NORTH CAROLINA
DEPARTMENT OF STATE TREASURER

STATE TREASURER OF NORTH CAROLINA
DALE R. FOLWELL, CPA

INVESTMENT MANAGEMENT DIVISION

Opportunistic Fixed Income Review

November 18, 2020

All Data as of September 30, 2020 Unless Otherwise Stated

Role in the Portfolio

Attractive Absolute Returns

- Long-term returns that are competitive with long-term public equities, after consideration of lower downside risk, due to opportunistic investments, longer duration private investments, restructurings, leverage, hedging, and trading skill

Competitive Relative Returns

- Achieve or exceed the return on the performance benchmark over a long period of time, within reasonable risk parameters

Diversification

- Enhance the diversification of the total fund relative to public equity and investment grade fixed income

Capital Preservation

- Protect capital through credit-oriented investments and trading strategies that are designed to minimize downside risk

Deflation Protection

- The structure of certain fixed income assets may provide protection against the detrimental effects of deflation

Portfolio Launched June 2009

- The asset class (N.C.G.S. § 147-69.2(b)(6c)) was approved for investment by the NC General Assembly in June 2009.

Source: Investment Policy Statement for North Carolina Retirement Systems, July 1, 2014

Portfolio Components

Components	Strategies / Types of Investments	
Traditional Corporate Credit	High Yield Bonds	Bank Loans
Distressed Credit	High Yield Bonds	Post-Reorg Equity
	Structured Credit	
Hedge Funds	Long/Short Credit	Relative Value
	Convertible Arbitrage	Distressed Credit
	Derivatives	Event-Driven
Special Situations	Structured Credit	Mezzanine Debt
	Whole Loans	Direct Lending
	Real Estate Loans	Dislocation

* Portfolio Components, Targets, and Maximums come from the Investment Policy Statement for North Carolina Retirement Systems, July 1, 2014

Opportunistic Fixed Income

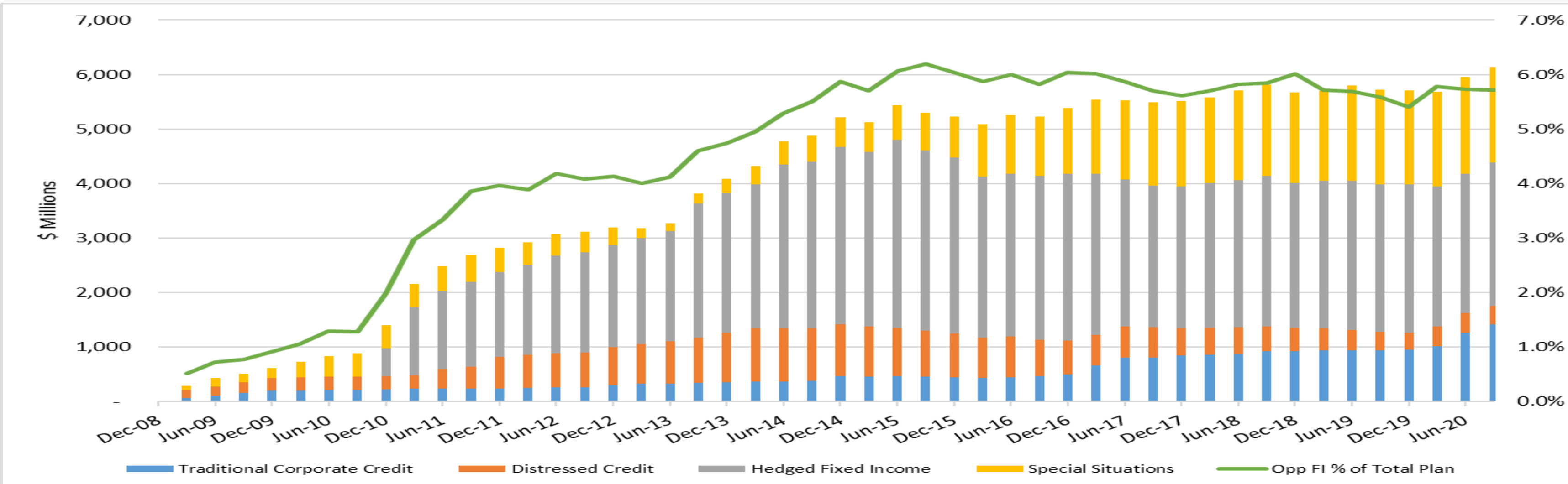
- Currently under-weight vs. target by 1.3%
- Additional capacity for more than $1.4B

	Market Value ($MM)	%	Target	Range		Relative %	Relative $ (MM)
				Minimum	Maximum		
Growth	**$51,515**	**47.91%**	**58.0%**	**37.0%**	**71.0%**	**-10.09%**	**($10,851)**
Public Equity	36,599	34.04%	42.0%	37.0%	47.0%	-7.96%	($8,563)
Private Equity	5,781	5.38%	6.0%	0.0%	8.8%	-0.62%	($671)
Non Core Real Estate	2,996	2.79%	3.0%	0.0%	8.0%	-0.21%	($230)
Opportunistic Fixed Income	**6,140**	**5.71%**	**7.0%**	**0.0%**	**7.50%**	**-1.29%**	**($1,387)**
Rates & Liquidity	**42,909**	**39.90%**	**29.0%**	**24.0%**	**42.0%**	**10.90%**	**11,725**
IG Fixed Income & Cash	33,672	31.31%	28.0%	24.0%	32.0%	3.31%	3,564
Pension Cash	9,237	8.59%	1.0%	0.0%	10.0%	7.59%	8,161
Inflation Sensitive & Diversifiers	**11,008**	**10.24%**	**11.0%**	**4.0%**	**16.0%**	**-0.76%**	**($820)**
Inflation Sensitive	5,520	5.13%	6.0%	2.0%	7.5%	-0.87%	($932)
Core Real Estate	5,488	5.10%	5.0%	2.0%	10.0%	0.10%	112
Multi-Strategy	**2,097**	**1.95%**	**2.0%**	**0.0%**	**4.0%**	**-0.05%**	**($54)**
Grand Total	**$107,529**	**100.00%**					

