Client X
Pension and Annuity Funds
Initial Fund Review

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Introduction

Meketa Investment Group's Initial Review of the Client X Pension and Annuity Funds is designed to achieve the following objectives:

- Identify and describe the major components and characteristics essential to the long-term success of an investment pool.
- Provide a brief review of these components and their present status for the Pension and Annuity Funds.
- Develop an action plan for the Pension and Annuity Funds, including the priority level for each project.

With the initial review, we seek to identify areas of potential improvement for the Funds' structure, strategies, efficiency, and performance. Meketa Investment Group does not request specific approval of each of the goals or recommendations outlined. Rather, this document serves as a platform or guide from which we plan to address and discuss these issues.

We have assigned each area of review with a priority of one through three. We expect that the Trustees and Meketa Investment Group will address and implement approved recommendations according to the following schedule:

Priority:	**Timeframe:**
One	0 – 12 months
Two	9 – 24 months
Three	18 – 16 months

While we do not view these as rigid time parameters, they do represent, based on our experience, a reasonable timeframe for the Trustees to make thoughtful decisions on the future course of the Pension and Annuity Funds.

Summary Initial Fund Review

The table below summarizes Meketa Investment Group's initial review of the Client X Pension and Annuity Funds, including recommendations for action and priorities. Each recommendation is described in detail in the following pages.

Recommendation	Priority
General Investment Policy	
• Review and update Asset Allocation Policy	One
• Review and update Investment Policy Statement	One
• Review and update investment manager guidelines for separate accounts	One
Aggregate Structure	
• Evaluate the Pension and Annuity Fund manager roles & structure	One
• Diversify aggregate fixed income portfolios – conduct searches for dedicated TIPS and high yield bond portfolios	One
• Diversify aggregate international equity portfolios – conduct searches for dedicated foreign small cap and emerging markets equity managers	Two
• Establish long-term strategic overweight to small capitalization public equities	Two
• Establish long-term strategic value bias within domestic and foreign public equity portfolios	Two
• Continue to diversify aggregate real estate portfolios – conduct search for non-core real estate fund(s)	Three
• Establish private equity programs – conduct search for a diversified private equity fund of funds	Three
• Re-establish hedge fund portfolios – conduct search for low volatility diversified hedge fund of funds	Three
Manager Roster	
• Review and evaluate the Pension and Annuity Fund's managers	One
• Consider utilizing passive (indexed) portfolios to a greater extent in more efficient markets	One
• Consider changing SSgA's enhanced index mandate to a fully-passive S&P 500 index strategy	Two
• Diversify by manager strategy, resulting in diversified alpha sources for the Funds	Three

Summary Initial Fund Review, continued

Custody & Related Services

- Review manager operating expenses and seek to reduce where appropriate ---- One
- Retain one or more transition managers ---- Two
- Retain one or more commission recapture brokers ---- Two
- Review custody services provided by State Street Bank ---- Two
- As the Funds' assets continue to grow, consider initiating a securities lending program ---- Three

Trustee Protection & Governance

- Establish a Crisis Response Plan ---- One
- Consider hiring a third-party proxy voting provider ---- Three

- *Priority one* areas will be addressed by the Trustees and Meketa Investment Group, with any recommendations approved by the Trustees implemented by Meketa Investment Group within the next twelve months.
- *Priority two* areas will be addressed over the next nine to eighteen months, and any recommended and approved actions implemented within that timeframe.
- *Priority three* areas will be addressed over the next eighteen to thirty-six months, and any recommended and approved actions implemented within that timeframe.

Investment Policy Statement

An Investment Policy Statement (IPS) represents one of the most important governance tools for an asset pool. The written policy, and the process required to create it, serves to identify and formalize the objectives and constraints governing the structure and investment of assets.

A well-developed Investment Policy Statement represents the intersection of client-specific goals and circumstances with the realities and expectations of the broad capital markets. The document should include long-term strategic asset allocations for the assets within the Pension and Annuity Funds.

Pension and Annuity Funds Status:

The Pension and Annuity Funds currently combine their Investment Policy Statements with their investment manager guidelines. The combined policy document addresses most important areas regarding the Funds' philosophy, policies, and strategies, such as return and risk objectives, asset allocation, rebalancing, and performance measurement. The document does not cover such issues as the Funds' actuarial assumed rate of return, overall diversification, investment costs, constraints (e.g., legal and regulatory, time horizon and liquidity), and procedures regarding review and modification of overall Fund policies.

Recommendation:

Initiate a review and update of the Funds' Investment Policy Statements. Any changes in the statements would be coordinated with strategic decisions by the Trustees.

Elements of the IPS that are subject to change due to varying market and business circumstances (e.g., asset allocation targets) are currently included in the body of the document and should, in our view, be moved to an appendix. A list of permissible and forbidden investments also belongs in an appendix.

Also, we recommend that a set of assumptions guiding the asset allocation decision be incorporated into appendices to the Investment Policy Statement. These appendices would include, for each asset class, expected return, volatility, and correlations.

The Investment Policy Statement should be reviewed at least annually by the Trustees to ensure that the objectives and constraints remain relevant. However, major changes to the Investment Policy Statement should be made only when significant developments in the circumstances of the Funds or capital markets occur.

Priority: One

Asset Allocation Policy

A primary determinant of the long-term return and risk for an investment pool is its overall asset allocation. Each asset class (e.g., equity, fixed income, real estate) exhibits unique risk and return behavior, with limited correlation to other asset classes. By appropriately combining asset classes, an investor can control risk without sacrificing expected return, and can create a multi-asset portfolio tailored to a unique set of objectives.

The Asset Allocation Policy should reflect the return and risk objectives of the Pension and Annuity Funds, in addition to the expectations for capital market behavior. The Asset Allocation Policy should be expressed as target allocations to each defined asset, and should include ranges around which the allocation may vary without necessitating deliberate rebalancing. In addition, the Asset Allocation Policy should include a rebalancing policy to facilitate rebalancing when necessary. Please see the Appendix for further discussion about rebalancing. Typically, the Asset Allocation Policy is incorporated as an appendix to the Investment Policy Statement

An explicit Asset Allocation Policy ensures that the primary determinants of return and risk are developed and monitored at an aggregate level. Asset allocation should represent a coordinated approach between the Pension and Annuity Funds and their investment managers.

Pension and Annuity Funds Status:

The Funds have an actuarial assumed rate of return of 7.5%. The Funds' current Asset Allocation Policies specify target allocations to U.S. equities, international equities, fixed income, real estate and hedge funds. The Funds' target Asset Allocation Policies is provided in a table on the following page.

The Policy does not address numerous asset classes, including Treasury-Inflation Protected Securities (TIPS), private equity, below investment grade fixed income securities (i.e., high yield bonds) and emerging markets equity, among others. The Funds' rebalancing procedure calls for the written advice of the investment consultant.

Recommendation:

Meketa Investment Group recommends that the target Asset Allocation Policy and ranges for both Funds be reviewed. We will recommend targets for all appropriate asset classes, confirming existing targets or recommending changes. Rebalancing guidelines should also be adopted to control risk and maintain the Funds' desired asset class exposures regardless of market conditions.

A revised Policy would address public and private, as well as domestic and foreign, equities, real estate, hedge funds, and bonds. The Trustees should seek a target Asset Allocation Policy that meets or exceeds this return target, while minimizing overall risk. Finally, the Policy would consider the Funds' actuarial status and cost structure.

Priority: One

Asset Allocation Policy (continued)

The following table displays each Fund's current Asset Allocation Policy.

	Pension Fund	Annuity Fund
Domestic Equity	51.0%	45.0%
Developed Foreign Equity	10.0%	5.0%
Fixed Income	21.5%	37.5%
Real Estate	10.0%	5.0%
Hedge Funds	7.5%	7.5%
Total	**100%**	**100%**
Expected Return	*7.74%*	*7.19%*
Exp. Std. Deviation	*10.8%*	*9.1%*
Probability of Achieving 7.5% over 20 Years	*45%*	*37%*

Note: Expected Return, Expected Standard Deviation, and Probability of Achieving 7.5% over 20 Years based on inputs from Meketa Investment Group's 2008 Annual Asset Study.

Investment Guidelines & Contracts

Once an investment manager has been selected to fill a specific role, investment guidelines and management contracts ensure that the Trustees and the manager understand the scope of the assignment and the restrictions under which the manager is operating.

Investment guidelines should clearly define the role of the manager and the areas of the capital markets in which the manager is expected to operate. In addition, the investment guidelines should provide a comprehensive list of any constraints placed upon the portfolio, such as limitations on individual positions or industry sectors. The guidelines should clearly state the performance benchmarks and the time periods used for evaluation. Finally, the investment guidelines should include the required level of reporting and communication to the Pension and Annuity Funds. Legal counsel should review investment management contracts and related legal documents prior to adoption.

Once guidelines have been adopted, they should be reviewed regularly and updated as necessary to reflect changes in manager roles or in the capital markets. The Pension and Annuity Funds should retain copies of all manager governance documents.

Pension and Annuity Funds Status:

Meketa Investment Group has received management contracts and investment guidelines for each of the Funds' separate account managers. The guidelines address important issues including risk and return objectives, benchmarks, and reporting requirements. The guidelines are, in some case, unique to the manager, but in other cases, are identical across managers and are included as part of the Investment Policy Statement.

Recommendation:

We recommend a full review and update of investment manager guidelines to ensure that each manager is controlling relevant risks, specific benchmarks are specified, and each guideline is consistent with the manager's respective role for the Funds. Additionally, these guidelines would not reference the Funds' Investment Policy Statement.

Longer-term, if the Trustees decide to engage additional separate account managers, Meketa Investment Group will develop manager guidelines for these portfolios.

Priority: One

Manager Structure

Once the asset allocation of a fund has been determined, manager portfolios should be structured to minimize overlap and cross-trading among managers, to provide broad diversification, and to capitalize on the experience and expertise of management firms. Specialized manager roles should complement one another; duplication of investment strategy or assignment increases costs and risks, while reducing efficiency. A structure in which each manager fulfills a distinct and necessary role increases efficiency. It also ensures that the Pension and Annuity Funds' policies are not reversed by the actions of individual managers.

It is essential to review manager roles regularly to ensure that the roles remain relevant and consistent with the Pension and Annuity Funds' objectives. Each investment manager should be monitored continuously to ensure that they fulfill their specific mandates. To this end, the Trustees should consider the resources and time available to monitor managers when determining how complex they wish the Pension and Annuity Funds' manager structure to be.

Pension and Annuity Funds Status:

The Pension and Annuity Funds utilize both active and passive investment managers, and are invested across five major asset classes.

The Pension Fund's manager roster currently consists of five domestic equity portfolios, two foreign equity portfolios, three investment grade bond portfolio, two real estate portfolios, and one hedge fund of funds manager. The Annuity Fund's manager roster consists of five domestic equity managers, one international equity manager, three investment grade bond managers, two real estate managers and one hedge fund of funds manager. Meketa Investment Group evaluated the overlap of positions between the active large cap managers the Pension and Annuity Funds are invested in. We concluded that although there is some overlap between the managers it is not significant.

All of the Funds' managers have specifically assigned roles, with each manager operating under formal investment guidelines.

Recommendation:

We recommend the Trustees continue to emphasize a specialist manager structure with each manager performing a specified, well-defined role for the Funds. Should the Trustees adopt a new Asset Allocation Policy, we recommend specialist managers be hired to invest dedicated portfolios in each new asset class. We also recommend on-going reviews of each manager to ensure that they consistently fulfill their assigned roles for the Funds. Further, we recommend the Funds minimize unnecessary overlap in strategies between managers, where possible.

The Funds could benefit from further portfolio diversification. Toward that end, we may recommend changes or adjustments in managers' roles and a reallocation of assets among managers. In this way, the Funds can take advantage of managers' capabilities while reducing inefficient and costly overlap.

Additional details on private markets and public markets, active and passive management, equity capitalization, and style are shown in the following sections.

