Atlantic Yards | Atlanta, GA

Real Estate Strategy Semi-Annual Report (Open Session)

Prepared for California State Teachers' Retirement System

As of Q3 2021

RCLCO FUND ADVISORS

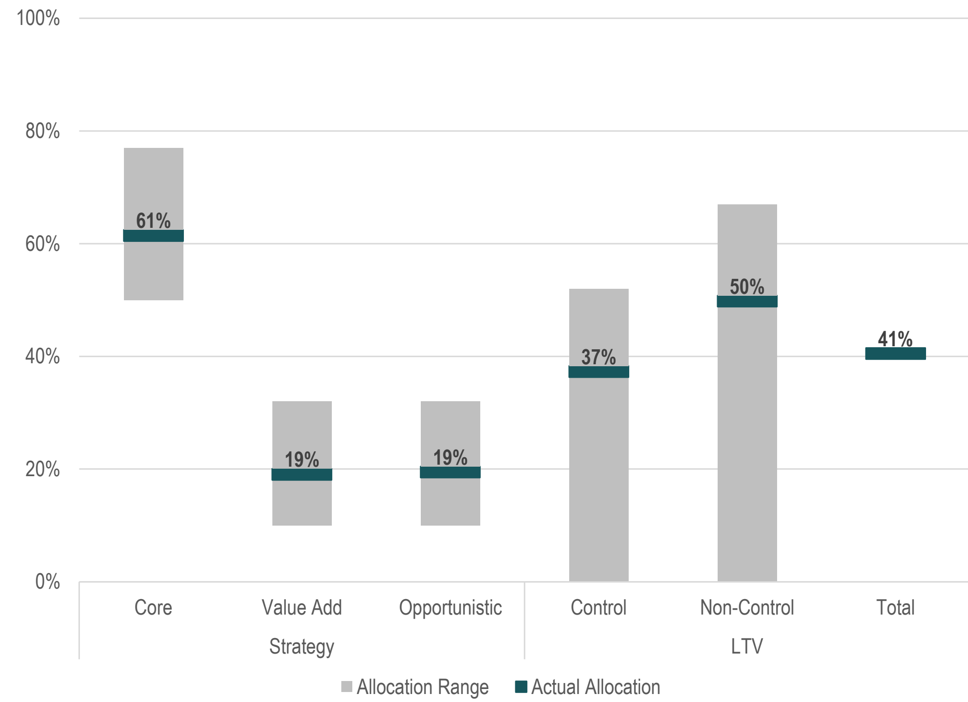
Funding Status and Compliance

As of Q3 2021

Portfolio Allocation

	$ Billions	% of Total Portfolio
Total Portfolio NAV	$327.7	N/A
Target Real Estate Allocation	$45.9	14.0%
Actual Real Estate NAV	**$42.0**	**12.8%**

Compliance - Strategy & Leverage[1]



[1] Percentages do not account for the portion of Legacy assets.
Source: CalSTRS; State Street; NCREIF