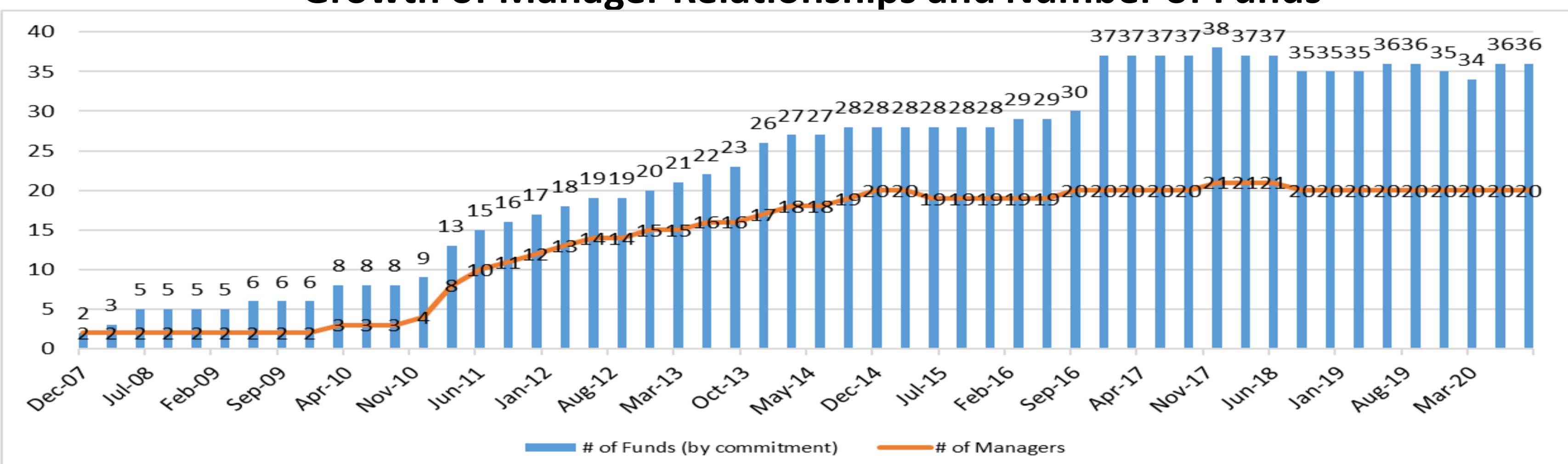
Unaudited financials as of 9/30/20

Portfolio History

Portfolio Market Value Timeline by Component

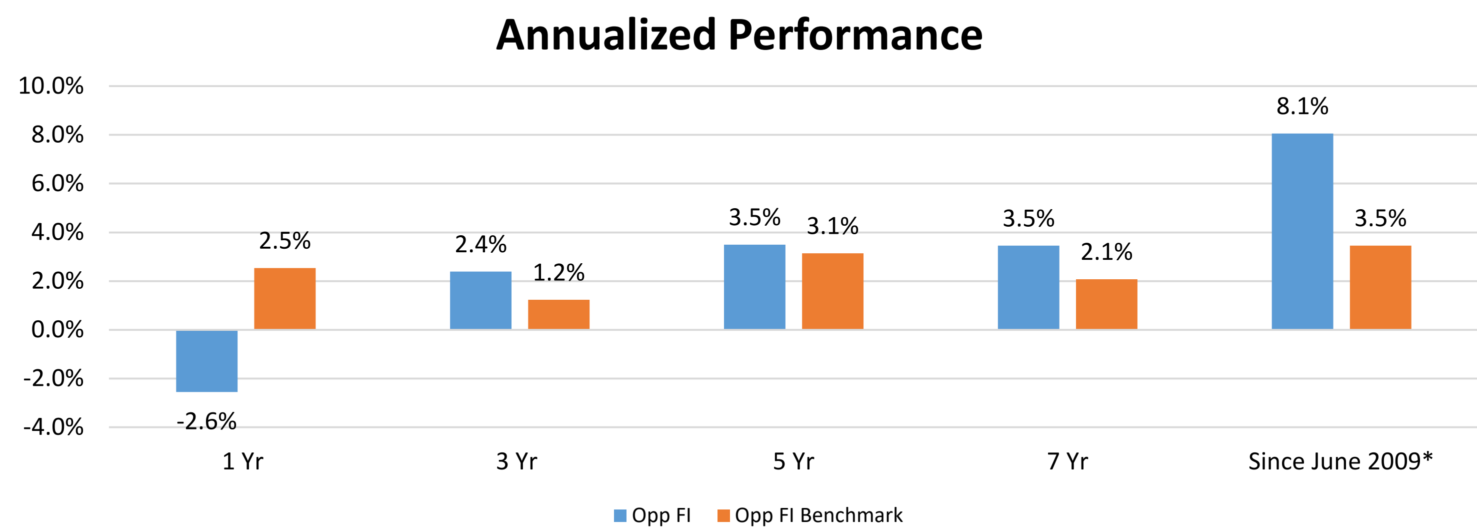


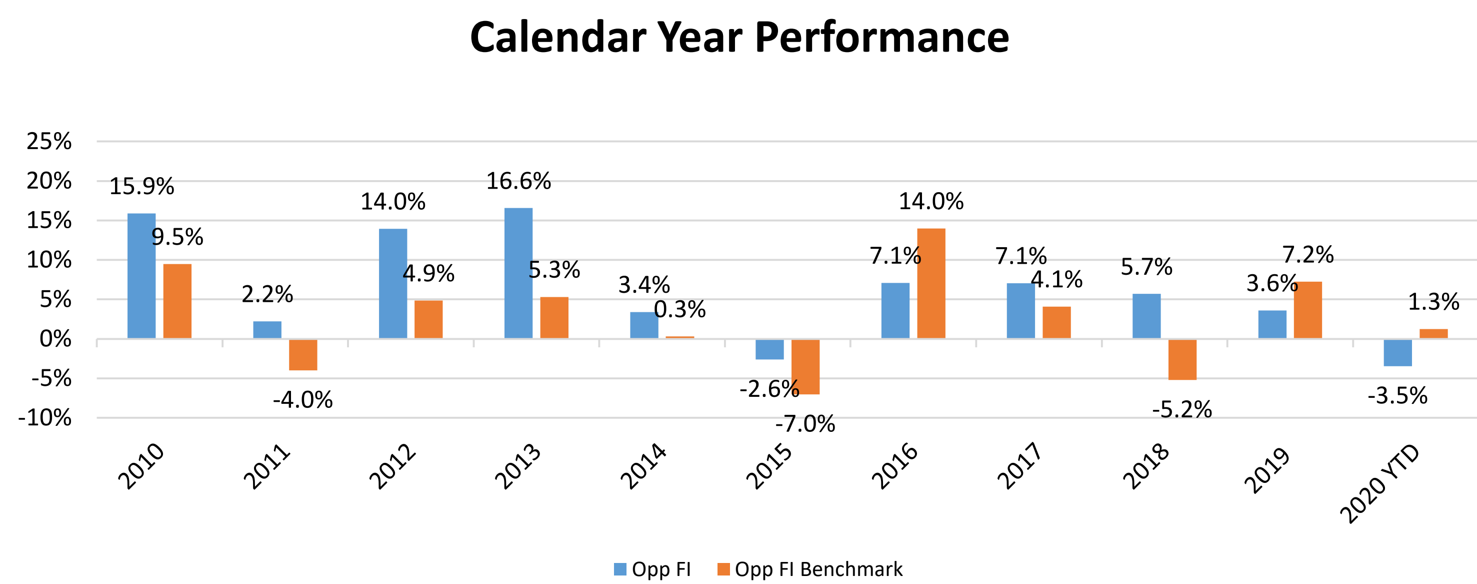
Growth of Manager Relationships and Number of Funds



Note: Fund count excludes liquidated investments.

Portfolio Performance

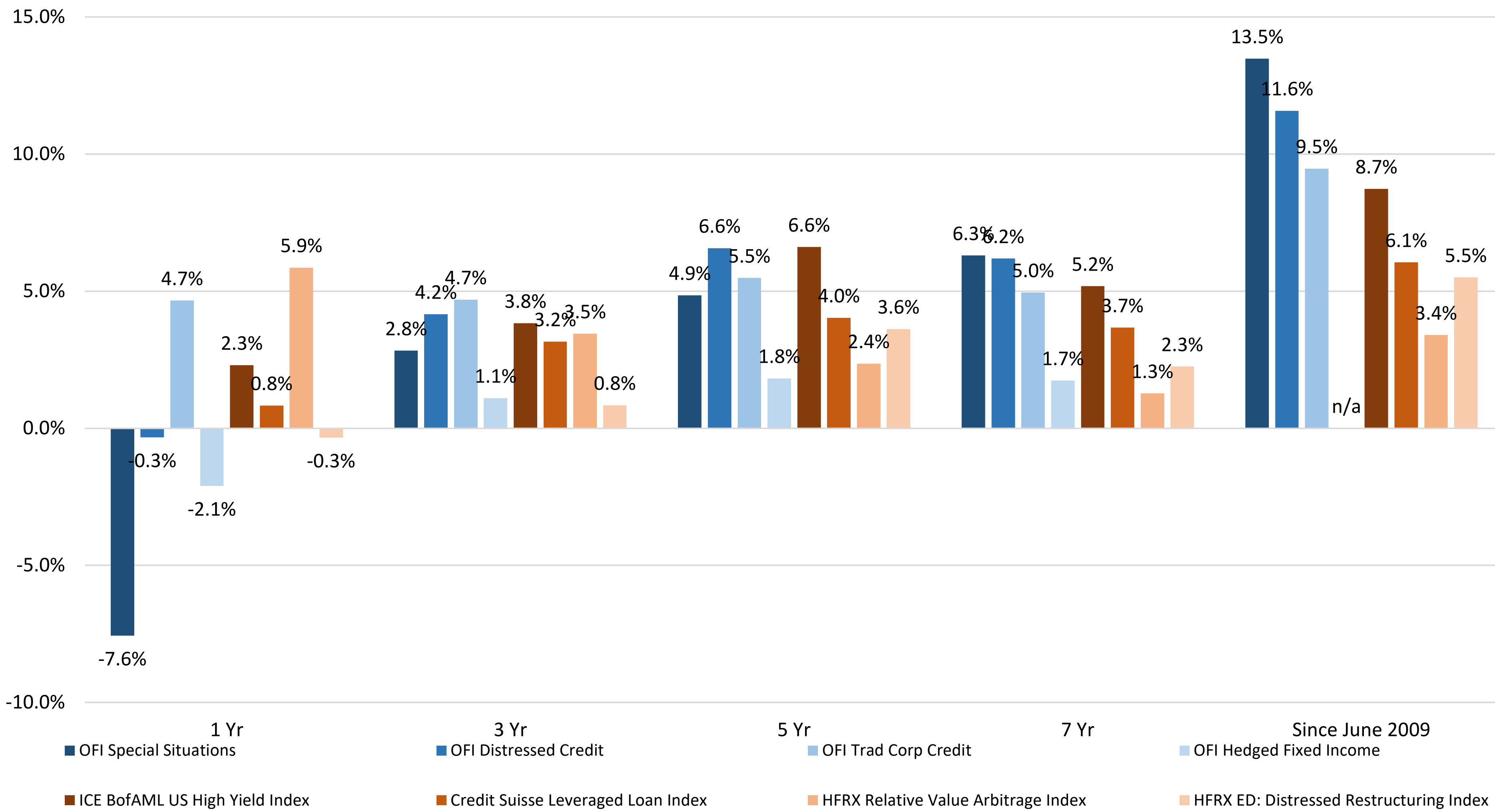




Note: See slide 20 for details on the composition of the Opportunistic Fixed Income Benchmark.

