



Virtual Spring Conference
May 19-21, 2021
Fiscal and Monetary Stimulus
Worried About Unintended Consequences?

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Martin Zorn

President

Kamakura Corporation

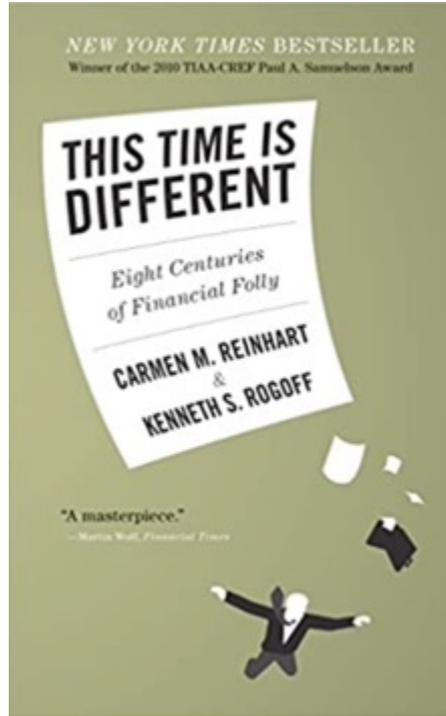
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Fiscal and Monetary Stimulus Worried About Unintended Consequences?

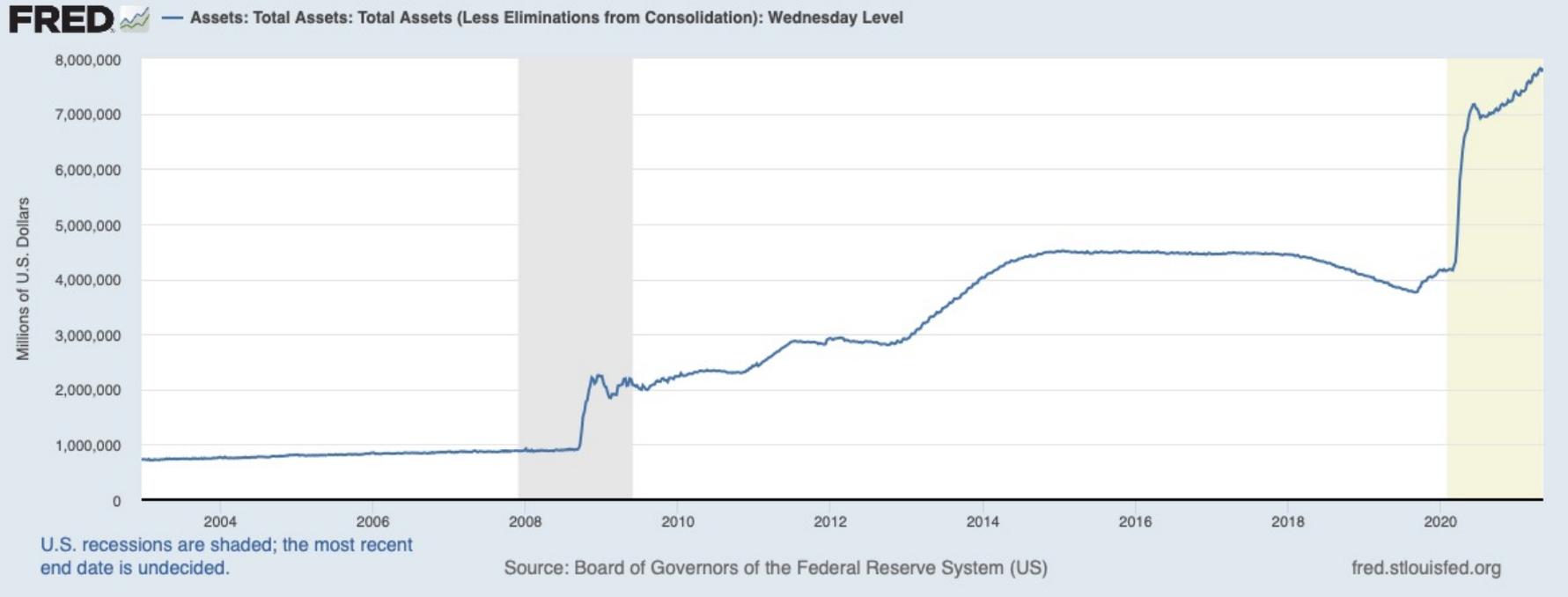
- Transitory Inflation
- Low and Negative Rates
- Market Distortions
- Modeling

Why Am I Worried?

