

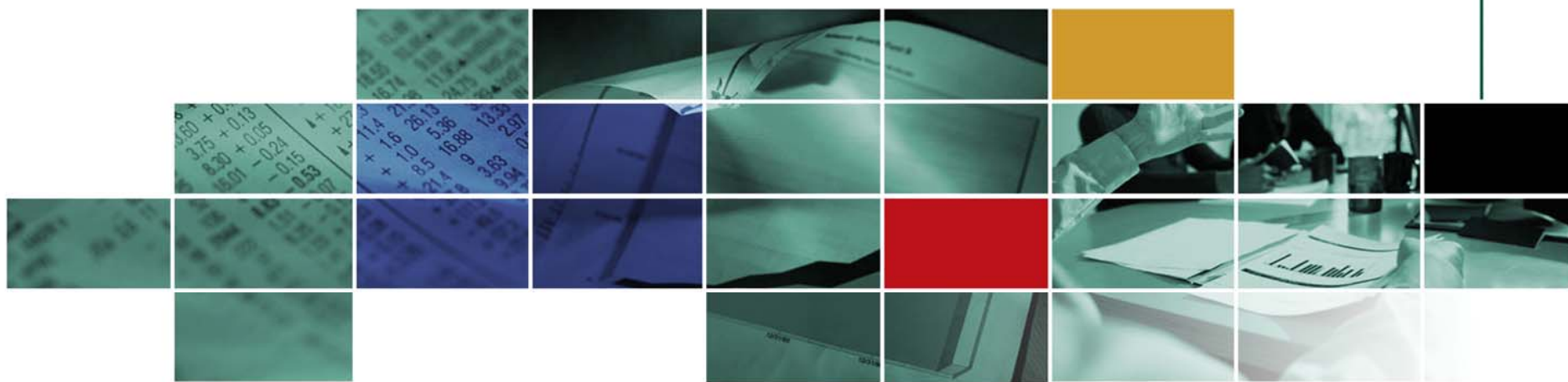
RVKuhns

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What Lies Ahead?

Texas Municipal Retirement System

September 2008





Presentation Agenda

- I. Introduction:** Laying the Foundation
- II. Historical Portfolio:** Why Change?
- III. Peer Portfolio:** Another Perspective
- IV. Portfolio Construction:** Methodology to “What Lies Ahead?”
- V. Recent Portfolio Events:** Diversification in Progress
- VI. Future Portfolio Considerations:** What Lies Ahead?



Introduction: Laying the Foundation for “What Lies Ahead”



Diversification and Risk

- ▶ True or False?
 - ▶ **“Don’t put all your eggs in one basket”** – TRUE
 - ▶ Don’t concentrate your investments in one category. Spreading risk prevents large losses.
 - ▶ **“Cash is king”** – FALSE
 - ▶ While safe investments such as cash and bonds are less likely to lose money in the short-term, over the long-term they do not provide sufficient wealth creation.



Diversification and Risk

Background and introduction:

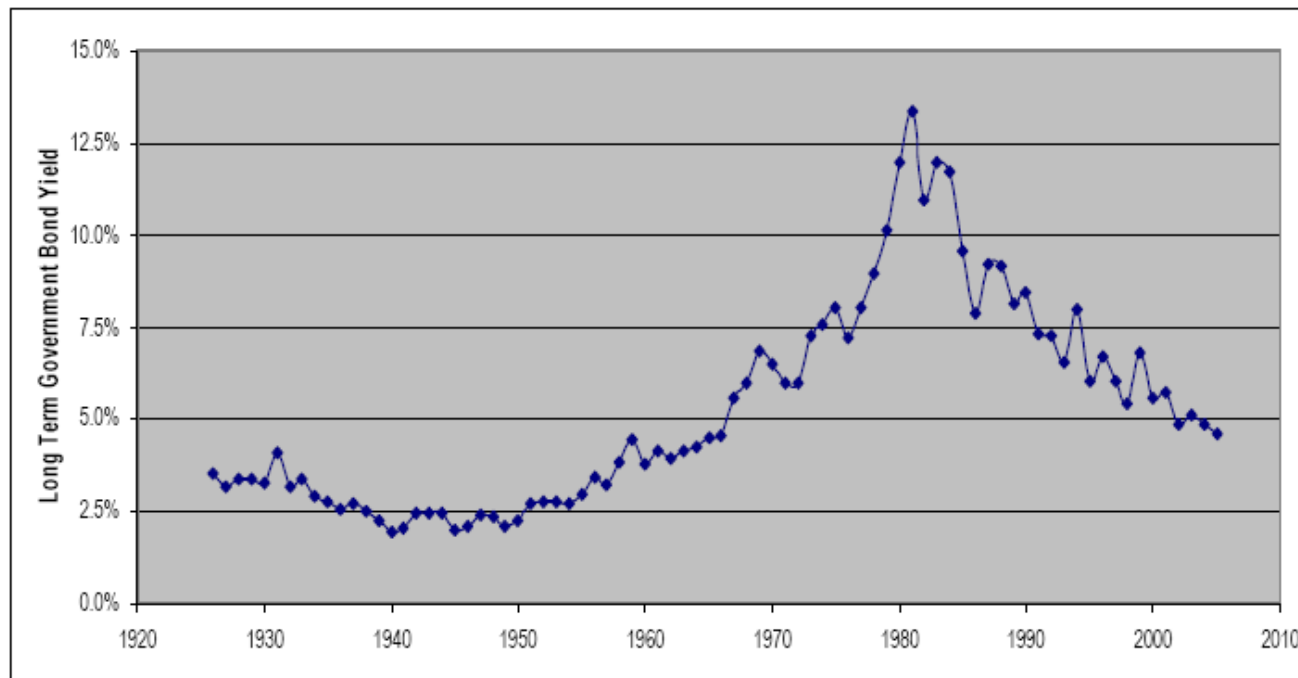
- ▶ TMRS was invested in 100% bonds
 - ▶ Lacking diversification
 - ▶ Potentially insufficient return given long-term market dynamics
- ▶ There is another way
 - ▶ Broad diversification and a long-term perspective can lead to higher returns without undue risk