Portfolio Performance

Portfolio Component Annualized Performance vs. Market Benchmarks



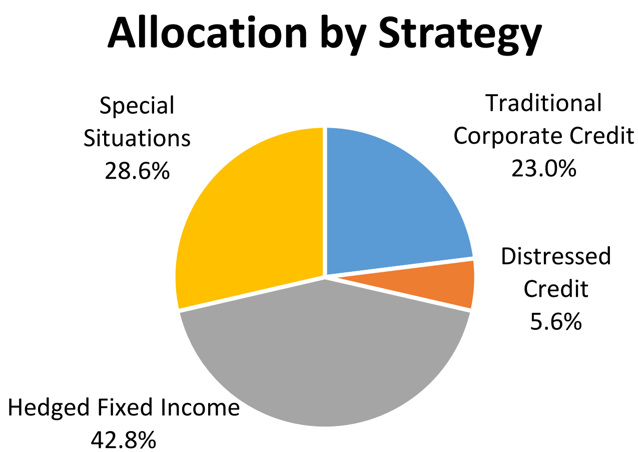
Note: See slide 20 for details on the composition of the Opportunistic Fixed Income Benchmark.

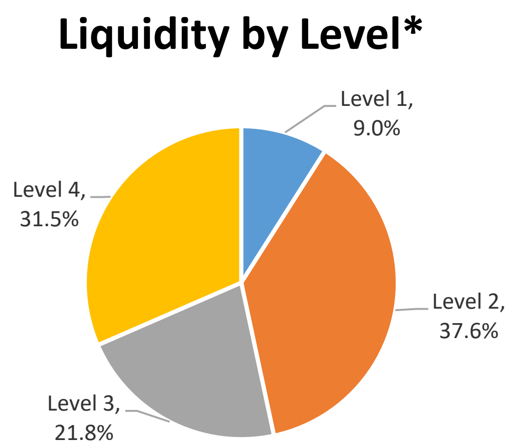
Dislocation Capital Deployed During COVID

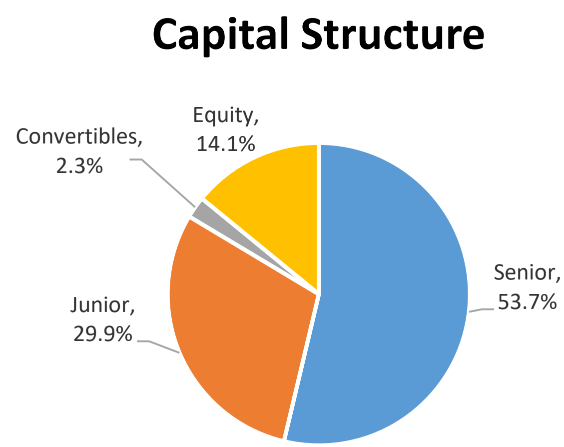
- Deployed $513MM beginning in late March/early April
- Took advantage of structural dislocation in credit markets
- Generated ~$67MM in gains

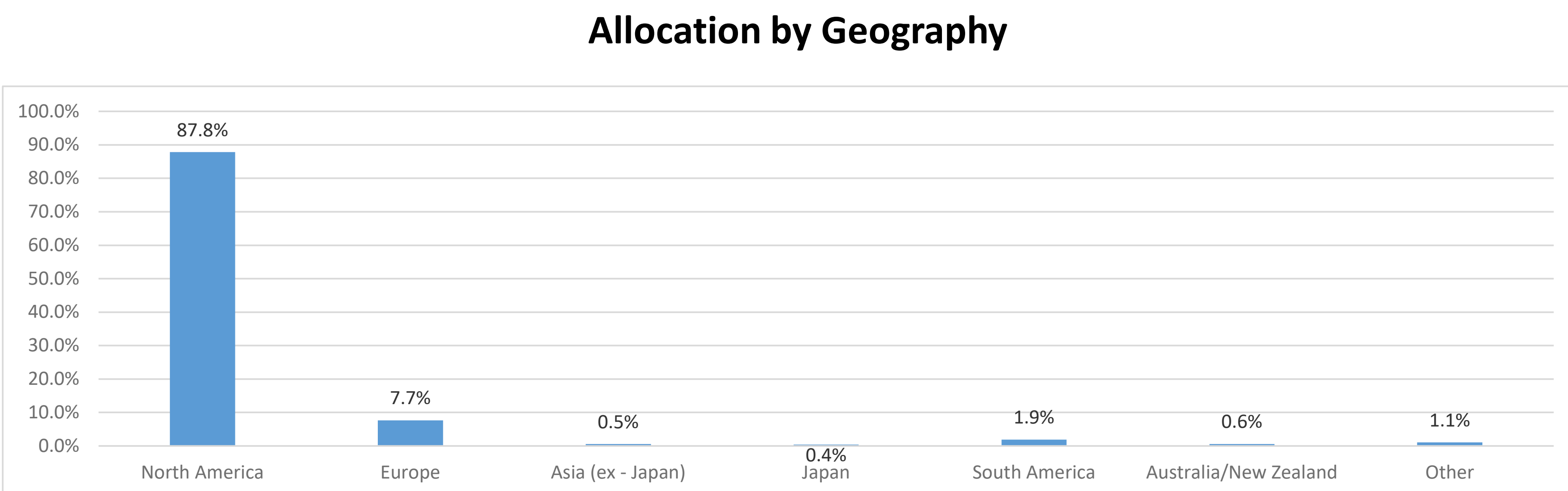
Date of First Draw	Manager	Commitment ($MM)	Amount Called ($MM)	Est Total Return (a/o 9/30)	Est IRR	Est Gain/Loss ($MM)
4/9/2020	Brigade	250	250	9.28%	19%	23
3/31/2020	HPS	300	190	9.70%	n/a	18
3/25/2020	Centerbridge Flex	245	74	26.70%	97%	25
	Total	**795**	**513**		**Total Profit**	**67**

