

Commercial Mortgage Performance IndexSM

4Q 2020 RESULTS AND ANALYSIS

The Giliberto-Levy Monitor reports quarterly results of the Giliberto-Levy Commercial Mortgage Performance IndexSM and provides comprehensive in-depth market analysis and commentary on key aspects of the commercial mortgage industry. A subscription to the Giliberto-Levy Monitor includes access to the Giliberto-Levy Analyzer—a custom query tool enabling analysis of total return on a long-term historical basis.

Update from the G-L 2

The Giliberto-Levy High-Yield Real Estate Debt Index (the G-L 2) offers investors a performance benchmark for mezzanine debt, preferred equity, and A/B note structures, among others. The G-L 2 is fully consistent with other mark-to-market indexes, including other commercial real estate investment performance indexes. For the 12 months ended 12/31/20, the G-L 2 notched a return of 5.12%, which is 348 basis points lower than the 8.60% return tallied since its inception at the beginning of 2010. By contrast, the G-L 1 (our first mortgage, fixed-rate index covered in this Monitor) showed a return of 6.33% - 121 basis points higher – for the 12 months ended 12/31/20. Of equal interest, investment-grade CMBS, as measured by Bloomberg Barclays indices, showed a total return of 7.62% for the same 12 months, with slightly more volatility than the G-L 2.

To learn more about the G-L 2 or join the Founders Group, please contact **John Levy at 804-500-9025** or **jlevy@jblevyco.com**.

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MARKET OVERVIEW

FOURTH QUARTER 2020 SUMMARY									
Total Return: (in %)	Total (all sectors)	1.16							
	Office	1.14							
	Multi-family	1.22							
	Retail	1.08							
	Industrial	1.23							
Spreads : (as of 12/31/2020)	Office	223							
•	Multi-family	202							
	Retail	230							
	Industrial	201							
Index Statistics:	Capitalization (\$ billion)	281.57							
(as of 12/31/2020)	Duration (years)	5.29							
	Coupon (%)	4.14							
	Maturity (years)	7.41							
	Book LTV (%)	50.77							

Spreads are averages for new ten-year loans at 60%–65% loan-to-value ratio. Source: Giliberto-Levy

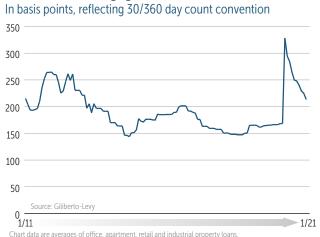
The Giliberto-Levy Commercial Mortgage Performance Index (G-L 1) generated 1.16% total return for 4Q 2020.¹ Total return consisted of 0.97% income return and 0.19% capital value return, which includes price changes and other factors. (The sum of the components may not equal the total due to rounding.) The modest capital value increase reflected a combination of increases in intermediate- and long-term Treasury yields and decreases in commercial mortgage spreads. Fourth quarter spreads declined about 25 basis points (bp) for major sectors (see Chart 1).

¹ The Index's components are fixed-rate commercial mortgage loans held on balance sheets of institutions such as life insurance companies and pension funds. Index returns are a market-value-weighted blend of office, apartment, retail, industrial, lodging, mixed-use and other miscellaneous property types. Index performance tracks senior loans only; it does not include construction loans, mezzanine and other subordinate instruments and bridge loans made by such institutions.









Treasury yields changed very little at the short end of the yield curve, but intermediate- and long-term rates started to climb (see Charts 2 and 3). Increases were on par with decreases in credit spreads; Table 1 (in Pricing Trends below) shows effects on mortgage coupon rates.

Chart 2: US Treasury Yields 9/30/20 and 12/31/20 (in %)

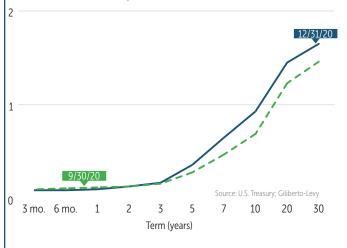
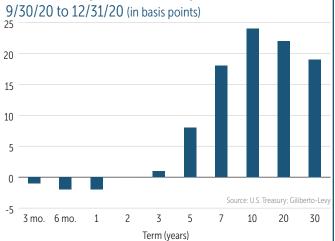


Chart 3: Changes in US Treasury Yields



G-L 1 total return for calendar year 2020 was 6.33%, compared with 8.39% for 2019. Both years had "coupon plus" returns, i.e., total return exceeded income return due to favorable movements in index yields.

