

ADDITIONAL AGENDA ITEM
FINANCE AND PLANNING COMMITTEE
MAY 12, 2004

10. **Presentation of Restatement of Historical Endowment Policy Portfolio Returns**

The Board of Directors of The University of Texas Investment Management Company (UTIMCO) presents the Report below on the Restatement of Historical Endowment Policy Portfolio (EPP) and Returns for the Permanent University Fund (PUF) and the General Endowment Fund (GEF) as an information item to the U. T. Board of Regents. The EPPs are the policy benchmarks against which the returns of the PUF, GEF, the Long Term Fund (LTF), and the Permanent Health Fund (PHF) are measured. The establishment of EPPs for the PUF and GEF and monitoring performance of the Funds relative to stated objectives are delegated to UTIMCO by the Investment Policy Statements of the PUF and GEF.

The UTIMCO Board of Directors approved the Restatement of Historical Endowment Policy Portfolio Returns for the PUF and GEF on May 6, 2004.

REPORT

The reasonableness of the historical benchmark returns has been questioned by the State Auditors as well as others. The State Auditors report, *A Report Comparing Texas's Five Largest Long-Term Investment Funds*, issued February 2003, noted that the PUF and LTF underperformed when compared with the returns of their policy index and briefly discussed the reasons. In response in the comment section, UTIMCO agreed that it would attempt to deal with several technical benchmark issues in order to provide more accurate performance comparisons in the future. UTIMCO has now completed a thorough review of the asset class weights and benchmarks used in the establishment of EPPs. The overall issues with the EPPs were:

- With the first Policy Portfolio published in 1997, return for periods prior to 1997 were calculated using the policy portfolio allocation which existed in 1997, not to policy allocations that actually existed in the prior periods. In periods after 1997, the target weights approved by the UTIMCO Board were used immediately in calculating EPP returns rather than incorporating a phase-in period.

- Establishing the same target weights in a single EPP for the PUF and LTF/GEF without consideration that the PUF was not managed as a total return fund prior to November 1999 although the LTF/GEF was managed as a total return fund.
- Appropriateness of the benchmarks used for Private Capital in the EPPs.

Issues:

- With the first Policy Portfolio published in 1997, return for periods prior to 1997 were calculated using the policy portfolio allocation which existed in 1997, not to policy allocations that actually existed in the prior periods. In periods after 1997, the target weights approved by the UTIMCO Board were used immediately in calculating EPP returns rather than incorporating a phase-in period.

EPP returns are calculated on a monthly basis by multiplying the policy weights of each asset category with Asset Allocation Policy times the return for the benchmark index defined for each asset category and summing the results. UTIMCO began reporting EPP returns in 1997. At that time, the method used to calculate EPP returns prior to 1997 was to apply the asset allocation targets in existence in 1997 to selected benchmark returns in previous years. In years subsequent to 1997, it was standard procedure to apply then-current asset allocation targets to then-defined benchmarks. As asset allocation targets were changed through time, the changes were reflected immediately in the EPPs. Because benchmark changes were reflected immediately in historical EPPs but actual portfolios changed more gradually as investments were made at a measured pace, particularly in the relatively illiquid alternative asset categories, there was often a mismatch between the composition of the benchmark portfolio and actual portfolios, and hence differences in actual versus policy index returns. In periods where the benchmark returns of the illiquid asset categories are increasing rapidly relative to other categories in the policy portfolio, the comparison between actual returns and policy portfolio returns will be unrealistically biased in favor of the policy benchmark portfolio return. Of course, the opposite bias would occur in the opposite market conditions. The combination of these two factors incorrectly biased return comparisons for both the LTF/GEF and the PUF relative to the Policy Portfolio.

- Establishing the same target weights in a single EPP for the PUF and LTF/GEF without consideration that the PUF was not managed as a total return fund prior to November 1999 although the LTF/GEF was managed as a total return fund.

