	12.86	13.85	14.06	14.52	14.75	15.00
9.5	11.59	11.88	13.38	13.57	14.62	14.84	15.32	15.57	15.83
10	12.20	12.50	14.08	14.29	15.38	15.63	16.13	16.39	16.67
12	14.63	15.00	16.90	17.14	18.46	18.75	19.35	19.67	20.00
15	18.29	18.75	21.13	21.43	23.08	23.44	24.19	24.59	25.00

To determine exactly what your combined effective rate is, you will have to use the tax rate for your state of residence. While some state have no income tax, others have different rates for earned and investment income, so do your arithmetic carefully.

In an earlier chapter, the rule of 72 and the rule of 115 were discussed as shortcut methods to determine when money would double or triple, but that was on a pre-tax basis. The table below shows how federal taxes increase the time period before your money doubles and triples.

**NUMBER OF YEARS MONEY WILL DOUBLE AND TRIPLE
NON-TAXABLE VS. TAXABLE**

INTEREST RATE	NON-TAXABLE RULE OF 72		TAXABLE RULE OF 72 FEDERAL TAX BRACKET					NON-TAXABLE RULE OF 115		TAXABLE RULE OF 115 FEDERAL TAX BRACKET				
	# YRS		15%	25%	28%	33%	35%	# YRS		15%	25%	28%	33%	35%
3%	24		28	32	33	36	37	38		45	51	53	57	59
3.5	21		24	27	29	31	32	33		39	44	46	49	50
4	18		21	24	25	27	28	29		34	38	40	43	44
4.5	16		19	21	22	24	25	26		30	34	35	38	39
5	14		17	19	20	22	22	23		27	31	32	34	35
5.5	13		15	17	18	20	20	21		25	28	29	31	32
6	12		14	16	17	17	18	19		23	26	27	29	28
6.5	11		13	15	15	15	17	18		21	24	25	26	27
7	10		12	14	14	14	15	16		19	22	23	25	25
7.5	10		11	13	13	14	15	15		18	20	21	23	24
8	9		11	12	13	13	14	14		17	19	20	21	22
8.5	9		10	11	12	13	13	14		16	18	19	20	21
9	8		9	11	11	12	12	13		15	17	18	19	20
9.5	8		9	10	11	11	12	12		14	16	17	18	19
10	7		8	10	10	11	11	12		14	15	16	17	18
12	6		7	8	8	9	9	10		11	13	13	14	15

To find out how long money doubles and triples after deducting for federal taxes for an interest rate not shown in the above table, the following formulas are used.

FORMULA

WHEN MONEY DOUBLES AFTER TAXES

First multiply the interest rate by 1 minus your tax bracket to get the net after tax rate. Divide 72 by the net after tax rate to determine your answer.

A) $\text{INTEREST RATE} \times (1 - \text{TAX BRACKET}) = \text{NET AFTER TAX RATE}$

B) $72 \div \text{NET RATE} = \# \text{ OF YEARS MONEY WILL DOUBLE AFTER TAXES}$

EXAMPLE: $5\% \times .75 \text{ (FOR SOMEONE IN THE 25\% BRACKET)} = 3.75\%$

$72 \div 3.75 = 19.2 \text{ YEARS}$

FORMULA

WHEN MONEY TRIPLES AFTER TAXES

First multiply the interest rate by 1 minus your tax bracket to get the net after tax rate. Divide 115 by the net after tax rate to determine your answer.

A) $\text{INTEREST RATE} \times (1 - \text{TAX BRACKET}) = \text{NET AFTER TAX RATE}$

B) $115 \div \text{NET RATE} = \# \text{ OF YEARS MONEY WILL TRIPLE AFTER TAXES}$

To find out how long money doubles and triples after deducting for both state and federal taxes, you will need to first determine your combined state and federal effective tax rate by applying the formula previously discussed.

Then apply the appropriate formula from above, substituting your combined effective state and federal tax rate:

(1 - COMBINED EFFECTIVE TAX BRACKET) instead of (1 - TAX BRACKET)

CHAPTER 4

TAX DEFERRED INTEREST

This chapter will discuss the advantage of postponing taxes on interest compared to paying taxes on interest in the year they are due. The underlying principle of taxes, is, that every \$1.00 of taxable income is reduced by your tax bracket as shown in the table below.

VALUE OF EVERY \$1.00 REDUCED BY FEDERAL TAX BRACKET

15%	25%	28%	33%	35%
\$.85	\$.75	\$.72	\$.67	\$.65

HOW MUCH MUST YOU EARN TO NET \$1.00 AFTER TAXES

15%	25%	28%	33%	35%
\$1.18	\$1.33	\$1.39	\$1.49	\$1.54

VALUE OF EVERY \$1.00 REDUCED BY COMBINED STATE AND FEDERAL EFFECTIVE TAX BRACKET

18%	20%	28%	29%	31%	35%	36%	37%	38%	39%	40%	41%
\$.82	\$.80	\$.72	\$.71	\$.69	\$.65	\$.64	\$.63	\$.62	\$.61	\$.60	\$.59

The following table dramatically shows how taxes negatively impact the amount of return on your money over time.

