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North America Credit Research
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AI Capex Funding: Data Center - Hyperscaler Bond Matrix 3.0

Wider Spreads, Wider Relationships, More PC & More Equity

Performance is starting to impact supply. From their June tights to today, our High Yield High Performance Compute index has widened 244bp in the last month to 503bp. The actual spread peak last week during max neocloud fears was 544bp. Similarly, the High Grade Technology sector has widened 37bp from its June lows to 127bp (max last week of 133bp). That performance has driven a materially slower pace of issuance into the public markets, with leveraged loans arguably a slight exception.

The bond universe basically hasn't grown since August. Our tracked universe of bonds have increased from $602 billion in July to $629 billion today. Syndicated leveraged loans have increased but still remain a small component of the overall loan market at less than 59bp vs. 344bp for the High Yield bond market; see details below in the leveraged finance market commentary. Lending activity has been concentrated into a number of large private deals totaling over $100 billion of ultimate size on the GPU side with various flavors of subordination and/or vendor backstops used to solve for investment grade ratings on portions of the financings. It's probably a bit of a red herring to assume private markets are replacing public markets. As we have written in the past (AI Capex 2.0), GPU financings are arguably more complex and harder than data center financings. Many of them were going to come to the private credit market regardless. Additionally, the line between public and private credit in these transactions is extremely blurry, with most of these deals including 144a or 4a2 private placement tranches that are ultimately intended to be syndicated largely to traditional investment grade bond buyers like insurance companies and asset managers. One other item to think about in regards to GPU financings (discussed below in the High Grade section) is the relative level of competition for capital in the short-end of the fixed income markets. There are few 30 year alternatives for investors to deploy capital, but many 5-year alternatives. While the overall proportion of credit markets three year average life and in is small, the number of fixed income products creates an interesting competitive pricing dynamic.

Increased equity issuance (and equity overall) is probably a more durable and genuine trend. We have seen a number of large secondary equity offerings and IPO filings in the last several months. Larger equity components into deals seems inevitable in the current market environment. The loan-to-cost on financings year-to-date has ranged between 70%-95% (low-end neocloud, high-end hyperscaler) with the average closer to 90%. On a go-forward basis, we expect less leverage to be the norm, which should ultimately should reduce supply and support spreads.

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Figure 1: Hyperscaler & AI/Data Center Investable Universe ($bn)

	Direct IG	Proportionate Share of DC Lessor Debt		Total Related
	Index	IG Index	HY Index	Obligations
AMZN	$117	$0	$3	$120
MSFT	$34	$9	$2	$44
GOOGL	$74	$3	$13	$90
META	$81	$40	$9	$130
ORCL	$117	$14	$3	$134
Other	$72	$4	$34	$111
Total	**$495**	**$70**	**$64**	**$629**

Source: J.P. Morgan.

Data centers have lagged hyperscalers. The underlying corporate relationships between hyperscalers and related project finance bonds have moved since the last version of this report in July. Currently, the average HG project now trades 135bp wide to its related hyperscaler, while the average HY project now trades 238bp wide to its related hyperscaler. The current universe encompasses 23 pairs, up from 15 in May. In July the average HG project finance bond traded 99bp wide to its related hyperscaler - meaning that has been an impressive 36% of the relationship and 14% of the total spread. Conversely, the average HY project traded 208bp wide to its related hyperscaler in July - so that relationship has widened 30bp or 15% of the relationship and 7% of the average total spread. Additionally, all-in yields do matter. The average data center lease approximates a 12% yield-on-cost and the average GPU lease is somewhere in the 15-18%+ range depending on structure. As high yield funding all-in financing costs move above 10%, we would expect to see more structural tweaks to achieve investment grade ratings. That on the margin will push a bit more paper into high grade from leveraged finance.

Figure 2: Hyperscaler - Project Bond Relationship Summary

	Count	Average	Wide	Tight
Hyperscaler - HG Project	7	135bp	255bp	64bp
Hyperscaler - HY Project	13	238bp	423bp	66bp
HY Lessee - HY Project	7	-185bp	555bp	-563bp

Source: J.P. Morgan.

Supply expectations and fears will continue to be the biggest determinant of spread performance in our view. The underlying fundamentals and construction performance of projects, hyperscalers and the ecosystem in totality have been quite strong. Much of the negative narrative has been around continued investor willingness to lend and the total quantum of credit ultimately available to the space. We continue to think overall capacity is available (Growing Pains, *Rosenbaum et al*). Arguably, equity issuance has helped stabilize funding costs in the last week less because of traditional solvency concerns, and more out of the expectation that equity issuance reduces the technical overhang in credit. What does that mean going forward? The recursive loop of credit market performance to equity market performance to equity market issuance back to credit market performance is going to be a real factor going forward.

