

**REFLECTIONS ON INVESTING <sup>1</sup>**  
**One-Hour Version**

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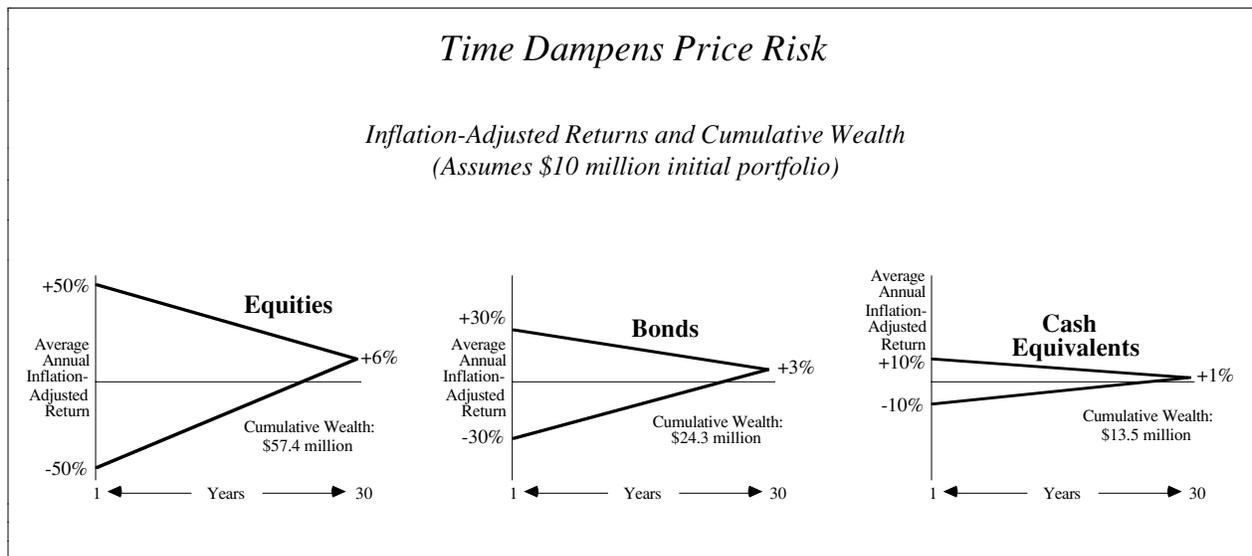
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<sup>1</sup> Portions of this document are based on materials originally prepared during my employment with Grantham Mayo Van Otterloo & Co. I am especially indebted to Jeremy Grantham for his wise counsel on investments and to Robert Arnott of First Quadrant Co. for his assistance in preparing the section on rebalancing. I am also grateful to my former colleagues at Cambridge Associates for helping shape so many of my views on investing.

## GENERAL OBSERVATIONS

- **Risk is in the eyes of the beholder.**

For perpetual life institutions, equities broadly defined are the **least** risky asset, because they are the most reliable way of maintaining endowment purchasing power (see graph on next page). For investors with short time horizons, assets whose prices fluctuate (including equities) can be very risky, because such investors may need (or elect) to sell them at temporarily depressed prices. Some of the many prisms through which investors view risk are identified in the table on the following page.



- **There is no such thing as an “ideal” asset mix — even for foundations with identical spending policies.**

The ultimate measure of the appropriateness of a given asset mix for a given foundation is whether it will produce the maximum return for whatever level of risk the foundation’s trustees are willing to bear. But few (if any) trustee groups can gauge accurately their tolerance for poor results until those results actually roll in. The idea of an “ideal” asset mix for foundations with different governing boards is thus an impossibility.

## Risk Lies in the Eyes of the Beholder

Scale: 0 = Riskless 10 = Extremely Risky

Type of Risk	Comments	Fixed Income			Equities					Other	
		Money Market Fund	Bond Index Fund	Actively Managed Bond Portfolio	Broad US Stock Index Fund (Wilshire 5000)	Narrow US Stock Index Fund (S&P 500)	Typical Multi-Mgr Structure ("Complementary")	Typical Core / Satellite Structure	Completeness / Satellite Structure	Typical Hedge Fund	Typical Venture Fund
<i>Short-Term Risks</i>											
Price Fluctuations											
Beta (vs. S&P 500)	Not very useful	2	4	Varies	9	10	8	9	8	5	2
Standard Deviation	Not very useful	0	4	Varies	7	8	7	6	6	6	3
Loss Potential											
Probability of Loss	"Safe" investments = low returns	0	4	3	5	5	4	5	5	6	2
Magnitude of Loss	It pays to bear this risk	0	4	3	6	6	5	5	5	8	2
Average Loss	It pays to bear this risk	0	4	3	6	6	5	6	6	7	8
Liquidity Risk	It pays to bear this risk	0	2	4	4	3	6	4	4	7	10
Structural Risk [a]	Can be eliminated through hard work	0	0	2	0	0	3	2	3	6	6
Informational Risk [b]	Can be eliminated through hard work	0	0	2	0	0	5	4	4	7	10
Reputational Risk [c]	It pays to bear this risk	1	1	3	1	0	5	3	4	Varies	Varies
<i>Long-Term Risks [d]</i>											
Complete Wipeout	Risk of this is often lower than it seems	0	0	0	0	0	0	0	0	4	1
Real Return < 0%	Flip side of minimizing loss periods	5	3	4	2	2	3	2	2	5	5
Real Return < 5-6%	No investments are riskless in this sense	10	10	10	6	6	9	8	7	4	4
Real Return < 10%	No investments are riskless in this sense	10	10	10	10	10	10	10	10	5	5
<i>Other Decision Variables</i>											
Long-Term Return Potential	Depends heavily on entry price	Very low	Low	Medium	Medium	Medium	Low-medium	Low-medium	Medium-high	High	High
Costs											
Management Fees	Controllable via performance-based fees	Very low	Low	Medium	Very low	Very low	High	Varies	Varies	High	High
Due Diligence / Legal Fees	Flip side of structural risk	Nil	Very low	Medium	Very low	Very low	Medium-high	Medium-high	Medium-high	High	High
Deadweight % [e]	Most multi-mgr funds have too much	None	None	> 70%	None	None	> 60%	Varies	< 40%	Very low	None