HOW A SINGLE DEPOSIT OF \$1,000 GROWS OVER TIME WITH TAXES PAID VERSUS DEFERRED AT 5% COMPOUNDED ANNUALLY

END OF YEAR	TAX-DEFERRED ACCOUNT BALANCE	TAXABLE ACCOUNT BALANCE BY TAX BRACKET *				
		15%	25%	28%	33%	35%
5	\$1,276	\$1,231	\$1,202	\$1,193	\$1,179	\$1,173
10	1,629	1,516	1,445	1,424	1,390	1,377
15	2,079	1,867	1,737	1,700	1,639	1,616
20	2,653	2,299	2,088	2,029	1,933	1,896
25	3,386	2,831	2,510	2,421	2,279	2,225
30	4,322	3,486	3,018	2,889	2,687	2,610
35	5,516	4,292	3,627	3,448	3,169	3,063
40	7,040	5,285	4,360	4,115	3,736	3,594

*ASSUMES TAXES DUE ARE PAID FROM BALANCE OF ACCOUNT IN YEAR DUE

As the table illustrates, the tax deferred account accumulates a much larger amount of money than the taxable account. The higher your tax bracket, the lower the money in your taxable account.

Since the table shows how \$1,000 at 5% interest grows in a tax deferred versus a taxable account, you can determine the values over a given time period for any deposit by multiplying the tax deferred and appropriate tax bracket columns by the number of thousands you wish to invest.

For example, if you have \$25,000 to invest at 5% compounded annually and are in the 25% tax bracket, multiply the numbers in the tax deferred column and the 25% taxable column by 25 to arrive at your answer.

The following table shows how a deposit of \$50,000 at 6% compound annual interest grows in a taxable versus a tax deferred account.

**HOW \$50,000 GROWS AT 6% INTEREST
IN A TAXABLE VERSUS TAX DEFERRED ACCOUNT**

END OF YEAR	ANNUAL INTEREST EARNED	TAX DEFERRED ACCOUNT BALANCE	TAXABLE @ 25% ACCOUNT BALANCE
1	\$3,000	\$ 53,000	\$52,250
5	3,553	66,911	62,300
10	4,390	89,542	77,650
15	5,423	119,828	96,750
20	6,700	160,357	120,600
25	8,278	214,594	150,250
30	10,228	287,175	187,250
35	12,636	384,304	233,350
40	15,612	514,286	290,800

To determine values for an investment greater than \$50,000, multiply the above figures by the appropriate ratio. For an investment smaller than \$50,000 divide the above numbers by the appropriate ratio.

What dramatically stands out are the following facts:

TOTAL TAX DEFERRED INTEREST EARNED OVER 40 YEARS= \$464,286
TAX-DEFERRED ADVANTAGE OVER TAXABLE ACCOUNT AT 40 YEARS =\$223,486

What has accounted for the tremendous growth in the tax deferred account?

Triple compounding!

With a tax deferred account you receive:

- 1) Interest on your deposit**
- 2) Interest on the interest that was added to your deposit**
- 3) Interest on the money that would have been paid in taxes**

The following question is always asked.

By delaying paying taxes, won't taxes have to be paid eventually and therefore the net result in the end, will be the same amount of money as paying the tax on the interest each year?

Taxes will ultimately have to be paid, that is unavoidable. However, the answer as to the result being the same is an emphatic no!

In the prior table, the taxable account after 40 years grew to \$290,800. This was the net amount after taxes had been paid each year on the interest at a 25% tax rate. If the tax deferred account which had grown to \$514,286 at the end of 40 years, \$464,286 of which was fully taxable interest, was withdrawn in a lump sum, even at today's highest federal tax rate of 35%, \$162,500 in taxes would have to be paid. This would leave a net sum of \$351,786 which is still \$60,986 more than the taxable account in which taxes were paid each year when due. However, the real value of the tax deferred account is providing a greater annual income, even after taxes, than the taxable account. Just how dramatic the difference is in favor of the tax deferred account is shown below.

Wouldn't you rather have \$514,286 providing an annual income than \$290,800?

	<u>TAXABLE</u>	<u>TAX-DEFERRED</u>
40TH YEAR VALUE	\$290,800	\$514,286
INTEREST RATE	5%	5%
ANNUAL INTEREST EARNED	\$14,540	\$25,714
TAX RATE	28%	28%
TAX DUE	\$4,071	\$7,200
ANNUAL NET INCOME	\$11,469	\$18,514
10 YEAR NET INCOME	\$114,690	\$185,140
20 YEAR NET INCOME	\$229,380	\$370,280

What a difference in your retirement lifestyle!

TAX DEDUCTIBLE SAVINGS AND TAX DEFERRED GROWTH

In addition to the power of tax deferred interest, compounding, if a tax deduction is also available, it makes for a super investment, because you are investing with pre-tax dollars, unlike investing with after-tax dollars, whereby every dollar earned is reduced by taxes before it is invested.

The next table shows the accumulated tax savings over time for an annual \$3,000 IRA investment at various tax brackets.

