

# **Investment Portfolio**

for

# **High Risk Premium Programme (HIRP)**

**Nov 15, 2020**

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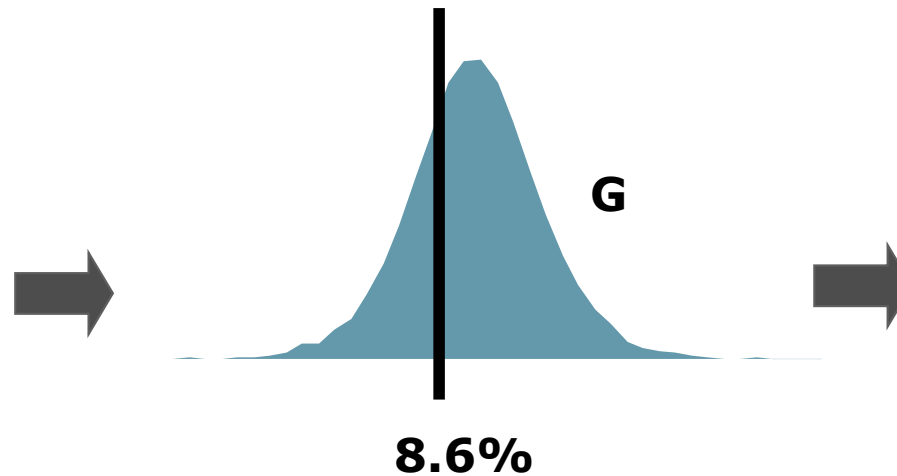
# **Portfolio Construction**

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## Inputs

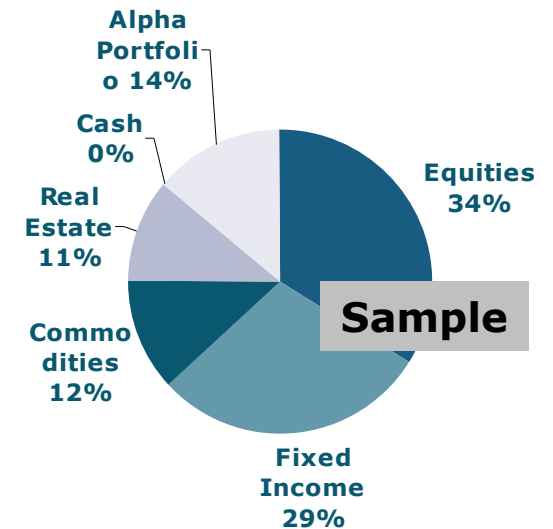
- Asset class return distributions, empirical.
- Correlation estimates between all assets.
- Objective
  - Minimum Return Target ("MRT").
  - Long-term return of global equities, 8.6% p.a.
- Constraints
  - Maximum leverage and borrowing.
  - Minimum allocations.

