

Commercial Mortgage Performance Index<sup>SM</sup>

**3Q 2020 RESULTS AND ANALYSIS** 

The Giliberto-Levy Monitor reports quarterly results of the Giliberto-Levy Commercial Mortgage Performance Index<sup>SM</sup> 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

Our 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 6/30/20, the G-L2 notched a return of 6.77%, which is 202 basis points lower than the 8.79% 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 5.61% - 116 basis points lower – for the 12 months ended 6/30/20. Of equal interest, investment-grade CMBS, as measured by Bloomberg Barclays indices, showed a total return of 5.95% 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 ilevy@jblevyco.com.

#### **CONTENTS**

Market Overview	1
Pricing Trends: 3Q 2020	2
Credit Effects	3
Relative Performance	3
Lending Activity	4
U.S. Commercial Mortgage Outlook	
Appendix: Supporting Tables & Charts 3Q 2020	7

#### MARKET OVERVIEW

THIRD QUARTER 2020 SUMMARY											
Total Return: (in %)	Total (all sectors)	1.74									
	Office	1.56									
	Multi-family	1.93									
	Retail	1.57									
	Industrial	1.83									
<b>Spreads</b> : (as of 9/30/2020)	Office	249									
•	Multi-family	229									
	Retail	254									
	Industrial	229									
Index Statistics	Capitalization (\$ billion)	278.53									
(as of 9/30/2020)	Duration (years)	5.32									
	Coupon (%)	4.15									
	Maturity (years)	7.39									
	Book LTV (%)	50.66									

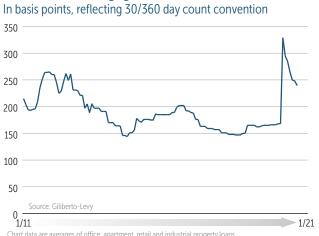
Spreads are averages for new ten-year loans at 60%–65% loan-to-value ratio. Source: Giliberto-Levy

The Giliberto-Levy Commercial Mortgage Performance Index (G-L 1) produced 1.74% total return for 3Q 2020.1 Total return consisted of 0.99% income return and 0.76% capital value return, which includes price changes and other factors. (The sum of the components may not equal the total due to rounding.) As was the case in 2Q, declining commercial mortgage spreads caused most of the capital value increase. Third quarter spreads declined about 20 to 25 basis points (bp) for major sectors, compared with 60-to-65 bp declines in 2Q (see Chart 1).

<sup>&</sup>lt;sup>1</sup> 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-valueweighted 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.







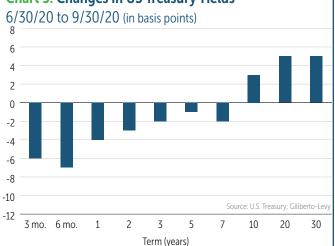
G-L 1 total return year to date through September 30 was 5.11%. Trailing four-quarter total return was 5.02%

Even with back-to-back quarterly spread declines, **commercial mortgage spreads remained about 75 bp higher than pre-COVID levels**. U.S. Treasury yields moved a few bp up or down, with down moves for maturities less than ten years and increases from ten years out (see Charts 2 and 3). The benchmark ten-year yield was 0.69% on September 30, up 3 bp from its June 30 value, for example.

### **Chart 2: US Treasury Yields** 6/30/20 and 9/30/20 (in %)



# **Chart 3: Changes in US Treasury Yields**



CMBS turned in similar performance results. According to Bloomberg Barclays Indices, investment-grade CMBS generated 1.90% total return. Baa-rated corporate bonds, adjusted to match G-L1 duration, coincidentally also came in at 1.90%.

### PRICING TRENDS: 3Q 2020

Table 1: Key Rates	Table 1: Key Rates (in %)										
20-year Treasury Yield 20-year Mortgage Spread 20-year Mortgage Yield	6/30/2020 1.18 2.65 3.83	<b>9/30/2020</b> 1.23 2.40 3.63	<b>change</b> 0.05 -0.25 -0.20								
10-year Treasury Yield 10-year Mortgage Spread 10-year Mortgage Yield	0.66 2.65 3.31	0.69 2.40 3.09	0.03 -0.25 -0.22								
7-year Treasury Yield 7-year Mortgage Spread 7-year Mortgage Yield	0.49 2.65 3.14	0.47 2.40 2.87	-0.02 -0.25 -0.27								
5-year Treasury Yield 5-year Mortgage Spread 5-year Mortgage Yield Source: U.S. Treasury; Giliberto-Levy	0.29 2.65 2.94	0.28 2.40 2.68	-0.01 -0.25 -0.26								

• The 2.75% to 3.00% coupon rate floor that life insurance company and pension fund lenders maintained during 2Q collapsed in 3Q. In 2Q, only 7% of loans made by these entities had coupons below 3%; in 3Q nearly 40% of their loans had sub-3%



coupons. As noted above, Treasury yields did not change much, so the result most likely reflects a behavioral shift in the market.

