



# The Yin and Yang of Risk Assets

**March 17th, 2021**

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President & CEO

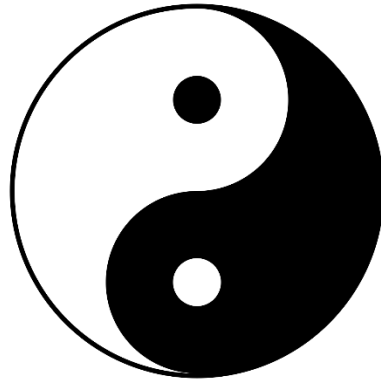


STRATEGIC ASSET ALLIANCE  
THE INSURANCE INVESTMENT SPECIALIST

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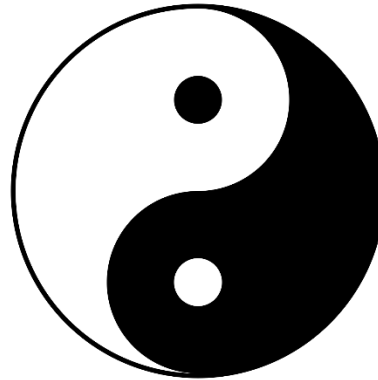
**What are your insurer's risk asset investments?**

 Start presenting to display the poll results on this slide.



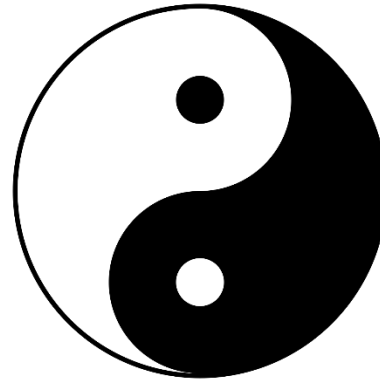
| Yin       | Yang   |
|-----------|--------|
| Receptive | Active |
| Winter    | Summer |
| Disorder  | Order  |
| Risk      | Reward |





| Risk   | Reward  |
|--|---|
| Can be overdiversified (5% heuristic)                              | Diversifier that can improve risk adjusted return |
| Can be over valued   | Higher investment income (sometimes)              |
| Downside can be vicious and timely, resulting in decreased surplus | Upside results in increased surplus               |





| Sources of Risk                 | Sources of Reward                |
|---------------------------------|----------------------------------|
| Drawdown and Volatility         | Dividends or interest            |
| Capital losses                  | Capital gains                    |
| Mean reversion (if over valued) | Mean reversion (if under valued) |



# Building Block #1: Risk Appetite



| Risk Assets-to-Surplus Ratio | Net Assets/Surplus (\$MM) | Risk Assets (\$MM) | Risk Assets As % of Total Portfolio | Surplus Level (\$MM): Worst negative return trend | Downside Impact: As % of Surplus | Surplus Level (\$MM): Worst Calendar Year Decline | Downside Impact: As % of Surplus |
|------------------------------|---------------------------|--------------------|-------------------------------------|---|----------------------------------|---|----------------------------------|
| 100%                         | \$2,076.4                 | \$2,076.4          | 54.90%                              | \$1,011.7   | -51.30%                          | \$1,260.8   | -39.30%                          |
| 85%                          | \$2,076.4                 | \$1,764.9          | 46.70%                              | \$1,164.3   | -43.90%                          | \$1,376.1   | -33.70%                          |
| 75%                          | \$2,076.4                 | \$1,557.3          | 41.20%                              | \$1,266   | -39.00%                          | \$1,452.9   | -30.00%                          |
| 65.60%                       | \$2,076.4                 | \$1,362.1          | 36.00%                              | \$1,361.7   | -34.40%                          | \$1,525.1   | -26.60%                          |
| 50%                          | \$2,076.4                 | \$1,038.2          | 27.50%                              | \$1,520.4   | -26.80%                          | \$1,645   | -20.80%                          |
| 40%                          | \$2,076.4                 | \$830.6            | 22.00%                              | \$1,622.1   | -21.90%                          | \$1,721.8   | -17.10%                          |
| 35%                          | \$2,076.4                 | \$726.7            | 19.20%                              | \$1,673   | -19.40%                          | \$1,760.2   | -15.20%                          |
| 30%                          | \$2,076.4                 | \$622.9            | 16.50%                              | \$1,723.9   | -17.00%                          | \$1,798.6   | -13.40%                          |
| 25%                          | \$2,076.4                 | \$519.1            | 13.70%                              | \$1,774.7   | -14.50%                          | \$1,837   | -11.50%                          |
| 20%                          | \$2,076.4                 | \$415.3            | 11.00%                              | \$1,825.6   | -12.10%                          | \$1,875.4   | -9.70%                           |
| 15%                          | \$2,076.4                 | \$311.5            | 8.20%                               | \$1,876.5   | -9.60%                           | \$1,913.8   | -7.80%                           |
| 10%                          | \$2,076.4                 | \$207.6            | 5.50%                               | \$1,927.3   | -7.20%                           | \$1,952.3   | -6.00%                           |



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**Assuming the previous slide is your insurer,  
what % of Surplus is your Risk Appetite?**

 Start presenting to display the poll results on this slide.



