

How Diversification Really Works

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- Federal Times' "Money Matters" Columnist
- "Ask the Experts" Panelist at www.federaltimes.com

Course Content

1. Success and Failure in Retirement Investing
2. Defining Retirement Resources, Goals and Constraints
3. Understanding Investment Risk and Return
- 4. How Diversification Really Works**
5. Asset Classes and Types – Diversification and Concentration
6. Understanding Asset Allocation and Hedging
7. Setting Investment Performance Expectations
8. Managing Investment Costs
9. The Case for Index Investing
10. Accounting for Inflation in Retirement Planning
11. Managing Portfolio Liquidity
12. Organizing Your Portfolio

SEA Member Benefits

- Free Hour of Consulting / Analysis
 - \$250 Vantage Discount
- Email Questions to me at mmiles@variplan.com

Understanding Investment Risk and Return

Investment risk is the possibility that an investment will produce an unexpected return.

Investment risk applies to:

- Average Rate of Return
- Periodic Returns (Sequence)

Investment Return

Investment return is the change in value that an investment produces in exchange for taking risk.

Investment return consists of:

- Yield
- Price Appreciation / Depreciation

Investment Risk and Return

- Risk and return are tied together.
 - Risk is the means to an end.
- Risk and return can be quantified and managed.
 - You should expect to be paid to take risk.

Investment Risk and Return

When it comes to investing for retirement income, the primary objective is to realize the expected return in each and every period.

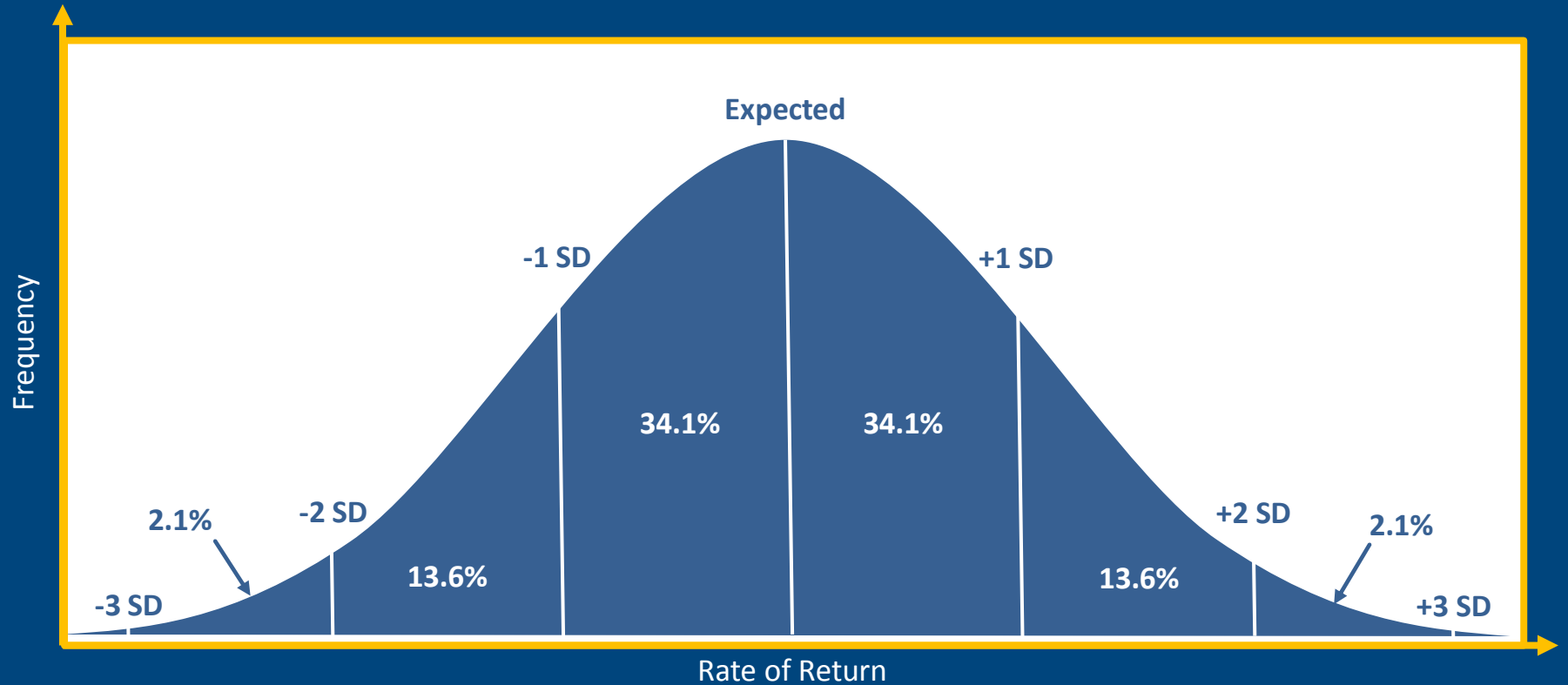
Predictability is the most valuable commodity.

