



Unstable Equilibrium: Finding the New Normal in Credit Markets

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Rising rates volatility and spiking rates/credit correlations: a bad combination

Move index 1988-2023



Credit rates correlation 1929-2023



Source: Bloomberg Finance LP. MOVE index represents implied volatility on 1-month Treasury options, as of 31 Aug, 2023. Source: Correlation coefficients calculated used 36 month look back period. Rates represented by the Bloomberg US Long Treasury Total Return Index. Credit represented by the Bloomberg Long US Corporate excess return index, as of 31 July 2023. Most recent data available.

Credit volatility increasingly attributed to rates volatility

31 Aug 2023

US high grade contribution to volatility



US high yield contribution to volatility

Source: Analysis done by T. Rowe Price. Source of data Bloomberg Finance LP. High Grade represented by Bloomberg Investment Grade Corporate Index, as of 31 Aug 2023. Source: Analysis done by T. Rowe Price. Source of data Bloomberg Finance LP. High yield represented by Bloomberg High Yield Corporate Index, as of 31 Aug 2023.

A challenging period for fixed income

Historical Returns (9/30/2020 - 9/30/2023)



³ Bloomberg Canada Aggregate Corporate Bond Index.

⁴ JP Morgan Emerging Markets Bond Index Global Diversified.

⁵ Bloomberg Global Aggregate Bond CAD Hedged Index.

⁶ JP Morgan Corporate Emerging Market Bond Index Broad Diversified.

⁷ Bloomberg Canada High Yield Corporate Bond Index.

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A new environment requires a new approach

Reassess Your Objectives



Dynamically

Source: T. Rowe Price.

Reassess your objectives

Passive

Increase allocation to more leveraged issuers

Total Returns

Higher risk in your bond allocation





Index Aware Success even with negative outcomes? Absolute Return Seek positive returns in most environments



Source: T. Rowe Price.