A good portfolio is more than a long list of good stocks and bonds. It is a balanced whole, providing the investor with protections and opportunities with respect to a wide range of contingencies.

— *Harry Markowitz* —

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# Diversification: “The Only Free Lunch in Investing”

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- Different assets zig when others zag
  
- Correlation statistic: -1 to +1
  - Plus 1: Perfect direct relationship
  - Minus 1: Perfect inverse relationship
  - Zero: No relationship
  
- Investment grade bonds are highly correlated with each other
  
- Risk assets not as highly correlated to IG bonds or many other risk assets
  
- But, what does that ‘Free Lunch’ of Diversification look like?



## Building Block #2: Correlations



| <b>Fixed Income</b>          | <b>Correlation to US Agg.</b> |
|------------------------------|-------------------------------|
| U.S. Aggregate               | 1.00                          |
| U.S. Municipal               | 0.64                          |
| U.S. Int. Treasury           | 0.79                          |
| U.S. Short Gov/Cred          | 0.76                          |
| U.S. TIPS                    | 0.74                          |
| U.S. Inv. Grade Corp         | 0.80                          |
| <b>Risk Assets</b>           |                               |
| U.S. High Yield              | 0.18                          |
| U.S. Leveraged Loans         | (0.06)                        |
| EM Sovereign                 | 0.53                          |
| EM Corporate                 | 0.44                          |
| U.S. Large Cap               | 0.00                          |
| U.S. Mid Cap                 | 0.01                          |
| U.S. Small Cap               | (0.07)                        |
| EAFE                         | 0.07                          |
| EM Equity                    | 0.12                          |
| U.S. REITs                   | 0.28                          |
| Global Equity                | 0.05                          |
| Global Infrastructure Equity | (0.03)                        |
| Private Equity               | (0.22)                        |



## Building Block #2: Return and Risk Assumptions



| <i>Asset Class</i>           | <i>Forecast (Annualized)</i> |             |
|------------------------------|------------------------------|-------------|
|                              | <i>Pre-Tax Return</i>        | <i>Risk</i> |
| <b>Fixed Income</b>          |                              |             |
| U.S. Aggregate               | 2.10%                        | 3.43%       |
| U.S. Municipal               | 1.90%                        | 3.28%       |
| U.S. Int. Treasury           | 1.50%                        | 2.83%       |
| U.S. Short Gov/Cred          | 1.70%                        | 1.50%       |
| U.S. TIPS                    | 1.50%                        | 5.29%       |
| U.S. Inv. Grade Corp         | 2.50%                        | 6.22%       |
| <b>Risk Assets</b>           |                              |             |
| U.S. High Yield              | 4.80%                        | 8.33%       |
| U.S. Leveraged Loans         | 5.10%                        | 7.91%       |
| EM Sovereign                 | 5.20%                        | 8.82%       |
| EM Corporate                 | 4.70%                        | 8.52%       |
| U.S. Large Cap               | 4.10%                        | 14.80%      |
| U.S. Mid Cap                 | 4.40%                        | 16.93%      |
| U.S. Small Cap               | 4.60%                        | 19.44%      |
| EAFE                         | 6.50%                        | 16.92%      |
| EM Equity                    | 7.20%                        | 21.14%      |
| U.S. REITs                   | 6.50%                        | 15.34%      |
| Global Equity                | 5.10%                        | 15.76%      |
| Global Infrastructure Equity | 6.10%                        | 10.80%      |
| Private Equity               | 7.80%                        | 18.67%      |