Priority: One

U.S. Equity Capitalization

Capitalization is a stock market measure based on the total market value of a company's stock (the total number of outstanding shares multiplied by share price). Market capitalization does not reflect a company's revenues, the number of employees or the value of its assets. Definitions of capitalization size categories vary in the investment industry. The definitions of "small, medium, and large" currently used by Meketa Investment Group are:

Small: less than $2 billion

Medium: between $2 billion and $14 billion

Large: above $14 billion

Some investors have further segmented the market, introducing the labels "microcap" and "megacap" for the very smallest and very largest companies. This further segmentation illustrates the arbitrary nature of precisely defining capitalization categories.

While the S&P 500 index is the most widely used representation of the U.S. equity markets, over 80% of the S&P 500 index is comprised of large capitalization companies. The Russell 3000 index is a broader index that captures most of the domestic equity market. As of November 30, 2008, its capitalization structure was 64% large, 25% medium, and 11% small.

Historically, small capitalization stocks have provided higher average annual returns, accompanied by higher volatility, compared to large capitalization equities. This is referred to as "the small stock effect." Academic studies have sought to explain the small stock effect, examining the greater inefficiency of the market for smaller stocks and the greater business risks of smaller companies. While small stocks have tended to outperform large stocks over long holding periods, over shorter periods, smaller stocks sometimes lag significantly.

Long-term investors should structure portfolios to include representation of small and mid capitalization companies. To ignore the market's smaller stocks completely would exclude an investor from benefiting from the wealth-generating power of a substantial portion of the U.S. stock market.

Pension and Annuity Funds Status:

As of November 30, 2008, the Pension Fund's large capitalization domestic equity weight was approximately three percentage-points less than that of the broad market Russell 3000 index. Additionally, small cap stocks displayed a six percentage-point overweight relative to the index, while the allocation to midcap stocks was three percentage-points underweight relative to the index.

As of November 30, 2008, the Annuity Fund's large capitalization domestic equity weight was approximately one percentage-point more than that of the broad market Russell 3000 index. Additionally, small cap stocks displayed a market-like weighting relative to the index, while the allocation to midcap stocks was slightly less than in the index.

From a manager perspective, the Funds employed dedicated managers for large cap, midcap, small cap and microcap U.S. equity.

U.S. Equity Capitalization (continued)

Domestic Equity Portfolio Structure

Capitalization Structure:	Pension Fund Aggregate Domestic Equity 11/30/08	Annuity Fund Aggregate Domestic Equity 11/30/08	Russell 3000 11/30/08
Weighted Average Market Cap. (US$ billion)	58.7	57.0	67.2
Median Market Cap. (US$ billion)	2.6	3.3	0.5
Large (% over US$14 billion)	61	65	64
Medium (% US$2 billion to US$14 billion)	22	24	25
Small (% under US$2 billion)	17	10	11

Recommendation:

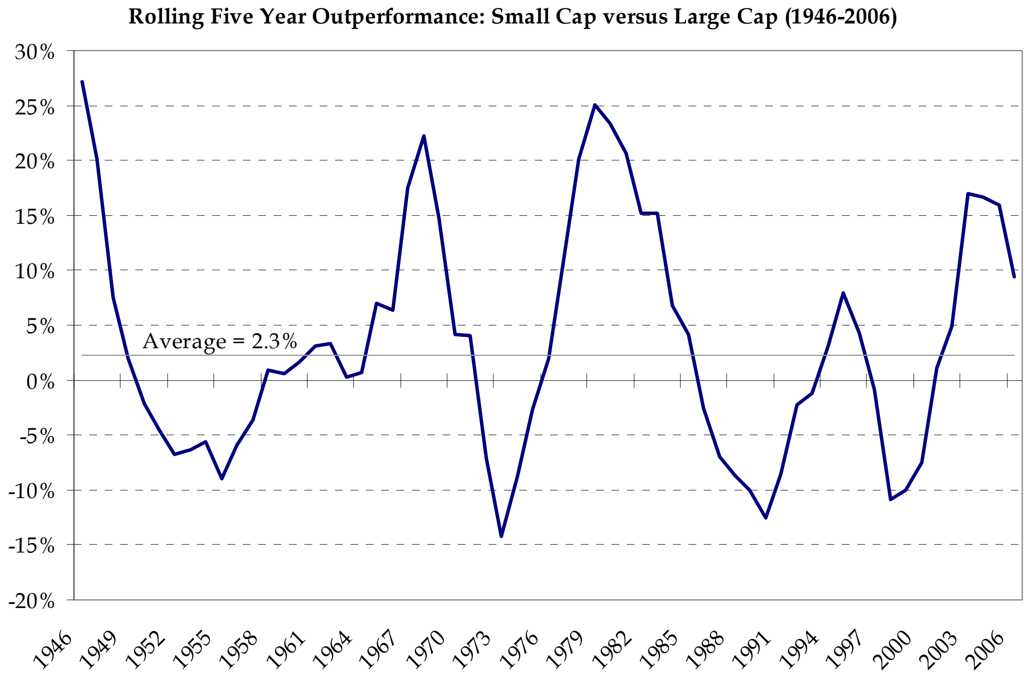
Small cap stocks currently comprise approximately 11% of the U.S. stock market. Historically, over long time periods, smaller stocks have provided higher average annual returns than large capitalization stocks. Based on Meketa Investment Group's higher expected returns for small capitalization issues, we recommend an overweight to small capitalization and medium capitalization shares.

We recommend the Funds consider a modest overweight to small capitalization stocks. Specifically, we believe the Funds should consider a "1.5x market" target (within the U.S. equity aggregate) for small cap stocks. This would currently equate to a 16% allocation to small cap stocks.

As mentioned previously, the Pension Fund's current small cap allocation within its domestic equity portfolio is 17%. As such, no action is required. However, at 10%, the Annuity Fund's small cap allocation is below market. We recommend the Trustees consider rebalancing towards small cap stocks. We would seek to accomplish this transition when recommending adjustments to asset allocation, new investment strategies, and transfers of assets (i.e., rebalancing, directing cash flows, etc.).

Priority: Two

The "Small Stock Effect"



Recent Small Stock and Large Stock Cyclicality

Stock	1995 – 1999	2000 - 2007
Russell 2000 Index (Small Cap)	16.7%	6.7%
Russell 1000 Index (Large Cap)	28.0%	2.2%

Active & Passive Investment Management

The goal of active management is to add value through enhanced returns or reduced risk, relative to a particular market sector or combination of market sectors. Generally, active managers seek to outperform by creating portfolios that differ from the market through investing in specific securities, strategies, or sectors. When these investments are successful, active management produces returns that are superior to a passive benchmark (indexes). The failure of these investments to achieve the objectives represents an active management risk.

A variety of other risks accompany active management. Firms that manage assets actively may accept large risks unintentionally, they may encounter significant personnel problems, or they may accept large risks to compensate for lagging performance. A sound investment strategy acknowledges the risks associated with active management.

Passive investment strategies, for example, index funds, attempt to replicate the returns of a particular market segment. In areas of the capital markets that are particularly "efficient" (e.g., large capitalization stocks and very high quality bonds), quality passive management strategies have a higher probability of success than active management strategies. In addition, passive portfolios incur very low fees, which improves overall net performance. Passive management is most appropriate when the objective is to provide broad diversification with low management fees and low operating costs.

Pension and Annuity Funds Status:

The Funds employ both active and passive public equity and fixed income managers on their respective rosters. For each Fund, the majority of public market assets were actively managed.

The Funds' active public market managers include Navellier (large cap growth equity), Voyageur (large cap value and international equity), Quantitative Management Associates (midcap core equity), Thomson, Hortsmann & Bryant (small and micro cap equity), INVESCO (international equity) Loomis Sayles (core bonds), Income Research & Management (core bonds) and Ullico "J for Jobs" (mortgage-backed securities).

The Funds employ SSgA to passively manage a broad market U.S. bond index strategy (investment grade bonds) and an S&P 500 "enhanced" index strategy (large cap equity).

As of November 30, 2008, SSgA passively invested less than one-fifth of the Pension Fund's domestic equities and less than one-fifth of the Pension Fund's fixed income assets. As of November 30, 2008, SSgA passively invested slightly more than one-quarter of the Annuity Fund's domestic equities and approximately two-fifths of the Annuity Fund's fixed income assets.

Active & Passive Investment Management (continued)

Recommendation:

Meketa Investment Group recommends that the Funds consider utilizing passive strategies within more efficient segments of the market (i.e. large cap U.S. stocks, investment grade bonds, large cap foreign developed market stocks, etc.) to a greater extent. Larger allocations to index strategies in these markets will reduce the Funds' overall management fees, while better controlling risks.

In addition, we recommend converting the SSgA S&P 500 enhanced index strategy currently utilized by the Funds to a traditional passive S&P 500 index mandate.

Additionally, if the Trustees decide to add exposure to Treasury Inflation Protected Securities (discussed later), we would recommend that this exposure be obtained through a passive mandate.

Priority: One

Where Do Active Managers Add Value?[1]

Asset Class	25th Percentile	Median	75th Percentile
Core Bonds	-10 bp	-30 bp	-40 bp
High Yield	50 bp	0 bp	-60 bp
Domestic Large Cap	90 bp	20 bp	-70 bp
Domestic Small Cap	190 bp	100 bp	60 bp
Foreign Large Cap	480 bp	280 bp	260 bp
Emerging Markets Equity	410 bp	170 bp	10 bp

[1] All periods are based on 20 years as of December 31, 2008. With the exception of emerging markets which is a 10 year period.

Growth & Value Disciplines

While there are numerous techniques and strategies used to manage equities actively, most can be categorized as growth-oriented or value-oriented management styles. Generally, growth-oriented managers seek to identify companies with the best earnings growth prospects, while value-oriented managers seek to identify the most attractively priced stocks. Most equity managers employ a combination of the two strategies, although one strategy is usually predominant.

Growth and value strategies generally provide exposure to different industries and companies. In addition, the two strategies have displayed less-than-perfect correlations. Thus, there are diversification benefits available from holding equities in both strategies. This exposure may be achieved through the use of specific growth or value strategies, or through the use of broad market index funds. Market index funds cover the full style spectrum, and can therefore be used to provide exposure to both style categories.

Strategies emphasizing either growth stocks or value stocks tend to rotate in market leadership, with one strategy and then the other providing superior returns. However, over long time periods, value stocks have generated slightly stronger historical returns. Further, value strategies have experienced lower volatility over time, relative to growth strategies. Nevertheless, as noted above, the Pension and Annuity Funds can gain diversification benefits by investing in both growth and value strategies. Consequently, growth-stock investing is a valid approach for a portion of the equity component.

Pension and Annuity Funds Status:

As of November 30, 2008, the price characteristics of the Pension and Annuity Funds' domestic equity portfolios displayed a core orientation. Further, the price characteristics of the Pension Fund's international equity portfolio displayed a value bias, while the Annuity Fund's international equity portfolio exhibited a core orientation.

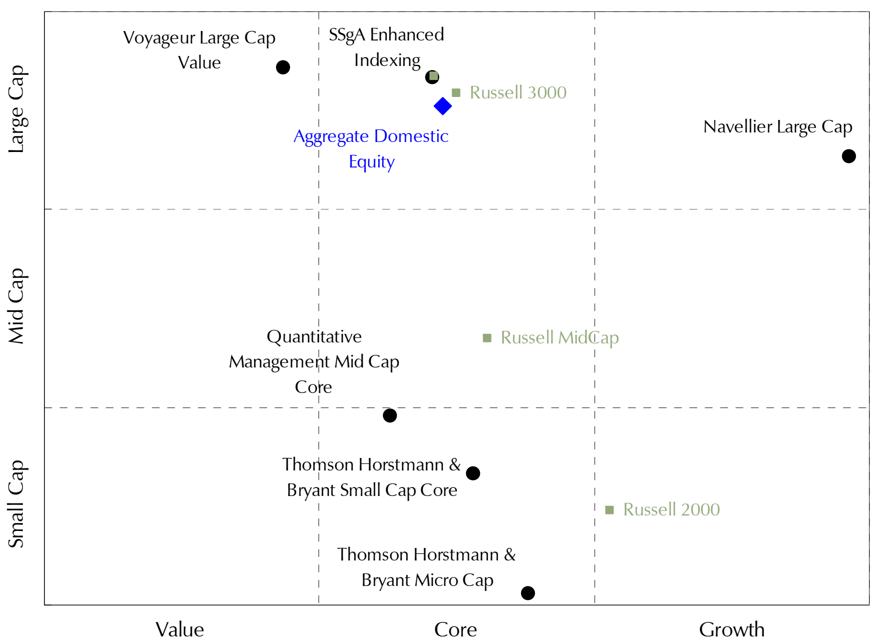
Recommendation:

Historically, over long time periods, value stocks have provided higher average annual returns than growth stocks, although this relationship is cyclical. As such, Meketa Investment Group generally favors a slight value bias in equity portfolios. We would seek to transition each Fund from its core orientation to a value orientation when recommending adjustments to asset allocation, new investment strategies, and transfers of assets (i.e., rebalancing, directing cash flows, etc.).