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High Performance Computing Public Debt Universe

Figure 3: IG and HY High Performance Computing versus Hyperscaler Bond Relative Value

Note: The blue rows are IG HPC bonds. The gray rows are HY HPCs which are compared on both YTM and YTC basis

Security	Issuer	Par amount outstanding $bn	Rating (Mdy / SP / Fitch)	Current G-Spread (bp)	Rating notch difference / Basis, bp
RDMICH 7 1/2 03/30/45	RD Michigan	14.0	Baa3 / - / BBB	375	1 notches
ORCL 5 3/8 07/15/40	Oracle Corp	2.2	Baa2 / BBB- / BBB	294	81
RPLDCI 6.581 05/30/49	Beignet Investor LLC	27.3	- / A+ / -	229	1 notches
META 6.2 05/15/46	Meta Platforms Inc	4.0	Aa3 / AA- / -	165	64
TXEDCI 7.534 11/30/48	Sopaipilla Investor LLC	12.6	- / A+ / AA-	243	1 notches
META 6.2 05/15/46	Meta Platforms Inc	4.0	Aa3 / AA- / -	165	79
QTSQST 5.7 04/15/36	QTS Fayetteville	4.6	Baa2 / - / -	246	8 notches
MSFT 3.45 08/08/36	Microsoft Corp	1.7	Aaa / AAA / WD	32	214
QTSQDY 6 5/8 09/01/31	QTS Cntrl Issuer LLC	3.9	Baa3 / - / BBB-	255	8 notches
MSFT 1.35 09/15/30	Microsoft Corp	0.4	Aaa / AAA / -	0	255
HUTRBA 6.192 11/15/42	Hut 8 DC LLC	3.3	- / BBB- / BBB-	199	7 notches
GOOGL 4.8 02/15/36	Alphabet Inc	4.3	Aa2 / AA+ / -	72	127
HUTBPA 6.129 11/30/42	Beacon Point DC LLC	4.3	Baa2 / - / -	217	5 notches
NVDA 3 1/2 04/01/40	Nvidia Corp	1.0	Aa1 / AA / WD	91	126
BLKPRL 6 1/8 02/15/31	Black Pearl Compute	2.0	Ba2 / - / BB-	162	9 notches
AMZN 4 1/4 03/13/31	Amazon.com Inc	5.0	A1 / AA / AA-	53	109
AMZN 3.85 03/13/28	*Amazon.com Inc*	*2.3*	*A1 / AA / AA-*	*33*	*129*
PFORGE 6 3/4 03/15/31	APLD ComputeCo 2 LLC	2.2	Ba3 / - / BB-	303	4 notches
ORCL 4 95 02/04/31	Oracle Corp	3.5	Baa2 / BBB- / BBB	237	66
ORCL 2.3 03/25/28	*Oracle Corp*	*2.0*	*Baa2 / BBB- / BBB*	*181*	*122*
YNDRDC 6 7/8 06/30/31	Yondr JK 1 LLC	0.7	Ba3 / - / BB	455	4 notches
ORCL 2 7/8 03/25/31	Oracle Corp	3.3	Baa2 / BBB- / BBB	238	217
ORCL 4 1/2 05/06/28	*Oracle Corp*	*0.8*	*Baa2 / BBB- / BBB*	*182*	*273*
FLASHC 7 1/4 12/31/30	Flash Compute LLC	1.3	Ba3 / - / -	260	10 notches
GOOGL 4.1 11/15/30	Alphabet Inc	2.5	Aa2 / AA+ / -	38	222
GOOGL 0.8 08/15/27	*Alphabet Inc*	*1.0*	*Aa2 / AA+ / -*	*17*	*243*
WULF 7 3/4 10/15/30	Wulf Compute LLC	3.2	Ba2 / BB / BB	176	9 notches
GOOGL 4.1 11/15/30	Alphabet Inc	2.5	Aa2 / AA+ / -	38	138
GOOGL 0.8 08/15/27	*Alphabet Inc*	*1.0*	*Aa2 / AA+ / -*	*17*	*159*
MERIDI 6 1/4 04/30/31	Meridian Arc Holdco LLC	5.7	Ba2 / BB- / BB	368	9 notches
GOOGL 4.1 02/15/31	Alphabet Inc	3.0	Aa2 / AA+ / -	42	326
GOOGL 3 7/8 11/15/28	*Alphabet Inc*	*1.0*	*Aa2 / AA+ / -*	*16*	*353*
CIFR 7 1/8 11/15/30	Cipher Compute LLC	1.7	Ba3 / - / BB-	219	10 notches
GOOGL 4.1 11/15/30	Alphabet Inc	2.5	Aa2 / AA+ / -	38	181
GOOGL 0.8 08/15/27	*Alphabet Inc*	*1.0*	*Aa2 / AA+ / -*	*17*	*202*
TRACTC 5 7/8 03/01/31	SV RNO Property Owner 1	3.8	Ba1 / BB+ / BB	476	7 notches
NVDA 2 06/15/31	Nvidia Corp	1.3	Aa1 / AA / -	53	423
NVDA 1.55 06/15/28	*Nvidia Corp*	*1.3*	*Aa1 / AA / -*	*35*	*442*
TRACTD 6 1/2 05/01/31	PR RNO Property Owner 1	4.6	Ba1 / BB / BB	475	7 notches
NVDA 2 06/15/31	Nvidia Corp	1.3	Aa1 / AA / -	53	421
NVDA 1.55 06/15/28	*Nvidia Corp*	*1.3*	*Aa1 / AA / -*	*35*	*440*
APLD 9 1/4 12/15/30	APLD ComputeCo LLC	2.4	- / BB- / BB-	342	9 notches
META 4.2 11/15/30	Meta Platforms Inc	4.0	Aa3 / AA- / -	64	278
META 4.6 05/15/28	*Meta Platforms Inc*	*1.5*	*Aa3 / AA- / -*	*24*	*319*
CORZ 7 3/4 05/15/31	Core Scientific Finance	3.3	- / BB / BB-	436	-2 notches
CRWV 9 02/01/31	Coreweave Inc	1.8	B1 / B / BB-	940	-504
SECMOS 8 7/8 05/01/31	SE Cosmos LLC	1.0	- / BB / BB-	489	0 notches
SOFTBK 8 1/4 10/22/31	Softbank Group Corp	0.6	- / BB+ / -	403	85
SOFTBK 5 04/15/28	*Softbank Group Corp*	*1.1*	*Ba2 / BB+ / -*	*251*	*238*
EDGCOM 7 1/2 04/30/31	Edged Compute LLC	1.3	- / BB+ / BB-	698	-3 notches
CRWV 9 02/01/31	Coreweave Inc	1.8	B1 / B / BB-	940	-242
ELKGVP 7 1/2 06/15/31	Elk Grove Village Proper	0.9	Ba3 / BB- / BB-	403	-1 notches
CRWV 9 3/4 10/01/31	Coreweave Inc	2.8	B1 / B / BB-	967	-563
ZENARC 8 7/8 08/31/31	Zenith Arc LLC	2.3	Ba2 / BB / -	788	-1 notches
JANEST 7.294 08/13/31	Jane Street Group	5.9	Ba1 / BB / BBB-	233	555
GALAXY 9 7/8 08/01/31	Galaxy Helios Data Cntr	3.5	- / BB- / BB-	677	-1 notches
CRWV 9 3/4 10/01/31	Coreweave Inc	2.8	B1 / B / BB-	967	-290
DDRIVE 8 7/8 09/30/31	DDC 01 Propco LLC	1.1	- / BB- / BB-	628	-1 notches
CRWV 9 3/4 10/01/31	Coreweave Inc	2.8	B1 / B / BB-	967	-339
STNGRY 6 06/15/31	Stingray Compute	0.8	Ba2 / - / BB-	213	9 notches
AMZN 3 7 06/12/31	Amazon Com Inc	2.5	A1 / AA / AA-	75	137
AMZN 1.65 05/12/28	*Amazon.Com Inc*	*2.3*	*A1 / AA / AA-*	*34*	*179*
CLSPRK 7 7/8 10/01/31	CSDC FINANCE I LLC	2.3	Ba2 / - / BB-	318	9 notches
META 4.55 08/15/31	Meta Platforms Inc	1.0	Aa3 / AA- / -	66	253
META 4.6 05/15/28	*Meta Platforms Inc*	*1.5*	*Aa3 / AA- / -*	*24*	*295*
ELNIFOR 7 06/15/31	APLD ComputeCo 3 LLC	1.6	- / BB- / BB-	387	9 notches
META 4.55 05/15/31	Meta Platforms Inc	3.0	Aa3 / AA- / -	64	324
META 4.6 05/15/28	*Meta Platforms Inc*	*1.5*	*Aa3 / AA- / -*	*24*	*364*

