# State of Minnesota Office of the State Auditor 



Rebecca Otto State Auditor

# LARGE PUBLIC PENSION PLAN INVESTMENT REPORT 

For the Year Ended December 31, 2008

## Description of the Office of the State Auditor

The mission of the Office of the State Auditor is to oversee local government finances for Minnesota taxpayers by helping to ensure financial integrity and accountability in local governmental financial activities.

Through financial, compliance, and special audits, the State Auditor oversees and ensures that local government funds are used for the purposes intended by law and that local governments hold themselves to the highest standards of financial accountability.

The State Auditor performs approximately 150 financial and compliance audits per year and has oversight responsibilities for over 3,300 local units of government throughout the state. The office currently maintains five divisions:

Audit Practice - conducts financial and legal compliance audits of local governments;
Government Information - collects and analyzes financial information for cities, towns, counties, and special districts;

Legal/Special Investigations - provides legal analysis and counsel to the Office and responds to outside inquiries about Minnesota local government law; as well as investigates allegations of misfeasance, malfeasance, and nonfeasance in local government;

Pension - monitors investment, financial, and actuarial reporting for approximately 730 public pension funds; and

Tax Increment Financing - promotes compliance and accountability in local governments’ use of tax increment financing through financial and compliance audits.

The State Auditor serves on the State Executive Council, State Board of Investment, Land Exchange Board, Public Employees Retirement Association Board, Minnesota Housing Finance Agency, and the Rural Finance Authority Board.

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# Large Public Pension Plan Investment Report 

## For the Year Ended December 31, 2008



January 14, 2010
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## Scope and Methodology

This report reviews the investment performance of Minnesota’s large public pension plans for the 2008 calendar year. These pension plans and the State Board of Investment held over $\$ 38$ billion in assets as of December 31, 2008, and represent the retirement savings of hundreds of thousands of public employees.

The six individual large public pension plans included in this report are the Bloomington Fire Department Relief Association, the Duluth Teachers’ Retirement Fund Association, the Minneapolis Employees Retirement Fund (MERF), the Minneapolis Firefighters' Relief Association, the Minneapolis Police Relief Association, and the St. Paul Teachers’ Retirement Fund Association. The State Board of Investment (SBI), which is referenced frequently, is not a pension plan, but invests the assets of certain public employee pension plans administered by the Minnesota State Retirement System, the Public Employees Retirement Association, and the Teachers Retirement Association.

The pension plans are required under Minnesota Statutes, section 356.219, to annually report investment information to the Office of the State Auditor, and the State Auditor is required to provide a report to the legislature on the investment performance of these plans. One way to measure investment performance is to calculate a rate of return which can then be used to compare a plan against a benchmark or against other plans. The methodologies used by each of the large plans to calculate rates of return may vary from one another and from the methodology used by the Office of the State Auditor. To obtain analogous comparisons of investment performance, the Office of the State Auditor calculates rates of return using a uniform calculation method. ${ }^{1}$ Using a uniform calculation method allows for a fair comparison of performance among plans.

Oversight of these pension plans is important to safeguard the pensions of public employees and to control local and state liabilities. This report informs lawmakers of the large plans' investment performance, educates fiduciaries and members of the plans, and provides transparency to the public.

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## Executive Summary

- During 2008, rates of return for the large plans ranged from negative 35.1 percent (Duluth Teachers’) to negative 25.2 percent (Bloomington Fire). None of the plans were able to meet their respective benchmarks. (Pages 7 through 16)
- All of the large plans ended 2008 with funding ratios below 100 percent. Saint Paul Teachers’ was the only plan that experienced an increase in its funding ratio, which may be due to several statutory assumption changes enacted in recent years. Bloomington Fire dropped below full funding for the first time since 2002. Funding ratios for the large plans ranged from 64.1 percent (Minneapolis Police) to 91.3 percent (Bloomington Fire). (Pages 17 and 18)
- The ten-year period from January 1999 through December 2008 began and ended during economic downturns. None of the large plans were able to meet their actuarial assumed rates of return over this period, although most of the plans were able to keep up with or exceed market returns. The State Board of Investment's Income Share Account provides an example of a rate of return that was available over this ten-year period. The Income Share Account is a balanced fund that returned 1.8 percent for the period. All but two of the large plans (Bloomington Fire and Minneapolis Police) exceeded this return. The best-performing plans over the ten-year period were Duluth Teachers' and St. Paul Teachers', which earned 2.6 percent and 3.6 percent, respectively. The SBI’s Basic Fund returned 3.0 percent for the period while the Post Fund returned 2.7 percent. (Pages 21 and 22)
- The plans with the lowest rates of return for the ten-year period were Bloomington Fire and Minneapolis Police, with returns of 0.6 percent and 1.4 percent, respectively. Bloomington Fire had the highest large-plan rate of return for 2008, however, and had invested a significant portion of its portfolio in SBI funds with a long-term record of good performance. (Pages 21 and 22)


## Recommendations

The State Auditor provides the following recommendations based on a review of the large plans' reporting information:

- Investment policies should be updated to reflect the investment strategy of the plan. Some plans are investing in asset classes that aren't currently reflected in their investment policies. In addition, many new investments and asset classes are becoming available for investment, and plan trustees must ensure their policies reflect any new investments or allocation changes. Plan trustees should understand the potential risks and rewards of these newer investments, and determine if they will play a role in the long-term investment strategy of the plan.
- The investment policy should be crafted and maintained with a long-term investment perspective in mind. Asset allocations expressed in the investment policy should be closely followed by the plans as part of a long-term investment strategy. Even as markets fluctuate, asset allocations should remain consistent with the policy.
- Trustees should understand their fund managers’ investment strategies, monitor the performance of their active fund managers, and hold managers accountable for the performance of the assets being managed. Passively-managed funds and market indices serve as useful comparison tools for fund performance.


## Understanding Investment Performance Terms

## Asset Allocation

Asset allocation describes the practice of distributing the assets of a portfolio among different types of investment assets, such as stocks, bonds, cash, and real estate. By diversifying an asset base, the goal is to create a favorable risk/reward ratio for a portfolio. When one asset class declines, the expectation is another will increase and offset the loss.

## Passive Investment Strategy

Passive investment strategy or passive management is more commonly called indexing. Indexing is an investment management approach based on investing in exactly the same securities, in the same proportions, as an index. The management style is considered passive because portfolio managers do not make decisions about which securities to buy and sell. Instead, managers simply copy the index by purchasing the same securities included in a particular stock or bond market index.

## Active Investment Strategy

Active investment strategy or active management is an attempt to "beat" the market as measured by a particular benchmark or index. The aim of active fund management is to outperform, after fees are paid, the index that a particular fund is benchmarked against. Prevailing market trends, the economy, political and other current events, and companyspecific factors (such as earnings growth) all affect an active manager's decisions. Active investing often has higher costs than passive investing. These extra expenses may reduce any extra gains an active manager might earn.

## Enhanced Indexing Investment Strategy

Enhanced indexing investment strategy or enhanced indexing is a hybrid strategy used by many of the large plans. Enhanced indexing combines both passive and active investment strategies and attempts to generate rates of return that are slightly higher than that of an index fund or other passive management techniques.

## Benchmark

A benchmark is an index to which a plan compares its investments. Market benchmarks are used by individual investors, portfolio managers, and market researchers to determine how a particular market or market sector performs. Investors look to broad indices as benchmarks to help them gauge not only how well the markets are performing, but also how well they are performing as investors.

## Why Benchmarks are Important

Measuring investment returns against an appropriate benchmark encourages prudent investment decisions and gives trustees a fair depiction of how a plan's investments are performing.

The key to establishing the most accurate benchmark for a portfolio is determining which indices best track investments similar to the holdings in the portfolio. An ideal benchmark return would consist of a hypothetical portfolio of indices, invested in the same asset classes and in the same proportion as the actual holdings of the entire portfolio. Indices track different asset classes, such as domestic equity or bonds. An index may also track subsets of an asset class, such as small-capitalization growth domestic equity. Although benchmark indices are not directly available for investment purposes, mutual and collective index funds can be obtained which hold the same securities as the index. Known as "index funds," these funds are managed with a passive style. Figure 1 below compares the 2008 rates of return and benchmark returns for the large plans and the State Board of Investment (SBI).

Figure 1: 2008 Rates of Return and Benchmark Return


## 2008 Performance Analysis

The year 2008 was turbulent for investments as the United States experienced what may have been the worst economic downturn since the Great Depression. ${ }^{2}$ Domestic equity markets, measured by the Russell 3000 Index, steadily declined in 2008, reaching an 11year low in November. The largest losses occurred in the fourth quarter in the wake of the financial crisis during the fall of 2008. Several indicators further substantiated that the economy was in the midst of a recession. The unemployment rate steadily increased throughout the year, reaching 7.2 percent by the end of 2008 , the highest level in 16 years. The housing market continued to weaken as foreclosures totaled roughly 1.0 million for the year, a 63.0 percent increase from the prior year. To make matters worse, existing home values decreased 10.6 percent in 2008. Inventory continued to build as existing home sales decreased by 15.0 percent from 2007. Corporate profits also took a step back in 2008. By the fourth quarter of 2008, pre-tax corporate profits had fallen to their lowest levels since 2004.