Historical Portfolio: “Why Change?”

Risk of Historical Status Quo

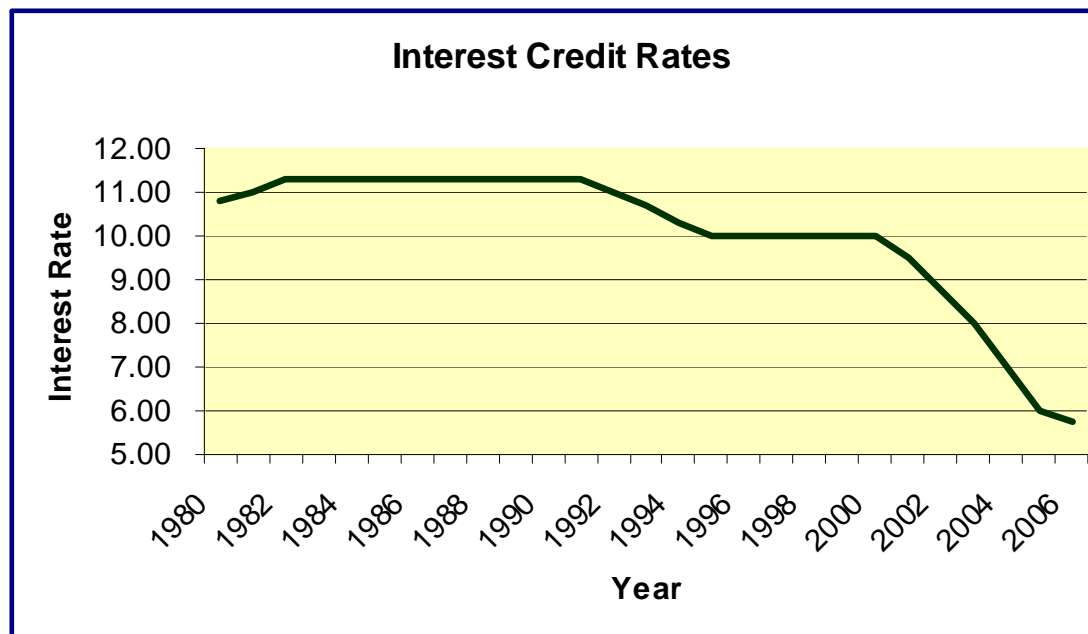
- ▶ Portfolio has held long-term bonds in a period of high and declining interest rates
- ▶ This was an unusual environment



Source: Ennis Knupp, TMRS Asset Liability Study

Risk of Historical Status Quo

- ▶ Historical surpluses were used to support the rising cost of benefits
- ▶ In the future if rates:
 - ▶ Fall – Difficult to meet the 5% requirement, not much further to fall
 - ▶ Stabilize – Difficult to meet current liabilities, no surplus to fund COLAs
 - ▶ Rise – The near term impact will be capital losses



Source: TMRS Investing in the Future



Risk of Historical Status Quo

Results of initial analysis:

- ▶ The risks to the portfolio included a lack of diversification as well as significant interest rate exposure
 - ▶ The portfolio has been comprised of high quality bonds with a long term maturity date
 - ▶ The “longer” the bond, the greater the sensitivity to changes in interest rates (if rates rise, value of bond falls)
- ▶ The impact of rising rates would be an erosion of the capital base for future investing and an end to surpluses that have been a source for benefit increases
- ▶ A strategy that worked well for many years
- ▶ However, market dynamics require a change

