

APPENDIX A-1
Exhibit A

The Unitrust Approach

Administrative Provisions of the Trust Instrument

SECTION ____: Definition of "unitrust amount." For purposes of this trust instrument, the "unitrust amount" from a trust or share for a calendar year shall be a unitrust amount equal to four percent (4%) of the value of the assets in the trust or share. Assets shall be valued as of the close of the last business day of the preceding calendar year, or in the first year of the trust or share, as of the day on which the trust or share was established. Assets shall be valued at their net fair market value as hereafter provided, with no accrual of interest or other periodic payments, and considering the debts and any accrued estate tax (but not income tax or real estate tax) liability of the trust or share.

The unitrust amount shall be paid first from income, then from capital gains, and then from principal. Any income of the trust in excess of the prescribed unitrust amount shall be added to principal in the calendar year received.

If a trust or share pays a unitrust amount to a beneficiary, the following provisions shall apply to it:

(a) Valuation of Non-marketable Assets. In determining the fair market value of a non-marketable asset in a trust or share for a calendar year, the trustee may, but need not, have the non-marketable asset appraised by a valuation professional. The cost of the appraisal shall be paid from the principal of the trust estate. The trustee need not revalue a non-marketable asset each year, but may use the prior year's value if the trustee so chooses; provided, however, that if a non-marketable asset was last valued at more than \$100,000, the asset must be revalued within three years. The trustee's assignment of a value to a non-marketable asset, done in good faith, shall be binding on all current and future beneficiaries of the trust or share and shall not be subject to question.

Marketable assets in a trust or share are (i) cash, and moneys held at financial institutions, (ii) securities (including mutual fund shares) for which market quotations are readily available, and (iii) interests in common trust funds. "Non-marketable assets" in a trust or share are all assets which are not marketable assets. Examples of non-marketable assets include (but are not limited to) real estate, partnership interests, closely held stock and loans.

The trustee may distribute a non-marketable asset to a beneficiary as part of the beneficiary's unitrust payment, valuing the asset at its fair market value. The trustee may sell a non-marketable asset to a beneficiary, for cash or on credit, at its fair market value.

If the trust or share holds a residence, including a seasonal or vacation home, the trustee in its discretion may allow a beneficiary to occupy the residence. In such case:

- (1) The value of the residence shall be excluded in determining the unitrust amount payable to the beneficiary.
- (2) The beneficiary shall not pay rent to the trustee.
- (3) Neither the expenses of the residence nor the value of its use shall be charged against the unitrust amount payable to the beneficiary. The expenses of the residence (including taxes, assessments, insurance, mortgage payments, repairs and replacements, but not improvements) shall be paid by the trustee, except that the beneficiary shall pay all utilities, ordinary maintenance, painting, decorating and other similar expenses. *

Exhibit B

The Annuity Approach

ARTICLE ____: If my mother, M, survives me, as of my death the trustee shall set aside from the principal of the trust estate the amount of \$300,000, adjusted for inflation as hereafter provided, as a separate trust. The trustee shall select and allocate the cash, securities and other property, including real estate and interests therein, which shall constitute the trust, employing for the purpose values current at the time or times of allocation. The trust shall be held and disposed of as hereinafter provided. The succeeding articles of this agreement shall be subject to the trustee's making or providing for this allocation.

(a) Annuity. Commencing with my death the trustee shall pay to my mother, M, in each calendar year of the trust, in equal monthly installments, an annuity of \$12,000, adjusted for inflation as hereafter provided.

(b) Inflation Adjustments. The dollar amounts of \$300,000 and \$12,000 shall be adjusted to reflect the increase or decrease in the cost of living which occurred from the month of _____, 19____, [insert the month in which the trust was signed] to the month immediately preceding my death.

In addition, the annuity in (a) shall be adjusted annually to reflect increases and decreases in the cost of living which occur after my death. The month of January immediately following my death shall be used as the base month, and inflation adjustments shall be made each succeeding January.