\$3,000 IRA						
TAX DEDUCTIBLE SAVINGS BY TAX BRACKET						

END OF YEAR	TOTAL DEPOSITS	CUMULATIVE TAX SAVINGS				
		TAX BRACKET				
		15%	25%	28%	33%	35%
1	\$3,000	\$ 450	\$ 750	\$ 840	\$ 990	\$ 1,050
5	15,000	2,250	3,750	4,200	4,950	5,250
10	30,000	4,500	7,500	8,400	9,900	10,500
15	45,000	4,500	11,250	12,600	14,850	15,750
20	60,000	6,750	15,000	16,800	19,800	21,000
25	75,000	11,250	18,750	21,000	24,750	26,250
30	90,000	13,500	22,500	25,200	29,700	31,500
35	105,000	15,750	26,250	29,400	34,650	36,750
40	120,000	18,000	30,000	33,600	39,600	42,000

The next table shows a comparison of an annual \$3,000 tax deductible or tax deferred investment with a taxable plan.

The investment is at 5% interest, compounded annually and the federal tax bracket is 25%.

<u>\$3,000 ANNUAL CONTRIBUTION</u>					
TAX DEDUCTIBLE OR TAX DEFERRED PLAN VS. TAXABLE ACCOUNT					

END OF YEAR	TOTAL ANNUAL DEPOSITS	VALUE TAXABLE ACCOUNT	VALUE TAX-SAVINGS ACCOUNT	TOTAL TAXES SAVED ON INTEREST	TOTAL TAX DEDUCTION
1	\$3,000	\$ 3,113	\$ 3,150	\$ 37	\$ 750
5	15,000	16,774	17,406	632	3,750
10	30,000	37,287	39,621	2,334	7,500
15	45,000	61,596	67,974	6,378	11,250
20	60,000	90,820	104,157	13,337	15,000
25	75,000	125,948	150,342	24,394	18,750
30	90,000	168,177	209,283	41,106	22,500
35	105,000	218,939	284,508	65,569	26,250
40	120,000	279,961	380,520	100,559	30,000

Wouldn't you prefer \$380,520 earning 5% interest at retirement, than \$279,961? Look at the comparison!

	<u>TAXABLE</u>	<u>TAX-SAVINGS ACCOUNTS</u>
40TH YEAR VALUE	\$ 279,961	\$ 380,520
INTEREST RATE	5%	5%
ANNUAL INTEREST EARNED	\$ 13,998	\$ 19,026
TAX RATE	25%	25%
TAX DUE	\$ 3,500	\$ 4,757
ANNUAL NET INCOME	\$ 10,498	\$ 14,269
10 YEAR NET INCOME	\$ 104,980	\$ 142,690
20 YEAR NET INCOME	\$ 209,960	\$ 285,380

If you wanted to determine the cumulative tax deductions or taxable account values, tax deferred account values, and cumulative tax savings on interest at 5% for amounts greater than \$3,000 per year, multiply the figures in the prior tables by the appropriate ratio. For example, for \$4,000, multiply the above figures by 2, etc. For sums less than \$3,000 per year, multiply the numbers by the appropriate ratio. For example, for \$600, multiply by .20, for \$1,000, multiply by .333, etc.

**INCREASE YOUR INCOME, NOT YOUR INCOME TAX.
GIVE YOURSELF A TAX HOLIDAY, DEFER TAXES AS
LONG AS POSSIBLE. BECOME MONEY WISE.**

CHAPTER 5

COST OF DELAY

This chapter deals with the time value of money and the advantages of investing early. For every year that you delay saving any amount of money, the cost to you is many times greater than the money you did not save. You can never recover this lost money. It is gone forever.

No one plans to fail financially, but that is what can occur if one fails to start an investment plan early.

You may think you can not afford to start saving and investing now for a future goal, but the reality is, you can not afford to wait.

There is no more important ingredient than **time** in any financial plan. The longer you delay saving and investing money on a consistent basis, the steeper the climb will be to reach your financial goals.

Starting as early as possible, and letting the power of compound interest work on your money, will lead to financial security.

Procrastination is your biggest enemy.

The first table shows the values year by year for 40 years for a \$2,000 annual deposit and a \$166.66 monthly deposit (which equals \$2,000 over 12 months), at 6% interest, compounded annually. You will be able to determine from this table, how much money you would have at the end of a period of time and that the earlier you start or the longer your money compounds, the more you will accumulate.

The comparison of investing annually at the beginning of the year versus making monthly deposits is illustrated to show you that it is in your interest to make your investment at the beginning rather than over the entire course of the year, since your money will grow faster. This applies to a fixed interest type of account like a certificate of deposit, money market or annuity.

The following table will enable you to determine how much money is lost by waiting 1 to 39 years to invest. The figures are based upon \$2,000 annually or \$166 monthly, earning 6% interest, compounded annually.