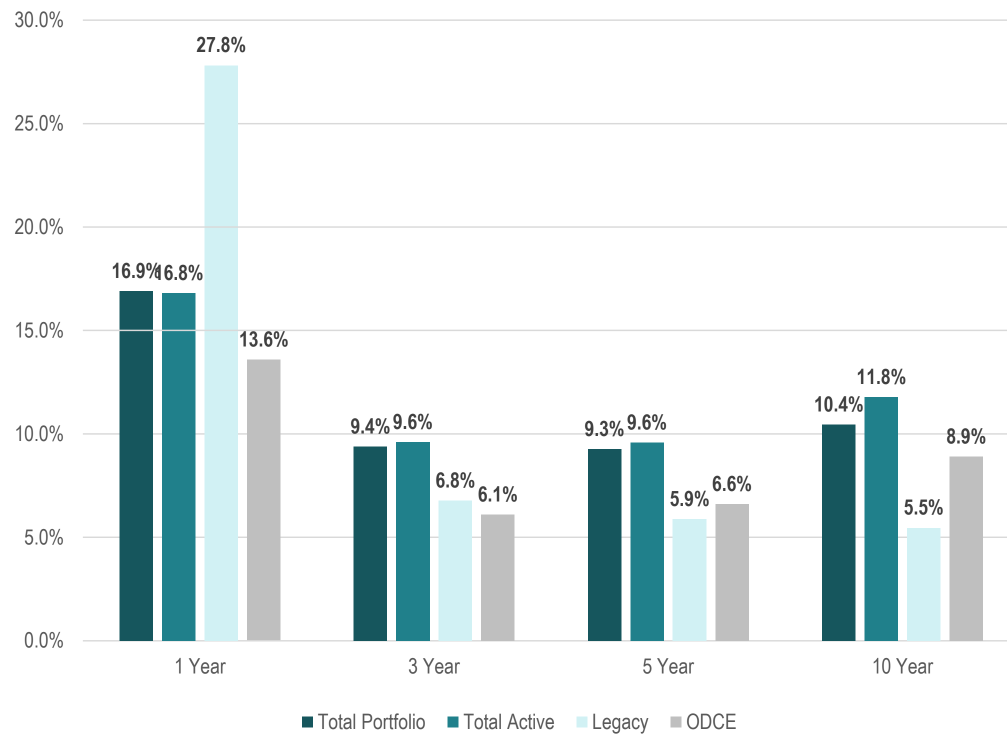
Returns

As of Q3 2021

Portfolio Performance[1]
Net Time Weighted Returns

	Including Legacy				Excluding Legacy			
	1 Yr	**3 Yr**	**5 Yr**	**10 Yr**	**1 Yr**	**3 Yr**	**5 Yr**	**10 Yr**
Core	15.0%	8.5%	8.6%	10.5%	15.0%	8.5%	8.6%	10.5%
Value Add	18.5%	9.9%	10.5%	13.8%	18.5%	9.9%	10.5%	14.3%
Opportunistic	21.7%	11.7%	10.3%	9.1%	21.8%	13.8%	12.7%	13.1%
Total	**16.9%**	**9.4%**	**9.3%**	**10.4%**	**16.8%**	**9.6%**	**9.6%**	**11.8%**
Target Return (ODCE)	**13.6%**	**6.1%**	**6.6%**	**8.9%**	**13.6%**	**6.1%**	**6.6%**	**8.9%**