Portfolio Characteristics



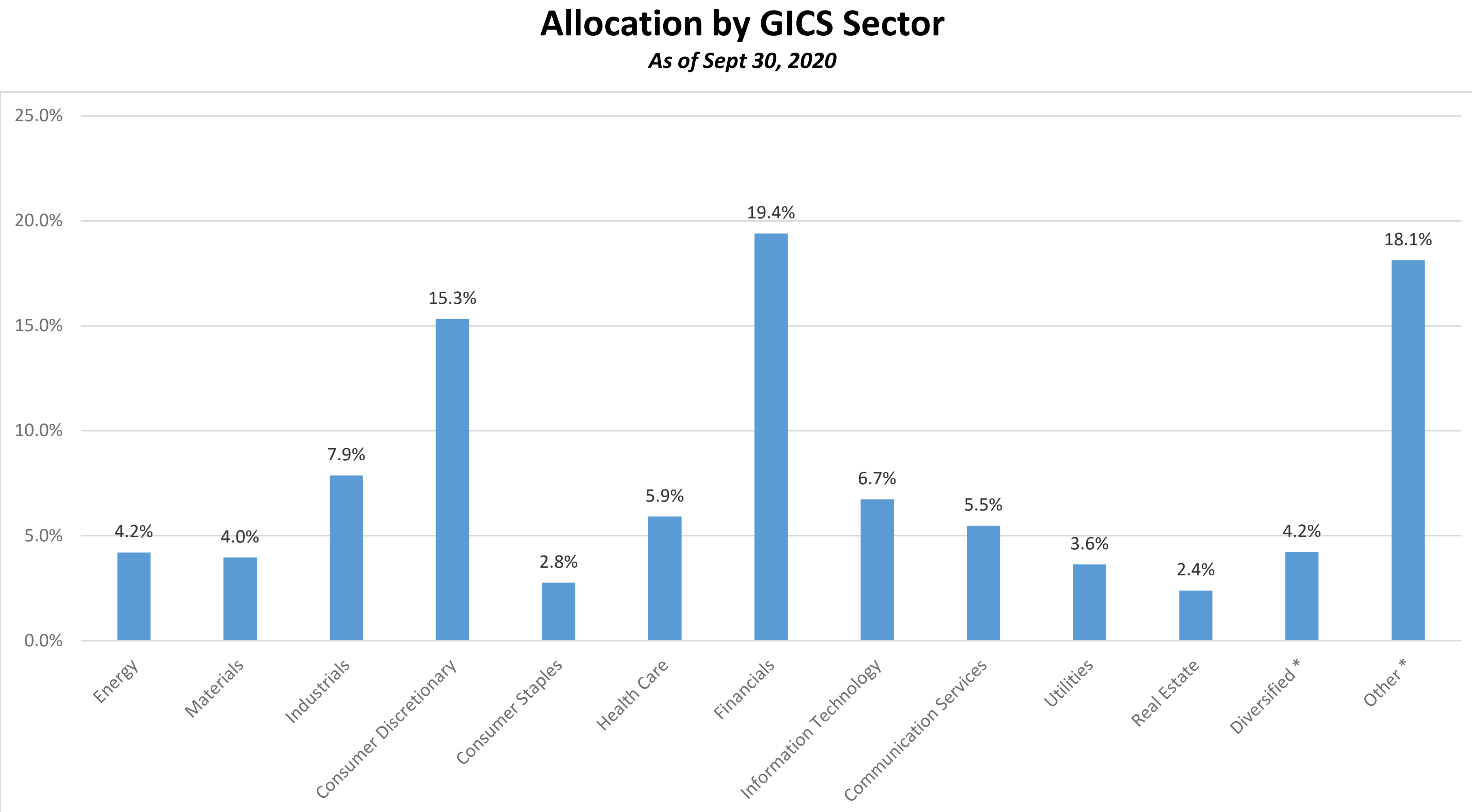






Note: Information is based on market value, as of Sept 30, 2020
*Level 1 Liquidity = T+3; Level 2 = T+3 to 12 Months; Level 3 = 12 to 24 Months; Level 4 = Greater than 24 Months

Portfolio Characteristics



*Holdings that cannot be classified into any one particular sector, as self-reported by the investment manager, may include CMBS, RMBS, ABS, or CLOs

Credit Market Update

Private Credit

- Allocations to senior, secured private loans helped during Spring
- Managers able to closely monitor loan performance and provide financing flexibility

Structured Credit

- RMBS and ABS markets have rebounded post-COVID.
- CMBS continue to be depressed.
- CLO debt and equity have rebounded but with more dispersion between quality

Bonds

- Higher quality HY spreads snapped back after central bank intervention
- CCC spreads lagged but have tightened in recent months

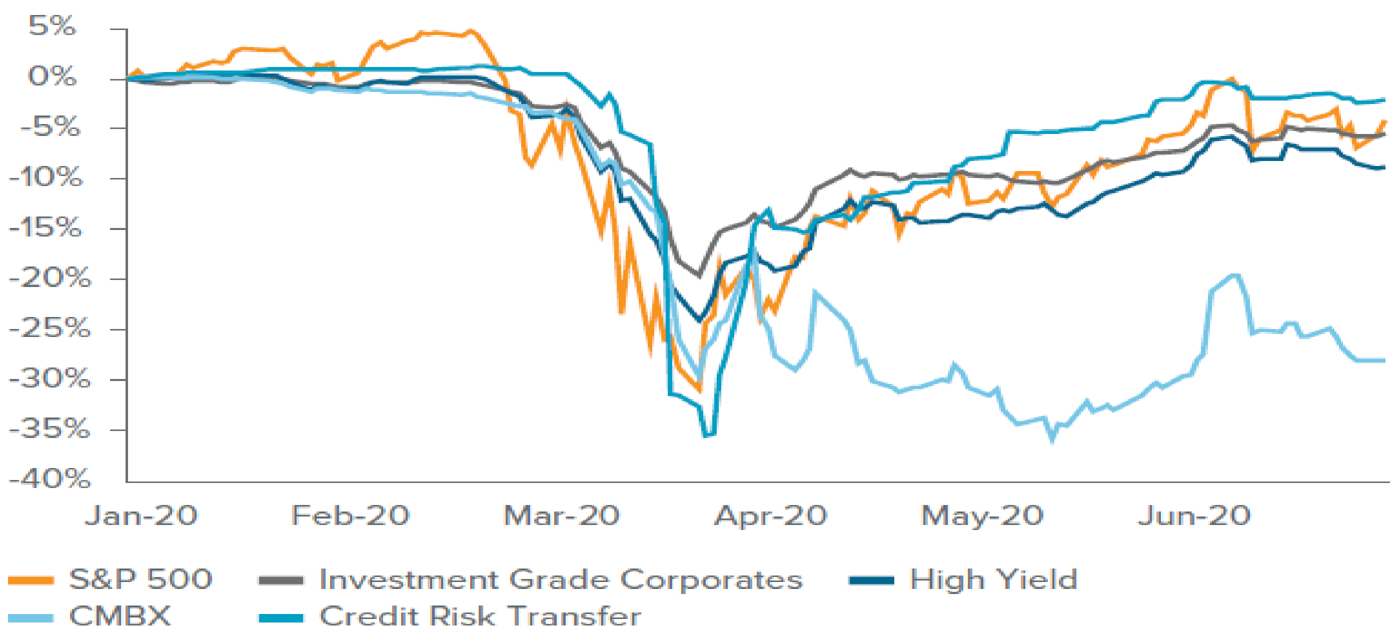
Loans

- Outflows from mutual funds and ETFs have slowed but continue

Structured Credit

- CMBS has not bounced back like the V-shaped recovery in corporate credit and equity markets
- Fed intervention targeted primarily corporate and muni markets
- Fiscal/monetary stimulus to securitized markets was small and targeted

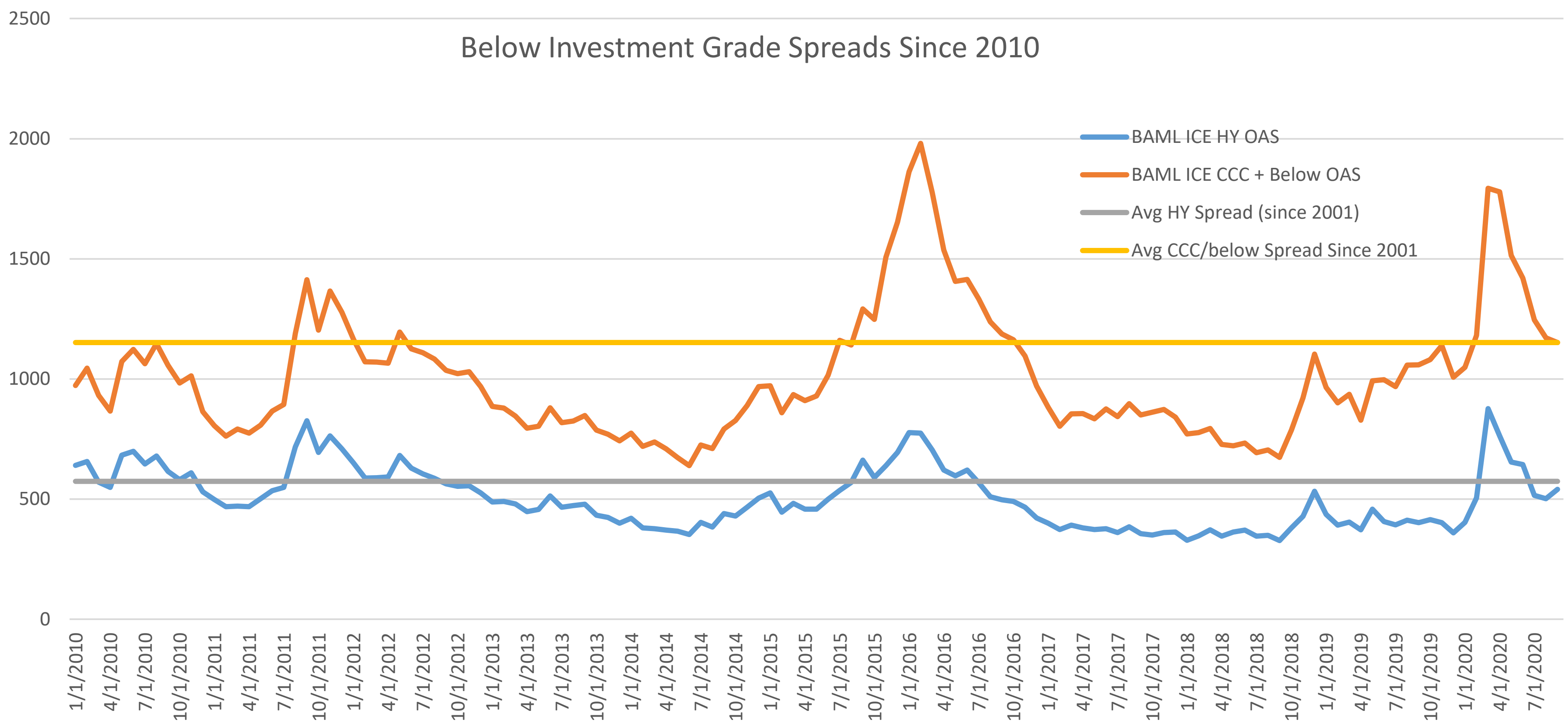
Cumulative Performance January 1, 2020 – June 30, 2020



Source: BloombergBarclays, Markit, Standard & Poor's, Vista and Voya Investment Management. As of June 30, 2020.

