STARWOOD REAL ESTATE INCOME TRUST, INC. SUPPLEMENT NO. 5 DATED JUNE 15, 2023 TO THE PROSPECTUS DATED APRIL 7, 2023

This prospectus supplement ("Supplement") is part of and should be read in conjunction with the prospectus of Starwood Real Estate Income Trust, Inc., dated April 7, 2023 (as supplemented to date, the "Prospectus"). Unless otherwise defined herein, capitalized terms used in this Supplement shall have the same meanings as in the Prospectus. References herein to the "Company," "we," "us," or "our" refer to Starwood Real Estate Income Trust, Inc. and its subsidiaries unless the context specifically requires otherwise.

The purposes of this Supplement are as follows:

- to provide an update on our portfolio;
- to disclose the transaction price for each class of our common stock as of July 1, 2023;
- to disclose the calculation of our May 31, 2023 NAV per share for each class of our common stock;
- to provide an update on our share repurchase requests; and
- to provide an update on the status of our current public offering (the "Offering").

Portfolio Highlights

Portfolio Update

We believe our portfolio remains well-positioned for the long-term across three key areas driving performance: asset selection, market selection and debt structuring.

1. Asset Selection

Approximately 93% of our portfolio is invested in asset classes we believe are well-positioned for today's environment. This includes 82% in rental housing and industrial, two of the best performing asset classes today.

In May, our rental housing portfolio was 95% occupied and experienced rent growth across market rate multifamily and single-family rental above 5% over expiring leases (remaining consistent over the last 30, 60 and 90 day trends). In addition, HUD released the 2023 allowable rents for our affordable housing assets (which represent one-fourth of our rental housing portfolio) and announced an 8.3% allowable increase. Across our rental housing portfolio, affordability remains an important driver of our performance. With an average rent of approximately \$1,470 per month, our properties remain 45% more affordable than the median monthly U.S. mortgage payment of \$2,651.

Our industrial portfolio held strong at 99% occupancy. Over the last five months, as our industrial leases have expired, rent increases have continued to average 49%. Floating-rate real estate loans represent another 5% of our assets under management and are currently yielding 12% due to the steep rise in benchmark rates. Importantly, we continue to have limited exposure to office and retail.

2. Market Selection

Approximately 75% of our portfolio is allocated to the Southeast and Southwest. Our two biggest concentrations are in Florida and Texas - nearly 30% of our portfolio is in these two states. Importantly, we have been more overweight in the Southeast, with 59% allocated to these markets, and 16% allocated to the Southwest. This remains important over the near-term as we have seen a wide divergence in performance, particularly in rental housing, between the Southeast and Southwest. We also have 10% of our portfolio allocated to international markets across Europe and Australia, which provides portfolio diversification and solid underlying fundamentals.

SREIT-SUP5-0623

3. Debt Structuring

99% of our secured property debt is effectively fixed at approximately 3.4% and has five years of duration remaining. In addition, we have minimal debt maturities over the next three years with 1% maturing in 2023, 1% maturing in 2024, and 9% maturing in 2025. We believe that this will help us navigate through the current market turbulence.

Liquidity

The redemption limitations, combined with our liquidity position, enhance our ability to properly navigate through a challenging market environment. As of the end of May 2023, we had access to approximately \$1.8 billion of liquidity or 14% of NAV in the form of cash, marketable securities and lines of credit. In an effort to generate incremental liquidity, we are thoughtfully assessing and executing on strategic asset sales with the ultimate goal to improve our overall portfolio composition and performance, as well as further strengthen our balance sheet.

July 1, 2023 Transaction Price

The transaction price for each share class of our common stock for subscriptions accepted as of July 1, 2023 (and repurchases as of June 30, 2023) is as follows:

	Transaction (per shar	
Class S	\$	25.52
Class T	\$	25.52
Class D	\$	25.08
Class I	\$	25.33

The July 1, 2023 transaction price for each of our share classes is equal to such class's NAV per share as of May 31, 2023. A detailed presentation of the NAV per share is set forth below. The purchase price of our common stock for each share class equals the transaction price of such class, plus applicable upfront selling commissions and dealer manager fees.