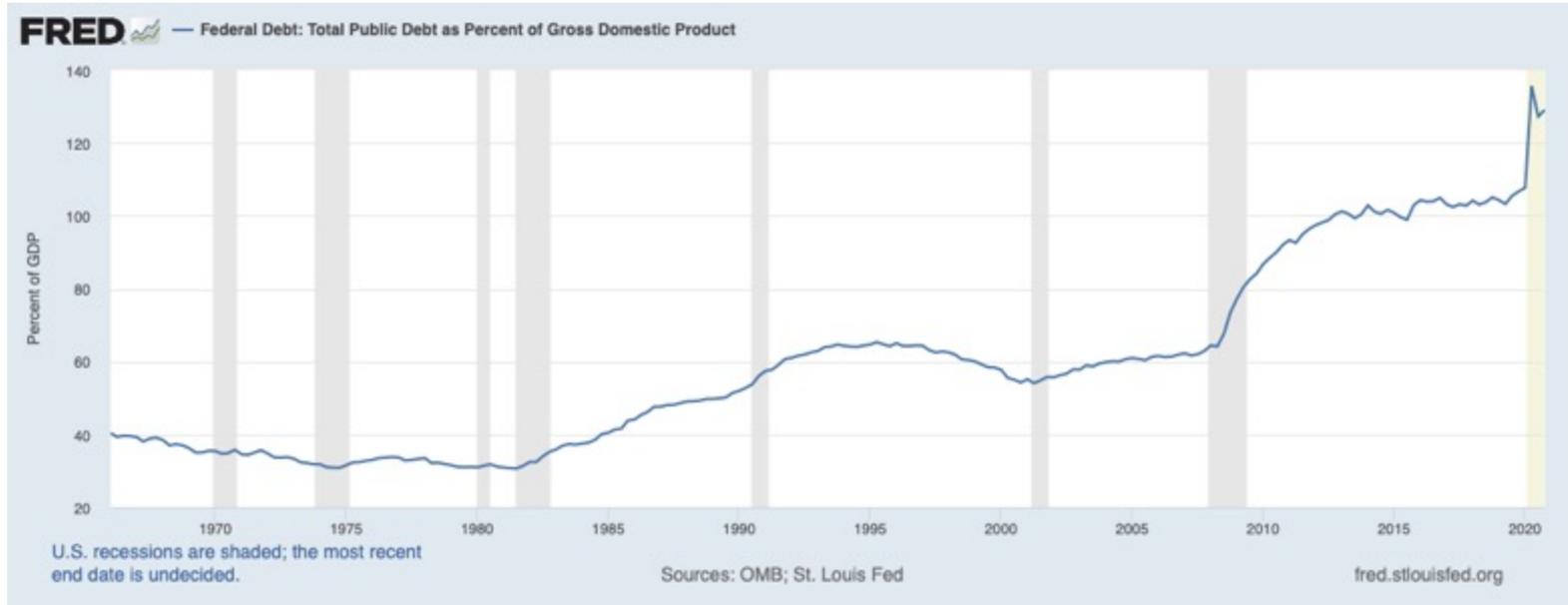
- Famous Last Words: “This Time is Different”



Federal Reserve Balance Sheet



Federal Debt U.S.