Expand your toolkit

As of 30 September 2023

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 YTD
US Govt	Global HY	CMBS	US TIPs	EM Hard	US HY	HY Muni	Muni	US HY	EM Local	HY Muni	Global HY	US TIPs	HY Muni	Bank Loans	EM Local
13.74	58.90	20.40	13.56	18.54	8.24	13.84	3.30	18.91	15.21	4.76	14.59	10.99	7.77	-0.61	8.27
US Agency	US HY	EM Local	Muni	HY Muni	Global HY	Muni	HY Muni	Global HY	HY Muni	ABS	US IG Corp	US IG Corp	US HY	ABS	Bank Loans
9.26	58.18	15.68	10.7	18.14	7.42	9.05	1.81	18.27	9.69	1.77	14.54	9.89	6.00	-4.30	6.63
MBS	Bank Loans	Global HY	US Govt	EM Local	Bank Loans	US IG Corp	MBS	Bank Loans	EM Hard	US Agency	EM Hard	Global Agg	US TIPs	US Agency	US HY
8.34	52.53	15.05	9.81	16.76	5.41	7.46	1.51	10.36	9.32	1.34	14.42	9.20	5.96	-7.87	5.79
US Agg	EM Corp	US HY	HY Muni	Global HY	CMBS	MBS	EM Corp	EM Hard	Global HY	Muni	US HY	CMBS	Bank Loans	Muni	Global HY
5.24	34.88	14.73	9.25	16.21	0.23	6.08	1.30	10.19	8.28	1.28	14.08	8.11	5.42	-8.53	5.37
Global Agg	HY Muni	EM Corp	EM Hard	US HY	ABS	US Agg	ABS	EM Local	EM Corp	MBS	EM Local	US Govt	Global HY	Global HY	HY Muni
4.79	32.73	13.08	8.46	15.39	-0.27	5.97	1.25	9.94	7.96	0.99	13.47	8.00	4.89	-10.16	4.43
US TIPs	CMBS	EM Hard	US IG Corp	EM Corp	EM Corp	EM Hard	EM Hard	EM Corp	US HY	US Govt	EM Corp	US Agg	Muni	US HY	EM Hard
-2.35	28.45	12.04	8.15	15.02	-0.60	5.53	1.23	9.65	7.59	0.86	13.09	7.51	1.52	-10.57	3.81
Muni	EM Hard	Bank Loans	US Agg	US IG Corp	US Agency	US Govt	US Agency	US IG Corp	Global Agg	CMBS	HY Muni	EM Corp	EM Corp	CMBS	EM Corp
-2.47	28.18	10.38	7.84	9.82	-1.38	5.05	1.01	6.11	7.39	0.78	10.68	7.13	0.91	-10.91	3.64
US IG Corp	ABS	US IG Corp	US HY	Bank Loans	MBS	EM Corp	CMBS	US TIPs	US IG Corp	Bank Loans	US Agg	EM Hard	ABS	MBS	US IG Corp
-4.94	24.72	9.00	6.96	9.76	-1.41	4.96	0.97	4.68	6.42	0.60	8.72	5.88	-0.34	-11.81	3.21
EM Local	EM Local	HY Muni	MBS	CMBS	US IG Corp	CMBS	US Govt	CMBS	Muni	US Agg	Bank Loans	US Agency	MBS	US TIPs	Muni
-5.22	21.98	7.80	6.23	9.66	-1.53	3.86	0.84	3.32	5.45	0.01	8.70	5.48	-1.04	-11.85	2.67
EM Hard	US IG Corp	US Agg	CMBS	US TIPs	US Agg	US TIPs	US Agg	HY Muni	Bank Loans	Global Agg	US TIPs	Global HY	US IG Corp	EM Corp	US Agg
-10.91	18.68	6.54	6.02	6.98	-2.02	3.64	0.55	2.99	4.32	-1.20	8.43	5.42	-1.04	-12.26	2.09
ABS	Muni	US TIPs	Global HY	Muni	Muni	US Agency	Bank Loans	US Agg	US Agg	US TIPs	CMBS	Muni	CMBS	US Govt	US TIPs
-12.72	12.91	6.31	5.73	6.78	-2.55	3.58	0.10	2.65	3.54	-1.26	8.29	5.21	-1.16	-12.46	1.87
EM Corp	US TIPs	US Govt	Global Agg	Global Agg	Global Agg	US HY	US IG Corp	Global Agg	CMBS	EM Corp	Muni	US HY	US Agency	US Agg	MBS
-15.86	11.41	5.87	5.64	4.32	-2.60	2.17	-0.68	2.09	3.35	-1.65	7.54	5.19	-1.32	-13.01	1.87
CMBS	Global Agg	ABS	ABS	US Agg	US Govt	ABS	US TIPs	ABS	US TIPs	Global HY	US Govt	HY Muni	EM Hard	HY Muni	ABS
-20.52	6.93	5.85	5.14	4.21	-2.75	1.88	-1.44	2.03	3.01	-2.37	6.86	4.89	-1.51	-13.10	1.74
US HY	US Agg	Global Agg	US Agency	ABS	HY Muni	Bank Loans	Global Agg	MBS	MBS	US HY	Global Agg	ABS	US Agg	US IG Corp	US Agency
-26.55	5.93	5.54	4.82	3.66	-5.51	1.82	-3.15	1.67	2.47	-2.39	6.84	4.52	-1.54	-15.76	1.64
Global HY	MBS	MBS	EM Corp	MBS	EM Hard	Global HY	Global HY	US Agency	US Govt	US IG Corp	MBS	MBS	US Govt	EM Local	US Govt
-26.83	5.89	5.37	2.31	2.59	-6.58	1.67	-4.25	1.39	2.31	-2.51	6.35	3.87	-2.32	-15.85	1.59
HY Muni	US Agency	US Agency	Bank Loans	US Agency	US TIPs	Global Agg	US HY	US Govt	US Agency	EM Hard	US Agency	Bank Loans	Global Agg	Global Agg	Global Agg
-27.01	1.53	4.36	1.50	2.16	-8.61	0.59	-4.99	1.04	2.06	-4.61	5.89	3.50	-4.71	-16.25	1.43
Bank Loans	US Govt	Muni	EM Local	US Govt	EM Local	EM Local	EM Local	Muni	ABS	EM Local	ABS	EM Local	EM Local	EM Hard	CMBS
-29.32	-3.57	2.38	-1.75	1.99	-8.98	-5.72	-14.92	0.25	1.55	-6.21	4.53	2.11	-9.71	-16.45	1.24