Source: J.P. Morgan, Bloomberg Finance L.P. Data as of 10/28/2026

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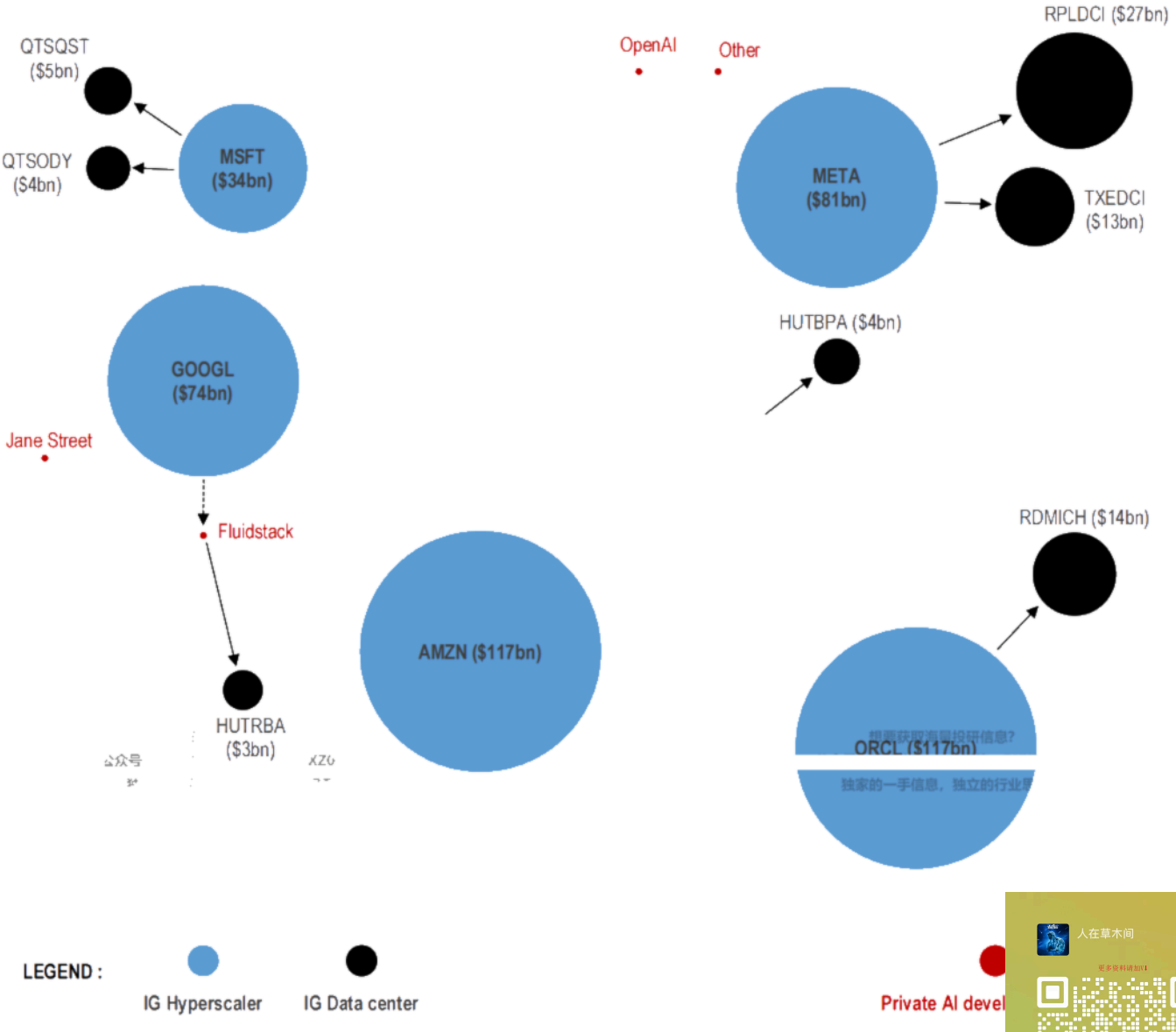
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Figure 4: High Performance Computing Leveraged Loans