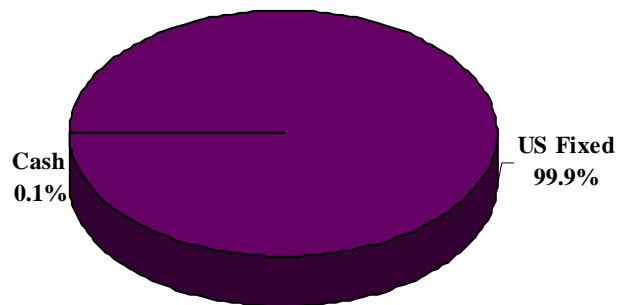


Peer Portfolios: Another Perspective

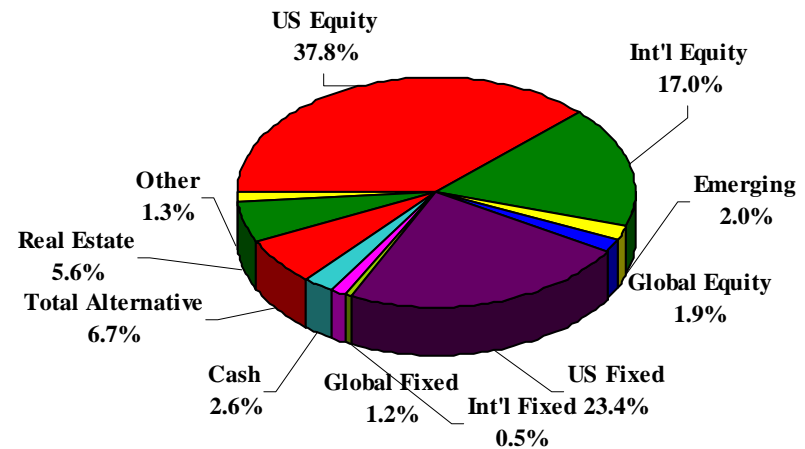
Public Fund Comparison

- ▶ TMRS asset allocation compared to average public retirement fund asset allocation (2006)

Texas Municipal Retirement System

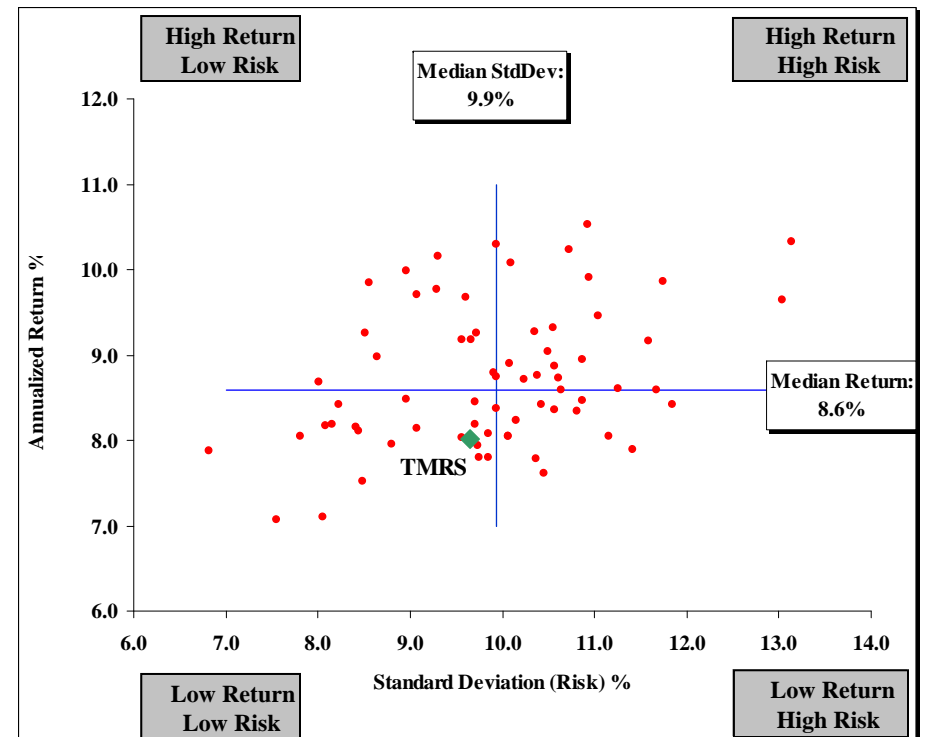
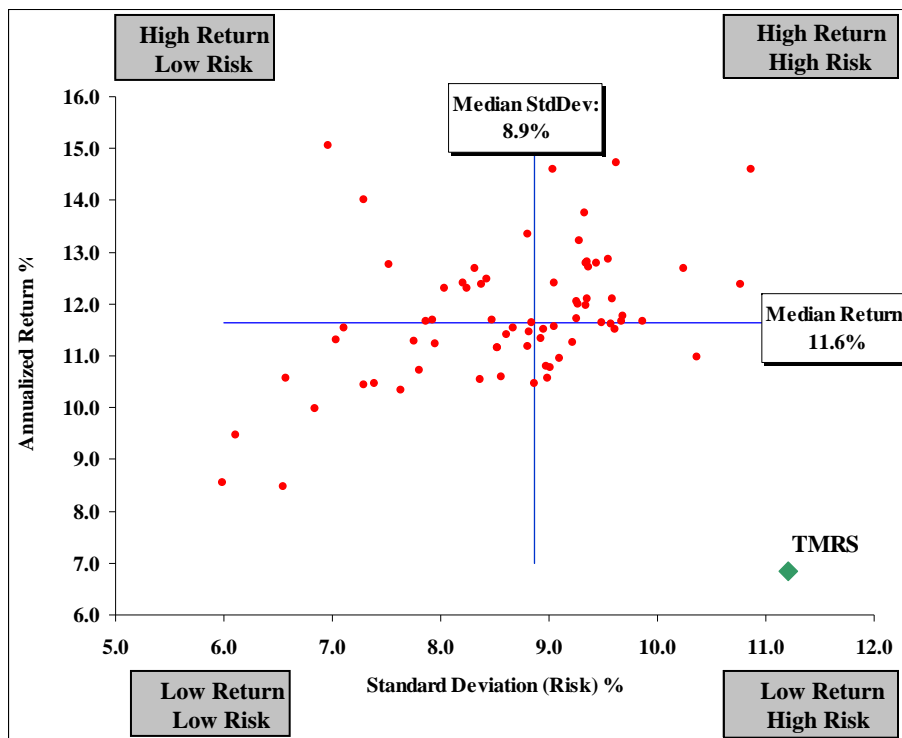