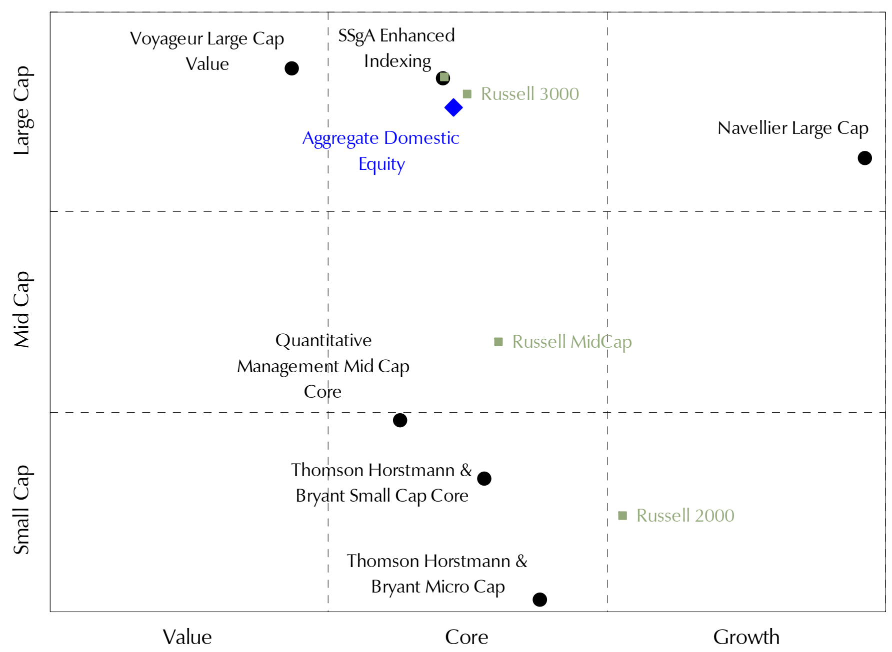
Priority: Two

Domestic Equity Manager Styles

Pension Fund

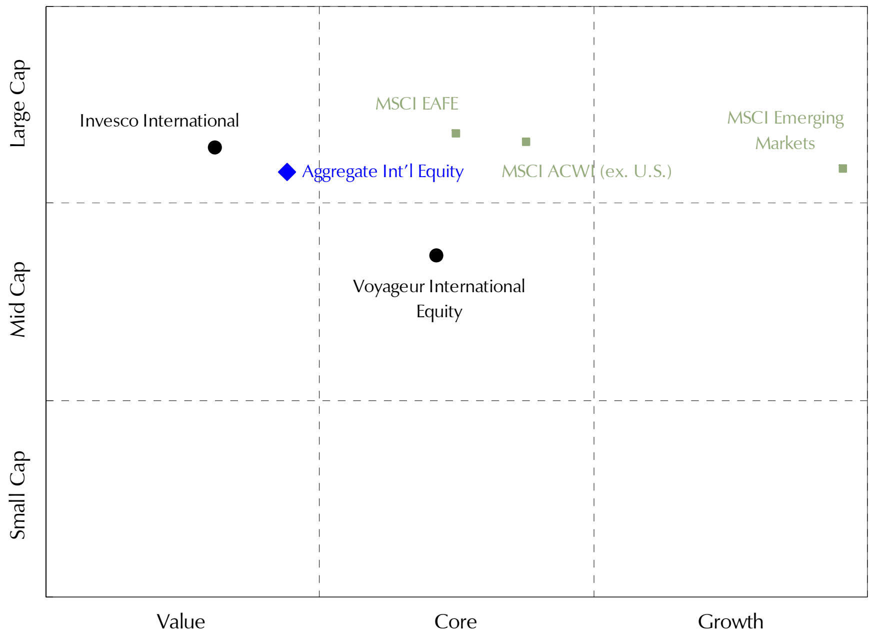


Annuity Fund

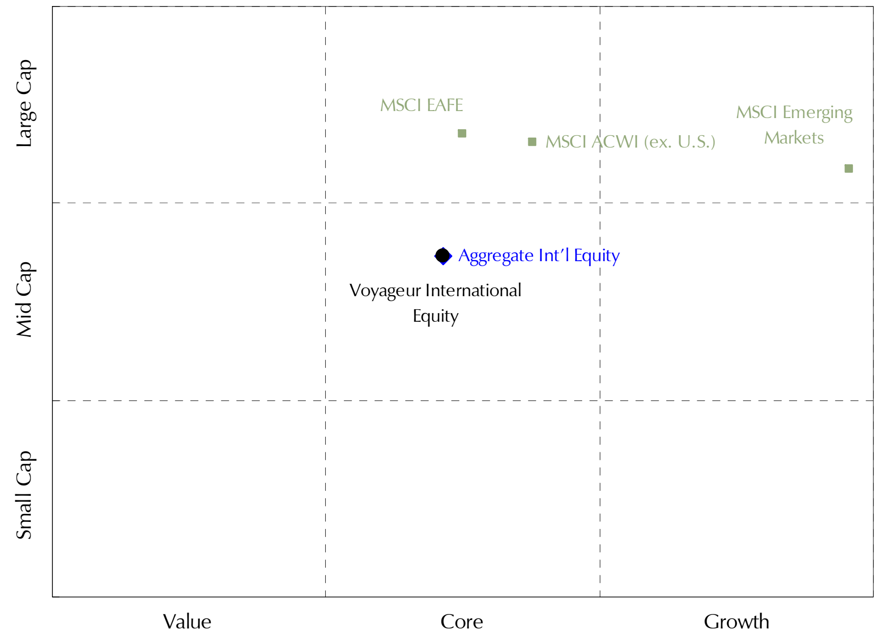


International Equity Manager Styles

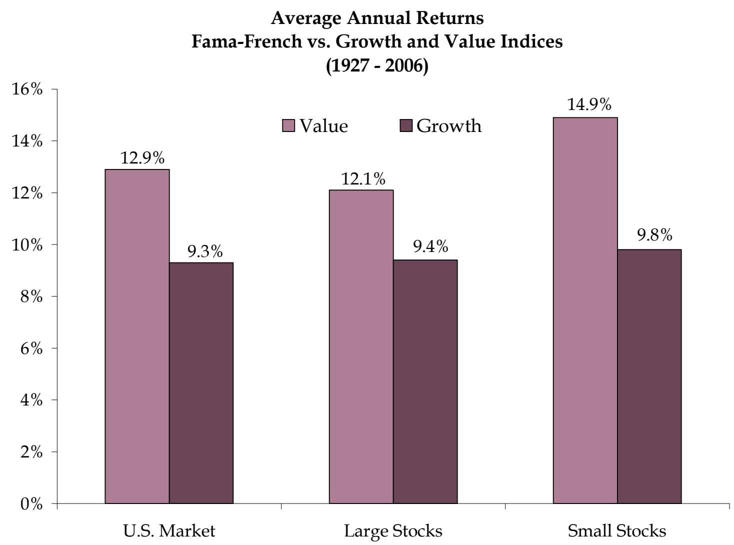
Pension Fund

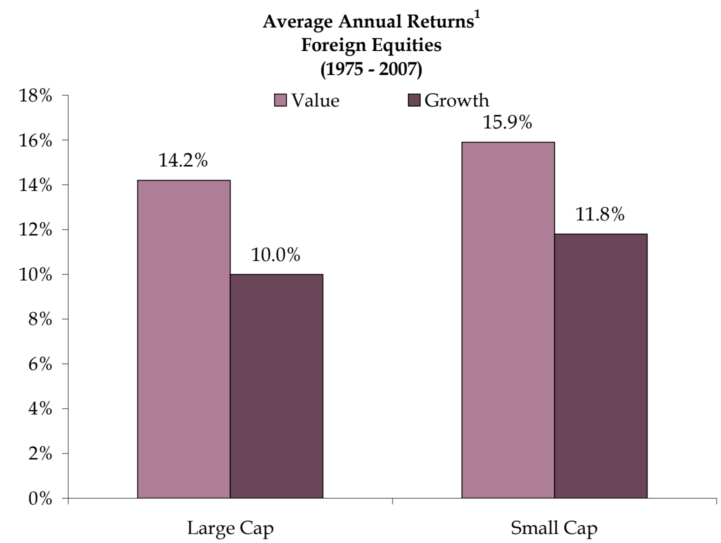


Annuity Fund



Historical Performance of Growth and Value Stocks





U.S. Growth and Value Cycles: 1975 - 2008

Cycle	Dates	Average Annual Outperformance	Duration (Months)
Value	1/75 - 12/77	11.2%	36
Growth	1/78 - 11/80	3.9	35
Value	12/80 - 3/89	4.8	100
Growth	4/89 - 12/91	10.9	33
Value	1/92 - 4/94	7.1	28
Growth	5/94 - 6/00	9.3	74
Value	7/00 – 12/06	9.3	79
Growth	1/07 – 12/08	4.7	24

International Investing

The U.S. equity market comprises only a portion of the developed world's capital markets. Foreign and domestic equity markets have produced alternating superior and inferior relative returns over various time periods. However, over long-term periods, developed foreign stock markets have provided cumulative returns similar to those of the U.S. equity market.

More importantly, foreign equity market returns historically have not been highly correlated with U.S. equity market returns. Due to this relatively low correlation, investors generally experience materially lower overall equity volatility if their equity assets include a diversified investment in foreign equities. Historically, an international allocation below 20% has offered investors the greatest reduction in overall volatility. This volatility reduction has occurred despite the higher volatility of foreign equities. In the same manner that investors receive risk-reduction benefits from owning a variety of individual domestic stocks and individual industries, they similarly benefit from owning investments representing a variety of international markets.

Another benefit of international investing is the fact that an increasing number of companies and industries operate in multinational environments. Thus, owning foreign stocks expands a Fund's opportunities in growing markets and growing industries.

In addition to the historical returns and volatility of foreign investing, there are other specific risks to be considered. In particular, there exist potential political and currency risks associated with investing in foreign securities. In an uncertain world, investing a large share of a domestic Fund internationally increases the risk of loss due to political instability. Also, because the Pension and Annuity Funds' benefits are payable in U.S. dollars, a foreign currency investment adds a further element of uncertainty. These political and currency risks offset a portion of the statistical diversification benefits.

When making an allocation to international equities, it is important that this investment be allocated to a large number of countries and industries, to ensure appropriate diversification. We further recommend that the majority of the Pension and Annuity Funds' international equity assets be invested in highly developed foreign markets. While there may be opportunities in emerging (less developed) markets, political and economic risks abound.

Large Cap Developed Markets

The most common benchmark used by foreign equity investors is the MSCI EAFE index, which represents developed countries in Europe, Australasia, and the Far East. Japan and the U.K. are the two largest components of the index, each comprising roughly twenty-five percent of the benchmark. The largest foreign stocks, like those in the U.S., are companies and brands that most U.S. investors would recognize.

International Investing (continued)

The capital markets of the developed world have become increasingly sophisticated and automated. In the G-7 nations, market discipline has forced these countries to adopt bookkeeping and regulatory practices that are on par with those of the U.S., thus providing an element of shareholder protection. Hence, an allocation in large cap foreign stocks represents an entry point to overseas investing with which the vast majority of plan sponsors are comfortable.

Small Cap Developed Markets

Expanding investments to include small companies increases the expected returns to a portfolio of assets and increases aggregate diversification. We believe this is true with investing in foreign markets as well as in the U.S.

