



Bond System Project



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Indicator Selection

Bond System Prospectus

1. Opportunity Cost
2. Risk Sentiment
3. Inflation Expectations

Bridgwater White Paper

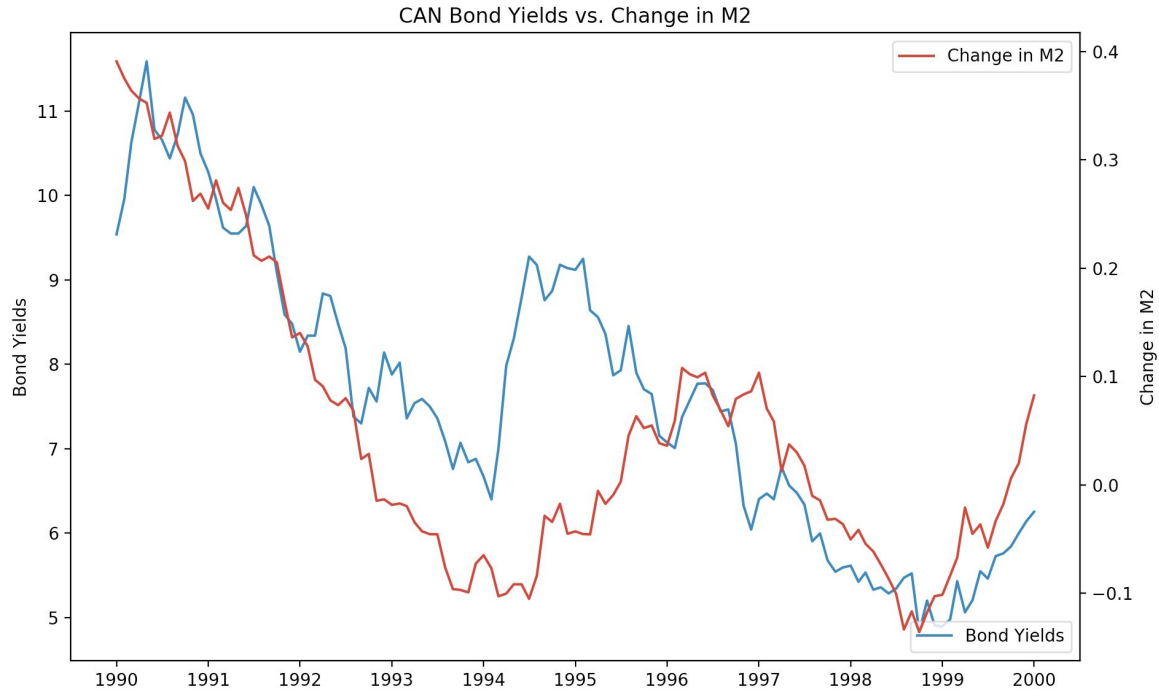
1. Money-Credit Growth
2. Economic Growth
3. Inflation
4. Fed Policy