The cost of living shall be measured using the Consumer Price Index, for all items for all urban consumers, not seasonally adjusted, as published by the Bureau of Labor Statistics of the U.S. Department of Labor (or its successor index).

(c) Remainder. Upon the death of my mother, the trust estate shall be distributed per stirpes to my then living descendants, subject to postponement of possession as provided below, except that each portion otherwise distributable to a descendant of mine for whom a share of the Family Trust is then held hereunder shall be added to that share.

(d) Source of Annuity Payments. The annuity shall be paid first from income, then from capital gains, and then from principal. Any income of the trust in excess of the prescribed annuity shall be added to principal in the calendar year received.

(e) Funding Period. Notwithstanding that the obligation to pay the annuity shall commence with my death, payment may be deferred until a reasonable period after the complete funding of the trust. If payment is deferred, the trustee shall pay to the beneficiary (in case of underpayment) or shall recover from the beneficiary (in case of overpayment) an amount equal to the difference between the annuity properly payable and any annuity actually paid, in each case without interest.

(f) Proration. In determining the annuity, the trustee shall prorate the same on a daily basis for a short year and for a year in which an estate or interest terminates.

(g) Prevailing Provisions. The provisions of this article shall prevail over any other provisions in this instrument which are inconsistent herewith.

In addition, modify the reference to "income" beneficiary throughout the balance of the trust instrument. For example, in the administrative provisions, the trust instrument might direct the trustee to render accounts "to each adult beneficiary then entitled to receive or have the benefit of the income or annuity from the trust."

The Problem with Unitrusts

No Number Can Always Be Right: Indeed Any One Number Is Usually Wrong

- *The choice of the unitrust percentage represents a forecast that the future will mirror the characteristics of the period that was reviewed to help select the unitrust percentage.*
- *But when pricing in the financial markets changes during one period – e.g., if yields fall and P/E ratios rise – the second period must be different in at least some respects. Total return can be the same in the second period, but only if the capital appreciation component increases, driving yields even lower!*
- *The selection of a 4% (after-tax) unitrust percentage is egregiously high in the setting of today's capital market pricing – discriminating heavily against remaindermen: The same percentage would have been egregiously low anytime before 1955, provided the portfolio was heavily invested in equities. For balanced portfolios, 4% was always too high. The only reason it would not have been disastrous for much of the Post-World-War-II era is that P/E ratios have tripled over that period. Should this have been expected? Should we expect a continued expansion for the foreseeable future?*
- *As a rough approximation – and given how low dividend yields are relative to history – P/E ratios would have to double every 20-25 years to justify a 4% unitrust percentage. Moreover, as the dividend yield declines, the doublings would have to take place at an ever faster pace.*

The Problem with the Bull Market

Bull Markets Not Only Don't Help Us as Much as We Think, in Some Respects They Hurt

- *Since the beginning of 1995, the S&P has tripled, from 459 to 1300+ but dividends have risen "only" 28%. Ignoring inflation, is the 100% equity investor three times as rich (i.e., 200% better off) or only 28% better off?*

If you are planning to deplete your assets entirely in 1999, you are about 150% better off (don't forget taxes). But, if you are planning to run them down over 25 years, you are only 45-50% better off. If you are a foundation with an indefinite horizon you are 28% better off and if you are an individual who is younger than 50 and your horizon extends through the lives of your grandchildren, you are almost certainly worse off – the loss of dividend yield more than offsetting your higher current wealth.