Quantifying Risk and Return

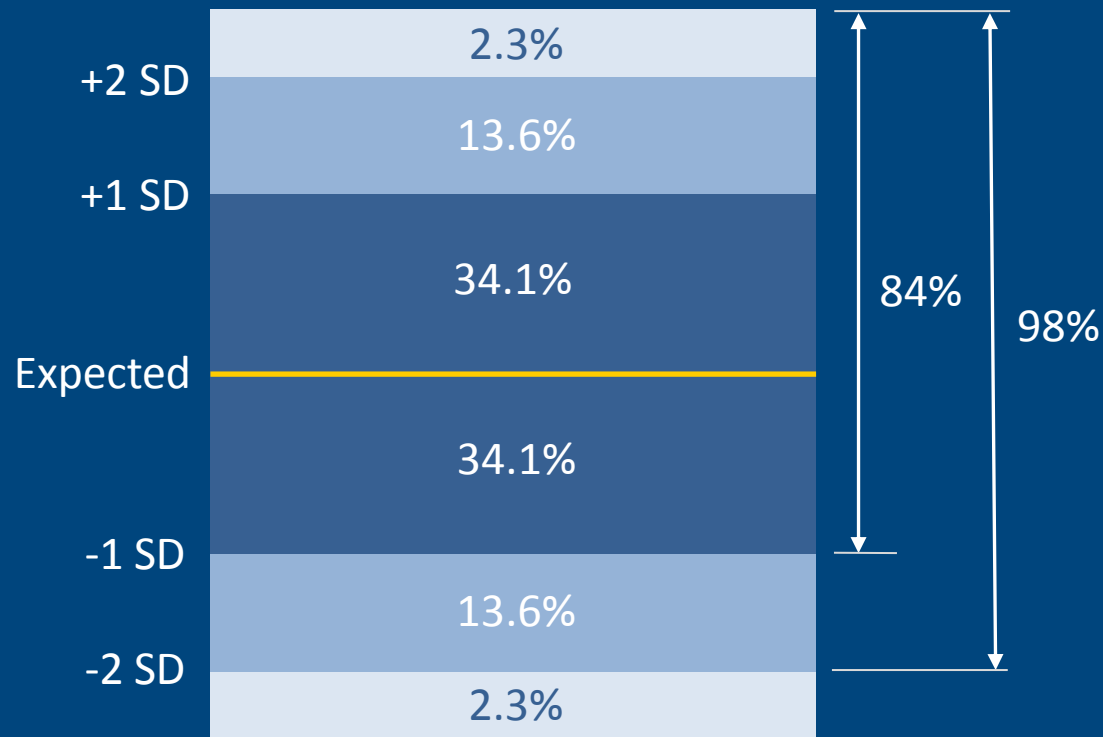
Return is expressed as a percentage of the amount invested.

Risk is usually expressed as Standard Deviation.

