

# Giliberto-Levy Commercial Mortgage Performance Index (G-L 1)

Monitor First Quarter 2023



GILIBERTO-LEVY  
COMMERCIAL REAL ESTATE DEBT INDEXES

# Giliberto-Levy Commercial Mortgage Performance Index

## First Quarter 2023 Summary

Total Return: (in %)		Spreads: (as of 12/31/2022)		Index Statistics: (as of 12/31/2022)	
Office	2.82	Office	224	Capitalization (\$ billion)	277.22
Multi-family	3.26	Multi-family	198	Duration (years)	4.73
Retail	2.93	Retail	225	Coupon (%)	3.96
Industrial	3.16	Industrial	192	Maturity (years)	6.55
Total (all sectors)	3.13			Book LTV (%)	48.18

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) posted a 3.13% total return in 1Q 2023. Income return was 1.09%, comparable to 1.08% generated in 4Q 2022.<sup>1</sup> The 2.04% capital value return was the strongest since 2Q 2020, when markets had settled down a bit from the COVID-induced shock at the end of 1Q 2020.

Reductions in U.S. Treasury yields drove the strong capital value result. On average, yields for issues with two or more years to maturity declined 37 basis points (bp) (see Charts 1 and 2).

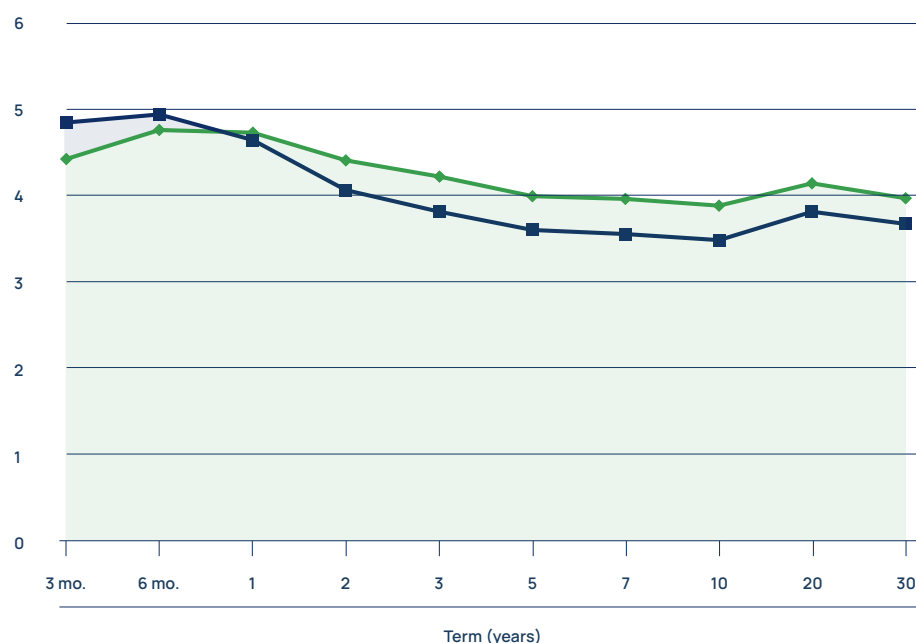
Chart 1

### US Treasury Yields

In %

Source: U.S. Treasury; Giliberto-Levy

◆ Dec 31, 2022  
■ Mar 31, 2023



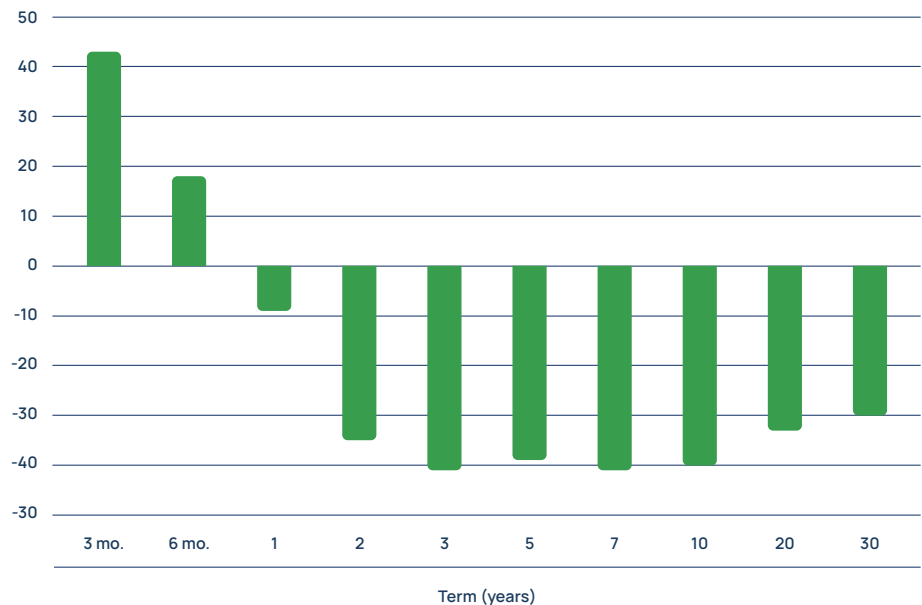
<sup>1</sup> The Index's components are fixed-rate commercial mortgage loans held on balance sheets of institutions such as life insurance companies and pension funds. Index returns are a market-value-weighted blend of office, apartment, retail, industrial, lodging, mixed-use and other miscellaneous 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.

Chart 2

## Changes in US Treasury Yields December 31, 2022 to March 31, 2023

In basis points

Source: U.S. Treasury; Giliberto-Levy



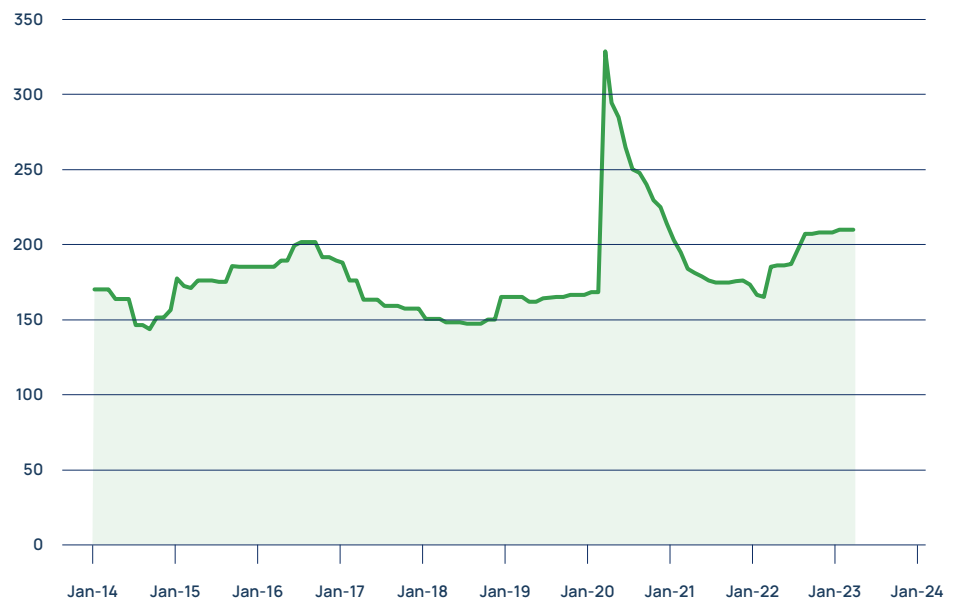
Commercial mortgage spreads did not change much (see Chart 3). There appeared to be upward movement after the failures of Silicon Valley Bank and Signature Bank, but spreads on priced deals – as distinct from price “talk” on possible new deals – settled back to only slightly above December 31, 2022 levels by quarter end.