Domestic equities incurred sizable losses during 2008, just one year removed from historic highs. Domestic equities, as measured by the Russell 3000 Index, returned negative 37.3 percent for 2008. The losses surpassed those experienced during 2001 and 2002.

International equities were the worst performing asset class in 2008, returning negative 45.5 percent as measured by the Morgan Stanley Capital International (MSCI) AllCountry World Index excluding the United States (ACWI ex. U.S.). This index measures the performance of both developed and emerging markets.

Domestic bonds proved to be one of the safest asset classes during 2008, returning 5.2 percent as measured by the Barclays Capital Aggregate Index. The economic downturn did not have a significant effect on the returns of bonds or cash equivalent assets.

## Bloomington Fire Department Relief Association

The Bloomington Fire Department Relief Association returned negative 25.2 percent in 2008, as calculated by the Office of the State Auditor. Bloomington Fire did not meet its benchmark return of negative 24.2 percent, although the benchmark did not fully represent the plan's holdings because the benchmark had no allocations to international equities or cash.

[^1]Bloomington Fire's investment policy allocates 70.0 percent to stocks and 30.0 percent to bonds. The plan's actual allocation for 2008 consisted of 40.3 percent domestic stock, 10.4 percent international stock, 16.8 percent bonds, and 32.5 percent cash. International securities and cash made up 42.9 percent of the plan's total portfolio in 2008.

At the end of 2008, over 87 percent of Bloomington Fire's total assets were held in the State Board of Investment (SBI)'s Supplemental Fund. At year-end, 34.5 percent of the plan's assets with the SBI were invested in the Common Stock Index Account, 26.9 percent in the Money Market Account, 8.4 percent in the Growth Share Account, 11.1 percent in the International Share Account, and 19.1 percent in the Bond Market Account.

The Common Stock Account is a Russell 3000 Index fund that returned negative 36.8 percent for the year. In June 2008, Bloomington Fire began investing some of its assets in the Money Market and Growth Share Accounts. The Money Market Account returned 1.4 percent while the Growth Share Account returned negative 36.5 percent. The Growth Share Account is an actively-managed domestic equity account that exceeded its Russell 3000 Index benchmark. The International Share Account, consisting of active, semipassive, and passive managers, returned negative 45.3 percent for the year. The account is compared to a composite index that returned negative 45.5 percent. The Bond Market Account, an actively-managed account, returned negative 4.1 percent in 2008 and missed its benchmark Barclays Capital Aggregate Index return of 5.2 percent.

In February 2008, Bloomington Fire opened an account with Wachovia Securities. This account, with 6.9 percent of the plan's assets, is invested in cash, individual stocks, fixedincome, and mutual funds. It returned negative 51.0 percent in 2008, although this return was affected by the timing of large receipts that occurred when the account was opened.

Bloomington Fire also held investments in two internally-managed accounts. One of the internally-managed accounts was closed in the first quarter of 2008. The account had a negative 4.4 percent return for 2008, but had an average annual return of 5.4 percent for the 24 months that the account was open. The remaining internally-managed account held just over five percent of the plan's assets, and was entirely invested in short-term cash investments. The account returned 1.3 percent for 2008.

## Duluth Teachers' Retirement Fund Association

The Duluth Teachers' Retirement Fund Association returned negative 35.1 percent in 2008, well below its benchmark return of negative 24.9 percent. Real estate was the only asset class for Duluth Teachers' that met or exceeded its respective benchmark for the year.

Duluth Teachers' domestic equity portfolio returned negative 45.1 percent for the year, unable to reach its benchmark U.S. Equity Custom Index return of negative 36.1 percent. The largest equity manager in the domestic equity portfolio is Met West, holding 21.0
percent of the plan's total assets. The Met West fund invests in large-capitalization stocks through an enhanced S\&P 500 Index fund. The goal of this fund is to return onehalf to one percent higher than the S\&P 500 Index. Met West returned negative 50.1 percent in 2008, falling well short of the benchmark S\&P 500 Index return of negative 37.0 percent. The small-capitalization growth portfolio of the asset class is managed by Disciplined Growth Investors, which held 14.3 percent of Duluth Teachers’ total assets at the end of 2008. This fund returned negative 41.4 percent in 2008 compared to a negative 38.5 percent return from the Russell 2000 Growth Index benchmark. The small- and mid-capitalization portfolio, comprising 9.6 percent of the plan's total assets, is managed by Wellington. The Wellington fund returned negative 37.6 percent in 2008, while its Russell 2500 Value Index benchmark provided a negative 32.0 percent return.

Duluth Teachers' allocates 23.0 percent of its investment policy to fixed-income investments. The fixed-income portfolio held 30.9 percent of the plan's total assets at the end of 2008. The fixed-income investments were managed by Western Asset, which returned negative 6.1 percent for the year. The fund lagged far behind the 5.2 percent benchmark return set by the Barclays Capital Aggregate Index.

The plan's international equities were managed by Artio Global Investors. International investments made up 13.1 percent of Duluth Teachers' total assets at the end of the year. The fund had a poor showing in 2008, with a negative 44.4 percent return, slightly lower than the benchmark MSCI Europe, Asia, and the Far East (EAFE) Index return of negative 43.4 percent. The fund may have exposure to emerging markets, however, which is not reflected by the MSCI EAFE Index.

Duluth Teachers’ investments in commodities and real estate combined to total 5.1 percent of the plan's total assets at the end of 2008. Duluth Teachers' had real asset investments held with Wellington Management Company. The plan's investments in commodities performed poorly during 2008, returning negative 45.3 percent. A custom index was used as the benchmark for commodities, which returned a negative 31.7 percent. Duluth Teachers' real estate investments make up less than one percent of the plan's total assets. These investments performed well in 2008, returning 12.8 percent for the year. The plan's real estate investment return compared favorably to the benchmark National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index return of negative 6.5 percent. During 2008, a property in Duluth Teachers’ real estate portfolio was refinanced with an outside party. As a result of the refinancing, Duluth Teachers' investment of nearly $\$ 1$ million was paid back in full. The plan's remaining real estate investments consist of the buildings which house the plan's offices. Rental income from the buildings is included by Duluth Teachers' in the calculation of the investment return for real estate, which may have contributed to the strong return of the asset class for 2008.

The plan's private equity funds are held by HarborVest Partners and Piper Jaffray. Private equity consists of equity securities in operating companies that are not publicly traded on a stock exchange. Nearly $\$ 4.4$ million was added to this investment class by Duluth Teachers' in 2008, which brought the plan closer to the 5.0 percent targeted
allocation for private equity in its investment policy. About 4.6 percent of the plan's assets were invested in private equity at the end of the year. The private equity investments returned negative 25.9 percent in 2008.

## Minneapolis Employees Retirement Fund

The Minneapolis Employees Retirement Fund (MERF) transferred its assets to the State Board of Investment (SBI) in the fall of 2008. Due to this transition, only limited comparison data is available for MERF for 2008. The total fund rate of return provided for MERF was negative 28.1 percent for 2008, below the plan's benchmark return of negative 27.3 percent.

Policy asset allocation targets for MERF were revised near the end of 2008, after the transfer of assets to the SBI. The new allocation targets for MERF are 49.0 percent to domestic equities, 21.0 percent to international equities, 29.0 percent to fixed-income investments, and 1.0 percent to cash. At the end of 2008, MERF's domestic equity portfolio fell below its target allocation, with just 41.5 percent of the total assets. International equity investments were close to the new policy target, making up 19.8 percent of the plan's assets. MERF's total fund consisted of fixed-income investments totaling 36.2 percent of the assets, which was above its target allocation. The deviation between target and actual asset allocations was likely due to market losses for domestic and international equities. MERF's total fund held 2.5 percent in cash investments at the end of 2008.

MERF's domestic equity investments returned negative 36.8 percent in 2008, while its benchmark, the Russell 3000 Index, returned negative 37.3 percent. The international equity portfolio provided a return of negative 44.2 percent for the year. The portfolio's return was slightly higher than the benchmark MSCI ACW Index ex. U.S. return of negative 45.2 percent. MERF's global equities returned negative 21.5 percent through the first three quarters of 2008, compared to a negative 25.6 percent benchmark return from the MSCI ACW Index. MERF's global equity investments were transitioned to domestic and international pools after the transfer to the SBI.