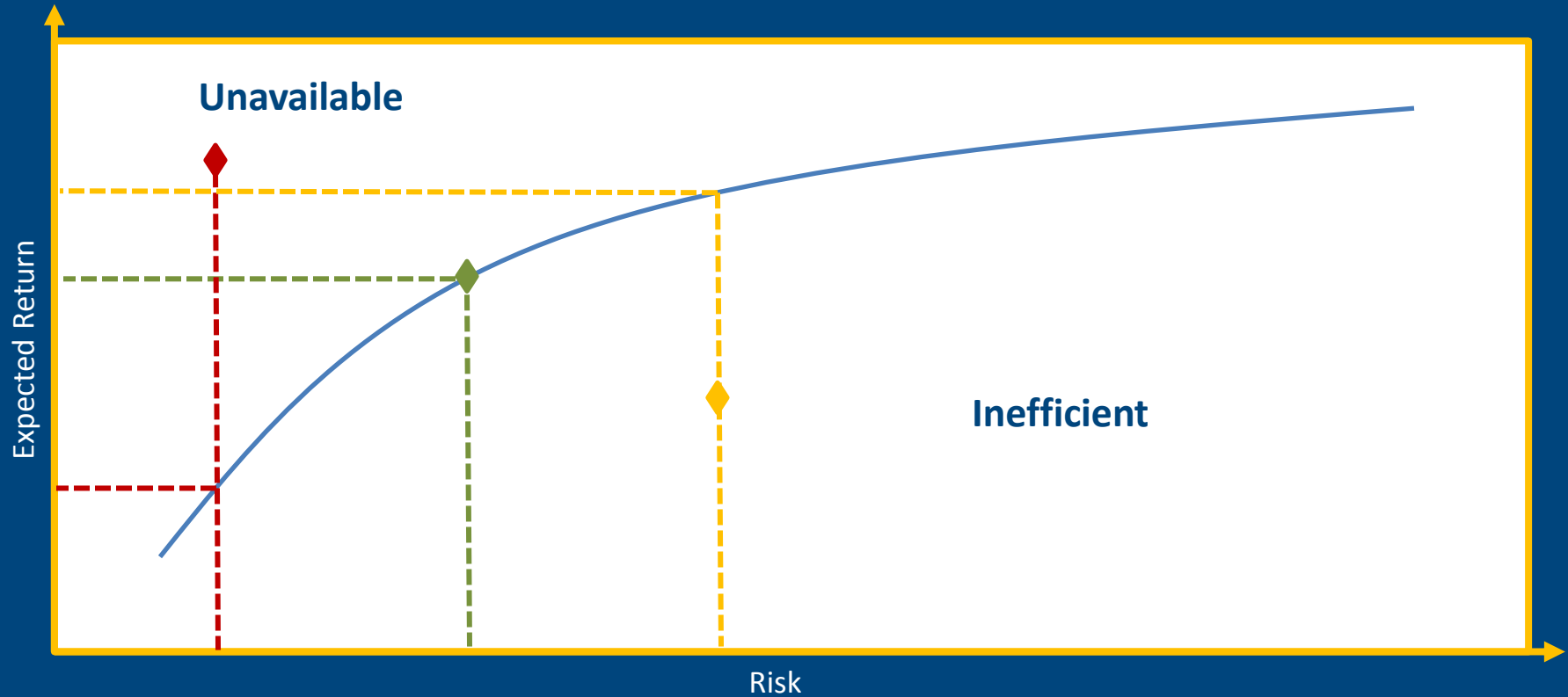
Standard Deviation



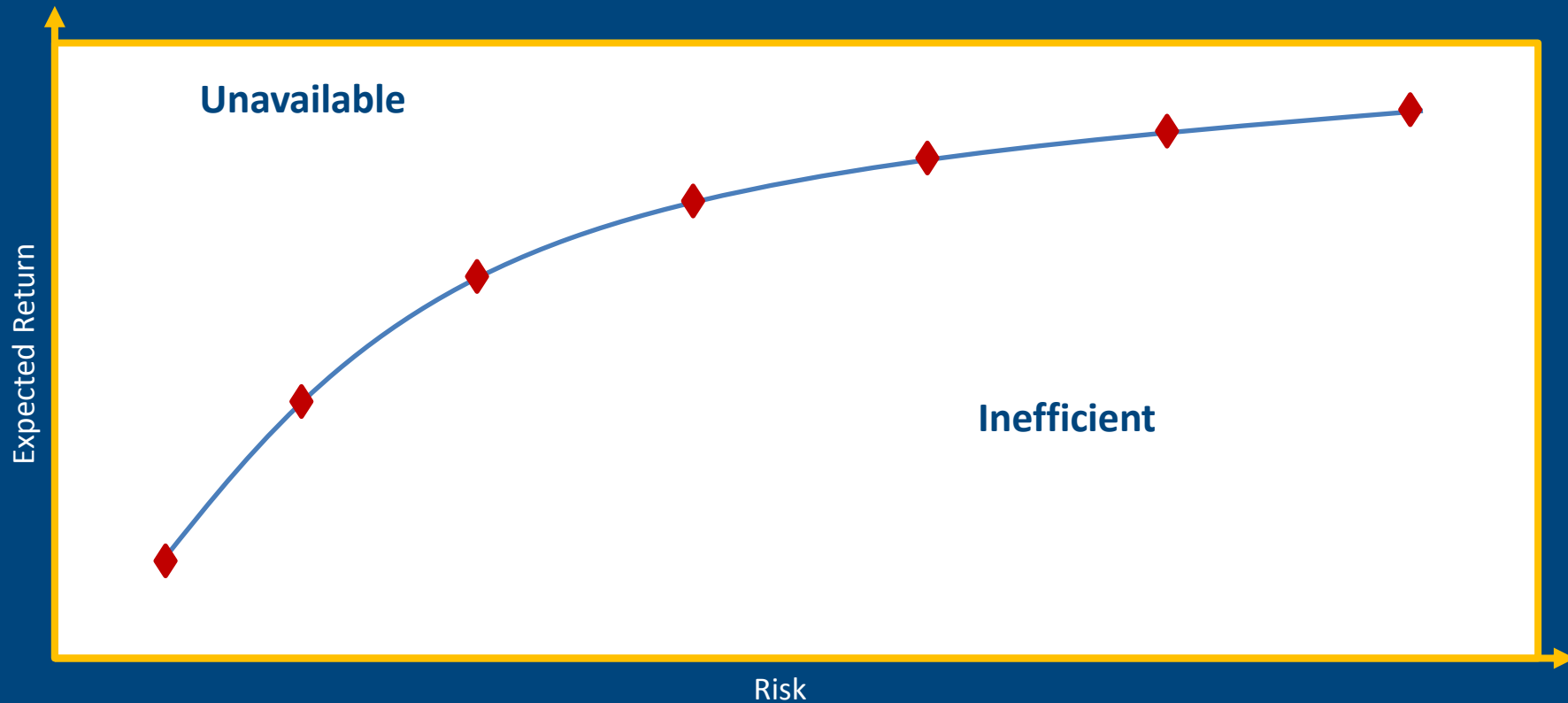
Standard Deviation



The Efficient Frontier



Designing Efficient Portfolios



The Way Diversification Really Works

Financial Planning and Management



- Wants
- Needs

- **Guaranteed**
 - Annuities
 - Insurance
- **At Risk**
 - **Liquid Assets**
 - Cash
 - Marketable Securities
 - **Illiquid Assets**
 - Real Estate
 - Business Interests

- **Action**
 - Constraints
- **Decisions**
- **Analysis**
 - Assumptions
 - Experience
 - Probabilities
 - Estimates

- **Risk**
- **Return**

- Cash Flow
- Wealth

Inflation & Taxes

Diversification

- Intra-Market (Within Markets)
- Inter-Market (Between Markets)