May 31, 2023 NAV Per Share

NAV per share is calculated in accordance with the valuation guidelines that have been approved by our board of directors. Our NAV per share, which is updated as of the last calendar day of each month, is posted on our website at www.starwoodNAV.reit. Please refer to "Net Asset Value Calculation and Valuation Guidelines" in the Prospectus for information on how our NAV is determined. The Advisor is ultimately responsible for determining our NAV. All of our property investments are appraised annually by third party appraisal firms in accordance with our valuation guidelines and such appraisals are reviewed by our independent valuation advisor. We have included a breakdown of the components of total NAV and NAV per share as of May 31, 2023 along with the immediately preceding month.

Our total NAV presented in the following tables includes the NAV of our Class S, Class T, Class D, and Class I common shares, as well as partnership interests of the Operating Partnership held by parties other than the Company. The following table provides a breakdown of the major components of our NAV as of May 31, 2023 (\$ and shares/units in thousands):

Components of NAV	May 31, 2023	
Investments in real estate	\$	25,218,660
Investments in real estate debt		1,586,448
Cash and cash equivalents		733,544
Restricted cash		287,876
Other assets		1,012,288
Debt obligations		(14,100,914)
Secured financings on investments in real estate debt		(735,520)
Subscriptions received in advance		(18,534)
Other liabilities		(1,243,353)
Performance participation accrual		
Management fee payable		(13,225)
Accrued stockholder servicing fees (1)		(4,243)
Non-controlling interests in consolidated joint ventures		(94,528)
Net asset value	\$	12,628,499
Number of outstanding shares/units		497,230

Stockholder servicing fees only apply to Class S, Class T and Class D shares. For purposes of NAV we recognize the stockholder servicing fee as a reduction of NAV on a monthly basis. Under accounting principles generally accepted in the United States of America ("GAAP"), we accrue the full cost of the stockholder servicing fee as an offering cost at the time we sell Class S, Class T and Class D shares. As of May 31, 2023, we have accrued under GAAP \$373.7 million of stockholder servicing fees payable to the Dealer Manager related to the Class S, Class T and Class D shares sold.

The following table provides a breakdown of our total NAV and NAV per share, by share class, as of May 31, 2023 (\$ and shares/units in thousands, except per share/unit data):

					(nirg-party Operating	
NAV Per Share	Class S Shares	Class T Shares	Class D Shares	Class I Shares	Pa	artnership Units ⁽¹⁾	Total
Net asset value	\$ 5,516,796	\$ 145,090	\$ 738,914	\$ 5,718,516	\$	509,183	\$ 12,628,499
Number of outstanding shares/units	216,212	5,684	29,466	225,766		20,102	497,230
NAV Per Share/Unit as of May 31, 2023	\$ 25.52	\$ 25.52	\$ 25.08	\$ 25.33	\$	25.33	

⁽¹⁾ Includes the Operating Partnership units held by the Special Limited Partner and other third parties.

Set forth below are the weighted averages of the key assumptions in the discounted cash flow methodology used in the May 31, 2023 valuations, based on property types. Once we own more than one self-storage and one extended stay investment, we will include the key assumptions for the property types.

		Exit
	Discount	Capitalization
Property Type	Rate	Rate
Multifamily	6.5%	5.3%
Single-Family Rental	6.5%	5.4%
Industrial	6.6%	5.4%
Office	7.6%	6.2%
Other	8.3%	6.7%

These assumptions are determined by the Advisor (except for investments valued by a third party appraisal firm), and reviewed by our independent valuation advisor. A change in these assumptions would impact the calculation of the value of our property investments. For example, assuming all other factors remain unchanged, the changes listed below would result in the following effects on our investment values:

		Multifamily	Single-Family	Industrial	Office	Other
	Hypothetical	Investment	Rental Investment	Investment	Investment	Investment
Input	Change	Values	Values	Values	Values	Values
Discount Rate	0.25% decrease	+2.0%	+2.0%	+2.0%	+1.9%	+1.8%
(weighted average)	0.25% increase	(1.9)%	(1.9)%	(1.9)%	(1.9)%	(1.8)%
Exit Capitalization Rate	0.25% decrease	+3.1%	+3.0%	+3.2%	+2.7%	+2.3%
(weighted average)	0.25% increase	(2.9)%	(2.8)%	(2.9)%	(2.6)%	(2.1)%