A dedicated allocation to foreign small capitalization equities has provided investors with superior returns historically on an absolute and risk-adjusted basis. Combined with their lower correlation to U.S. equities and the expanded opportunity set they offer for adding value, foreign small cap equities present an attractive prospect to U.S. investors. Consequently, investors should consider an allocation to small capitalization international stocks. It is reasonable to expect that active managers can add significant value over the benchmark due to pricing inefficiencies in this market.

Emerging Markets

The rationale behind investing in emerging markets is simple: growth. Along with opportunities in emerging markets, political and economic risks abound. Emerging markets have delivered spectacular returns over short periods, but subsequently have often fallen sharply. Emerging markets have been the most volatile public market asset class.

Still, Meketa Investment Group believes that investing in emerging markets is appropriate for long term portfolios as a tool for enhancing returns. Further, we recommend the use of active management, as emerging equity markets offer active managers significant opportunities to add value.

Pension and Annuity Funds Status:

The Pension and Annuity Funds each currently have a target allocation to international equities. Both Funds are invested primarily in developed market large cap mandates. The Pension Fund gains this exposure through diversified portfolios invested by INVESCO and Voyageur, while the Annuity Fund employs only Voyageur. As of November 30, Voyageur invested a portion (approximately 10%) of their portfolio in emerging market equities. Additionally, each Fund had an allocation to small cap foreign equities as a result of Voyageur's weighting in smaller issues.

Currently, the Funds do not employ managers dedicated to investing in foreign small cap or emerging markets stocks.

International Investing (continued)

Recommendation:

To further diversify the Funds' international equity component, Meketa Investment Group recommends the Funds consider the risks and rewards of adding dedicated allocations to small capitalization international equity and emerging market equity managers. Exposure to these areas of the international equity markets would be best achieved by utilizing active specialist managers.

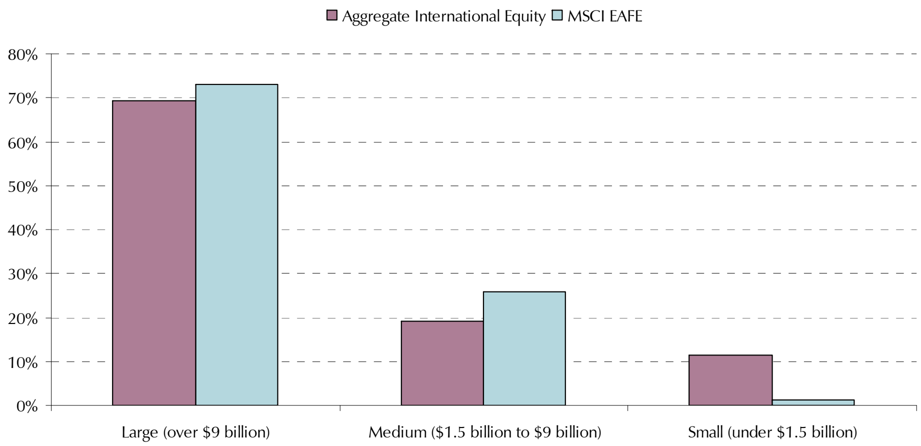
Like in the U.S., the availability of top-tier foreign small stock managers can be cyclical. Therefore, we advise a more flexible approach to obtaining foreign equity exposure. For example, the Funds may wish to retain an "all cap" manager, like Voyageur, which invests up to one-third of its portfolio in small cap stocks, to gain exposure to this segment of the market.

Further, as the Funds continue to build out their international equity portfolios through the addition of dedicated specialist managers, the Trustees may wish to consider gaining a portion its exposure to developed large cap foreign markets via a passive manager.

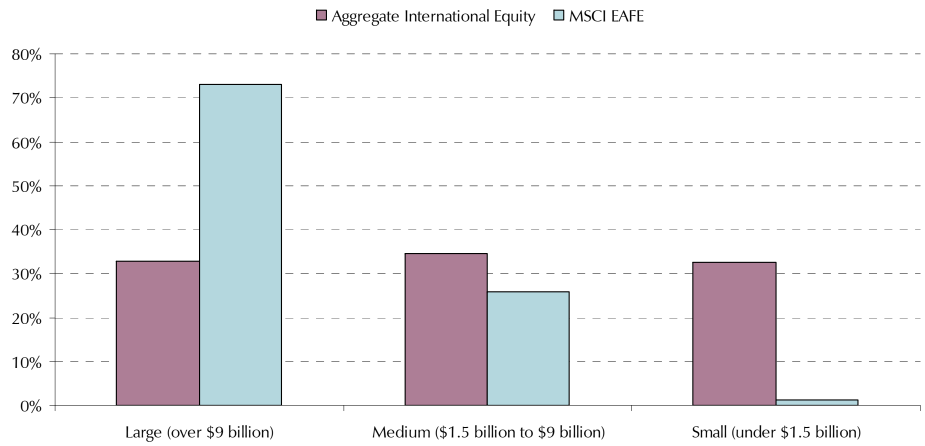
Priority: Two

International Equity Characteristics

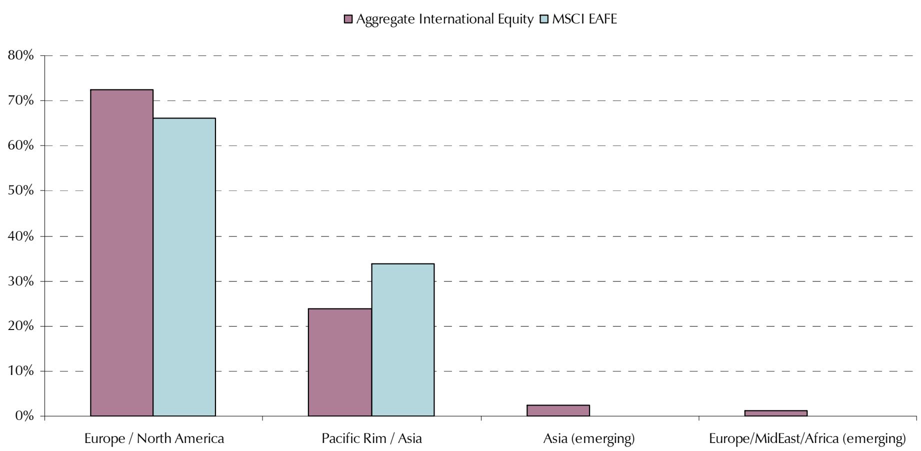
Pension Fund Capitalization Structure



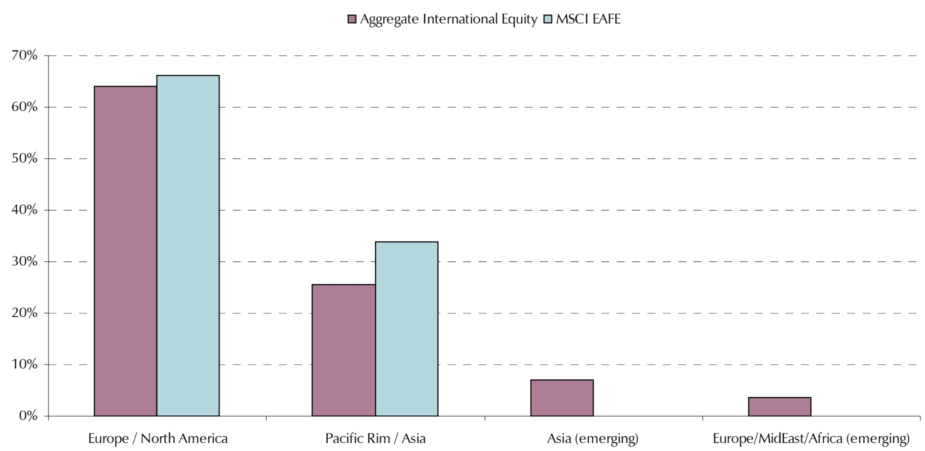
Annuity Fund Capitalization Structure



Pension Fund Regional Allocations



Annuity Fund Regional Allocations



Investment Grade Bond Portfolios

Investment-grade fixed income securities provide stability of income, capital preservation, and a source of liquidity for payment of benefits. Investment grade bonds reduce a Fund's overall risk. While expected returns on intermediate term, investment grade bonds are lower than those of equities, bonds also exhibit lower price volatility. Consequently, risk-adjusted return characteristics of fixed income securities compare more favorably to those of equities. In addition, historically, the correlation between bonds and equities (domestic and international) has been low. For these reasons, fixed income securities are almost always included in an optimal portfolio asset allocation. Simply stated, the fact that bonds have a set maturity, ensuring the Fund's return of principal on a known date, means that investment grade bonds can be viewed as a source of liquidity during periods of extended equity market weakness.

Active fixed income managers all employ some combination of four basic strategies: 1) interest rate forecasts, 2) yield curve strategies, 3) sector rotation, and 4) security selection. "Top down" managers emphasize interest rate forecasting, and "bottom-up" managers emphasize security selection, over the other strategies. Over longer periods of time, very few fixed income managers have been able to outperform the benchmark employing "top-down," or market timing, strategies. When considering fixed income strategies, it is important to recognize that return distributions for fixed income securities are limited on the upside, compared to equities. This is due to the fact that interest rates, the primary determinant of investment grade bond returns, cannot decline below 0%, capping potential price appreciation.

The three main sectors of the investment grade fixed income market are: U.S. Treasury and agency securities, corporate debt, and mortgage-backed securities. Managers who focus on these sectors are called "Core" managers. "Core Plus" managers invest additionally in riskier sectors, such as domestic high yield bond and international fixed income investments, including emerging markets, in some cases.

Pension and Annuity Funds Status:

The Pension and Annuity Funds are invested primarily in investment grade fixed income securities. The Pension Fund employs Loomis Sayles (an actively managed total return bond separate account), ULLICO's Separate Account J (an actively managed commingled fund which invests primarily in high quality mortgages), and SSgA (a passively managed diversified core bond fund). The Annuity Fund employs the same SSgA and ULLICO strategies, as well as Income Research & Management (an actively managed core bond separate account). The Funds do not have dedicated exposure to below investment grade bonds (i.e., high yield bonds) or inflation-protected securities (i.e., TIPS).

Recommendation:

The Trustees should consider evaluating greater use of index funds in this area. Given the efficiency of the investment grade fixed income market, Meketa Investment Group recommends that the Funds consider investing a significant portion of their investment grade bond portfolios in low cost index funds, simultaneously adding diversification and reducing management fees for the Funds.

Investment Grade Bond Portfolios (continued)

Note that index managers typically charge approximately 0.05% of assets for investment grade bond mandates of this size. At present, the average fee for the Pension Fund's aggregate bond portfolio approximates 0.43% on all assets, while the average fee for the Annuity Fund's portfolio approximates 0.27%.

Priority: Two

Fixed Income Portfolio Structure

Duration & Yield:	Pension Fund Aggregate Fixed Income 11/30/08	Annuity Fund Aggregate Fixed Income 11/30/08	Barclays Aggregate 11/30/08
Average Effective Duration (years)	4.3	3.7	3.7
Yield to Maturity (%)	6.7	5.3	4.0
Market Allocation (%):			
United States	95	97	94
Foreign (developed markets)	5	3	6
Foreign (emerging markets)	0	0	0
Currency Allocation (%):			
Non-U.S. Dollar Exposure	0	0	0
Sector Allocation (%):			
U.S. Treasury-Nominal	16	15	25
U.S. Treasury-TIPS	0	0	0
U.S. Agency	2	5	10
Mortgage Backed	32	24	40
Corporate	37	36	18
Sovereign & Supranational	2	1	4
Commercial Mortgage Backed	5	9	3
Asset Backed	4	7	0
Cash Equivalent	2	0	0

Treasury Inflation Protected Securities (TIPS)

Unlike traditional bonds, inflation-linked bonds offer investors a guaranteed return over inflation, if held to maturity. Generally, investors receive an explicit annual coupon plus a variable adjustment based on the rate of inflation.

TIPS have risk and return patterns that differ from those of stocks or traditional bonds, and thus provide valuable diversification to both long- and short-term investment funds. An investment in TIPS would likely produce attractive gains in a rising inflation environment, offsetting losses in stocks and traditional bonds. Because the future is always uncertain, owning an asset that may do well in an otherwise adverse environment could be extremely valuable.