PRICING TRENDS: 4Q 2020

Table 1: Key Rates (in %)									
20-year Treasury Yield 20-year Mortgage Spread 20-year Mortgage Yield	9/30/2020 1.23 2.40 3.63	12/31/2020 1.45 2.14 3.59	change 0.22 -0.26 -0.04						
10-year Treasury Yield	0.69	0.93	0.24						
10-year Mortgage Spread	2.40	2.14	-0.26						
10-year Mortgage Yield	3.09	3.07	-0.02						
7-year Treasury Yield	0.47	0.65	0.18						
7-year Mortgage Spread	2.40	2.14	-0.26						
7-year Mortgage Yield	2.87	2.79	-0.08						
5-year Treasury Yield	0.28	0.36	0.08						
5-year Mortgage Spread	2.40	2.14	-0.26						
5-year Mortgage Yield	2.68	2.50	-0.18						

Source: U.S. Treasury; Giliberto-Levy

• Origination of loans with coupon rates below 3% continued in 4Q. About 46% of ten-year loans had coupon rates under 3%. This was during a quarter when the ten-year Treasury yield moved up about 25 bp. The percentage of sub-3% coupons was almost



identical when all loans, both under and over ten-year term to maturity, were analyzed.

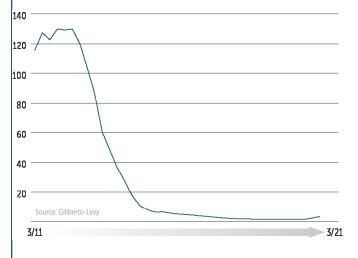
- We continued to see a 20-bp to 30-bp small loan (under \$5 million) premium for most sectors. Not all small-balance loans have such premiums.
- For calendar year 2020 the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index reported price changes of -1.1% for apartments, -2.5% for office, +8.4% for industrial, -10.2% for retail and -18.9% for hotels. These changes reflect a combination of property sales and appraisals. The hotel sample is small and may not be representative of the market.

CREDIT EFFECTS

Credit effects for 2020 came in at 4 bp, up from 2 bp in 2019 (see Chart 4). The annualized quarterly run rate dipped slightly from 5 bp in 3Q to 4 bp in 4Q. This is a statistic we will watch closely in 2021. Its direction will be dictated, in part, by the pace of economic recovery, which is contingent on factors such as progress with COVID vaccinations and the size and delivery of fiscal stimulus.

Chart 4: Commercial Mortgage Credit Effects, 1Q 2011 to 4Q 2020

Rolling four-quarter effect as a percentage of book value, in basis points



RELATIVE PERFORMANCE

Due to the rise in Treasury yields, intermediate- and long-term Treasury notes and bonds posted negative total returns in 4Q 2020 (see Table 2).

Table 2: Total Return as of December 31, 2020

	Total	Return (%)		Duration
	4Q		Last	as of
Index	2020	YTD	4Q	12/31/20
Commercial Mortgages*	1.16	6.33	6.33	5.29
Duration-adjusted Baa Bond	2.71	7.61	7.61	5.29
CMBS: Investment Grade	1.25	7.61	7.61	5.25
CMBS 2.0	1.73	6.89	6.89	4.80
TSY Int. Term	-0.23	5.77	5.77	3.98
TSY 5-7 yr. Term	-0.45	8.48	8.48	5.87
Credit Int. Term	1.55	7.08	7.08	4.44
A Int. Term	1.14	7.58	7.58	4.41
Baa Int. Term	2.46	7.41	7.41	4.75
High-yield Int. Term	6.04	5.84	5.84	2.91
Ba Int. Term	4.92	7.73	7.73	3.33

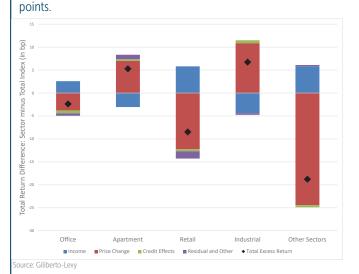
*Giliberto-Levy Total Index includes office, retail, multifamily, industrial, and other

Source: Bloomberg, Barclays; Giliberto-Levy

All other fixed-income sectors turned in positive results: credit spreads for corporate and CMBS securities declined. For example, investment-grade CMBS produced 1.25% total return, according to Bloomberg Barclays Indices. As was the case in 3Q, this result was quite comparable to G-L 1 performance. However, CMBS delivered higher total return (7.61%) for all of 2020. The reason is that the CMBS spread retraced almost all its early 2020 spread increases; it ended 2020 about 10 bp above its year-end 2019 level. The G-L average spread was about 50 bp higher, in contrast.