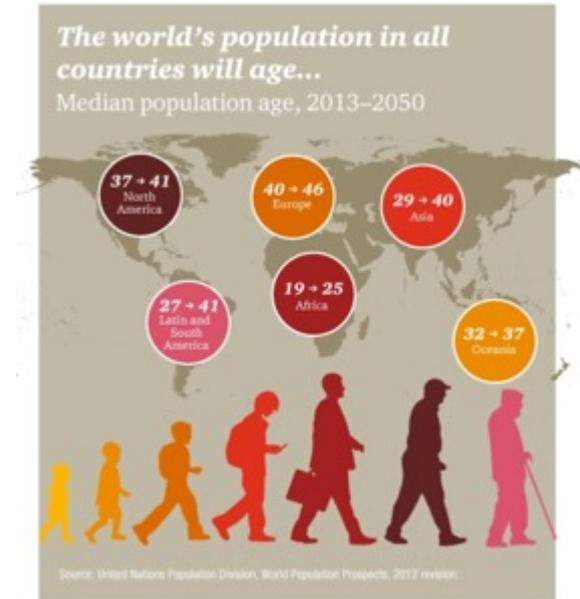
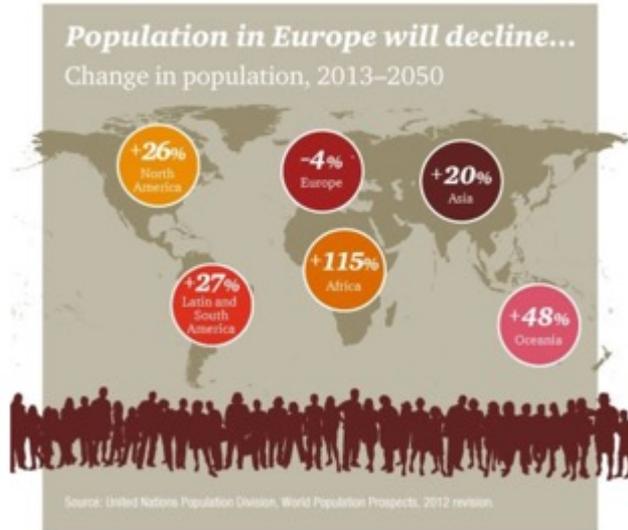


Is America's Welfare State on Borrowed Time?

- WSJ Editorial May 5, 2021
 - Through 1969 borrowing tended to be reserved for wars, economic depressions, investments in transportation
 - From 1970's the country shifted to a budget-deficit policy
 - Deficits averaged 3% of spending from 1950-1969
 - Deficits averaged 10% of spending during the 1970's
 - Deficits averaged 18% of spending during the 1980's
 - The US borrowed 22% of spending in 2019

Demographic Time Bomb

Demographic change



Inflation Outlook



Fed Chairman Jerome Powell said the recovery is “uneven and far from complete”. While he noted that inflation pressures could rise in the coming months, these “one-time increases in prices are likely only to have transitory effects on inflation”

Federal Reserve

- The Fed states that it has the "tools" to stop inflation if it breaks out
 - What are those tools?
 - 1980's rerun?
 - Raise rates fast enough and high enough to induce a recession to bring down inflation?
 - 15 years of unprecedented high rates as it did once before?
 - Does it have the will to act if inflation meets their definition?

Monetary Policy

- Does Monetary Policy Threaten Inflation?
- Statements of Governors
 - Financial Sector Vulnerabilities
 - Actions "conditioned on employment and average inflation outcomes"
 - Policy shift away from the practice of heading off inflation early
 - Back to the future?
 - WIN Buttons