[a] Novelty / complexity of transaction

[b] Inaccurate or incomplete data

[c] Risk of underperforming peer institutions

[d] Long-Term Risk taxonomy omits "Reputational Risk" because, over longer time periods, it is subsumed by other types of risk

[e] "Deadweight" = securities held by active managers solely for diversification purposes

- **By the time investors accumulate sufficient evidence suggesting that an investment approach (or asset class) produces superior returns, the big bucks have already been made.**

There is an irony at work here. Although institutions are accused of being hopelessly short-term in their thinking, especially with respect to manager hirings and firings, they're actually too far-sighted in other respects, especially with respect to asset allocation. The basic problem is that people tend to forget that the current price of an asset is always more important than historical averages. Examples: "value" stocks in the U.S. (very cheap in mid-1970s, overly expensive by late 1980s); small stocks in the U.S. (horribly expensive by 1983, when the first big wave of studies was published extolling their long-term virtues); real estate in the late 1980s (same story as small stocks). Studies extolling the virtues of particular investments have a nasty tendency to appear at or close to secular peaks in the returns on such investments.

- **Events that are forecastable are usually already reflected in securities prices.**

Board discussions of current economic trends (e.g., "the economy is picking up; let's increase our stock holdings") are not useful unless accompanied by informed discussion of what "the market" has already discounted. Prices at the margin are moved by true surprises — events so improbable that had anyone been so bold or far-sighted as to have seen their approach, he or she would have been unable to persuade anyone else to invest their hard-earned money in accordance with such a forecast. Paradoxically, the more far-sighted an investment forecast is, the less useful it is likely to be, especially to trustees, who naturally shy away from extreme or unconventional gambles.

- **Most governing boards operate on a part-time basis in an environment where consensus comes first.**

This is the least favorable environment for investment decision-making. Also, the greater the number of trustees involved, the more serious the potential is for "lowest common denominator" decision-making.

## INVESTMENT GOALS AND CONSTRAINTS

- **There are just a few types of risk which should concern foundation investors:**

### *Short-Term Risks*

- **Price Risk** (defined at the **Asset Class** level)
- **Reputational Risk** (underperformance relative to peer institutions)

### *Long-Term Risk*

- **Inflation Risk** (erosion of fund purchasing power)

*Asset Class Price Volatility as the Proper Definition of Worrisome Volatility:* Combining individual assets that rise and fall at different times — including even those that are themselves **highly** volatile — can and usually does **reduce** the short-term volatility of a fund. Given this fact, fluctuations in the market value of individual asset classes (i.e., “price risk”) is the only type of **volatility** with which trustees must **unavoidably** be concerned. It is **not** the only form of **risk** with which they need be concerned, of course, which is why two additional forms of risk are discussed here.

*Apparent Incompleteness of Above Catalog of Risks:* Some people would argue that this catalog of just three risks which should concern trustees is incomplete because it excludes such obvious risks as the potential for income shortfalls (i.e., current yields that don’t at least equal current spending) or the potential for underperforming conspicuous indices (e.g., the S&P 500). My view is that all types of risk not listed explicitly above are **subsumed** by the risks that **are** listed. For example, current income shortfalls are problematic only if such shortfalls trigger forced sales of assets at depressed prices to meet spending needs; hence, the risk of current income shortfalls is subsumed by the first type of risk listed above (short-term fluctuations in endowment market values). And the specter of underperforming conspicuous indices is problematic only if such underperformance proves so upsetting that trustees feel compelled to abandon sensible long-term policies at an inopportune time in an effort to avoid further short-term embarrassments. Such distress seldom arises unless peer institutions are performing materially better; hence, the risk of underperforming specified indices is subsumed by the second type of risk listed above (underperformance relative to peer institutions). Similarly, since the long-term goal of most institutional funds is to maintain fund purchasing power net of spending, the oft-discussed risk of underperforming peer institutions over the **long** term is subsumed by the third type of risk listed above (lost purchasing power).

- **There is no “free lunch”: the only way to increase expected long-term real returns (i.e., reduce *inflation* risk) is to assume increased levels of the other forms of risk (i.e., assume more *individual asset price* and *reputational* risk)**

This is tautologically true, notwithstanding so-called “efficient frontier” studies showing that foundations can increase their long-term returns **without** incurring greater risk by dialing into their policy portfolios assets whose prices rise and fall at different times than domestic stocks and bonds. However, such “efficient” portfolios typically entail more of the **second** type of risk described above: **reputational** risk. Why? Because most institutional asset mixes favor **comfort** over **efficiency** (defined as maximum long-term risk-adjusted returns), the chief example being the still-meager percentage of U.S. institutional funds allocated to foreign securities, which can boost total fund efficiency materially but which still entail a high degree of the second type of risk described above (short-term underperformance). Consequently, institutions that **do** implement faithfully efficient asset allocation policies must have the patience to endure the inevitable periods when their funds underperform those of peer institutions.

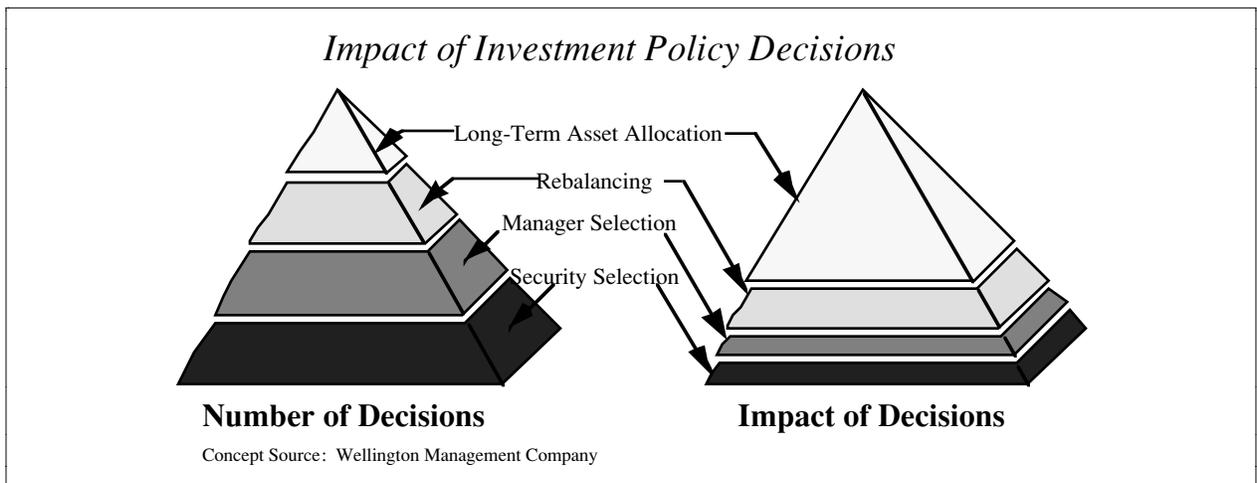
- **Most trustee groups pursue policies that represent a balancing of all three types of risk.**