- *This is analogous to what happened to bond investors since the early 1980s. At the end of 1981, intermediate Treasuries yielded 13.96%. By the end of 1998, yields were 4.68%. With capital gains in 12 of the 17 years, the cumulative gain totaled was 46%. But, despite the bull market (indeed, because of the bull market), the total return was only 10.6% per year, or almost 3½% below the starting yield. Long bonds "broke even" on the bull market – starting yield of 13.34%, ending yield of 5.42%, capital gain of nearly 104% and a total return of 13.5%.*
- *Since equities have longer durations than even long bonds, it takes longer for the injury from lower yields to offset the benefits of capital gains, but it is only a matter of time.*

Conclusions

- *The most salient investment fact of the second half of the Twentieth Century was the collapse in dividend yields and associated expansion in P/E ratios. Because it happened...*
 - *...realized rates of return were raised. But, since it happened...*
 - *...future rates of return were driven lower. (In other words, the Great Bull Market is not only unlikely to recur, it undermines the possibility of its own recurrence.) However...*
 - *...since many investors misunderstand how history is pertinent, they have mistakenly concluded that the high real rates of return of the past are indicative of future returns.*
- *For trusts, Garland-type rules are best – because they work regardless of where yields are or how they may change. However, they are complex and most people may be unwilling to use them.*
- *Unitrusts represent the classic error of “fighting the last war.” 4% unitrusts would have worked well in the past because P/Es expanded significantly but are doomed for (at least) the next (investment) generation. They also are subject to many of the same abuses (in terms of manipulating asset allocation) that exist under the current system.*
- *The current system – which defines income as dividends and interest – work much like Garland + rules whenever stock/bond mixes are in the typical balanced range (i.e., 40-50-60-70% equities). Since most trusts are invested in this fashion, they are vastly superior to unitrusts.*

Assumptions Underlying Simulations

		Comments
Beginning Assets	\$10 million	Large assets = high tax rates but low fees
Dividend yield	1.23%	As of April 29
Capital appreciation	3.98	As per page 5
Intermediate Treasury Yield	5.20	As of April 29
Inflation	2.40	Blue Chip consensus
Management & fiduciary fees	0.50%	Large size + indexing
Round-trip equity trading costs	0.56	Reflects 5¢ each way + 1/8 th bid-ask spread on \$40 shares
Round-trip bond trading costs	0.19	Reflects 6/32nds bid-ask spread
Ordinary tax rate	40.79%	103% of 39.6%
State & local tax rate	7.00	Approximate national average and just above NYS
Federal capital gains rate	21.19	20% + 40.79% - 39.6%
Combined ordinary	44.93	
Combined capital gains	25.33	Remember, state tax is deductible to the tune of 40.79%
Equity turnover	5%	Index-like
Bond turnover	20	Index-like

Stress Test

First-year bear market	70%	Reduces market P/E to 10½ times earnings
First-year rise in interest rates	4.00	Intermediate Treasuries rise to 9.2%
First-year (&c.) rise in inflation	3.00	Inflation averages 5.4%

Source: Department of Commerce, Bureau of Labor Statistics, Standard & Poor's, Wall Street Journal, Ibbotson Associates, Blue Chip Financial Forecasts, IRS, State Revenue Departments, and David Levine.