Shrinkflation



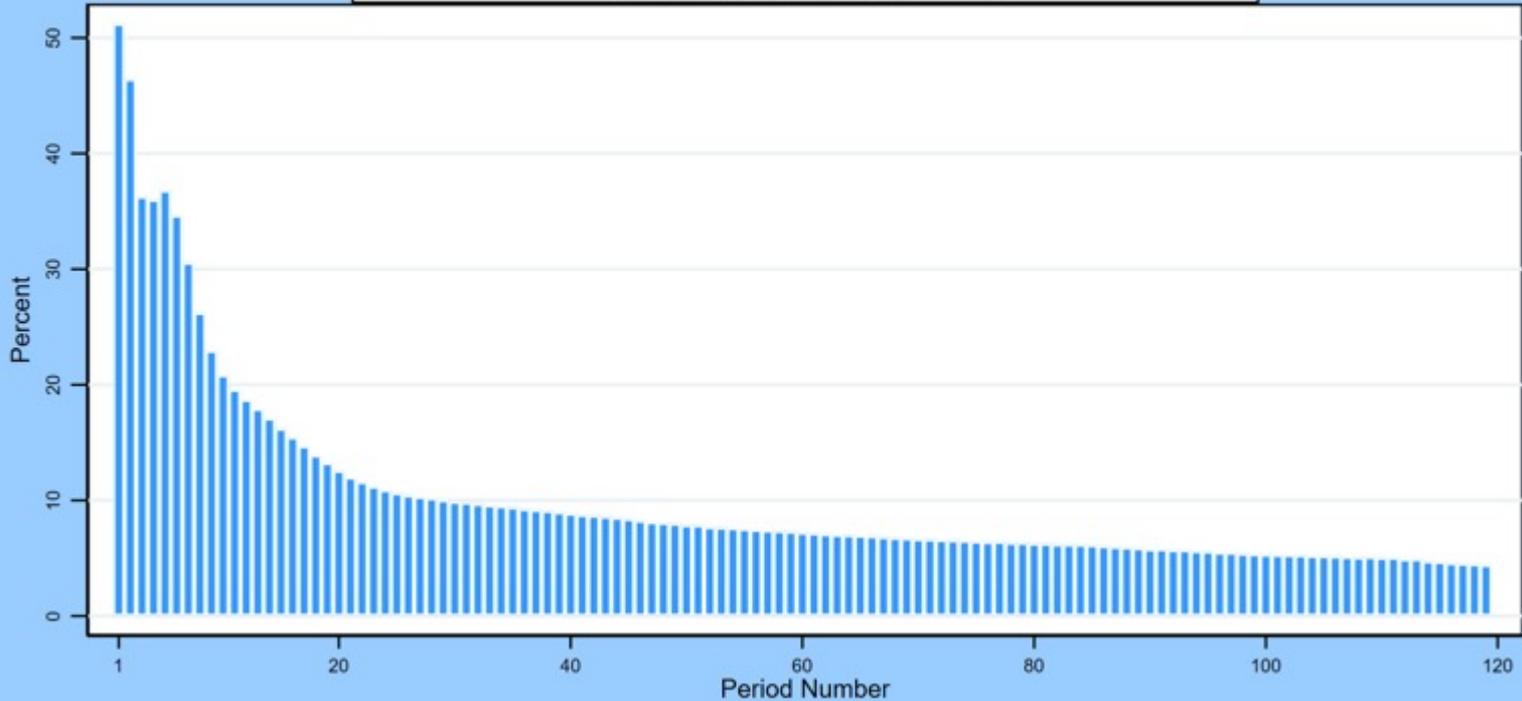
- Paper towels at Costco – same price now 20 fewer sheets -14.3% inflation
- UK- Toblerone shrinks by 10% but same price
- Shrinkflation coming to a store near you

Larry Summers interview at FT

- Covid created a \$250-300bn hole in wages in the US
- \$900bn stimulus in December + \$1.9tn in recent stimulus
- “I’m concerned that what is being done is substantially excessive”
- Could this result in huge excess in demand in the US and ultimately a rise in the dollar as monetary policy is driven to tighten and drive another global crisis for dollar denominated debt?

Interest Rate Implications

Simulation of U.S. Treasury Yield Curve
500,000 Scenarios for 120 Periods of Length 91 Days Each
Percent of 3-month Bill Yields that are Negative
Simulation Start Date: April 23, 2021



Source: Kamakura Corporation, U.S. Department of the Treasury

Schwab Warning

Negative Yielding Bonds

Due to current market conditions, you may see bond offers that are priced at a negative Yield to Maturity (YTM). YTM is the annual rate of return assuming a bond is held to maturity and all of the interest payments are reinvested at the original rate. When a security has a negative Yield to Maturity and is held to maturity, the result will be a net loss on the investment. There are very limited reasons you might want to invest in a bond with a negative YTM. Please make sure this order is consistent with your investing strategy.

Possible negative rates for Treasury Auctions

When you enter a Treasury order at the auction, you agree to accept the interest rate set at auction. It is possible that rates on Treasury securities purchased at auction could be negative resulting in a loss to you. If you were to participate in a Treasury auction where this occurred, you would lose part of your investment and realize a negative rate of return. Before submitting Treasury Orders at Auction, please consider this possibility and make sure your order is consistent with your investing strategy.

Please consult your Bond Specialist for further details or questions related to these types of events and the possible impacts on fixed income trades.