**HOW MUCH YOU LOSE BY WAITING
COST OF DELAY**

END OF YEAR	\$2,000 ANNUALLY		\$166 MONTHLY	
	ACCUMULATED DEPOSITS	ACCUMULATED VALUES	ACCUMULATED DEPOSITS	ACCUMULATED VALUES
1	\$2,000	\$2,120	\$2,000	\$2,065
2	4,000	4,367	4,000	4,254
3	6,000	6,749	6,000	6,574
4	8,000	9,274	8,000	9,033
5	10,000	11,951	10,000	11,640
6	12,000	14,788	12,000	14,403
7	14,000	17,795	14,000	17,333
8	16,000	20,983	16,000	20,437
9	18,000	24,362	18,000	23,729
10	20,000	27,943	20,000	27,217
11	22,000	31,740	22,000	30,915
12	24,000	35,764	24,000	34,834
13	26,000	40,030	26,000	38,988
14	28,000	44,552	28,000	43,392
15	30,000	49,345	30,000	48,063
16	32,000	54,426	32,000	53,012
17	34,000	59,811	34,000	58,257
18	36,000	65,520	36,000	63,817
19	38,000	71,571	38,000	69,711
20	40,000	77,985	40,000	75,959
21	42,000	84,785	42,000	82,582
22	44,000	91,992	44,000	89,602
23	46,000	99,631	46,000	97,043
24	48,000	107,729	48,000	104,931
25	50,000	116,313	50,000	113,291
26	52,000	125,412	52,000	122,154
27	54,000	135,056	54,000	131,548
28	56,000	145,280	56,000	141,506
29	58,000	156,116	58,000	152,061
30	60,000	167,603	60,000	163,250
31	62,000	179,780	62,000	175,110
32	64,000	192,686	64,000	187,682
33	66,000	206,368	66,000	201,008
34	68,000	220,870	68,000	215,133
35	70,000	236,242	70,000	230,106
36	72,000	252,536	72,000	245,977
37	74,000	269,808	74,000	262,801
38	76,000	288,117	76,000	280,634
39	78,000	307,524	78,000	297,472
40	80,000	328,095	80,000	317,385

To find the cost of delay from the previous table, just take the figures for any two time periods and make the comparison.

For example: If you are 35 years old and invested \$2,000 annually for 30 years, locate the figures at the 30 year column. Instead of investing this year, you decided to wait one year, when you were 36 years old, and invest until you were age 65, which would be for a total of 29 years.

What did it cost you to delay investing for only one year?

VALUE AT END OF 30 YEARS	VALUE AT END OF 29 YEARS	DIFFERENCE
\$167,603	\$156,116	\$11,487
		- \$ 2,000 (ONE LESS DEPOSIT)
		\$9,487

You thought you saved yourself \$2,000 by waiting one year, but it actually cost you \$11,487, in lost interest. Gone forever!

The longer one delays, the greater the difference becomes.

There may never be a really convenient or ideal time to begin an investment or savings plan. **Don't delay, start today!**

You can determine the cost of delay for any amount of money at various interest rates, whether it is a single deposit, monthly or annually, by referring to the compound interest tables, previously discussed.

The next table illustrates how a \$2,000 deposit at 6% made at the beginning of each calendar year, rather than at year's end or monthly will accumulate more money for you. Every month you delay costs you money. Lost forever!

INVESTING ANNUALLY AT THE BEGINNING OF THE YEAR

END OF YEAR	\$2,000 ANNUALLY VALUES BY DEPOSIT DATE			\$166.66 MONTHLY VALUES OF MONTHLY	
	JANUARY 1	DECEMBER 31	INCREASE	DEPOSITS	DECREASE
5	\$11,951	\$9,251	\$2,700	\$11,640	\$311
10	27,943	24,362	3,501	27,217	726
15	49,345	44,552	4,793	48,063	1,282
20	77,985	71,571	6,414	75,959	2,026
25	116,313	107,729	8,584	113,291	3,022
30	167,603	156,116	11,487	163,249	4,354
35	236,242	220,870	15,372	230,106	6,136
40	328,095	307,524	20,571	319,569	8,526

This next table compares a \$2,000 annual investment for 10 years, with no further investment for the next 25 years, with a \$2,000 annual investment for 25 years, but which started 10 years later. Each investment earned 6% interest, compounded annually for the entire time period.

**INVESTING EARLY FOR 10 YEARS IS BETTER THAN
WAITING 10 YEARS AND THEN INVESTING FOR 25 YEARS**

PREMIUM	ACCUMULATION	END OF		
		YEAR	PREMIUM	ACCUMULATION
\$2,000	\$2,120	1	0	0
2,000	4,367	2	0	0
2,000	6,749	3	0	0
2,000	9,274	4	0	0
2,000	11,951	5	0	0
2,000	14,788	6	0	0
2,000	17,795	7	0	0
2,000	20,983	8	0	0
2,000	24,362	9	0	0
2,000	27,943	10	0	0
0	29,620	11	\$2,000	\$2,120
0	37,394	15	\$2,000	11,951
0	50,042	20	\$2,000	27,943
0	66,967	25	\$2,000	49,345
0	89,617	30	\$2,000	77,985
0	119,928	35	\$2,000	116,313

	EARLY INVESTOR	LATE INVESTOR
TOTAL VALUE	\$119,928	\$116,313
TOTAL DEPOSITS	\$ 20,000	\$ 50,000

Imagine depositing \$30,000 less, but earning \$3,615 more.
The investor, who starts early, reaps the biggest gains.
By delaying investing, you delay the power of interest compounding over time. The longer the delay, the greater the loss of interest to you, never to be regained.

CHAPTER 6

HOW LONG WILL YOUR MONEY LAST

This chapter will deal with the subject, how long money will last as it is being drawn down.

The following table shows how long a sum of money will last at various compound annual interest rates if a percentage of the original capital is withdrawn at the beginning of each year. An inflation rate of zero is assumed.