The fixed-income portfolio returned negative 5.1 percent for MERF in 2008. While MERF had used a custom fixed-income benchmark for the first three quarters of the year, the Barclays Capital Aggregate Index was used in the fourth quarter for the SBI investments. The Barclays Capital Aggregate Index provided an annual benchmark return of 5.2 percent for 2008. During the first three quarters of 2008, real estate investments returned negative 1.0 percent for MERF. The Wilshire REIT Index provided a 1.0 percent benchmark return for the same period. After the transfer of assets to the SBI, MERF's real estate investments were either liquidated or accounted for in the fixedincome pool.

The Deposit Accumulation Fund (DAF), which holds the remaining active members' assets, is not included in the calculation of MERF's asset allocations or total fund return.

The DAF is invested in short-term cash equivalents and returned 0.4 percent during the fourth quarter of 2008. Returns for this fund were not available for the first three quarters of the year.

## Minneapolis Firefighters' Relief Association

The Minneapolis Firefighters’ Relief Association returned negative 28.7 percent in 2008, as calculated by the Office of the State Auditor. The 2008 return fell short of the plan's benchmark of negative 24.7 percent. Large losses experienced in the equity markets affected the 2008 asset allocation for Minneapolis Fire. Domestic equity holdings, as a percentage of the total portfolio, fell by 8.1 percent from 2007 and international equity decreased by 4.2 percent. The allocation to bonds, which performed relatively well compared to equity in 2008, increased by 9.5 percent from 2007.

Ivy Global Natural Resources, the top performing fund in 2007, had a loss in 2008 of negative 61.3 percent, the largest percentage loss in 2008 . The fund was well off its DOW AIG Commodity Index benchmark of negative 35.7 percent. All other balanced funds held by Minneapolis Fire also experienced significant losses in 2008. The rates of return ranged from negative 26.9 percent (New Century Capital) to negative 16.0 percent (Mairs \& Power). With the exception of the Ivy Global fund, the balanced funds for Minneapolis Fire outperformed the pure equity funds, both domestic and international.

Domestic equity made up the largest percentage of Minneapolis Fire's total portfolio. For 2008, domestic equity returned negative 39.0 percent compared to its S\&P 500 Index benchmark of negative 37.0 percent. The domestic equity holdings of Minneapolis Fire are comprised of four separate fund managers. Knelman Asset Management, a new manager for Minneapolis Fire in 2008, returned negative 38.6 percent compared to its Russell 1000 Growth Index benchmark return of negative 38.4 percent. Knelman targets large-capitalization stocks that have above-average earnings. Marque Millenium focuses on large-capitalization stocks that are undervalued or trading at a discount. It returned negative 39.2 percent for 2008, below its Russell 1000 Value Index benchmark return of negative 36.9 percent. White Pine Capital, a small-capitalization growth manager, returned negative 40.1 percent which was slightly below its Russell 2000 Growth Index benchmark return of negative 38.5 percent. The final domestic equity manager is the State Board of Investment (SBI) Common Stock Index Account, which attempts to replicate the returns of the Russell 3000 Index. The Common Stock Index Account returned negative 36.8 percent, just above the Russell 3000 Index return of negative 37.3 percent.

Fixed-income returned negative 5.0 percent compared to its Barclays Capital Aggregate Index benchmark return of 5.2 percent. The negative return was driven by the Post Advisory Group, a high-yield bond fund, which returned negative 28.7 percent in 2008. The three remaining fixed-income funds are all aggregate bond funds that track the Barclays Capital Aggregate Index as a benchmark. The rates of return for the aggregate
bond funds ranged from negative 4.6 percent (SBI Bond Market Account) to 6.1 percent (Riversource Investments).

International equity experienced the largest percentage of losses among all asset classes in 2008. The international equity portfolio of Minneapolis Fire returned negative 43.6 percent compared to its MSCI EAFE Index benchmark return of negative 43.4 percent. The international equity portfolio is comprised of funds managed by Dodge \& Cox and Manning \& Napier. The Dodge \& Cox fund returned negative 46.7 percent while Manning \& Napier returned negative 41.4 percent. Both of these funds track the MSCI EAFE Index as a benchmark. International equity made up 18.8 percent of the plan's total portfolio.

## Minneapolis Police Relief Association

The Minneapolis Police Relief Association returned negative 29.5 percent in 2008, as calculated by the Office of the State Auditor, falling short of its benchmark return of negative 26.2 percent. Poor returns in domestic equities, international equities, and global equities all contributed to the plan's low return.

Minneapolis Police's domestic equity investments returned negative 36.3 percent in 2008, while the Wilshire 5000 Index provided a benchmark return of negative 37.2 percent for the asset class. The Grantham, Mayo, Van Otterloo fund was closed in August of 2008, leaving the SBI Common Stock Index Account as the lone component of the domestic equity portfolio at the end of the year. The SBI Common Stock Index Account, a Russell 3000 Index fund, returned negative 37.0 percent in 2008. Minneapolis Police had additional domestic equity market exposure through a new account managed by Leuthold Weeden. Opened in July 2008, the fund consists primarily of domestic stock investments, while also containing a mixture of allocations to international stocks, bonds, money market instruments, and alternative investments. The Leuthold Weeden fund returned negative 29.1 percent during the final six months of 2008.

The fixed-income portfolio for Minneapolis Police returned negative 7.0 percent in 2008, missing the positive 5.2 percent return of the Barclays Capital Aggregate Index benchmark by a wide margin. The SBI Bond Market Account is the primary component of the portfolio, comprising nearly forty percent of the fixed-income investments at the end of the year. The SBI account returned negative 4.3 percent in 2008. The Galliard Capital Management fund, which provided the best return of the asset class, returned negative 0.5 percent for the year. Two of Minneapolis Police's fixed-income accounts held investments in high-yield bonds, which are not tracked by the Barclays Capital Aggregate Index. These two accounts, Loomis Sayles and Western, fared far worse than the rest of the fixed-income portfolio. Loomis Sayles had a return of negative 17.9 percent in 2008, and Western returned negative 15.4 percent for the year.

International equity investments returned negative 43.5 percent in 2008, which exceeded the benchmark MSCI ACW Index ex. U.S. return of negative 45.5 percent. Minneapolis Police transferred $\$ 26.0$ million from its SBI Common Stock Index Account to its SBI International Share Account in January 2008. The SBI International Share Account had a poor showing in 2008, however, returning negative 45.3 percent, and resulted in almost $\$ 25.7$ million in investment losses. The Mercator account performed slightly better during 2008, as it returned negative 36.7 percent compared to its negative 43.4 percent MSCI EAFE Index benchmark return. At the end of 2008, Minneapolis Police held 16.7 percent of its total assets in international equity investments, the poorest-performing asset class for the year.

Minneapolis Police's global investments also struggled in 2008. The New Perspective Fund, held by Capital Research and Management, returned negative 37.8 percent for the year. The fund fared better than the negative 42.2 percent benchmark return provided by the MSCI ACW Index. The Mellon Global Alpha Fund I failed to meet expectations in 2008, returning negative 35.9 percent. The fund was far from reaching its custom benchmark return of negative 22.4 percent, which is comprised of 60.0 percent from the MSCI World Index and 40.0 percent from the Citigroup World Government Bond Index.

Prudential PRISA, a real estate account, returned negative 14.1 percent for the year. Minneapolis Police's real estate investments failed to attain the negative 10.7 percent benchmark return provided by the NCREIF Open-End Diversified Core. Minneapolis Police continued to provide funding to its real estate portfolio by investing an additional $\$ 5.0$ million during 2008. The real estate asset class made up 4.5 percent of Minneapolis Police's total assets at the end of the year.

## St. Paul Teachers' Retirement Fund Association

The St. Paul Teachers’ Retirement Fund Association returned negative 28.2 percent in 2008, as calculated by the Office of the State Auditor, falling short of its benchmark return of negative 27.6 percent. The large losses caused a shift in the plan's asset allocation from the prior year. Both domestic and international equity holdings declined in 2008, as a percentage of the total portfolio. Fixed-income, the only investment type to have a positive return in 2008, increased as a percentage of the total portfolio. As a result of the market losses, domestic and international equity allocations are slightly below the investment policy allocations and fixed-income allocations exceed those set in the policy.

Domestic equity returned negative 37.0 percent for 2008 , matching the S\&P 500 Index benchmark return. The large-capitalization funds for St. Paul Teachers’ included BGI (S\&P 500 Index fund), Barrow \& Hanley (Value), and Fifth Third Asset Management (Growth). The funds returned negative 36.9 percent, negative 35.6 percent, and negative 34.4 percent, respectively. All of the large-capitalization equity funds outperformed their respective benchmarks. The mid-capitalization fund managed by BGI returned negative 38.4 percent, which exceeded its benchmark rate of return. The mid-capitalization fund managed by Wellington returned negative 46.9 percent, which fell short of its
benchmarks. Small-capitalization returns ranged from negative 37.7 percent to negative 33.6 percent. The Russell 2000 Index, which measures the performance of smallcapitalization U.S. equities, returned negative 33.8 percent for 2008.