All Funds



Public Fund Comparison 2006

- ▶ 5 & 10 Year risk and return profile compared to peers





Portfolio Construction – Methodology to “What’s Next”



Diversification

“Putting your eggs in different baskets”

- ▶ How do we improve returns and maintain a moderate level of risk?
- ▶ Diversification is the tactic of spreading your investments across divergent opportunity sets in order to mitigate risk
- ▶ An “asset class” is considered a group of investments with a distinctive profile from other groups (e.g., stocks vs. bonds vs. real estate)



Diversification - Asset Classes

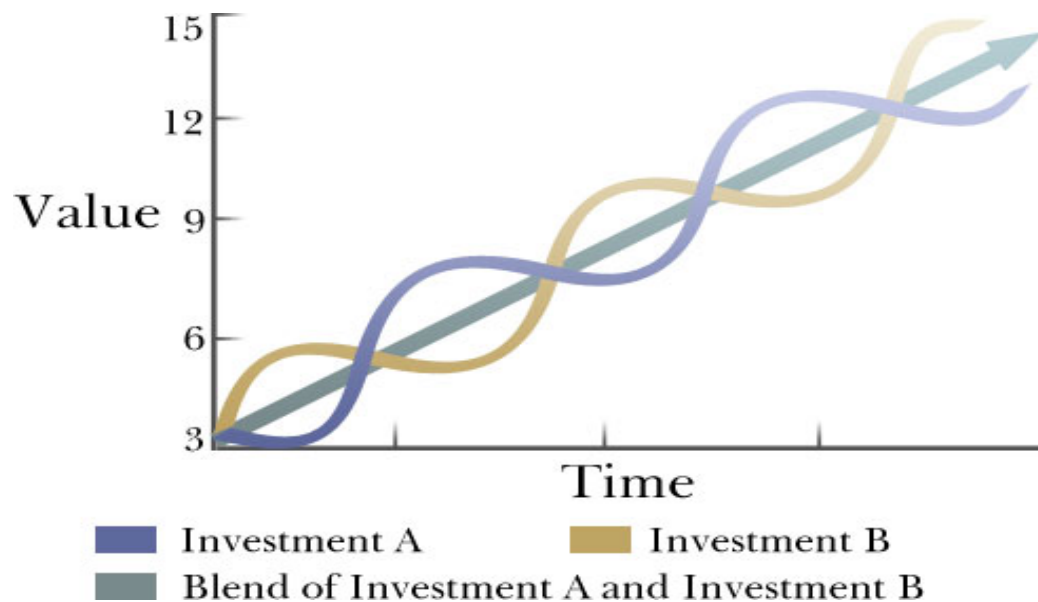
- ▶ Traditional asset classes typically include:
 - ▶ Stocks – U.S., non-U.S., small company, etc.
 - ▶ Bonds – Treasuries, Corporates, Mortgages, etc.
 - ▶ Cash – T-Bills, commercial paper, etc.