The main disadvantages of TIPS are that they will likely underperform when inflation falls, and they will provide little protection against a rise in interest rates without a similar increase in inflation. However, the advantages of TIPS outweigh the disadvantages.

Most investors have at least a portion of their liabilities exposed to inflation. For investors with inflation-sensitive liabilities, TIPS represent the lowest risk asset available. Defined benefit plans that offer a COLA (cost of living adjustment) possess liabilities explicitly linked to inflation. By holding TIPS, pension funds can more closely match their assets to their liabilities. Endowments and foundations that must keep up with rising salaries and other costs can likewise use TIPS to match their assets to their likely future liabilities.

Pension and Annuity Funds Status:

The Pension and Annuity Funds do not currently have dedicated exposures to Treasury Inflation Protected Securities (TIPS).

Recommendation:

Meketa Investment Group recommends that the Funds consider an allocation to a dedicated TIPS portfolio. We recommend that this allocation be achieved through a low-cost index strategy. This asset class serves as a source for benefits payments as well as a protection against inflationary pressures.

Priority: One

High Yield Portfolios

For U.S. institutional investors, specialized high yield bond management is a relatively recent investment trend. A growing number of firms offer dedicated high yield bond management, but the universe remains relatively small.

Managing high yield bonds requires significant research and trading resources. Often, limited information is publicly available in the high yield market. For many issues, high yield bond managers must provide all or most of the necessary detailed research.

Also, the amount of high yield bond assets that one firm can manage effectively is constrained by the relative illiquidity of this market. For this reason, a few managers have closed their products to new investors when assets under management reached the $10 to $20 billion range. Additionally, limited liquidity makes it imperative that all trading be conducted by skilled and experienced personnel.

The greater resources required by high yield bond managers and the limited ability to leverage these resources, lead to higher management expenses. Management fees for separately managed high yield bond portfolios range from 40 to 90 basis points per year, far higher than for investment grade bonds.

Pension and Annuity Funds Status:

The Funds currently lack dedicated high yield bond exposure.

Recommendation:

Meketa Investment Group recommends that the Funds consider an allocation to a dedicated high yield bond portfolio. We recommend that this allocation be achieved through an actively-managed portfolio, as skilled high yield bond managers have demonstrated an ability to outperform the broad high yield bond market.

Priority: One

Real Estate Investing

Real estate is a separate asset class, providing unique return and risk characteristics. In addition, real estate offers some inflation protection relative to stocks and bonds. Finally, real estate's return behavior does not closely track that of stocks or bonds; thus, a real estate investment provides increased diversification and helps moderate aggregate returns over time. The expected returns from real estate will depend on the type of investment vehicle utilized and the degree of risk or leverage used. However, over long-term periods, real estate returns are expected to rank between the returns of stocks and bonds.

Real estate is not a liquid asset. Its price is set infrequently and often only through appraisal. Institutional investors have typically utilized commingled real estate pools that can offer a limited degree of liquidity, depending upon their structure and the cash flows from underlying investments and other investors. However, this liquidity is not guaranteed, and investors often receive withdrawal funds on a gradual basis. Much of the liquidity constraints stem from the absence of a public market for real estate. The advent of real estate investment trusts (REITs), entities that trade publicly but invest in real estate, offer liquidity to investors seeking easily tradable, daily priced real estate exposure. The market is relatively new, however, and the historical performance of REITs has not exhibited the characteristics associated with private real estate investments.

Pension and Annuity Funds Status:

The Pension Fund currently targets a 10% allocation to real estate, while the Annuity Fund targets 5% of total assets.

The Pension Fund's real estate portfolio is invested across two managers, the AFL-CIO Building Investment Trust (BIT) and RREEF's America REIT III Fund. The BIT is a core strategy, investing primarily in high quality income-producing properties. RREEF's America REIT III Fund employs a value-added strategy, which incorporates a higher capital appreciation return component, and thus more risk, as the manager attempts to enhance investment properties. Both strategies are open-end commingled funds, with quarterly liquidity.

The Annuity Fund's real estate portfolio is invested across the JPMorgan Strategic Property Fund and the RREEF America REIT III Fund. JPMorgan employs a traditional core strategy, and is also an open-end fund, which offers quarterly liquidity.

Recommendation:

In aggregate, Meketa Investment Group believes that the diversification benefits of real estate warrant at least a 5% allocation to the asset class for defined benefit funds. While the current strategies are appropriate investments, we recommend that the Trustees consider gradually building a more diversified real estate roster, including new allocations to dedicated value-added and opportunistic strategies, as well as publicly traded real estate securities (REITs).

Priority: Three

Private Markets Investing

Private market investments consist of participation in non-publicly traded partnerships that invest in productive assets (e.g., provision of capital to new or existing businesses – private equity), inputs to production (such as natural resources), and infrastructure (through investment in public assets and services). All of these have historically yielded returns higher than or comparable to public market equities, while exhibiting low correlation with public market investments.

The non-public and often complex nature of such investments results in limited awareness of their return and risk potential. This makes the market for such investments especially "inefficient," and attractive to the informed, patient investor. Additionally, private market investments, because they are not valued daily, display lower volatility than public market investments.

Drawbacks to private market investments include the expertise and time required to analyze their often complex deal structure, high fees as compared to public markets, intricate valuation procedures, limited transparency, and illiquidity.

The incentives facing private market investors and management, coupled with the patient nature of private capital, allow for significant value-added measures to be taken, resulting in historically high private equity returns as compared to public equities. Additionally, the top quartile manager adds significantly more alpha than that compared to the top quartile public markets manager.

The high return potential, favorable correlation characteristics, and low volatility associated with private market investments argues for their inclusion in the asset allocation of the Funds.

Pension and Annuity Funds Status:

The Funds do not currently invest in the private markets.

Recommendation:

Meketa Investment Group recommends that the Trustees consider investing in private markets. More specifically, through investment in private equity. With the addition of private markets, the expected long-term volatility of the Funds will be dampened.

Meketa Investment Group recommends a conservative, carefully planned approach when investing in private markets. We recommend the Funds establish private market allocations that are explicitly defined at the aggregate level. Initially, we recommend the Funds' consider a modest allocation (5% to 10%) to private equity to attain meaningful benefits of this segment of the private markets.

Given the size of the Funds, exposure to the asset class would be attained most efficiently through a fund of funds, which offer substantial diversification benefits, and provide exposure to some high quality private equity funds that otherwise might not be accessible to the Funds.

Priority: Three

Hedge Fund Investing

A hedge fund is an investment vehicle that can buy and sell short securities, use arbitrage, trade derivatives, and invest in almost any opportunity in any market where it foresees the potential for profit. It is important to understand that investment returns, volatility, and risk vary enormously among the different hedge fund strategies.

Hedge funds represent an array of trading strategies that may or may not be directional in nature. Hedge funds will often include investments in equity, fixed income, and commodities markets. They may also invest in non-traditional securities, such as currencies, structured notes, and a variety of derivative instruments. It is the manner in which they make these investments, as well as their ability to invest in non-traditional securities, that make hedge funds unique.

Plan sponsors should be skeptical of the ability of most managers to add value. Yet, when a plan sponsor is confident that a manager possesses skill, the manager should be allowed to have greater discretion and more "tools." In the hedge fund world, this includes short selling, leverage, asset concentration, derivatives, and investing in less liquid assets.

Certain hedge fund strategies have the potential to add value and provide meaningful diversification to a plan sponsor. While plan sponsors should be skeptical about historical returns, the low correlation of hedge funds to traditional equity and fixed income markets makes them attractive as either a source of portable alpha or an alternative asset class that has the ability to reduce a fund's overall level of volatility, without sacrificing return.

Because every hedge fund is unique, there is no simple or direct way to assess the likely risks and potential returns. Hedge funds are complex investment strategies that should be approached cautiously.

Pension and Annuity Funds Status:

The Funds' target allocation to the asset class currently stands at 7.5% of total assets. The Funds were previously invested in a hedge fund of funds strategy (Ivy Clarus Associates II) managed by Ivy Asset Management. In December, the Trustees voted to terminate Ivy. Approximately 70% of the proceeds from the Ivy investment are expected to be received in January 2009, with the remaining "less liquid" assets to be distributed over time. Meketa Investment Group's memorandum relating to recent developments at Ivy can be found in the appendix.

Recommendation:

Meketa Investment Group recommends a conservative, carefully planned approach when investing in hedge funds. As such, we would recommend the hedge fund allocation be targeted for low volatility strategies that would serve to diversify the Funds and reduce overall volatility, rather than taking on added risk to seek higher returns. A fund of funds strategy is the preferable vehicle to gain such exposure.

Priority: Three

Manager Evaluation

Selecting and monitoring investment managers is a key determinant of the overall success of any investment plan. Investment managers are highly compensated employees chosen to fulfill specific roles within the Pension and Annuity Funds. Each manager should be assigned a carefully defined role that does not overlap with the assignments of other managers.

When evaluating prospective and current managers, Meketa Investment Group looks for five key characteristics: a proven investment strategy, a cohesive investment process, deep investment resources, strong risk-adjusted performance, and low operating costs. In addition, all managers should be evaluated within the context of the needs of the Pension and Annuity Funds.

Pension and Annuity Funds Status:

Meketa Investment Group has collected and reviewed information for each of the Funds' investment managers. We are engaged in an initial review of major strategy considerations, investment process, organizational structure, performance, and operating expenses.

As part of our initial review, thus far we have met with Navellier, SSgA, Quantitative Management Associates, and Voyageur at Meketa Investment Group's offices. We also conducted conference calls with INVESCO and Income Research & Management. Further, due to other client relationships, we are intimately familiar with Income Research & Management, SSgA, ULLICO "J for Jobs", AFL-CIO BIT, INVESCO, Navellier, JPMorgan Strategic Property Fund, and RREEF America III, each of which we have met with during the past year. Additionally, we have been in contact with investment professionals from Thomson, Horstmann & Bryant regarding the Funds' investments and anticipate meeting with the team in the near future.

After conducting a holdings overlap analysis on the Funds, no significant redundancies were found between managers.

Recommendation:

Meketa Investment Group's preliminary review of the Funds' managers has not revealed any circumstances requiring immediate action. We expect to make manager recommendations in the future, as appropriate. We further recommend on-going reviews to ensure that managers consistently fulfill their assigned roles for the Funds. As part of this monitoring process, we recommend that the Trustees continue to meet with the Funds' managers on a regular basis at Trustee meetings.

As noted previously, given the need to diversify the Funds, most, if not all managers, will experience at least a partial reduction in assets as new strategies are funded. As the Funds explore new strategies and asset classes, and consequently need to trim their exposure to their existing managers, we will make recommendations about which managers should serve as a source of funds at that time. In some cases, we may recommend terminating managers to reduce overlap and costs.

Priority: One

Manager Strategy Overview

This section provides a brief review of the strategy employed by each of the Funds' managers. It provides the benchmark that each manager is seeking to outperform, and a synopsis of how they attempt to do so.

Domestic Equity

Navellier Large Cap Growth Equity (Pension & Annuity): Navellier manages a large cap growth U.S. equity portfolio on behalf of the Funds. Navellier seeks to outperform the Russell 1000 Growth index by employing a bottom-up strategy which primarily utilizes quantitative strategies to identify companies expected to deliver above-average earnings growth over the longer term. They apply risk control and optimization techniques to construct a portfolio.

Quantitative Management Associates Midcap Equity (Pension & Annuity): QMA invests a core-oriented midcap equity portfolio on behalf of the Pension & Annuity Funds. QMA is charged with outperforming the S&P 400 midcap index. The strategy employs a primarily bottom-up, quantitative approach that invests in both growth and value stocks, while targeting risk characteristics similar to those of the benchmark. The resulting portfolio provides style neutral, core midcap equity exposure.

SSgA Index Plus (Pension & Annuity): The SSgA S&P 500 enhanced index strategy seeks to outperform the S&P 500 index by 50 to 100 basis points in a risk controlled manner. SSgA uses a quantitative strategy to construct a portfolio of stocks with characteristics similar to those of the S&P 500 index. As of September 30, 2008, the portfolio was invested across 283 names.