Before the passage of the constitutional amendment in November 1999, achievement of the PUF's investments objectives was substantially hindered by the inability to make distributions to the Available University Fund on a total return basis. The objective of preserving the purchasing power of the distribution stream subordinated the PUF's allocation among various asset classes to the production of current income to meet distribution needs. In the environment of low or declining interest rates which has existed in the past several years, a higher than optimal percentage of PUF investment assets were allocated to higher-yielding, fixed income securities in order to maintain

distributions on a level-dollar basis. Throughout the 1980s and through 1992, in order to maintain above average payout rates, the majority of the LTF/GEF was invested in fixed income securities. After 1992, a more aggressive asset rebalancing program was put into place. Under the amended provisions of the Texas Uniform Management of Institutional Funds Act, which were amended in 1993, the Board of Regents was permitted to adopt a total return investment strategy. The Board of Regents adopted a total return spending policy in February of 1995 and recommended a long-term equity allocation goal to be achieved in five years. Accordingly, the LTF/GEF portfolio often differed in composition as compared to the PUF over the period 1993 through 1999. Therefore, it is inappropriate to compare past results of the PUF and LTF/GEF to the same policy benchmark. Because the 1999 Constitutional amendment converted PUF distributions to a total return basis, recent results are identical for the PUF and LTF/GEF benchmarks.

- Appropriateness of the benchmarks used for Private Capital in the EPP.

In the State Auditor's report, the benchmark utilized for Private Capital was an absolute return of 17%. The 17% was established by applying a 400-500 basis point premium to an estimated public markets return of 12%-13%. This static benchmark proved to be problematic given the reality of dynamic public market returns. To improve the benchmark, the Wilshire 5000 plus 4% was implemented in August 2002 to replace the static 17%. Although an improvement over the 17%, the Wilshire 5000 plus 4% is still problematic over shorter periods as a result of the inherent valuation lag between the private markets and the public markets.

The third item, the appropriateness of the benchmark for Private Capital, has been problematic since the inception of the asset class, not just for UTIMCO but for all other investment funds benchmarking a similar private capital portfolio. It has been recognized by the UTIMCO Board for some time that the previous benchmarks used were not appropriate for comparison, especially over periods of less than 10 years. In fact, the private equity industry uses an entirely different method of calculating returns than the traditional public markets industry. The challenge for funds incorporating both private equity and public market assets has been, and continues to be, to integrate the two different return calculation methodologies to produce a composite return for the funds. In situations where returns are evaluated only over very long time periods such as 10 years, a public markets based proxy such as Wilshire 5000 plus 4% might be appropriate. However, for short time period comparisons such as 1 to 5 years, the use of a more direct measure of the actual conditions in the private equity market is essential to avoid inappropriate conclusions. An important function of a policy benchmark is to provide a reliable yardstick for observers to judge how well UTIMCO management is performing relative to reasonable objectives. These comparisons are often made over periods as short as one year or less. Therefore, the proxy benchmarks, such as Wilshire 5000 plus 4%, and the flat rate benchmark, such as 17%, are inappropriate for the shorter term evaluations and may result in incorrect

conclusions by these observers. As the table below indicates, both the flat 17% and the Wilshire 5000 + 4% benchmarks have low correlations to the actual historical private capital returns in the endowment portfolios.

Correlation Coefficients	UTIMCO and Venture Economics	UTIMCO and Wilshire +4%	UTIMCO and 17%
1 Year	0.9229	0.5162	0.0000
3 Years	0.8931	0.8882	0.0291
5 Years	0.9520	0.9710	0.0000

Correlation coefficients measure the statistical tendency of two variables to move in tandem over certain time periods. Two variables moving in perfect synchronization (but not necessarily at the same level) would have a correlation coefficient of 1.0; two variables with no relationship would have a correlation coefficient of 0.0. The table shows correlation coefficients for the actual UTIMCO private capital returns and returns for three benchmarks for all 1, 3, and 5 year time periods over the past 10 years. Returns for a well defined benchmark will have a relatively high correlation with the actual portfolio returns being evaluated by the benchmark. Note that the flat 17% is a poor benchmark over all time periods. The Wilshire 5000 + 4% benchmark has a high correlation for longer periods such as 5 years, but is a poor choice for shorter time periods. Only the Venture Economics Index meets the criteria of having high correlations across all time periods.