- ▶ Alternative asset classes may include:
 - ▶ Absolute Return
 - ▶ Real Return
 - ▶ Private Equity
 - ▶ Real Estate



Effects of Diversification

- ▶ Low correlated asset classes are subject to different influences and produce diverse return streams
- ▶ Using diverse asset classes provides smoother return profile over time and allows for better compounding – otherwise known as the benefit of **diversification** .





How to Diversify

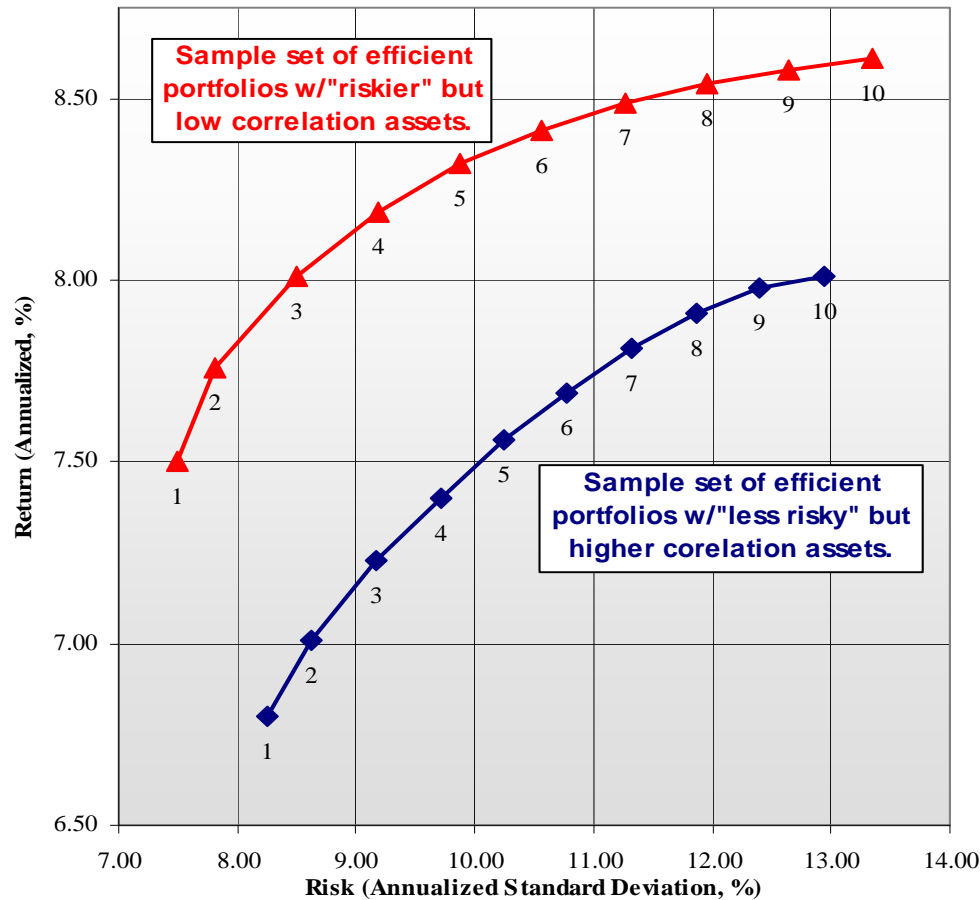
- ▶ Combine low correlation assets
 - ▶ Assets seen as “too volatile” for a stand alone investment may be worthy contributors to the overall portfolio