Voyageur Large Cap Value Equity (Pension & Annuity): Voyageur employs a bottom-up, research driven strategy focusing on valuation, management, and business momentum. Voyageur uses a multi-factor model that ranks a universe of the 1,500 largest U.S. companies, incorporating fundamental valuation and momentum measures. A sector-neutral approach to portfolio construction is utilized. Voyageur's benchmark is the Russell 1000 Value index.

Thomson Horstmann & Bryant Small/Micro Cap Equity (Pension & Annuity): THB invests a small/micro cap equity portfolio across companies with market capitalizations consistent with the market capitalization range of the Russell 2000 index, its benchmark. A bottom-up fundamental research process is employed in the identification of securities in which to invest. The weight of any single sector will generally be limited to a minimum of 5% and a maximum of 35% of the total market value of the portfolio. The portfolio invests in stocks with market capitalizations between (approximately) $50 million and $2.0 billion and is diversified across approximately 300 different names. THB's strategy generally exhibits a core/value orientation.

Manager Strategy Overview (continued)

International Equity

Voyageur International Equity (Pension & Annuity): The Voyageur international all cap equity strategy is sub-advised by Polaris Capital Management, a Boston-based global and international equity manager. The investment objective of the strategy is to identify the superior value, using a bottom-up value-oriented approach. The underlying investment philosophy is grounded in two basic beliefs: companies exist to generate cash flow for owners, and superior returns can be generated by purchasing the most undervalued streams of sustainable "free" cash flow. The strategy seeks high risk-adjusted returns that exceed the global cost of equity with a focus on absolute risk. Voyageur's benchmark is the MSCI EAFE index, a proxy for the broad developed international equity markets.

INVESCO International Equity (Pension): INVESCO manages an international equity portfolio on behalf of the Pension Fund. The INVESCO International Equity strategy utilizes a bottom-up investment process to exploit inefficiencies in global equity markets. The manager employs a broadly defined valuation methodology, a global sector approach to company research, requires a long investment time horizon, and applies risk management at the security and portfolio level. The investment process is clearly delineated in three discrete investment steps that include a financial and valuation assessment, primary research driven by direct company contact, and team based portfolio decisions. Portfolio design attempts to limit risk versus the benchmark. The international equity strategy may investment up to 10% in emerging markets securities. INVESCO's benchmark is the MSCI EAFE index.

Fixed Income

Income Research & Management Intermediate Government/Credit (Annuity): Income Research & Management invests an investment grade bond portfolio on behalf of the Annuity Fund. IR&M seeks to add value through intermediate government / credit portfolios through a bottom-up investment approach, emphasizing corporate and government issues which are researched for credit, structure, and price characteristics. In designing portfolios they seek to achieve higher yields, positive convexity, and duration within 10% of the benchmark (Barclays Capital Intermediate Government/Credit index).

Loomis Sayles Core Total Return (Pension): Loomis Sayles manages a core, total return strategy which seeks to outperform the Barclays Capital Aggregate index. Loomis seeks to exploit the complete range of global fixed income insights generated by the Loomis Sayles Fixed Income organization in portfolios with benchmark-aware risk and return objectives. Portfolio construction is driven by a combination of bottom-up security selection and top-down macroeconomic analysis. Primarily, the portfolio will be invested across government, corporate and mortgage-based securities. Up to 5% of the portfolio may be invested in below investment grade securities.

Manager Strategy Overview (continued)

Fixed Income (continued)

ULLICO "J for Jobs" (Pension & Annuity): The "J for Jobs" portfolio is an open-ended, commingled pool that invests in high-quality secured mortgages on development projects. Investments in "J for Jobs" are primarily in new construction or extensive renovations. The portfolio consists of high-quality construction loans and permanent mortgages secured by a variety of properties throughout the United States. To qualify for a "J for Jobs" mortgage, borrowers must certify that they will employ contractors and subcontractors signatory to collective bargaining agreements with unions affiliated with their local Building and Construction Trades Council. All projects are by construction workers affiliated with the Buildings and Construction Trades Department of the AFL-CIO. Additionally, all assets held by the "J for Jobs" fund are in a separate account that is fully insulated from the creditors of ULLICO. The strategy is benchmarked against the Barclays Capital Aggregate index.

SSgA U.S. Aggregate Bond Index (Pension & Annuity): The SSgA U.S. Aggregate Bond Index strategy seeks to replicate the returns of the Barclays Aggregate index, an index comprised of investment-grade U.S. bonds. Investments include U.S. Treasury, agency, corporate, mortgage-backed securities, commercial mortgage-backed securities, and asset-backed securities. Overall sector and quality weightings are matched to the index, with individual security selection based upon criteria generated by State Street's credit and research group, security availability, and analysis of each security's impact on the portfolio's weightings. Further, the portfolio's is managed duration neutral to the index at all times.

Real Estate

AFL-CIO Building Investment Trust (Pension): The mission of the BIT is to provide competitive risk-adjusted returns for shareholders through investments in institutional-quality commercial real estate while promoting economic development and creating union jobs. The BIT's principal objective in making investments is to seek income and capital appreciation while protecting the shareholders' capital. Mercantile, as the trustee of the BIT, employs an investment strategy that seeks to create value through investment in the development and acquisition of income -producing institutional quality commercial real estate. The BIT employs a core strategy and seeks to outperform the NCREIF Property index over a full market cycle.

RREEF America III (Pension & Annuity): RREEF America III is the firm's flagship value-added commercial real estate investment product. RREEF America III is a private real estate investment trust (REIT) that seeks to provide competitive value-added investment returns. The fund looks to achieve these returns by upgrading the physical condition, occupancy and operating characteristics of the properties in which it invests, seeking to enhance their income streams and market values. Fund activities include the acquisition, physical improvement, market repositioning, active management and sale of well-located apartment, industrial, retail and office properties in major metropolitan markets across the continental United States. The fund also invests in new development projects. While RREEF America III is not managed to a specific benchmark, the NCREIF Property index and the NCREIF Open-End Fund index are the most appropriate proxies.

Manager Strategy Overview (continued)

Real Estate (continued)

JPMorgan Strategic Property Fund (Annuity): The Strategic Property Fund employs a core strategy, focusing primarily on existing high-quality, well-leased assets in the four major property types: office, industrial, multi-family and retail. The fund focuses on the larger primary economic markets. The fund seeks high current income, modest appreciation and principal preservation, while targeting relatively low volatility. The fund seeks to outperform the NCREIF Property index over a full market cycle.

Hedge Funds

Ivy Clarus Associates II (Pension & Annuity): Ivy Clarus Associates II is a multi-strategy fund of hedge funds which seeks to provide above-average capital appreciation while taking low to moderate risk, without incurring any unrelated business taxable income (UBTI). The fund seeks to provide significant diversification among various investment strategies, including long/short equity, event driven, relative value, credit and tactical trading. The fund aims to maximize positive investment returns by employing managers that have demonstrated the ability to preserve and grow capital through different market cycles. The managers employed exhibit a sophisticated skill set for their respective strategies and have proven to produce returns with lower volatility and alpha to market indices.

Operating Expenses

One of the surest ways to increase a Fund's returns is to reduce operating expenses. Operating expenses can be explicit (e.g., portfolio management, custody, and brokerage fees) or implicit (trading execution costs). In most cases, opportunities exist to reduce expenses outright or to identify sources of offsetting income.

Investment management fees typically represent the largest component of a Fund's expenses, and should be negotiated aggressively and monitored closely. For example, while a manager's fees may be low when measured as a percentage of assets, the dollar fee may have increased substantially through market appreciation. Much of the accompanying fee appreciation does not represent additional management responsibility, and a fee re-negotiation is appropriate.

Custody fees should also be monitored and negotiated, as appropriate. Custody fees should be examined in the context of the entire fee stream to the custodian.

Trading costs are comprised of explicit costs (commissions) and implicit costs (execution and market impact), and can be difficult to monitor precisely. While influenced by an investment manager's particular strategy, trading costs indicate the care an investment manager takes in implementing strategy. Participation in directed brokerage and commission recapture programs helps control trading costs and limit the exposure of client assets to soft dollar arrangements.

Pension and Annuity Funds Status:

Meketa Investment Group has collected information regarding the management expense structure of the Funds. In aggregate, the Pension Fund's annual investment management fee is approximately sixty basis points (0.60%), while the Annuity Fund's aggregate annual investment management fee is approximately forty-five basis points (0.45%). We generally expect annual management fees to be in the range of thirty to fifty basis points for funds of a similar size. The extensive use of active management is the primary contributor to this above-average fee structure.

Recommendation:

Meketa Investment Group will continue to review the Funds' operating expenses in depth, and will recommend opportunities for expense reductions following further review. The potential exists for fee negotiations with the Funds' current investment managers. Further utilization of index funds will also greatly reduce the Funds' average operating expense ratios.

Priority: Two

	Pension Fund Market Value 11/30/08	Annuity Fund Market Value 11/30/08	Fee Schedule	Effective Fee	Peer Median Fee
Domestic Equity Managers					
Navellier Large Cap Growth	8.0	7.3	45 bp on all assets	45 bp	67 bp
Voyageur Large Cap Value	19.8	7.0	50 bp on first $10mm, 40 bp on next $15mm	44 bp	62 bp
Quantitative Management Associates	3.3	2.6	55 bp on first $25mm	55bp	70 bp
Thomson Hortsmann & Bryant (small/micro cap)	5.1	1.9	100 bp on all assets	100bp	93 bp
SSgA S&P 500 Enhanced Index	6.8	8.2	30 bp on first $50mm	30 bp	62 bp
International Equity Managers					
Voyageur	3.4	2.3	95 bp on all assets	95 bp	72 bp
INVESCO	4.4	NA	100 bp on first $10mm	100 bp	85 bp
Fixed Income Managers					
Loomis Sayles	16.7	NA	50 bp on first $10mm, 30 bp on next $90mm	42 bp	35 bp
Income Research & Management	NA	15.1	25 bp on first $50mm	25 bp	35 bp
ULLICO "J for Jobs"	4.2	4.2	75 bp on all assets	75 bp	NA
SSgA Broad Market Bond Fund	4.1	15.1	15 bp on first $50mm	15 bp	30 bp
Real Estate Managers					
RREEF America REIT III	3.4	2.3	125 bp on all assets	125 bp	75 bp
AFL-CIO BIT	10.5	NA	100 bp on all assets	100 bp	NA
JPMorgan Strategic Property Fund	NA	2.6	100 bp on all assets	100 bp	NA

Custody Services

The primary role of a custody bank is to provide accurate, reliable, efficient, and useful accounting and safekeeping services. It is crucial that the custody bank act as the independent confirmation of asset values and account activity, to protect investment assets and to reduce the possibility of missed income, or manipulation or errors that could lead to financial loss. In addition, the custody bank should be able to provide its data in machine-readable (computerized) form, and should offer up-to-date on-line access to accounting information.

Because custodian banks track investment activity as part of their accounting responsibilities, it has become the industry standard to rely upon the custodian to calculate investment performance. Fees for this service are generally minimal as the custodian already performs much of the work entailed in calculating performance. By retaining the custodian bank to calculate performance, Pension and Annuity Funds improve the likelihood of accurate and impartial performance numbers.

In addition to accounting, safekeeping and performance calculation services, custody banks often offer investment products that can serve client needs. For example, most custodians offer automatic overnight cash pools to allow clients to invest excess cash on a daily basis. These cash pools can be as conservative as a Treasury-only money market fund, or as aggressive as a cash pool backed by S&P 500 index futures. Index fund products also are usually available from the custodian. The advantages of utilizing investment products of the custodian stem from the relationship pricing that can occur and the administrative ease of transitions to and from these products.

Pension and Annuity Funds Status:

The assets of the Pension and Annuity Funds are in custody at State Street Bank. State Street Bank provides general accounting services for the Funds and offers a comprehensive online system to retrieve data. Recently, State Street Bank was retained to calculate preliminary total Fund investment performance for the Annuity Fund; they do not calculate audited investment performance for either Fund. As part of the custody services offered by State Street, the Funds utilize a short-term investment fund (STIF) managed by State Street Bank to sweep separate account manager cash on an overnight basis, as well as manage cash flows.

