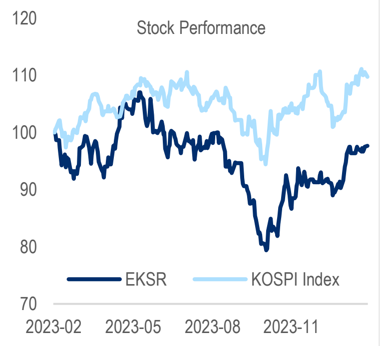
Company Research Note

27 February 2024

Ticker	365550 KS/ 365550.KS
GICS Sector	Real Estate
	Industrial REITs
Rating	Not Rated
Target Price	N/A
Current Price	3905
Upside/(downside)	N/A
MarketCap (US$m)	625
Total Shares (m)	213



Source: Bloomberg

ESR Kendall Square REIT

Pure-play Korean logistics REIT, backed by renowned Sponsor

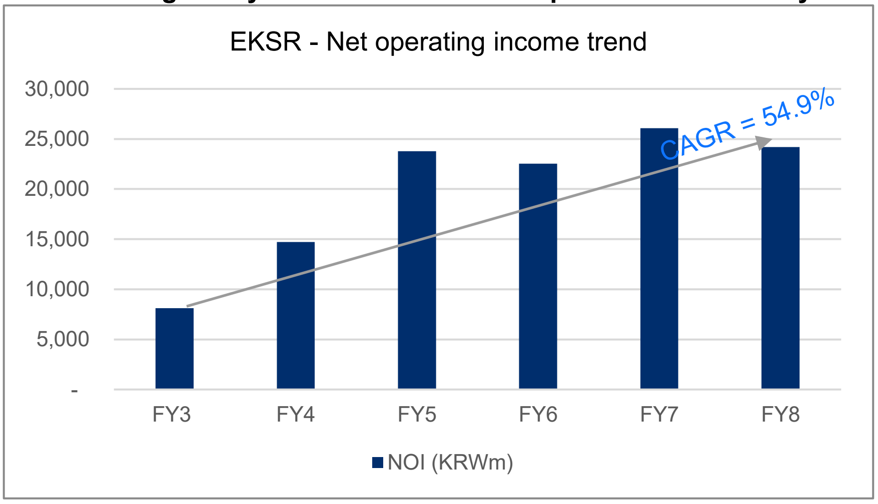
Investment thesis

1) **Unique exposure to the logistic asset sector in South Korea with visible growth.** ESR Kendall Square REIT is the only listed REIT in Korea providing a pure-play exposure to logistics. The REIT has been pursuing an active strategy of growing its portfolio via acquiring new assets, expanding its portfolio from an initial 10 assets at IPO in December 2020 to 18 modern logistics parks, or a 19% CAGR in terms of GFA. Thanks to the growth of AUM, coupled with positive rental reversions and in-built rental escalations, its net operating income has increased by 199% from 6 months ending in May 2021 to November 2023. Sponsored by Hong Kong-listed ESR Group, the REIT also benefits from a visible pipeline of assets for potential acquisition, and the ability to fill vacancies. The company aims to more than triple its AUM to KRW 10tn by 2030.

2) **Track record of asset recycling and expansion.** Drawing on its experience after successfully implementing its first capital recycling cycle in 2023, ESKR will look to continually recycle its mid-sized assets which it then aims to top up immediately with new acquisitions. With a proven ability to fill vacancies, ESKR will continue to make on-the-market purchases for properties below full occupancies and then leverage its network to fill the vacancies.

3) **Attractive valuation.** ESKR is trading at a wide discount to its regional logistics peers. Relative to its Singapore-listed peers, it is trading 25-30% cheaper on PBR multiples, while its TTM dividend yield was towards the wider end of the peer group. The Japan-listed REITs similarly trade at a wider PBR multiple, while offered at a tighter 4.2-4.5% yield. The management has guided to pay KRW274/share of dividends for FY24. At its current share price, it represents an FY24 yield of 7.02%, which was wider than its regional and domestically listed REIT counterparts.

EKSR's NOI grew by 54.9% CAGR over the past two and a half years



Source: Company report (FY for the six-month period ending May/Nov), DZT Research

Ke Yan, CFA
Equity Analyst
yan.ke@icaasia.com

For more information on our company-sponsored research and corporate access please contact us at:
research@icaasia.com

Company background

ESR Kendall Square REIT (ESKR) is a pure-play warehousing and logistics Korean REIT. The REIT was incorporated in September 2020 and listed on the KOSPI exchange in December 2020. Having listed with a portfolio of 10 assets, the REIT had grown its portfolio to owning and managing 18 assets, as of December 2023.