Default Risk



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CREDIT NAME CREDIT PORTFOLIO MACRO FACTOR SENSITIVITY PORTFOLIO MANAGEMENT

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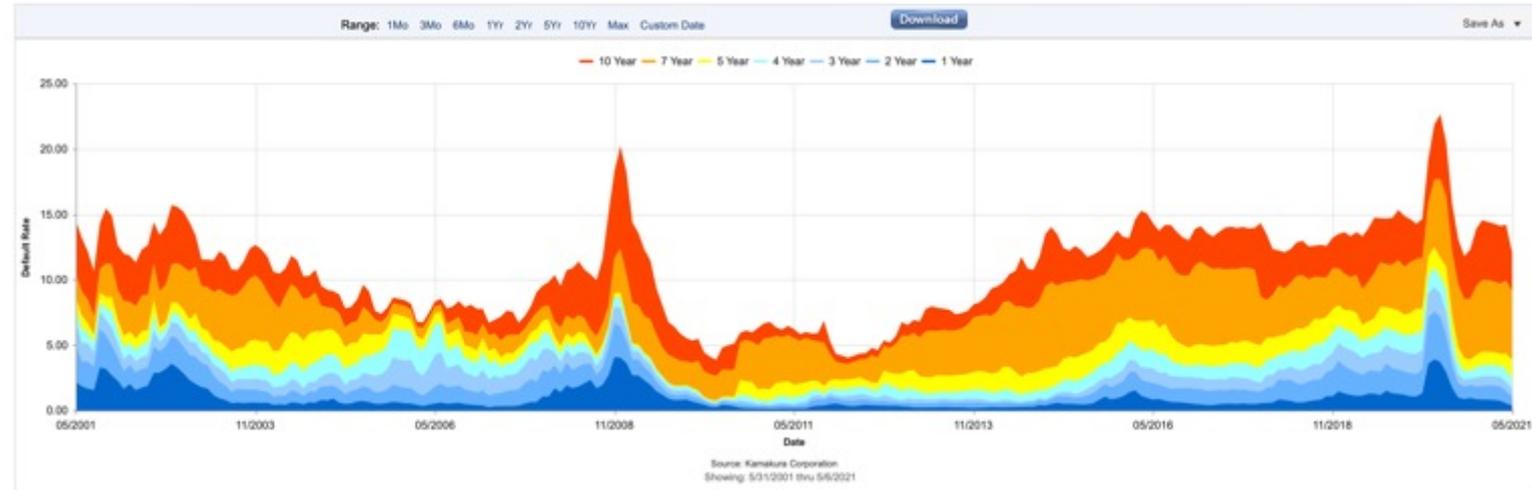
Portfolio Setup Default Probabilities Bond Spreads CDS Ratings Risk Map Correlations Troubled Company Index Download

Date: 2021 May 6 Go Rated: Rated Subject: ALL

JC6 EXPECTED CUMULATIVE DEFAULT RATE: RATED FIRMS

Troubled Company Index Expected Cumulative Default Rate

As of: 5/6/2021	1 Year	2 Year	3 Year	4 Year	5 Year	7 Year	10 Year
Expected Default Rate	.37	1.05	1.62	2.39	3.86	9.05	12.02
Expected Number of Defaults	9	28	43	63	103	241	320



Bubble Risk



INVESTING

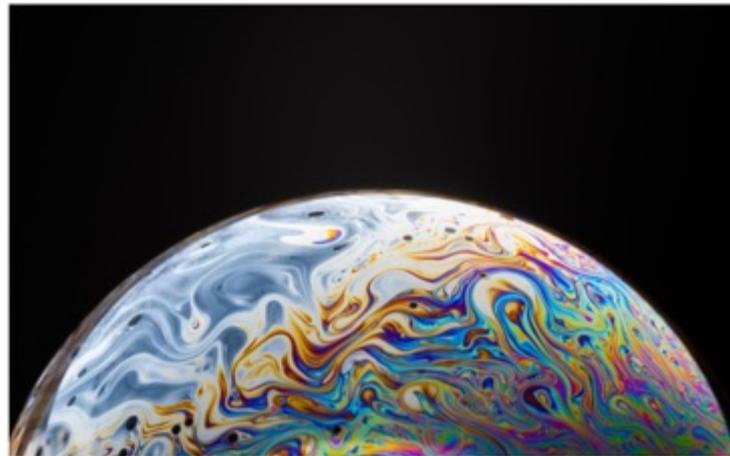
Jarrow and co find a better way to spot stock market bubbles