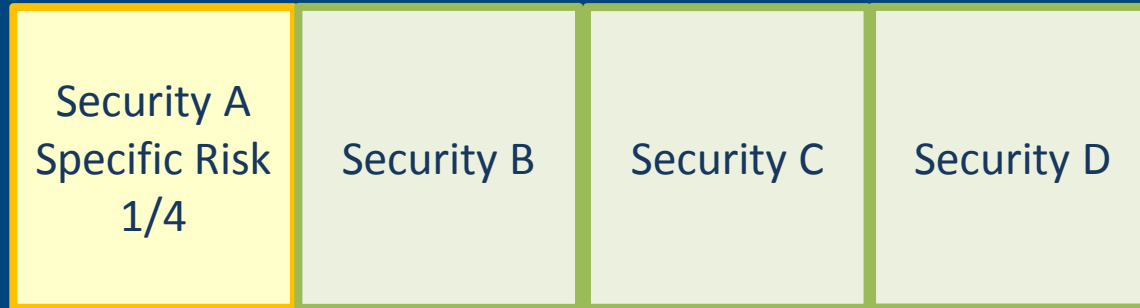
Intra-Market Diversification

Security A
Specific Risk
1

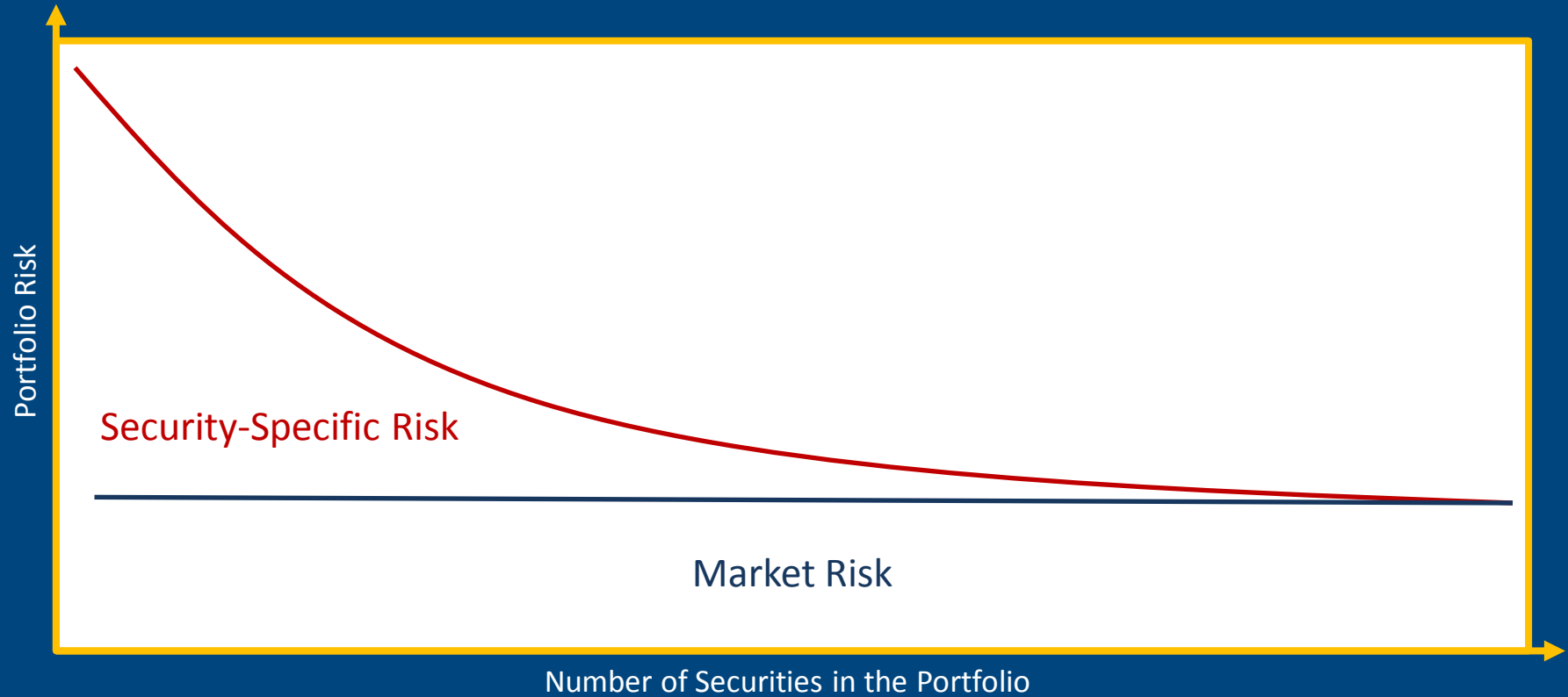
Intra-Market Diversification



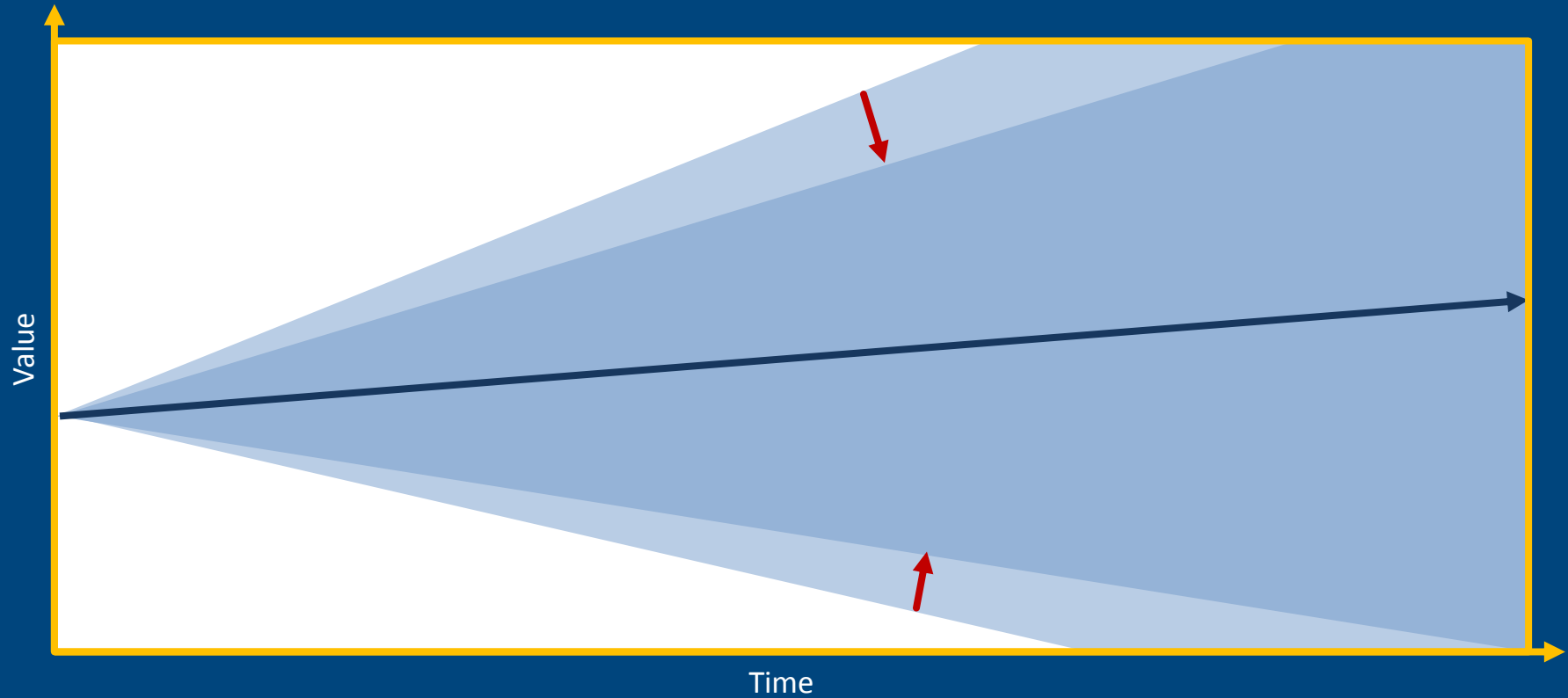
Intra-Market Diversification



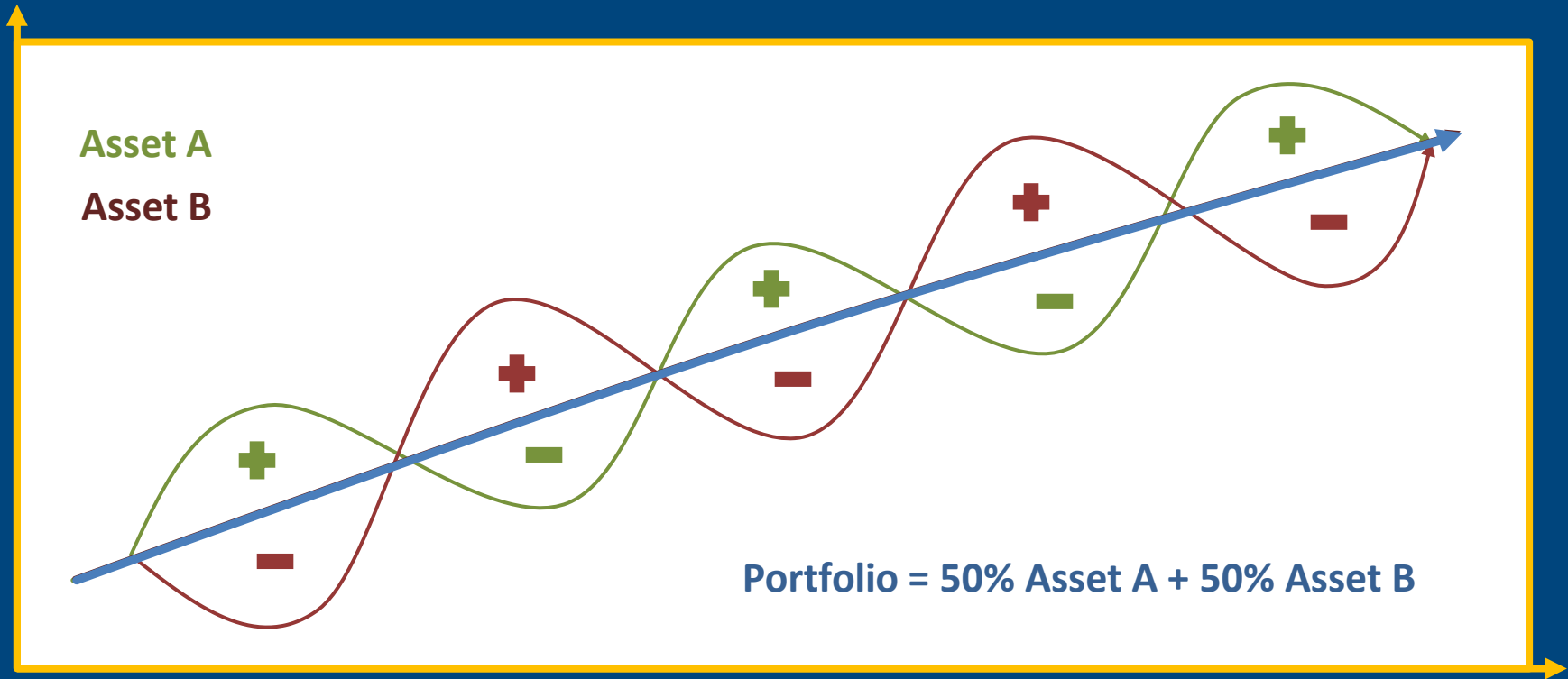
Intra-Market Diversification



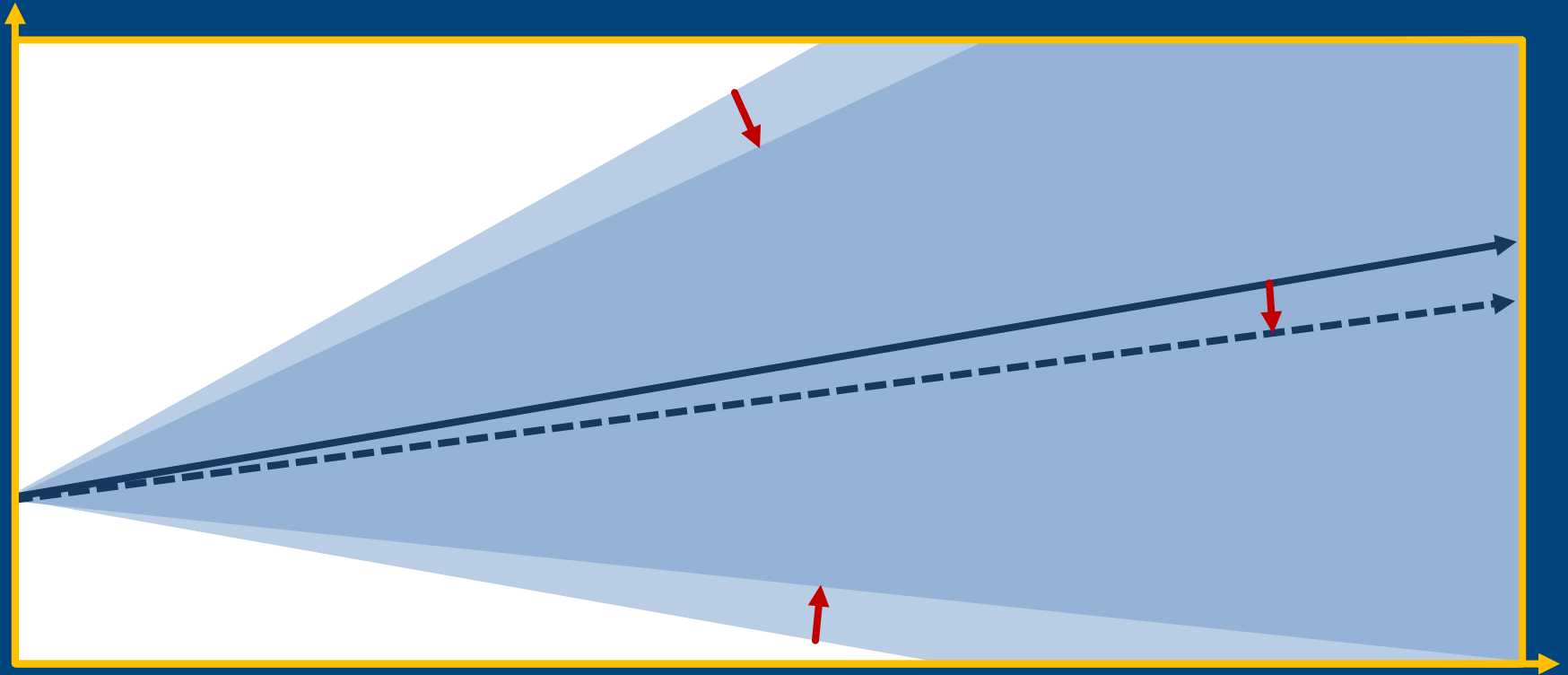
Intra-Market Diversification



Inter-Market Diversification