Historical Net Time-Weighted Returns

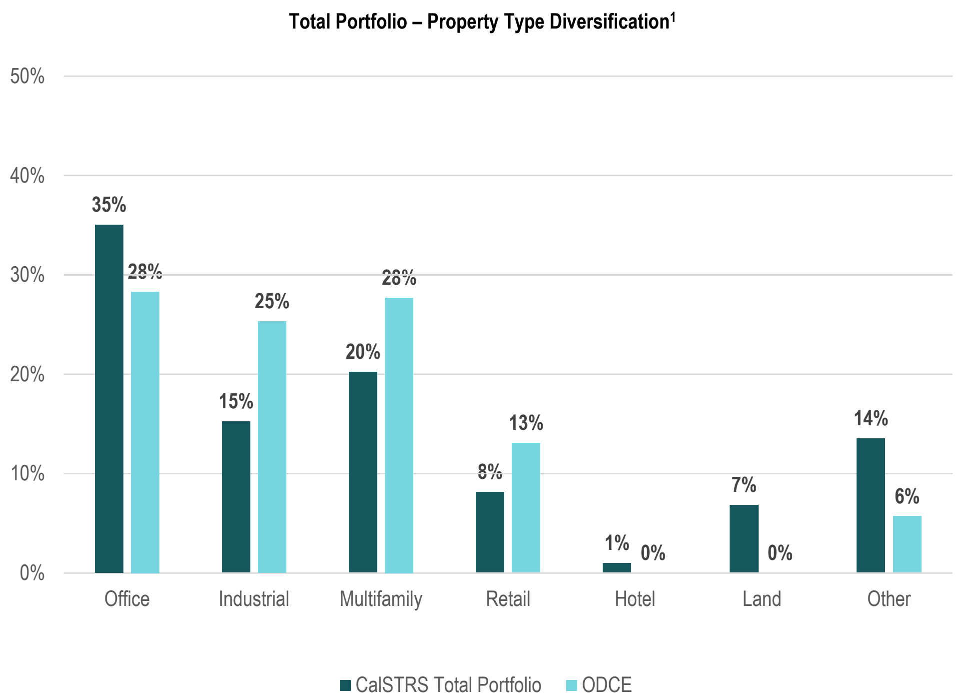


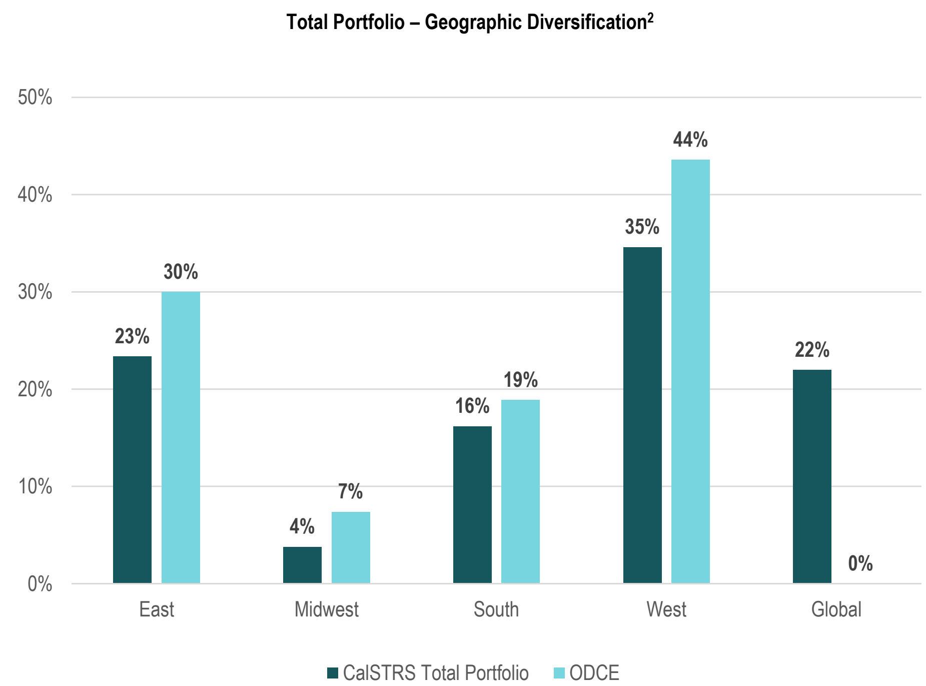
[1]*Green cells denote outperformance of the target return metric. The Core portfolio has a net target return benchmarked to the ODCE, while the Value Add and Opportunistic portfolios have net target returns of 50 basis points and 300 basis points over the ODCE, respectively.*
Source: State Street, NCREIF