HOW LONG WILL YOUR MONEY LAST												
PER-CENT OF ORIGINAL CAPITAL WITHDRAWN EACH YEAR	INTEREST RATE ON YOUR INVESTMENT											
	3%	4%	5%	6%	7%	8%	9%	10%	12%	15%		
5%	28	36	F O R E V E R									
6%	23	28	36	-----								
7%	18	20	25	33	-----							
8%	15	17	20	23	31	-----						
9%	13	14	15	17	21	27	-----					
10%	12	13	14	15	17	20	26	-----				
12%	9	10	10	10	11	12	14	15	-----			
15%	7	8	8	8	8	8	8	8	10	11	-----	

For example, if your capital earns 6% interest, compounded annually, you can withdraw 10% of your original principal each year, for 15 years, before you run out of money.

If you wish to always preserve 100% of your principal, and you withdraw money annually at the end of each year, your withdrawal should be no more than your compounded interest rate. However, if instead, money is withdrawn at the beginning of each year or monthly, your withdrawal should be slightly less than your interest rate, since your entire principal did not earn a full year's worth of interest. If your capital earned 5% interest and you withdrew only the interest, your original principal would last forever.

However, if you increased the amount withdrawn by the rate of inflation, each year, to maintain purchasing power, you could run out of money in a relatively short period of time.

For example, if you increased your 5% withdrawal each year to compensate for a 3% annual inflation rate, you would run out of money in 24 years. At a 4% inflation rate, your money would be gone in 22 years.

You would not be increasing your withdrawal from 5% to 8% to compensate for 3% inflation.

You would be increasing the 5% to 5.15% withdrawal in year one, which is your 5% withdrawal multiplied by the 3% rate of inflation. In year 2, you would multiply your previous year's withdrawal of 5.15% of your capital by the new rate of inflation. If inflation was again 3%, you would multiply the 5.15% withdrawal by 3%, which gives you your new withdrawal amount of 5.30%, rounded off. By year 20, if inflation remains at 3%, you will be withdrawing over 9% of your remaining capital for that year.

If you were withdrawing 10% of capital, which was earning 5%, the table shows that you would run out of money in 14 years. If you were to increase your withdrawal by 3%, to maintain purchasing power, you would run out of money in 9 years.

It is obvious, that by increasing your withdrawal more than your capital earns, or increasing your withdrawal each year to maintain purchasing power due to inflation, you will end up depleting your original capital. The above examples do not take into consideration any taxes that may have to be paid.

The fundamental questions which people at or planning for retirement want to have answered are: How much capital will be needed, how much can be withdrawn, and how long will it last?

The following three tables show how long a monthly withdrawal taken from capital, earning interest will last. Interest rates from 5-10%, compounded monthly are illustrated. How long the monthly withdrawal will last is by full years. Whenever the letter F is used, it means forever, and the symbol < means less than.

HOW LONG YOUR CAPITAL WILL LAST

CAPITAL	AMOUNT OF MONTHLY WITHDRAWAL															
	\$500		\$1000		\$1500		\$2000		\$2500		\$3000		\$4000		\$5000	
	INTEREST RATES															
	5%	6%	5%	6%	5%	6%	5%	6%	5%	6%	5%	6%	5%	6%	5%	6%
	NO. OF YEARS															
\$50,000	11	11	5	4	3	3	2	2	1	1	1	1	1	1	<1	<1
100,000	40	F	10	11	6	6	4	4	3	3	3	3	2	2	1	1
150,000	F	F	19	23	10	11	7	7	5	6	4	4	3	3	2	2
200,000	F	F	35	F	16	18	10	11	8	8	6	6	4	4	3	3
250,000	F	F	F	F	23	30	14	16	10	11	8	9	6	6	4	4
300,000	F	F	F	F	36	F	19	23	13	15	10	11	7	7	5	6
400,000	F	F	F	F	F	F	36	F	22	26	16	18	10	11	8	8
500,000	F	F	F	F	F	F	F	F	36	F	23	30	14	16	10	11
1,000,000	F	F	F	F	F	F	F	F	F	F	F	F	F	F	36	F

HOW LONG YOUR CAPITAL WILL LAST

CAPITAL	AMOUNT OF MONTHLY WITHDRAWAL															
	\$500		\$1000		\$1500		\$2000		\$2500		\$3000		\$4000		\$5000	
	INTEREST RATES															
	7%	8%	7%	8%	7%	8%	7%	8%	7%	8%	7%	8%	7%	8%	7%	8%
	NO. OF YEARS															
\$50,000	12	13	5	5	3	3	2	2	1	1	1	1	1	1	<1	<1
100,000	F	F	12	13	7	7	5	5	3	3	3	3	2	2	1	1
150,000	F	F	29	F	12	13	8	8	6	6	5	5	3	3	2	2
200,000	F	F	F	F	21	27	12	13	9	9	7	7	5	5	3	3
250,000	F	F	F	F	50	F	18	22	12	13	9	10	6	6	5	5
300,000	F	F	F	F	F	F	29	F	17	20	12	13	8	8	6	6
400,000	F	F	F	F	F	F	F	F	50	28	21	27	12	13	9	9
500,000	F	F	F	F	F	F	F	F	F	F	50	F	18	22	12	13
1,000,000	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F