High Yield Credit Spreads

- CCCs have been slower to rebound to pre-COVID levels
- High and low quality HY spreads are back to long-term average

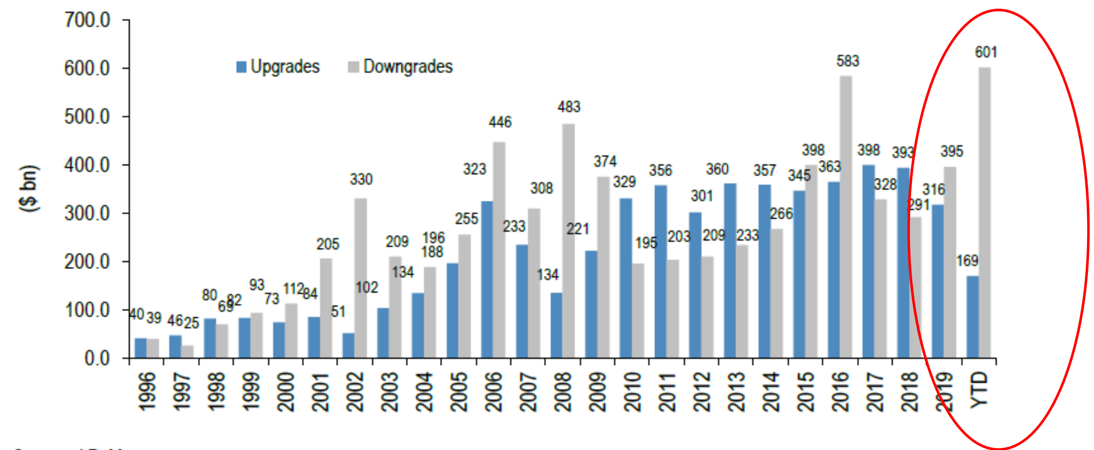


Source: BofA Merrill Lynch (accessed via Bloomberg).

Stress in Corporate Credit

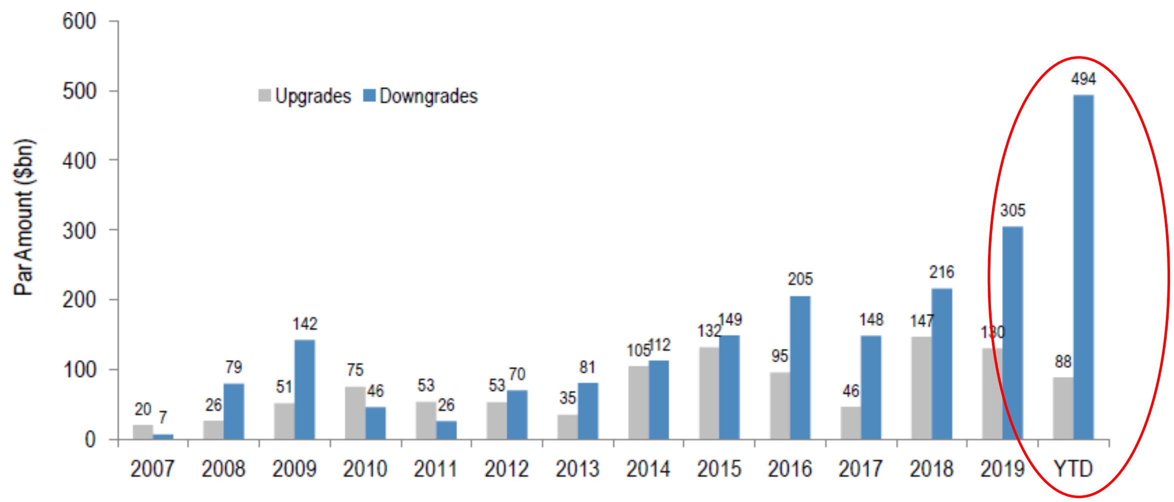
- Downgrades have outpaced upgrades YTD

High Yield



Source: J.P. Morgan.

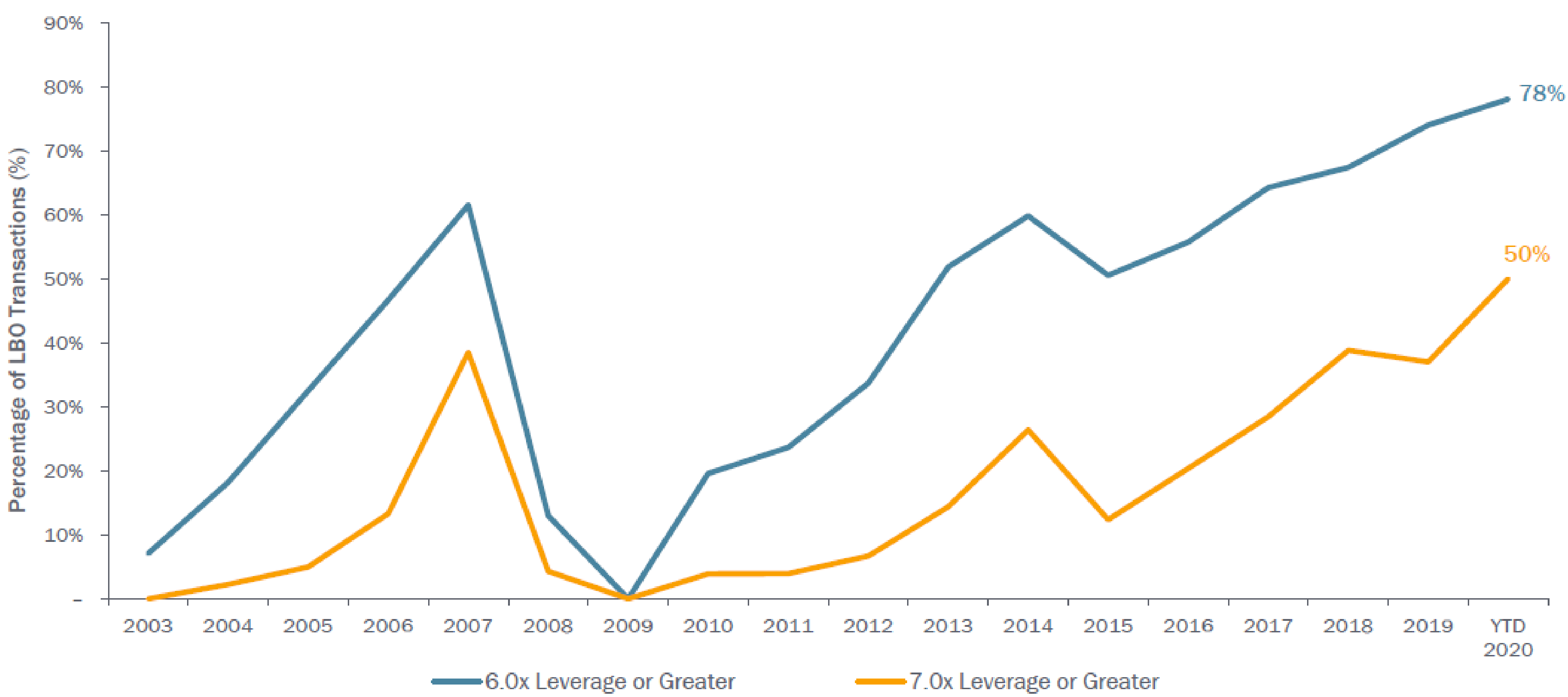
Loans



Source: J.P. Morgan.