Recommendation:

We recommend a full review of accounting and other services provided by State Street Bank to ensure that the Pension and Annuity Funds receive all necessary services, at the appropriate fee level. After initial conversations with State Street Bank regarding performance calculation, it does not appear that State Street Bank can cost effectively provide this service for the Funds.

Priority: Two

Transition Management

When a plan sponsor adds a new asset class, changes its asset allocation targets, or hires or fires a manager, assets will need to be moved from one or more portfolios to other, potentially new, portfolios. These assets may stay within the same asset class (e.g., when one small cap stock manager is replaced with another) or they may move across assets classes (e.g., when a new allocation to TIPS is funded from equities). Increasingly, plan sponsors are using the services of "transition managers" to oversee these portfolio transitions.

Transition management often entails selling marketable securities from a "legacy portfolio," where a manager has been terminated, to a "target portfolio," where the new manager will take over. The outmoded model for handling this type of transition was to instruct the legacy manager to sell all the securities and give the new manager the resulting cash to invest. The main shortcomings of this method are that commissions will be exorbitant, opportunity costs may be massive, and that trade execution may be poor, as a firm with no incentive to maximize receipts is responsible for executing the trades.

Using a third party transition manager can reduce or eliminate these risks. For example, the transition manager typically transfers as many assets "in-kind" as possible. In-kind assets are found in the legacy portfolio and also needed by the new manager to create the target portfolio; therefore, they can be transferred directly over to the new portfolio. Because they are not traded on the open market, commission costs are significantly reduced. Further, the transition manager seeks to maintain market exposure throughout the transition, thus ensuring that opportunity costs are minimized. Finally, a transition manager is much more likely to be unbiased, and to search for the best execution than the terminated manager.

Pension and Annuity Funds Status:

To our knowledge, the Pension and Annuity Funds do not have any transition management relationships.

Recommendation:

Meketa Investment Group recommends that the Funds retain a panel of transition managers. We recommend that the Funds select two to three transition managers to be available to assist in the cost effective transition of assets between and among asset classes when implementing any approved recommendations as outlined previously in this document.

Priority: Two

Commission Recapture

Trading costs are comprised of explicit costs (commissions) and implicit costs (execution and market impact), and can be difficult to monitor precisely. While influenced by an investment manager's particular strategy, trading costs indicate the care an investment manager takes in implementing strategy.

Brokerage commissions are one of the largest expenses of an investment portfolio. Every time an investment manager conducts a trade, the broker used charges a commission. However, seeking the lowest commission is not always prudent, as it may not result in best execution (i.e., the trade may be executed at an unfavorable price or time).

The term "commission recapture" refers to a brokerage house setting aside, as a refund to the plan sponsor, a portion of the total commission paid. These refunds normally come in the form of monthly cash payments directly to the plan sponsor, which can then be used to pay for custody expenses, actuarial fees, legal or consulting retainers, or other expenses.

Commission recapture programs can be established for domestic equity, foreign equity, and fixed income portfolios (i.e., most publicly traded securities). However, it is important to note that the percentage of commissions that can be recaptured varies significantly by asset class, market capitalization, and country.

Commission recapture can create direct cost savings for plan sponsors if executed correctly. The benefits associated with utilizing a recapture broker outweigh the risks, as long as the relationship between the manager and the broker is set up professionally and trades are executed with a plan sponsor's best interests in mind. Plans that use numerous managers or have funds invested in liquid portfolios with high turnover rates will reap the largest benefits from a commission recapture program.

Pension and Annuity Funds Status:

The Funds do not currently utilize a commission recapture broker.

Recommendation:

Meketa Investment Group feels that commission recapture is a valuable option for plan sponsors. As such, we recommend that the Funds retain and utilize one or more commission recapture brokers, but that the Funds' investment managers be allowed a broad choice of brokers through which to trade, and that they not be required to execute a specific portion of trades through any specific broker(s).

Priority: Two

Securities Lending

Securities lending programs provide ancillary income to investment pools. Securities lending allows long-term investors to benefit from other investors' temporary needs for individual stocks and bonds.

When a Fund lends equities and bonds, they are compensated with collateral, made up of cash equivalent securities. Income from these cash equivalent securities comprises securities lending income.

Individual programs vary according to several factors, including the degree of risk accepted and the percentage of gains accruing to the investor. The collateral requirements for loaned securities, the indemnification of investors, the likely volume of lending available, and the revenue split vary from one program to another and should be carefully reviewed before a decision to participate is finalized.

Pension and Annuity Funds Status:

The Pension and Annuity Funds do not participate in a securities lending relationship.

Recommendation:

Based on the Pension and Annuity Funds' current size and investment structure, a securities lending program is not a viable option. However, as the Funds' assets grow, Meketa Investment Group will evaluate the appropriateness of a securities lending program.

Priority: Three

Crisis Response Plan

Periodically, crises arise that require immediate action. For example, a manager's investment team may depart unexpectedly, or a natural disaster may deny investment professionals access to necessary information. Meketa Investment Group believes the Pension and Annuity Funds' assets should never be left unattended.

To deal with such emergencies, we recommend that a crisis team be identified by the Board of Trustees in advance. The crisis team could consist of two members of the Board of Trustees, legal counsel(s), the administrative office, and Meketa Investment Group. The team would have the authority to take any necessary actions between meetings.

The team would be permitted to terminate a manager, to halt trading in a portfolio, to shift management responsibilities to another manager, or to take any other action necessary to protect the Pension and Annuity Funds.

Pension and Annuity Funds Status:

To our knowledge, the Pension and Annuity Funds do not currently have a formal contingency plan for investment-related emergencies.

Recommendation:

Meketa Investment Group recommends the formulation and adoption of a Crisis Response Plan that identifies the crisis team and makes the necessary authorizations for rapid actions.

Priority: One

Proxy Voting and Activism

The voting of proxies is important to the overall performance of a plan, and doing so is the fiduciary duty of the Committee. However, the Committee has the ability to delegate the responsibility of voting all proxies, either to a third-party proxy-voting service or to the Trust's investment managers.

Regardless of whom the Committee delegates the proxy voting to, the Committee should receive a full accounting of all proxy votes, and upon request, a written explanation of individual voting decisions. The Committee should review how their proxies were voted on at least an annual basis.

In addition, some plan sponsors have found it valuable to become activists with regard to their proxy voting. For example, by banding together with other like-minded investors, plan sponsors have placed greater attention on board independence, socially-conscious issues, and labor issues.

Pension and Annuity Funds Status:

The voting of proxies is currently the responsibility of the Funds' managers. We have requested the proxy voting policies of each manager.

Recommendation:

We recommend that the Funds formally delegate the voting of proxies and ensure that the Investment Policy Statement clearly outlines how the Trustees intend to do so. If the Trustees wish to continue delegating the voting of proxies to the Funds' managers, this should be clearly outlined in each manager's guidelines. Alternatively, the Trustees could conduct a search for a third-party proxy-voting service. The benefit of a third-party proxy-voting service is that they will provide an annual report of voting decisions with explanations.

Priority: Three

APPENDICES

Asset Class Considerations

Goals of Asset Allocation

The goal of distributing assets across different asset classes is to allow for the most efficient commitment of assets relative to Fund needs. Because different asset classes offer unique risk and return characteristics, combining asset classes allows for greater flexibility in achieving financial goals. Further, combining asset classes allows a Fund to reduce the risk level associated with a specific expected return through diversification.

Meketa Investment Group recommends an initial decision regarding gross allocation to equities and bonds, based on the Fund's return objective and risk tolerances. This decision accumulates all equity-like assets, including domestic equity, foreign equity, private equity, high yield bonds, and (equity) real estate. The fixed income allocation is a residual of the gross equity allocation.

Asset Class Definitions

Within the broad equity and fixed income asset types, Meketa Investment Group identifies asset classes as distinct, based primarily on three considerations. First among these is the expectation of "unique" return behavior relative to other classes. The primary measure of this "uniqueness," and hence the measure of usefulness as a diversifying element, is the historical and expected correlation of a particular asset class's return relative to other groups of assets. A second characteristic is the ability of an asset class to represent a potential long-term strategic allocation with a positive expected return; a true asset class should not be one that can only be utilized opportunistically like currencies or commodities. Finally, an asset class must offer a robust return experience that lends itself to reasonable assumptions regarding future behavior. While these characteristics provide guidelines for our identification of asset classes, not all asset groups meeting these criteria will automatically be included in a client's portfolio.

Based on the criteria described above, Meketa Investment Group considers the following primary asset classes:

- Cash equivalents
- Investment-grade bonds
- TIPS (inflation-indexed bonds)
- High yield bonds
- Real estate
- Public domestic equity
- Public foreign equity
- Private equity

Once the primary asset class allocation has been determined, the implementation of that decision may entail commitments to sub-sectors of the primary asset classes. The identification of sub-asset classes is driven by the ability to further refine expected risk and return behavior, the desire to fully diversify the exposure to any one asset class, and the recognition that opportunities for specialization exist within each primary asset class. This specialization by investment managers may improve the likelihood of receiving superior returns. For example, while growth and value-oriented investment styles are likely to produce similar returns over long time periods, managers tend to specialize in evaluating and investing in companies with either growth or value characteristics. Utilizing two specialist managers, each focusing on their area of expertise, may improve the likelihood of generating strong returns from the equity allocation, even though the aggregate equity position may not exhibit a style bias.

Risk and Return Expectations

Our expectations for future asset class returns are grounded in the current state of the world's capital markets and the historical relationships between asset classes. However, our expectations account for potential future economic environments that may not be evident from the recent past.

When we review historical returns, correlation relationships, and price volatility, we also consider other risks that are less quantifiable. For example, there exist political and currency risks associated with investing in foreign securities. In an uncertain world, investing a large share of a domestic fund internationally increases risk of loss due to political instability. There are no guarantees that individual countries will not collapse, and there are no guarantees that international friction will not result in U.S. investors' inability to access their foreign assets. Also, because benefits are payable in U.S. dollars, an investment in foreign currencies adds an element of uncertainty. These political and currency risks offset part of the statistical diversification benefits.

We revise our asset class risk, return, and correlation expectations annually. The table on the following page represents our current asset class expectations.

EXPECTED RETURNS AND RISKS OF MAJOR ASSET CLASSES

Asset Class / *Sub-Asset Class*	Expected Return	One Standard Deviation of Expected Annual Return	Two Standard Deviations of Expected Annual Return	Standard Deviation of Expected Annual Return
Cash Equivalents	3.4%	1.4 to 5.4%	-0.6% to 7.4%	2.0%
Short-Term Investment Grade Bonds	*3.9*	0.9 to 6.9	-2.1 to 9.9	*3.0*
TIPS	4.5	-1.0 to 10.0	-6.5 to 15.5	5.5
Investment Grade Bonds	5.0	0.0 to 10.0	-5.0 to 15.0	5.0
High Yield Bonds	7.2	-3.8 to 18.2	-14.8 to 29.2	11.0
Private Real Estate (Core)	6.8	-3.2 to 16.8	-13.2 to 26.8	10.0
Public Real Estate	7.2	-8.8 to 23.2	-24.8 to 39.2	16.0
Public Domestic Equity	8.8	-7.2 to 24.8	-23.2 to 40.8	16.0
Public Domestic Equity (Large)	*8.6*	-7.4 to 24.6	-23.4 to 40.6	*16.0*
Public Domestic Equity (Small)	*9.2*	-12.3 to 30.7	-33.8 to 52.2	*21.5*
Public Foreign Equity (Developed)	8.9	-9.1 to 26.9	-27.1 to 44.9	18.0
Public Foreign Equity (Emerging)	10.3	-13.7 to 34.3	-37.7 to 58.3	24.0
Private Equity	10.6	-13.4 to 34.6	-37.4 to 58.6	24.0
Hedge Funds	7.1	-1.4 to 15.5	-9.9 to 24.1	8.5
Public Real Estate	7.2	-8.8 to 23.2	-24.8 to 39.2	16.0

DIVERSIFICATION

RISK CONTROL AND DIVERSIFICATION

All capital markets are intrinsically volatile and risky. Historically, investors have controlled risk using the three "D"s: discipline, diligence and diversification. Since no other methods have been shown to reduce risk, we recommend that these form the basis of a Fund's risk control policy.