These 18 assets had a total asset under management (AUM) of KRW2.78tn (US$2.09bn) and occupied a gross floor area (GFA) of 1.16m sqm.

Asset overview

Predominantly located in the Greater Seoul Area and Greater Busan Area, ESKR's portfolio is concentrated around transportation hubs in the Seoul metropolitan area. Located near highways, several of its assets surround the Gyeongbu Expressway, which is the second oldest and most heavily traveled expressway connecting Seoul to Suwon, Daejeon, Gumi, Daegu, Gyeongju, Ulsan and Busan.

Table: Portfolio Overview

#	Asset	GFA (sqm)	Completion date	Occupancy rate (%)	Acquisition cost (KRWbn)
1	Goyang LP	199,678	Jan-19	100%	478
2	Anseong LP 2	154,990	Jun-20	100%	325
3	Anseong LP 1	95,265	Feb-20	100%	160
4	Icheon LP 5	84,545	Feb-20	100%	198
5	Yongin LP 1	70,028	Nov-17	100%	129
6	Anseong LP 3	63,471	Apr-21	100%	127
7	Icheon LP 6	62,195	Jan-23	100%	114
8	Bucheon Cold LP	58,264	Jul-19	100%	197
9	REF Icheon LP 4	49,616	Jun-18	100%	81
10	Icheon LP 7	46,041	Apr-23	100%	127
11	REF Pyeongtaek LP	43,212	Aug-12	100%	84
12	REF Yongin LP 2	43,176	Jan-17	100%	76
13	REF Yongin LP 3	43,045	Jun-20	100%	92
14	Gimhae LP 2	39,941	Dec-19	100%	71
15	Icheon LP 2	33,365	Apr-18	100%	49
16	Anseong LP 4	27,040	Nov-21	100%	59
17	Gimhae LP 1	25,733	Dec-00	100%	46
18	Icheon LP 3	18,421	Dec-18	100%	29
		1,158,026			**2,446**

Source: Company report, DZT Research

Currently, the largest asset in ESKR's portfolio is Goyang LP (Asset #1 in the table above), which occupies 60,403 pyeong (~199,678 sqm), a seven-floor logistics park located in Goyang, Gyeonggi Province. As per the REIT, the site is the largest logistics hub in the Gangbuk area, accessible by the Seoul Outer Circular Expressway, Gangbyeon Expressway, and Incheon International Airport Expressway. Given its proximity to the center of Seoul city, the Goyang LP asset, together with Bucheon Cold LP (Asset #8), are commonly referred to as "Prime Core Assets" in the Korean Logistics market. The two assets had completed construction in January and July 2019 respectively and were part of the initial portfolio owned by ESKR at IPO.

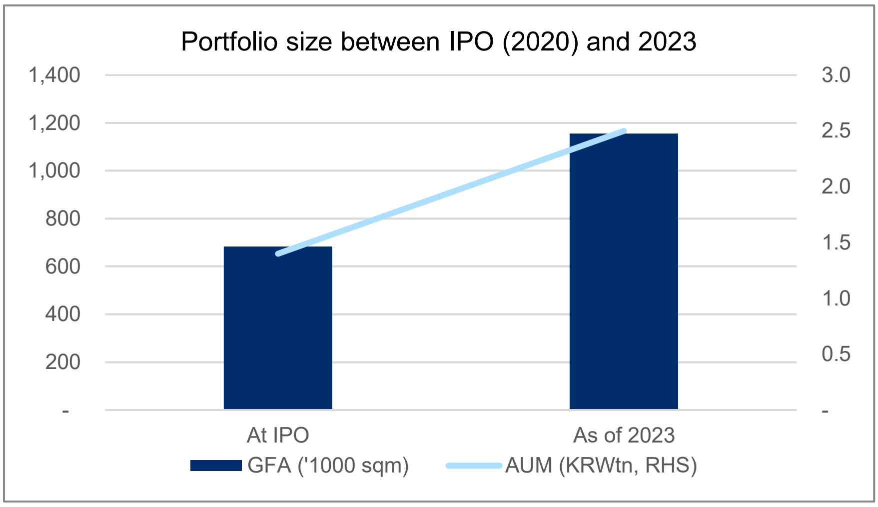
ESKR's second-largest asset is Anseong LP 2 (Asset #2), which occupies 46,643 pyeong (~154,990 square metres), and is located in Wongok-myeon, Anseong. With a total of five floors, the asset is located just 2km away from West Anseong IC and is easily accessible to the Pyeongtaek-Jecheon Expressway and Gyeongbu Expressway.