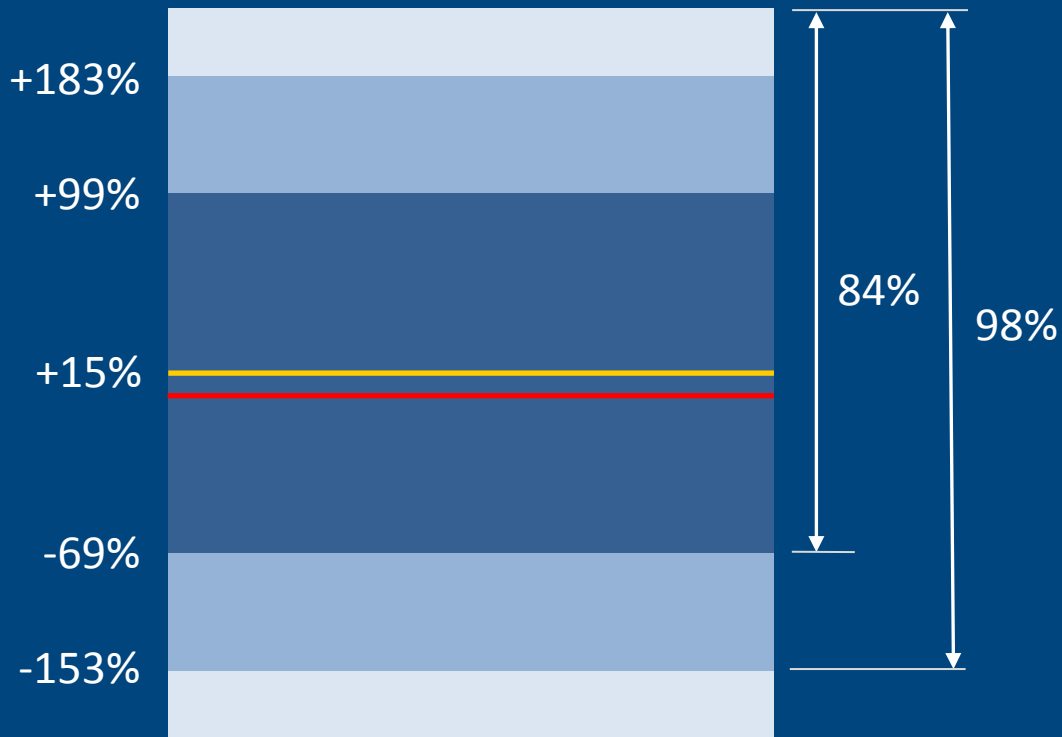


Inter-Market Diversification



Single Small Cap Stock

Expected Annual Return: 15%
Standard Deviation: 84%



The Efficient Frontier

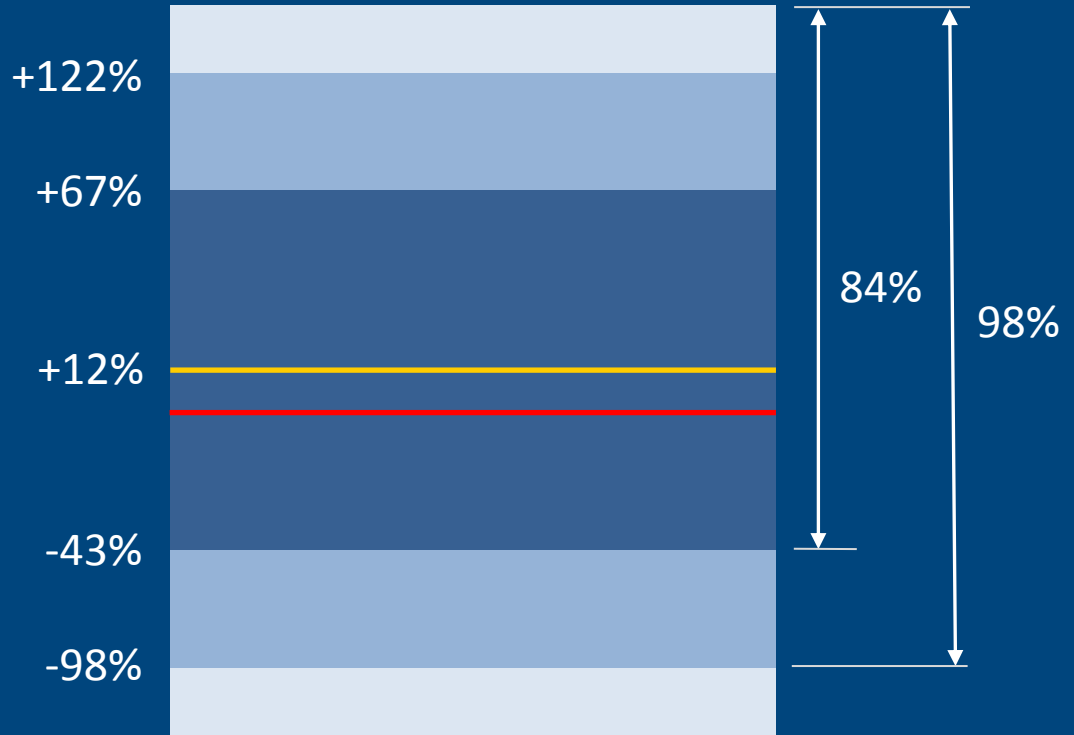


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Single Large Cap Stock

Expected Annual Return: 12%
Standard Deviation: 55%



The Efficient Frontier