Saint Paul Teachers' fixed-income performed below its benchmark for 2008. The plan's fixed-income portfolio returned 0.3 percent compared to the Barclays Capital Aggregate Index return of 5.2 percent. The below-market returns were the result of poor performance from the Voyageur actively-managed fund. The Voyageur fund, which uses the Barclays Capital Aggregate Index as a benchmark, returned negative 5.6 percent. Saint Paul Teachers’ fixed-income portfolio also includes a passively-managed fund. This fund returned 5.9 percent in 2008, exceeding its benchmark return of 5.7 percent.

International equity returned negative 39.6 percent in 2008. The international equity portfolio consisted of developed markets and emerging markets. Developed markets consist of countries such as Germany, Japan, and the United Kingdom. Emerging markets include countries such as Brazil, China, and Mexico. Saint Paul Teachers' international equity portfolio is comprised of 86.3 percent developed markets and 13.7 percent emerging markets. The developed market funds, managed by JP Morgan and Morgan Stanley, returned negative 42.0 percent and negative 32.8 percent, respectively. The MSCI EAFE Index, the benchmark for developed market international equity, returned negative 43.4 percent. The emerging markets fund managed by Capital International returned negative 49.5 percent, exceeding its MSCI Emerging Markets Index benchmark return of negative 53.2 percent.

The real estate holdings for St. Paul Teachers’ returned negative 12.5 percent in 2008, compared to its NCREIF Property Index benchmark return of negative 6.5 percent. The real estate holdings managed by Advantus returned negative 35.7 percent, which contributed to the below-market returns for the total portfolio. The holdings managed by UBS returned negative 8.4 percent for 2008.

Alternative investments, managed by RWI private equity, returned negative 30.2 percent, as calculated by the Office of the State Auditor. These investments are illiquid, and as such, are difficult to value and typically have no benchmark.

Saint Paul Teachers' cash portfolio returned negative 41.0 percent in 2008. Saint Paul Teachers' includes the Clifton Group cash overlay account in its cash portfolio. The return is affected by this account, which overlays equity returns on cash. Some of the cash portfolio return is also impacted by securities lending income, which is included in the rate of return.

## State Board of Investment

The State Board of Investment (SBI)'s Basic Fund returned negative 26.1 percent in 2008, while the Post Fund returned negative 26.2 percent. Both funds missed their benchmarks, which were negative 25.0 percent and negative 24.1 percent, respectively.

The Basic Fund holds assets for the active members of the three state-wide retirement systems. The Post Fund holds assets for the retired members of these three systems. The differing returns for the Basic and Post Fund result from their differing asset allocations. The Basic Fund has a higher allocation to alternative assets than the Post Fund, with less assets allocated to bonds and cash. The assets of both funds are invested together in a combined fund, which is the basis for the investment performance discussion provided in this section.

The SBI's domestic equity portfolio returned negative 38.1 percent in 2008. The portfolio did not reach the benchmark Russell 3000 Index return of negative 37.3 percent. The actively-managed portion, holding nearly one-quarter of the portfolio's assets, underperformed the market in 2008 and was the lowest return of the portfolio. The aggregate return for active managers was negative 40.5 percent, falling well short of the custom benchmark return of negative 36.9 percent. The passively-managed portion, tracking the Russell 3000 Index, comprised 39.6 percent of the domestic equity portfolio. The fund returned negative 37.1 percent for the year, while the Russell 3000 Index provided a negative 37.3 percent return. An additional above-market return for the domestic equity portfolio came from the semi-passively managed segment. The semipassive investments returned negative 37.2 percent, which was slightly higher than the benchmark Russell 1000 Index return of negative 37.6 percent. The three semi-passive managers combined to hold 35.7 percent of the portfolio’s assets at the end of 2008.

The bond portfolio of the SBI returned negative 4.2 percent for the year, failing to reach the 5.2 percent benchmark return of the Barclays Capital Aggregate Index. None of the eight individual bond managers were able to provide a return that reached the benchmark, with only the actively-managed Dodge \& Cox fund providing a positive return at 0.1 percent. The active managers dragged down the portfolio's overall return by returning negative 7.3 percent, while the semi-passively managed portion posted a return of negative 1.4 percent in 2008. The allocation of funds between active and semi-passive bond managers was nearly an even split at the end of 2008.

The SBI's international equity portfolio returned negative 45.3 percent in 2008, providing the lowest return of all the asset classes. While international investments performed poorly during the year, the portfolio performed slightly better than its benchmark MSCI ACW Index ex. U.S. return of negative 45.5 percent. Active emerging-market managers returned the lowest percentage in 2008 at negative 53.0 percent, slightly higher than the negative 53.2 percent custom benchmark return. Active developed-market managers had the best return of the portfolio at negative 42.8 percent, exceeding the negative 43.5 percent benchmark. The largest portion of the international equity portfolio is invested in passive developed-market investments managed by State Street, which held 42.7 percent of the portfolio's funds at the end of 2008 . The passive fund returned negative 43.4 percent during the year. The three semi-passive developed managers combined to return negative 44.4 percent in 2008. The passive and semi-passive managers were both measured against a custom benchmark return of negative 43.5 percent.

The SBI's alternative investments had a positive showing in 2008, returning 1.4 percent. The actual rate of return is also used as the benchmark for this asset class. The majority of the portfolio is allocated to private equity, which comprises 53.4 percent of alternative investments. Assets are also held in yield-oriented investments, resource investments, and real estate.

Figure 2 below shows the 2008 rates of return for the large plans and the State Board of Investment (SBI).

Figure 2: 2008 Rates of Return


## Funding Ratios

Funding ratios show the relationship between a plan's assets and its liabilities. An actuary uses statutory assumptions based on historical data to calculate the plan's liability. Examining the ratio between assets and liabilities can help determine how wellfunded the plan is, whether additional contributions to the plan will be needed, and whether future benefit increases can be afforded. Investment returns, contributions, actuarial assumptions, plan provisions, and historical funding issues can all have a direct influence on the financial health of the plan.

Bloomington Fire suffered the largest drop in its funding ratio of any of the large plans in 2008, plummeting 39.7 percent from the prior year. Despite the significant decline, Bloomington Fire remained the highest-funded plan, at 91.3 percent. For the first time since 2002, the plan was not fully funded. Because the funding ratio for Bloomington Fire is not smoothed, it is subject to greater volatility than the other large plans.

Duluth Teachers' funding ratio dipped 4.7 percent during 2008. The plan’s funding level for the year was 82.1 percent. At the end of 2008, Duluth Teachers’ reached its highest actuarial accrued unfunded liability amount over the past ten years, at $\$ 65.0$ million.

MERF's funding level closed 2008 at 76.0 percent, a 10.0 percent decline from the previous year. MERF experienced the highest dollar increase in its actuarial accrued unfunded liability of any of the plans, surpassing its 2007 liability amount by $\$ 147.5$ million.

Minneapolis Fire’s funding ratio fell by 8.1 percent during 2008. Although the plan’s actuarial accrued unfunded liability more than doubled during 2008, Minneapolis Fire's 84.7 percent funding ratio was the second-highest of the large plans.

Minneapolis Police ended the year with the lowest funding ratio of the large plans, at just 64.1 percent. The plan's funding ratio decreased by 23.8 percent from the prior year. Minneapolis Police saw its 2008 funding ratio fall to its lowest level over the past ten years.

Saint Paul Teachers’ was the only plan to see a rise in its funding ratio during 2008, experiencing a 2.1 percent increase. The plan closed the year at 75.1 percent funded and benefited from a $\$ 19.5$ million drop in its actuarial accrued unfunded liability. The funding ratio for St. Paul Teachers' may have benefited from several statutory changes that were adopted during the past few years, including a change to the plan's amortization period for unfunded actuarial accrued liabilities.

Figure 3 on the next page illustrates the 2008 fiscal year funded ratios for the large plans.

Figure 3: Fiscal Year 2008 Funded Ratio Percentage


## Administrative Expenses

Pension plans are permitted by Minnesota law to pay certain administrative expenses. These expenses include items such as staff salaries, legal fees, professional services (including audit and actuarial fees), and other expenses such as travel, postage, and printing. These administrative expenses affect funding ratios and contribution rates since they are paid directly out of the pension plan's assets. It is important to limit expenses to those that are necessary and reasonable, while still maintaining a well-managed pension plan.