Security	Issuer	Offer Amount ($bn)	Spread to 3yr (bp)	Rating (Mdy / SP / Fitch)
CRWC 5.5% 09/01/2031	CoreWeave GPU	$2.60bn	625bp	Ba2 / NR / BB+
CRWC 4.5% 11/15/2031	CoreWeave GPU	$3.10bn	468bp	Ba2 / NR / BB+
ISAOLC 4.25% 11/15/2030	Crusoe	$0.51bn	435bp	Ba1 / BB / NR
LAMBCM 3% 12/31/2030	Lambda Compute II LLC	$0.93bn	303bp	Baa2 / NR / NR
QTS 2.25% 07/22/2033	QTS	$3.25bn	333bp	Baa3 / NR / BBB
VOLTYD 6.5% 10/15/2032	Volta Tydal Holdings	$3.71bn	741bp	NR / NR / NR
VOLTYD 6.5% 10/15/2032	Volta Tydal Holdings	$1.30bn	741bp	NR / NR / NR

Figure 5: Hyperscalers and the HPC Universe Credit Linkages Simplified

Note: Solid arrows: single-tenant projects. Dotted arrows: multi-tenant or intermediary structures; % reflects estimated revenue share



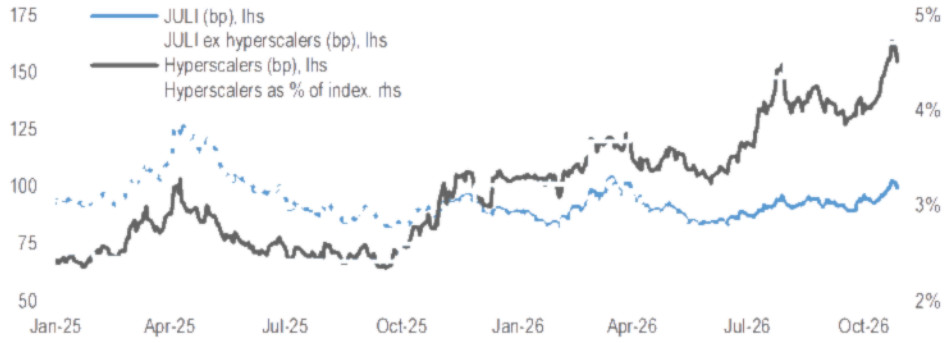
Source: J.P. Morgan, Bloomberg Finance L.P.

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High Performance Computing (AI) within Investment Grade

What's interesting to us in this back and forth for hyperscaler spreads over the past few weeks is that it has come alongside zero incremental USD senior unsecured hyperscaler issuance (the last deal was Alphabet's $25bn on August 6th). **As such, hyperscalers currently make up 4.7% of the HG market currently vs. 2.6% a year ago.** So one can either attribute the widening to what is going on in adjacent markets (as we discussed here), or fears of even larger than previously expected 2027 unsecured issuance (which seems erroneous given the most prolific hyperscaler issuers have yet to report earnings), or because of the ongoing wave of GPU financing occurring in real-time in the background. These are not mutually exclusive reasons but the last one seems most reasonable to us. **Part of why we believe these financings are having an outsized impact on spreads is not only their size (a reported $103bn in total for the two currently in motion) but the private to public nature of these transactions which means the broader market is fearful of the relative value implications these may have for traditional senior unsecured hyperscaler risk once pricing details emerge to the rest of the market post-facto.**

Figure 6: Hyperscaler spread and index weight



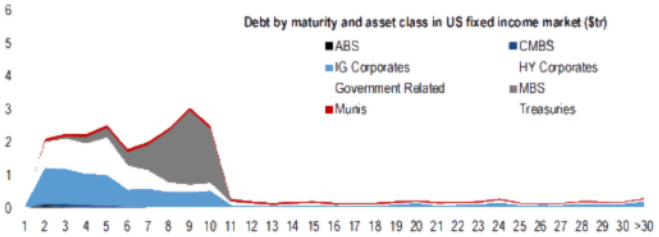
Source: J.P. Morgan.