Property sector relative (to the overall index) performance variation is largely explained by differences in duration and income yields (see Chart 5). Duration is a driver of price performance. With commercial mortgage yields falling, sectors with longer (than index average) duration generally benefited.

Chart 5: Sector Performance Attribution 4Q 2020 Sector performance minus Total Index performance, in basis

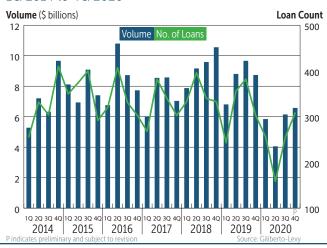


LENDING ACTIVITY

Observations below are based on data received at the time we prepared this report. Results are subject to change as we receive additional information.

• 4Q origination of loans eligible for the Index increased to \$6.6 billion, compared with 3Q 2020's \$6.1 billion, revised from the previously reported \$5.1 billion (see Chart 6). As usual, we expect the most recent quarter's volume to increase when additional loans made in 4Q 2020 are reported as part of 1Q 2021 data collection.

Chart 6: Index-eligible Loan Production 1Q 2014 to 4Q 2020



- Average loan size moved up to \$25.7 million from quarter's \$24 million. Loan sizes ranged from \$1.0 million to over \$400 million. Loans above \$25 million made up roughly 70% of dollar volume but accounted for about 29% of the number of loans. These statistics are comparable to those posted in prior quarters.
- The average LTV on new loans eligible for inclusion in the G-L 1 was 62%. This is a slight increase from last quarter's 60%. Reported DSC held steady at 2.4 times.
- The ten-year segment's market share by volume was 48%, which is near the norm. Other segments also showed typical shares. Five- and seven-year loans jointly got 26% of volume, and loans with 15 years or more to maturity had about 20%.
- New loan production was 25% full-term interest-only loans, 66% loans with partial amortization, and 9% fully amortizing loans. Partially amortizing loans often include an interest-only period up front: 63% of all loans, by volume, had at least some period of interest-only.

Nearly \$8 billion of new loans was added to the Index (see Table 3 for details). These data come from September, October and November 2020 loans. December 2020 loans, which are included in the production number cited above and depicted in Chart 6, will be added to the Index for 1Q 2021. The large volume of lending on industrial assets reflects today's favorite with institutional investors.

Table 3: Total Index Additions (Fourth Quarter 2020)

		Weighted-Average											
	Amount (\$)	No. of Loans	Coupon (bp)	Spread	DSCR		Term (years)						
Office	357,875,000	12	3.39%	275	2.18	63.0	9.1						
Apartment	3,944,100,589	162	2.92%	208	2.21	63.9	11.7						
Retail	427,075,000	20	3.41%	254	2.44	54.1	11.3						
Industrial	2,953,679,923	106	2.86%	217	2.70	60.2	9.6						
Other	115,075,000	8	3.22%	256	2.22	65.6	9.4						
Total	7,797,805,512	308	2.95%	218	2.41	61.9	10.7						

Source: Giliberto-Levy



Please note that spreads reported in Table 3 are weighted averages of loans made during periods prior to December 2020. These averages do not represent quarter-end pricing parameters. Pricing spreads are reported in the summary table at the top of this report for standardized ten-year loans at 60% to 65% LTVs. These standardized spreads also appear in Table 1. Standardized spreads are generated from new loan originations and form the baseline for marking to market all loans in the Index

COMMERCIAL MORTGAGE PERSPECTIVE

Chart 1 (in the top section of the Monitor) shows how volatile spreads were in 2020. Our G-L 1 major-sector composite, which equally weights spreads on office, retail, multifamily and industrial, went from 166 bp on December 31, 2019 to a peak 329 bp in March 2020, then settled back to 214 bp on December 31, 2020. Treasury yields also changed considerably. Commercial mortgage coupon rates reflected these sometimes offsetting factors (see Chart 7).

Chart 7: Quarter-end Coupon Rates

For Ten-year Commercial Mortgages



Source: U.S. Treasury; Giliberto-Levy

As 2020 ended, the ten-year commercial mortgage coupon rate (Treasury yield plus G-L standardized spread) for 60% to 65% LTV deals had fallen about 50 bp from its year-end 2019 level. It is a good bet – it happens about two-thirds of the time – that spreads will come down as Treasury yields increase. Of course, the direction of Treasury yields is never clear, at least to us. However, it does seem likely that yields will remain well below historical averages. Consequently, we do not expect mortgage coupon rates to shoot up. This is good news for borrowers, obviously. Even if spreads

come down, there is a distinct possibility they will remain wider than the historical average. As a result, lenders that make loans to hold on balance sheets as offsets to liabilities likely will continue to supply debt capital.