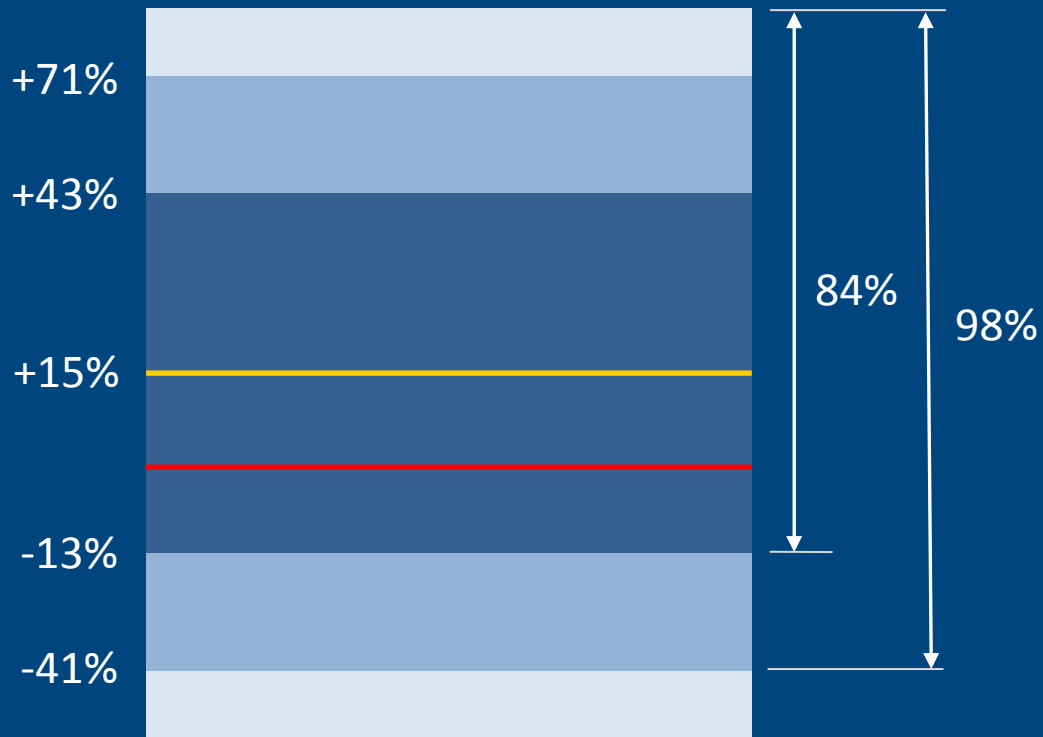


The Efficient Frontier



Small Cap U.S. Stocks – S Fund

Expected Annual Return: 15%
Standard Deviation: 28%



The Efficient Frontier

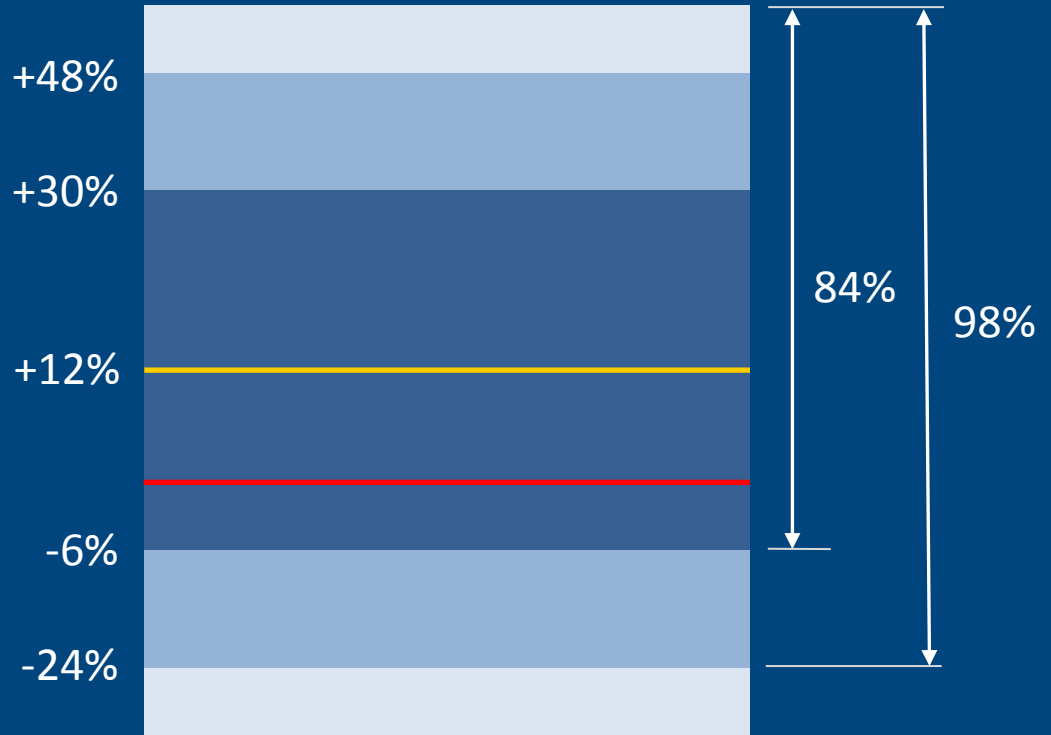


The Efficient Frontier



Large Cap U.S. Stocks – C Fund

Expected Annual Return: 12%
Standard Deviation: 18%



The Efficient Frontier

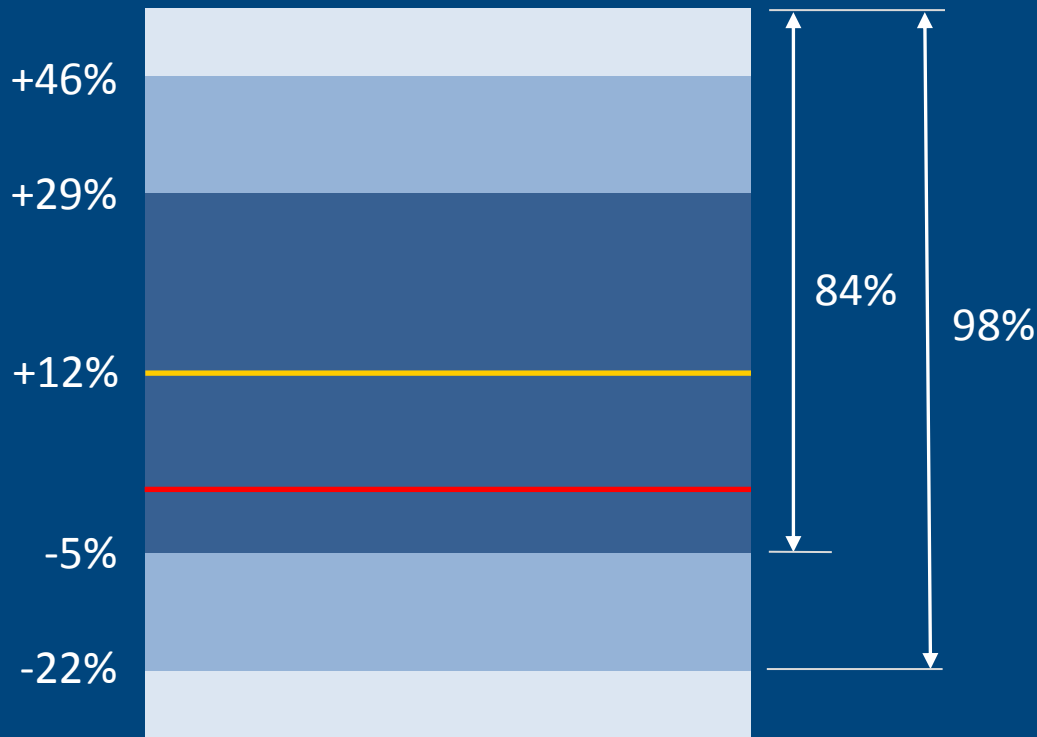


The Efficient Frontier