Minneapolis Fire had the highest total administrative expenses of the large plans in 2008. The plan spent $\$ 692,982$ in expenses for the year, a 19.1 increase from 2007. St. Paul Teachers' followed closely with a $\$ 691,157$ expense total for the year. St. Paul Teachers' was the only plan whose administrative expense total decreased for 2008. MERF totaled $\$ 690,456$ in administrative expenses for 2008, a 3.8 percent increase from its 2007 total.

Bloomington Fire had the lowest total administrative expenses of the plans, at $\$ 107,871$. The plan saw the highest percentage increase in its expenses, however, with a 44.4 percent increase from the prior year. Duluth Teachers’ spent $\$ 487,944$ for expenses in 2008, while Minneapolis Police totaled $\$ 578,932$ in administrative expenses for the year.

On a per-member basis, Minneapolis Fire and Minneapolis Police had the highest administrative expense figures, at $\$ 1,175$ and $\$ 673$, respectively. It's important to note that both of these plans are closed to new members and their total membership is slowly declining. Therefore, administrative expenses are continually allocated to fewer
members each year. Other than the closed plans, Bloomington Fire had the highest permember expense total of the plans, spending $\$ 351$ per member. Duluth Teachers' and MERF totaled $\$ 145$ and $\$ 138$ per member, respectively. Saint Paul Teachers' had the lowest total administrative expenses on a per-member basis, at just $\$ 69$. Figure 4 below shows the per-member administrative expense amounts for the large plans for each of the past five years.

Figure 4: Administrative Expenses per Member (2004-2008)


Legal fees, one type of administrative expense, were significantly higher for Minneapolis Fire and Minneapolis Police than for the other large plans. Both plans have been involved in ongoing litigation, which has had an impact on their legal fees. Legal fees accounted for 28.6 percent of Minneapolis Fire's total administrative expenses and 22.0 percent of Minneapolis Police's total expenses. Much of Bloomington Fire's sharp increase in total administrative expenses for 2008 was due to a significant rise in legal fees. Spending just $\$ 240$ on legal fees in 2007, Bloomington Fire paid out $\$ 33,066$ in legal fees during 2008. Bloomington Fire amended its bylaws during 2008, which required a significant review by the plan's legal counsel. Figure 5 below shows the total legal fees for the large plans for the past five-year period.

Figure 5: Legal Fees (2004-2008)

Figure 6

MERF - \$690,456

Administrative Expenses for Fiscal Year 2008

Duluth Teachers' - \$487,944


## Ten-Year Performance Analysis

The ten-year period beginning in January 1999 and ending in December 2008 was marked with economic downturns. The downturn that began in 2000 amid the dot-com bubble saw three consecutive years of declines in the U.S. equity market, as measured by the Russell 3000 Index. The economic downturn of 2008, marked by the housing crisis, is widely considered the worst economic period in decades. Annual U.S. stock market returns were as high as 31.1 percent (2003) and as low as negative 37.3 percent (2008). This ten-year period will allow us to measure the performance of Minnesota's large plans during a time of economic adversity.

Market indices provide a benchmark for returns available to Minnesota's large plans over the ten-year period ended December 31, 2008. The overall U.S. stock market average rate of return over the ten-year period was negative 0.8 percent, as measured by the Russell 3000 Index. Domestic equity continued to represent the largest asset class for each of the large plans. However, as domestic equities lost value, the allocations to less volatile asset classes, such as bonds and cash, increased, changing the domestic equity allocations for most plans.

International equity, as measured by the MSCI EAFE Index, averaged a negative 1.3 percent annual rate of return over the ten-year period. International equity allocations ranged from 10.4 percent (Bloomington Fire) to 21.6 percent (St. Paul Teachers'). Emerging markets, as measured by the MSCI Emerging Markets Index, lost over one-half of its value in 2008. It averaged an annual rate of return of 6.6 percent over the ten-year period.

Fixed-income offered the most stable returns over the ten-year period. One year after having the highest allocation among Minnesota’s large plans, Bloomington Fire had only 16.8 percent allocated to fixed-income in 2008, the lowest of all large plans. MERF had the highest fixed-income allocation at 36.2 percent. The average annual bond market return was 5.6 percent, as measured by the Barclays Capital Aggregate Index.

An example of a return that was available over the ten-year period is the State Board of Investment's Income Share Account. The target asset allocations for this account are 60.0 percent domestic equities, 35.0 percent bonds, and 5.0 percent cash. The stock component of this account is indexed to the Russell 3000 Index and the bond portion is actively managed and includes corporate bonds, mortgage securities, and governmentissued bonds. The Income Share Account represents a balanced fund and over time is expected to average higher returns than a fixed-income or money market account. The Income Share Account's average annual rate of return for the ten-year period was 1.8 percent. All but two of Minnesota’s large plans exceeded the Income Share Account ten-
year rate of return. However, the large plans all failed to meet their actuarial assumed average annual rates of return over the ten-year period.

Saint Paul Teachers' was the highest performing plan over the ten-year period, averaging a 3.6 percent annual rate of return. During this period, St. Paul Teachers' had the top rate of return four out of the ten years. The SBI had the next highest ten-year return with the Basic Fund returning 3.0 percent and the Post Fund returning 2.7 percent. Duluth Teachers', although having the poorest 2008 performance, returned an average of 2.6 percent over the ten-year period. The next highest return was 2.3 percent, earned by both MERF and Minneapolis Fire. Minneapolis Police averaged an annual return of 1.4 percent for the ten-year period. The lowest-performing plan over the ten-year period was Bloomington Fire. The plan averaged an annual return of 0.6 percent over the ten-year period. Although Bloomington Fire had the highest return in 2008, it had the lowest annual rate of return of the large plans each year from 2001 through 2005.

Figure 7 below shows the ten-year average annual rates of return for the large plans and for the SBI.

Figure 7: Ten-Year Average Annual Rates of Return (1999-2008)


## Why Rates of Return Matter

Rates of return matter because what may seem like small differences can make large differences in actual dollars. To put the returns into context, consider $\$ 100$ invested at 3.6 percent (the highest large-plan return) for ten years. At the end of ten years, you would have $\$ 142$. If you instead only earned 0.6 percent (the lowest large-plan return), you would have $\$ 106$ at the end of ten years. The higher rate of return yields nearly 34 percent more in actual dollars. If plan provisions are set up optimally, high rates of return could allow for lower contribution rates and possible benefit increases. Although the growth won't be as steady as illustrated in the example below, the result will be the same.

Figure 8: Ten-Year Growth of $\mathbf{\$ 1 0 0}$ at Differing Rates of Return


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2008 Plan Summaries

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## How to Read the Plan Summaries

The plan summaries found on pages 29 through 36 of this report contain various acronyms and investment terms that are defined below.

## Rates of Return (ROR)

- OSA One-Year ROR - The pension plan's total return on its assets for 2008, as calculated by the Office of the State Auditor. Under state law, the Duluth Teachers' Retirement Fund Association, Minneapolis Employees Retirement Fund, and the State Board of Investment are allowed to submit more limited reporting information. The rates of return for these three plans are provided by the plans and are not re-calculated by the Office of the State Auditor.
- Plan One-Year ROR - The pension plan's return on its assets for 2008, as calculated by the plan or its consultant.
- Benchmark ROR - The rate of return of a hypothetical portfolio invested in the plan's chosen benchmark components, in the percentages dictated by the plan's investment policy. Although not perfect, it is a good measure of what return the plan could have achieved during the year had it invested passively.
- Actuarial Assumed ROR - The rate of return required for the plan to meet its actuarial assumptions.
- Three-, Five-, and Ten-Year ROR - The average annual returns earned by the plan over the specified time period, either calculated by the Office of the State Auditor or reported by the plan.


## Asset Class

A group of similar investments, such as domestic equity, bonds, cash, or alternative investments. Pension plans invest in different asset classes for diversification purposes. When returns for one asset class decline another may increase, offsetting the loss. In this report, any account or fund that holds investments from more than one asset class is reported as its own asset class.

## Benchmark Components and Rates of Return

These are the different indices to which the plan compares its investments. Indices track different asset classes, such as domestic equity or bonds. They may also track subsets of an asset class. To evaluate investment performance, it is important to use appropriate indices.

## Policy Asset Allocation

Each plan has an investment policy that states how the plan's assets are to be invested across different asset classes. The percentage allocated to each asset class in the investment policy is the policy asset allocation.

## Actual Asset Allocation

The percentage actually invested in each asset class as of the end of the year is the actual asset allocation. Since investments increase and decrease at different rates, plans rebalance their portfolios by transferring assets among investments during the year.

## Beginning Market Value/Ending Market Value

The market value is the price as determined by buyers and sellers in an open market. The dollar amount in the asset class or investment as of the beginning/end of 2008 is the beginning market value/ending market value.

## Net Cash Flows

Net cash flows are the net amount of cash (or securities) deposited or withdrawn from the asset class or investment during the year.