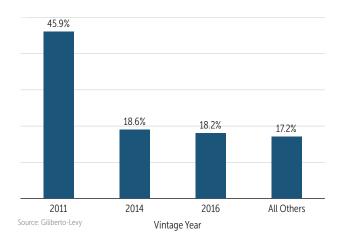
But we do see a warning sign from one of our indicators, coming from our annual analysis of loans scheduled to mature in the next year. The purpose of the analysis is to understand both the volume of loans and potential credit loss exposure for G-L 1.

For 2020, about 4.7% of year-end 2019 balances was set to mature. We believed that rate was below a normal pace due to the combination of a severe drop in lending volume during the 2007-2009 financial crisis and a strong post-crisis rebound. For 2021, the pace will increase. About \$16.6 billion of index principal, or 6.3% of the total \$265.5 billion outstanding at year-end 2020, is set to mature in 2021.

Nearly 83% of 2021 scheduled maturities will come from 2011, 2014, and 2016 vintage years, corresponding to 10-, 7- and 5-year original terms to maturity, respectively (see Chart 8).

Chart 8: G-L Loans Scheduled to Mature in 2021

Percentage of total maturing in 2021, by Vintage Year



We divided maturing loans into two groups: (1) those that amortize fully and (2) those that have balloon payments.

Only 0.9% of 2020 year-end balances fall into the first category. Loans that have twelve months or less remaining and are fully amortizing have quite low balances relative to collateral value: the



average December 31, 2020 LTV is 2.5% and the highest LTV in the cohort is 8.3%. Average DSC, based on estimated current NOI, is 2.3 times. We expect this segment to pose minimal risk of default at maturity.

Table 4 shows the "heat map" in which we sort loans with balloon payments at maturity by current LTV and DSC, which reflect movements in collateral value and earnings.

Table 4: Breakdown of Loans with Balloon Payments at Maturity in 2021

By percentage of 12/31/20 balance of all loans with balloon payments expected in 2021

LTV	0% to 50%	50% to 65%	65% to 70%	70% to 75%	above 75%					
DSC										
1.0 and less	0.6%	1.1%	0.1%	0.7%	0.4%					
1.01 to 1.15	0.2%	0.4%	0.0%	0.0%	0.0%					
1.15 to 1.5	6.9%	2.7%	0.6%	0.2%	0.1%					
1.5 to 1.75	4.8%	2.3%	0.1%	0.0%	0.0%					
above 1.75	58.2%	15.6%	1.5%	0.1%	0.2%					
N/A	1.8%	0.4%	0.9%	0.0%	0.0%					

Source: Giliberto-Levy

The color scheme shows red, amber and green zones, corresponding to highest risk, moderate risk and least risk, (Note that our color scheme does not correspond one-for-one with the commercial mortgage risk rating grid used by the National Association of Insurance Commissioners.)

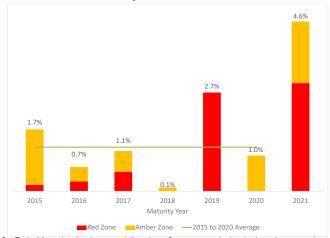
The bottom (gray) row in Table 4 tracks loans that did not provide origination DSC. These add up to about 3% of loans with 2021 balloon maturities. All these loans have LTVs below 70%. However, for loans maturing in 2020 no loans in this category had LTVs above 50%.

Our conclusion in the 4Q 2019 Monitor, written before the onset of the COVID pandemic, was that "we would not be surprised if (in 2020) credit losses drift slightly higher due to continued issues in retail and an overall seasoning effect." As discussed in the Credit Effect section above, this did come to pass.

Importantly, Table 4 shows a meaningful uptick in the percentage of loans with elevated risk, those in the red and amber zones. The total is 4.6% of the balances set to mature, compared with an average of 1.2% from 2015 through 2020 (see Chart 9).

Chart 9: Percentage of Maturing Loan Balances

Loans with Elevated Maturity Default Risk 2015 to 2021



See Table 4 for red and amber zone delineations. Percentages calculated using prior year-end principal balances for loans with balloon payments at maturity in the indicated year. Source: U.S. Treasury; Giliberto-Levy

The increase reflects erosion of property earnings and declines in value experienced in many sectors due to the pandemic and associated economic trauma. Credit events lag: defaults can increase even after the economy begins to recovery. We suspect this is particularly likely given how severe and compressed (in time) the economic collapse was. Still, we are not predicting that credit effects will go up dramatically in 2021, but the substantial risk increase implies keeping a watchful eye.