HOW LONG YOUR CAPITAL WILL LAST																
AMOUNT OF MONTHLY WITHDRAWAL																
	\$500	\$1000	\$1500	\$2000	\$2500	\$3000	\$4000	\$5000								
INTEREST RATES																
	9%	10%	9%	10%	9%	10%	9%	10%	9%	10%	9%	10%	9%	10%	9%	10%
CAPITAL	NO. OF YEARS															
\$50,000	15	18	5	5	3	3	2	2	1	1	1	1	1	1	<1	<1
100,000	F	F	15	18	7	8	5	5	4	4	3	3	2	2	1	1
150,000	F	F	F	F	15	18	9	9	6	7	5	5	3	3	2	2
200,000	F	F	F	F	F	F	15	18	10	11	8	7	5	5	4	4
250,000	F	F	F	F	F	F	37	F	15	18	11	11	7	7	5	5
300,000	F	F	F	F	F	F	F	F	25	F	15	18	9	9	6	7
400,000	F	F	F	F	F	F	F	F	F	F	F	F	15	18	10	11
500,000	F	F	F	F	F	F	F	F	F	F	F	F	50	F	15	18
1,000,000	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F

From the previous tables, you can easily determine how much capital is needed to generate various amounts of monthly income and how long it will continue, by interest rate.

For example, it will take \$250,000 earning 6% interest, compounded monthly to throw off \$1,500 a month for 30 years, or \$2,500 a month for 11 years.

The following table will help you determine how much money you need to accumulate at retirement, in order to withdraw a monthly income over a given time period, as the remaining capital continues to earn interest. The figures assume that the entire capital will be liquidated at the end of each given time period. The table will also enable you to determine how much monthly income you could withdraw over a given time period if you invested a lump sum of money. You can also find the balance remaining after making withdrawals over a given period of time.

HOW MUCH CAPITAL IS NEEDED TO YIELD \$100 A MONTH

**HOW MUCH MONTHLY INCOME CAN BE WITHDRAWN
BY DEPOSITING A LUMP SUM?**

**HOW MUCH OF YOUR ORIGINAL INVESTMENT REMAINS AFTER
MONTHLY WITHDRAWALS OVER A GIVEN TIME PERIOD?**

INTEREST RATE	NO. OF YEARS YOUR CAPITAL WILL LAST							
	5	10	15	20	25	30	35	40
3%	\$5,565	10,356	14,481	18,031	21,088	23,719	25,984	27,934
4%	5,430	9,877	13,519	16,502	18,945	20,946	22,585	23,927
5%	5,299	9,428	12,646	15,153	17,106	18,628	19,814	20,738
6%	5,173	9,007	11,850	13,958	15,521	16,679	17,538	18,175
7%	5,050	8,613	11,126	12,898	14,149	15,031	15,653	16,092
8%	4,932	8,242	10,464	11,955	12,956	13,628	14,079	14,382
9%	4,817	7,894	9,859	11,114	11,916	12,428	12,755	12,964
10%	4,707	7,567	9,306	10,362	11,005	11,395	11,632	11,777
12%	4,496	6,970	8,332	9,082	9,495	9,722	9,847	9,916
15%	4,203	6,198	7,145	7,594	7,807	7,909	7,957	7,979

Example: How much capital is needed now, from which you can withdraw \$1,000 per month for 15 years, if the account earns 6% interest? Locate the figure, \$11,850, where the columns for 15 years and 6% interest intersect. Multiply this number by 10, since the above table illustrates figures per \$100 a month.

The answer is \$118,500 will need to be invested in an account earning 6% a year for 15 years in order to generate \$1,000 a month.

Example: How much monthly income would you be able to withdraw over 20 years, if you invested \$175,000, earning 7% a year, over that time period.

Locate the figure, \$12,898, where the 7% and 20 year columns intersect, which is the amount of capital that would generate \$100 a month for 20 years. Dividing it into \$175,000 produces the answer, \$1,357 a month. Since the sum of \$175,000 is 13.567 times greater than \$12,898, you would therefore multiply \$100 by 13.57.

Example: How much capital would you still have after drawing down \$1,000 a month for 10 years, if your original investment was based upon a 6% annual interest rate for 20 years. Locate the figure, \$13,958, where the 6% and 20 year columns intersect. Multiplying it by 10 will give you the amount of your original investment (\$139,580), which would produce \$1,000 a month for 20 years. Next, locate the figure, \$9,007, where the 6% and 10 year columns intersect and multiply it by 10. Answer: \$90,070 would still remain.

CHAPTER 7

INFLATION

HOW MUCH MUST I SAVE HOW LONG MUST I SAVE HOW LONG WILL MY MONEY LAST

At retirement, many people are faced with the reality that they could outlive their money.

Today, with people living into their eighties, nineties, and even over one hundred, the focus is on how long will one's financial resources last.

As people are forced to draw down on their life savings and investments to supplement their social security benefits, the greater that possibility becomes. This is especially true if you must use your capital faster than interest replaces the amount withdrawn. When inflation is added to this scenario, there is a loss of purchasing power, causing a further reduction in the amount of time that your money will last.

Loss of purchasing power, like taxes, over a period of time is a real money destroyer.

Retirement is expensive. This means you must better prepare yourself financially to guard against outliving your resources.

Planning for it should start as early as possible. After all those years working, the day you retire, the amount of income you receive from accumulated assets, will be what matters most to you.