Past performance is not a reliable indicator of future performance. All numbers are percentages. Sources: T. Rowe Price; "MBS" represents the Bloomberg USS Index; "CMBS" represents the Bloomberg CMBS Index; "Emerging Markets Debt" represents the J.P. Morgan Emerging Markets Bond Global Index; "Global High Yield" represents the S&P/LSTA Performing Loan Index; "Global High Yield" represents the Bloomberg ABS Index; "ABS" represents the Bloomberg ABS Index; "Banks Corporates" represents the S&P/LSTA Performing Loan Index; "Global Aggregate Investment Grade Bond Index; "ABS" represents the Bloomberg ABS Index; "Banks Loans" represents the S&P/LSTA Performing Loan Index; "Global Aggregate" represents the Bloomberg US. Aggregate Bond Index: "Emerging Market Corporates" represents the J.P. Morgan CEMBI Broad Diversified Index; "Global Aggregate" represents the Bloomberg US. Tragents Index; "Hunicipals" represents the Bloomberg US. Tragents Index; "U.S. Aggnegate Index; "U.S. High Yield Total Return Index Value Unhedged USD: "High Yield Municipals" represents the Bloomberg U.S. Agency' represents the Bloomberg U.S. Agency Index; "U.S. High Yield Total Return Index Value Unhedged USD: "High Yield Municipals" represents the Bloomberg U.S. Trepesents the Bloomberg U.S. TIPS' represents the Bloomberg U.S. TIPS Index. "U.S. Agency' represents the Bloomberg U.S. TIPS Index." Sources for Bloomberg Index data: Bloomberg Index Services Limited. Source: S&P/LSTA. Please see Additional Disclosures page for sourcing information. Information has been obtained from sources believed to be reliable, but J.P. Morgan does not warnant its completeness or accuracy. The index is used with permission. The index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright © 2022, J.P. Morgan Chase & Co. All rights reserved.

Invest dynamically: Duration

Illustrative Example Flexible Credit Approach: Duration



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Source: T. Rowe Price. As of 31 Aug 2023.

"Flexible Credit Approach" represents the T. Rowe Price Unconstrained Credit Strategy.

Invest dynamically: Credit Beta

Illustrative Example Flexible Credit Approach: Duration times spread (DTS)



For illustrative purposes only. This material does not provide investment advice or recommendations. Ratio (RHS) is the Flexible Credit Representative Portfolios Duration Times spread relative to the Global High Yield Index. "Flexible Credit Representative Portfolio" represents the T. Rowe Price Unconstrained Credit Strategy. Source: T. Rowe Price. As of 31 Aug 2023. Global High Yield Index represents the ICE BofA Global High Yield USD Hedged.

Invest dynamically: Hedging and Relative Value

Illustrative Example Flexible Credit Approach: Long/short exposure



For illustrative purposes only. This material does not provide investment advice or recommendations.

Source: T. Rowe Price. As of 31 Aug 2023.

"Flexible Credit Approach" represents the T. Rowe Price Unconstrained Credit Strategy.

Expected Performance: Reimagining a beta-centric approach to credit



The expected performance for the Unconstrained Credit Strategy are relative to alternative credit indices such as investment grade corporates, high yield corporates, or emerging market bonds. Market environments and expected performance are based on the general strategy structure, but are not based on actual performance, nor intended as forward-looking performance projections. As with any investment, performance may vary and is subject to potential loss. For illustrative purposes only.

Illustrative results: Flexible Credit Approach

Historical Returns (9/30/2020 - 9/30/2023)



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¹ Bloomberg U.S. Mortgage-Backed Securities Agency Fixed Rate MBS Index.

² Bloomberg U.S. Securitized Bond Index.

³ Bloomberg Canada Aggregate Corporate Bond Index.

⁴ JP Morgan Emerging Markets Bond Index Global Diversified.

⁵ Bloomberg Global Aggregate Bond CAD Hedged Index.

⁶ JP Morgan Corporate Emerging Market Bond Index Broad Diversified.

⁷ Bloomberg Canada High Yield Corporate Bond Index.

⁸ "Flexible Credit Representative Portfolio" represents the T. Rowe Price Unconstrained Credit Strategy. Source: T. Rowe Price. Figures are shown net of fees.

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Dynamic correlations vs. the Flexible Credit Representative Portfolio

Illustrative Example

26 week rolling correlation with S&P 500



26 week rolling correlation with US Aggregate



26 week rolling correlation with USD High Yield





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For the above T. Rowe Price analysis, the following indexes were used: S&P 500 Index, iBoxx USD Liquid High Yield Index, Bloomberg U.S. Aggregate Bond Index, and J.P. Morgan Emerging Markets Bond Index Global Diversified to compare with the "Flexible Credit Representative Portfolio" which represents the T. Rowe Price Unconstrained Credit Strategy.