## Process



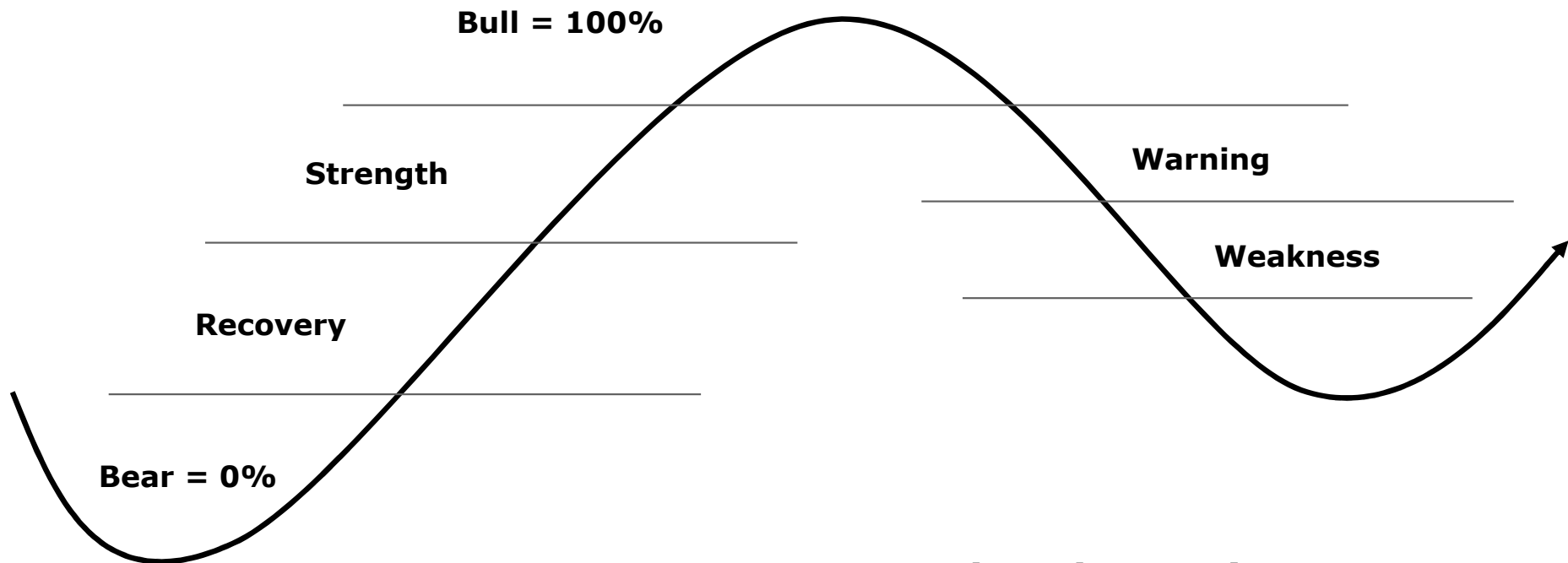
- Gain/Loss Optimization
  - Returns the portfolio that maximizes the probability of achieving a return above the Minimum Return Target.

## Outputs



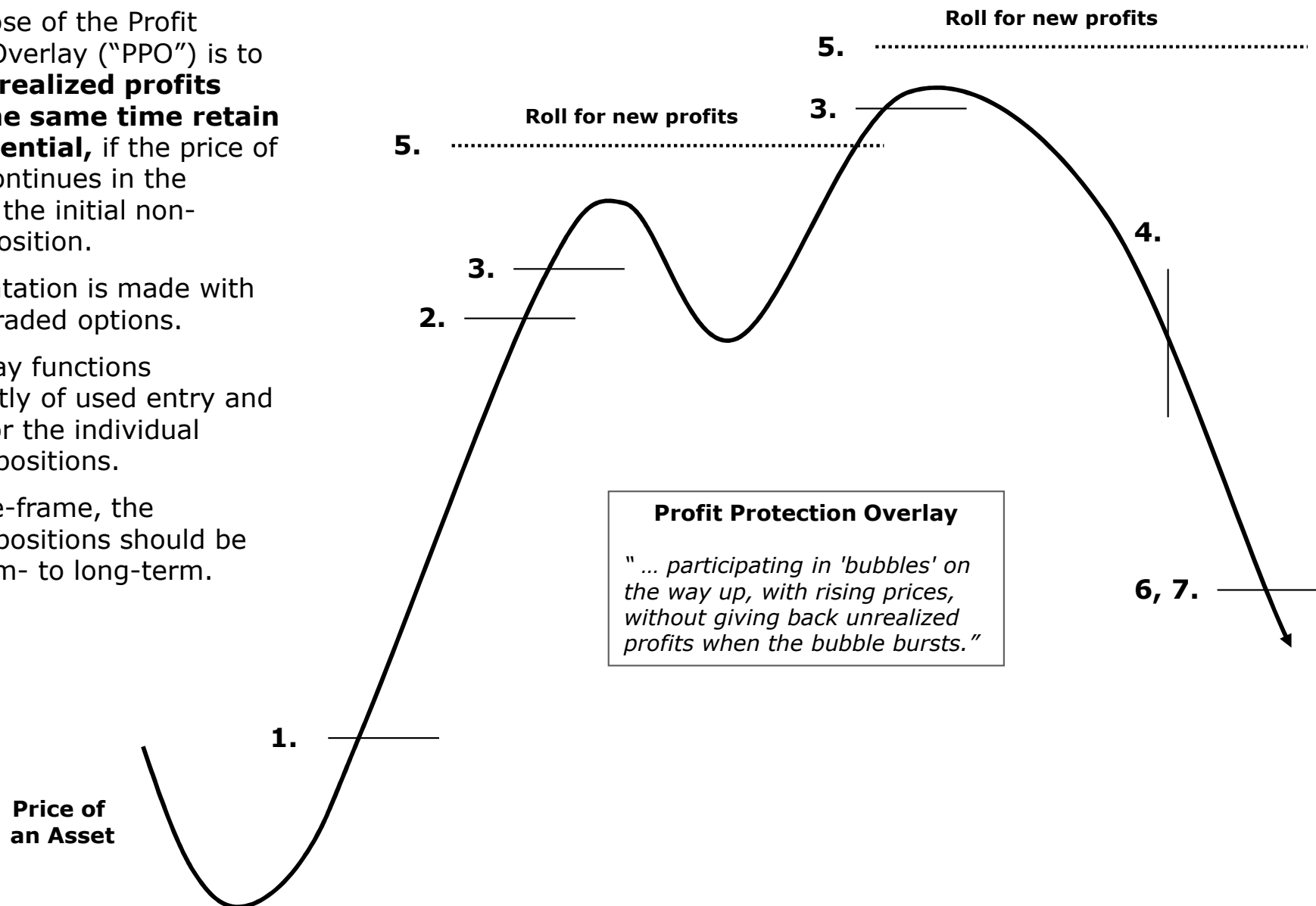
- Portfolio weights; how much?
- Expectation.
- Probability of outperformance.
- Risk of loss.
- ...