Chart 3

## Spreads over Treasuries for Ten-year Commercial Mortgages

In basis points, reflecting 30/360 day count convention

Source: Giliberto-Levy. Chart data are equally weighted averages of office, apartment, retail and industrial property loans at 60% to 65% LTV.



G-L 1 rolling four-quarter total return improved considerably, rising from -8.98% as of year-end 2022 to -1.79% as of March 31, 2023. What happened? First quarter 2022's negative 4.41% return was replaced by this quarter's positive 3.13%.

# Market Trends: 1Q 2023

Table 1

## Key Rates (in %)

	12/31/2022	3/31/2023	change
20-year Treasury Yield	4.14	3.81	-0.33
20-year Mortgage Spread	2.08	2.10	0.02
<b>20-year Mortgage Yield</b>	<b>6.22</b>	<b>5.91</b>	<b>-0.31</b>
10-year Treasury Yield	3.88	3.48	-0.40
10-year Mortgage Spread	2.08	2.10	0.02
<b>10-year Mortgage Yield</b>	<b>5.96</b>	<b>5.58</b>	<b>-0.38</b>
7-year Treasury Yield	3.96	3.55	-0.41
7-year Mortgage Spread	2.08	2.10	0.02
<b>7-year Mortgage Yield</b>	<b>6.04</b>	<b>5.65</b>	<b>-0.39</b>
5-year Treasury Yield	3.99	3.60	-0.39
5-year Mortgage Spread	2.08	2.10	0.02
<b>5-year Mortgage Yield</b>	<b>6.07</b>	<b>5.70</b>	<b>-0.37</b>

Sources: U.S. Treasury; Giliberto-Levy

- Table 1 shows the effects of Treasury yield and spread changes on commercial mortgage yields. Coupon rates are below 6%. Reminder: rates are for 60% to 65% LTV loans; loans with LTV in the 50% to 60% range were about 10 bp lower on average.
- Size premiums persisted across most sectors for loans below \$5 million. Typical premiums again ranged from 25 bp to 35 bp. One change was the appearance of a 15 bp increment for retail loans between \$5 and \$10 million. Not all small loans had premiums, but on average premiums were statistically significant.
- The National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index (NPI) continued to reflect reductions in carrying values for institutionally owned commercial real estate. Values were down about 3% in 1Q 2023.
- We also looked at cumulative value reductions since prices peaked. For this calculation we used a subset of the NPI: assets that are held in open-end funds that make up the ODCE Fund Index, which is also published by NCREIF. Assets in these funds are marked to market quarterly, which is not the case for all assets in the broader NPI.
  - Industrial has been written down 6%.
  - Apartments are down about 8%.

- > Office has registered a 13% reduction.
- > Retail is off almost 17%. However, retail prices peaked in 4Q 2018, while the other major sectors' peaks were in 2022. Since March 2022, retail is down 9%.

## Credit Tracker

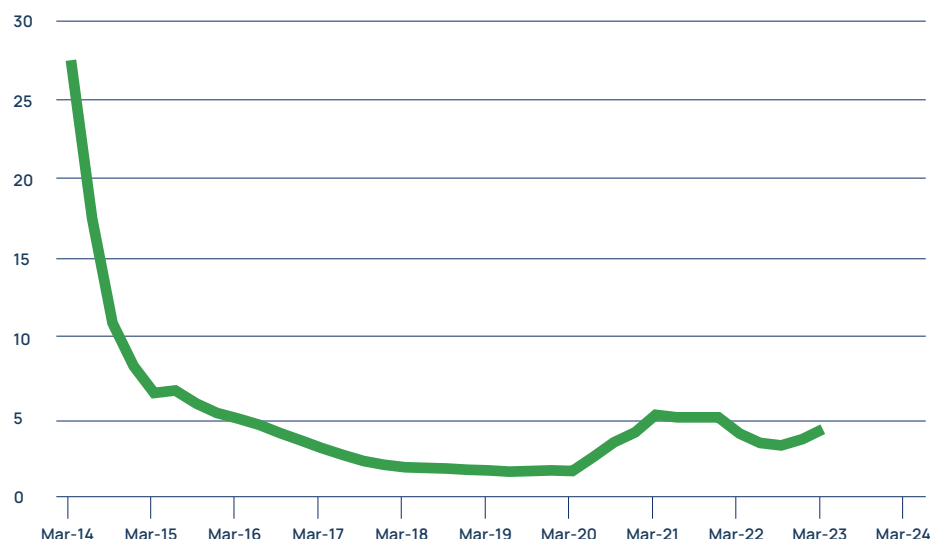
Trailing four-quarter credit effects held steady at 4 bp (see Chart 4). First quarter 2023's annualized credit effect was 5 bp.

Chart 4

### Commercial Mortgage Credit Effects

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

Source: Giliberto-Levy



The G-L 1's elevated risk percentage increased from its year-end 2022 level (see Table 2 and Chart 5). (The percentage is the share of loans that are in the amber and red risk zones in our credit tracker heat map.)

Table 2

### Credit Quality Distribution: All G-L 1 Loans

As a percentage of March 31, 2023 balances of these loans

DSC	LTV						Total
	0% to 50%	50% to 60%	60% to 65%	65% to 70%	70% to 75%	above 75%	
1.0 and less	0.23%	0.40%	0.28%	0.08%	0.10%	0.16%	1.25%
1.01 to 1.15	0.29%	0.78%	0.33%	0.19%	0.28%	0.07%	1.96%
1.15 to 1.5	1.88%	2.78%	1.71%	1.35%	0.83%	0.35%	8.90%
1.5 to 1.75	3.71%	5.57%	2.17%	1.00%	0.65%	0.26%	13.36%
above 1.75	41.93%	19.95%	6.74%	3.25%	1.11%	0.46%	73.44%
Unknown	0.06%	0.82%	0.10%	0.08%	0.01%	0.01%	1.09%
<b>Total</b>	<b>48.10%</b>	<b>30.31%</b>	<b>11.34%</b>	<b>5.95%</b>	<b>2.98%</b>	<b>1.32%</b>	<b>100.0%</b>

Source: Giliberto-Levy

LTV and DSC are updated from the original underwriting to reflect seasoning and market movements.

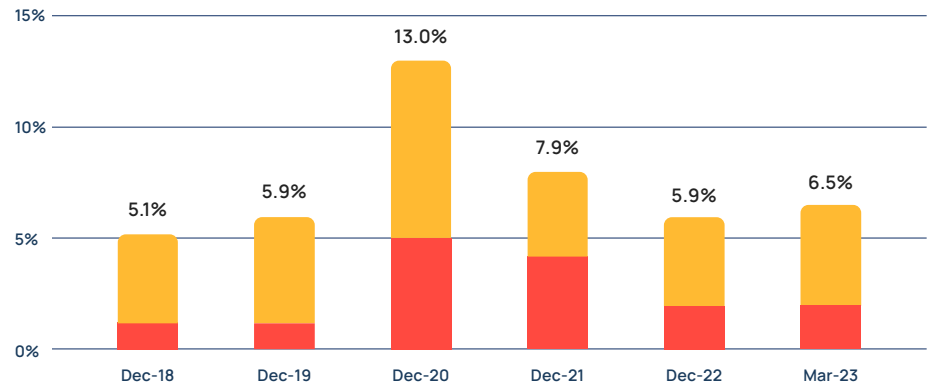
Zone	Red	Amber	Green	Unknown
Total	2.0%	4.5%	92.5%	1.1%

Chart 5

## Potential At-Risk Loans

As a percentage of loan balances at month end

Source: Giliberto-Levy



Declining property values pushed up LTVs. That drove the risk percentage increase. We expect further increases in 2023.