Allocating assets without regard to price risk is sensible only if the resulting portfolio can be expected to generate current income at least equal to current spending, even under worst case conditions. If it cannot, then assets may have to be sold at depressed prices to fund income shortfalls, thus impairing long-term real returns. Allocating assets without regard to the second type of risk — underperforming peer institutions — is sensible only if trustees are certain they will not abandon unconventional (but potentially profitable) policies during the inevitable periods when such policies underperform more conventional approaches. Allocating assets without regard to the third type of risk — inadequate inflation-adjusted returns — is sensible only if a foundation is consciously pursuing a policy of self-liquidation.

The remainder of this narrative assumes that a governing board has reviewed the preceding points, and has elected to adopt policies that indeed reflect a balancing of the three risks described above. This threshold policy choice enables us to eliminate from consideration policies that entail extremely high levels of any of the risks described above. Thus, all-equity policies can be eliminated because they entail excessive levels of the first two types of risk. All-fixed income portfolios can be eliminated because they entail excessive levels of the third type of risk.

**ASSET ALLOCATION**

- **Asset allocation decisions are the chief determinant of a fund’s long-term returns.**



- **Governing boards seeking to craft enduring asset allocation policies must answer two threshold questions:**
  1. **How much of each of the three forms of risk enumerated above (price risk, reputational risk, and inflation risk) are we comfortable bearing?**
  2. **How confident are we that we can make strategic shifts across asset class boundaries in a timely manner (i.e., be successful “market timers”)?**

The first question is crucial because different answers point to radically different “policy portfolios,” as indicated by the table at page 2.

The second question is no less important, because it has a crucial bearing on the character of the guidelines being formulated, as follows:

<i>Governing Board’s Assessment of Its Ability to Make Asset Allocation Shifts</i>		
	<b>Highly Confident</b>	<b>Not Confident</b>
<b>Permissible Assets</b>	Few or no prohibitions — to facilitate purchases of <b>any</b> assets selling at a <b>sufficiently low price</b>	Highly specific list of permissible and prohibited assets — to inhibit untimely shifts into unfamiliar asset types
<b>Breadth of Allocation Ranges</b>	Wide — to maximize potential profits	Narrow — to minimize discomfort and ad hoc timing errors

*Nexus between Confidence Factor and Permissible Assets:* Investors with high confidence in their ability to make timely asset allocation shifts typically eschew asset class prohibitions (e.g., the prohibitions against holding securities of bankrupt issuers found in many institutional funds' guidelines). Why? Because **every** asset class (or subclass) becomes a prudent investment if its price is sufficiently low. This is tautologically true in an economic sense, and increasingly true in a strictly legal sense as more states adopt revised versions of the "prudent man" rule that focus on total fund diversification as opposed to the riskiness of individual investments. Since there are no assets that one can state with certainty will **never** become compellingly cheap, the only legitimate reasons for including (or excluding) certain asset types in long-term asset allocation guidelines are: (1) to advance non-economic goals (e.g., by excluding tobacco-related stocks); or (2) to inhibit trustees from making ad hoc decisions that will reduce rather than increase the fund's long-term returns.

*Nexus between Confidence Factor and Breadth of Allocation Ranges:* Why should trustee groups that lack the confidence to make strategic shifts themselves (right-hand column) adopt **narrower** policy ranges than more confident investors? After all, the trustees need not retain responsibility for making such shifts themselves: they could instead adopt **broad** ranges (e.g., let U.S. equities range from 30% to 80% of total assets, as opposed to some narrower range) and **delegate** to outside experts the power to make shifts within such ranges. Unfortunately, what appears superficially to be a perfect match — a board that recognizes it lacks the time or experience to make timely strategic shifts matched with an outsider who relishes this task — is in fact a dangerous **mismatch**. To be profitable net of trading costs **and** the timing errors that even the best asset allocation specialists inevitably make, short-term asset allocation strategies must be aggressive, i.e., they must entail inherently contrarian moves that are potentially profitable precisely because they are so uncomfortable (e.g., reducing stock exposure as stock prices are skyrocketing upwards, or loading up on bonds as interest rates are rising sharply). Unless a governing board that admits it is not well-equipped to play and win this difficult game literally stops monitoring its fund's short-term results (which most boards are unwilling to do), the discomfort associated with potentially profitable asset allocation strategies will eventually cause it to terminate its relationship with the outside asset allocation specialist, typically at what proves in hindsight to have been an especially **inopportune** time.

- **The utility of asset allocation guidelines is inversely related to their prolixity.**

Excess verbiage is not only off-putting to well-intentioned users (e.g., potential donors to community foundations), it is often a mask for a board's failure to reach a clear consensus on important policy issues. The best asset allocation

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statements have the following attributes: (1) quantified real (i.e., inflation-adjusted) return expectations for permissible asset classes and subclasses; (2) quantified ranges for these asset classes and subclasses; and (3) a highly succinct (preferably less than five words) rationale for why each asset class or subclass is deemed permissible. An illustrative set of guidelines appears below.

These illustrative guidelines assume that the foundation in question invests **only in publicly traded** assets. The exhibit entitled *Comparative Asset Allocation Guidelines* on the following page compares the risk/return tradeoff inherent in this set of policy preferences (see Column C) to the tradeoffs inherent in alternate policies, each chosen because it typifies a generic category of institutional investors.