### Price cycle for an asset



### Trend Mode-varying exposure

- The purpose of the Profit Protection Overlay (“PPO”) is to **protect unrealized profits while at the same time retain upside potential**, if the price of the asset continues in the direction of the initial non-protected position.
- Implementation is made with exchange-traded options.
- The overlay functions independently of used entry and exit rules for the individual underlying positions.
- As to time-frame, the underlying positions should be held medium- to long-term.



# Strategic Portfolio

## Objectives

- Maximize the Gain/Loss of the distribution of expected return. Gain in the meaning of surpassing the Minimum Return Target, loss in the meaning of not.

## Constraints

- Minimum Return Target equal to long-term return of global equities – currently 8.6% p.a.
- Maximum leverage at 50%.
- Maximum borrowing at 50%.
- Minimum allocation to every Asset and Asset Class 3%.

## Investment Universe

- Viable Asset Categories
  - Equities, Fixed-income, Commodities, Real Estate, Cash.
- Assets and Asset Classes
  - 18 different, all with **high risk premium**.
- Pure beta exposure in the portfolio, i.e. no alpha components.
- Exchange-traded options, with adequate liquidity, should be available for all assets and asset classes.

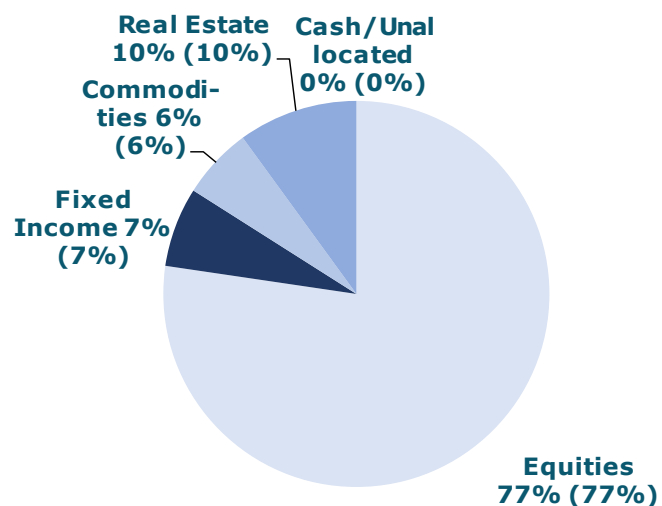
## Other

- Cost of funding
  - 1.59% p.a.