## Relative Performance

**G-L 1 was a star compared with other investment-grade fixed income** (see Table 3). Baa-rated intermediate bonds produced 2.66% total return, after adjusting to match G-L 1 duration, for example. Unlike the modest increase in G-L 1 spreads, CMBS spreads for the index widened by roughly 25 bp, which blunted the favorable effect of falling Treasury yields. Investment-grade CMBS showed a 1.70% total return, according to Bloomberg Index Services.

Table 3

### Total Return as of March 31, 2023

Index	Total Return (%)			Duration as of 3/31/2023
	1Q23	YTD	Last 4 Q	
Commercial Mortgages*	3.13	3.13	-1.79	4.73
Duration-adjusted Baa Bond	2.66	2.66	-3.14	4.73
CMBS: Investment Grade	1.70	1.70	-4.09	4.49
CMBS 2.0	1.03	1.03	-4.75	4.02
TSY Int. Term	2.27	2.27	-1.54	3.78
TSY 5-7 yr. Term	2.97	2.97	-3.14	5.39
Credit Int. Term	2.47	2.47	-1.88	4.06
A Int. Term	2.49	2.49	-1.86	4.06
Baa Int. Term	2.49	2.49	-2.16	4.25
High-yield Int. Term	3.57	3.57	-3.06	3.48
Ba Int. Term	3.42	3.42	-1.24	3.69

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

Sources: Bloomberg Index Services; Giliberto-Levy

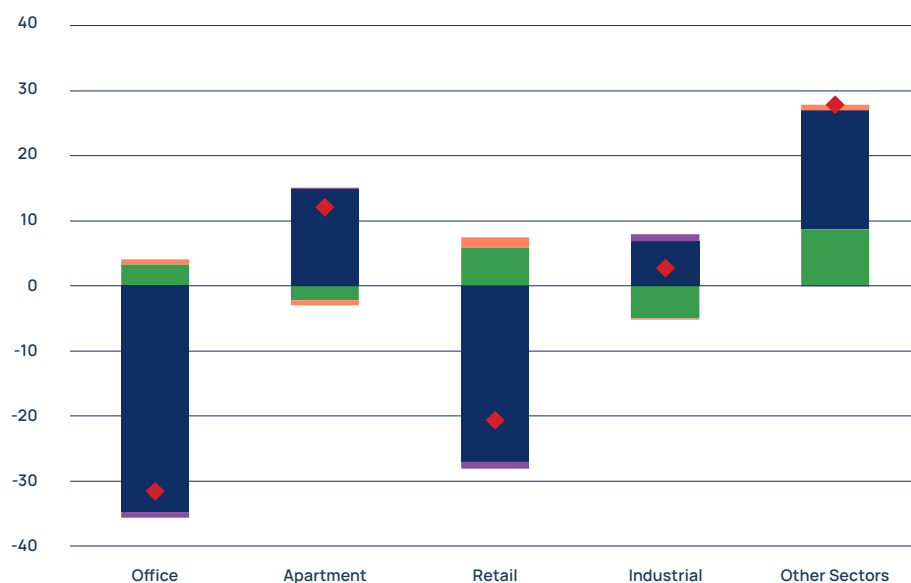
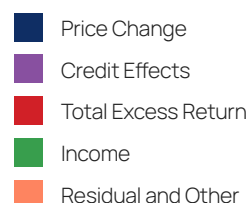
Property sector relative (to the overall index) performance variation continues to be driven by differences in duration and income yields (see Chart 6). This analysis shows a replay in 1Q 2023 of what happened in 4Q 2022 for the office sector. Its underperformance, despite its short duration, resulted from a higher percentage of office loans being exposed to the short end of the Treasury yield curve that showed yield increases.

Chart 6

## Sector Performance Attribution 1Q 2023

Sector performance minus Total index performance, in basis points

Source: Giliberto-Levy



## Lending Activity

Observations are based on data received at the time we prepared this report. These statistics are subject to change as we receive more information about lending activity. *Please note that these revisions do not alter published G-L 1 returns.*

Table 4

## G-L 1 Lending Activity Summary

	Most Recent Period 1Q 2023 P	Prior Period 4Q 2022	Year Ago Comp. Period 1Q 2022
Loan Volume (\$ billions)	3.3	3.7	14.1
Weighted Average:			
LTV	59.2%	57.8%	58.9%
DSCR	1.69	1.51	1.96
Coupon Rate	5.72%	5.98%	3.61%
Spread (basis points)	185	202	163
Term to Maturity (years)	7.4	8.6	10.6
Loan Size (\$ millions)	24.6	36.0	38.7

Spread is reported with respect to comparable maturity U.S. Treasury yield.  
P Preliminary and subject to revision

Source: Giliberto-Levy

- **Loan production volume continues to be down: 1Q production was on par with 4Q 2022 (see Chart 7).** Volume and loan count will increase as more reports trickle in.