<i>Illustrative Asset Allocation Guidelines</i>					
<b>Asset Class</b>	Expected Real Return on Index	Expected Excess Return from Active Management (Net of Fees)	Expected Real Total Return	Proposed Policy  Portfolio Allocation Min/Norm/Max	Reason Held
<i>Total Return Strategies</i>					
Domestic Equities	6%	0.75%	6.75%	30 / 35 / 50	Enhance real returns
Foreign Equities					
Developed Markets	6%	1.0%	7.0%	5 / 15 / 50	Enhance real returns
Emerging Markets	6%	1.5%	7.5%	0 / 5 / 15	Enhance real returns
Equity Substitutes					
Venture Capital	10%	Inc'd in 10%	10.0%	0 / 0 / 0	Enhance real returns
High Yield/Distressed Debt	3%	6%	9%	0 / 3 / 6	Enhance real returns
Risk Arbitrage	0%	8%	8%	0 / 4 / 10	Enhance real returns
Other Strategies	10%	Inc'd in 10%	10.0%	0 / 3 / 5	Enhance real returns
<i>Volatility Control Strategies</i>					
Inflation Hedges					
Resource-Related Stocks	5%	1.0%	6.0%	0 / 5 / 16	Hedge / enhance returns
Equity Real Estate	6%	2.0%	8.0%	0 / 5 / 10	Hedge / enhance returns
Deflation Hedges					
Domestic Bonds	3%	0.5%	3.5%	15 / 15 / 30	Hedge deflation
Foreign Bonds	3%	1.0%	4.0%	0 / 5 / 20	Hedge deflation
Cash Equivalents	1%	0.25%	1.25%	0 / 0 / 10	Liquidity buffer
Total Fund			6.10%		

## Comparative Asset Allocation Guidelines

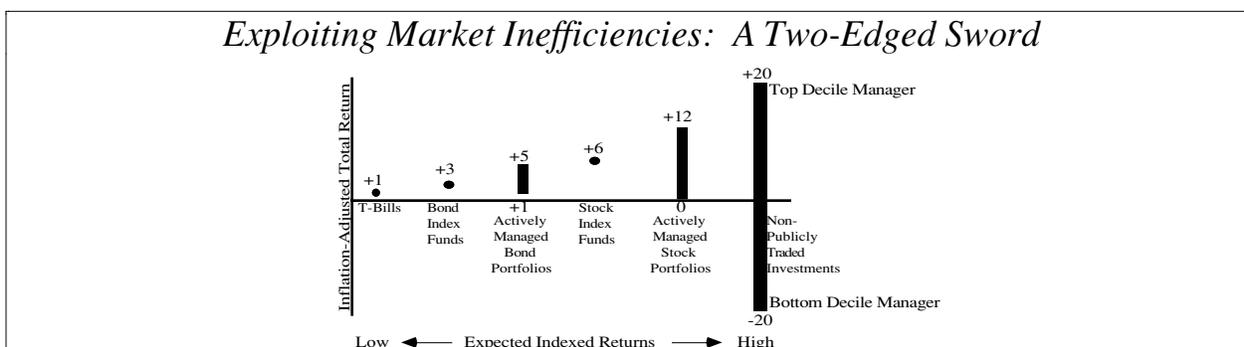
	Fund A	Fund B	Fund C	Fund D	Fund E
	Invests Only in Publicly Traded Assets			Invests in Both Privately and Publicly Traded Assets	
Typical of	Most Small Foundations	Leading Small Foundations	Cutting Edge Small Foundations	Leading Large Foundations	Cutting Edge Large Foundations
Characterization	Traditional Institutional Asset Mix	"Efficient" Portfolio Constrained to Limit Risk of Underperformance	"Efficient" Portfolio	"Efficient" Portfolio Constrained to Limit Risk of Underperformance	"Efficient" Portfolio
Short-Term Risks Market Value Fluctuations Underperformance of Peer Institutions	Moderate Low	Moderate Moderate	Moderate Moderate	Moderate High	Low High
Long-Term Risk Erosion of Fund Purchasing Power	High	Moderate	Moderate	Low	Low
Asset Class Ranges	Min / Normal / Max	Min / Normal / Max	Min / Normal / Max	Min / Normal / Max	Min / Normal / Max
<i>Total Return Strategies</i>					
<b>Domestic Stocks</b>	<b>40 / 50 / 60</b>	<b>45 / 50 / 80</b>	<b>30 / 35 / 50</b>	<b>40 / 45 / 65</b>	<b>20 / 25 / 40</b>
<b>Foreign Stocks</b>	<b>0 / 0 / 5</b>	<b>5 / 10 / 35</b>	<b>5 / 25 / 50</b>	<b>10 / 15 / 25</b>	<b>15 / 20 / 35</b>
• Developed Markets	0 / 0 / 5	2 / 8 / 30	5 / 15 / 50	5 / 10 / 15	10 / 15 / 30
• Emerging Markets	0 / 0 / 1	0 / 2 / 30	0 / 10 / 15	0 / 5 / 15	5 / 5 / 15
<i>Opportunistic</i>					
<b>Equity Substitutes</b>		<b>0 / 5 / 8</b>	<b>0 / 10 / 18</b>	<b>2 / 5 / 10</b>	<b>5 / 25 / 35</b>
• Venture Capital		0 / 0 / 0	0 / 0 / 0	2 / 3 / 4	2 / 6 / 9
• High Yield/Distressed Debt		0 / 5 / 8	0 / 3 / 6	0 / 2 / 4	0 / 7 / 9
• Risk Arbitrage		0 / 0 / 0	0 / 4 / 10	0 / 0 / 2	0 / 7 / 9
• Other Strategies		0 / 0 / 0	0 / 3 / 5	0 / 0 / 4	0 / 5 / 10
<i>Volatility Control Strategies</i>					
<b>Inflation Hedges</b>			<b>0 / 10 / 20</b>	<b>0 / 5 / 10</b>	<b>0 / 10 / 20</b>
• Natural Resource-Related Stocks			0 / 3 / 10	0 / 0 / 10	0 / 3 / 10
• Real Estate-Related Stocks			0 / 2 / 6	0 / 0 / 3	0 / 2 / 6
• Direct Real Estate Investments			0 / 0 / 0	0 / 5 / 6	0 / 5 / 10
<b>Deflation Hedges</b>	<b>40 / 40 / 55</b>	<b>15 / 35 / 50</b>	<b>15 / 20 / 50</b>	<b>20 / 30 / 40</b>	<b>10 / 20 / 30</b>
• Domestic Bonds	40 / 40 / 50	15 / 30 / 30	15 / 15 / 30	15 / 20 / 25	10 / 15 / 20
• Foreign Bonds	0 / 0 / 5	0 / 5 / 10	0 / 5 / 20	5 / 10 / 15	0 / 5 / 10
<b>Cash Equivalents</b>	<b>5 / 10 / 20</b>	<b>0 / 0 / 10</b>	<b>0 / 0 / 10</b>	<b>0 / 0 / 10</b>	<b>0 / 0 / 10</b>
Rebalancing Discipline	Drifting asset mix; ad hoc strategy or policy shifts	Threshold rebalancing	Semi-annual rebalancing back to policy norms	Semi-annual rebalancing back to policy norms	Semi-annual rebalancing back to policy norms
Expected Return	4.77%	5.47%	5.62%	5.95%	6.22%
Annual Standard Deviation	13.10%	14.59%	14.14%	15.11%	15.23%
Return/Annual Standard Deviation	0.00	0.00	0.00	0.00	0.00

