All investing involves risks and costs. Your advisor can provide you with more information about the risks and costs associated with specific programs. No investment strategy (including asset allocation and diversification strategies) can ensure peace of mind, assure profit, or protect against loss.

This booklet is based on the views of Matson Money, Inc. Other persons may analyze investments and the approach to investing from a different perspective than that reflected in this booklet. Nothing included herein is intended to infer that the approach to investing espoused in this booklet will assure any particular results.
What is the Efficient Frontier?

The Efficient Frontier is a line created from a risk reward graph, comprised of optimal portfolios.

Every possible risky asset and combination of risky assets can be plotted on a risk/return graph.

Portfolios along the efficient frontier line are “optimal”.

The line defines the set of portfolios comprised of risky assets for which one cannot improve both risk and return.

- Portfolios that fall below the line are **suboptimal** portfolios.
- Portfolios above the line are **unachievable**.
You can plot any two assets or portfolios on a risk/return graph. All you need is their specific historical return and standard deviation.

When the assets are perfectly correlated, every mix of these two assets would fall somewhere on a perfectly straight line between two points.

A 50/50 mix would fall dead center and be a simple average of the two assets’ risk and return profiles.
In all other scenarios, where assets are not perfectly correlated, things change in a very exciting way...

1. The Risk/Return characteristics now change in a non-linear fashion
2. Portfolios above the line are unachievable.

This lack of correlation pulls the line out and to the left, resulting in a rounded line.

- Now every combination/weighting of the two risky assets will fall on this curved line.
The Sharpe Ratio


\[ S(x) = \frac{(r_x - R_f)}{\text{StdDev}(x)} \]

- Measures the risk premium (premium above the risk-free rate) per unit of risk for an asset or portfolio.

- A measure of ________.

After creating an efficient frontier, the Sharpe Ratio can be used to determine the most efficient mix of assets.

The single most efficient mix will be where a tangent line from the risk-free return crosses the efficient frontier.

For illustrative purposes only. Not based on actual data.
The Sharpe Ratio

This does not mean that this is necessarily the portfolio you should be holding.

- All it implies is that this is

- From here you need to understand personal risk tolerance and return needs.

WE CAN SEE THIS IN THE FMIA

<table>
<thead>
<tr>
<th>Portfolio (1973-2011)</th>
<th>Return</th>
<th>Risk</th>
<th>Sharpe Ratio*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservative^{24.5}</td>
<td>9.15%</td>
<td>6.46</td>
<td>1.10</td>
</tr>
<tr>
<td>Moderate^{24.5}</td>
<td>10.65%</td>
<td>10.49</td>
<td>0.82</td>
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<tr>
<td>Growth^{24.5}</td>
<td>11.89%</td>
<td>15.32</td>
<td>0.65</td>
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<tr>
<td>Aggressive^{24.5}</td>
<td>12.64%</td>
<td>19.54</td>
<td>0.54</td>
</tr>
<tr>
<td>S&amp;P 500^{3,4}</td>
<td>9.61%</td>
<td>18.35</td>
<td>0.41</td>
</tr>
</tbody>
</table>

* Assumes risk-free rate of 2%. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE PERFORMANCE.
The Picture of Efficiency 1,2,3,4,5

There are several important aspects to the actual shape of the Efficient Frontier.

- The curve of the line wraps back under itself.
- The slope declines as we get further out.

For illustrative purposes only. Not based on actual data.

Past Performance is no guarantee of future performance.
At some point overweighting towards asset (or class) becomes inefficient despite technically being on the efficient frontier.

This is why we do not typically recommend 100% fixed income portfolio.

- You can potentially add equities to a portfolio without adding additional risk.
- The slope declines as we get further out.

Additionally, notice that as you go out on the top right, the “efficiency” of the portfolio decreases.

- What you gain in return does not keep up incrementally with the increase in risk (line flattens out).
- Adding equal increments of risk gives you diminishing increments of return.

SO WHAT?
WHAT DO YOU MEAN, “SO WHAT?”

This is not all theoretical... It has practical application.

LOOK FAMILIAR?

• Efficiency is CRITICAL...inefficiency SUCKS.

• Efficiency can be measured.

• Most people do not know how efficient their portfolios are.

• Efficiency absolutely requires engineering and discipline.
1. Have you discovered your True Purpose for Money, that which is more important than money itself?

☐ YES ☐ NO

2. Are you invested in the Market?

☐ YES ☐ NO

3. Do you know how markets work?

☐ YES ☐ NO

4. Have you defined your Investment Philosophy?

☐ YES ☐ NO

5. Have you identified your personal risk tolerance?

☐ YES ☐ NO

6. Do you know how to measure diversification in your portfolio?

☐ YES ☐ NO

7. Do you consistently and predictably achieve market returns?

☐ YES ☐ NO

8. Have you measured the total amount of commissions and costs in your portfolio?

☐ YES ☐ NO

9. Do you know where you fall on the Markowitz Efficient Frontier?

☐ YES ☐ NO

10. When it comes to building your investment portfolio, do you know exactly what you are doing and why?

☐ YES ☐ NO
11. Are you working with a financial coach versus a financial planner?

- [ ] YES
- [ ] NO

12. Do you have a customized lifelong game plan to guide all of your investing and spending decisions?

- [ ] YES
- [ ] NO

13. Do you have an Investment Policy Statement?

- [ ] YES
- [ ] NO

14. Have you devised a clear-cut method for measuring the success or failure of your portfolio?

- [ ] YES
- [ ] NO

15. Do you fully understand the implications and applications of diversification in your portfolio?

- [ ] YES
- [ ] NO

16. Do you have a system to measure portfolio volatility?

- [ ] YES
- [ ] NO

17. Are you aware of the incentives brokerage firms and the financial community have when selling commission-based products?

- [ ] YES
- [ ] NO

18. Do you know the three warning signs that you are gambling and speculating with your money versus prudently investing it?

- [ ] YES
- [ ] NO

19. Can you identify the cultural messages and personal mind-sets about money that destroy your peace of mind?

- [ ] YES
- [ ] NO

20. Are you ready to shift your personal experience of money and investing from a scarcity mode to an abundance mode?

- [ ] YES
- [ ] NO

When you have achieved the ability to answer “yes” to all of these questions, you will be on your way to a high level of peace of mind.
1. All investing involves risk and costs. Your advisor can provide you with more information about the risks and costs associated with specific programs. No investment strategy (including asset allocation and diversification strategies) can ensure peace of mind, assure profit, or protect against loss.


3. The information regarding the index/indices is included merely to show the general trends in the periods indicated and is not intended to imply that the fund/portfolio/composite was similar to the index/any of the indices in composition or risk.

4. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE PERFORMANCE. Index performance returns do not reflect any management fees, transaction costs or expenses. In addition, the index is unmanaged and not available for direct investment; therefore its performance does not reflect the expenses associated with the active management of an actual portfolio.

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<thead>
<tr>
<th>ASSET CLASSES</th>
<th>CONSERVATIVE</th>
<th>MODERATE</th>
<th>GROWTH</th>
<th>AGGRESSIVE</th>
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<tbody>
<tr>
<td>FIXED INCOME</td>
<td></td>
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<tr>
<td>Cash Equivalents</td>
<td>2%</td>
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<tr>
<td>Short-Term Fixed Income</td>
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<td>5-Year Government Bonds</td>
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<td>U.S. EQUITY</td>
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<td>Large Cap Stocks</td>
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<td>11.85%</td>
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