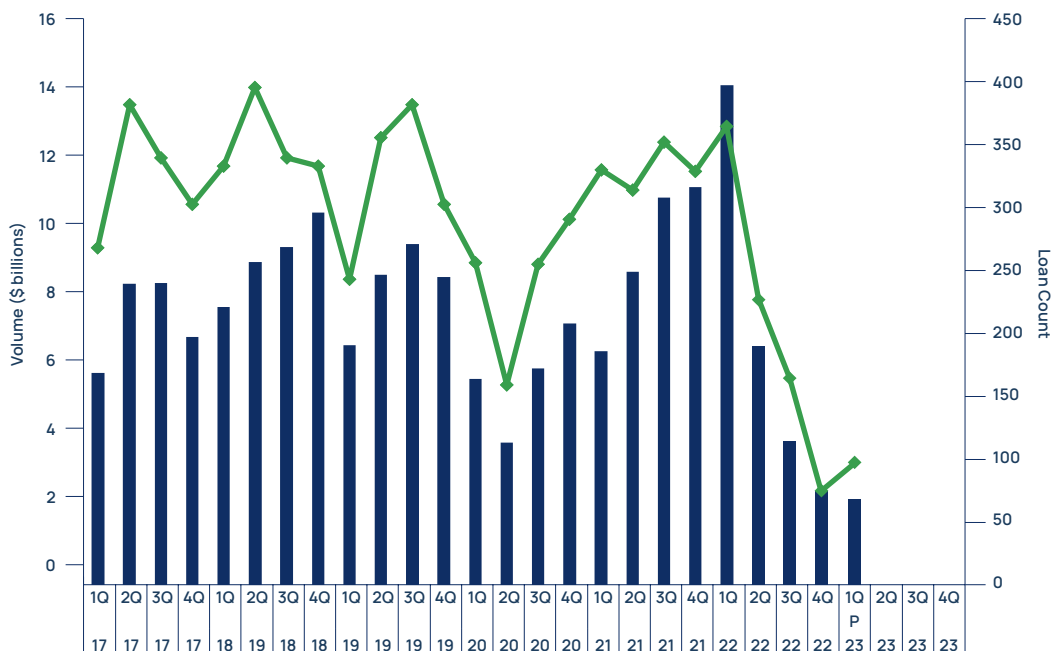
Chart 7

## Index-eligible Loan Production

*P Preliminary and subject to revision*

Source: Giliberto-Levy

◆ # of Loans  
— Volume



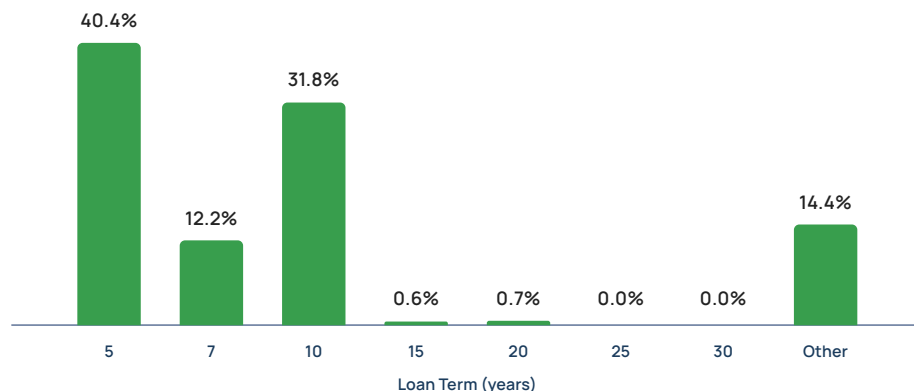
- The ten-year segment's market share by volume was down to 32% (see Chart 8); it usually is 40% or more. **What's interesting is the large share of loans made at the five-year mark.** This quarter's 40% share is well above 21% and 15% shares from 4Q and 3Q 2022, respectively. In addition, few loans with terms to maturity greater than ten years were reported. Both shifts are reasonable: why lock in a high rate for an extended period? It's a reversal of the "lock in and go long" phenomenon we noted in the past.

Chart 8

## Distribution of Lending Activity

*by Term to Maturity, 1Q 2023*

Source: Giliberto-Levy



- **Full-term interest-only loans market share fell from 63% in 4Q 2022 to 47% in 1Q 2023.** Partially amortizing loans made up 48% of volume, with about half having an interest-only period up front. Only about 5% of the volume was made up of fully amortizing loans. In addition, the average term for these loans was 8.8 years. Such loans typically show averages of 25 or more years to maturity. The greatly reduced average term is consistent with low production volume for longer-term loans.



**We added more than \$7 billion of new loans to the Index** (see Table 5a for details). This came from two sources: (1) loans originated in December 2022, and January and February 2023 (see Table 5b) and (2) loans originated from January 2022 through November 2022 that were reported too late to be included during the appropriate quarters of 2022 (see Table 5c).<sup>2</sup>

March 2023 loans, which are included in the production number cited above and depicted in Chart 7 will be added to the Index for 2Q 2023.

**Table 5a**

## Total Index Additions to G-L 1

	Amount (\$)	Number of Loans	Weighted-Average				
			Coupon	Spread (bp)	DSCR	LTV (%)	Term Years
Office	842,948,500	20	5.15%	209	1.61	53.8	6.7
Apartment	2,292,917,000	78	4.95%	183	1.58	60.6	8.7
Retail	662,320,000	32	5.69%	202	1.98	59.1	7.6
Industrial	2,533,602,000	69	4.95%	175	1.67	58.4	8.1
Other	760,750,000	43	5.32%	187	1.77	57.3	8.0
<b>Total</b>	<b>7,092,537,500</b>	<b>242</b>	<b>5.08%</b>	<b>186</b>	<b>1.68</b>	<b>58.5</b>	<b>8.1</b>

Source: Giliberto-Levy

**Table 5b**

## Index Additions: New Loans from December 2022, January and February 2023

	Amount (\$)	Number of Loans	Weighted-Average				
			Coupon	Spread (bp)	DSCR	LTV (%)	Term Years
Office	162,540,000	10	6.55%	247	1.37	62.6	6.3
Apartment	1,053,775,000	40	5.54%	178	1.50	62.1	8.4
Retail	573,020,000	25	5.89%	205	1.97	59.1	7.2
Industrial	1,083,732,000	30	5.71%	171	1.61	58.4	7.0
Other	469,100,000	31	5.63%	187	2.06	53.7	6.8
<b>Total</b>	<b>3,342,167,000</b>	<b>136</b>	<b>5.72%</b>	<b>185</b>	<b>1.69</b>	<b>59.2</b>	<b>7.4</b>

Source: Giliberto-Levy

<sup>2</sup> Before inclusion in G-L 1, late loans are processed identically with loans that were received "on time". Collateral value, income and loan market value are updated from each loan's pricing date through December 31 of the origination year. They enter the index as of Jan. 1 the following year.

Table 5c

## Index Additions: Late-Reported Loans From January through November 2021

	Amount (\$)	Number of Loans	Weighted-Average				
			Coupon	Spread (bp)	DSCR	LTV (%)	Term Years
Office	680,408,500	10	4.81%	200	1.67	51.7	6.8
Apartment	1,239,142,000	38	4.45%	188	1.65	59.4	9.0
Retail	89,300,000	7	4.38%	183	2.03	58.8	10.1
Industrial	1,449,870,000	39	4.37%	178	1.72	58.4	8.8
Other	291,650,000	12	4.82%	186	1.32	63.1	10.0
<b>Total</b>	<b>3,750,370,500</b>	<b>106</b>	<b>4.51%</b>	<b>186</b>	<b>1.7</b>	<b>57.9</b>	<b>8.6</b>

Source: Giliberto-Levy

Please note that spreads reported in Tables 5a, 5b and 5c are weighted averages of loans made during periods prior to March 2023. These averages do not stand for 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: Annual Principal Change Review

We compiled our annual review of the change in the Index's outstanding principal balance over the prior calendar year.

**New loans added during 2022, including late reports from 2021, totaled about \$36 billion** (see Chart 9). This was below 2021's \$41 billion. Volume started to decline after the Fed's rate hikes started.

**The net change in the Index's outstanding principal balance was about \$15.5 billion compared with an increase of \$18 billion in 2021.**

Chart 9

## Components of G-L 1 Index Principal Balance Change from Year-end 2021 to Year-end 2022

Source: Giliberto-Levy



Chart 9 reconciles the gap between the net change in principal and the amount of new loans. Amortization and balloon payments at loan maturity explained most of the \$21 billion difference.

**Principal losses due to credit issues added up to roughly \$218 million, or about 0.11%** of principal outstanding at the beginning of 2022. This was comparable to 2021's 0.14% result. **Loss severity, according to our credit model, was 27%**, marking an increase from the 24% posted in 2021. The uptick makes sense viewed against a backdrop of declining values.

We expect the index's outstanding principal balance to shrink during 2023, unless there is a dramatic, and unexpected, surge in lending volume. In the 4Q 2022 Monitor, we noted that about \$39 billion is set to mature in 2023. That is more than the \$36 billion of new loans made in 2022, and it is well above the approximately \$15 billion annualized pace from the two most recent quarters.

As always, we welcome your comments and questions.