## Investment Return

The net amount of interest, dividends, and appreciation or depreciation the asset class or investment gained or lost during the year is the investment return.

## Rate of Return

The net (after fees) return of the asset class or investment during the year is the rate of return.
Bloomington Fire Department Relief Association

\[

\]

> | $\begin{array}{c}\text { Benchmark Components } \\ \text { and Rates of Return }\end{array}$ |  |
| :--- | ---: |
| S\&P 500 | $(37.0) \%$ |
| Barclays Govt/Credit | $5.7 \%$ |



\[

\]

r Ended December 31, 2008
(Dollars in Thousands)
Colte Bled De 31,200





${ }^{1}$ The rate of return was affected by the timing of large receipts that occurred when the account was opened.

Duluth Teachers' Retirement Fund Association
For the Year Ended December 31, 2008
(Doluars in Thousands)

${ }^{1}$ The December 31, 2007, market value for Private Equity was adjusted by $\$ 1,129,764$.



## Minneapolis Employees Retirement Fund

 For the Year Ended December 31, 2008$\stackrel{\circ}{\circ}$

会 (Dalas in


| Rates of Return (ROR) |  |
| :--- | ---: |
|  |  |
| Plan One-Year ROR | $(28.1) \%$ |
| Benchmark ROR | $(27.3) \%$ |
| Actuarial Assumed ROR - Active | $6.0 \%$ |
| Actuarial Assumed ROR - Retired | $5.0 \%$ |
| Plan Three-Year ROR | $(4.0) \%$ |
| Plan Five-Year ROR | $1.4 \%$ |
| Plan Ten-Year ROR | $2.3 \%$ |


| $\begin{array}{c}\text { Benchmark Components } \\ \text { and Rates of Return }\end{array}$ |  |
| :--- | ---: |
| Russell 3000 | $(37.3) \%$ |
| Barclays Capital Aggregate | $5.2 \%$ |
| MSCI ACWI ex. U.S. | $(45.2) \%$ |
| 90-Day U.S. Treasury Bill | $1.6 \%$ |


| $\begin{array}{c}\text { Rate of } \\ \text { Return }\end{array}$ |
| ---: |
| $(36.8) \%$ |
| $(5.1) \%$ |
| $(44.2) \%$ |
| $(21.5) \%$ |
| $(1.0) \%$ |



|  |
| :---: |
|  |  |


| $\begin{array}{c}\text { Net Cash Flow } \\ \left(\text { Net of Fees) }{ }^{2}\right.\end{array}$ |
| :--- |


${ }^{1}$ The Deposit Accumulation Fund holds the remaining active member dollars in short-term cash equivalent investments. MERF does not consider this account part of its asset allocation, therefore it is not included in the total rate of return or policy and actual asset allocations.
${ }^{2}$ Net cash flow and investment return data was not available for MERF due to the transfer of the fund's assets to the State Board of Investment during 2008. ${ }^{3}$ Third quarter returns used in the calculation of the annual rates of return were calculated estimates based on limited data provided.

## Minneapolis Firefighters' Relief Association For the Year Ended December 31, 2008

| Rates of Return (ROR) |  |
| :--- | ---: |
|  |  |
| OSA One-Year ROR | $(28.7) \%$ |
| Plan One-Year ROR | $(28.6) \%$ |
| Benchmark ROR $^{1}$ | $(24.7) \%$ |
| Actuarial Assumed ROR - Active | $6.0 \%$ |
| Actuarial Assumed ROR - Retired | $6.0 \%$ |
| OSA Three-Year ROR | $(3.7) \%$ |
| OSA Five-Year ROR | $1.0 \%$ |
| OSA Ten-Year ROR | $2.3 \%$ |


| Beginning <br> Market Value |  |
| :---: | ---: |
| $\$ 35,543$ |  |
| 34,638 |  |
|  | 51,635 |
| 1,087 |  |
|  | 28,045 |
|  | 18,073 |
|  | 45,550 |
|  | 32,583 |
|  | 5,377 |
|  | 2,131 |
| $\$$ | $\mathbf{2 7 7 , 6 6 2}$ |






${ }^{1}$ The benchmark rate of return is weighted $40 \%$ S\&P 500, $35 \%$ Barclays Capital Aggregate, $5 \%$ Russell 2000 Growth, $15 \%$ MSCI EAFE, and 5\% Dow Jones AIG Commodities.
${ }^{2}$ The rate of return was affected by large non-cash receipts and disbursements in January 2008 .

| Rates of Return (ROR) |  |
| :--- | ---: |
|  |  |
| OSA One-Year ROR | $(29.5) \%$ |
| Plan One-Year ROR | $(29.8) \%$ |
| Benchmark ROR | $(26.2) \%$ |
| Actuarial Assumed ROR - Active | $6.0 \%$ |
| Actuarial Assumed ROR - Retired | $6.0 \%$ |
| OSA Three-Year ROR | $(5.0) \%$ |
| OSA Five-Year ROR | $0.0 \%$ |
| OSA Ten-Year ROR | $1.4 \%$ |

$$
\begin{aligned}
& \text { Benchmark Components } \\
& \text { and Rates of Return } \\
& \hline
\end{aligned}
$$

$$
\begin{array}{lr}
\hline \text { Wilshire 5000 } & (37.2) \% \\
\text { Barclays Capital Aggregate } & 5.2 \% \\
\text { MSCI ACWI ex. U.S. } & (45.5) \% \\
\text { MSCI ACWI } & (42.2) \% \\
\text { Mellon Custom Benchmark }{ }^{1} & (22.4) \% \\
\text { NCREIF ODCE } & (10.7) \%
\end{array}
$$

| $\begin{array}{r}\text { Rate of } \\ \text { Return }\end{array}$ |
| ---: |
| $(36.3) \%$ |
| $(7.0) \%$ |
| $(43.5) \%$ |
| $(37.8) \%$ |
| $(35.9) \%$ |
| $(14.1) \%$ |
| $2.7 \%$ |
| $(35.0) \%$ |
| $(29.1) \%$ |
| $(19.9) \%$ |



Minneapolis Police Relief Association
 $\underset{\substack{\text { For the Year Ended December 31, } 2008 \\ \text { (Dolars in Thousands) }}}{\text { 2 }}$ For the Year Ended December 31, 2008
(Dollars in Thousands)
${ }^{1}$ The Mellon Custom Benchmark is weighted $60 \%$ MSCI World Index and $40 \%$ Citigroup WBGI Index.
St. Paul Teachers' Retirement Fund Association Yar Ended December 31, 2008
(Oollas in Thoosunass)

| Actual <br> Asset Allocation |  |
| :--- | :---: |
| Domestic Equities | $39.4 \%$ |
| Domestic Fixed Income | $26.5 \%$ |
| Real Estate | $10.2 \%$ |
| International Equities | $21.6 \%$ |
|  |  |
| Alternative Assets | $1.0 \%$ |
| Cash | $1.3 \%$ | Rate of $\begin{array}{r}\begin{array}{c}\text { Rate of } \\ \text { Return }\end{array} \\ \hline(37.0) \%\end{array}$

 웅



 | $\begin{array}{c}\text { Policy } \\ \text { Asset Allocation }\end{array}$ |  |
| :--- | ---: |
| Equities: Large Cap | $36.0 \%$ |
| Equities: Small Cap | $9.0 \%$ |
| Fixed Income: Domestic | $19.0 \%$ |
| Real Estate | $8.0 \%$ |
| Int'l Equities: Core | $21.0 \%$ |
| Int'l Equities: Emerging | $4.0 \%$ |
| Alternative Assets | $2.0 \%$ |
| Cash | $1.0 \%$ |






For the Yea
${ }^{1}$ The December 31, 2007 market value for Alternative Assets was adjusted by $\$ 11,000$. ${ }^{2}$ Cash rate of return due to overlays on equity returns of enhanced cash account.

## State Board of Investment - Basic Fund For the Year Ended December 31, 2008 (Dollars in Thousands)

$\begin{array}{r}\text { Rate of } \\ \text { Return } \\ \hline\end{array}$ (38.0)\%


 | $\begin{array}{c}\text { Net Cash Flow } \\ \text { (Net of Fees) }\end{array}$ |  |
| :---: | ---: |
| $\$$ | 505,723 |
|  | $(2,375,072)$ |
|  | 401,373 |
|  | 862,723 |
|  | 23,726 |
|  | 383 |
| $\$$ | $\mathbf{( 5 8 1 , 1 4 4 )}$ |

 Total $\quad \$ \quad 25,300,926$


| $\begin{array}{c}\text { Benchmark Components } \\ \text { and Rates of Return }\end{array}$ |  |
| :--- | ---: |
| Russell 3000 | $(37.3) \%$ |
| Barclays Capital Aggregate | $5.2 \%$ |
| MSCI ACWI ex. U.S. ${ }^{1}$ | $(45.5) \%$ |
| Alternative Assets $^{2}$ | $1.4 \%$ |
| 90-Day U.S. Treasury Bill | $1.6 \%$ |


| Rates of Return (ROR) |  |
| :--- | ---: |
|  |  |
| Plan One-Year ROR | $(26.1) \%$ |
| Benchmark ROR | $(25.0) \%$ |
| Actuarial Assumed ROR - Active | $8.5 \%$ |
| Plan Three-Year ROR | $(2.4) \%$ |
| Plan Five-Year ROR | $3.0 \%$ |
| Plan Ten-Year ROR | $3.0 \%$ | The actual rate of return is used as the benchmark for Alternative Assets.