**Notes:** (1) Simulation model used to calculate returns and risks assumes annual rebalancing of asset mix back to normal asset class weightings. (2) By design, the **sum** of the minimums or maximums for the subclasses within certain asset classes differs from the constraints for such assets classes. Example: Fund E's stated maximum for foreign stocks (developed plus emerging) is less than the sum of the individual maximums for developed and emerging market stocks. This is because a Fund could reach a constraint for one subclass without necessarily reaching the constraint for another subclass that falls into the same larger asset class. In our example, Fund E could hold the maximum 30% in stocks from developed foreign markets without violating the 40% cap of overall foreign stock exposure so long as emerging market stock exposure does not exceed 10%.

*Total Return (i.e., Equity) Bias:* Bonds produce lower real returns than equities over the long term. The only reason to hold bonds on a **permanent** basis is to hedge against deflation-induced declines in equity prices or equity income streams (i.e., dividends). Numerous studies suggest that a permanent bond commitment of 20% provides an adequate deflation hedge for institutions with spending rates of 4% to 6%, provided that the bonds have the right attributes (intermediate to long-term, high quality, non-callable). For a variety of reasons, however, most foundations maintain larger permanent bond commitments, and foundations whose trustees are sufficiently concerned about underperforming peer institutions should adopt permanent bond ratios that comport more closely with prevailing norms (i.e., 30 % to 40%).

*Other Volatility Control (i.e., Hedging) Strategies:* Except for deflation, the economic scenario that should most concern equity-oriented investors is an environment in which inflation is high and accelerating at unexpectedly rapid rates. The best form of protection against high rates of unanticipated inflation are equity interests in natural resources, which can be held directly via commodity futures or (more typically) indirectly through ownership of shares in firms that own or control natural resources or earn expanding profits when resource prices are rising rapidly.

*Importance of Specifying Excess Return (“Alpha”) Expectations for Each Asset Class and Subclass:* Note that the illustrative guidelines on the preceding page are accompanied by return expectations for each asset class and subclass (second column of numbers from the right) that are themselves the sum of two independent variables: (a) an expected real return for the asset if held on an indexed basis (far left column of numbers); and (b) an assumed premium from active management net of all fees and trading costs (second column of numbers from the left). These premia (often referred to as “alphas” by practitioners) are, of course, “best guesses” or point estimates. In practice, the higher the expected return on an asset class or subclass, the larger the **range** of expected alphas, i.e., the greater the dispersion between the long-term returns produced by the best-performing managers and those produced by the worst-performing managers. This unfortunate fact-of-life is illustrated in the following exhibit.



- **Catastrophe hedges are sometimes so mispriced that the “insurance” they provide has a “negative cost,” i.e., investors get paid to become insured.**

An example: in 1981, long-term Treasuries (the classic deflation hedge) yielded more than 14%, an unprecedentedly high nominal yield that provided the potential for rich capital gains if the Federal Reserve succeeded in bringing inflation under control (as it subsequently did) and significant protection (via reinvestment of coupon income) if it did not. There is an important corollary to the principle that investors can occasionally get **paid** to become insured: such hedges can also become so **overpriced** that investors who acquire them at peak prices can wind up worse off than investors who lack such “insurance” — even if the event being insured against occurs. An example of the latter phenomenon: investors who acquired energy-related properties as inflation hedges at the peak of energy prices in 1980 were going to do very poorly even if inflation had continued spiraling upward, which it did not.

- **Truly long-term investors can safely ignore the so-called “currency risks” inherent in foreign stocks.**

Over the short term (e.g., 1- to 3-year holding periods), a rising U.S. dollar can reduce the value of foreign stocks held by investors whose wealth is measured in U.S. dollars. Over longer time periods, however, stock markets are amazingly effective at arbitraging away valuation discrepancies caused by currency changes. Example: when the U.S. dollar rises in yen terms, the competitiveness of Japanese firms exporting goods to other nations is enhanced. This enhanced competitiveness will ultimately be reflected in higher relative multiples (price/earnings, price/book, price/cash flow) for shares of Japanese exporters. The resulting multiple expansion will help offset any initial currency losses on shares held by dollar-based investors.

- **Foreign securities remain more expensive to own and trade than U.S. securities.**

<i>Foreign versus U.S. Investing Costs</i>						
	Turnover	Trading Costs	Custody	Dividend Withholding	Management Fees	Total Annual Costs
<i>Active Managers</i>						
Foreign Active (\$25mm)	50%	95	20	45	60	<b>220</b>
U.S. Active (\$100mm)	50%	23	10	0	40	<b>73</b>
<b>Cost Differential</b>		72	10	45	20	<b>147</b>
<i>Index Funds</i>						
Foreign Index (\$25mm)	Varies	~10	15	45	15	<b>85</b>
U.S. Index (\$100mm)	Varies	~2	~1	0	~4	<b>7</b>
<b>Cost Differential</b>		~8	~14	45	~11	<b>78</b>

Source: Grantham, Mayo, Van Otterloo & Co. estimates. Foreign Index = EAFE with 2/3 Japan weight.

- **Foreign markets remain significantly less efficient than domestic markets.**

The chief reason is that foreign investors tend to rely more heavily on “top down” (macroeconomically oriented) approaches, which push them in the direction of markets and issues embodying relatively high levels of comfort, excitement, or sex appeal. For the foreseeable future, it is safe to assume that value-oriented approaches to foreign stock management will produce excess returns (or “alphas”) exceeding those produced by most active U.S. managers. Absent a conviction that U.S. stocks will outperform foreign stocks on an indexed basis, this assumption that carefully chosen active managers will produce higher excess returns in foreign markets reinforces the case for a significant commitment to foreign equities.