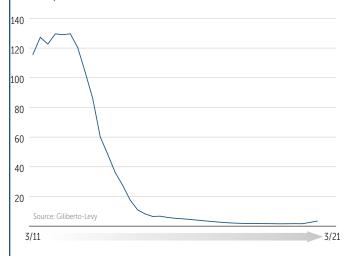
- We detected 25-bp small loan (under \$5 million) premiums for most sectors. Not all small-balance loans have such premiums.
- Except for industrial, values for all property sectors reported in the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index continued to decline.

#### CREDIT EFFECTS

Credit effects continued to show a run rate of 5 bp annually (see Chart 4). The 3Q result was slightly higher than 2Q's. We anticipate the rate will continue to increase, but we do not have an estimate of the magnitude.

# Chart 4: Commercial Mortgage Credit Effects, 1Q 2011 to 3Q 2020

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



#### RELATIVE PERFORMANCE

As mentioned above, Treasury yields did not move much. Consequently, total return on Treasury notes and bonds largely was driven by coupon income. Fixed-income securities that have credit risk benefitted from declining credit spreads, which caused values to increase. This helped G-L 1 and CMBS results, as noted earlier, and powered corporate investment-grade and high-yield bonds to solid results (see Table 2).

Table 2: Total Return as of September 30, 2020

	Total	Return (%)		Duration
	3Q		Last	as of
Index	2020	YTD	4Q	9/30/20
Commercial Mortgages*	1.74	5.11	5.02	5.32
Duration-adjusted Baa Bond	1.90	4.77	6.33	5.32
CMBS: Investment Grade	1.90	6.28	5.95	5.23
CMBS 2.0	2.78	5.07	4.83	4.87
TSY Int. Term	0.19	6.02	6.03	3.92
TSY 5-7 yr. Term	0.40	8.98	8.50	5.80
Credit Int. Term	1.24	5.45	6.49	4.48
A Int. Term	0.91	6.37	7.28	4.48
Baa Int. Term	1.86	4.83	6.28	4.77
High-yield Int. Term	4.41	-0.19	2.32	3.18
Ba Int. Term	3.64	2.68	5.04	3.44
3 ,				

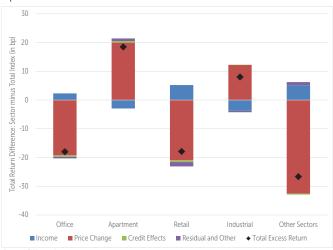
\*Giliberto-Levy Total Index includes office, retail, multifamily, industrial, and other

Source: Bloomberg, Barclays; Giliberto-Levy

Property sector relative (to the overall index) performance variation is largely explained by differences in duration and income yields (see Chart 6). 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 3Q 2020

Sector performance minus Total Index performance, in basis points.

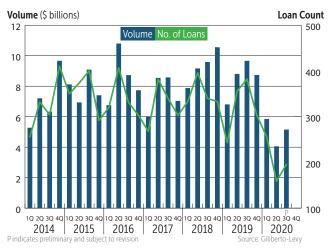


Source: Giliberto-Levy

#### **LENDING ACTIVITY**

• 3Q origination of loans eligible for the Index increased to \$5.1 billion, compared with 2Q 2020's \$4.0 billion, revised from the previously reported \$3.6 billion (see Chart 6). The rebound will, in fact, be greater when additional loans made in 3Q are reported as part of 4Q data collection.