RCLCO FUND ADVISORS

Total Portfolio Diversification

Property Type and Geographic Diversification vs. ODCE





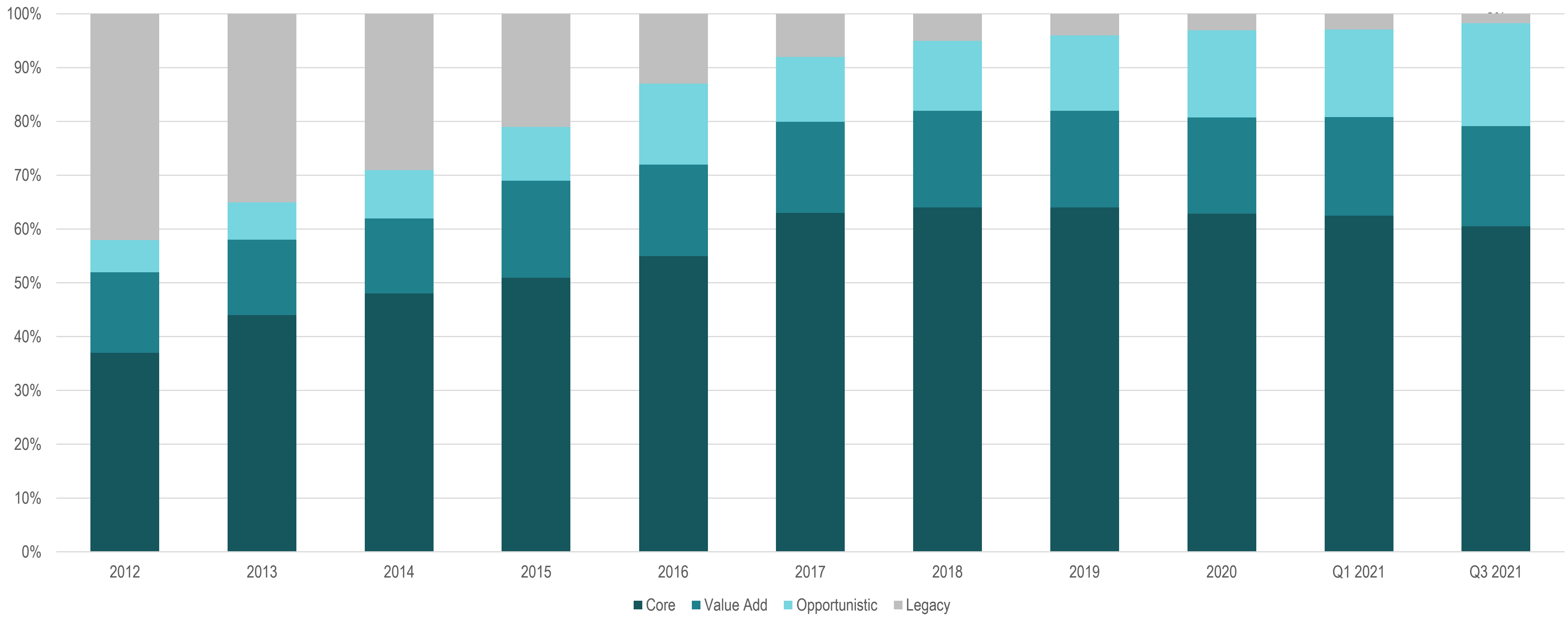
Note: ODCE and CalSTRS' property type and geography weights based on gross real estate value.

[1]"Other" property type category is made up of the following property types in descending order by percentage: Mixed Use, Other, Manufactured, Debt, Senior Living, Diversified, Various, Self Storage, Hospitality, Private Equity Real Estate, Healthcare, Entertainment, Securities, Public REIT, Parking, and Private REIT..

[2] Global includes International and U.S. diversified.