Simulation Results – Unstressed

	Modified Garland Rule		Modified Garland + 1%		Modified Garland + 2%		2½% Unitrust		4% Unitrust		All Income (Current System)	
	Assets	After-tax Spending	Assets	After-tax Spending	Assets	After-tax Spending	Assets	After-tax Spending	Assets	After-tax Spending	Assets	After-tax Spending
<u>100% Equities</u>												
Beg. Year 1	10.0 M	84 K	10.0 M	183 K	10.0 M	282 K	10.0 M	250 K	10.0 M	400 K	10.0 M	65 K
Year 20	11.6	95	9.6	167	8.6	213	8.3	209	6.1	249	12.0	78
Year 40	12.9	105	8.8	153	7.2	162	6.6	166	3.6	146	13.8	89
% Change	29%	24%	-12%	-16%	-28%	-43%	-34%	-34%	-64%	-63%	38%	37%
Inflation-adjusted goes broke		Never		106 yrs.		52 yrs.		61 yrs.		33 yrs.		Never
<u>60% Equities</u>												
Beg. Year 1	10.0 M	81 K	10.0 M	180 K	10.0 M	278 K	10.0 M	250 K	10.0 M	400 K	10.0 M	161 K
Year 20	10.6	83	8.8	151	7.9	194	7.5	189	5.6	229	9.0	146
Year 40	11.0	86	7.6	129	6.1	138	5.6	141	3.0	124	7.9	128
% Change	10%	6%	-24%	-28%	-39%	-50%	-44%	-44%	-70%	-69%	-21%	-20%
Inflation-adjusted goes broke		Never		84 yrs.		47 yrs.		54 yrs.		31 yrs.		99 yrs.
<u>20% Equities</u>												
Beg. Year 1	10.0 M	77 K	10.0 M	176 K	10.0 M	275 K	10.0 M	250 K	10.0 M	400 K	10.0 M	257 K
Year 20	9.7	73	8.1	137	7.3	178	6.9	176	5.1	211	6.8	178
Year 40	9.4	71	6.5	110	5.3	119	4.7	120	2.6	107	4.6	120
% Change	-6%	-9%	-35%	-38%	-47%	-57%	-53%	-52%	-74%	-73%	-54%	-53%
Inflation-adjusted goes broke		251 yrs.		72 yrs.		43 yrs.		48 yrs.		29 yrs.		47 yrs.

Note: In the Garland and All Income scenarios, the income beneficiary pays half of the 0.50% management fee and all taxes associated with his or her spending.

Source: See sources on page 6.

Simulation Results – Stressed

	Modified Garland Rule		Modified Garland + 1%		Modified Garland + 2%		2½% Unitrust		4% Unitrust		All Income (Current System)	
	Assets	After-tax Spending	Assets	After-tax Spending	Assets	After-tax Spending	Assets	After-tax Spending	Assets	After-tax Spending	Assets	After-tax Spending
100% Equities												
Beg. Year 2	2.9 M	109 K	2.8 M	146 K	2.7 M	179 K	2.8 M	69 K	2.7 M	107 K	2.9 M	67 K
Year 20	3.3	107	2.7	111	2.1	109	3.7	93	2.8	113	4.0	93
Year 40	3.1	99	2.1	85	1.4	69	4.0	101	2.2	89	4.5	105
Unstressed 1st year spending inflation-adjusted goes broke	Never		31 yrs.		18 yrs.		21 yrs.		13 yrs.		Never	
60% Equities												
Beg. Year 2	4.5 M	123 K	4.3 M	190 K	4.2 M	252 K	4.3 M	108 K	4.2 M	169 K	4.4 M	156 K
Year 20	4.8	98	3.8	115	3.1	122	4.5	112	3.4	137	3.8	137
Year 40	4.5	88	3.0	86	2.0	76	3.8	95	2.1	85	2.6	93
Unstressed 1st year spending inflation-adjusted goes broke	Never		43 yrs.		25 yrs.		29 yrs.		17 yrs.		50 yrs.	
20% Equities												
Beg. Year 2	6.7 M	103 K	6.5 M	205 K	6.4 M	301 K	6.5 M	162 K	6.4 M	254 K	6.5 M	311 K
Year 20	6.3	53	5.0	90	4.0	111	4.7	121	3.5	146	3.1	156
Year 40	5.8	45	3.9	66	2.6	68	3.1	80	1.7	72	1.3	65
Unstressed 1st year spending inflation-adjusted goes broke	125 yrs.		48 yrs.		30 yrs.		33 yrs.		21 yrs.		32 yrs.	

Note: In the Garland and All Income scenarios, the income beneficiary pays half of the 0.50% management fee and all taxes associated with his or her spending.

Source: See sources on page 6.