# **Chart 6: Index-eligible Loan Production** 1Q 2014 to 3Q 2020



- Average loan size was about \$24 million, slightly below last quarter's \$26 million. Loan sizes ranged from under \$1 million to nearly \$300 million. Loans above \$25 million made up roughly two-thirds of dollar volume but accounted for about 26% of the number of loans. These statistics are comparable to those posted in 2Q.
- The average LTV on new loans eligible for inclusion in the G-L 1 was 60%. This is down from last quarter's 63%. Reported DSC was 2.4 times, up from last quarter's 2.3 times. Neither change seems meaningful.
- The ten-year segment's market share by volume was 44%, reverting to a more typical result compared with 2Q's outsized 58%. Seven-year loans experienced an uptick in popularity, coming in with 21% of volume. Loan with 15 years or more to maturity had about 20% of reported volume.
- New loan production was 32% full-term interest-only loans, 58% loans with partial amortization, and 10% fully amortizing loans. Partially amortizing loans often include an interest-only

period up front.

More than \$5 billion of new loans was added to the Index (see Table 3 for details). These data come from June, July and August 2020 loans. September 2020 loans, which are included in the production number cited above and depicted in Chart 6, will be added to the Index for  $4\Omega 2020^2$ 

# **Table 3: Total Index Additions** (Third Quarter 2020)

			Weighted-Average											
	Amount (\$)	No. of Loans	Coupon (bp)	Spread	DSCR		Term (years)							
Office	956,949,443	18	3.21%	249	2.41	55.9	11.5							
Apartment	2,339,994,000	92	2.94%	226	2.36	60.7	11.1							
Retail	211,113,000	17	3.80%	327	2.62	57.8	8.0							
Industrial	1,512,034,384	63	3.17%	249	2.53	56.7	10.2							
Other	157,309,500	6	3.77%	257	1.91	52.0	19.1							
Total	5,177,400,327	196	3.12%	242	2.41	58.3	11.0							

Source: Giliberto-Levy

Please note that spreads reported in Table 3 are weighted averages of loans made during periods prior to September 2020. These averages do not represent quarter-end pricing parameters. Those 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

You likely recall that we reported a near-total cessation of lending activity after COVID-induced lockdowns in mid-March. As a result, commercial mortgage credit spread data were scarce. However, some lenders continued to maintain pricing grids even though it was doubtful that they would commit to new loans. Several lenders mentioned that they looked at spreads reported by Trepp, the CMBS data and analytics provider, to get a feel for "market sentiment". We decided to compare Trepp spreads with G-L 1 spreads.

We are not privy to Trepp's data collection process. Our understanding is that data come from surveying selected lenders – we do not know who participates -- to ask what pricing would be for hypothetical "standardized" loans. We believe it is fair to characterize survey

 $<sup>^2</sup>$ The outsized volume of apartment lending reflects ongoing GSE activity in the sector. Importantly, G-L1does not track all GSE multifamily loans. For example, small-balance loan programs are excluded.

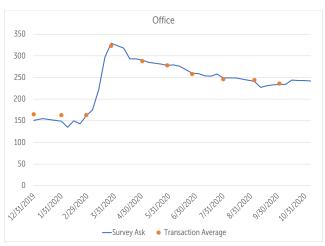


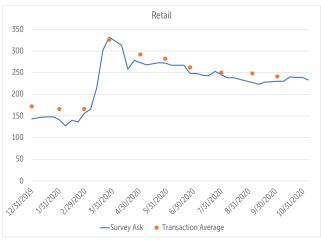
replies as "ask spreads". In contrast, G-L reports spreads derived from transactions, such as those summarized in Table 3 above. We use these spreads and econometric modeling to generate empirical pricing grids.

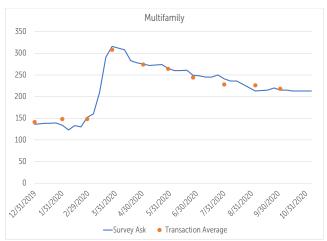
Charts 7a through 7d show ask spreads and average transaction spreads for ten-year loans with 50% to 59% LTV, which is what Trepp reports. (Trepp data are reported weekly; G-L 1 spreads are plotted on the weekly date nearest the corresponding month end.)

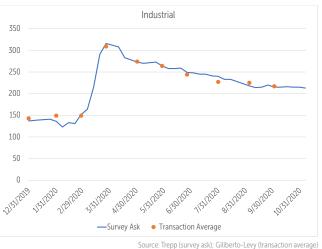
# Chart 7a-d: Commercial Mortgage Spreads for Major Property Sectors

Ten-year loans at 50% to 59% LTV, in basis points









We were surprised by how closely the two data sets track. Average spreads, across all four sectors and ten reported months, were 225 bp and 229 bp for Trepp and G-L 1, respectively.