In some ways, this dynamic is very similar to the interplay between data-center bonds and hyperscaler bonds earlier this year. But **there is one critical difference, in our view, which is the shorter tenor of the GPU financings** (thus far, all appear to be shorter than 10 years). Inside 10 years, spread buyers can rotate across a broad range of spread products including ABS, CMBS, CLOs, agency/MBS, HY and Munis. This is a double-edged sword, in our view. On the one hand, every existing bond has an owner so clearly **the addressable pool of 'demand' is significantly larger in the front-end than the long-end. Below, we show the amount of UST + USD Spread products at each maturity point from 1 year to 30 years and the amount of spread product between years 1 and 10 is $21.1tr vs just $4.5tr beyond 10 years, e.g. the front-end is nearly 5x larger than the long-end. However, the flipside of this dynamic is that the diversity of product at the front-end should entail a wider relative value hurdle for these GPU financings to the extent demand is fungible between FI products.** Below, we show a snapshot of all relatively liquid products at each point along the curve, extracted from our Fixed Income Cross Product Relative Value Monitor: IG corporate spreads are currently 71bp in the front end, 89bp at 5yr and 106bp at 10yr, versus ranges of roughly 33-190bp, 28-174bp and 39-542bp, respectively, across the other spread products shown in Figure 2. But these alternatives largely disappear further out the curve. At 30yr, munis are essentially the only competing spread product at 90bp currently versus 121bp for IG corporates. In other words, at the 2yr point in Figure 8

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there are 15x different products that GPU financings need to compete against so the odds of a relatively wider pricing outcome are arguably higher vs. at the 30yr point hyperscaler unsecured issuance is for all intents and purposes just competing against other IG corporates.

Figure 7: The cross-product RV dynamic is radically different at front-end vs. long-end



Source: J.P. Morgan, Bloomberg Finance L.P.

Figure 8: Fixed-income cross product relative value monitor

		Spread to UST		IG Corp Sprd to UST	Spread to Corp		RED = Rich ; GREEN = Cheap			5-year Spread to Corps Range		SPRD to Corps. Historical Averages		
							z-scores							
		Level	WoW Chg		Level	WoW Chg	1yr	3yr	5yr	5y Min SPRD to Corps	5y MAX SPRD to Corps	1yr Avg	3yr Avg	5yr Avg
2yr	CRE CLO AAA	141	2	71	76	-5	-2.5	-1.6	-1.3	50	235	88	109	120
	2Yr IG Tax-exempts	-166	-20	71	-237	-27	-2.1	-1.7	-0.9	-329	-61	-185	-182	-182
	Auto (Subprime AAA)	60	0	71	-11	-7	-2.1	-2.4	-1.5	-51	53	4	9	5
	Student Loan ABS (FFELP AAA)	90	0	71	18	-2	-0.7	-1.0	-1.0	5	45	24	28	28
	FR AAA HELOC	100	0	71	58	-7	-0.9	0.0	0.0	62	91	63	59	59
	2yr Non QM AAA	150	0	71	79	-7	1.0	0.7	0.0	45	157	73	72	69
	7/6 Hybrid Arms	77	1	71	6	-7	-1.3	-1.7	-1.0	-72	69	18	30	24
	FNMA CC 15yr	60	-1	71	9	-8	-1.2	-1.1	0.0	-64	76	17	18	8
	Student Loan ABS (Private Credit AAA)	170	0	71	48	-7	-0.8	0.1	0.1	15	69	57	48	44
	Auto (Prime AAA)	47	0	71	-24	-7	-1.1	-1.2	-0.3	-66	4	-19	-15	-20
	2yr Jumbo Prime Front Sequentials	180	0	71	109	-7	0.8	0.7	0.7	55	128	96	95	95
	2yr IG TAX MUNI	36	5	71	-35	-3	-0.3	-0.5	0.1	-126	-6	-39	-31	-37
	Credit Card (Fixed AAA)	33	0	71	-38	-7	-2.7	-2.1	-0.4	-121	-12	-36	-24	-32
	SEQ 2Y (CMO Coupon	90	6	71	18	-2	-0.5	-1.0	0.3	-126	65	25	33	7
	6.5 Cpn CMO floaters	190	10	71	119	3	2.8	3.1	2.0	-61	144	49	59	31
5yr	AA CLOs (recent issue)	117	6	89	28	-2	-1.7	-1.4	-1.7	21	170	52	78	88
	AAA CLOs (recent issue)	91	0	89	3	-7	-2.5	-1.5	-1.5	-4	103	23	29	38
	5Yr IG Tax-exempts	-148	-12	89	-237	-19	-2.8	-1.6	-1.0	-263	-67	-186	-203	-201
	Conduit LCF 5x AAA	87	4	89	-2	-3	-1.0	-1.2	-1.2	-7	16	2	4	4
	FNMA CC 30yr	128	-1	89	32	-8	-0.9	-1.4	-0.1	-23	79	37	47	34
	FNMA DUS 7/6.5	61	1	89	-45	-6	-1.6	-1.4	0.1	-99	-10	-76	-57	-69
	FNMA DUS 5/4.5	39	0	89	-69	-7	-1.7	-1.4	-0.1	-105	-22	-39	-38	-47
	Non-Agency RMBS (55% SSNR PT)	174	0	89	85	-8	-0.1	-0.2	0.5	-11	130	87	89	67
	5yr IG TAX MUNI	36	5	89	-40	-3	-1.7	-0.5	0.2	-115	-39	-53	-46	-43
	CMO 5yr SEQ (145)	114	4	89	25	-3	-0.4	-0.8	0.4	-61	62	29	36	10
	CMBX Pulled Loan	150	0	89	61	-7	0.9	1.1	1.0	-53	72	65	66	34
10yr	Conduit A	280	6	106	97	-2	0.8	-0.4	-0.5	36	408	96	117	145
	Conduit AA	143	6	106	37	-2	-0.6	-0.8	-0.7	0	223	43	55	67
	Conduit A5	116	4	106	10	-4	-0.8	-0.8	-0.8	-12	107	15	25	29
	10Yr IG Tax-exempts	-124	-10	106	-230	-18	-1.8	-0.4	-0.5	-281	-108	-212	-220	-212
	Conduit BBB- (On The Run)	542	12	106	436	4	1.3	-0.2	-0.3	221	826	396	467	485
	Conduit Super-Senior AAA	62	4	106	-24	-4	-1.3	-1.2	-0.5	-63	21	-17	-14	-16
	10yr IG TAX MUNI	61	3	106	-45	-4	-0.3	-0.5	-0.1	-78	-21	-45	-41	-44
	10yr Bucket Jumbo LCF	175	0	106	69	-8	1.7	1.1	0.8	-13	128	61	62	59
	Agency DUS 10/9.5	42	1	106	-64	-7	-1.5	-1.4	-0.2	-105	-38	-56	-54	-61
	Freddie K A2 (10yr)	39	0	106	-67	-8	-1.4	-0.9	0.3	-122	-46	-59	-60	-72
	CMO 10Yr SEQ (145)	130	5	106	24	-3	-0.5	-0.8	0.4	-67	64	28	34	10
	Freddie K A1 (10yr)	42	0	106	-64	-8	-1.5	-1.0	0.3	-137	-39	-52	-55	-72
30yr	30yr IG TAX MUNI	90	4	121	-32	-6	-1.3	-1.0	-1.0	-47	25	-22	-22	-18
	30Yr IG Tax-exempts	-26	5	121	-142	-5	-0.2	-0.3	-0.6	-173	-74	-140	-136	-150