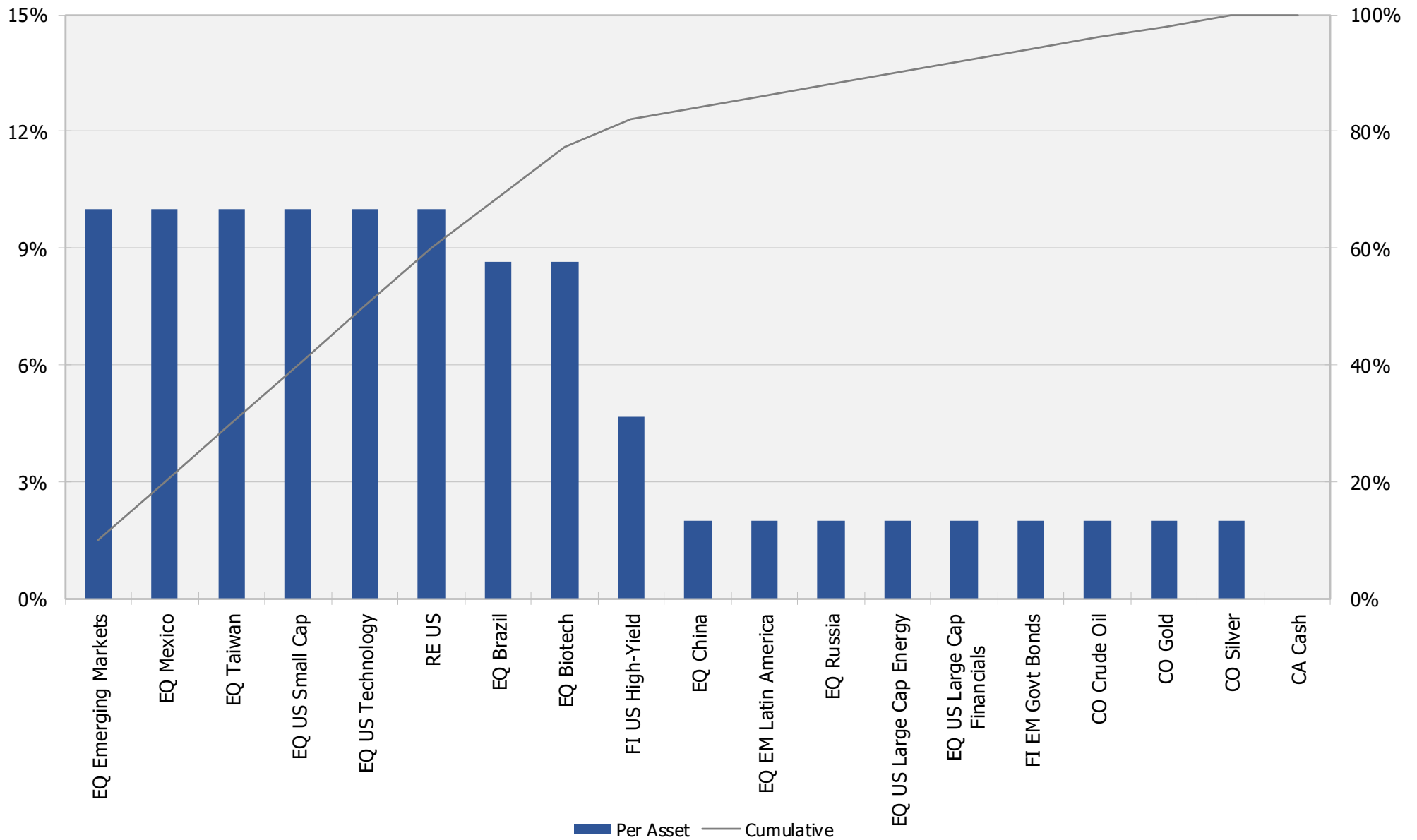
## Allocation % Trading Level

Previous allocation in parentheses

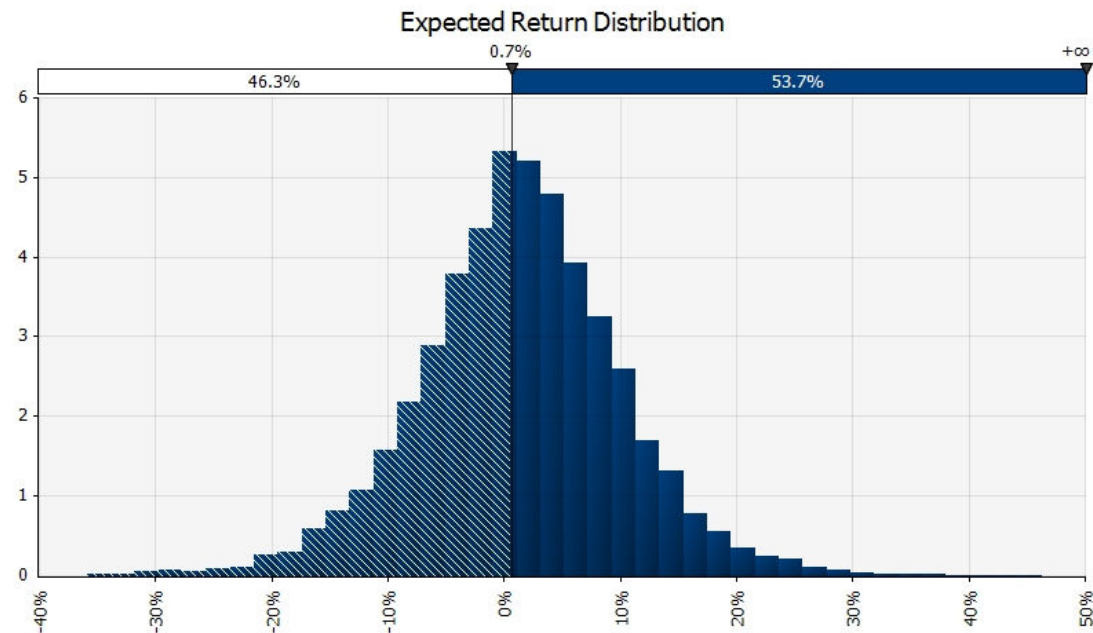


Asset Category and Asset Class	Allocation % NAV	Current Allocation % Trading Level	Change in Allocation	Previous Allocation % Trading Level
<b>Total</b>	<b>150</b>	<b>100</b>		<b>100</b>
<b>Equities</b>	<b>116</b>	<b>77</b>	<b>+0</b>	<b>77</b>
EQ Brazil	13	9	+0	9
EQ China	3	2	+0	2
EQ EM Latin America	3	2	+0	2
EQ Emerging Markets	15	10	+0	10
EQ Mexico	15	10	+0	10
EQ Russia	3	2	+0	2
EQ Taiwan	15	10	+0	10
EQ US Large Cap Energy	3	2	+0	2
EQ US Large Cap Financials	3	2	+0	2
EQ US Small Cap	15	10	+0	10
EQ US Technology	15	10	+0	10
EQ Biotech	13	9	+0	9
<b>Fixed Income</b>	<b>10</b>	<b>7</b>	<b>+0</b>	<b>7</b>
FI EM Govt Bonds	3	2	+0	2
FI US High-Yield	7	5	+0	5
<b>Commodities</b>	<b>9</b>	<b>6</b>	<b>+0</b>	<b>6</b>
CO Crude Oil	3	2	+0	2
CO Gold	3	2	+0	2
CO Silver	3	2	+0	2
<b>Real Estate</b>	<b>15</b>	<b>10</b>	<b>+0</b>	<b>10</b>
RE US	15	10	+0	10
<b>Cash</b>	<b>0</b>	<b>0</b>	<b>+0</b>	<b>0</b>
CA Cash	0	0	+0	0

# Allocations, Sorted



- Outlook is 1 month.
- To note
  - The probability of surpassing the Minimum Return Target is roughly 54%.
  - The probability of actually losing money (the return ending up being below 0%) on a monthly basis is 42%.
  - **Gain/Loss 1.2.**
- Statistical moments
  - Mean 1.4%.
  - Standard deviation 8.7%.
  - Skewness 0.0.
  - Kurtosis 4.2.



# **Tactical Adjustments – Trend Modes**