Aggressive Portfolio

55% C Fund
26% S Fund
9% I Fund
1% G Fund
9% F Fund



The Efficient Frontier

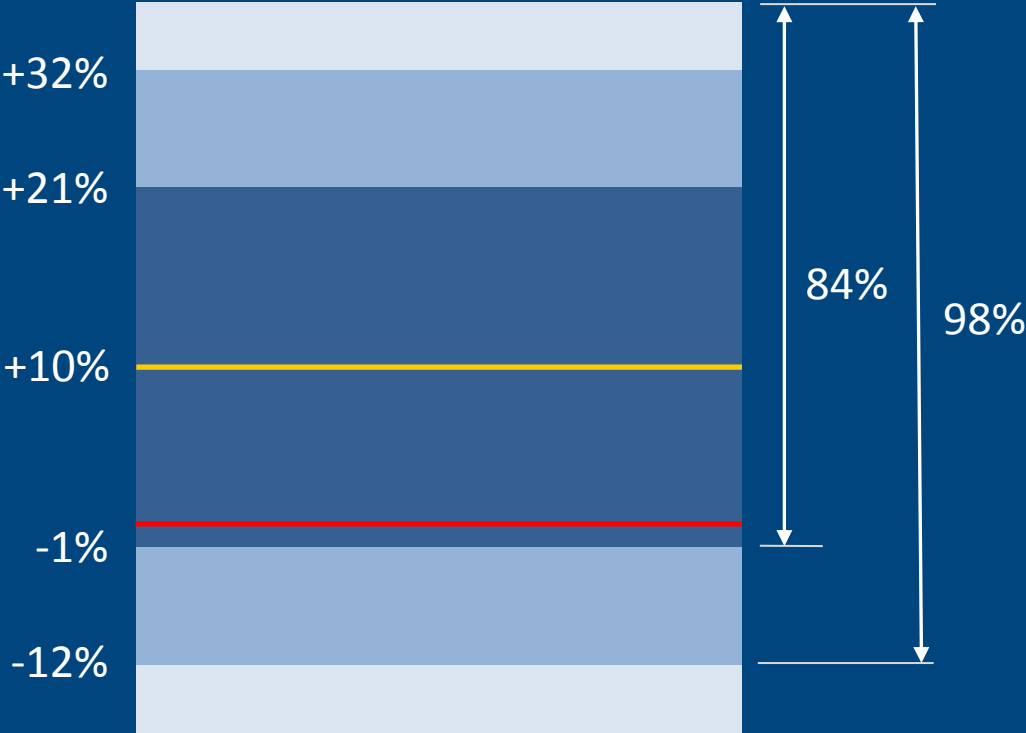


The Efficient Frontier



Balanced Portfolio

- 40% C Fund
- 15% S Fund
- 5% I Fund
- 3% G Fund
- 37% F Fund



The Efficient Frontier

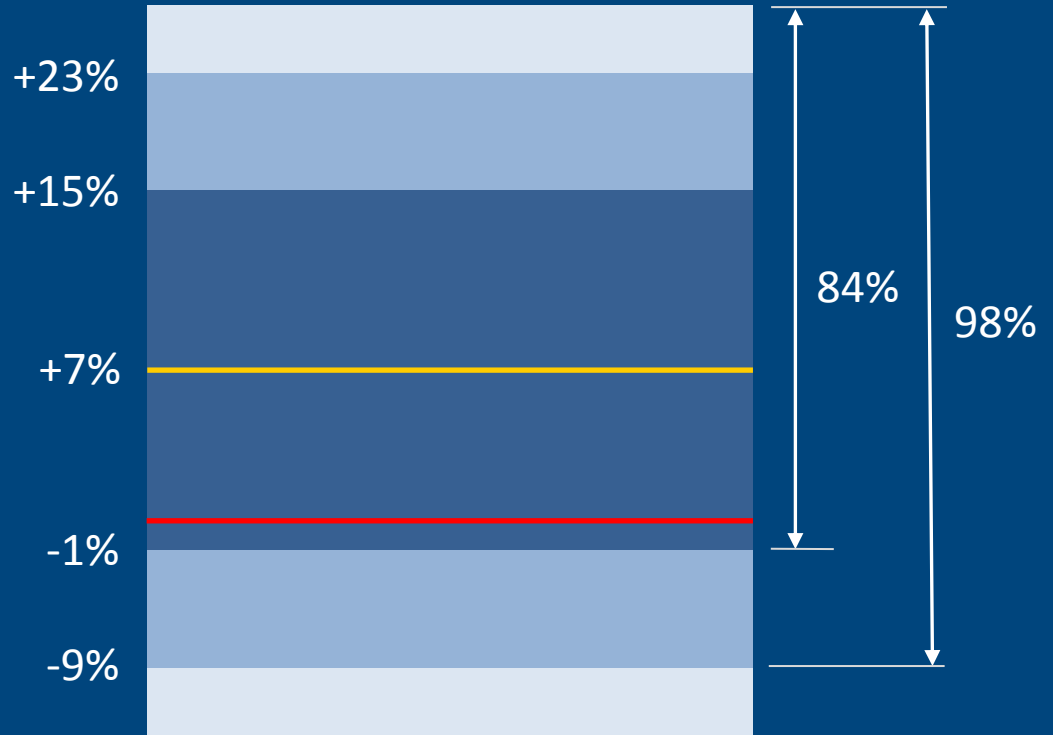


The Efficient Frontier



Conservative Portfolio

20% C Fund
7% S Fund
3% I Fund
10% G Fund
60% F Fund



The Efficient Frontier



The Efficient Frontier



Diversification

- Essential for Risk Efficiency
- Reduces Risk Faster than Return
 - Is Not Arbitrary
- Is Easily Accomplished in the TSP

Next Week's Webinar

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2. Defining Retirement Resources, Goals and Constraints
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