Across the entire portfolio, ESKR had an overall occupancy rate of 100% as of December 2023. The bulk of its assets are relatively new, having completed construction within the past five years, and are generally ramp-up warehouses, spread over multiple floors.

Expansion since listing

Starting with an initial portfolio of 10 assets at the time of its listing in December 2020, ESKR has been active in asset acquisitions/disposals, having expanded its portfolio to 18 logistics assets. ESKR's AUM has risen by 99% from KRW1.4tn at IPO to KRW2.78tn as of December 2023.

Chart: Portfolio size between IPO till 2023



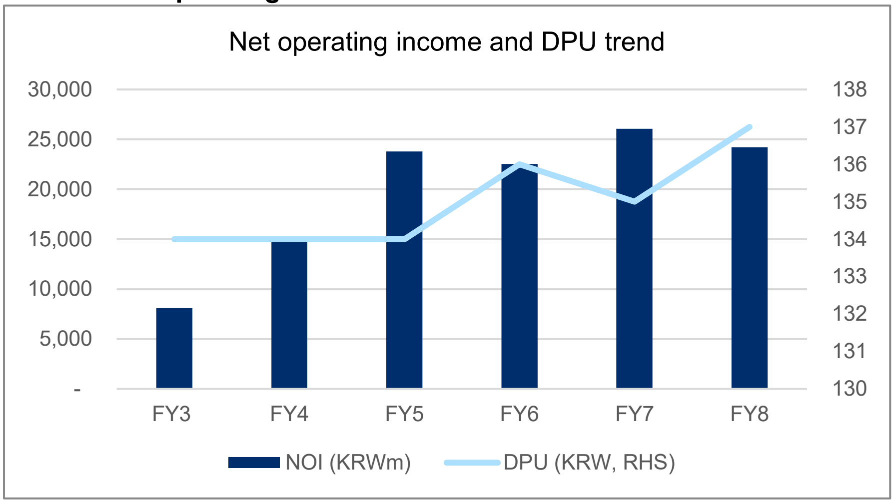
Source: Company report, DZT Research

In a bid to fund its growing portfolio, ESKR had undertaken a US$400m follow-on in December 2021, which together with bank borrowings, was used to fund its acquisition of eight assets in 2021, growing its asset size by 70% in the year. Owing to the newfound contributions, net operating income (NOI) for the REIT had doubled between FY3-4 (full-year period ending Nov 2021) to FY5-6 (full-year period ending Nov 2022). However, limited by Korean exchange regulations, the equity raise had resulted in the REIT being overfunded and a dilution on its share base, thus distributions per unit had been flat in the year.

That being said, gross revenue and net operating income have been rising consistently since FY3 (six-month period ending May 2021). Together with a growing asset base, ESKR also has an unblemished dividend payout record, consistently paying around KRW134-137/ share in each six-month period as well. Paying out 90% of its distributable income, ESKR made KRW135/share and KRW137/share dividend payments in FY7 and FY8 respectively (six-month periods ending May/Nov 2023). It is expected to make a dividend payment of KRW274/share in 2024 (FY9 and FY10 combined).

Most recently in mid-2023, ESKR also completed its first capital recycling cycle, selling Icheon Logistics Park 1 in June 2023. The asset was sold for KRW81bn, at a 4.02% capitalization rate, with a 19% holding period IRR over a 2.5-year investment horizon. Proceeds from the asset sale were then used to partially fund the acquisition of Icheon Logistics Park 6 (Asset #7) and Icheon Logistics Park 7 (Asset #10) for KRW120bn combined, at a capitalization rate of 5.0% and 5.1% respectively. The two assets are located along the highway zone in the Icheon province, and their first full-year consolidation is likely to add approximately KRW6bn to 2024 topline, 5-6% of 2023's sales.

