STARWOOD REAL ESTATE INCOME TRUST, INC. SUPPLEMENT NO. 10 DATED FEBUARY 11, 2022 TO THE PROSPECTUS DATED JUNE 2, 2021

This prospectus supplement ("Supplement") is part of and should be read in conjunction with the prospectus of Starwood Real Estate Income Trust, Inc., dated June 2, 2021 (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 acquisition pipeline;
- to provide an update on our rent growth;
- to disclose the transaction price for each class of our common stock as of March 1, 2022;
- to disclose the calculation of our January 31, 2022 NAV per share for each class of our common stock;
- to disclose the share reallocation between our primary offering and distribution reinvestment plan; and
- to provide an update on the status of our current public offering (the "Offering").

Acquisition Pipeline

Our acquisitions pipeline remains strong. We currently have seven acquisitions under contract or exclusivity totaling \$4.5 billion of purchase price. The pipeline is heavily concentrated in residential, industrial, and self-storage.

Rent Growth Update

Rent growth remains strong. Our multifamily portfolio in particular (66% of our AUM) experienced rent growth of 17% year-over-year on new leases and 13% rent growth on combined new and renewal leases over the trailing 30 days in January.

March 1, 2022 Transaction Price

The transaction price for each share class of our common stock for subscriptions accepted as of March 1, 2022 (and repurchases as of February 28, 2022) is as follows:

- · · · · · · · · · · · · · · · · · · ·	Transact (per s	
Class S	\$	26.45
Class T	\$	26.41
Class D	\$	26.03
Class I	\$	26.30

The March 1, 2022 transaction price for each of our share classes is equal to such class's NAV per share as of January 31, 2022. A detailed presentation of the NAV per share is set forth below. No transactions or events have occurred since January 31, 2022 that would have a material impact on our NAV per share. 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.

January 31, 2022 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 January 31, 2022 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 January 31, 2022 (\$ and shares/units in thousands):

Components of NAV	Jan	January 31, 2022		
Investments in real estate	\$	19,770,271		
Investments in real estate debt		945,932		
Cash and cash equivalents		576,180		
Restricted cash		611,128		
Other assets		545,063		
Debt obligations		(11,318,239)		
Secured financings on investments in real estate debt		(265,647)		
Subscriptions received in advance		(453,494)		
Other liabilities		(280,209)		
Performance participation accrual		(26,085)		
Management fee payable		(10,505)		
Accrued stockholder servicing fees (1)		(3,343)		
Minority interest		(82,609)		
Net asset value	\$	10,008,443		
Number of outstanding shares/units		379,868		

⁽¹⁾ 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 January 31, 2022, we have accrued under GAAP \$315.3 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 January 31, 2022 (\$ and shares/units in thousands, except per share/unit data):

NAV Don Chang	_	lass S		Class T		Class D		Class I	C Pa	perating ortnership	T-4-1
NAV Per Share		nares	Φ	Shares	Φ	Shares	Φ.	Shares	Φ.	Units (1)	Total
Net asset value	, ,-	884,909	3	129,662	Þ	609,441	\$ 4	1,646,486	Þ	237,945	\$10,008,443
Number of outstanding shares/units	1	65,798		4,909		23,411		176,701		9,049	379,868
NAV Per Share/Unit as of January 31, 2022	\$	26.45	\$	26.41	\$	26.03	\$	26.30	\$	26.30	

⁽¹⁾ Includes the partnership interests of the Operating Partnership held by the Special Limited Partner.

Set forth below are the weighted averages of the key assumptions in the discounted cash flow methodology used in the January 31, 2022 valuations, based on property types.

	Discount	Exit Capitalization
Property Type	Rate	Rate
Multifamily	5.9%	4.6%
Industrial	5.8%	4.8%
Office	7.5%	6.1%
Other	7.9%	6.5%

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	Industrial	Office	Other
	Hypothetical	Investment	Investment	Investment	Investment
Input	Change	Values	Values	Values	Values
Discount Rate	0.25% decrease	+2.0%	+2.0%	+1.9%	+1.9%
(weighted average)	0.25% increase	(2.0)%	(2.0)%	(1.9)%	(1.9)%
Exit Capitalization Rate	0.25% decrease	+3.8%	+3.9%	+2.8%	+2.7%
(weighted average)	0.25% increase	(3.4)%	(3.5)%	(2.6)%	(2.4)%

The following table provides a breakdown of the major components of our NAV as of December 31, 2021 (\$ and shares/units in thousands):

Components of NAV	 December 31, 2021
Investments in real estate	\$ 19,649,799
Investments in real estate debt	954,077
Cash and cash equivalents	271,877
Restricted cash	665,799
Other assets	486,597
Debt obligations	(11,327,804)
Secured financings on investments in real estate debt	(268,181)
Subscriptions received in advance	(496,845)
Other liabilities	(645,814)
Performance participation accrual	(204,225)
Management fee payable	(9,628)
Accrued stockholder servicing fees (1)	(3,192)
Minority interest	(79,666)
Net asset value	\$ 8,992,794
Number of outstanding shares/units	345,972

⁽¹⁾ 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 December 31, 2021, we have accrued under GAAP \$291.5 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 December 31, 2021 (\$ and shares/units in thousands, except per share/unit data):

	Class S Class T Class D Cl						Class I			
NAV Per Share		Shares		Shares		Shares		Shares	rtnership Jnits (1)	Total
Net asset value	\$ 4	4,028,101	\$	121,076	\$	568,654	\$ 4	,244,461	\$ 30,502	\$ 8,992,794
Number of outstanding shares/units		154,381		4,648		22,142		163,625	1,176	345,972
NAV Per Share/Unit as of December 31, 2021	\$	26.09	\$	26.05	\$	25.68	\$	25.94	\$ 25.94	

⁽¹⁾ Includes the partnership interests of the Operating Partnership held by the Special Limited Partner.

Share reallocation

In this offering we are selling up to \$8,000,000,000 in shares in our primary offering and up to \$2,000,000,000 in shares pursuant to our distribution reinvestment plan. In accordance with the terms of the offering, we may reallocate shares between the primary offering and distribution reinvestment plan. We have reallocated \$1,700,000,000 in shares from our distribution reinvestment plan to our primary offering, and as a result, we are now offering up to \$9,700,000,000 in shares in our primary offering and up to \$300,000,000 in shares pursuant to our distribution reinvestment plan.

Status of our Current Public Offering

We are currently offering on a continuous basis up to \$10.0 billion in shares of common stock, consisting of up to \$9.7 billion in shares in our primary offering and up to \$0.3 billion in shares pursuant to our distribution reinvestment plan. As of the date hereof, we had issued and sold (i) 210,144,690 shares of our common stock (consisting of 85,619,005 Class S shares, 1,786,395 Class T shares, 14,856,334 Class D shares and 107,882,956 Class I shares) in the primary offering for total proceeds of approximately \$5.1 billion and (ii) 3,624,342 shares of our common stock (consisting of 1,799,071 Class S shares, 67,677 Class T shares, 276,772 Class D shares and 1,480,822 Class I shares) pursuant to our distribution reinvestment plan for a total value of approximately \$88.0 million. As of January 31, 2022 our aggregate NAV was approximately \$10.0 billion. We intend to continue selling shares in the Offering on a monthly basis.