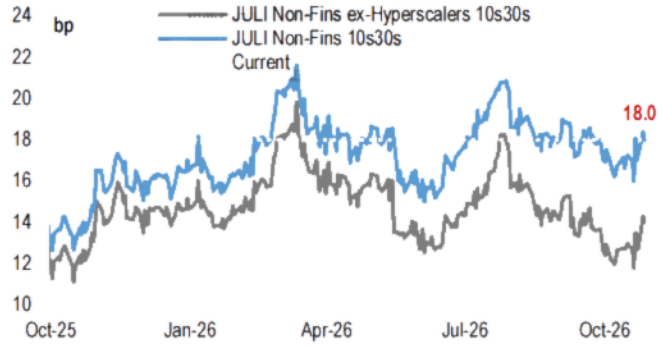
Note: As of 10/23/2026. Securitized products are placed in term buckets based on approximate WAL/duration. *Data collection on 2yr Jumbo Prime Front Sequentials began in November of 2023.
This report compares the referenced security spread to the IG corporate spread. Securities with spreads that are furthest to the left of the 5-year range are richer, spreads that are furthest to the right indicate as cheaper.
To reflect recently traded levels, US CLO AAA/AA spreads are represented by the yield on the US CLOIE index versus the 3-year swap rate to match the effective average life (given the typical 2-year non-call).
Z-scores provide additional context on the reference security spread. Z-scores shaded with a red orientation indicate richer spreads, while green shaded values indicate cheaper spreads.
Source: iBoxx, Refinitiv, ICE, J.P. Morgan.

Thus, while incremental hyperscaler issuance earlier this year added duration to the market, it was also supplying an area where investors have relatively few alternatives for sourcing long-duration spread product. That makes the magnitude of long-end hyperscaler more understandable as the concentration risk at the long-end is magnified by the lack of alternative fixed income products out the curve. Hyperscalers have cheapened across the curve YTD, but the repricing has been heavily skewed toward longer maturities: 3yr spreads are 72bp, +30bp YTD and just 1bp wide of JULI, 10yr spreads are 135bp, +46bp YTD and 32bp wide of JULI, and long-end spreads are 169bp, +56bp YTD and 62bp wide of the index versus just 16bp wide at

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YE25. The hyperscaler 10s30s curve is similarly wide at 44bp, versus only 14bp ex-hyperscalers.