- **Most institutions could substantially enhance their long-term returns by adopting more sensible “rebalancing” disciplines.**

Although last among the policy choices that collectively constitute long-term asset allocation, this final step is arguably the most important. Consider this: if a foundation’s asset mix is allowed to drift indefinitely, the mix will eventually approximate a 100% equity commitment regardless of the initial policy targets. This conclusion assumes that equities produce higher returns than other assets over the long term — an assumption that underlies virtually all institutional investment programs. Perhaps the best study of rebalancing options (Arnott and Lovell, 1992) concludes that “disciplined rebalancing can boost returns as much as a fairly large shift in the policy mix itself.” There are essentially three rebalancing rules one can adopt:

1. *Calendar Rebalancing.* Automatic rebalancing to the “normal” policy target at regular calendar intervals (e.g., quarterly or semi-annually). Example: if the foundation’s “normal” commitment to U.S. stocks is 50%, a sale of 6% would occur if U.S. stocks are 56% of total assets on the specified rebalancing date.

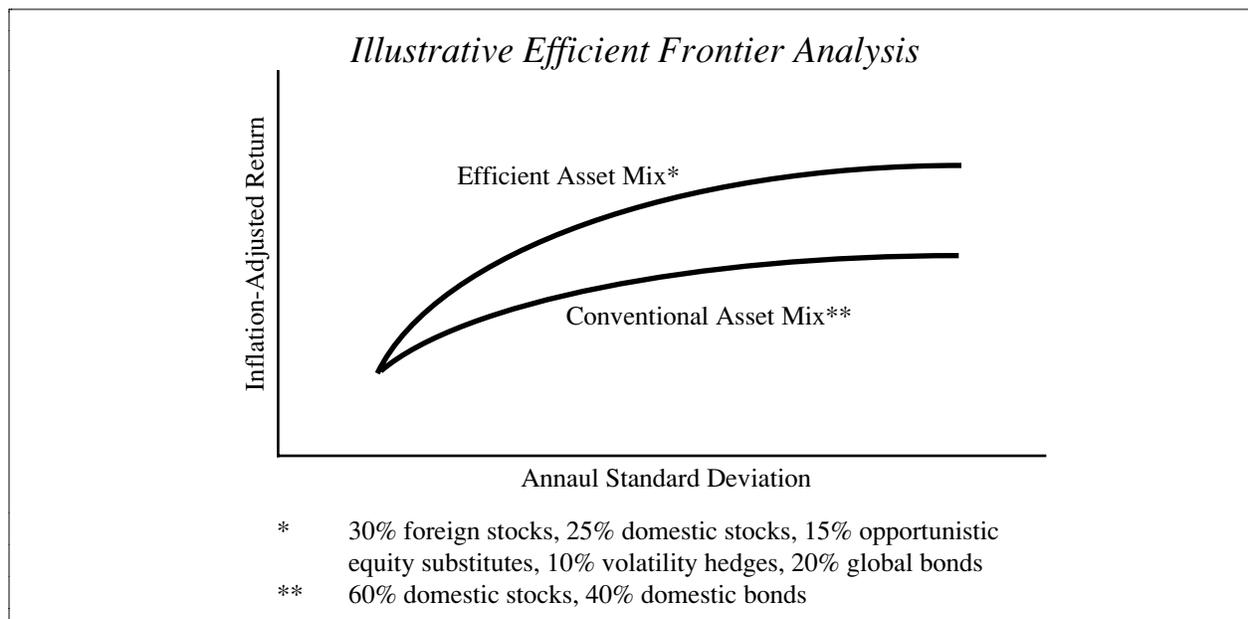
2. *Threshold Rebalancing.* Rebalancing of asset class weightings that have moved outside specified ranges back to “normal” policy targets. Example: if the allowed range for U.S. stocks is 50% plus or minus 5%, our hypothetical foundation with 56% of assets in U.S. stocks would cut all the way back to 50% when rebalancing its asset mix.

3. *Rebalancing to Allowed Ranges.* Rebalancing only as needed to ensure that a given asset class commitment doesn’t remain outside its Board-approved range. Example: if the allowed range for U.S. stocks is 50% plus or minus 5%, a sale of 1% would occur when U.S. stocks reach 56% of total assets, regardless of how long it has been since the last rebalancing.

Which rule will work best in a given situation depends on many variables, including trading costs and the desired frequency of rebalancing moves. Studies suggest that **calendar rebalancing** is potentially the most profitable strategy, provided that trading costs are controlled effectively (a difficult goal at best if the mix includes non-publicly traded assets) and — importantly — that rebalancing takes the fund all the way back to its original policy mix (not merely to the outer bounds of the allowed range). But even less aggressive rebalancing rules (e.g., threshold rebalancing or rebalancing only to allowed ranges) are preferable to a drifting mix, or to the equally common practice of making tactical or even “policy” shifts **out** of poorly performing asset classes (as many foundations did following the stock market crash of 1987) only to reverse them at much higher prices. Although rebalancing is inherently uncomfortable — entailing as it does the sale of “winners” and the simultaneous purchase of “losers” — a well-defined rebalancing rule can paradoxically provide comfort to trustees: it can provide precisely the reassurance that trustees need to buy when other investors are clamoring to sell, and to sell when other investors are clamoring to buy.

- **So-called “efficient” portfolios presuppose rebalancing.**

“Efficiency” in this context means an optimal tradeoff between risk and expected return. An illustrative “efficient frontier analysis” appears below (see graph). As noted in the accompanying table, absent disciplined rebalancing, much of the return advantage derived from diversification is forfeited.