However, we found a few interesting differences.

Prior to March 2020, G-L 1 transactions spreads were 10 bp higher than ask spreads on average. The largest gap was 21 bp between a retail sector "ask" of 147 bp and 168 bp measured with transaction data. The office gap was 10 bp, while multifamily and industrial posted 5 bp differences. In all instances, G-L 1 transaction spreads exceeded reported ask spreads.

Starting with March 2020, the gap mostly disappeared: the average difference was less than 2 bp, which is not meaningful. What was striking, though, was the persistence of a positive gap (G-L1 spread



minus reported ask) of about 11 bp for retail. We conjecture that this was due to (1) a general aversion to retail lending, as evidenced by the low volume shown in Table 3 and (2) differences between a hypothetical "clean" deal that a lender might have in mind when providing a survey quote and the specifics of actual retail asset financings. (Keep in mind that all spreads are for ten-year deals at 50% to 59% LTV.)

If the high correlation between reported ask and transaction spreads continues – we think it likely – then market spreads appear to have been stable from the end of 3Q until mid-November. That said, Trepp's ask spreads are reported with a lag. The last data point we had when writing this commentary was before positive news about potential COVID vaccines was announced. It does appear that CMBS spreads decreased slightly thereafter. Perhaps private-market spreads have as well.

As always, we welcome your comments and questions.

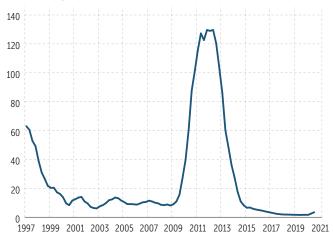
November 2020

# **Chart 8: Commercial Mortgage Performance**Rolling four-quarter total return for Total Index



## **Chart 9: 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 September 30, 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	1.01	0.60	-0.04	1.56	5.09	5.13	2376.58	2	4	4
Apartment	0.96	1.00	-0.03	1.93	5.26	5.06	3094.22	1	2	2
Retail	1.04	0.58	-0.05	1.57	4.94	5.04	2823.53	2	4	5
Industrial	0.95	0.92	-0.04	1.83	5.26	5.09	2780.42	1	3	3
Other Sectors	1.04	0.46	-0.03	1.48	4.38	4.23	N/A	2	3	4
Total	0.99	0.79	-0.04	1.74	5.11	5.02	2597.18	1	3	3
Aggregate	0.98	0.82	-0.04	1.76	5.17	5.09	4203.40	1	3	3

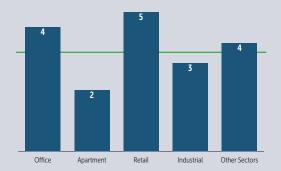
Aggregate excludes Other Sectors (hotel/motel, mixed-use and miscellaneous)
Other Return is paydown return and compounding
Index bases: Aggregate Dec. 1971 = 100; Total and major sectors Dec. 1977 = 100 bp Basis Points

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 3Q 2020

A. G-L Performance by Sector	.7
B. G-L Statistics & Averages	8
C. G-L Credit Quality Using Book Value	.9
D. G-L Coupon Rate	10
E. G-L Remaining Term	
F. G-L Duration Cell	
G. G-L Vintage Cohort	13

# Table B: Giliberto-Levy Index Performance by Property Sector - For the quarter ended September 30, 2020

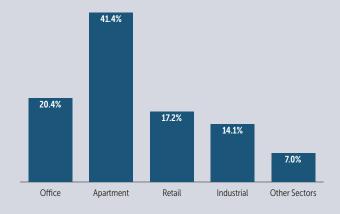
	Returns (%)			Statistics		Averages					
					Adj.					Pct. of	No. of
Sector	Income	Price	Other	Total	Duration	Coupon	Maturity	Price	Yield	Portfolio	Cohorts
Office	1.01	0.60	-0.04	1.56	4.78	4.25	6.67	105.9	2.64	20.4%	2,465
Apartment	0.96	1.00	-0.03	1.93	5.81	4.03	7.87	106.3	2.69	41.4%	5,529
Retail	1.04	0.58	-0.05	٧	4.87	4.38	6.93	105.7	2.80	17.2%	3,802
Industrial	0.95	0.92	-0.04	1.83	5.06	4.00	6.94	106.3	2.45	14.1%	2,683
Other Sectors	1.04	0.46	-0.03	1.48	5.66	4.30	8.66	103.9	3.29	7.0%	1,254
Total	0.99	0.79	-0.04	1.74	5.32	4.15	7.39	105.9	2.71	100.0%	15,733
Aggregate	0.98	0.82	-0.04	1.76	5.30	4.14	7.29	106.1	2.66	93.0%	14,479