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Key takeaways



Performance

Unconstrained Credit (USD Hedged) Composite*

Periods Ended 30 September 2023					Annualized			
Figures are Calculated in U.S. Dollars	Three	e Months	Year-to-Date	One Year	Two Years	Three Years	Since Inception 31 Jan 2019	
Unconstrained Credit (USD Hedged) Composite* (Gross of Fees)	3	8.79%	4.25%	7.47%	1.11%	5.04%	4.44%	
Unconstrained Credit (USD Hedged) Composite* (Net of Fees)	;	3.70	3.96	7.07	0.73	4.65	4.05	
Linked Benchmark ¹		1.32	3.62	4.50	2.54	1.74	1.70	
Value Added (Gross of Fees) ²	:	2.47	0.63	2.97	-1.43	3.30	2.74	
Value Added (Net of Fees) ³	:	2.38	0.34	2.57	-1.81	2.91	2.35	
Credit Beta Indices								
MAC Custom Index (1/3 USHY, 1/3 Loans, 1/3 EM Agg) ⁴	0	.23%	5.31%	11.09%	-2.57%	0.48%	2.05%	
iBoxx USD Liquid High Yield Index⁵	(0.37	5.30	9.84	-2.70	1.30	2.55	
J.P. Morgan EMBI Global Core ⁵	-	2.68	1.02	9.51	-9.30	-5.02	-1.18	
iBoxx USD Liquid Investment Grade Index ⁵	-4.30		-0.44	3.70	-9.48	-5.91	0.39	
Bloomberg US Aggregate Index ⁵	-	3.23	-1.21	0.64	-7.30	-5.21	-0.46	
Calendar Years	2019 ⁶	2020	2021	2022				
Unconstrained Credit (USD Hedged) Composite* (Gross of Fees)	6.47%	3.33%	6.79%	-0.03%				
Unconstrained Credit (USD Hedged) Composite* (Net of Fees)	6.11	2.94	6.39	-0.40				
Linked Benchmark ¹	2.12	0.66	0.09	1.47				
Value Added (Gross of Fees) ²	4.35	2.67	6.70	-1.50				
Value Added (Net of Fees) ³	3.99	2.28	6.30	-1.87				

Past performance is not a reliable indicator of future performance.

Gross performance returns are presented before management and all other fees, where applicable, but after trading expenses. Net of fees performance reflects the deduction of the highest applicable management fee that would be charged based on the fee schedule contained within this material, without the benefit of breakpoints. Gross and net performance returns reflect the

reinvestment of dividends and are net of all non-reclaimable withholding taxes on dividends, interest income, and capital gains. *In Canada, Dynamic Credit is offered as Unconstrained Credit; Dynamic Emerging Markets Bond is offered as Unconstrained Emerging Markets Bond; and Global Dynamic Bond is offered as Global Unconstrained Bond.

¹Effective 1 May 2021, the benchmark for the composite changed to ICE BofA US 3-Month Treasury Bill Index. Prior to 1 May 2021 the benchmark was the 3 Month LIBOR in USD Index.

Historical benchmark representations have not been restated.

² The Value Added row is shown as Dynamic Credit (USD Hedged) Composite (Gross of Fees) minus the benchmark in the previous row.

³The Value Added row is shown as Dynamic Credit (USD Hedged) Composite (Net of Fees) minus the benchmark in the previous row.

⁴MAC Custom Index is represented by 1/3 iBoxx USD Liquid High Yield Index, 1/3 S&P/LSTA Leverage Loan Index and 1/3 J.P Morgan EMBI Global Core. The MAC Custom Index is a T. Rowe Price proprietary benchmark that is used to compare the Strategy's MAC - Long Exposures against a comparable MAC benchmark.

⁵ Indexes shown represent beta credit returns and are benchmarks used by ETFs representing the Strategy's MAC – Long Exposure components: High Yield Bond, Emerging Market Bond, US

Investment Grade Index and Bloomberg US Aggregate Bond Index, respectively. The ETF benchmarks are shown for illustrative purposes to demonstrate how each of the different sectors

performed for the period when looking at passive indexes (peer proxies).

⁶ Since Inception 31 January 2019 through 31 December 2019.