May 2023

Chart 10

## Commercial Mortgage Performance

*Rolling four-quarter total return for Total Index*

Source: Giliberto-Levy

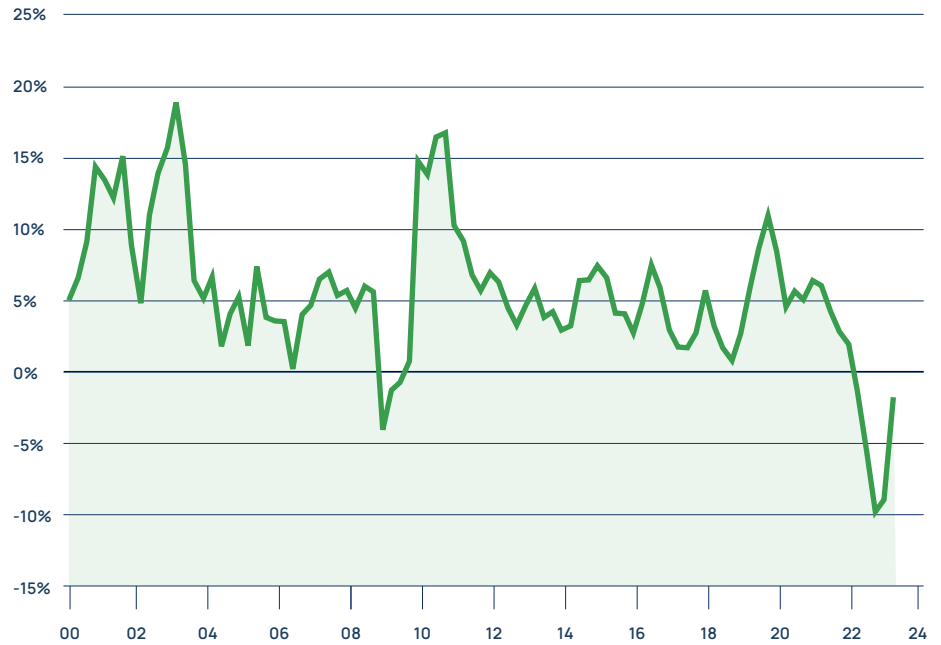


Chart 11

## Commercial Mortgage Credit Effects

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

Source: Giliberto-Levy

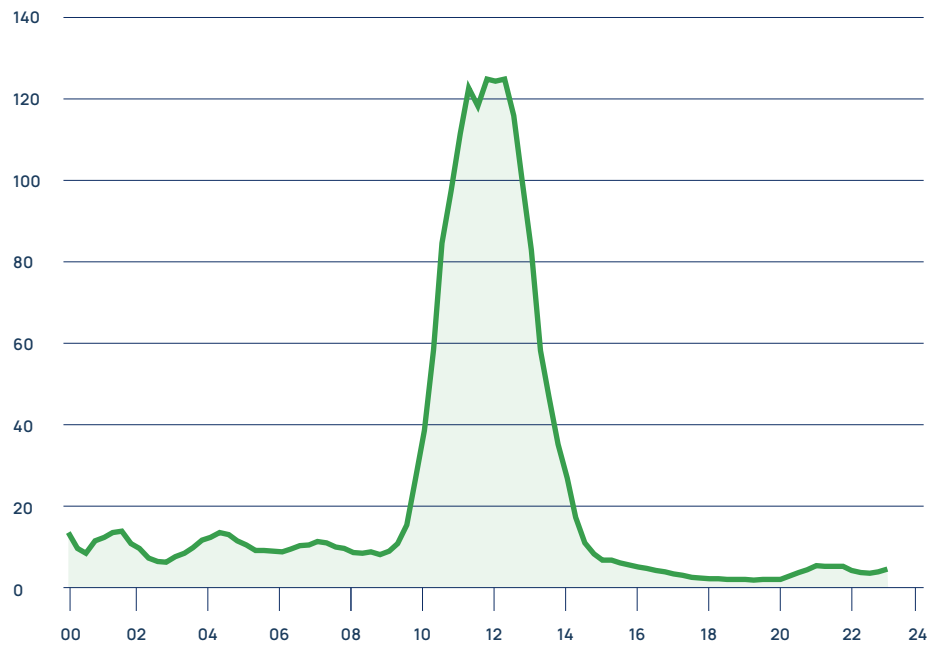


Table A

## Giliberto-Levy Commercial Mortgage Index (G-L I) Performance by Property Sector

For the quarter ended March 31, 2023

Sector	Returns (%)						Index Level	Credit Effects (book value; bp)		
	Last 3 months				YTD Total	Last 12 Months		Last 3 Months	YTD	Lasat 12 Months
	Income	Price	Other	Total						
Office	1.13	1.66	0.03	2.82	2.82	-1.20	2320.42	2	2	7
Apartment	1.07	2.17	0.01	3.26	3.26	-2.34	2972.69	1	1	3
Retail	1.16	1.74	0.03	2.93	2.93	-0.99	2764.75	3	3	8
Industrial	1.05	2.10	0.02	3.16	3.16	-2.00	2676.29	0	0	1
Others	1.18	2.20	0.03	3.41	3.41	-0.85	N/A	2	2	5
Total	1.10	2.02	0.02	3.13	3.13	-1.79	2513.45	1	1	4
Aggregate	1.09	2.01	0.02	3.11	3.11	-1.86	4063.55	1	1	4

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

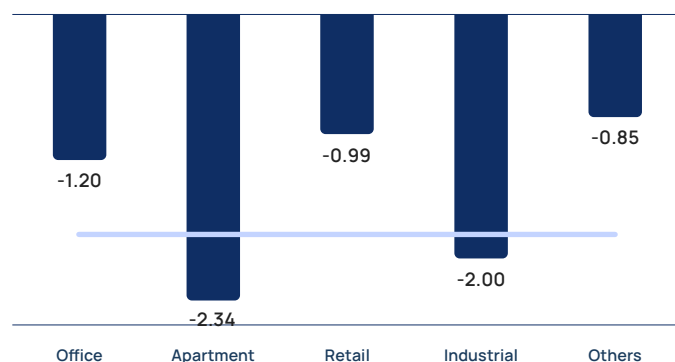
Other Return is paydown return and compounding

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

bp basis points

### Total Return by Sector

Last 12 months; in percent



### Credit Effect by Sector

Last 12 months



Table B

## Giliberto-Levy Commercial Mortgage Index (G-L I) Performance by Property Sector

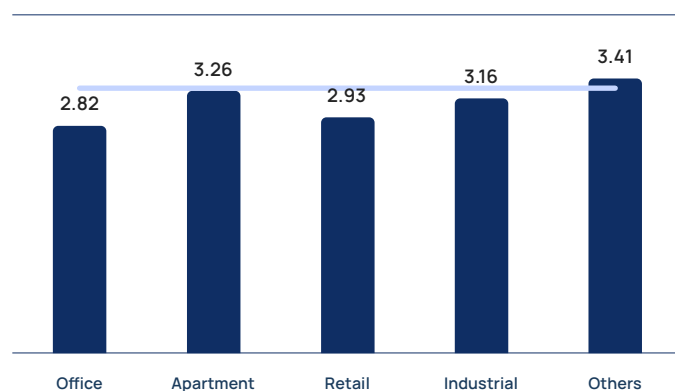
For the quarter ended March 31, 2023

Sector	Returns (%)				Statistics						
	Income	Price	Other	Total	Mod. Duration	Coupon	Maturity	Price	Yield	Pct. of Portfolio	Num. of Cohorts
Office	1.13	1.66	0.03	2.82	4.11	4.13	5.83	92.9	5.97	15.6%	2044
Apartment	1.07	2.17	0.01	3.26	5.04	3.85	6.84	91.6	5.61	45.9%	6346
Retail	1.16	1.74	0.03	2.93	4.21	4.22	5.99	92.9	5.99	13.8%	3358
Industrial	1.05	2.10	0.02	3.16	4.76	3.80	6.42	92.3	5.47	18.1%	2927
Others	1.18	2.20	0.03	3.41	5.03	4.24	7.70	91.4	6.00	6.6%	1162
<b>Total</b>	<b>1.10</b>	<b>2.02</b>	<b>0.02</b>	<b>3.13</b>	<b>4.73</b>	<b>3.96</b>	<b>6.55</b>	<b>92.1</b>	<b>5.72</b>	<b>100.0%</b>	<b>15837</b>
Aggregate	1.09	2.01	0.02	3.11	4.71	3.94	6.46	92.1	5.70	93.4%	14675