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 September 30, 2020

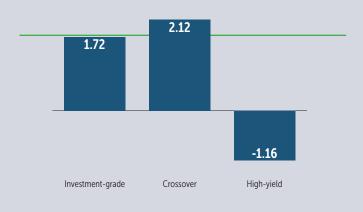
	Returns	Returns (%)					Statistics Averages					
Credit Quality Using Book Value	Income	Price	Other	Total		Adj. Duration	Coupon	Maturity	Price	Yield	Pct. of Portfolio	No. of Cohorts
Investment-grade	0.99	0.77	-0.04	1.72		5.22	4.16	7.27	106.1	2.65	92.0%	14,771
Crossover	0.98	1.15	-0.01	2.12		6.55	4.05	8.79	104.0	3.30	7.9%	948
High-yield	1.10	-2.79	0.53	-1.16		4.93	4.33	6.17	93.3	5.41	0.1%	14
Total	0.99	0.79	-0.04	1.74		5.32	4.15	7.39	105.9	2.71	100.0%	15,733

### **Credit Quality Definition**

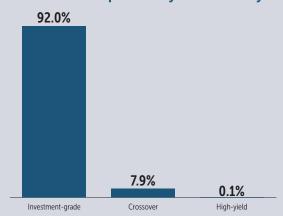
	Bool	k LTV
	Minimum	Maximum
Investment-grade	NA	70.0%
Crossover	70.1%	85.0%
High-yield	85.1%	NA

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 (%)



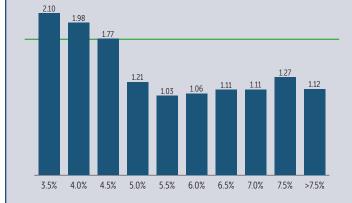
### **Portfolio Composition by Credit Quality**



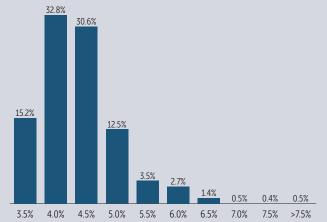
# Table D: Giliberto-Levy Performance by Coupon Rate - For the quarter ended June 30, 2020

	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%	0.81	1.30	-0.02	2.10	5.67	3.25	7.38	102.2	2.70	15.2%	1,583
3.5% to 4.0%	0.91	1.09	-0.02	1.98	5.21	3.79	6.85	105.2	2.67	32.8%	3,748
4.0% to 4.5%	1.00	0.80	-0.03	1.77	5.86	4.25	8.34	107.5	2.78	30.6%	3,868
4.5% to 5.0 %	1.10	0.15	-0.04	1.21	5.33	4.73	7.82	107.9	2.78	12.5%	1,931
5.0% to 5.5%	1.23	-0.13	-0.07	1.03	3.71	5.24	5.85	106.6	2.54	3.5%	873
5.5% to 6.0%	1.34	-0.17	-0.11	1.06	3.05	5.74	5.19	106.8	2.46	2.7%	1,189
6.0% to 6.5%	1.44	-0.15	-0.18	1.11	3.17	6.24	5.54	108.2	2.47	1.4%	972
6.5% to 7.0%	1.54	-0.25	-0.18	1.11	3.18	6.71	5.56	108.7	2.47	0.5%	347
7.0% to 7.5%	1.67	-0.16	-0.24	1.27	2.93	7.26	5.31	108.6	2.32	0.4%	328
7.5% and above	1.86	-0.41	-0.32	1.12	2.38	8.07	4.45	108.4	2.30	0.5%	894
Total	0.99	0.79	-0.04	1.74	5.32	4.15	7.39	105.9	2.71	100.0%	15,733