Excessive Leverage Late in the Credit Cycle

- Defaults and restructurings driven by excess leverage
- 78% of LBO transactions with leverage greater than 6x
- 50% with leverage greater than 7x



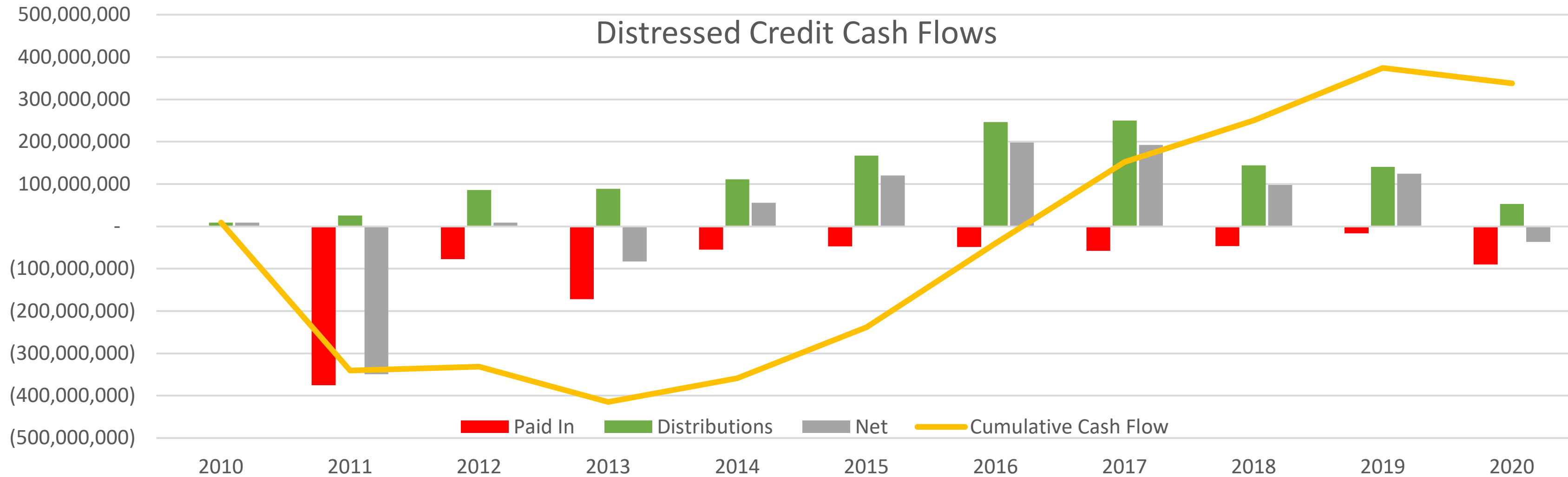
Source: Centerbridge and LPC, information as of Sept 30, 2020

Portfolio Priorities

1. Reposition to reflect more robust opportunity in:
    1. Stressed credit
    2. Restructurings
    3. Recapitalizations
    4. Rescue financing/flexible corporate lending
2. Reduce hedged credit strategies, particularly in commingled funds
3. Continue to focus on SMAs and custom opportunities with co-investments
4. Fully build dislocation mandate

Re-building Allocations to Stressed/Restructurings

- Commitments to distressed credit has been minimal over the past several years
- Distributions from existing allocations have outweighed paid-in capital



- Ample room to grow this allocation

Portfolio Component*	Target*	9/30/20	+/-	Maximum*
Traditional Corporate Credit	15%	19%	+4%	50%
Distressed Credit	25%	6%	-19%	50%
Hedged Fixed Income	45%	47%	+2%	75%
Special Situations	15%	29%	+14%	75%

Data as of Sept 30, 2020

Forward Looking Opportunity Set

More Attractive

- Restructurings, stressed credit, rescue financing
- Dislocation Mandate
  - Opportunistically buy corporate credit when market triggers are breached
- On a select basis:
  - Loans – higher quality, trading off due to technical issues
    - Larger issuers
    - High Quality
    - Senior/Secured
    - Strong fundamentals
  - Middle market lending

Less Attractive

- US High Yield beta
- Commercial RE debt (retail, office and hospitality)
- Regular way loans – “loan beta”
- Covenant-lite, broadly syndicated loans

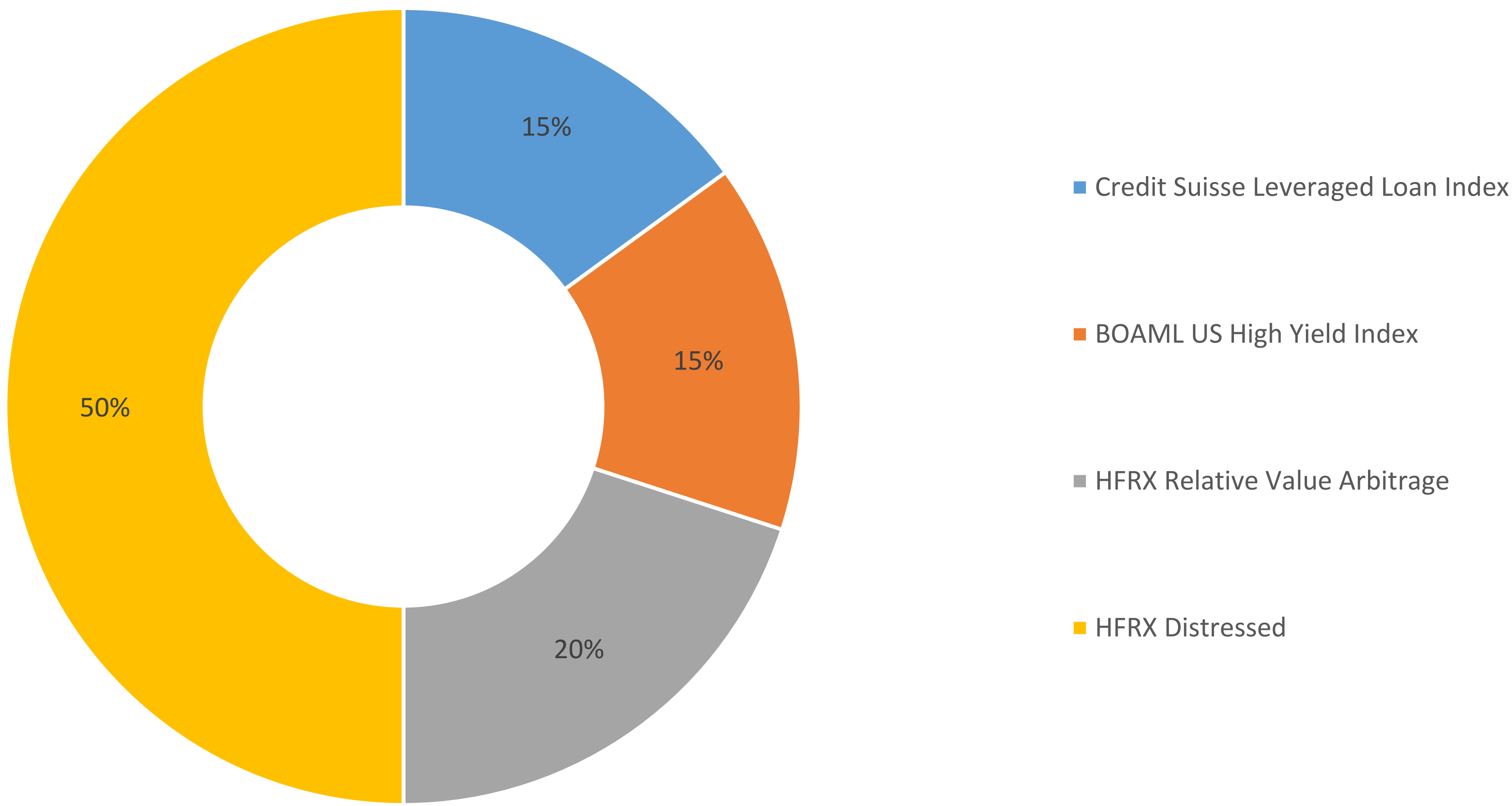
Appendix

Portfolio Components

Portfolio Component*	Target*	9/30/20	+/-	Maximum*
Traditional Corporate Credit	15%	19%	+4%	50%
Distressed Credit	25%	6%	-19%	50%
Hedged Fixed Income	45%	47%	+2%	75%
Special Situations	15%	29%	+14%	75%

Note: See slide 19 for details on the composition of the Opportunistic Fixed Income Benchmark.