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

### Total Return by Sector

Last 12 months; in percent



### Portfolio Composition by Sector

in percent

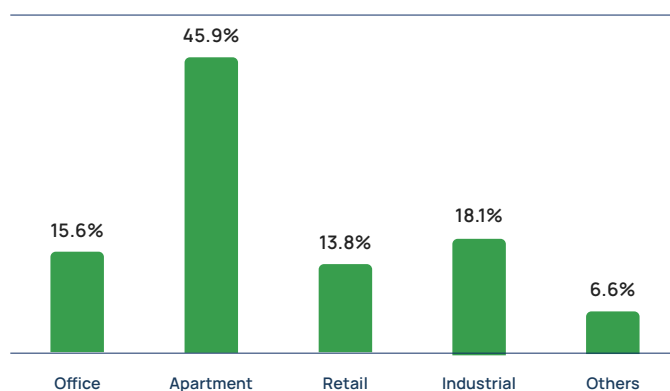


Table C

## Giliberto-Levy Commercial Mortgage Index (G-L I)

### Performance by Book LTV Classification

For the quarter ended March 31, 2023

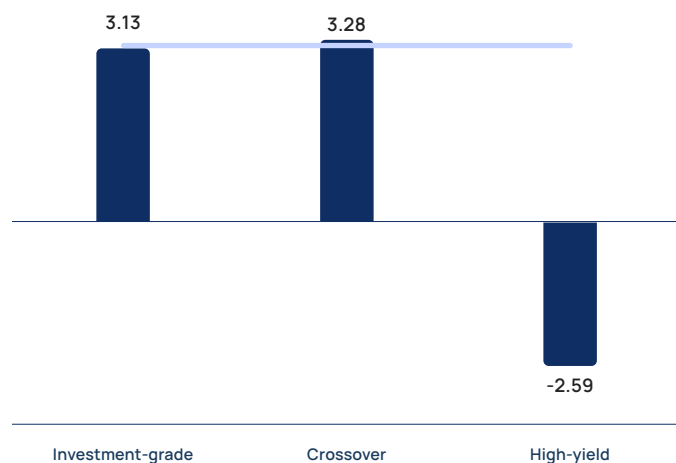
Credit quality using book value	Returns (%)				Statistics						
	Income	Price	Other	Total	Mod. Duration	Coupon	Maturity	Price	Yield	Pct. of Portfolio	Num. of Cohorts
Investment-grade	1.09	2.02	0.02	<b>3.13</b>	4.70	3.95	6.50	92.2	5.70	96.1%	15325
Crossover	1.21	2.06	0.02	<b>3.28</b>	5.45	4.29	7.57	90.7	6.05	3.9%	508
High-yield	1.76	-4.41	0.06	<b>-2.59</b>	4.42	4.75	9.64	63.3	11.49	0.1%	4
<b>Total</b>	<b>1.10</b>	<b>2.02</b>	<b>0.02</b>	<b>3.13</b>	<b>4.73</b>	<b>3.96</b>	<b>6.55</b>	<b>92.1</b>	<b>5.72</b>	<b>100.0%</b>	<b>15837</b>

Credit quality definition	Book LTV	
	Minimum	Maximum
Investment-grade	NA	70.0%
Crossover	70.1%	85.0%
High-yield	85.1%	NA

**Please note** that all G-L I loans are senior loans. "Crossover" loans are those with LTVs above 70% and below 85%. They are not subordinate positions that "attach" at 70% LTV and go up to 85% of the capital stack.

### Total Return by Credit Quality

For the quarter; in percent



### Portfolio Composition by Credit Quality

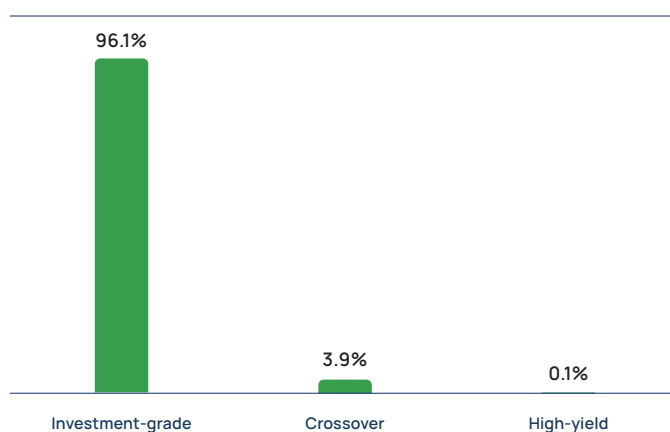


Table D

## Giliberto-Levy Commercial Mortgage Index (G-L I)

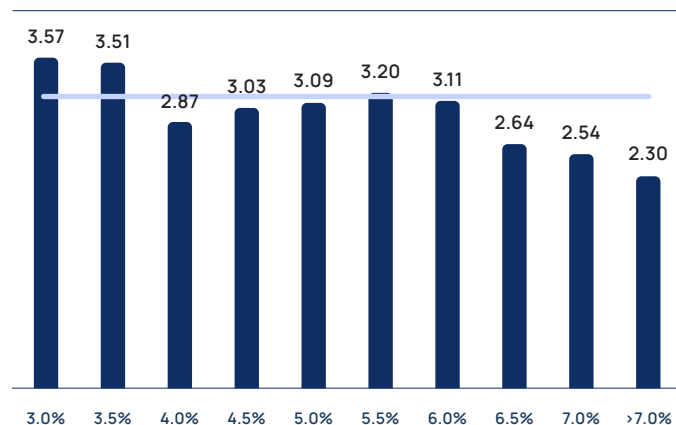
### Performance by Coupon Rate

For the quarter ended March 31, 2023

Coupon Rate	Returns (%)				Statistics						
	Income	Price	Other	Total	Mod. Duration	Coupon	Maturity	Price	Yield	Pct. of Portfolio	Num. of Cohorts
0.0% to 3.0%	0.83	2.72	0.02	3.57	5.70	2.74	7.16	85.6	5.49	10.6%	1118
3.0% to 3.5%	0.97	2.52	0.02	3.51	5.70	3.28	7.58	87.6	5.60	18.2%	2203
3.5% to 4.0%	1.04	1.80	0.03	2.87	4.03	3.78	5.40	92.7	5.79	26.7%	3651
4.0% to 4.5%	1.16	1.85	0.02	3.03	4.47	4.25	6.50	94.0	5.77	25.5%	3600
4.5% to 5.0%	1.27	1.81	0.01	3.09	4.68	4.73	6.87	95.6	5.82	10.9%	1776
5.0% to 5.5%	1.37	1.83	0.00	3.20	4.98	5.24	7.57	98.1	5.81	3.4%	727
5.5% to 6.0%	1.46	1.66	-0.01	3.11	4.72	5.74	7.29	100.6	5.76	2.5%	914
6.0% to 6.5%	1.56	1.10	-0.02	2.64	3.41	6.24	5.40	101.9	5.81	1.2%	732
6.5% to 7.0%	1.64	0.93	-0.04	2.54	3.69	6.68	5.75	103.7	5.85	0.4%	264
7.0% & above	1.84	0.54	-0.09	2.30	2.82	7.65	4.71	105.1	5.91	0.5%	264
<b>Total</b>	<b>1.10</b>	<b>2.02</b>	<b>0.02</b>	<b>3.13</b>	<b>4.73</b>	<b>3.96</b>	<b>6.55</b>	<b>92.1</b>	<b>5.72</b>	<b>100.0%</b>	<b>15837</b>