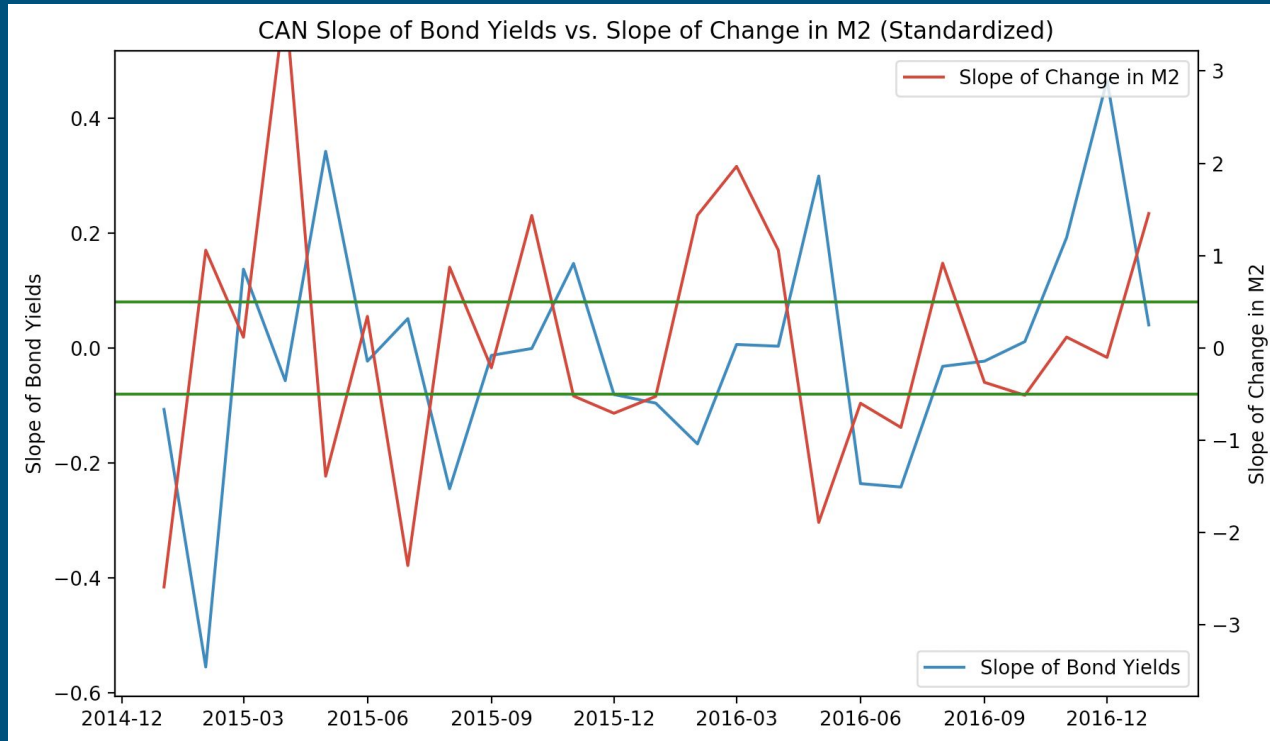
Selected Indicators

1. Monetary Base
2. Bond Premium and Curve Height
3. Relative Stock/Bond Performance

Monetary Base Indicator



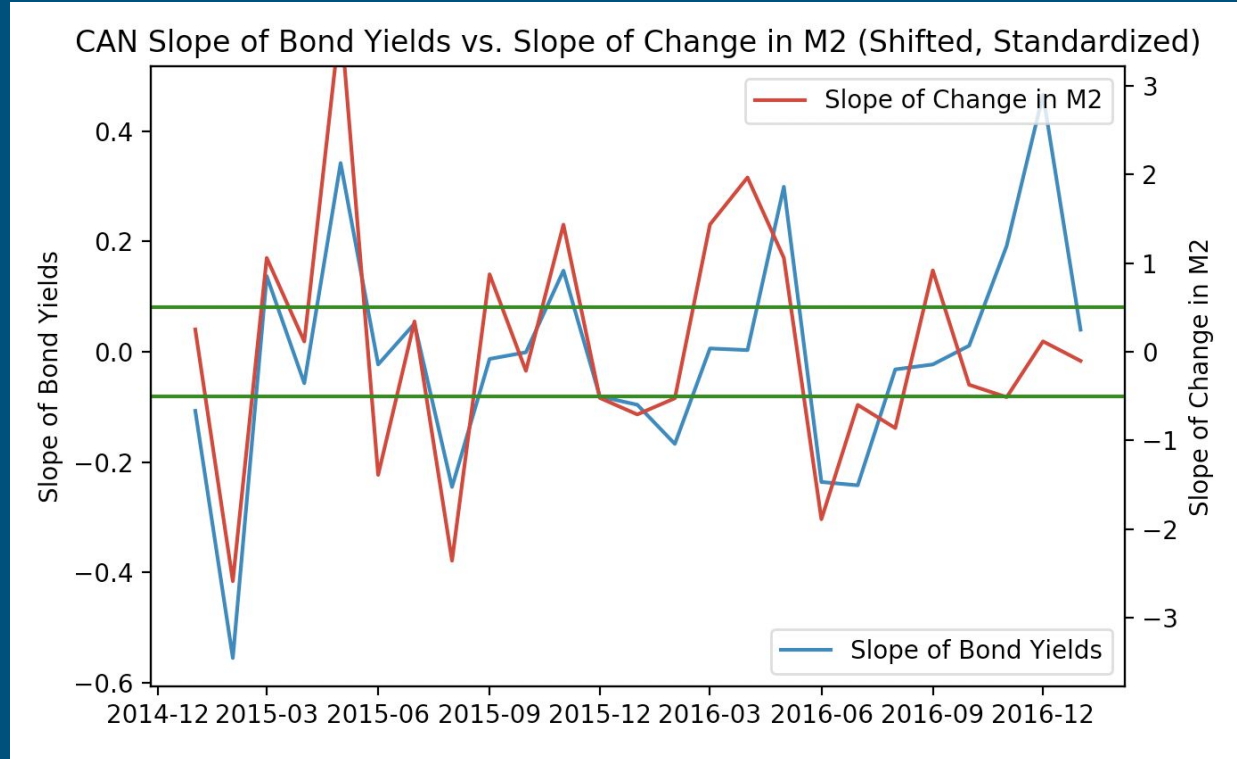
Monetary Base & Bond Yields



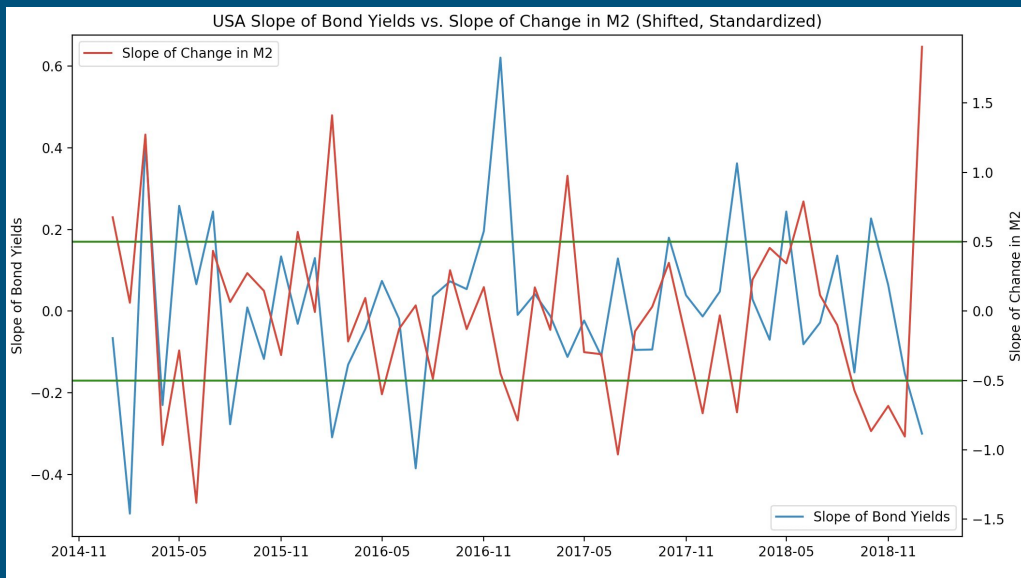
Monetary Base & Bond Yields

Correlation

0.6792



Global Correlations



Country	Correlation (2015 - 2019)
CAN	0.580035
GBR	0.524368
AUS	0.523156
DEU	0.406753
FRA	0.381815
ESP	0.272539
ITA	0.257998
CHE	0.005912
USA	-0.187881
JPN	-0.299288
Mean	0.215806

Indicator Summary

- Monetary Base Indicator
 - Normalizes second derivative data over past 5 years
 - Produces long and short views, scaled from -1 to 1
- Bond Premium Indicator
 - Normalizes over past 2 years & weighted by curve height
 - Produces long views, ranging from 0 to 1
- Relative Stock/Bond Performance Indicator
 - Measures the difference in risk-adjusted returns for Stocks and Bonds
 - Produces long and short views, scaled from -1 to 1

Cross-Indicator Comparisons

Indicator Returns Correlation Matrix

	Monetary Base Indicator	Bond Premium Indicator	Relative Stock/Bond Indicator	Passive Global Bonds
Monetary Base Indicator	1.00	0.042927	-0.003148	0.014088
Bond Premium Indicator	0.042927	1.00	0.057263	0.612379
Relative Stock/Bond Indicator	-0.003148	0.057263	1.00	-0.060201