The following table provides a breakdown of the major components of our NAV as of April 30, 2023 (\$ and shares/units in thousands):

Components of NAV	April 30, 2023
Investments in real estate	\$ 25,406,759
Investments in real estate debt	1,610,326
Cash and cash equivalents	311,749
Restricted cash	298,486
Other assets	964,304
Debt obligations	(14,216,328)
Secured financings on investments in real estate debt	(749,361)
Subscriptions received in advance	(21,608)
Other liabilities	(651,004)
Performance participation accrual	
Management fee payable	(13,448)
Accrued stockholder servicing fees (1)	(4,203)
Non-controlling interests in consolidated joint ventures	(96,176)
Net asset value	\$ 12,839,496
Number of outstanding shares/units	505,737

Stockholder servicing fees only apply to Class S, Class T and Class D shares. For purposes of NAV we recognize the stockholder servicing fee as a reduction of NAV on a monthly basis. Under accounting principles generally accepted in the United States of America ("GAAP"), we accrue the full cost of the stockholder servicing fee as an offering cost at the time we sell Class S, Class T and Class D shares. As of April 30, 2023, we have accrued under GAAP \$384.0 million of stockholder servicing fees payable to the Dealer Manager related to the Class S, Class T and Class D shares sold.

The following table provides a breakdown of our total NAV and NAV per share, by share class, as of April 30, 2023 (\$ and shares/units in thousands, except per share/unit data):

NAV Per Share	Class S Shares	Class T Shares	Class D Shares	Class I Shares	(hird-party Operating artnership Units ⁽¹⁾	Total
Net asset value	\$ 5,598,809	\$ 145,333	\$ 745,533	\$ 5,840,839	\$	508,982	\$ 12,839,496
Number of outstanding shares/units	219,508	5,697	29,744	230,686		20,102	505,737
NAV Per Share/Unit as of April 30, 2023	\$ 25.51	\$ 25.51	\$ 25.07	\$ 25.32	\$	25.32	

Includes the Operating Partnership units held by the Special Limited Partner and other third parties.

Share Repurchase Request Update

Pursuant to the terms of our share repurchase plan, the total amount of aggregate share repurchases is limited to no more than 2% of our aggregate NAV per month (measured using the aggregate NAV as of the end of the immediately preceding month) and no more than 5% of our aggregate NAV per calendar quarter (measured using the aggregate NAV as of the end of the immediately preceding quarter).

In April 2023, we received repurchase requests equal to 4.2% of our aggregate monthly NAV. As per the terms of our share repurchase plan, we honored all repurchase requests for April 2023 on a pro rata basis up to the 2% monthly limitation. As such, 47.7% of each stockholder's repurchase request was satisfied in April 2023.

In May 2023, we received repurchase requests equal to 4.2% of our aggregate monthly NAV. As per the terms of our share repurchase plan, we honored all repurchase requests for May 2023 on a pro rata basis up to the 2% monthly limitation. As such, 47.8% of each stockholder's repurchase request was satisfied in May 2023.

Importantly, our structure continues to provide investors with liquidity over time, as it was designed. Investors who started redeeming in November 2022, when redemption requests were first prorated, would have received 98% of their money back in the seven months ended June 2023.

Status of our Current Public Offering

This Offering was declared effective by the SEC on April 7, 2023 and we are currently offering on a continuous basis up to \$18.0 billion in shares of common stock, consisting of up to \$16.0 billion in shares in our primary offering and up to \$2.0 billion in shares pursuant to our distribution reinvestment plan. As of the date hereof, we had issued and sold (i) 39,641,768 shares of our common stock (consisting of 14,326,014 Class S shares, 216,687 Class T shares, 2,153,004 Class D shares and 22,946,063 Class I shares) in the primary offering for total proceeds of approximately \$1.1 billion and (ii) 7,089,098 shares of our common stock (consisting of 3,216,079 Class S shares, 113,891 Class T shares, 433,425 Class D shares and 3,325,703 Class I shares) pursuant to our distribution reinvestment plan for a total value of approximately \$0.2 billion. As of May 31, 2023, our aggregate NAV was approximately \$12.6 billion. We intend to continue selling shares in the Offering on a monthly basis.