| <p>▶ Portfolio I uses investments A & B, each of which has an expected rate of return, volatility, and a high correlation</p> | <table border="1"> <thead> <tr> <th></th> <th colspan="2"><u>Portfolio I</u></th> </tr> <tr> <th>Investments:</th> <th><u>A</u></th> <th><u>B</u></th> </tr> </thead> <tbody> <tr> <td>Return:</td> <td>10.0%</td> <td>7.0%</td> </tr> <tr> <td>Std. Dev:</td> <td>12.0%</td> <td>8.0%</td> </tr> <tr> <td>Correlation:</td> <td colspan="2">.90</td> </tr> </tbody> </table> | | <u>Portfolio I</u> | | Investments: | <u>A</u> | <u>B</u> | Return: | 10.0% | 7.0% | Std. Dev: | 12.0% | 8.0% | Correlation: | .90 | |
|--|--|----------|---------------------|--|---------------------|----------|----------|----------------|-------|------|------------------|-------|------|---------------------|-----|--|
| | <u>Portfolio I</u> | | | | | | | | | | | | | | | |
| Investments: | <u>A</u> | <u>B</u> | | | | | | | | | | | | | | |
| Return: | 10.0% | 7.0% | | | | | | | | | | | | | | |
| Std. Dev: | 12.0% | 8.0% | | | | | | | | | | | | | | |
| Correlation: | .90 | | | | | | | | | | | | | | | |
| <p>▶ Portfolio II uses two different investments, X & Y, which have the same expected return as A & B, but higher volatility, and lower correlation</p> | <table border="1"> <thead> <tr> <th></th> <th colspan="2"><u>Portfolio II</u></th> </tr> <tr> <th>Investments:</th> <th><u>X</u></th> <th><u>Y</u></th> </tr> </thead> <tbody> <tr> <td>Return:</td> <td>10.0%</td> <td>7.0%</td> </tr> <tr> <td>Std. Dev:</td> <td>13.2%</td> <td>8.8%</td> </tr> <tr> <td>Correlation:</td> <td colspan="2">.10</td> </tr> </tbody> </table> | | <u>Portfolio II</u> | | Investments: | <u>X</u> | <u>Y</u> | Return: | 10.0% | 7.0% | Std. Dev: | 13.2% | 8.8% | Correlation: | .10 | |
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| Std. Dev: | 13.2% | 8.8% | | | | | | | | | | | | | | |
| Correlation: | .10 | | | | | | | | | | | | | | | |



How to Diversify

Efficient Frontier



Portfolio I

Investment A = 56%

Investment B = 44%

Expected Return = 8.68%

Std. Dev. = 10.00%

Portfolio II

Investment X = 56%

Investment Y = 44%

Expected Return = 8.69%

Std. Dev. = 8.70%

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Benefits of Diversification - Conclusion

- ▶ Status quo runs the risk of not keeping pace with liabilities
- ▶ Adding asset classes to a portfolio can enhance returns **and** reduce risk through diversification.
 - ▶ Education and proper implementation over time are critical
- ▶ Diversified total-return portfolios have been proven over time



Recent Portfolio Events: Diversification In Progress

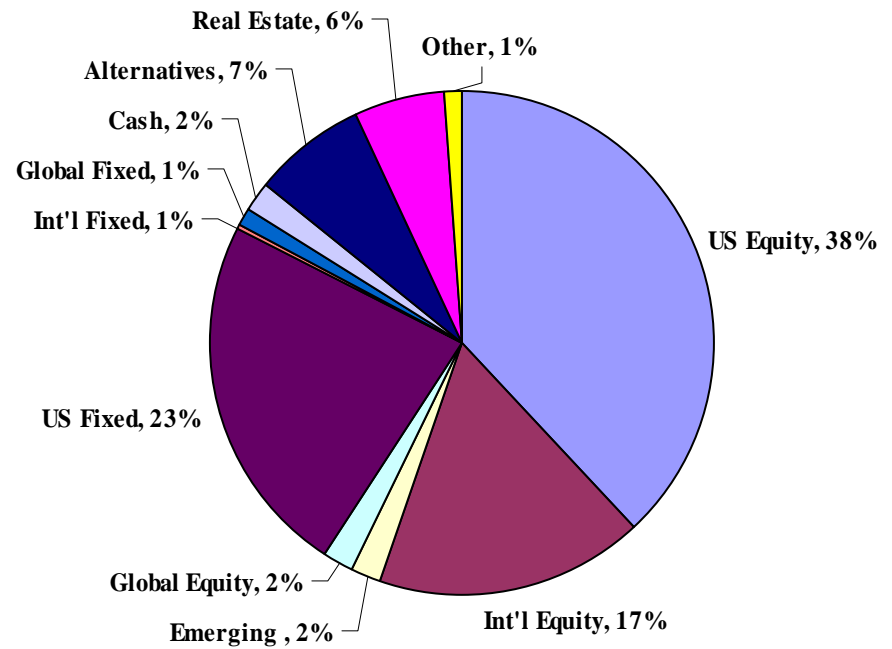
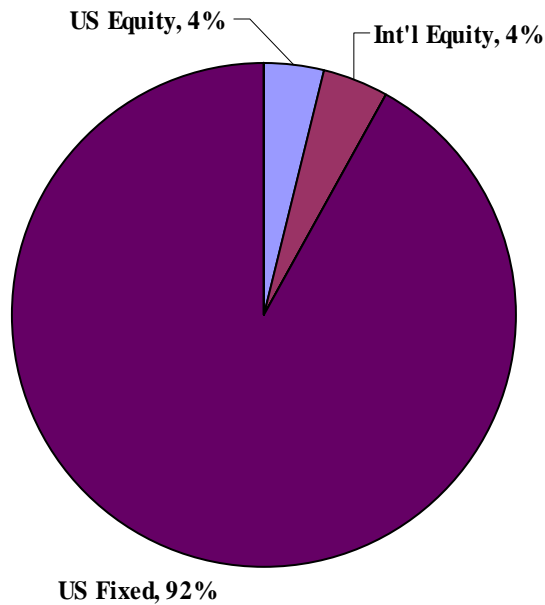