## Reflections on Investing

### *“Efficient” Portfolios Presuppose Rebalancing*

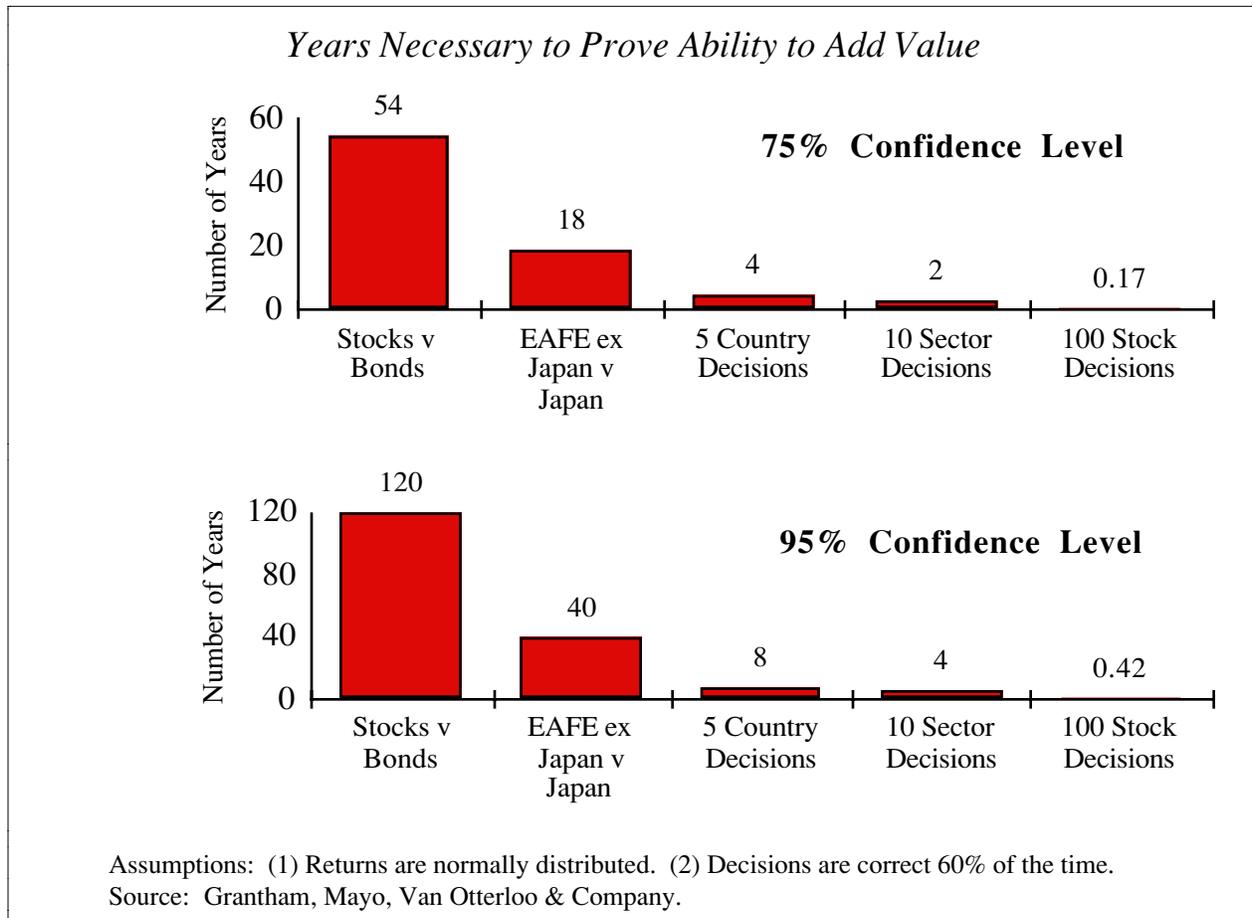
	Start of Year 1	End of Year 1	Start of Year 2	End of Year 2	Cumulative Return
<b>Return Assumptions</b>					
Asset A		50.0%		-25.0%	12.5%
Asset B		-25.0%		50.0%	12.5%
<b>“Efficient” Portfolio: Rebalanced</b>					
Asset A	\$100	\$150	\$113	\$84	
Asset B	\$100	\$75	\$113	\$169	
Total	\$200	\$225	\$225	\$253	
Return on Total		12.5%		12.5%	26.6%
<b>“Efficient” Portfolio: Not Rebalanced</b>					
Asset A	\$100	\$150	\$150	\$113	
Asset B	\$100	\$75	\$75	\$113	
Total	\$200	\$225	\$225	\$225	
Return on Total		12.5%		0.0%	12.5%

## MANAGER SELECTION

- **Selecting superior managers (or mutual funds) is harder than selecting winning stocks.**

There are two reasons why: (1) the people making the decisions (i.e., trustees) have far less information about managers (or mutual funds) than investors have about publicly traded companies; (2) trustees must balance the conflicting propaganda of mutual funds or managers (many of whom are quite glib) against the only facts available to them, i.e., past performance. As sensible people, trustees will invariably base decisions on available facts rather than unproven and unprovable marketing claims. Governing boards will therefore favor recent winners whose returns are destined to regress to the mean.

- **Managers’ marketing claims are generally unprovable because it takes a long time to prove (statistically) that favorable results reflect skill rather than luck.**



- **Most manager changes are a mistake.**

Firings are a mistake because clients usually bail out just before a manager’s style turns; and hirings are a mistake because clients are chasing recent successes. These principles apply equally to mutual funds pursuing focused investment strategies (e.g., a “large cap growth fund”).

- **Active managers’ returns typically display a huge survivor bias.**

This bias takes two forms. First, unless a manager complies fully with the Performance Reporting Standards articulated by the Association for Investment Management and Research,<sup>2</sup> it is possible that its reported performance excludes

<sup>2</sup> The Association for Investment Management and Research is a not-for-profit association of individuals working in the investment management and related industries. Copies of its Performance Reporting Standards for investment advisors may be obtained by phoning AIMR at 804-977-6600.

terminated accounts. More often than not, accounts that have been terminated earned inferior returns to those that have not been terminated. Second, in compiling average returns for a group of managers (e.g., managers favoring small capitalization “value” stocks), consultants and other information gatherers typically exclude managers that have gone out of business (e.g., a return series for the five years ending December 31, 1993 will comprise only managers operating on December 31, 1993).

- **The ever-increasing efficiency of financial markets means that techniques which have worked well in the past may not work well in the future.**

This concern is depicted pictorially in the exhibit two pages hence. Note that some aspects of the investment process remain invitingly inefficient (e.g., short-term asset allocation, including rebalancing techniques such as those discussed at page 12). Note also in the exhibit which appears three pages hence that, as argued at page 11, foreign markets remain significantly less efficient than U.S. markets.