Source: State Street

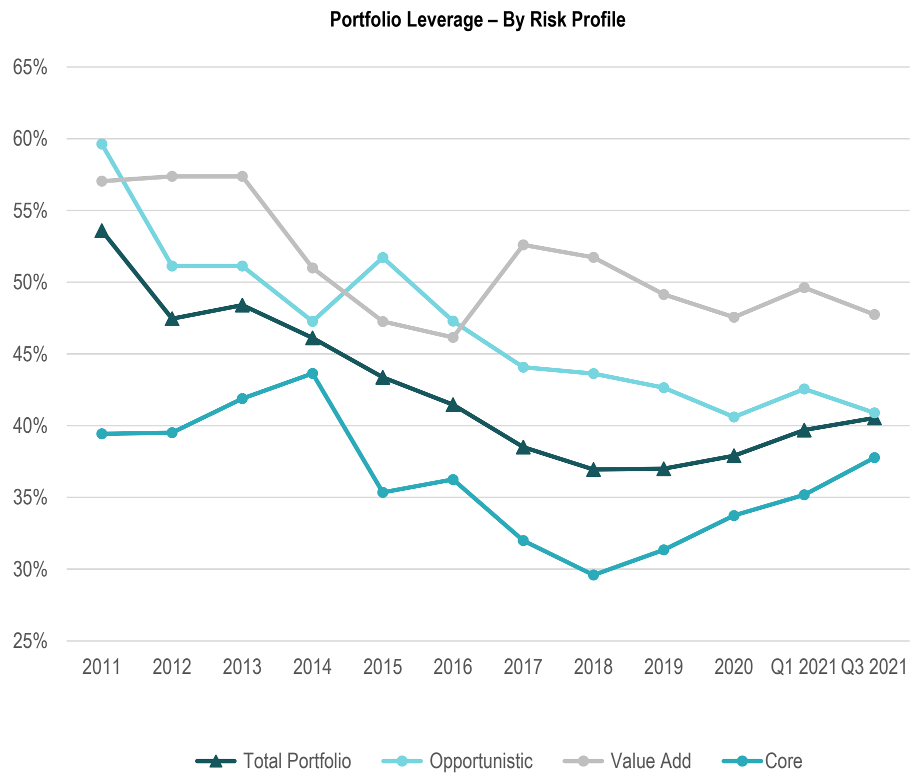
Portfolio Allocation by Risk Profile

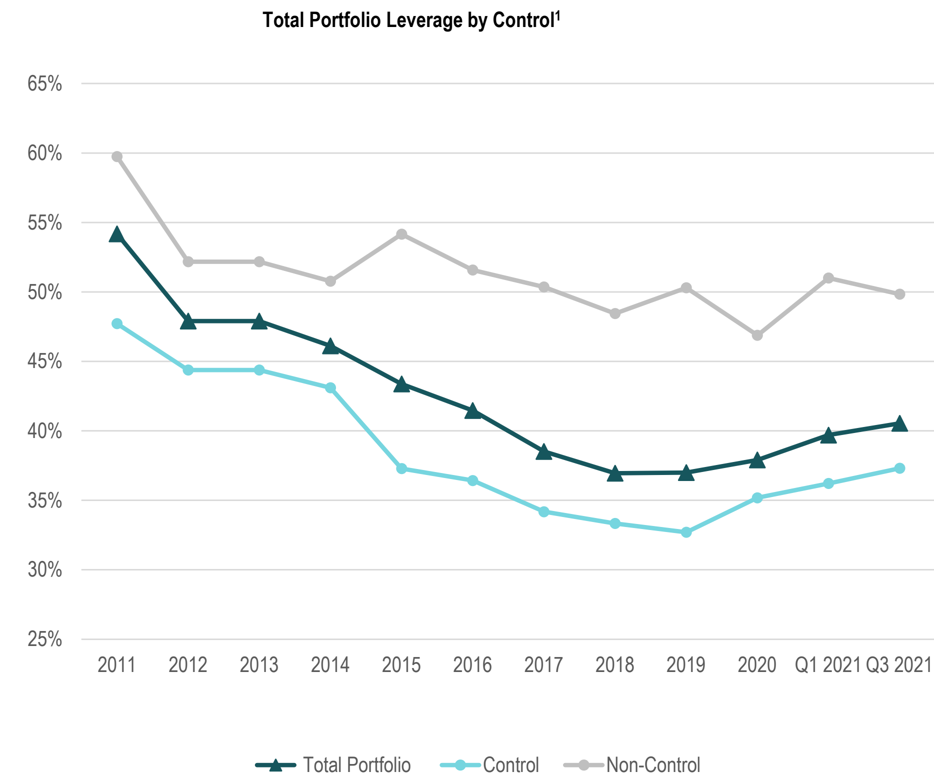


Weights based on percentage of CalSTRS' net asset value. REITs included in Core
Source: CalSTRS, State Street

Total Portfolio Leverage

By Risk Profile and Control





[1] *Control investments are those which CalSTRS maintains control over acquisitions, dispositions, and financing, or has high liquidity in normal market conditions.*