Quant team's options-based approach avoids pitfalls of historical data dependence



Rob Mannix
@RobMannix

06 May 2021



Traded Spreads



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Portfolio Setup | Default Probabilities | Bond Spreads | COG | Ratings | Risk Map | Correlations | Troubled Company Index | Download

Portfolio: ALL | View: Bond Spread by Rating | Go | Date: 2021 | May | 13 | Sector: ALL

BOND SPREAD DISTRIBUTION BY CREDIT RATING

Bond Spread by Rating | Bond-Implied Rating | Bond Spread by Maturity

Bond Spread (left side) versus Rating (across top) - Each cell shows the number of names - Click on colored cell to view underlying names.

% From	% To	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	C	D	TOTAL
0.00	0.02	1	-	1	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	7
0.02	0.05	3	2	2	4	9	4	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	0	29
0.05	0.10	5	5	4	25	23	25	9	6	-	-	1	-	-	-	-	-	-	-	-	-	-	0	104
0.10	0.20	7	12	9	55	98	83	90	59	11	1	-	2	-	-	-	-	-	-	-	-	-	0	427
0.20	0.30	2	10	5	28	44	58	105	57	7	1	3	1	-	-	-	-	-	-	-	-	-	0	442
0.30	0.40	4	4	5	26	30	42	81	80	20	-	3	-	1	2	-	-	-	-	-	-	-	0	432
0.40	0.50	1	2	4	20	25	33	71	74	30	2	3	-	-	-	-	-	-	-	-	-	-	0	385
0.50	0.60	9	4	4	13	35	38	67	93	34	10	4	1	-	-	-	-	-	-	-	-	-	0	429
0.60	0.70	11	3	10	10	19	30	67	90	63	40	7	6	1	1	-	-	-	-	-	-	-	0	358
0.70	0.80	7	3	9	18	27	38	78	82	67	50	7	5	2	-	-	-	-	-	-	-	-	0	391
0.80	0.90	-	10	3	11	26	38	62	74	37	9	9	1	-	-	-	-	-	-	-	-	-	0	414
0.90	1.00	1	-	8	6	22	22	66	104	61	35	5	6	4	1	-	-	-	-	-	-	-	0	341
1.00	1.25	-	-	10	9	16	39	101	103	73	31	20	8	2	1	-	-	-	-	-	-	-	0	703
1.25	1.50	-	-	-	2	5	19	30	103	89	42	12	17	3	1	2	-	-	-	-	-	-	0	440
1.50	1.75	-	-	1	-	1	5	14	92	86	88	52	17	17	8	2	2	1	-	-	-	-	0	383
1.75	2.00	-	-	-	-	3	3	3	32	55	55	44	19	18	5	4	-	1	-	-	-	-	0	242
2.00	2.50	-	-	-	3	-	2	1	21	31	50	74	50	37	18	4	2	1	-	-	-	-	0	292
2.50	3.00	-	-	1	-	-	1	2	8	8	16	48	31	55	17	4	13	-	-	-	-	-	0	204
3.00	3.50	-	-	-	-	1	1	1	2	4	8	23	19	52	10	11	5	2	-	1	-	-	0	140
3.50	4.00	-	-	1	-	-	-	1	1	2	8	8	10	38	9	3	3	1	-	-	-	-	0	85
4.00	4.50	-	-	-	-	-	1	-	3	2	5	8	8	13	9	5	4	1	-	-	-	-	0	57
4.50	5.00	-	-	-	-	-	-	-	3	1	-	1	4	11	7	3	5	-	-	-	-	-	0	35
5.00	10.00	-	-	-	-	-	-	-	13	1	4	1	4	22	12	11	19	22	-	1	-	-	0	110
10.00	20.00	-	-	-	-	-	1	-	1	-	2	-	-	3	1	4	1	10	-	7	-	-	0	30
20.00	999.00	-	1	-	-	-	-	-	1	-	-	-	1	-	-	-	-	2	-	2	-	-	0	7

SUMMARY	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	C	D	NR
AVG SPREAD	0.41	0.83	0.65	0.39	0.46	0.59	0.64	0.92	0.99	1.37	1.92	2.18	3.05	3.35	4.39	4.44	9.16	15.95					



Traded Spreads – Before Covid

BOND SPREAD DISTRIBUTION BY CREDIT RATING

Bond Spread by Rating | Bond-Implied Rating | Bond Spread by Maturity

Bond Spread (left side) versus Rating (across top) - Each cell shows the number of names - Click on colored cell to view underlying names.