It is in your interest to achieve an after-tax return on your money that exceeds the rate of inflation, year in and year out.

Your tax bracket and the rate of inflation, significantly impact, both the growth and the purchasing power of your money. The higher they are, the less you accumulate and the less your money will buy.

At the same time compound interest is increasing the amount of your money, taxes and inflation are hard at work reducing its value.

The following table illustrates by tax bracket and inflation rate, what you need to earn on a taxable investment to break even.

<u>INFLATION AND TAX TABLE</u>										
WHAT YOU NEED TO EARN TO JUST BREAK EVEN										

TAX BRACKET	INFLATION RATE									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
15%	1.18%	2.35%	3.53%	4.71%	5.88%	7.06%	8.24%	9.41%	10.6%	11.8%
25%	1.33	2.67	4.00	5.33	6.67	8.00	9.33	10.67	12.00	13.33
28%	1.39	2.78	4.17	5.56	6.94	8.33	9.72	11.11	12.50	13.89
33%	1.49	2.99	4.48	5.97	7.46	8.96	10.45	11.94	13.43	14.93
35%	1.54	3.08	4.62	6.15	7.69	9.23	10.77	12.31	13.85	15.38

The following formula provides a quick way for you to determine the interest rate or yield you need to earn on an after-tax basis to equal the current or an assumed rate of inflation.

FORMULA

$$\frac{\text{INFLATION RATE}}{(1 - \text{TAX RATE})} = \text{BREAK-EVEN INTEREST RATE}$$

For example, at a 2% inflation rate, someone in the 25% tax bracket would have to earn 2.67% on a taxable investment just to break even. Dividing the inflation rate by 1 - 25% gives you the answer.

$$\frac{2\%}{.75} = 2.67\%$$

If you also pay state income taxes, you will need to first determine your combined effective federal and state tax rate, as discussed in the double tax-free section in chapter 3 and then apply the above formula. For example, at a 3% inflation rate, someone in the 34% combined federal and state tax bracket would need to earn 4.55% on a taxable investment just to break even.

The next table shows how inflation reduces your purchasing power.

WHAT \$1 IS WORTH AT VARIOUS RATES OF INFLATION
--

END OF YEAR	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	.990	.980	.971	.962	.952	.943	.935	.926	.917	.909
2	.980	.961	.943	.925	.907	.890	.873	.857	.842	.826
3	.971	.942	.915	.889	.864	.840	.816	.794	.772	.751
4	.961	.924	.888	.855	.823	.792	.763	.735	.708	.683
5	.951	.906	.863	.822	.784	.747	.713	.681	.650	.621
6	.942	.888	.837	.790	.746	.705	.666	.630	.596	.564
7	.933	.871	.813	.760	.711	.665	.623	.583	.547	.513
8	.923	.853	.789	.731	.677	.627	.582	.540	.502	.467
9	.914	.837	.766	.703	.645	.592	.544	.500	.460	.424
10	.905	.820	.744	.676	.614	.558	.508	.463	.422	.386
15	.861	.743	.642	.555	.481	.417	.362	.315	.275	.239
20	.820	.673	.554	.456	.377	.312	.258	.215	.178	.149
25	.780	.610	.478	.375	.295	.233	.184	.146	.116	.092
30	.742	.552	.412	.308	.231	.174	.131	.099	.075	.057
35	.706	.500	.355	.253	.181	.130	.094	.068	.049	.036
40	.672	.453	.307	.208	.142	.097	.067	.046	.032	.022

Since the above table shows the factor per \$1, it is very easy to determine the loss of purchasing power on any amount of money, at various inflation rates.

Example: To find how much a sum of \$1,000 today, would be worth 15 years from now, assuming 3% annual inflation, multiply the factor of .642, located where the columns for 3% and 15 years intersect, by \$1,000.

Answer: \$642.

Just as the rule of 72 shows when a sum doubles, when used in connection with inflation, it tells you when a sum is reduced in value by half.

Example: When will a sum be reduced by half if the inflation rate is 3% per year.

FORMULA

72 ÷ INFLATION RATE = # OF YEARS IT WILL TAKE A SUM TO BE HALVED.

72 ÷ 3% = 24 YEARS

The following table will help you determine today, the amount of future income needed, with the equivalent purchasing power. By using this table, you can determine how much income, you will need, to keep up with inflation.