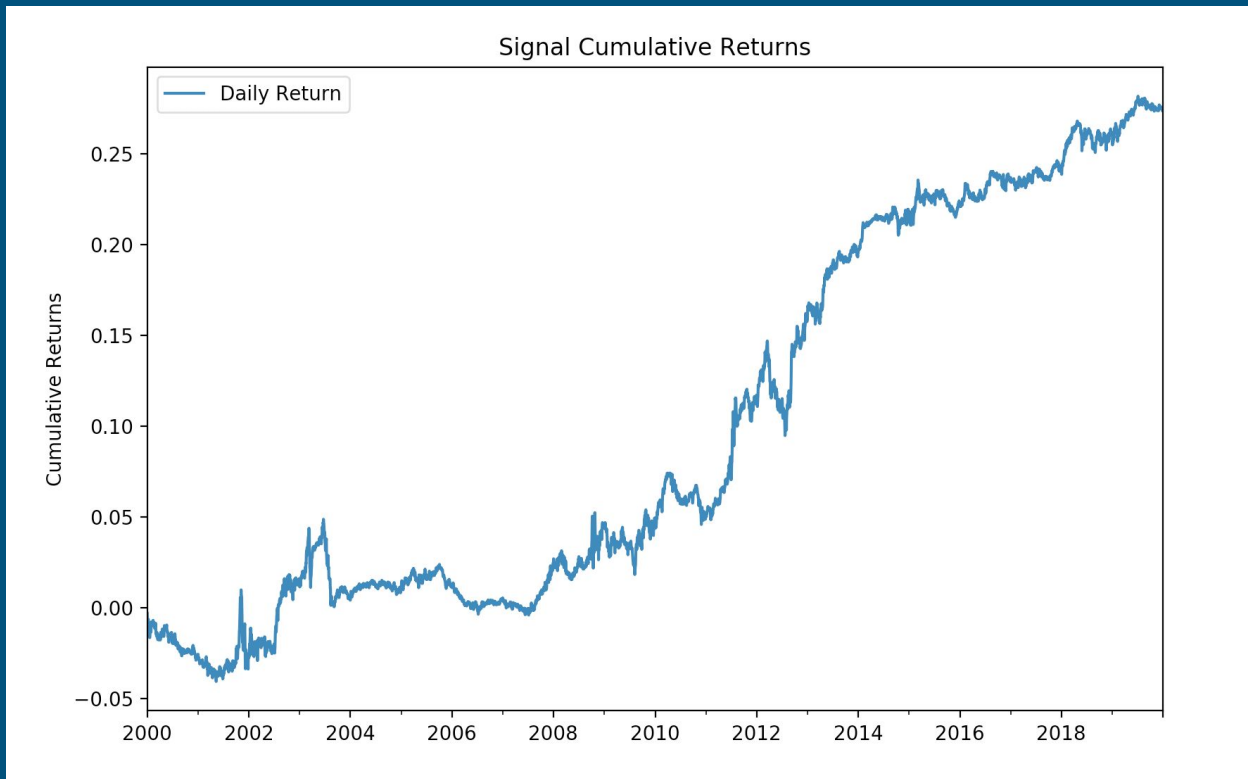
Standard Deviation of Returns

Monetary Base Indicator	0.001382
Bond Premium Indicator	0.003119
Relative Stock/Bond Indicator	0.001306
Passive Global Bonds	0.002380

Signal Construction

- Indicator Weights
 - 25% Weight on Bond Premium Indicator
 - 35% Weight on Relative Stock/Bond Indicator
 - 40% Weight on Monetary Base Indicator
- Creating Neutral Exposure to Passive Bonds Portfolio
 - Sum over the weighted indicator positions
 - Sum of negative positions = sum of positive positions