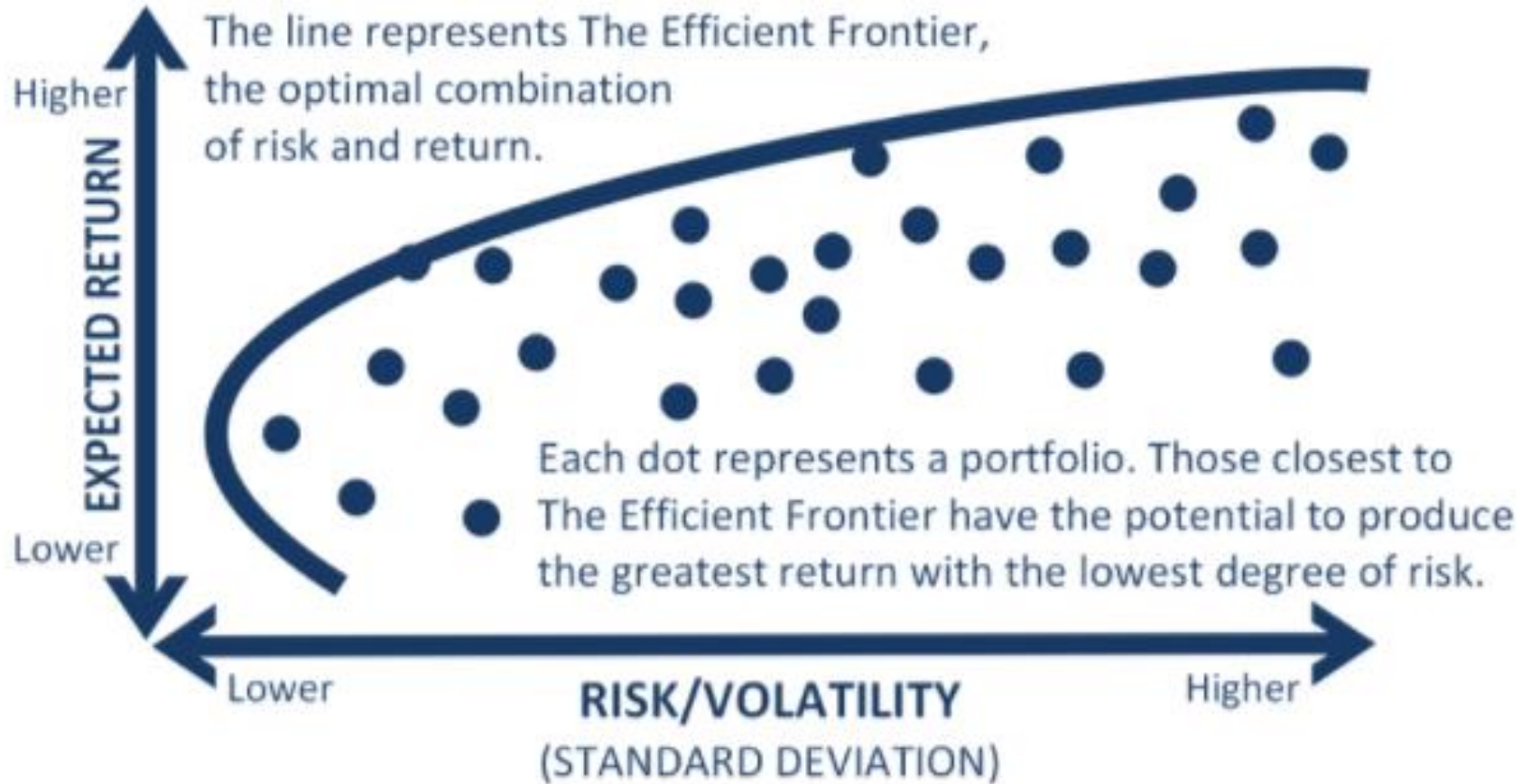
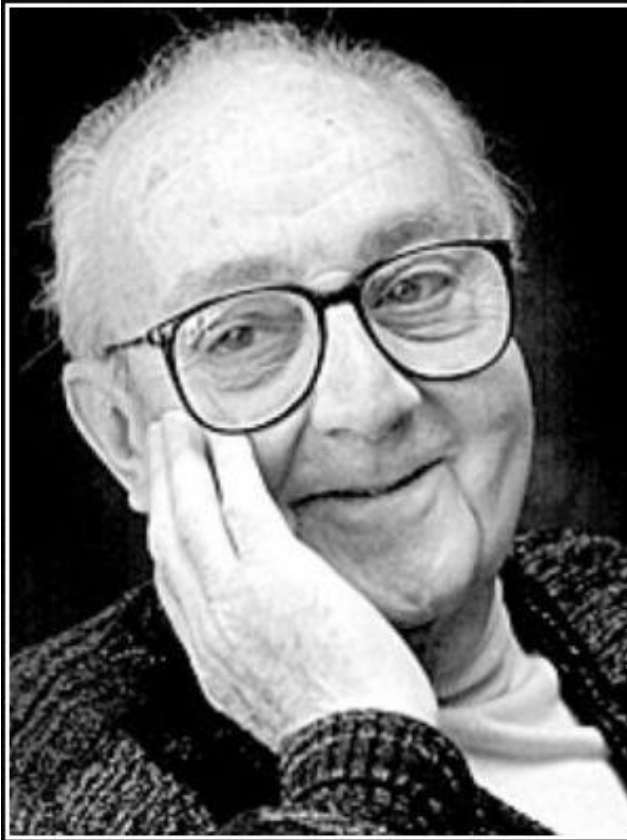


Figure 1: Efficient Frontier [2]





All models are wrong, but some are useful.

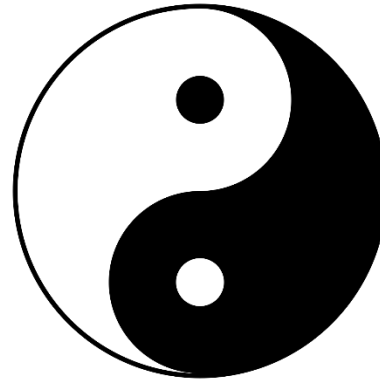
— *George E. P. Box* —

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**Risk Appetite**



**Efficient Frontier**

| Yin       | Yang   |
|-----------|--------|
| Receptive | Active |
| Winter    | Summer |
| Disorder  | Order  |
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