- **Given the vast universe of potential choices (over 18,000 registered investment advisers in the U.S. alone; over 4,500 mutual funds), it is essential that fund fiduciaries employ negative as well as positive screening criteria — in that order.**

In general, the more important and desirable an attribute is (e.g., a well-defined and preferably innovative investment philosophy), the more difficult and time consuming it is for trustees (or their consultants) to confirm its presence in a given money manager. Conversely, undesirable attributes (e.g., portfolio managers who are encumbered with excessive administrative or client servicing responsibilities) are relatively easy to detect. This suggests that screening criteria should generally be applied in **reverse** order — negative screens first, positive screens later, after the selection universe has been reduced to a more manageable number, as follows:

Step 1 Eliminate Managers Displaying **Disqualifying** Attributes

- investment decision-makers engaged primarily in brokerage or financial planning (as distinct from portfolio management)
- an inability to meet performance-reporting deadlines
- criminal convictions or sanctions by the SEC or other federal or state regulatory agencies

Step 2 Eliminate Managers Displaying Too Many **Undesirable** Attributes

- a high degree of personnel turnover
- insufficiently trained administrative personnel
- insufficiently robust investment accounting systems
- investment decision-makers that are unduly burdened with administrative tasks
- an unwillingness to specify asset size limits for products or services that require such limits

## Reflections on Investing

### Step 3 Eliminate Managers Displaying Too Few **Desirable** Attributes

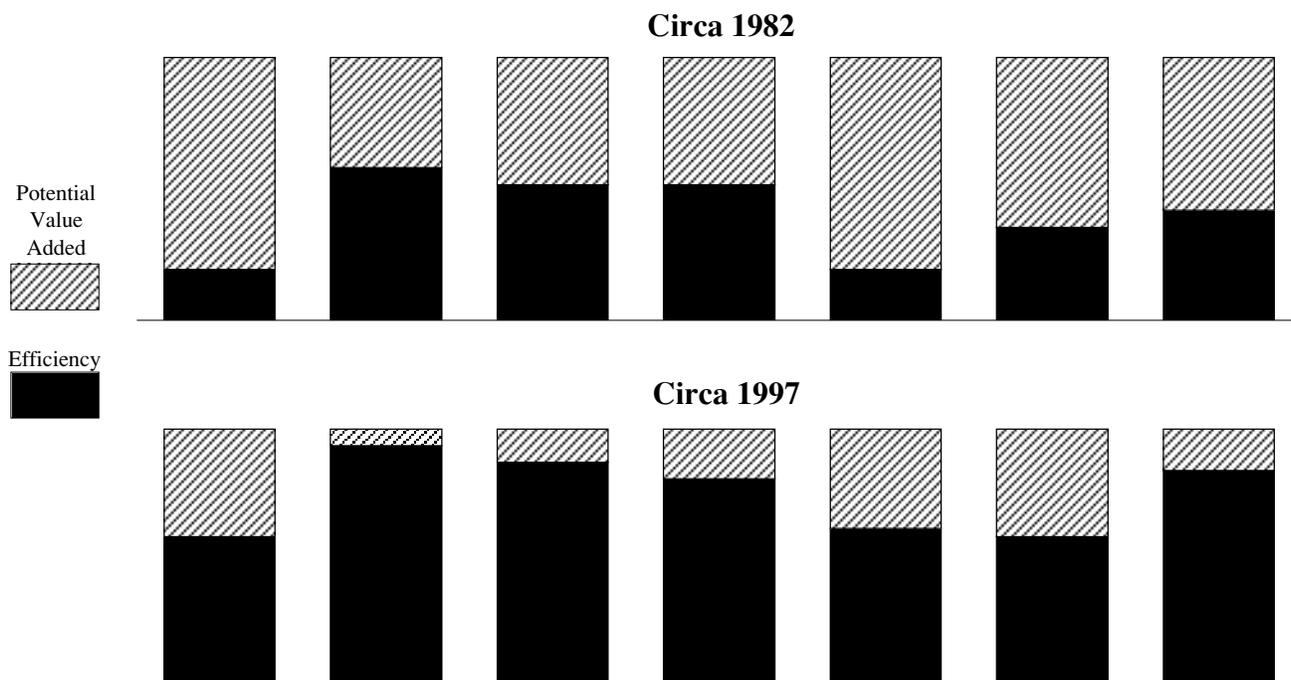
- money management is the firm's sole (preferably) or primary line of business
- the firm's decision-makers are seasoned professionals or the firm's philosophy is unusually innovative (preferably both)
- the firm is willing to use performance-based fees as an expression of confidence in its own abilities
- the firm complies fully with the performance standards promulgated by AIMR

### Step 4 Eliminate Managers Displaying Too Few **Important** Attributes

- a well-defined investment philosophy that gives the manager a discernible competitive advantage in the gathering or processing of investment data
  - a verifiable record that the firm has faithfully executed this philosophy over time
  - a proven capacity to deliver uniform results to all clients to whose assets the philosophy is applied
  - a reasonable amount of assets under management to which this philosophy is applied
  - satisfactory returns versus relevant benchmark indices
  - a proven capacity to adapt to changes in financial markets
  - a proven willingness to invest adequately in its own business (including technological resources) in light of such changes
  - investment professionals who have strong personal incentives (both financial and psychological) to produce satisfactory results for their clients
- 
- **A Stanford Business School study of Stanford MBA's indicated that the best single measure of success after business school is whether a person earned money working prior to the age of 12. This is a good starting (but not ending) point for manager selection.**

## (Over) Simplified View of Investment Process

### Potential Value Added of U.S. Securities in 1982 versus 1997



Task	Trading	Individual Stock Selection	Industry Selection	Economic Sector Selection	Investment Sector Selection	Short-Term Asset Allocation	Long-Term Asset Allocation
<b>Example</b>	Buy Stock X at 10:00am vs 10:03am	Aetna vs Travelers	Airlines vs Banks	Transportation vs Financial	Growth vs Value; Small vs Large	Current Allocations within Long-Term Ranges	Asset Allocation Ranges and Norms
<b>Typical Human Decision-maker</b>	Middle Level Professional	← Senior Professional →			1982: Fiduciary Committee	1997: Senior Professional	
<b>Type of Analysis</b>	Game Theory, etc.	← Relative Valuation →				Asset / Liability Matching	
<b>Extent Automated</b>	10 = Fully Automated						
Circa 1982	0	1	1	1	1	1	1
Circa 1995	4	7	6	4	4	5	3

# (Over) Simplified View of Investment Process

## Potential Value Added of U.S. versus Foreign Securities