Chart: Net operating income and DPU trend



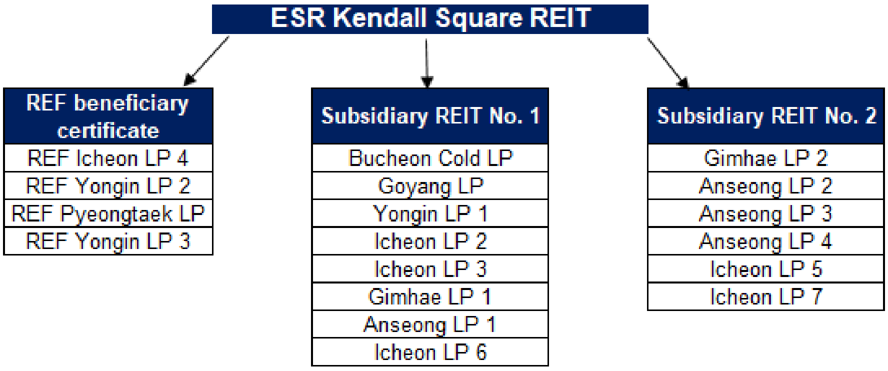
Source: Company report (FY for the six-month period ending May/Nov, FY8 ends in Nov 2023), DZT Research

REIT Structure

ESKR manages its portfolio under three wholly owned subsidiaries namely, Subsidiary REIT No. 1, Subsidiary REIT No. 2, and the REF beneficiary certificate, which collectively house its 18 logistics assets. As of January 2024, REIT No. 1, REIT No.2, and the REF beneficiary certificate held eight, six, and four assets, respectively. With the exception of the newly-acquired Icheon LP 6 and Icheon LP 7, Subsidiary REIT No. 1 and Subsidiary REIT No. 2 houses the assets held by ESKR at IPO and post its 2021 follow-on offering, respectively.

The REIT is structured as such so that each subsidiary can be used to collateralize bank borrowings with limited recourse on the other assets in the other subsidiaries. Moving forward, the REIT will continue adding assets to its existing two REIT subsidiaries and isn't opposed to setting up a new subsidiary should it acquire a large group of assets at one go.

Table: REIT Structure

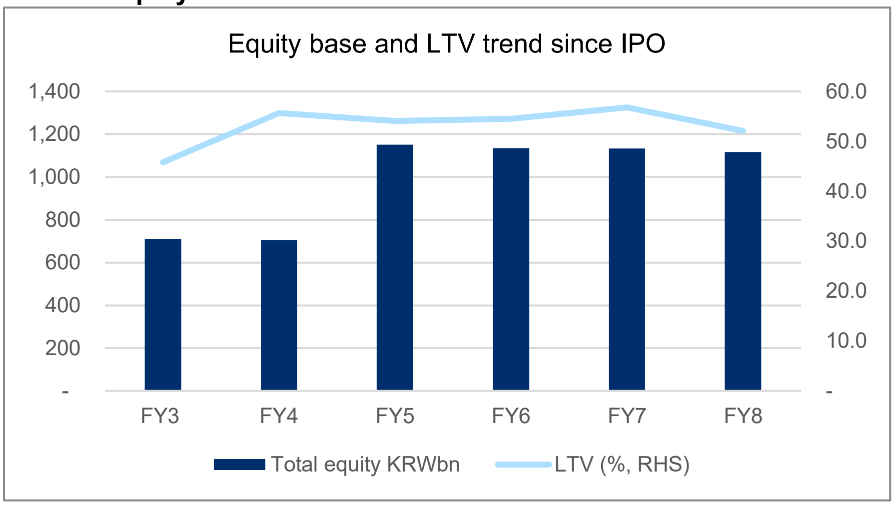


Source: Company report, DZT Research

Balance sheet & future pipeline

Since May 2021, the first reporting period after ESKR listed in December 2020, ESKR's total assets have doubled, with its equity base growing by 59.5%. Whilst its loan-to-value ratio (asset backed loan/appraisal value of its assets) has been inching upwards as its debt liabilities grew, at 52.1% as of December 2023, it remains comfortably below the regulatory limit of 66%. The debt headroom would provide some capital buffer, allowing ESKR to continue pursuing its active acquisition strategy with potentially limited dilution for future equity investors.

Chart: Equity base and LTV trend since IPO



Source: Company report (FY for the six-month period ending May/Nov), DZT Research

Aside from tapping capital markets, ESKR also plans to continually recycle its mid-sized assets in the 40,000 sqm GFA range, worth around KRW100-110bn, where the transaction market is generally more liquid. As per the REIT, it could look to dispose of four to five assets in the near-medium term. While the disposals could result in an approximate 16.7% loss in topline, ESKR aims to top it up immediately with new acquisitions.