As always, we welcome your comments and questions.

February 2021



Monitor charts and exhibits will be altered slightly in the next Monitor issue. Charts showing time series data will delete the oldest year currently shown and include space for 2021 results.

Exhibits for returns and statistics by coupon rates and by vintage years will change. We will add a row for 3% to 3.5% coupon rates and alter the initial row to 0% to 3%. This is driven by the large issuance of sub-3% coupon rate loans during 2020. The last two rows (7% to 7.5% and above 7.5%) will be combined into a single row.

Loans with vintage years prior to 2007 are about 2.9% of the total. All these years will be grouped into one row. Loans originated during the GFC-centered era of 2007 to 2010 will also be grouped into a single row: the loans that are still active from those years are just over 1% of the index. Of course, a vintage year 2021 row will appear.

Chart 10: Commercial Mortgage PerformanceRolling four-quarter total return for Total Index

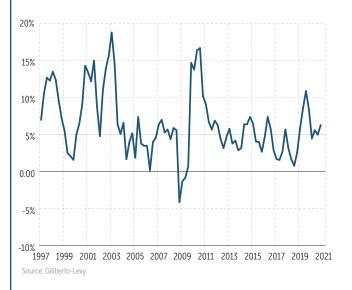
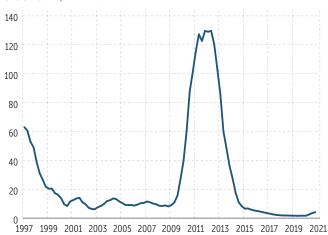


Chart 11: Commercial Mortgage Credit Effects

Rolling four-quarter total effects as a percentage of book value (in basis Points)



Source: Giliberto-Levy

SUPPORTING TABLES AND CHARTS

Table A: Performance by Property Sector - For the quarter ended December 31, 2020

Returns (%)

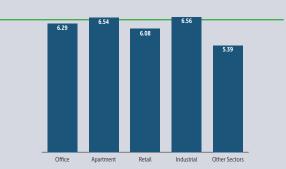
Credit Losses (book value; bp)

	Last 3 months				YTD	Last 12	Index	Last 3		Last 12
Sector	Income	Price	Other	Total	Total	Months	Level	Months	YTD	Months
Office	1.00	0.18	-0.04	1.14	6.29	6.29	2403.65	2	6	6
Apartment	0.94	0.30	-0.02	1.22	6.54	6.54	3131.83	1	3	3
Retail	1.03	0.10	-0.05	1.08	6.08	6.08	2853.97	2	6	6
Industrial	0.93	0.34	-0.04	1.23	6.56	6.56	2814.62	0	3	3
Other Sectors	1.03	-0.03	-0.03	0.98	5.39	5.39	N/A	2	5	5
Total	0.97	0.22	-0.03	1.16	6.33	6.33	2627.38	1	4	4
Aggregate	0.97	0.24	-0.03	1.18	6.41	6.41	4252.83	1	4	4

Aggregate excludes Other Sectors (hotel/motel, mixed-use and miscellaneous) Other Return is paydown return and compounding

Index bases: Aggregate Dec. 1971 = 100; Total and major sectors Dec. 1977 = 100 bp Basis Points bp Basis Points

Total Return by Sector Last 12 months (%)



Credit Effect by Sector Last 12 months (bp)



APPENDIX (Following pages)

Supporting Tables and Charts 4Q 2020

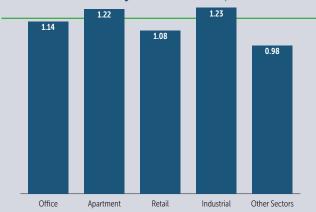
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Table B: Giliberto-Levy Index Performance by Property Sector - For the quarter ended December 31, 2020

	Returns (%)			Statistics Averages							
					Adj.					Pct. of	No. of
Sector	Income	Price	Other	Total	Duration	Coupon	Maturity	Price	Yield	Portfolio	Cohorts
Office	1.00	0.18	-0.04	1.14	4.67	4.23	6.52	106.1	2.49	20.0%	2,414
Apartment	0.94	0.30	-0.02	1.22	5.79	3.99	7.82	106.4	2.57	41.8%	5,621
Retail	1.03	0.10	-0.05	1.08	4.81	4.36	6.83	105.9	2.69	16.8%	3,742
Industrial	0.93	0.34	-0.04	1.23	5.16	3.92	7.02	106.3	2.32	14.6%	2,722
Other Sectors	1.03	-0.03	-0.03	0.98	5.61	4.28	8.58	103.9	3.26	6.8%	1,221
Total	0.97	0.22	-0.03	1.16	5.29	4.11	7.33	106.1	2.58	100.0%	15,720
Aggregate	0.97	0.24	-0.03	1.18	5.27	4.09	7.24	106.2	2.53	93.2%	14,499