The Venture Economics Index has an important additional advantage relative to the Wilshire 5000 + 4% proxy benchmark. Since all private capital portfolios have well known valuation issues in calculating interim performance results, comparing actual private capital returns in the endowment portfolios to the Wilshire-based proxy index, which as a public markets index has no such valuation issues, could magnify the effects of the valuation issues. On the other hand, comparing the endowment funds' private capital results to the Venture Economics Index, which has the same valuation issues since it is based on all private capital investments in the marketplace, would effectively offset the valuation problems, and thus provide a more reliable measure of the relative performance of the private capital portion of the endowment portfolios.

UTIMCO recognizes that it is unusual to restate EPP or benchmark returns. However, this restatement addresses errors in the construction of the EPP and inappropriate benchmark selections. Because UTIMCO regularly provides returns for periods including one month, one quarter, one year, three years, five years and ten years, it is important not only to adopt appropriate benchmarks for future returns, but to restate prior benchmark returns as well so that observers have a correct basis for comparison not only prospectively, but for the past as well. The problems with phase-ins of asset allocation changes will be treated carefully in the future, but adjustments to past benchmark returns are necessary for data integrity. Because both the PUF and GEF are now total return Funds, there will be no need to maintain different EPPs in the future, however, because historical returns are shown for periods before 1999, it will be necessary to show two distinct historical EPP return series until at least 2009. The

private capital benchmark issue is so severe, and would result in materially misleading comparisons over shorter term time periods, that, in UTIMCO's opinion, the change to the Venture Economic Index is essential for both future and past comparisons.

It is important to note that accounting rules recognize and require restatement in accounting situations similar to this. Accounting Principles Board (APB) pronouncements #9 and #20 address changes and corrections to previously reported information. Generally, these pronouncements state that if the impact of the restatement would be material, which is the case with the performance difference in this scenario, restatement is required.

The rules from the Association for Investment Management Research (AIMR) regarding benchmark constructions and restatement are less clear. UTIMCO requested an opinion from AIMR regarding the appropriateness of restating benchmarks and received the following reply:

"Please see Standard 5.A.7., which provides, in part, that if the firm changes the benchmark that is used for a given composite in the performance presentation, the firm must disclose both the date and the reasons for the change.

A benchmark can serve as a tool that measures the firm's effectiveness in implementing a style or strategy, or it can serve as the defining style to which the portfolios in the composite are managed. If a change in the benchmark represents a change in the composite's investment style or strategy, the firm must create a new composite.

If the investment management style has not changed but the firm believes a new benchmark is a more appropriate comparative measure for the composite, the firm must explain in the composite presentation its reasons for changing the benchmark. In most cases, the firm should change the benchmark going forward and not change historical presentations of the original benchmark. However, because benchmarks are continually evolving, if the firm deems the new benchmark to be a better representation of an investment strategy, the firm may consider changing the benchmark retroactively. Firms must disclose any changes to the benchmark over time. The firm must disclose the date the benchmark is changed and the reason it has been retroactively applied. In addition, firms are encouraged to continue to present the old benchmark. Changes to the benchmark primarily intended to make historical performance look better by lowering the benchmark return, violate the spirit of the Standards."

For the reasons identified earlier, UTIMCO believes that the benchmark changes indicated would provide a much more accurate and reliable representation of the endowment funds investment strategy both prospectively and retrospectively, are not being done primarily to make investment results look better, meet both Accounting Principles Board and AIMR standards for being retroactively applied, and are therefore appropriate and in the best interests of the endowment funds.