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GIPS® COMPOSITE REPORT

Unconstrained Credit Strategy (USD Hedged) Composite*

Period Ended December 31, 2022 Figures Shown in U.S. dollar

	<u>2019</u> 2	<u>2020</u>	<u>2021</u>	<u>2022</u>
Gross Annual Returns (%)	6.47	3.33	6.79	-
Net Annual Returns (%) ¹	5.69	2.50	0.03	-0.83
Benchmark (%) ³	2.12	0.66	0.09	1.47
Composite 3-Yr St. Dev.	N/A	N/A	N/A	9.82
Benchmark 3-Yr St. Dev.	N/A	N/A	N/A	0.31
Composite Dispersion	N/A	N/A	N/A	N/A
Comp. Assets (Millions)	33.8	76.1	68.4	62.1
# of Accts. in Comp.	1	2	2	2
Total Firm Assets (Billions)	1,218.2	1,482.5	1,653.6	1,237.44

The annual gross and net returns for the composite for 2022 were previously presented as 0.24% and -0.57%. The returns have been updated to -0.03% and -0.83%, respectively.

*In Canada, Dynamic Credit is offered as Unconstrained Credit; Dynamic Emerging Markets Bond is offered as Unconstrained Emerging Markets Bond; and Global Dynamic Bond is offered as Global Unconstrained Bond.

¹The fee rate used to calculate net returns is 0.81%. This represents the maximum fee rate applicable to all composite members. Past performance is not a reliable indicator of future performance.

²January 31, 2019 through December 31, 2019.

³Effective May 1, 2021, the benchmark for the composite changed to the ICE BofA US 3-Month Treasury Bill Index. Prior to this change, the benchmark was the 3 Month LIBOR in USD Index. The change was made because the firm viewed the new benchmark to be a better representation of the investment strategy of the composite. Historical benchmark representations have not been restated.

⁴Preliminary - subject to adjustment.

T. Rowe Price (TRP) claims compliance with the Global Investment Performance Standards (GIPS^{*}) and has prepared and presented this report in compliance with the GIPS standards. TRP has been independently verified for the 27-year period ended June 30, 2023 by KPMG LLP. The verificaton report is available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verificaton provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculaton, presentaton, and distributon of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm wide basis. Verificaton does not ensure the accuracy of any specific composite presentaton. TRP is a U.S. investment management firm with various investment advisers registered with the U.S. Securites and Exchange Commission, the U.K. Financial Conduct Authority, and other regulatory bodies in various countries and global strategies but excluding the services of the Private Asset Management group. As of October 1, 2022, there is no minimum asset level for portolio inclusion into the composite. Prior to October 2022, the minimum was \$1 million. The minimum was \$1 million. The minimum was \$2 million; and prior to January 2002 the minimum was \$1 million. Xaluatons are computed and performance reported in U.S. dollars.

Gross performance returns are presented before management and all other fees, where applicable, but after trading expenses. Net of fees performance reflects the deducton of the maximum fee rate applicable to all composite members as shown above. Gross performance returns reflect the reinvestment of dividends and are net of nonreclaimable withholding taxes on dividends, interest income, and capital gains. Gross performance returns are used to calculate presented risk measures. Effective June 30, 2013, portolio valuaton and assets under management are calculated based on the closing price of the security in its respective market. Previously portolios holding international securites may have been adjusted for after-market events. Policies for valuing portolios, calculating performance, and preparing compliant presentations are available upon request. Dispersion is measured by the standard deviation across asset-weighted portolio returns represented within a composite for the full year. Dispersion is not calculated for the composites in which there are five or fewer portolios.

The strategy utlizes on a regular basis a variety of derivative instruments such as (but not limited to) currency forwards, fixed income futures, interest rate swaps, credit default swaps, synthetic indices, and optons on all mentoned instruments, primarily to hedge certain market risks associated with the strategy's objective, to express directonal opportunities on specific markets and to facilitate liquidity management.

Benchmarks are taken from published sources and may have different calculaton methodologies, pricing tmes, and foreign exchange sources from the composite.

Composite policy requires the temporary removal of any portolio incurring a client initated significant cash inflow or outlow greater than or equal to 15% of portolio assets. The temporary removal of such an account occurs at the beginning of the measurement period in which the significant cash flow occurs and the account re-enters the composite on the last day of the current month after the cash flow. Additonal informaton regarding the treatment of significant cash flows is available upon request.

The firm's list of composite descriptons, a list of limited distributon pooled fund descriptons, and a list of broad distributon pooled funds are available upon request. GIPS[®] is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organizaton, nor does it warrant the accuracy or quality of the content contained herein.

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