### Total Return by Coupon Rate

For the quarter; in percent



### Portfolio Composition by Coupon Rate

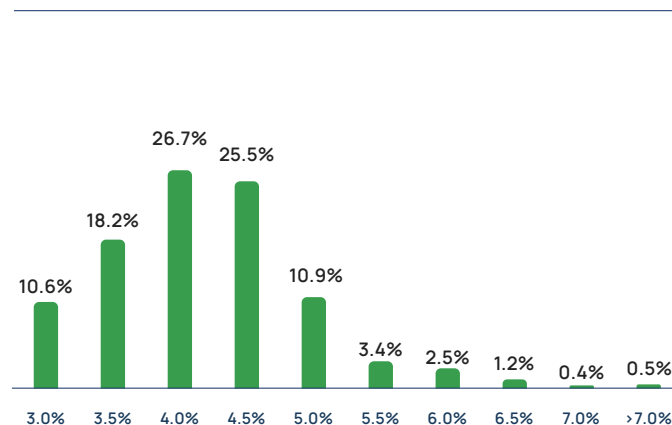




Table E

## Giliberto-Levy Commercial Mortgage Index (G-L I)

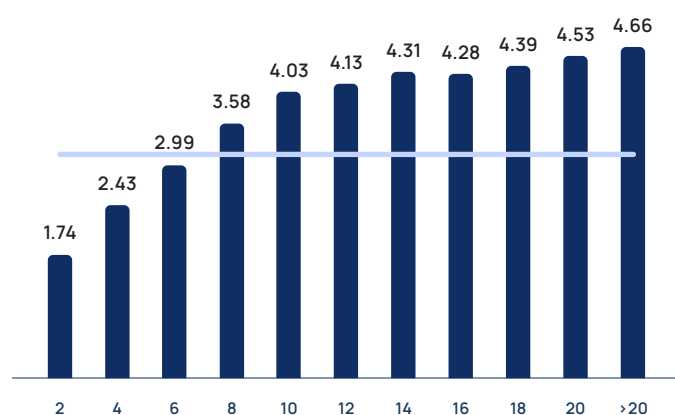
### Performance by Remaining Term to Maturity

For the quarter ended March 31, 2023

Maturity Cell	Returns (%)				Statistics						
	Income	Price	Other	Total	Mod. Duration	Coupon	Maturity	Price	Yield	Pct. of Portfolio	Num. of Cohorts
0 to 2 years	1.06	0.66	0.02	1.74	1.01	4.10	1.06	97.8	6.44	15.4%	2941
2 to 4 years	1.05	1.37	0.01	2.43	2.77	3.94	3.07	95.0	5.77	19.6%	3132
4 to 6 years	1.11	1.88	0.01	2.99	4.33	4.09	5.06	93.5	5.58	20.1%	2610
6 to 8 years	1.07	2.49	0.01	3.58	5.71	3.73	6.98	89.9	5.52	14.8%	2190
8 to 10 years	1.10	2.92	0.01	4.03	6.91	3.82	8.90	88.7	5.49	14.0%	1844
10 to 12 years	1.17	2.93	0.03	4.13	7.41	4.08	10.98	89.8	5.45	5.0%	873
12 to 14 years	1.13	3.12	0.05	4.31	8.09	3.81	13.16	86.3	5.50	4.0%	780
14 to 16 years	1.26	2.98	0.04	4.28	8.03	4.47	14.90	91.4	5.54	2.1%	463
16 to 18 years	1.15	3.14	0.09	4.39	8.43	3.79	16.98	85.3	5.57	1.6%	360
18 to 20 years	1.17	3.26	0.09	4.53	9.03	3.83	18.71	84.1	5.61	1.1%	257
20 years & more	1.28	3.32	0.05	4.66	10.45	4.15	25.38	83.6	5.67	2.5%	387
Total	1.10	2.02	0.02	3.13	4.73	3.96	6.55	92.1	5.72	100.0%	15837