## **Total Return by Coupon Rate** For the quarter (%)



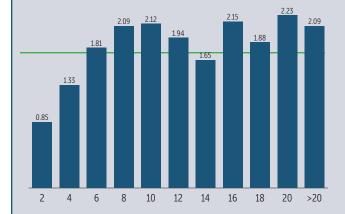
### **Portfolio Composition by Coupon Rate**



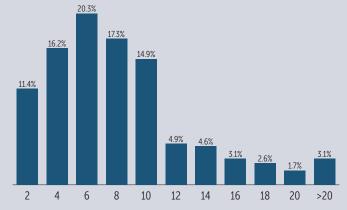
# **Table E: Giliberto-Levy Total Performance by Remaining Term to Maturity -** For the quarter ended September 30, 2020

	Statistics		Averages								
					Adj.					Pct. of	No. of
Maturity Cell	Income	Price	Other	Total	Duration	Coupon	Maturity	Price	Yield	Portfolio	Cohorts
0 to 2 years	1.10	-0.21	-0.04	0.85	0.98	4.46	1.04	101.9	2.32	11.4%	2,497
2 to 4 years	1.01	0.36	-0.04	1.33	2.76	4.21	3.08	105.0	2.40	16.2%	2,748
4 to 6 years	0.96	0.89	-0.04	1.81	4.39	4.03	5.11	106.1	2.57	20.3%	3,008
6 to 8 years	0.97	1.15	-0.03	2.09	5.79	4.15	7.08	107.5	2.77	17.3%	2,303
8 to 10 years	0.95	1.20	-0.03	2.12	7.12	3.96	8.97	106.2	2.92	14.9%	1,827
10 to 12 years	0.97	1.01	-0.05	1.94	7.49	4.15	10.95	107.6	2.89	4.9%	885
12 to 14 years	1.00	0.70	-0.05	1.65	8.46	4.31	13.04	108.4	3.03	4.6%	737
14 to 16 years	0.96	1.24	-0.04	2.15	8.84	4.02	14.86	106.2	3.09	3.1%	584
16 to 18 years	1.01	0.92	-0.05	1.88	9.31	4.38	17.03	108.7	3.16	2.6%	442
18 to 20 years	0.97	1.29	-0.03	2.23	10.04	4.07	19.02	106.2	3.26	1.7%	302
20 years or more	1.00	1.12	-0.04	2.09	11.89	4.22	26.15	106.5	3.37	3.1%	400
Total	0.99	0.79	-0.04	1.74	5.32	4.15	7.39	105.9	2.71	100.0%	15,733

## **Total Return by Maturity Cell** For the quarter (%)



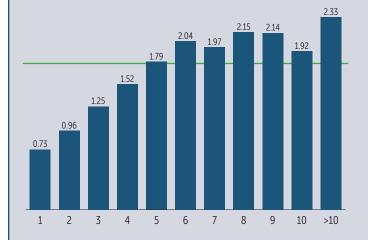
### **Portfolio Composition by Maturity Cell**



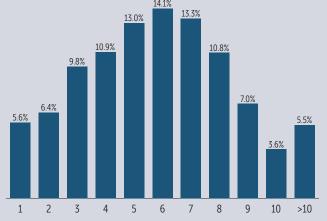
# **Table F: Giliberto-Levy Index Performance by Duration -** For the quarter ended September 30, 2020

	Statistics		Averages								
					Adj.					Pct. of	No. of
<b>Duration Cell</b>	Income	Price	Other	Total	Duration	Coupon	Maturity	Price	Yield	Portfolio	Cohorts
0 to 1 year	1.16	-0.38	-0.05	0.73	0.53	4.74	0.56	101.3	2.30	5.6%	1,550
1 to 2 years	1.06	-0.05	-0.05	0.96	1.44	4.35	1.64	102.9	2.34	6.4%	1,732
2 to 3 years	1.02	0.29	-0.05	1.25	2.45	4.27	2.86	104.7	2.37	9.8%	2,075
3 to 4 years	1.00	0.56	-0.04	1.52	3.47	4.18	4.15	105.8	2.47	10.9%	1,867
4 to 5 years	0.98	0.85	-0.04	1.79	4.43	4.14	5.39	106.6	2.56	13.0%	1,839
5 to 6 years	0.94	1.13	-0.03	2.04	5.44	3.97	6.86	106.4	2.74	14.1%	1,764
6 to 7 years	0.99	1.01	-0.03	1.97	6.46	4.24	8.51	108.1	2.85	13.3%	1,660
7 to 8 years	0.95	1.23	-0.03	2.15	7.45	3.97	10.41	106.8	2.96	10.8%	1,334
8 to 9 years	0.92	1.25	-0.03	2.14	8.37	3.85	12.38	105.9	3.02	7.0%	800
9 to 10 years	0.97	0.98	-0.03	1.92	9.47	4.14	15.41	107.2	3.16	3.6%	512
10 years or more	0.97	1.39	-0.02	2.33	11.76	4.07	21.32	106.4	3.32	5.5%	600
Total	0.99	0.79	-0.04	1.74	5.32	4.15	7.39	105.9	2.71	100.0%	15,733