Aggregate excludes Other Sectors (hotel/motel, mixed-use and miscellaneous) bp - Basis Points

Total Return by Sector For the quarter (%)



Portfolio Composition by Sector



Table C: Giliberto-Levy Index Performance by Book LTV - For the quarter ended December 31, 2020

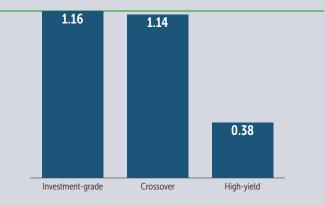
	Returns (%)			Statistics Averages							
Credit Quality Using Book Value	Income	Price	Other	Total	Adj. Duration	Coupon	Maturity	Price	Yield	Pct. of Portfolio	No. of Cohorts
Investment-grade	0.97	0.23	-0.04	1.16	5.18	4.12	7.20	106.3	2.52	91.5%	14,671
Crossover	0.96	0.18	-0.01	1.14	6.53	3.98	8.75	103.7	3.25	8.4%	1,032
High-yield	1.12	-0.76	0.02	0.38	5.23	4.24	6.90	91.5	5.62	0.1%	17
Total	0.97	0.22	-0.03	1.16	5.29	4.11	7.33	106.1	2.58	100.0%	15,720

Credit Quality Definition

	Bool	k LTV
	Minimum	Maximum
Investment-grade	NA	70.0%
Crossover	70.1%	85.0%
High-yield	85.1%	NA

Please note that all G-L 1 loans are senior loans. "Crossover" loans are those with LTVs above 75% and below 85%. They are not subordinate positions that "attach" at 75% LTV and go up to 85% of the capital stack.

Total Return by Credit Quality For the quarter (%)



Portfolio Composition by Credit Quality

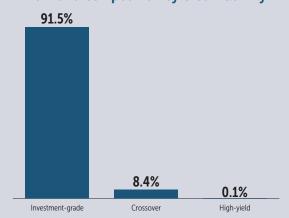
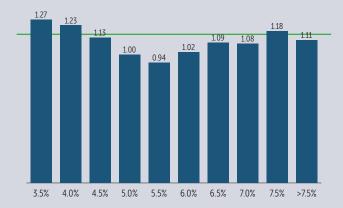


Table D: Giliberto-Levy Performance by Coupon Rate - For the quarter ended December 31, 2020

	Returns (%)			Statistics		Averages				
Credit Quality					Adj.					Pct. of	No. of
Using Book Value	Income	Price	Other	Total	Duration	Coupon	Maturity	Price	Yield	Portfolio	Cohorts
0.0% to 3.5%	0.79	0.49	-0.01	1.27	5.92	3.20	7.69	102.2	2.62	17.3%	1,835
3.5% to 4.0%	0.90	0.35	-0.02	1.23	5.06	3.79	6.66	105.6	2.53	32.4%	3,755
4.0% to 4.5%	0.99	0.17	-0.03	1.13	5.75	4.25	8.18	107.8	2.66	29.9%	3,841
4.5% to 5.0 %	1.09	-0.06	-0.04	1.00	5.27	4.73	7.74	108.0	2.67	12.0%	1,899
5.0% to 5.5%	1.22	-0.22	-0.07	0.94	3.69	5.23	5.86	106.7	2.40	3.3%	828
5.5% to 6.0%	1.34	-0.19	-0.13	1.02	3.07	5.74	5.28	107.0	2.30	2.4%	1,102
6.0% to 6.5%	1.44	-0.15	-0.19	1.09	3.17	6.24	5.56	108.4	2.33	1.3%	945
6.5% to 7.0%	1.53	-0.26	-0.19	1.08	3.20	6.71	5.62	109.0	2.34	0.4%	342
7.0% to 7.5%	1.66	-0.23	-0.25	1.18	2.93	7.26	5.34	108.8	2.13	0.4%	315
7.5% and above	1.85	-0.42	-0.32	1.11	2.38	8.07	4.49	108.5	2.09	0.4%	858
Total	0.97	0.22	-0.03	1.16	5.29	4.11	7.33	106.1	2.58	100.0%	15,720

Total Return by Coupon Rate For the quarter (%)