### Total Return by Maturity Cell

For the quarter; in percent



### Portfolio Composition by Maturity Cell

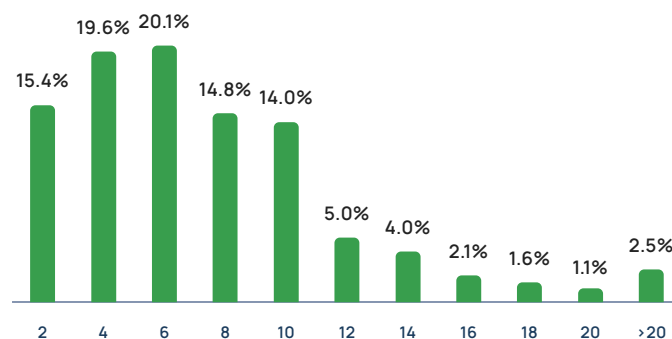


Table F

## Giliberto-Levy Commercial Mortgage Index (G-L I)

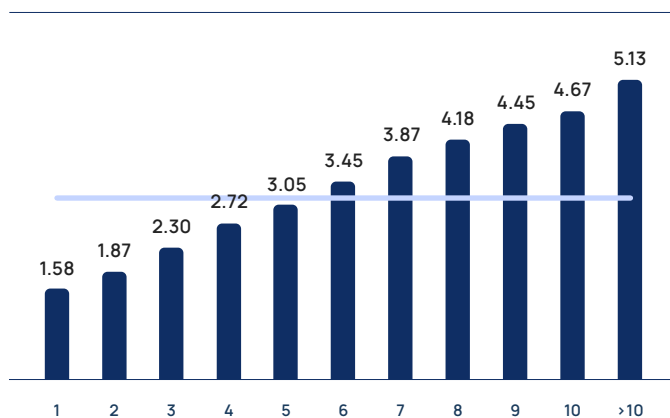
### Performance by Duration

For the quarter ended March 31, 2023

Duration Cell	Returns (%)				Statistics Averages						
	Income	Price	Other	Total	Mod. Duration	Coupon	Maturity	Price	Yield	Pct. of Portfolio	Num. of Cohorts
0 to 1 year	1.07	0.48	0.04	1.58	0.43	4.22	0.45	99.0	6.73	6.6%	1692
1 to 2 years	1.07	0.78	0.02	1.87	1.46	4.10	1.61	97.0	6.21	9.6%	2150
2 to 3 years	1.08	1.20	0.02	2.30	2.46	4.09	2.82	95.8	5.80	11.2%	1910
3 to 4 years	1.06	1.64	0.02	2.72	3.43	3.94	4.04	94.2	5.68	13.4%	1924
4 to 5 years	1.13	1.90	0.01	3.05	4.46	4.17	5.52	93.9	5.56	13.6%	1911
5 to 6 years	1.10	2.33	0.02	3.45	5.42	3.89	7.05	91.3	5.53	12.7%	1800
6 to 7 years	1.07	2.78	0.02	3.87	6.46	3.70	8.96	88.8	5.50	11.4%	1723
7 to 8 years	1.11	3.06	0.01	4.18	7.39	3.80	10.32	88.1	5.48	11.8%	1370
8 to 9 years	1.15	3.27	0.03	4.45	8.49	3.83	13.95	86.2	5.50	4.9%	691
9 to 10 years	1.20	3.45	0.02	4.67	9.46	3.93	17.77	85.4	5.53	2.5%	397
10 years & more	1.23	3.99	0.00	5.21	11.51	3.77	21.16	80.1	5.58	2.3%	269
<b>Total</b>	<b>1.10</b>	<b>2.02</b>	<b>0.02</b>	<b>3.13</b>	<b>4.73</b>	<b>3.96</b>	<b>6.55</b>	<b>92.1</b>	<b>5.72</b>	<b>100.0%</b>	<b>15837</b>

### Total Return by Duration Cell

For the quarter; in percent



### Portfolio Composition by Duration Cell

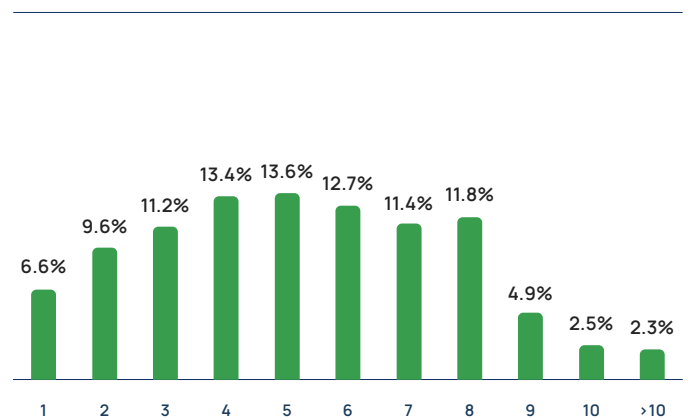


Table G

## Giliberto-Levy Commercial Mortgage Index (G-L I)

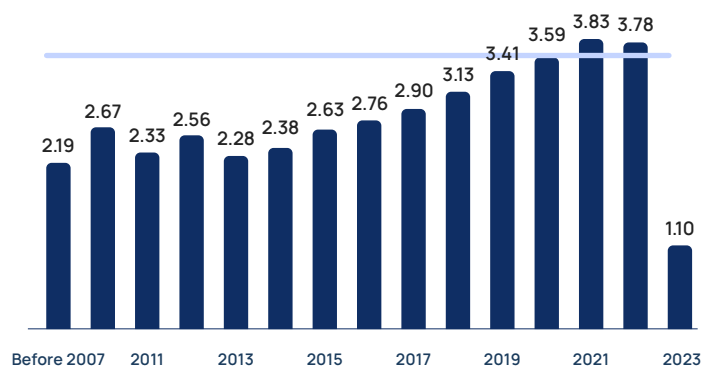
### Performance by Vintage Year

For the quarter ended March 31, 2023

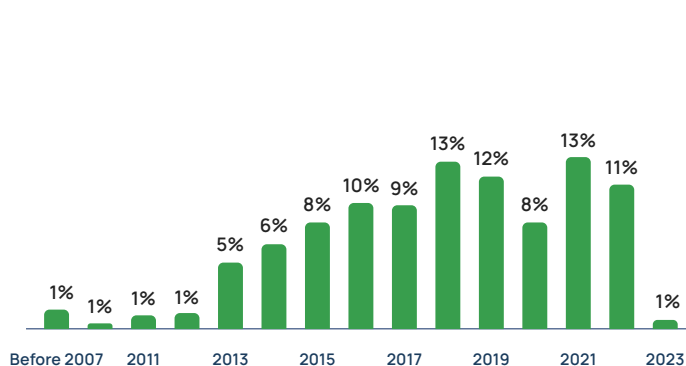
Vintage Year	Returns				Statistics						
	Income	Price	Other	Total	Mod. Duration	Coupon	Maturity	Price	Yield	Pct. of Portfolio	Num. of Cohorts
Before 2007	1.56	0.65	-0.02	2.19	2.45	6.29	4.52	101.5	5.89	1.5%	2330
2007 to 2010	1.55	1.14	-0.03	2.67	3.62	6.23	7.00	102.1	5.72	0.5%	307
2011	1.31	1.01	0.02	2.33	2.55	5.11	4.08	99.0	6.03	1.1%	264
2012	1.19	1.30	0.06	2.56	3.38	4.55	5.55	96.4	5.85	1.2%	328
2013	1.14	1.10	0.05	2.28	2.50	4.41	3.92	97.3	6.16	5.1%	993
2014	1.12	1.24	0.03	2.38	2.80	4.22	4.12	96.0	6.04	6.4%	1005
2015	1.07	1.53	0.03	2.63	3.38	3.96	4.83	94.5	5.80	8.1%	1358
2016	1.04	1.68	0.04	2.76	3.62	3.79	5.16	93.5	5.84	9.6%	1311
2017	1.09	1.78	0.03	2.90	4.01	3.97	5.44	93.6	5.76	9.4%	1333
2018	1.19	1.94	0.01	3.13	4.76	4.37	6.68	94.5	5.66	12.7%	1485
2019	1.08	2.32	0.01	3.41	5.40	3.79	7.47	90.7	5.63	11.5%	1422
2020	0.93	2.63	0.02	3.59	5.87	3.11	7.98	86.6	5.55	8.1%	1117
2021	0.93	2.89	0.01	3.83	6.44	3.03	8.39	85.2	5.51	13.0%	1511
2022	1.25	2.54	-0.01	3.78	6.53	4.48	8.80	92.1	5.61	11.0%	981
2023	0.96	0.13	0.00	1.10	5.42	5.76	7.12	100.1	5.68	0.7%	92
Total	1.10	2.02	0.02	3.13	4.73	3.96	6.55	92.1	5.72	100.0%	15837

### Total Return by Vintage Cohort

For the quarter; in percent



### Portfolio Composition by Vintage Cohort



**Please join us on Tuesday,  
June 20th from 10-11am for  
the annual G-L 2 High-Yield  
Real Estate Debt  
Symposium. The event,  
hosted by Michael Gilberto  
and John Levy, will  
take place virtually.**

**If you'd like to register for the  
Symposium, please email Julia  
Grant at [jgrant@jblevyco.com](mailto:jgrant@jblevyco.com).**

## The Gilberto-Levy Indexes

The G-L Commercial Mortgage Performance Index or G-L 1 tracks investment results for fixed-rate senior mortgages made by lenders such as life insurance companies, GSEs, pension funds and investment managers and held on their balance sheets. G-L 1 has been produced continuously since 1993, with a return inception date of January 1, 1972.

The G-L High-yield Real Estate Debt Index or G-L 2 measures performance for a variety of investments, such as mezzanine loans, leveraged whole loan and B-notes. G-L 2 production started in 2018. The return inception date is January 1, 2010.

To receive more information about the indexes, please contact Julia Grant ([jgrant@jblevyco.com](mailto:jgrant@jblevyco.com)).

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