### **Total Return by Duration Cell For the quarter (%)**



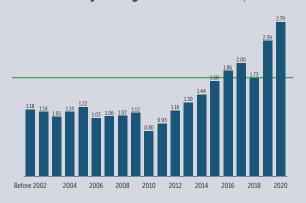
### **Portfolio Composition by Duration Cell**



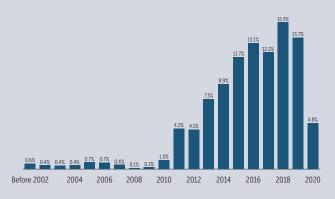
# Table G: Giliberto-Levy Index Performance by Vintage Year - For the quarter ended September 30, 2020

	Returns (%	6)			Statistics		Averages				
					Adj.					Pct. of	Num. of
Vintage Year	Income	Price	Other	Total	Duration	Coupon	Maturity	Price	Yield	Portfolio	Cohorts
Before 2002	1.78	-0.27	-0.33	1.18	2.47	7.73	4.80	108.4	2.28	0.6%	1,078
2002	1.54	-0.18	-0.22	1.14	3.06	6.67	5.71	108.3	2.31	0.4%	287
2003	1.37	-0.05	-0.27	1.05	2.66	5.93	4.58	107.8	2.25	0.4%	392
2004	1.37	0.02	-0.25	1.14	2.98	6.06	5.07	109.9	2.32	0.4%	339
2005	1.31	0.12	-0.21	1.22	3.15	5.67	5.43	108.5	2.35	0.7%	592
2006	1.42	-0.24	-0.15	1.03	2.88	6.10	5.05	107.2	2.49	0.7%	549
2007	1.43	-0.21	-0.16	1.06	4.00	6.21	7.72	108.3	2.60	0.4%	286
2008	1.51	-0.28	-0.17	1.07	2.60	6.53	4.26	107.5	2.37	0.1%	51
2009	1.71	-0.44	-0.16	1.12	2.86	7.43	4.62	108.3	2.37	0.2%	26
2010	1.26	-0.35	-0.11	0.80	1.42	5.17	2.34	103.2	2.29	1.0%	227
2011	1.21	-0.23	-0.04	0.93	1.94	5.05	2.70	104.2	2.32	4.2%	799
2012	1.02	0.20	-0.06	1.16	2.95	4.31	4.22	105.1	2.40	4.1%	835
2013	1.02	0.33	-0.05	1.30	4.03	4.34	5.81	106.4	2.49	7.3%	1,182
2014	0.98	0.49	-0.04	1.44	4.27	4.17	5.98	106.2	2.55	8.9%	1,144
2015	0.93	0.77	-0.03	1.68	4.73	3.93	6.52	105.8	2.63	11.7%	1,529
2016	0.91	0.98	-0.03	1.86	5.06	3.78	7.02	105.0	2.72	13.1%	1,469
2017	0.94	1.09	-0.02	2.00	5.62	3.96	7.55	106.3	2.78	12.2%	1,438
2018	1.01	0.73	-0.02	1.73	6.68	4.36	9.21	108.7	2.85	15.3%	1,524
2019	0.91	1.49	-0.02	2.39	7.43	3.79	10.18	105.3	2.97	13.7%	1,431
2020	0.83	1.90	-0.01	2.72	7.90	3.27	10.78	101.4	3.00	4.8%	555
Total	0.99	0.79	-0.04	1.74	5.32	4.15	7.39	105.9	2.71	100.0%	15,733

## **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 Index<sup>SM</sup> Monitor, please contact jgrant@jblevyco.com.

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