Portfolio Composition by Coupon Rate

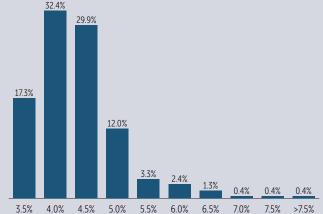


Table E: Giliberto-Levy Total Performance by Remaining Term to Maturity - For the quarter ended December 31, 2020

	Statistics		Averages								
					Adj.					Pct. of	No. of
Maturity Cell	Income	Price	Other	Total	Duration	Coupon	Maturity	Price	Yield	Portfolio	Cohorts
0 to 2 years	1.07	-0.23	-0.04	0.79	1.00	4.36	1.06	102.1	2.09	11.6%	2,431
2 to 4 years	1.00	0.28	-0.04	1.24	2.76	4.20	3.07	105.5	2.18	16.2%	2,829
4 to 6 years	0.94	0.54	-0.04	1.45	4.36	4.01	5.07	106.7	2.40	20.6%	3,004
6 to 8 years	0.97	0.24	-0.03	1.19	5.79	4.18	7.07	107.9	2.70	17.4%	2,285
8 to 10 years	0.91	0.25	-0.02	1.14	7.16	3.79	8.99	105.4	2.89	14.5%	1,819
10 to 12 years	0.96	0.13	-0.04	1.04	7.45	4.10	10.95	107.5	2.85	4.9%	862
12 to 14 years	0.99	0.02	-0.04	0.97	8.49	4.25	13.04	107.9	3.02	4.6%	748
14 to 16 years	0.94	0.10	-0.04	1.01	8.92	3.99	14.92	106.0	3.09	3.2%	595
16 to 18 years	1.02	-0.02	-0.05	0.95	9.23	4.46	17.03	108.9	3.14	2.3%	439
18 to 20 years	0.94	0.13	-0.03	1.04	9.94	3.88	19.02	105.0	3.23	1.7%	307
20 years or more	0.99	0.22	-0.03	1.18	11.94	4.20	26.14	106.5	3.34	3.1%	401
Total	0.97	0.22	-0.03	1.16	5.29	4.11	7.33	106.1	2.58	100.0%	15,720

Total Return by Maturity Cell For the quarter (%)



Portfolio Composition by Maturity Cell

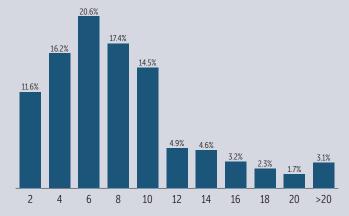
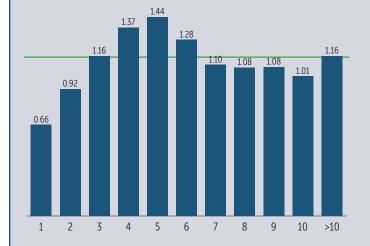


Table F: Giliberto-Levy Index Performance by Duration - For the quarter ended December 31, 2020

Returns (%)						Statistics		Averages				
						Adj.					Pct. of	No. of
Duration Cell	Income	Price	Other	Total		Duration	Coupon	Maturity	Price	Yield	Portfolio	Cohorts
0 to 1 year	1.15	-0.42	-0.07	0.66		0.51	4.66	0.54	101.3	2.07	5.5%	1,503
1 to 2 years	1.03	-0.06	-0.05	0.92		1.46	4.23	1.65	103.1	2.10	6.6%	1,760
2 to 3 years	1.03	0.19	-0.05	1.16		2.43	4.35	2.84	105.5	2.14	9.5%	2,069
3 to 4 years	0.97	0.44	-0.04	1.37		3.47	4.09	4.08	106.3	2.26	11.7%	1,915
4 to 5 years	0.96	0.52	-0.03	1.44		4.45	4.08	5.40	106.9	2.44	12.8%	1,804
5 to 6 years	0.94	0.37	-0.03	1.28		5.42	4.02	6.88	107.1	2.63	14.0%	1,776
6 to 7 years	0.97	0.15	-0.02	1.10		6.44	4.19	8.45	108.1	2.80	12.9%	1,604
7 to 8 years	0.92	0.18	-0.02	1.08		7.44	3.89	10.34	106.3	2.93	11.0%	1,330
8 to 9 years	0.90	0.21	-0.02	1.08		8.37	3.76	12.37	105.4	2.99	6.8%	819
9 to 10 years	0.96	0.07	-0.02	1.01		9.42	4.10	15.43	106.9	3.15	3.5%	525
10 years or more	0.95	0.23	-0.01	1.16		11.74	3.99	21.08	105.9	3.29	5.6%	615
Total	0.97	0.22	-0.03	1.16		5.29	4.11	7.33	106.1	2.58	100.0%	15,720