Modified Modified Garland Works Best

But the Existing System is not that Bad (and Much Preferable to the Unitrust Idea)

- *The "Garland Rule" as modified by Hertog and Levine represent the best spending policy for preserving a body of wealth (i.e., neither depleting it nor allowing it to grow). If spending (defined to include all taxes and fees) equals (a) equity investment times 125% of the dividend yield on the broad stock market, plus (b) bond investment times the yield minus the inflation rate, inflation-adjusted wealth remains intact. (Note: part (b) can easily be negative!)*
- *Since the aim of most settlors is to sub-divide the benefits deriving from the estate between the income beneficiaries and the remaindermen, an amount should be added to the modified Garland Rule – say 1-2% (pre-tax) – that permits the trust to be depleted slowly over time.*
- *The principal disadvantage of such a rule is it's complexity. A formula is needed for each asset class (U.S. stocks, foreign stocks, conventional bonds, inflation-adjusted bonds ((TIPs)), real estate, business assets, etc.). Some authority must set guidelines from time to time (annually will do): e.g. what is the inflation adjustment? what tax rate(s) should be used? etc. I am very skeptical that the consumers of such rules (the legal community, settlors, income beneficiaries, remaindermen) will embrace this methodology; most will simply not understand it.*
- *Interestingly, for balanced portfolios, the current system works a lot like the modified Garland Rule + 1% or 2%. The reason: Spending 100% of after-tax bond interest is quite a bit too high but spending 100% of after-tax dividends from the equity component represents "too little" spending. Net, net, the results it produces are perfectly reasonable. And it's simple.*

History Sometimes *Cannot Repeat*: An Illustration

- *From 1926 through 1981 the total return on long Treasuries averaged 3.0%. By the end of 1981, however, the yield had reached 13.34% and it was essentially impossible to devise an intermediate- or long-term scenario in which returns could be as low as 3%.*
- *A one-year return of 3.0% (or lower) was easily doable. If yields (on a 30-year bond) increased from 13.34% to 14.92%, the capital loss would be great enough to offset 10.34% of yield. However, each year the rise in yields would have to be greater – partly due to the higher starting yield, and partly due to the shortening of the bond's duration. In the third through seventh years, the yield on the bond would have to rise from 16.99% to 19.81% to 23.88% to 30.32% to 71.02% in order to limit the total return to 3.0%.*
- *By the eighth year the starting yield is so high and the duration of the bond is so short that the minimum possible total return is 14.07%; this occurs if yields rise to 306.93%. In round numbers here how that happens: Owing to the rise in yields from 71% to 307% there is a capital loss of 77%, but you earn the starting yield of 71% and you get to reinvest your mid-year coupon payment of 35½% at the mid-year yield of 189%. Your 35½% coupon earns interest of 94½% in the second half of the year which much more than offsets the 39% capital loss that occurs on the reinvested coupon as the yield continues to rise from 189% to 307%.*

Note: All scenarios assume the rise in yields in each year is equally divided between the first and second halves.

Lessons from History for Unitrusts (and You Too)

- *Some phenomena tend to repeat. When this is true we should "bet" on regression to the historical mean (e.g., weather in NYC in July).*
- *Some phenomena exhibit trends (e.g., population). When this is true, the historical growth rate might represent a good bet and the historical mean is always very misleading.*
- *Sometimes history is random. Roulette, of course, is a good example, but so are the short-term fluctuations in many phenomena around their respective means.*
- *Sometimes history is self-reversing! Rising interest rates weaken the economy, causing interest rates to decline which strengthens the economy, which causes interest rates to rise once again weakening the economy, and so on, and so on, etc.*
- Similarly, rising yields reduce investment returns **while they are happening** (owing to the associated capital losses) but then set the stage for higher investment returns in the future. Even if yields continue to rise, investment returns tend to be higher in the later period because the yield component of return is higher. To the extent that yields stabilize (let alone reverse), the capital gain/loss component improves as well.
- By the same token, declining yields boost returns while they are happening, but lead to lower returns in the future. **This is true for stocks as well as bonds.**