Recent Portfolio Events

- ▶ Domestic Equity has been added to the portfolio
 - ▶ Passive (or indexed) exposure
 - ▶ Dollar cost averaging to minimize risk
 - ▶ 4% position as of 8/31
- ▶ International Equity has been added to the portfolio
 - ▶ Passive (or indexed) exposure
 - ▶ Developed countries only to minimize risk
 - ▶ Dollar cost averaging to minimize risk
 - ▶ 4% position as of 8/31
- ▶ Fixed income (bond) investments - interest rate risk has been reduced and portfolio has become more diversified
- ▶ 100% externally advised by best in class fiduciaries

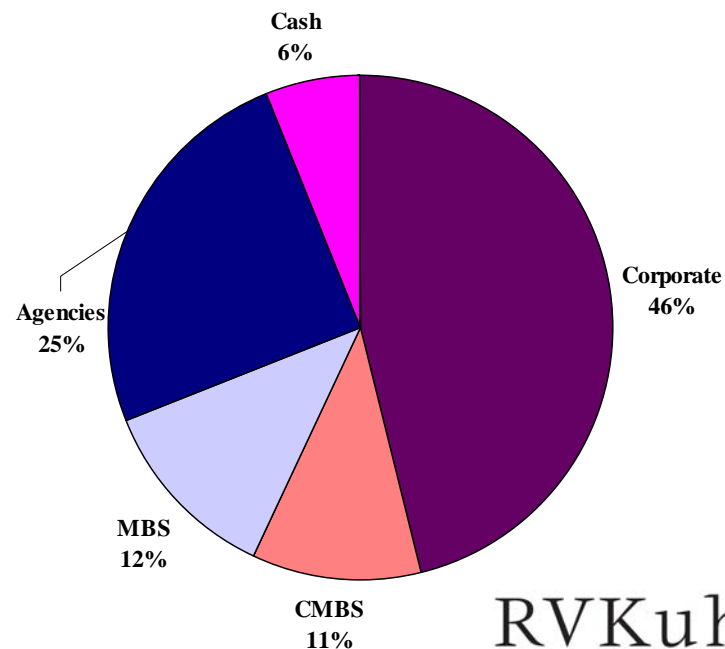
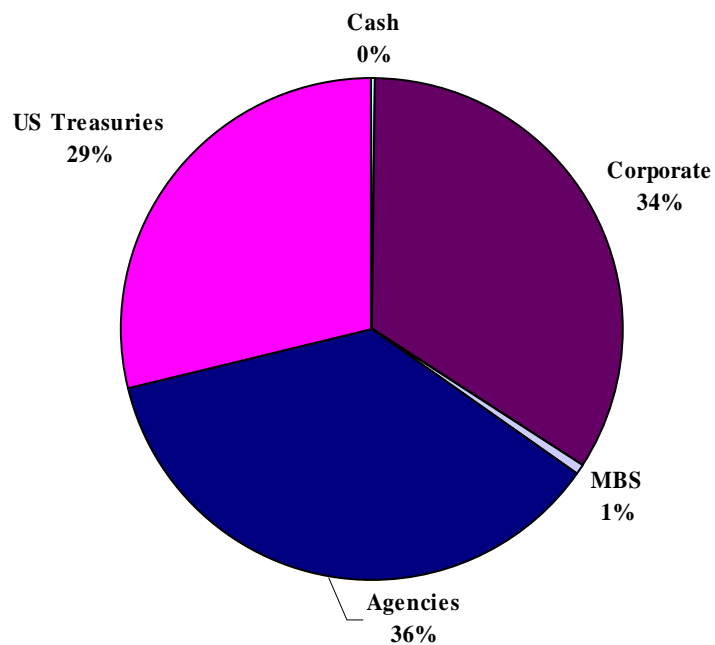
Recent Portfolio Events

- ▶ TMRS asset allocation compared to average public retirement fund equity asset allocation (2008)