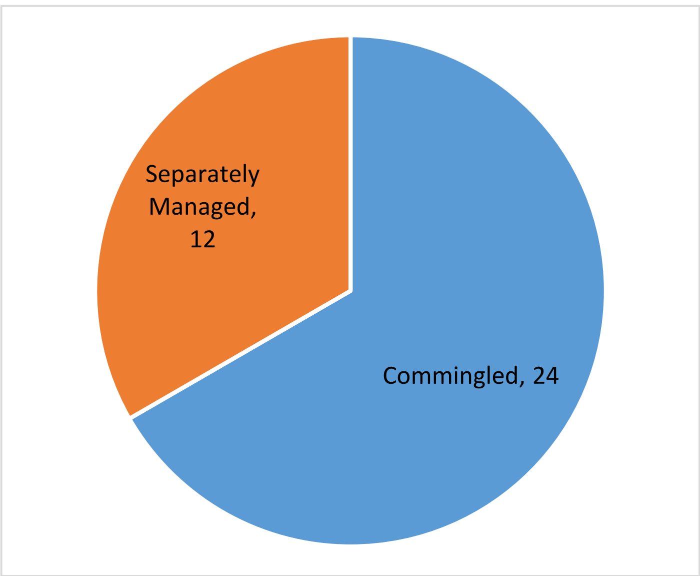
Portfolio Benchmark



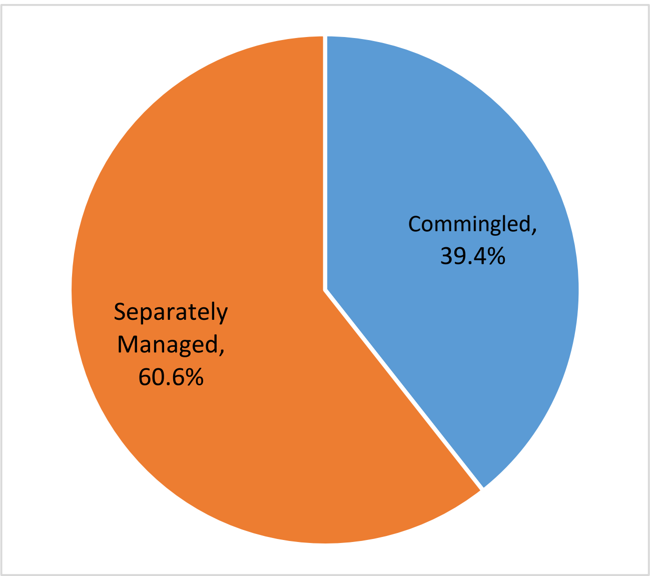
Note: The BOAML US High Yield Index is from BofA Merrill Lynch and is used with permission. See disclaimer on slide 27.

Portfolio Characteristics

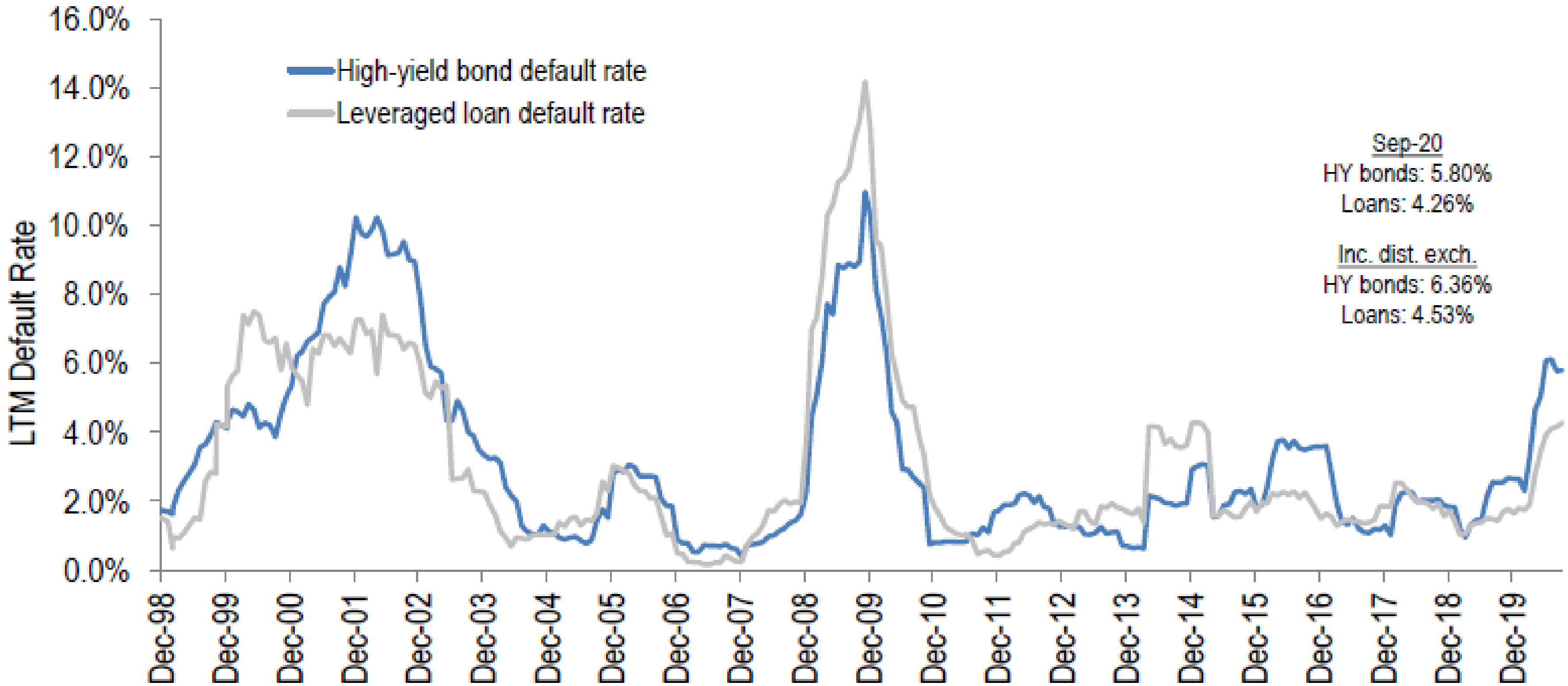
Account Type by Count



Account Type by Market Value



High Yield Bond and Loan Default Rates

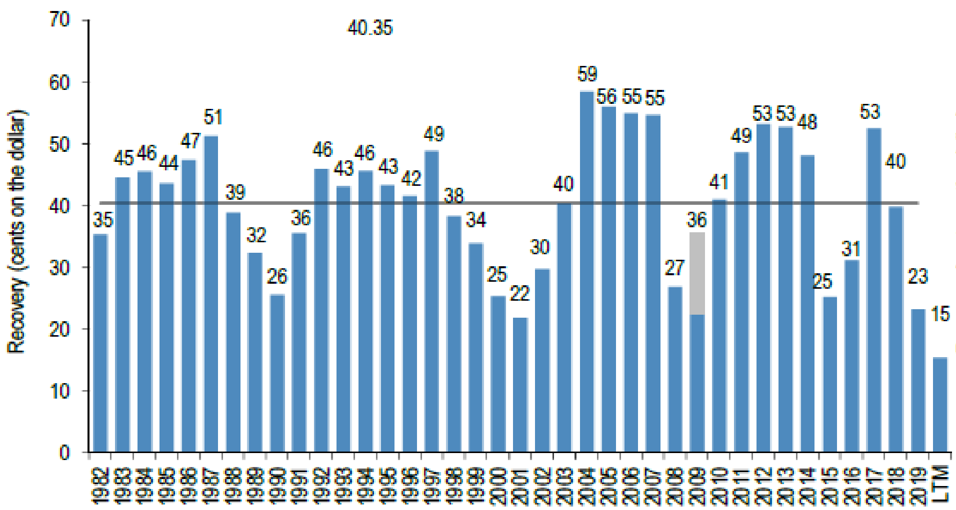


Source: J.P. Morgan.

Note: Data as of 9/30/2020.

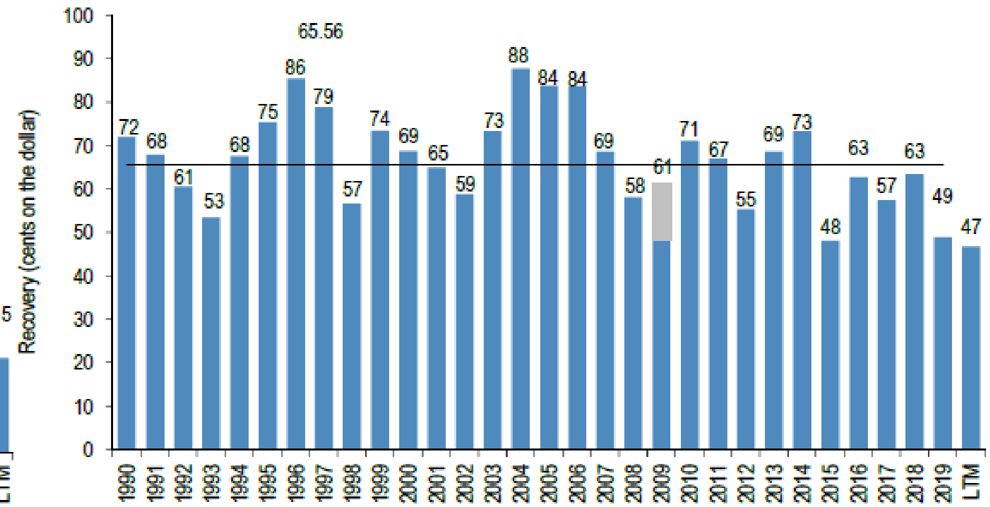
High Yield Bond and Loan Recovery Rates

Bond issuer-weighted recovery rates



Note: Recoveries in 2009 were 22.4 based on prices 30-days post default and were 35.7 based on year-end prices.
Source: Moody's Investors Services; J.P. Morgan