Signal Evaluation



Passive Bond P&L Comparison

Returns Correlations

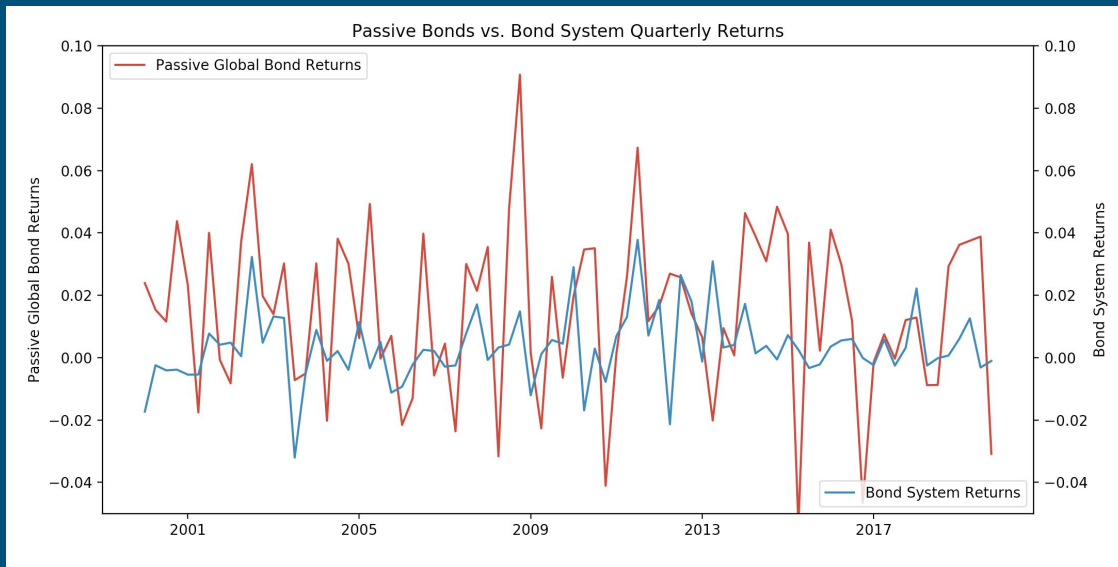
0.191391

**Passive
Bonds Std.
Deviation**

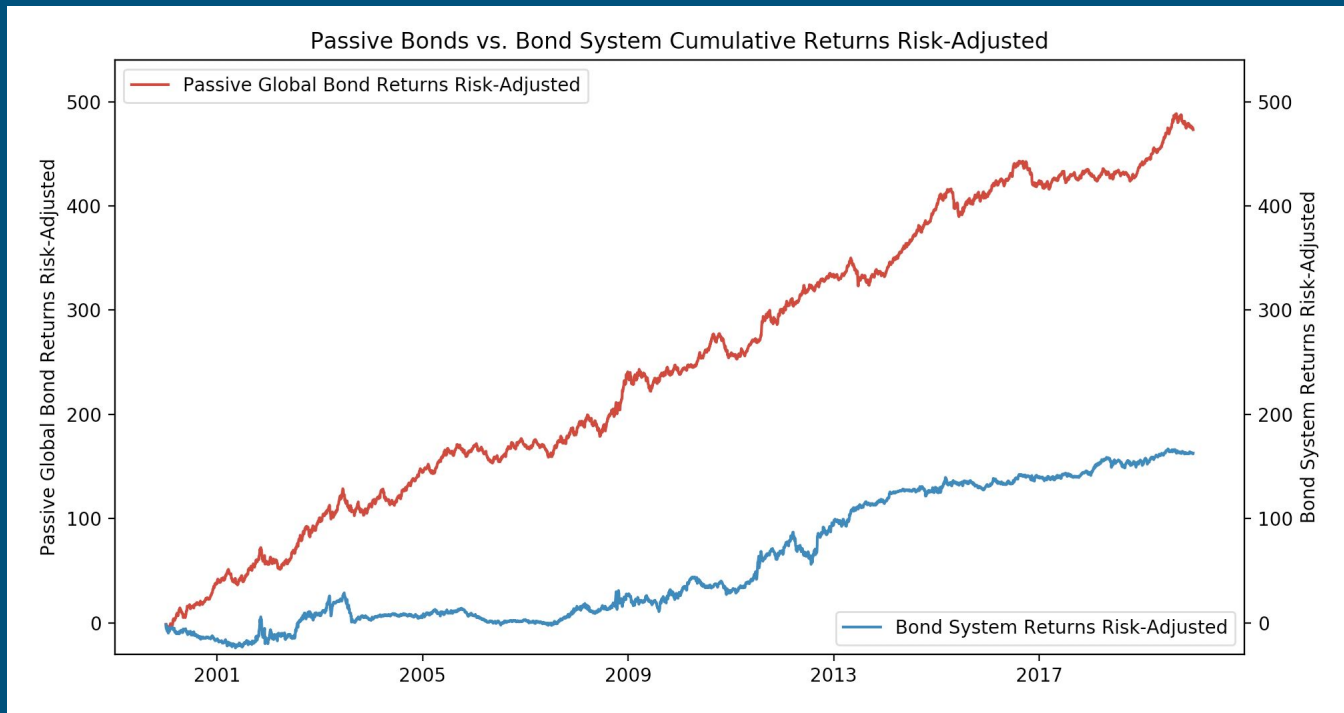
0.002380

**Bond System
Std.
Deviation**

0.001688

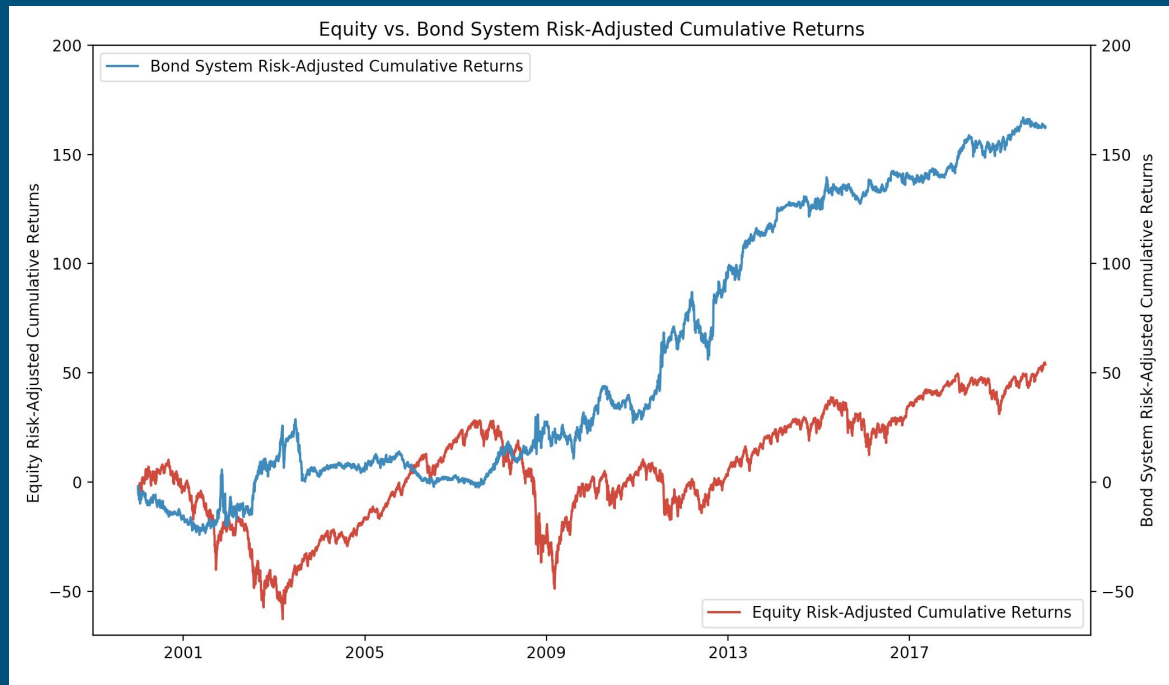


Passive Bond P&L Comparison



Equity P&L Comparison - Risk-Adjusted

Equity Std. Deviation	System Std. Deviation
0.008001	0.001519



Signal Limitations / Next Steps

- Bond Premium Indicator only produces long positions
 - Combine with other data (i.e. changes in GDP) to understand movement of negative bond premiums and produce short positions
- Reduce exposure to the passive global bonds portfolio
 - Add indicators to produce more short views, rather than magnifying fewer views
- Constructing more precise weights to balance minimizing portfolio variance and expected returns

Questions?



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