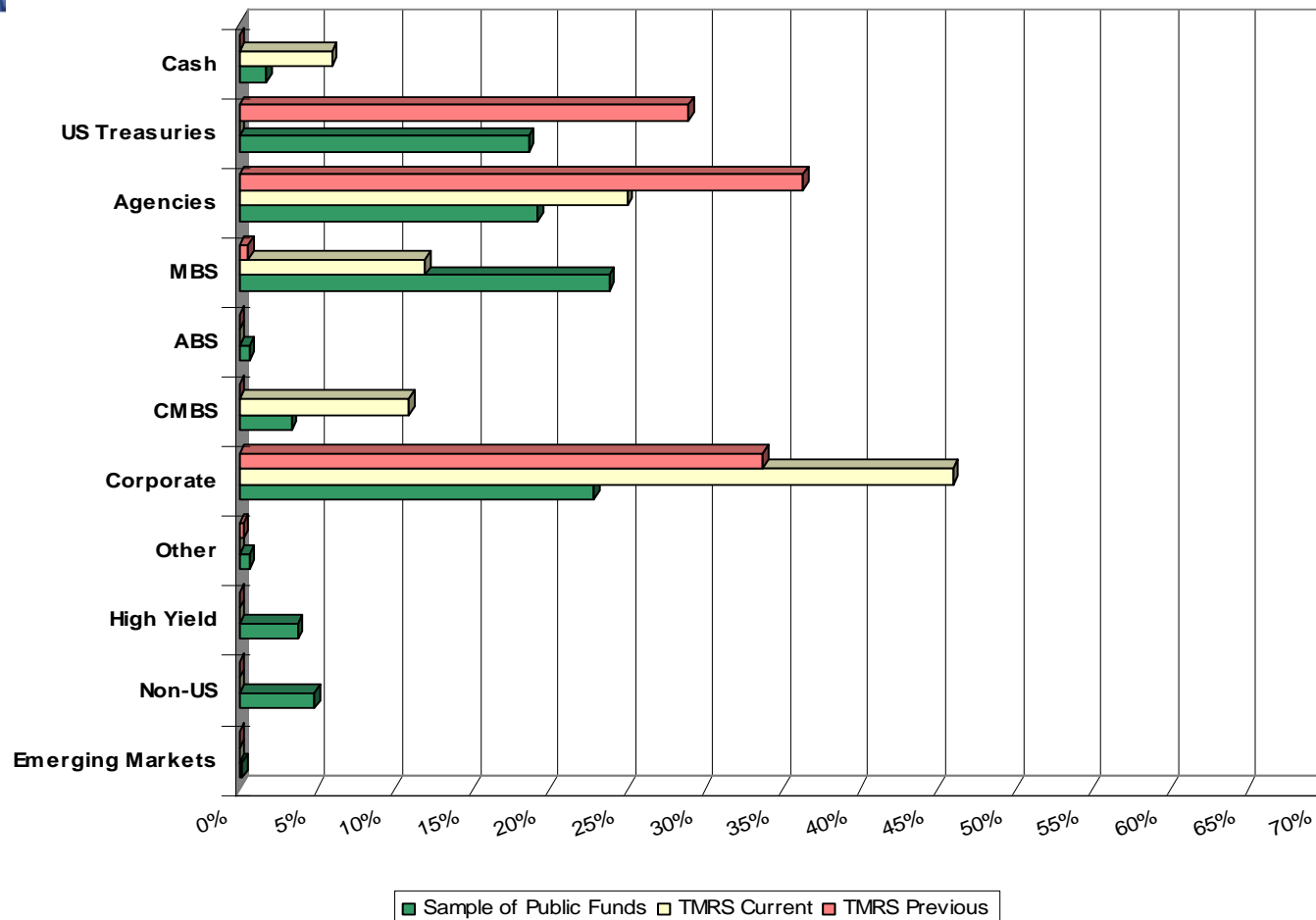
Recent Portfolio Events

- ▶ TMRS fixed income previous and current allocations
 - ▶ Additional sectors to diversify risk and maintain income or yield



Recent Portfolio Events

TMRS Comparison





Future Portfolio Considerations: “What Lies Ahead?”



What Lies Ahead?

- ▶ Total return orientation
 - ▶ Allows for meeting the participants financial needs through higher returns at moderate levels of risk
 - ▶ Requires legislative change from current income only orientation
 - ▶ A switch from an income only to total return orientation is a legislative process, to be followed by a TMRS policy decision



What Lies Ahead?

- ▶ More diversification – (total return orientation required)
 - ▶ Continued diversification within existing asset classes and consideration of new asset classes
 - ▶ Commercial real estate
 - ▶ Inflation oriented asset classes
 - ▶ Non-U.S. bonds
 - ▶ Alternatives



What Lies Ahead?

- ▶ Optimal diversification will require additional legislative change to allow for discretionary mandates
 - ▶ External advisory mandates to assist in the interim
 - ▶ Straightforward, slow, and methodical
 - ▶ Eventually leading up to discretionary mandates

- ▶ Best-in-class investors
 - ▶ R.V. Kuhns assists in competitive search and selection process
 - ▶ No conflicts of interest
 - ▶ Continual monitoring
 - ▶ Participants' best interests come first



Questions?