State Board of Investment - Post Fund

For the Year Ended December 31, 2008

| Actual <br> Asset Allocation |  |
| :--- | ---: |
| Domestic Equities | $42.7 \%$ |
| Bonds | $26.2 \%$ |
| International Equities | $14.4 \%$ |
| Alternative Assets | $12.9 \%$ |
| Cash | $3.8 \%$ |



| $\begin{array}{c}\text { Ending } \\ \text { Market Value }\end{array}$ |  |
| :---: | ---: |
| $\$$ | $7,516,777$ |
|  | $4,614,781$ |
|  | $2,536,752$ |
| $2,281,017$ |  |
|  | 662,419 |
|  | 0 |
| $\$$ | $\mathbf{1 7 , 6 1 1 , 7 4 6}$ |

Incorporates the return of the Provisional Standard MSCI ACWI ex. U.S. Index from 1/1/08 to 5/31/08. Incorporates the return of the Standard MSCI ACWI ex. U.S. Index from $6 / 1 / 08$ to $12 / 31 / 08$. ${ }^{3}$ The actual rate of return is used as the benchmark for Alternative Assets.

2008 Appendix

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Table 1
Historical Rates of Return
For Calendar Years 1999 to 2008

| 2003 |
| :---: |
| $19.4 \%$ |
| $28.2 \%$ |
| $23.8 \%$ |
| $20.0 \%$ |
| $22.3 \%$ |
| $22.8 \%$ |
| $26.7 \%$ |
| $22.7 \%$ |
| $23.5 \%$ |


| 2002 |
| :---: |
| $(14.4) \%$ |
| $(12.6) \%$ |
| $(11.4) \%$ |
| $(10.0) \%$ |
| $(10.1) \%$ |
| $(16.1) \%$ |
| $(10.1) \%$ |
| $(11.6) \%$ |
| $(11.6) \%$ |

べ


| $\mathbf{1 9 9 9}$ |
| :---: |
| $13.2 \%$ |
| $29.4 \%$ |
| $15.5 \%$ |
| $17.8 \%$ |
| $11.1 \%$ |
| $21.5 \%$ |
| $13.6 \%$ |
| $17.1 \%$ |
| $15.8 \%$ |

Public Pension Plans

| Public Pension Plans |
| :--- |
| Bloomington Fire |
| Duluth Teachers' |
| MERF |
| Minneapolis Fire |
| Minneapolis Police |
| Minneapolis Teachers' |
| St. Paul Teachers' |
| SBI Basic Fund |
| SBI Post Fund |

Table 2

## State of Minnesota Contributions

For Fiscal Years 1999 to 2008


| 2008 |  |
| :---: | :---: |
| $\$$ | 439,902 |
|  | - |
|  | $8,866,510$ |
|  | $1,413,297$ |
|  | $2,275,349$ |
|  | $\star$ |
|  | $3,509,320$ |
| $\$$ | $\mathbf{1 6 , 5 0 4 , 3 7 8}$ |

Note: This table includes any amount from the State of Minnesota regardless of where it is reported in the financial statements (e.g., as part of Employer Contributions). Public Pension Plans


## Public Pension Plans


Total

* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 3
Employer Contributions
For Fiscal Years 1999 to 2008

| Public Pension Plans | 1999 |  | 2000 |  | 2001 |  | 2002 |  | 2003 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bloomington Fire (12/31) | \$ |  | \$ |  | \$ |  | \$ |  | \$ | 742,343 |
| Duluth Teachers' (6/30) |  | 3,020,978 |  | 3,026,454 |  | 3,010,595 |  | 2,955,816 |  | 2,933,172 |
| MERF (6/30) |  | 14,722,996 |  | 13,013,923 |  | 11,233,852 |  | 12,260,956 |  | 38,102,470 |
| Minneapolis Fire (12/31) |  | 720,376 |  | 1,154,484 |  | 326,969 |  | 5,907 |  | 4,270 |
| Minneapolis Police (12/31) |  | 698,080 |  | 1,295,071 |  | 10,812 |  | 2,912,060 |  | 13,540,305 |
| Minneapolis Teachers' (6/30) |  | 23,357,250 |  | 25,373,644 |  | 25,738,703 |  | 25,696,261 |  | 25,394,648 |
| St. Paul Teachers' (6/30) |  | 17,514,764 |  | 19,049,291 |  | 19,996,142 |  | 20,958,423 |  | 19,986,168 |
| Total | \$ | 60,034,444 | \$ | 62,912,867 | \$ | 60,317,073 | \$ | 64,789,423 |  | 00,703,376 |
| Public Pension Plans |  | 2004 |  | 2005 |  | 2006 |  | 2007 |  | 2008 |
| Bloomington Fire (12/31) | \$ | 2,986,280 | \$ | 1,576,139 | \$ | 841,138 | \$ |  | \$ |  |
| Duluth Teachers' (6/30) |  | 2,826,730 |  | 2,845,684 |  | 2,867,299 |  | 2,940,697 |  | 2,994,086 |
| MERF (6/30) |  | 38,366,011 |  | 11,330,441 |  | 35,953,244 |  | 19,545,176 |  | 6,405,104 |
| Minneapolis Fire (12/31) |  | 2,670 |  | 4,737,705 |  | 1,348,855 |  | 3,030,347 |  | 3,336,852 |
| Minneapolis Police (12/31) |  | 20,800,530 |  | 24,976,747 |  | 5,366,224 |  | 3,647,229 |  | 3,535,999 |
| Minneapolis Teachers' (6/30) |  | 24,231,782 |  | 22,782,933 |  | * |  | * |  | * |
| St. Paul Teachers' (6/30) |  | 20,378,315 |  | 20,435,230 |  | 20,615,130 |  | 20,466,200 |  | 20,775,392 |
| Total |  | 109,592,318 | \$ | 88,684,879 | \$ | 66,991,890 | \$ | 49,629,649 | \$ | 37,047,433 |

Note: This table includes all city contributions where the city is the employer. The Employer Contributions are calculated by adding the employer regular and special contributions together. Some of the above entities include State of Minnesota contributions as Employer Contributions for financial reporting purposes, but they have been removed for purposes of this table.

Table 4
Employee Contributions
For Fiscal Years 1999 to 2008



| $\mathbf{2 0 0 8}$ |  |
| :---: | :---: |
| $\$$ | - |
|  | $2,954,062$ |
|  | $1,431,245$ |






* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 5










| Public Pension Plans |
| :--- |
| Bloomington Fire $(12 / 31)$ |
| Duluth Teachers' $(6 / 30)$ |
| MERF $(6 / 30)$ |
| Minneapolis Fire $(12 / 31)$ |
| Minneapolis Police $(12 / 31)$ |
| Minneapolis Teachers' $(6 / 30)$ |
| St. Paul Teachers' $(6 / 30)$ |

Note: This average is calculated by dividing all Contributions by the number of Members at Fiscal Year End.

* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 6

| Public Pension Plans | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bloomington Fire (12/31) | \$ 14,738 | \$ 16,516 | \$ 16,906 | \$ 17,343 | \$ 19,095 | \$ 18,880 | \$ 19,744 | \$ 20,193 | \$ 20,543 | \$ 21,612 |
| Duluth Teachers' (6/30) | 11,834 | 12,499 | 13,719 | 14,815 | 15,365 | 15,309 | 15,931 | 16,235 | 16,517 | 17,408 |
| MERF (6/30) | 19,453 | 21,382 | 24,008 | 26,124 | 27,171 | 27,669 | 28,681 | 29,596 | 30,852 | 32,060 |
| Minneapolis Fire (12/31) | 35,685 | 35,836 | 37,683 | 37,956 | 31,666 | 35,070 | 35,141 | 36,184 | 39,094 | 39,686 |
| Minneapolis Police (12/31) | 28,284 | 33,222 | 32,655 | 33,108 | 34,070 | 35,611 | 37,378 | 38,599 | 41,899 | 44,453 |
| Minneapolis Teachers' (6/30) | 24,305 | 26,286 | 28,867 | 31,061 | 31,389 | 31,657 | 32,352 | * | * | * |
| St. Paul Teachers' (6/30) | 22,805 | 24,283 | 26,439 | 27,835 | 28,618 | 29,174 | 29,349 | 30,323 | 30,778 | 31,502 |

Note: Beneficiaries include retirees, disabled members and surviving spouses.

* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 7

| $\stackrel{\infty}{\circ}$ | oo |  | $\bigcirc$ | - | a |  | - |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ¢ |  | V | $\stackrel{+}{\circ}$ |  |  | $\stackrel{N}{\sim}$ | 8 |  | * |



 $\left.\begin{array}{ccccccccc}\text { Percent Increase in Average of Total Benefits per Retired Member/Beneficiary } \\ \text { and The Consumer Price Index } \\ \text { For Fiscal Years } 1999 \text { to } 2008\end{array}\right]$ $\underline{\text { Public Pension Plans }}$ | Consumer Price Index |
| :--- |
| Bloomington Fire $(12 / 31)$ |
| Duluth Teachers' $(6 / 30)$ |
| MERF $(6 / 30)$ |
| Minneapolis Fire $(12 / 31)$ |
| Minneapolis Police $(12 / 31)$ |
| Minneapolis Teachers' $(6 / 30)$ |
| St. Paul Teachers' $(6 / 30)$ |

Note: Beneficiaries include retirees, disabled members and surviving spouses.

* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 8
Funded Ratio Percentage
For Fiscal Years 1999 to 2008
$\stackrel{c c c c c c c}{\circ}$









| Public Pension Plans |
| :--- |
| Bloomington Fire $(12 / 31)$ |
| Duluth Teachers' ( $6 / 30$ ) |
| MERF $(6 / 30)$ |
| Minneapolis Fire $(12 / 31)$ |
| Minneapolis Police $(12 / 31)$ |
| Minneapolis Teachers' $6 / 30)$ |
| St. Paul Teachers' $(6 / 30)$ |

Note: The funded ratio is calculated by dividing the actuarial value of plan assets by the actuarial accrued liability.

* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 9




 |  | 2001 |
| :---: | :---: |
| $\$$ | $(17,924,916)$ |
|  | $(19,363,000)$ |
|  | $108,813,000$ |
|  | $(11,491,000)$ |
|  | $115,479,000$ |
|  | $548,381,000$ |
|  | $191,886,000$ |
| $\$$ | $\mathbf{9 1 5 , 7 8 0 , 0 8 4}$ |






* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 10
Net Assets Held in Trust for Pension Benefits

| 2003 |  |
| :--- | ---: |
| $\$$ | $91,904,997$ |
|  | $231,247,693$ |
|  | $1,194,940,521$ |
|  | $250,351,289$ |
|  | $323,467,991$ |
|  | $719,598,888$ |
|  | $757,639,499$ |
| $\$$ | $\mathbf{3 , 5 6 9 , 1 5 0 , 8 7 8}$ |



| 2002 |  |
| ---: | ---: |
| $\$$ | $78,447,410$ |
|  | $234,368,916$ |
| $1,250,320,810$ |  |
|  | $226,580,974$ |
|  | $277,143,300$ |
|  | $770,489,009$ |
|  | $768,931,641$ |
| $\$$ | $\mathbf{3 , 6 0 6 , 2 8 2 , 0 6 0}$ |





|  | 2000 |
| ---: | ---: |
| $\$$ | $104,088,281$ |
|  | $298,838,376$ |
|  | $1,667,011,994$ |
|  | $310,820,185$ |
|  | $376,849,745$ |
|  | $1,099,515,863$ |
|  | $873,227,927$ |
| $\$$ | $\mathbf{4 , 7 3 0 , 3 5 2 , 3 7 1}$ |


|  | 1999 |
| ---: | ---: |
| $\$$ | $110,130,150$ |
|  | $243,211,001$ |
|  | $1,596,623,979$ |
|  | $341,239,285$ |
|  | $413,332,413$ |
|  | $1,000,241,426$ |
|  | $801,954,037$ |
| $\$$ | $\mathbf{4 , 5 0 6 , 7 3 2 , 2 9 1}$ |


2005

| 2004 |  | 2005 |  |
| :---: | :---: | :---: | :---: |
| \$ | 101,341,890 | \$ | 105,139,140 |
|  | 258,831,515 |  | 267,383,556 |
|  | 1,282,717,353 |  | 1,288,106,030 |
|  | 254,086,792 |  | 254,424,228 |
|  | 348,910,983 |  | 366,406,914 |
|  | 763,089,276 |  | 745,214,858 |
|  | 871,902,589 |  | 934,667,364 |
| \$ | 3,880,880,398 | \$ | 3,961,342,090 |



Note: These Net Assets only include any net assets that are "Held in Trust for Pension Benefits."

* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 11
Net Assets per Member
For Fiscal Years 1999 to 2008






| Public Pension Plans |
| :--- |
| Bloomington Fire $(12 / 31)$ |
| Duluth Teachers' $(6 / 30)$ |
| MERF $(6 / 30)$ |
| Minneapolis Fire $(12 / 31)$ |
| Minneapolis Police $(12 / 31)$ |
| Minneapolis Teachers' $(6 / 30)$ |
| St. Paul Teachers' $(6 / 30)$ |

Table 12
Actuarial Accrued Unfunded Liability per Member






| Public Pension Plans |
| :--- |
| Bloomington Fire $(12 / 31)$ |
| Duluth Teachers' (6/30) |
| MERF ( $6 / 30$ ) |
| Minneapolis Fire (12/31) |
| Minneapolis Police $(12 / 31)$ |
| Minneapolis Teachers' $(6 / 30)$ |
| St. Paul Teachers' $(6 / 30)$ |

Table 13
For Fiscal Years 1999 to 2008





| Public Pension Plans |
| :--- |
| Bloomington Fire $(12 / 31)$ |
| Duluth Teachers' $(6 / 30)$ |
| MERF $(6 / 30)$ |
| Minneapolis Fire $(12 / 31)$ |
| Minneapolis Police $(12 / 31)$ |
| Minneapolis Teachers' $(6 / 30)$ |
| St. Paul Teachers' $(6 / 30)$ |
| Total |

Table 14





For Fiscal Years 1999 to 2008






| Public Pension Plans |
| :--- |
| Bloomington Fire $(12 / 31)$ |
| Duluth Teachers' $(6 / 30)$ |
| MERF $(6 / 30)$ |
| Minneapolis Fire $(12 / 31)$ |
| Minneapolis Police $(12 / 31)$ |
| Minneapolis Teachers' $(6 / 30)$ |
| St. Paul Teachers' $(6 / 30)$ |

* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 15
Members at Fiscal Year End
For Fiscal Years 1999 to 2008
N|





| $\mathbf{2 0 0 3}$ |
| ---: |
| 292 |
| 3,493 |
| 5,854 |
| 690 |
| 959 |
| 13,259 |
| 9,587 |
| $\mathbf{3 4 , 1 3 4}$ |






| Public Pension Plans |
| :--- |
| Bloomington Fire $(12 / 31)$ |
| Duluth Teachers' $(6 / 30)$ |
| MERF $(6 / 30)$ |
| Minneapolis Fire (12/31) |
| Minneapolis Police (12/31) |
| Minneapolis Teachers' (6/30) |
| St. Paul Teachers' $(6 / 30)$ |
| Total |

Note: "Members" is the sum of retired/beneficiary, terminated and active members at fiscal year end.

* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 16
Members at Fiscal Year End - Retirees \& Beneficiaries Receiving Benefits


| Public Pension Plans |
| :--- |
| Bloomington Fire $(12 / 31)$ |
| Duluth Teachers' $(6 / 30)$ |
| MERF $(6 / 30)$ |
| Minneapolis Fire $(12 / 31)$ |
| Minneapolis Police $(12 / 31)$ |
| Minneapolis Teachers' $(6 / 30)$ |
| St. Paul Teachers' $(6 / 30)$ |
| Total |

Note: Beneficiaries are defined as retirees, disabled members, and surviving spouses.

* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.
Table 17
Investment Expenses
For Fiscal Years 1999 to 2008

* The Minneapolis Teachers' Retirement Fund Association was rolled into the Teachers' Retirement Association in 2006.

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[^0]:    ${ }^{1}$ Minnesota Statutes, section 356.219 , requires the Office of the State Auditor to compute and report total portfolio and asset class time-weighted rates of return, net of all costs and fees.

[^1]:    ${ }^{2}$ Investments continued to experience volatility beyond the timeframe discussed in this report. In March 2009, the Russell 3000 Index, a comprehensive measure of the U.S. equity market, fell to its lowest level since September 1996. The markets then rebounded and recaptured some of their 2008 and early 2009 losses. For the first three quarters of 2009, the Russell 3000 Index returned 21.2 percent.