Figure 9: Hyperscaler long-end issuance has weighed on spread curves



Source: J.P. Morgan

Figure 10: JULI vs Hyperscaler spread by tenor

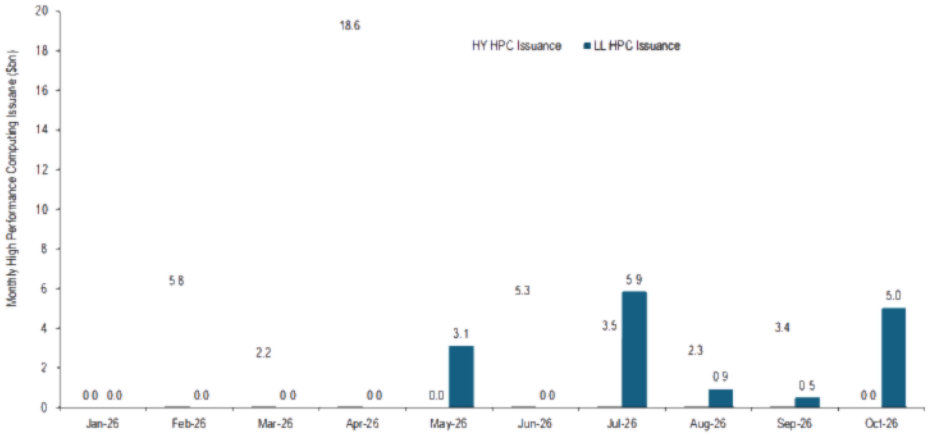
Tenor	JULI Spread, bp			Hyperscalers Spread, bp			Difference	Current
	YE25	Current	Δ	YE25	Current	Δ	YE25	Difference
1-3y	61.7	70.7	+9.1	42.4	72.2	+29.8	-19.3	+1.4
3-5y	73.6	82.3	+8.7	71.0	113.2	+42.1	-2.5	+30.9
5-7y	78.4	90.8	+12.3	77.0	130.9	+53.9	-1.4	+40.2
7-10y	90.5	103	+12.5	88.4	134.5	+46.1	-2.1	+31.5
10y+	97.3	107.2	+9.9	113.1	168.8	+55.7	+15.8	+61.6

Source: J.P. Morgan

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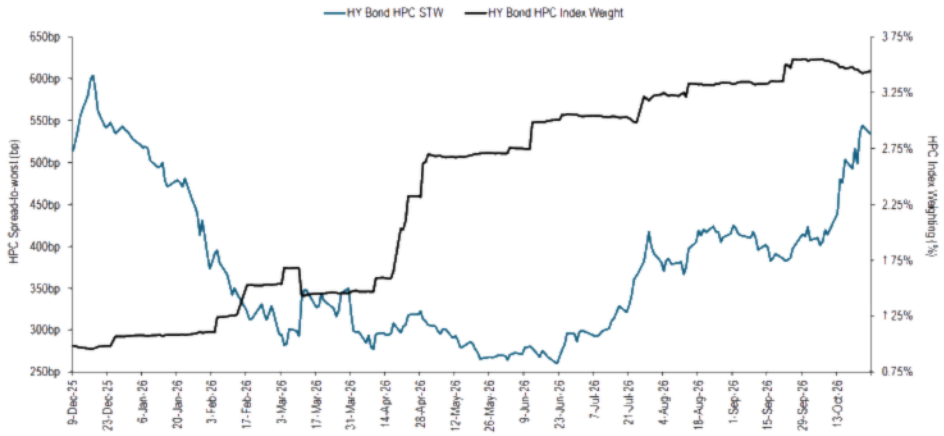
High Performance Computing (AI) within Leveraged Finance

Figure 11: The HPC subsector accounts for 30% of high-yield net issuance year-to-date versus only 8% of net institutional loan issuance



Source: J.P. Morgan.

Figure 12: Led by $41bn of bond issuance year-to-date, the HPC subsector market-weight within the High-Yield Bond Index has expanded from 1.07% at YE25 to 3.44%



Source: J.P. Morgan.

A large contributor to the $55bn growth in outstanding for the Developed USD High-Yield Bond Universe in 2026 (to $1.6TRN) has been the High-Performance Computing (AI) subsector. **For context, HPC (AI) bond issuance now totals $41.0bn year-to-date.** Accounting for 30% of the $135.8bn non-refi-related HY issuance year-to-date, HY net issuance is tracking well ahead of last year's pace (+65% yoy). How big has the HPC subsector become in the J.P. Morgan High-Yield Bond index? **The HPC subsector has expanded from 1.07% at YE25 to 3.44%. This includes $53.3bn of bonds outstanding via 18 issuers with an average duration inside 3.5yrs.** For reference, HPC now accounts for 36% of the HY Technology Sector, which is now 9.46% of the overall High-Yield Bond Index (third largest behind Energy and Financials). For context, Technology already has a far greater presence in the Leveraged Loan index (predominately Software) with a weighting of 14.86%. Meanwhile, in the latest **3Q26 High-Yield Portfolio Analysis** we find high-yield fund managers have embraced the sector. **Rising 70bp q/q, HY funds are now 10bp OW the rapidly growing High-**