Total Return by Duration Cell For the quarter (%)



Portfolio Composition by Duration Cell

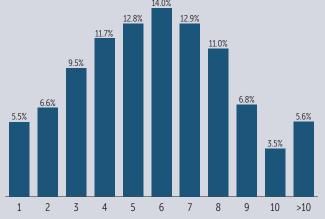
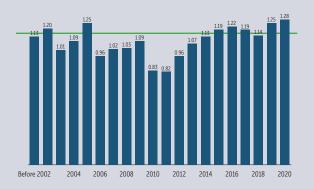


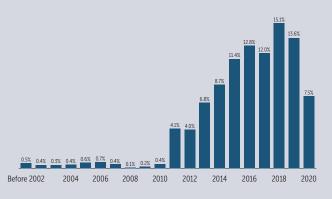
Table G: Giliberto-Levy Index Performance by Vintage Year - For the quarter ended December 31, 2020

	Returns (%	%)			Statistics		Averages				
					Adj.					Pct. of	Num. of
Vintage Year	Income	Price	Other	Total	Duration	Coupon	Maturity	Price	Yield	Portfolio	Cohorts
Before 2002	1.77	-0.31	-0.34	1.13	2.48	7.71	4.86	108.5	2.07	0.5%	1,034
2002	1.53	-0.08	-0.24	1.20	3.15	6.66	5.89	108.9	2.12	0.4%	280
2003	1.37	-0.08	-0.28	1.01	2.57	5.94	4.40	107.8	2.03	0.3%	389
2004	1.37	-0.02	-0.26	1.09	2.86	6.06	4.84	110.0	2.10	0.4%	339
2005	1.30	0.19	-0.24	1.25	3.36	5.68	5.78	109.7	2.16	0.6%	493
2006	1.42	-0.31	-0.15	0.96	2.75	6.10	4.84	107.0	2.38	0.7%	547
2007	1.42	-0.25	-0.16	1.02	3.96	6.20	7.67	108.2	2.51	0.4%	284
2008	1.51	-0.25	-0.23	1.03	2.99	6.52	4.90	108.9	2.24	0.1%	50
2009	1.71	-0.49	-0.13	1.09	2.76	7.44	4.48	107.9	2.18	0.2%	24
2010	1.25	-0.21	-0.21	0.83	2.59	5.46	4.41	106.1	2.15	0.4%	141
2011	1.21	-0.35	-0.04	0.82	1.74	5.05	2.46	103.8	2.09	4.1%	796
2012	1.02	-0.01	-0.06	0.96	2.77	4.31	3.97	105.1	2.20	4.0%	833
2013	1.02	0.10	-0.05	1.07	4.04	4.34	5.84	106.8	2.34	6.8%	1,139
2014	0.98	0.19	-0.04	1.13	4.09	4.17	5.74	106.5	2.37	8.7%	1,140
2015	0.93	0.29	-0.03	1.19	4.60	3.93	6.33	106.2	2.47	11.4%	1,514
2016	0.90	0.35	-0.02	1.22	4.94	3.78	6.84	105.4	2.57	12.8%	1,465
2017	0.93	0.28	-0.02	1.19	5.45	3.96	7.30	106.6	2.66	12.0%	1,435
2018	1.01	0.15	-0.02	1.14	6.50	4.36	8.95	108.9	2.75	15.1%	1,523
2019	0.90	0.35	-0.02	1.25	7.26	3.79	9.93	105.7	2.88	13.6%	1,431
2020	0.79	0.49	0.00	1.28	7.81	3.16	10.51	101.0	2.92	7.5%	863
Total	0.97	0.22	-0.03	1.16	5.29	4.11	7.33	106.1	2.58	100.0%	15,720

Total Return by Vintage Cohort For the quarter (%)



Portfolio Composition by Vintage Cohort



About the Giliberto-Levy Index

Established in 1993, the Giliberto-Levy Index provides essential information and accurate research on emerging trends affecting commercial mortgage investments. Investment professionals, actuaries, consultants, plan sponsors, banks, life companies, regulators and rating agencies use the index as a reliable way to evaluate the performance of commercial mortgages on a total return, marked-to-market basis.

Contact

To subscribe or receive more information on the Giliberto-Levy Commercial Mortgage Performance IndexSM Monitor, please contact jgrant@jblevyco.com.

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