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0.00	0.02	2	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4
0.02	0.05	-	1	1	1	2	2	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	9
0.05	0.10	4	1	3	5	1	2	2	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	21
0.10	0.20	2	7	14	22	16	21	14	9	6	-	-	1	-	-	-	-	-	-	-	-	-	-	112
0.20	0.30	10	5	14	31	38	32	24	9	9	1	-	-	-	-	-	-	-	-	-	-	-	-	158
0.30	0.40	4	8	15	38	37	52	42	40	19	2	8	-	-	-	-	-	-	-	-	-	-	-	262
0.40	0.50	3	4	15	31	37	63	56	61	49	7	-	-	-	-	-	1	-	-	-	-	-	-	327
0.50	0.60	8	8	14	29	33	47	67	77	33	9	1	-	3	1	-	-	-	-	-	-	-	-	348
0.60	0.70	-	2	8	21	34	59	56	66	66	16	2	-	-	2	-	-	-	-	-	-	-	-	330
0.70	0.80	1	7	8	16	24	52	74	89	52	14	2	1	1	-	-	-	-	-	-	-	-	-	341
0.80	0.90	2	-	1	9	15	31	65	95	54	16	1	1	3	-	-	2	-	-	-	-	-	-	295
0.90	1.00	13	1	7	8	22	19	53	78	66	18	2	1	3	-	-	-	-	-	-	-	-	-	291
1.00	1.25	10	10	30	23	29	87	119	116	90	51	15	4	4	-	2	-	-	-	-	-	-	-	756
1.25	1.50	-	-	18	15	22	49	129	130	131	64	31	12	7	-	1	1	-	-	-	-	-	-	603
1.50	1.75	1	-	1	-	5	35	70	100	110	61	29	10	14	1	1	1	-	-	-	-	-	-	478
1.75	2.00	-	-	-	-	4	31	48	97	68	68	33	17	20	3	2	3	-	-	-	-	-	-	394
2.00	2.50	-	-	-	-	2	6	35	100	100	77	87	49	25	6	6	1	-	-	-	-	-	-	610
2.50	3.00	-	-	-	-	4	5	35	57	55	58	46	49	9	6	1	2	-	-	-	-	-	-	327
3.00	3.50	-	-	-	-	-	3	5	28	32	26	22	33	8	6	2	-	-	-	-	-	-	-	165
3.50	4.00	1	-	-	-	-	1	3	1	6	17	16	22	21	10	7	3	2	-	-	-	-	-	110
4.00	4.50	1	-	-	-	-	6	1	1	6	16	12	21	12	11	4	1	-	-	-	-	-	-	92
4.50	5.00	-	-	-	-	-	7	3	1	1	7	10	10	7	11	5	-	-	-	-	-	-	-	62
5.00	10.00	-	-	1	-	1	1	2	-	3	3	3	25	33	25	61	36	12	2	1	-	-	-	209
10.00	20.00	-	-	-	-	1	1	-	-	-	2	2	-	1	3	-	3	25	1	-	-	-	-	39
20.00	\$99.00	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	8	5	-	-	-	-	15

SUMMARY	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	C	D	NR
AVG SPREAD	0.71	0.54	0.72	0.55	0.71	0.97	1.09	1.23	1.49	1.91	2.38	2.97	3.20	4.44	5.28	5.85	13.13	81.10	8.54				

How are you modeling these scenarios?

- Deterministically
 - How are you creating the scenarios?
- Stochastically
 - Are you too quick to reject the tail risk?
- Stress Testing
- Reverse Stress Testing
- How are you validating your model?

Final Thoughts on Modeling

Statistician George E. P. Box said “Remember that all models are wrong: the practical question is how wrong do they have to be to not be useful”

Prof. Robert Jarrow, “History is one scenario from a Monte-Carlo simulation”

John Maynard Keynes, “When the facts change, I change my mind. What do you do, sir?”



Questions

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