Source: State Street

U.S. Real Estate Summary

As of February 2022

- **US GDP will likely grow by ~3.5% in 2022** – a solid result that will support continued demand for most types of real estate. Growth will slow in subsequent years, but a recession is unlikely in the mid-term.
- **Job growth will moderate through 2024 as the growth of potential employees slows.** Job openings are at record levels, indicating a mismatch between employer needs and employee skills.
- The **10 Year US Treasury is expected to rise gradually** over the several years as the Fed raises base rates in coming months but remain below long-term averages. Real estate borrowing spreads should stay low for next several years as lenders vie for business.
- Most real estate property types should gradually improve over next 2-3 years:
  - **Multifamily –** job growth and high housing prices will keep multifamily demand high, although supply is ramping up.
  - **Industrial –** demand should stay exceptionally strong as e-commerce continues to expand and build out its supply chain.
  - **Office** – Return to office will be gradual once Omicron fades, as companies experiment with hybrid use. Rents will be soft in the short term. Risks are skewed to downside.
  - **Retail** – Overall retail supply will shrink, creating some re-use opportunities. Grocery anchored centers will generally perform despite some small store turnover..
  - The **single-family (for-sale and for-rent) sector will excel as demographics drives demand**, with prices and rents rising rapidly.
- Real estate **capital markets are very healthy**, with abundant equity dry powder and debt availability. Record transaction volume in Q4 and 2021. Cap rates for apartments and warehouse to stay low and possibly decline.

Property Markets Outlook

As Q4 2021

Multifamily	**Office**	**Retail**	**Industrial**
Multifamily performance rocketed in Q4 as vacancies and new construction fell and rents grew by 9% YOY. Vacancy in the five largest markets – New York, Dallas, Houston, Washington and Atlanta, all fell sharply in 2H21. RFA expects mid-term operating and investment performance to be strong. Higher employment, a partial return to offices and demographic trends, should increase renter demand in the coming years.	Office fundamentals continued to deteriorate in Q4 with increasing vacancies, decreasing rents, and negative absorption. These trends are marginally more acute in class A properties, but also characterize class B. There were some bright spots in the office sector, as office space showings increased and YTD absorption has been positive for new buildings (post 2010). However, the trend towards greater employee flexibility could be a headwind for the sector.	Grocer-anchored retail was solid in the 4rd quarter, as vacancy rates fell and absorption and rent growth increased. For retail overall, NCREIF reports that NOI has risen by 18.7% over the past year but is still 8% lower than the pre-COVID level, with super-regional mall NOI down by 16.5%. As distribution of goods continues to shift to e-commerce, retail centers will continue to incorporate experiential tenants.	Industrial remains the strongest major property type in Q4 with decreasing vacancies and rents growing by 7.0% YOY. Absorption is outpacing new supply, setting the stage for near term above-average rent growth. Industrial will continue to outperform other asset classes through 2022 in part due to the shift towards e-commerce, accelerated by COVID-19.

Disclaimers

Critical Assumptions

Our analysis depends on the correctness and completeness of data available as of the date of this memo. The future performance of the global, national, and local economy and real estate market, and other factors similarly outside our control may vary. Given the fluid and dynamic nature of the economy and real estate markets, as well as the uncertainty surrounding particularly the near-term future, it is critical to monitor the economy and markets continuously. Stable and moderate growth patterns are historically not sustainable over extended periods of time; the economy is cyclical; and real estate markets are typically highly sensitive to business cycles. Further, it is very difficult to predict when an economic and real estate upturn will end.

Our analysis cannot predict unusual economic shocks on the national and/or local economy, potential benefits from major "booms" that may occur, or the residual impact on the real estate market and the competitive environment of such a shock or boom. Also, it is important to note that it is difficult to predict changing consumer and market psychology.

As such, we recommend the close monitoring of the economy and the marketplace, and updating this analysis as appropriate.

General Limiting Conditions

Reasonable efforts have been made to ensure that the data contained in this study reflect accurate and timely information and are believed to be reliable and comprehensive. This study is based on estimates, assumptions, and other information developed by RCLCO Fund Advisors from its independent research effort and general knowledge of the industry. No responsibility is assumed for inaccuracies in reporting by any data source used in preparing or presenting this study. This memo is based on information that to our knowledge was current as of the date of this memo, and RCLCO Fund Advisors has not undertaken any update of its research effort since such date.

T3 West Midtown | Atlanta, GA

RFA
RCLCO FUND ADVISORS