WHAT YOUR MONEY NEEDS TO BE WORTH IN THE FUTURE THE VALUE OF \$1.00
--

END OF YEAR	INFLATION RATE									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	1.01	1.02	1.03	1.04	1.05	1.06	1.07	1.08	1.09	1.10
2	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.17	1.19	1.21
3	1.03	1.06	1.09	1.12	1.16	1.19	1.23	1.26	1.30	1.33
4	1.04	1.08	1.13	1.17	1.22	1.26	1.31	1.36	1.41	1.46
5	1.05	1.10	1.16	1.22	1.28	1.34	1.40	1.47	1.54	1.61
6	1.06	1.13	1.19	1.27	1.34	1.42	1.50	1.59	1.68	1.77
7	1.07	1.14	1.23	1.32	1.41	1.50	1.61	1.71	1.83	1.95
8	1.08	1.17	1.27	1.37	1.48	1.59	1.72	1.85	1.99	2.14
9	1.09	1.20	1.30	1.42	1.55	1.69	1.84	2.00	2.17	2.36
10	1.11	1.22	1.34	1.48	1.63	1.79	1.97	2.16	2.37	2.59
15	1.16	1.35	1.56	1.80	2.08	2.40	2.76	3.17	3.64	4.18
20	1.22	1.49	1.81	2.19	2.65	3.21	3.87	4.66	5.60	6.73
25	1.28	1.64	2.09	2.67	3.39	4.29	5.43	6.85	8.62	10.83
30	1.35	1.81	2.43	3.24	4.32	5.74	7.61	10.06	13.27	17.45
35	1.49	2.00	2.81	3.95	5.52	7.69	10.68	14.79	20.42	28.10
40	1.65	2.21	3.26	4.80	7.04	10.29	14.97	21.72	31.41	45.26

Since the above table shows the factor for \$1, you can easily determine how much money you will need to keep up with inflation.

Example: How much money will you need in 20 years to replace \$1,000 today, that has the equivalent purchasing power, if the inflation rate is a constant 3%? Multiply the factor, 1.81, found where the columns for 3% and 20 years intersect by \$1,000. **Answer:** \$1,810.

Example: Your present income is \$45,000 and you would like to determine how much you will need in 10 years, if inflation is a constant 4%, for you to have the same purchasing power. Multiplying \$45,000 by the factor, 1.48, gives you \$66,600.

Example: In today's dollars, you save \$100 per month. Assuming an average annual inflation rate of 2% over 15 years, how much will you need to save at that time, to retain the same purchasing power. **Answer:** Multiply \$100 by the factor, 1.35, and you come up with \$135 a month.

The next table shows how inflation destroys the purchasing power of your money.

FUTURE PURCHASING POWER OF \$1,000										
END OF YEAR	ANNUAL INFLATION RATE									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
5	\$951	\$906	\$863	\$822	\$784	\$747	\$713	\$681	\$650	\$621
10	905	820	744	676	614	558	508	463	422	386
15	861	743	642	555	481	417	362	315	275	239
20	820	673	554	456	377	312	258	215	178	149
25	780	610	478	375	295	233	184	146	116	92
30	742	552	412	308	231	174	131	99	75	57
35	706	500	356	253	181	130	94	68	49	36
40	672	453	307	208	142	97	67	46	32	22

This next table shows what you will need to equal the purchasing power of \$1,000 in today's dollars.

WHAT YOUR MONEY NEEDS TO BE WORTH IN THE FUTURE TO EQUAL \$1000										
END OF YEAR	INFLATION RATE									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
5	\$1,050	\$1,104	\$1,159	\$1,217	\$1,276	\$1,338	\$1,403	\$1,469	\$1,540	\$1,610
10	1,111	1,219	1,344	1,480	1,629	1,790	1,967	2,159	2,370	2,590
15	1,161	1,346	1,558	1,801	2,079	2,397	2,759	3,172	3,642	4,180
20	1,220	1,486	1,806	2,191	2,653	3,207	3,870	4,661	5,604	6,730
25	1,280	1,641	2,094	2,666	3,386	4,292	5,427	6,848	8,623	10,830
30	1,350	1,811	2,427	3,243	4,322	5,743	7,612	10,063	13,270	17,450
35	1,490	2,000	2,814	3,946	5,516	7,686	10,677	14,785	20,420	28,103
40	1,650	2,208	3,262	4,801	7,040	10,286	14,974	21,725	31,410	45,260

Since the above tables are per \$1,000, you can determine larger amounts by multiplying by the appropriate ratio. If you wanted to find the figure for an amount that was not an exact multiple, for example, \$75,500, just multiply by 75.5.

IT'S IN YOUR INTEREST TO START IMMEDIATELY

I hope that you have already become MONEY WISE and taken control of your interest.

If not, start today, don't delay.

Don't ever let it control you!

Become money wise and utilize tax deferred, tax-free and tax deductible strategies to increase your income, reduce taxes and build wealth.

May your interest always be very rewarding and you achieve financial security.

REWARD  YOURSELF
INCREASE INCOME AND BUILD WEALTH
BECOME MONEY WISE

MONEY WISE is a guide for consumers who wish to understand and profit by becoming money wise. The role that financial strategies and interest plays in your life is fundamental to your financial well – being. Consumers need to know information that will be financially beneficial to them in order to earn and keep more on what they save and invest, pay less in taxes and become better managers of their money.

When it comes to personal financial decisions such as choosing a savings account, or other after-tax, tax-deferred, tax-free and tax-deductible investments, many consumers do not know how to maximize their financial gain and minimize taxes, costing themselves hundreds and thousands of dollars every year. By making sense of the various alternatives with which you are confronted, you will come out the winner.

The type of financial investment you choose, the interest rate or yield you earn, the time period involved, how early you start, the rate of inflation, your tax bracket and your awareness of basic financial concepts, facts and strategies will determine eventually how much you profit.

This book contains many easy-to-understand tables, examples and explanations on how to locate, use and apply the data for specific situations to help you make the right choice.

You will be able to apply **MONEY WISE** immediately and throughout your life, rewarding yourself with thousands, tens of thousands and even hundreds of thousands of more dollars earned on your money and saved on taxes.