Discipline is necessary to avoid hasty judgments and expensive tactical reversals. Therefore, we recommend that all investment decisions be made within the framework of a carefully considered investment policy. A disciplined approach reduces the tendency to "time the markets," adopt investment fads, or terminate managers after a short interval of poor performance.

Diligence is necessary to prevent small problems from growing into big problems. We believe that Trustees should meet regularly to review every aspect of their Fund. Further, we recommend that Trustees (or an Investment Sub-Committee) conduct periodic inspection visits of the home offices of each investment professional serving the Fund. This level of diligence is costly, but is essential to protect the Fund and its beneficiaries.

Diligence also implies planning for unfavorable events before they occur. Therefore, we recommend developing a formal Crisis Response Plan, and implementing a Safety Reserve portfolio.

Diversification is the only mechanism for reducing event risk, i.e., the risk that any given investment will fail and lead to a loss. Therefore, we continue to recommend diversification in every dimension: across individual holdings, across asset types and classes, across investment strategies, and across time.

In order to ensure that the total loss of any investment cannot materially impact a Fund, we recommend that no individual investment ever be allowed to comprise more than 1% of the aggregate market value. Further, we recommend that allocations to specific industries and market arenas be controlled carefully.

We recommend diversification across investment managers and investment styles. Multiple investment managers bring multiple points of view, and multiple investment styles bring exposure to many different investment arenas.

There are many different stores of investment value. Therefore, we recommend diversification across many types of investment assets, including equities, debt and real estate, both domestic and foreign. We recommend investments in both public and private markets. Finally, we recommend investing across time. This means investments in both short-term and long-term assets, and investments in mature enterprises and as well as startups.

INDEX FUNDS

EQUITY INDEX FUNDS

Equity index funds and other passive equity strategies can be utilized to achieve very broad diversification with low management fees and low operating costs. For example, by owning an S&P 500 index fund, an investor can be assured that a portion of his assets will track the performance of the large capitalization segment of the domestic equity market cheaply and efficiently.

ACTIVE MANAGER RISK AND MARKET RISK

Index funds can protect an equity investor from many of the risks associated with active management. Firms that manage assets actively may accept large unintentional risks; for example, they may own a portfolio concentrated in exporting companies or in companies highly vulnerable to rising inflation. Unintentional risks may not be discovered until manager performance suffers and investors have experienced very poor returns.

Market risk is the risk that the market as a whole will rise or fall unpredictably. Index funds are designed to mirror the market, and are fully invested at all times. Thus, unlike an active manager, an index fund manager will not attempt to sell securities and raise cash in anticipation of a market downturn. Index funds rise and fall in lockstep with the market, and investors in index funds must be prepared for downside market volatility.

FEES AND COSTS

Compared to active managers, fees charged by index fund vendors are minimal, typically 10 basis points (0.1%) per year, or less. Since large index funds can benefit from economies of scale, management fees can fall as low as one or two basis points. This fee level contrasts sharply with active equity management fees, which typically range from forty to one hundred basis points per year. Typical transaction costs for index funds are also much lower.

RECOMMENDATION

Index funds covering different markets and different capitalization ranges are widely available, as are passive funds with growth and value biases. Because incremental costs are minimal, we usually recommend using two to three separate index funds in client portfolios. A typical choice might be an S&P 500 fund, an S&P MidCap fund, and an S&P SmallCap fund. Because these three funds are non-overlapping, the combination of the three provides efficient diversification across 1,500 names. By allocating monies among the funds, it is possible to achieve any desired overall capitalization structure.

REBALANCING

REBALANCING

Investors adopt long-term asset allocation targets in an effort to achieve specific investment goals. For example, historically, common stocks have provided strong returns in excess of monetary price inflation (i.e., real returns). Therefore, an investor may decide to allocate 65% of his portfolio to common stocks as a protection against possible inflation and in the hopes of earning superior returns. The same investor may allocate the remaining 35% to bonds and cash to provide stability and high current income.

If, after careful consideration, an investor concludes that approximately 65% of his portfolio must be invested in equity-like assets, then it becomes important to maintain an allocation to equities of about 65% most of the time. Allowing the equity allocation to stabilize below 65% could diminish the investor's prospects of outperforming inflation, while allowing the equity allocation to exceed 65% could result in an unacceptable level of volatility.

Markets, however, are not static, and equity markets in particular are volatile on a short-term and a long-term basis. For example, the S&P 500 index gained or lost at least 3% a week in sixteen of the fifty-two weeks between July 1, 1998 and June 30, 1999. Quarterly results are similarly volatile. In the twelve calendar quarters ending June 30, 1999, the S&P 500 gained or lost an average of 8% per quarter, with individual quarterly returns ranging from –10% to +21%.

Thus, regardless of what asset allocation an investor selects, ordinary market volatility will cause continual changes in allocations. Rebalancing is the process by which investors maintain pre-defined asset allocation ratios in response to market volatility.

IS REBALANCING NECESSARY?

Not all investors rebalance investments or attempt to control the drift in asset allocations. A passive asset allocation strategy in which asset class allocations are allowed to drift freely with market forces is known as a "buy-and-hold" strategy.

Different allocation strategies work best in different environments. A buy-and-hold strategy performs best when markets move in a single direction, for example, when equities steadily outperform bonds over a number of years. By contrast, rebalancing strategies perform best when the markets experience repeated reversals, that is, when equities sharply outperform, then sharply underperform bonds. The more frequent the changes in leadership, the greater the advantage for strategies that regularly rebalance allocations.

Most investors, however, consider active rebalancing necessary for risk control. If one asset class appreciates sharply relative to others, then that asset class will become an ever-increasing percentage of an investor's assets (i.e., overweighted compared to the target allocation). Allowing a substantial deviation from planned asset allocation levels is equivalent to betting that the overweighted asset class will continue to provide superior performance, while simultaneously betting that the underweighted asset classes will continue to underperform. For most investors, Meketa Investment Group recommends a carefully designed program of active rebalancing.

Avoiding Market Timing

Active rebalancing (i.e., maintaining prudent asset allocation levels) is not the same as market timing. Rebalancing is the adjustment of asset allocation levels *in response to* market induced changes. Market timing is the deliberate adjustment of asset allocation ratios *in anticipation of* a market shift. For example, a market timing investor who expects the equity market to decline may exchange common stocks for bonds or cash in advance of the anticipated equity decline. If the equity market does, in fact, decline, that investor's returns are improved. If, on the other hand, the equity market goes up, the investor's returns are degraded.

Dozens of academic studies of market timing strategies have been conducted over the past thirty years. Virtually without exception, these studies reveal that market timing does not work consistently. That is, investors are unable to correctly identify market shifts in advance with sufficient accuracy to recover the costs of the extra turnover and the losses associated with incorrect judgments.

Meketa Investment Group recommends strongly that investors avoid market-timing shifts in any form. Our recommendations for rebalancing strategies involve carefully controlled adjustments *in reaction to, not in anticipation of*, market movements.

When to Rebalance

Investors should decide when and how often to rebalance based in part upon the available resources. For example, if multiple index funds and a sophisticated custodian bank are available, it may be useful to establish an "automatic" rebalancing procedure. The custodian bank would be instructed to shift assets as necessary among index funds to maintain a predefined asset allocation, based upon market values. Properly implemented, this procedure can be extremely cheap and efficient.

Most investors will find, however, that rebalancing must be done manually. To prevent any attempt to "overcontrol" the asset allocation ratios with unnecessary, too frequent shifts, investors should establish target ranges for each asset class. For example, the target for common stocks might be set at 65%, +/-3%. With this range setting, no changes would be implemented unless the common stock allocation moved above 68% or below 62%.

Over short horizons, the market's movements can be nearly random. The market may appreciate several percent in a week, only to retreat several percent the next. Therefore, since the market may correct an asset allocation imbalance by itself, investors should feel no urgency to rebalance as soon as an asset allocation target range is exceeded by a small amount.

When an asset class is outside its allocation target range, Meketa Investment Group recommends rebalancing to the midpoint of the target range. Thus, if the target range for equities is 65%, +/-3%, and a fund's equity allocation rises to 69%, we would recommend a reduction in equities of 4% to 65%.

Size of Rebalancing Range

In general, wider target allocation ranges are superior to narrower target ranges for two main reasons. First, wider ranges require less frequent rebalancing, thus reducing associated transaction costs. Second, market trends tend to persist over time. Therefore, providing some room for market fluctuation before rebalancing can enhance returns.

Minimizing Rebalancing Costs

There are numerous means by which a multi-asset investment fund can be rebalanced, and depending upon the mechanism chosen, the effective cost of rebalancing adjustments can range from very little to substantial. As with most portfolio strategies, Meketa Investment Group recommends that investors seek the solution with the lowest operating cost.

Rebalancing shifts can be implemented with three generic strategies. In order of increasing transaction cost, these are: directing necessary cash flows, using index funds, and shifting actively managed assets. Rebalancing should not be viewed as a separate task, however, since many ordinary investment activities (e.g., implementing manager changes) provide an opportunity to accomplish a rebalancing objective at the same time.

Directing External Cash Flows

In our judgment, external cash flows (i.e., external contributions or withdrawals from investment assets) should *always* be used as a rebalancing tool. In this way, a necessary event (i.e., the cash flow) is made to serve two purposes at no additional cost. Cash should be used to return assets to an allocation target even if the assets remain within the target range.

The cheapest mechanism for effecting rebalancing moves is to direct external *positive* cash flows (i.e., new contributions) to underweighted asset classes. New monies purchase additional positions in the most underweighted assets. The operating cost of this type of rebalancing is essentially zero.

External *negative* cash flows (i.e., net withdrawals), on the other hand, pose a slightly more complex problem. If money must be withdrawn, there may be several potential sources of funds, each with a different associated operating cost. For example, if common stocks are overweighted when a net withdrawal is necessary, it may be possible to make the withdrawal from the cash reserves of active equity managers, or to make the withdrawal by liquidating positions in an equity index fund. Removing uninvested active manager cash appears attractive because the process does not involve buying or selling securities, thus avoiding the attendant brokerage and market effect costs. However, if most of an active manager's cash reserves are withdrawn, that manager's investment strategy may be altered, or the manager may decide to sell stocks to raise replacement reserves. Selling positions in an index fund, while not free, is generally much cheaper than causing active manager turnover.

If a withdrawal can be spread across several active managers such that the impact on any one manager's cash reserves is small, then we recommend that approach. If, on the other hand, a withdrawal would deplete a manager's cash reserves, then taking the money from an index fund (if one exists) is probably more efficient.

Redirecting Income

Virtually all portfolios generate at least some income (i.e., dividends, interest, or other corporate actions). Most investment managers deposit the income in their portfolios' cash reserve pools to be used as a source of investment funds.

A capable custodian bank, however, can "sweep" cash holdings from overweighted asset classes to underweighted asset classes. With this strategy, dividend and interest income serves the same low cost rebalancing purpose as net new contributions.

USING INDEX FUNDS

Occasionally it is necessary to effect a rebalancing by shifting assets actively from one asset type to another. For example, in a sustained bull market for common stocks, a fund's equity allocation may grow to the point where it is no longer seen as prudent. In such a case, it will be necessary to liquidate equities and buy bonds to restore balance.

Index funds offer an excellent, low-cost mechanism for rebalancing. Index fund managers are skilled at buying and selling securities at very low brokerage costs, and often with minimal market effects. Index fund managers sometimes swap securities with other investors, or use crossing networks to affect trades. Commingled index funds may have sufficient cash flow to provide cost-free rebalancing, in many cases.

A series of two to three equity index funds and a bond market index fund are particularly efficient for implementing rebalancing shifts. By shifting assets between one or more of the equity index funds and a bond index fund, an investor can maintain not only an overall equity/bond ratio, but a capitalization structure as well. Meketa Investment Group recommends this approach highly for larger investment funds.

USING ACTIVE MANAGERS

The most expensive mechanism for implementing rebalancing shifts is to instruct active investment managers to buy or sell securities. Without index funds, however, this may be the only vehicle available to an investor. We recommend that when it is necessary to use active managers to rebalance, the affected managers be permitted to make the changes over a reasonable time period to avoid hasty (and unnecessarily expensive) turnover.