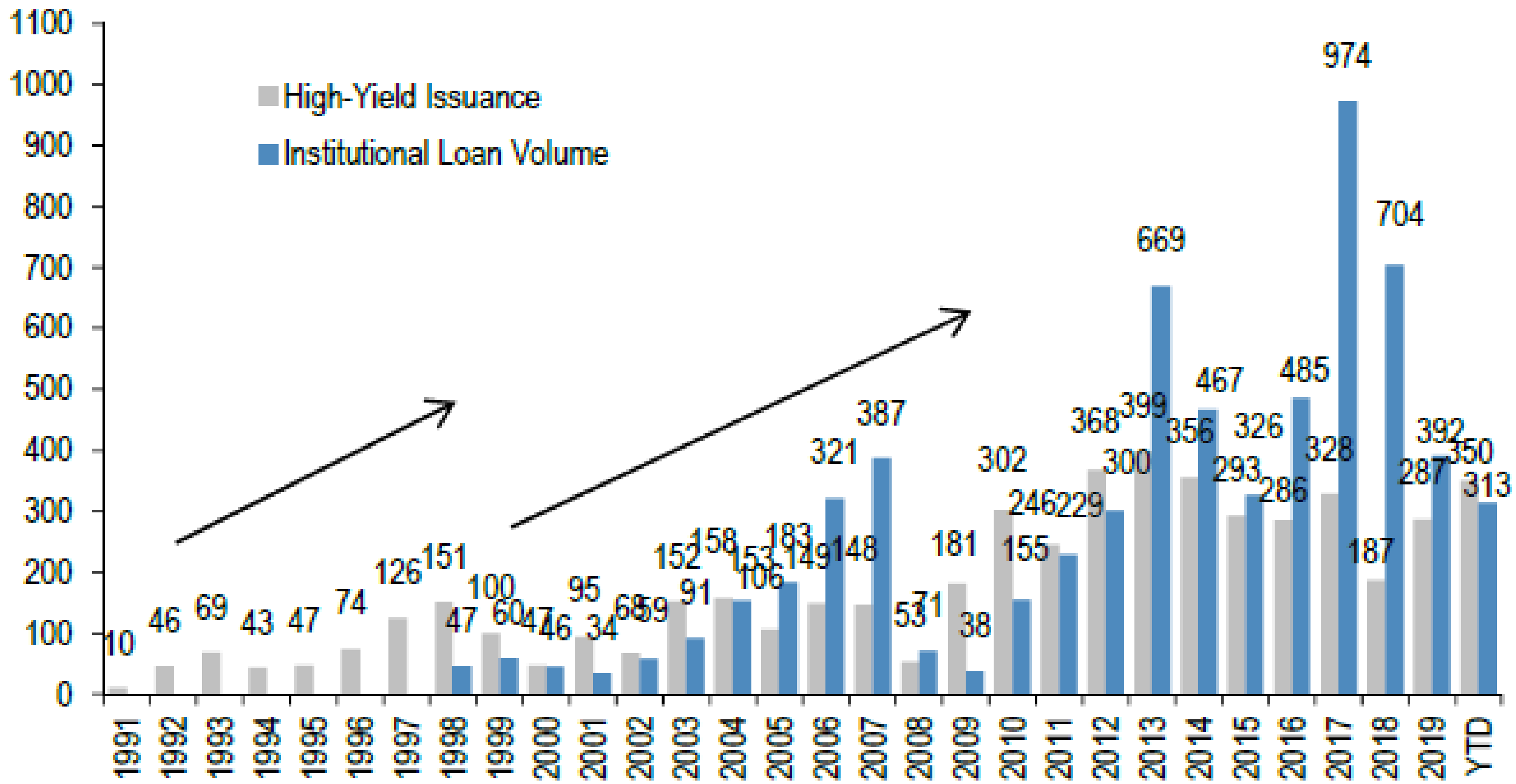
First-lien leveraged loan issuer-weighted recovery rates



Note: Recoveries in 2009 were 48.3 based on prices 30-days post default and were 61.4 based on year-end prices.
Sources: Moody's Investors Service; J.P. Morgan; Markit

Note: Data as of 9/30/2020.

High Yield Bond and Loan Issuance

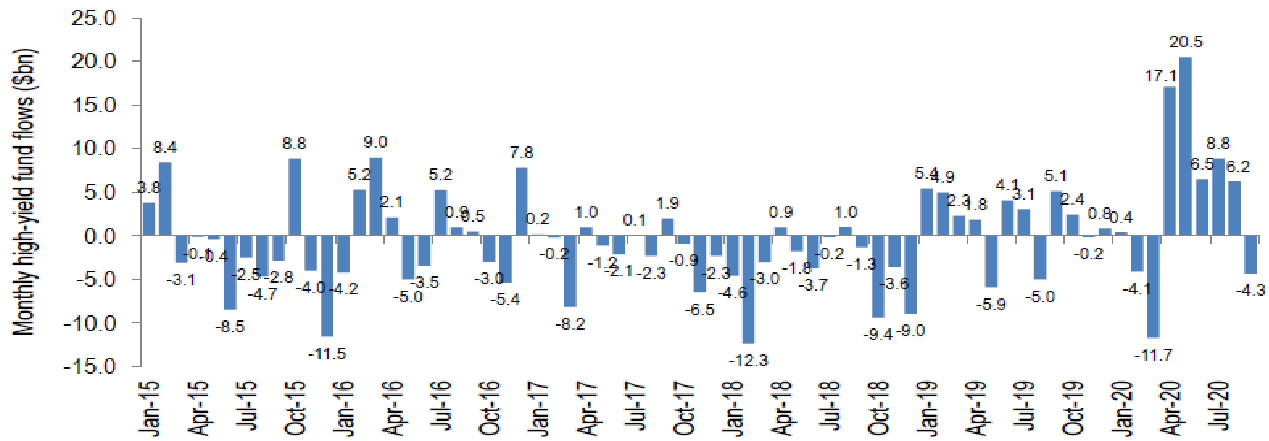


Source: J.P. Morgan; S&P LCD

Note: Data as of 9/30/2020. Values are in billions of U.S. Dollars.

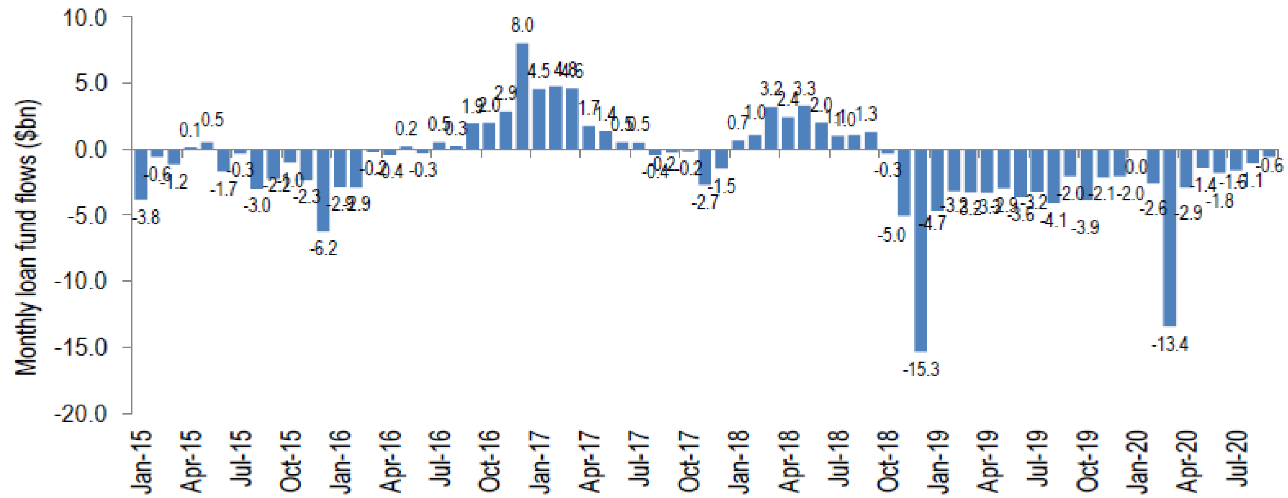
High Yield Bond and Loan Fund Flows

High Yield



Source: Lipper FMI.

Loans



Source: Lipper FMI.

Notes:

All data presented are based on currently available information at time of publication and may be revised subsequently.

The Opportunistic Fixed Income Benchmark is comprised of 50% HFRX Distressed Securities Index; 20% HFRX Relative Value Index; 15% Credit Suisse Leveraged Loan Index; and 15% BOAML US High Yield Index. The BOAML US High Yield Index is from BofA Merrill Lynch and is used with permission. See disclaimer on slide 28.

The Opportunistic Fixed Income asset class (N.C.G.S. § 147-69.2(b)(6c)) was created by the General Assembly in June 2009. It included some investments that were previously authorized under other provisions of G.S. § 147-69.2.

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