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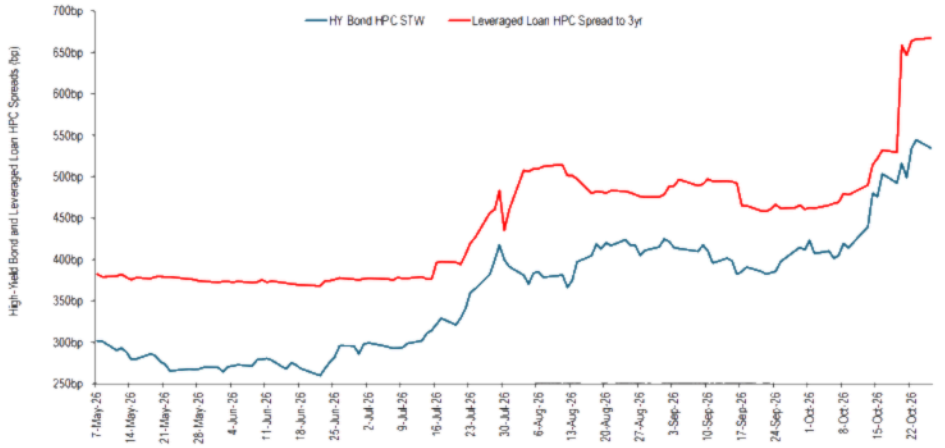
Performance Computing (AI) sub-sector at a 365bp weighting. The largest UWs are in GALAXY (-11bp), ZENARC (-9bp), CLSPRK (-8bp), the largest OWs in MERIDI (+7bp) and CIFR (+7bp), whereas CRWV is a MW at 47bp. Notably, HPC has a much less acute impact on the loan market. **Leveraged Loan HPC issuance totals $15.4bn year-to-date with the index-eligible portion of HPC loans (2 issuers with $9.3bn) at only 59bp of the broader Leveraged Loan index. With HPC high-yield bonds and leveraged loans 123bp and 207bp wider in October to 535bp and 667bp, respectively, this rapidly growing segment has contributed to October's index widening (HY: +24bp Oct vs LL: +49bp) alongside decompression (CCCs) and weakness across other sectors (esp. Telecom, Cable, Housing, Transports).** From a total return perspective, the HPC subsector for the HY and LL indices are down -2.9% and -1.6% in October, respectively, although the HY component is still outperforming the broader HY index year-to-date (+2.05% vs +0.55%).

Figure 13: High-Yield funds are now 10bp OW the rapidly growing High-Performance Computing (AI) sub-sector at a 365bp weighting

Main Issuer	Ticker	Par Amt	Rating (Mdy/SP/Fitch)	High Yield Funds exposure	J.P. Morgan High Yield Bond Index	OW vs Index	High Yield Funds change Q/Q	Index change Q/Q	Number of funds that own exposure	Percent of funds that own exposure	Average for funds that own it
CoreWeave Inc	CRWV	7,750	B1/B/BB-	0.47%	0.48%	-0.02%	5bp	-5bp	48	75%	0.62%
Applied Digital Corp	APLD	6,090	NR/BB-/BB-	0.43%	0.42%	0.00%	9bp	-1bp	46	72%	0.71%
Meridian ARC Holdco LLC	MERIDI	5,700	Ba2/BB-/BB	0.44%	0.37%	0.07%	3bp	-2bp	49	77%	0.47%
PR RNO Property Owner 1	TRACTD	4,565	Ba1/BB/BB	0.26%	0.29%	-0.03%	6bp	-2bp	45	70%	0.47%
SV RNO Property Owner 1	TRACTC	3,800	Ba1/BB+/BB	0.23%	0.24%	-0.01%	-2bp	-2bp	39	61%	0.39%
Cipher Compute LLC	CIFR	3,733	Ba3/NR/BB-	0.33%	0.26%	0.07%	1bp	0bp	44	69%	0.42%
Galaxy Helios Data Center	GALAXY	3,567	NR/BB-/BB-	0.12%	0.24%	-0.11%	12bp	24bp	21	33%	0.39%
Core Scientific	CORZ	3,300	NR/BB/BB-	0.17%	0.22%	-0.06%	4bp	-1bp	31	48%	0.43%
WULF Compute	WULF	3,200	Ba2/BB/BB	0.26%	0.23%	0.03%	0bp	0bp	36	56%	0.37%
CSUC Finance I LLC	CLSPHK	2,276	Ba2/NR/BB-	0.08%	0.16%	-0.08%	8bp	16bp	23	36%	0.34%
Zenith Arc LLC	ZENARC	2,250	Ba2/BB/NR	0.06%	0.14%	-0.09%	5bp	14bp	14	22%	0.35%
Edged Compute LLC	EDGCOM	1,300	NR/BB-/BB-	0.08%	0.08%	0.00%	4bp	0bp	20	31%	0.42%
Flash Compute	FLASHC	1,300	Ba3/NR/NR	0.11%	0.09%	0.02%	0bp	0bp	27	42%	0.26%
DCC 07 Propco LLC	DDRIVE	1,120	NR/BB-/BB-	0.03%	0.08%	-0.05%	3bp	8bp	11	17%	0.21%
SE Cosmos LLC	SECMOS	999	NR/BB+/BB-	0.13%	0.07%	0.06%	6bp	0bp	10	16%	0.41%
Elk Grove Village Property LLC	ELKGVP	900	Ba3/BB-/BB-	0.05%	0.06%	0.00%	3bp	0bp	24	38%	0.22%
Stingray Compute	STNGRY	810	Ba2/NR/BB-	0.05%	0.05%	0.00%	3bp	0bp	27	42%	0.20%
Yondr JK 1 LLC	YNDRDC	715	Ba3/NR/BB	0.06%	0.05%	0.01%	4bp	0bp	27	42%	0.21%
		$53.3bn	Total	3.36%	3.54%	-0.18%	72bp	47bp	59	92%	3.83%

Source: J.P. Morgan.

Figure 14: High-Yield and Leveraged Loan HPC spreads are 123bp and 207bp wider in October



Source: J.P. Morgan.