The specific actions taken to restate EPP returns were:

- To correct the issues of using 1997 asset allocation targets for all prior Policy Portfolio calculations, not incorporating appropriate phase in periods, and establishing the same target weights for the PUF and GEF/LTF, UTIMCO staff consulted Board of Regents and UTIMCO Board minutes and materials to determine the policy provisions in place through the period under review. Quarterly reports from 1992 through the current period were accumulated to determine actual asset allocations for the PUF and LTF/GEF for the same quarterly periods as the policy allocations. The PUF and LTF/GEF were treated differently in regards to a phase in. Based on the fact that PUF was restrained due to the distribution of income requirement, the benchmark weights were phased in more closely with actual percentage weights of the PUF. In the asset classes, such as the Private Capital area, where it was not possible to build a portfolio immediately, LTF/GEF asset allocations were phased in straight-line over time periods that were deemed reasonable in consideration of the time it would take to adjust the actual Fund allocation to reflect those changes. The benchmark indices used in the calculations were those approved in the Policy statements except for Private Capital. By the year 2000, the benchmarks have been completely phased in.
- To correct the problem with the Private Capital benchmark, the prior period benchmark indices were replaced with the Venture Economics Periodic IRR index. This replacement occurred in both the PUF and LTF/GEF policy portfolios beginning with 1993.

The results of these restatements are indicated in the table below for several periods ending February 29, 2004:

	Periods Ended February 29, 2004 (Returns for Periods Longer Than One Year are Annualized)						
	One Month	Three Months	Six Months	One Year	Three Years	Five Years	Ten Years
Permanent University Fund	2.49	8.34	15.49	31.74	5.29	6.05	9.74
Permanent University Fund Policy Portfolio	1.36	5.50	10.64	21.34	1.63	5.12	10.48
General Endowment Fund	2.33	8.22	15.61	32.56	5.89	N/A	N/A
Permanent Health Fund	2.31	8.15	15.45	32.31	5.74	N/A	N/A
Long Term Fund	2.31	8.14	15.45	32.38	5.81	7.56	10.44
General Endowment Fund Policy Portfolio	1.36	5.50	10.64	21.34	1.69	5.34	10.44
Policy Portfolio Before Restatement	1.36	6.12	11.89	27.38	4.21	5.37	10.41

The general form of performance reporting, including a footnote indicating that benchmarks were restated and offering restatement details and prior Policy Portfolio returns, is presented on the following page.

	Periods Ended February 29, 2004 (Returns for Periods Longer Than One Year are Annualized)						
	One Month	Three Months	Six Months	One Year	Three Years	Five Years	Ten Years
Permanent University Fund	2.49	8.34	15.49	31.74	5.29	6.05	9.74
Permanent University Fund Policy Portfolio *	1.36	5.50	10.64	21.34	1.63	5.12	10.48
General Endowment Fund	2.33	8.22	15.61	32.56	5.89	N/A	N/A
Permanent Health Fund	2.31	8.15	15.45	32.31	5.74	N/A	N/A
Long Term Fund	2.31	8.14	15.45	32.38	5.81	7.56	10.44
General Endowment Fund Policy Portfolio *	1.36	5.50	10.64	21.34	1.69	5.34	10.44

* Policy Portfolio returns for the PUF and GEF were restated in 2004 to correct errors in benchmark construction and calculation. Results were restated for all periods beginning June, 1993. The complete details of the restatement as well as prior Policy Portfolio returns are available upon request.

If additional information is requested, a document in the form of Attachment A will be provided.

UTIMCO requested Bruce Myers of Cambridge Associates, Inc. to review the methodology and supporting calculations and documentation and opine on restatement of EPPs. Mr. Myers explained that although it may not be general industry practice to restate benchmarks, he concurred with this retroactive restatement and the methodology used since it corrected errors in the construction of the historical EPP returns and would result in a more fair and accurate representation of historical relative performance for the endowment funds.

Attachment A

Procedures Used to Restate Prior Policy Portfolio Returns

Policy Portfolio returns for all periods beginning June 1993 were restated in 2004 to correct three technical errors in previously reported Policy Portfolio returns:

1. UTIMCO began publishing Policy Portfolio returns in 1997. At that time, Policy Portfolio returns for periods prior to 1997 were calculated using the policy asset allocation targets in place in 1997 rather than the actual approved allocations in prior years. In addition, when changes were made in asset allocation targets subsequent to 1997, those changes were implemented immediately in calculating Policy Portfolio returns, despite that fact that the changes might take years to actually implement especially in less liquid asset categories. As a result, prior Policy Portfolio returns did not accurately reflect either the true Asset Allocation Policies in place at each point in time in history or the practical implementation of those Policies. In order to correct these errors, UTIMCO analyzed Board of Regents minutes, UTIMCO Board minutes, and actual quarterly asset statements for the PUF and GEF/LTF for the period 1992 through 2003. Changes in Policy Allocations for liquid asset categories such as public equities and bonds were implemented almost immediately in the LTF/GEF's Policy Portfolio. However, changes in allocations to the LTF/GEF's private equity and hedge funds were phased in on a straight-line basis over time periods that were deemed reasonable to reflect the actual time it would take to implement those changes in the actual endowment portfolios. The PUF was phased-in more closely aligned with actual asset allocation due to the restraints placed on it from the distribution requirements. A senior consultant at Cambridge Associates reviewed the phase in procedures and found them to be reasonable.
2. Since the time it began reporting Policy Portfolio returns in 1997, UTIMCO has reported a single Policy Portfolio return for each time period for comparison to both the PUF and GEF/LTF. However, prior to Texas State Proposition 17 in 1999, the PUF asset allocation was constrained by the necessity to maintain a relatively level annual distribution which could be paid only out of current income. Proposition 17 converted the PUF to a so-called "total return" basis in which distributions could be paid out of either income or principal. The GEF/LTF had paid distributions on a "total return" basis since 1987. In a period of generally declining interest rates over the late 1990's, the PUF was forced into asset allocation positions that differed substantially from stated Investment Policy Targets which were apparently set without consideration of the income requirements (there was no differentiation in Asset Allocation Policy for the PUF and the GEF/LTF) in order to meet income requirements to pay distributions. To correct this error in Policy Portfolio construction, the phase-in process described above was done differently for the PUF Policy Portfolio than for the GEF/LTF Policy Portfolio, resulting in different returns for the two benchmarks. Phase-ins for the PUF were defined to more closely mirror the actual holdings in the PUF since the need to generate current income sometimes precluded a smooth linear phase-in as used in the case of the GEF/LTF. A senior consultant from Cambridge Associates reviewed the assumptions for both the PUF and GEF/LTF and found them to be appropriate.
3. Like many investors in the private capital asset category, UTIMCO has had difficulty determining an appropriate benchmark for the asset category. Over the 1993 through 2004 time period, UTIMCO has used at various times a flat 17% benchmark, a Wilshire 5000 +4% benchmark, and has recently adopted the Venture Economics Periodic IRR Index to evaluate actual private capital performance. Both the flat 17% benchmark and the Wilshire 5000 + 4% proxy benchmark have serious flaws. An essential trait of any appropriate benchmark is that returns for the benchmark should have a high degree of correlation with the actual returns of the portfolio to which the benchmark is being used as a comparison. As the table on the following page indicates, the flat 17% and Wilshire 5000 + 4% benchmarks fail this essential test, especially over shorter time frames. These correlation measures were calculated from actual data over the 1993 to 2003 time period.

Correlation Coefficients	UTIMCO and Venture Economics	UTIMCO and Wilshire +4%	UTIMCO and 17%
1 Year	0.9229	0.5162	0.0000
3 Years	0.8931	0.8882	0.0291
5 Years	0.9520	0.9710	0.0000

While the Wilshire proxy benchmark might be appropriate for longer term time periods such as 5 to 10 years, it is clearly not appropriate over shorter time periods such as one year. The flat 17% benchmark is not appropriate over any time period. On the other hand, the Venture Economics Index passes this important test over all time periods. Since we know that this Index has been a good benchmark over the ten year period that historical results are provided by the statistics above, the Venture Economics Index has been applied retroactively as the private capital asset category benchmark.

The composite result of the restatements of historical Policy Portfolio returns are indicated in the table below. The table also presents Policy Portfolio returns under the prior methods of calculation.

	Periods Ended February 29, 2004 (Returns for Periods Longer Than One Year are Annualized)						
	One Month	Three Months	Six Months	One Year	Three Years	Five Years	Ten Years
Permanent University Fund	2.49	8.34	15.49	31.74	5.29	6.05	9.74
Permanent University Fund Policy Portfolio	1.36	5.50	10.64	21.34	1.63	5.12	10.48
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