For future acquisitions, ESKR also seeks to further implement its “High Cap-rate Acquisition & Low-cap rate Disposition” strategy, as it has done when it completed its first capital recycling exercise in 2023. One reason for its success is that while average vacancies have stood at 10% for logistics assets located around Seoul’s metropolitan area, 20% including cold storage as per Colliers, ESKR has been able to consistently report maximum occupancies for the bulk of its assets. This is due to the management’s ability to fill vacancies which is partly attributed to the reputation of its sponsor as well. Owing to this, ESKR has been and will likely continue to make on-the-market purchases for properties below full occupancies and then use its network to fill the vacancies.

Over the longer term, ESKR expects to grow its AUM from the current KRW2.78tn to KRW10tn by 2030, representing a 20% CAGR.

For undertaking future acquisitions, ESKR also aims to further add new-age modern warehouses in the 6% capitalization rate range for growing its portfolio. This rate is set factoring in the associated borrowing costs in the domestic market. Owing to this requirement, while ESKR’s sponsor has a rich pipeline of assets, occupying approximately 4m GFA of leasable area, it has guided that it doesn’t necessarily need to acquire from its sponsor, but rather to make on-the-market purchases from single-warehouse/logistics operators.

Post the 2023 domestic rate hikes, ESKR could also begin raising capital again as interest rates stabilize in 2024, to continue fuelling its growth strategy. With exposure to foreign capital, as half of the REIT is owned by foreign institutions, ESKR isn’t opposed to looking to diversify and look overseas for asset acquisitions.

Industry outlook

As per CBRE, net absorption for Greater Seoul Grade A logistics assets domestically has been averaging at around 2m sqm annually over 2019-2022, before it peaked at 3.2m sqm in 2023. This had been driven by growth in major domestic 3PLs couriers, and e-commerce activity where demand had shot up over the pandemic. Moving forward, demand is likely to come from new e-commerce players with a focus on lower-priced products such as Daiso and CJ Olive Young. Foreign e-commerce companies including AliExpress, Temu, and new Chinese e-commerce players are expected to contribute to logistics demands within South Korea over the longer term as well.

Despite the increase in demand for logistics assets fuelled by the pandemic, annual supply volumes for logistics assets have been tracking closely to period-to-period net absorptions. In 2023, a surge in supply volumes also resulted in overall logistics asset vacancies domestically rising 9% y-o-y to 19% by 2023. The vacancy rate is expected to rise to 25% in 2024 owing to a large supply addition in the Anseong region. With a track record of recording maximum/close to maximum capacities, ESKR seems to have outperformed the overall market for domestic logistics assets on this front.

While the Anseong region will experience a surge in supply for logistics assets, as per various industry reports, the entire South Korean logistics market is expected to observe some tightness in supply over the medium term, beginning in 2024. This is owed to changes to the domestic project financing (PF) borrowing market and subsequent delays affecting the construction industry. As per the same CBRE report, after registering the strongest growth in investment volumes over 2023, the market for domestic logistics assets will also be more selective in undertaking transactions over 2024 which is expected to push average yields up. Yields are determined by location, floor area ratio, occupancy rates, and rental growth potential.

With a portfolio of new-age warehouses/logistics assets located around the prime Seoul metropolitan area, ESKR is a likely beneficiary from this shifting trend as its assets' value rises. With 17% of leases expiring in 2025, combined with a tight supply market for logistics assets, ESKR could likely benefit from positive rental reversions which would boost its rental income.

Sponsor and notable investors

ESKR's shareholding structure is evenly split between foreign and domestic institutions, which held approximately 46% and 42% ownership stakes, respectively.

The REIT sponsor is ESR Kendall Square, which was ultimately owned by the Hong Kong-listed ESR Group, an established Asia-centric real estate developer. ESR Group has a market value of US$5.6 billion and a focus on logistics properties including warehouses and distribution centres. Aside from a rich pipeline of sponsor assets which could potentially be future acquisition targets, one advantage of an established sponsor is better borrowing terms for funding future liquidity needs. ESR Kendall Square, the Sponsor, held a 10.26% ownership interest in ESKR (as of December 2023).

The largest external investor was the Canada Pension Plan Investment Board (CPPIB) which held a 24.85% ownership stake in ESKR as of November 2023. CPPIB had been a cornerstone investor when the REIT was listed and has also added to its stake on a pro-rata basis when ESKR undertook a follow-on offering to raise US$400m in December 2021. Aside from being an investor in the REIT, CPPIB also cooperates with the REIT sponsor, ESR Group, and is also an investor in the latter's development and income funds.

Aside from the CPPIB, other notable domestic and foreign financial institutions invested include IGIS Asset Management, Mirae Asset Management, and BlackRock.

Table: Notable institutional investors

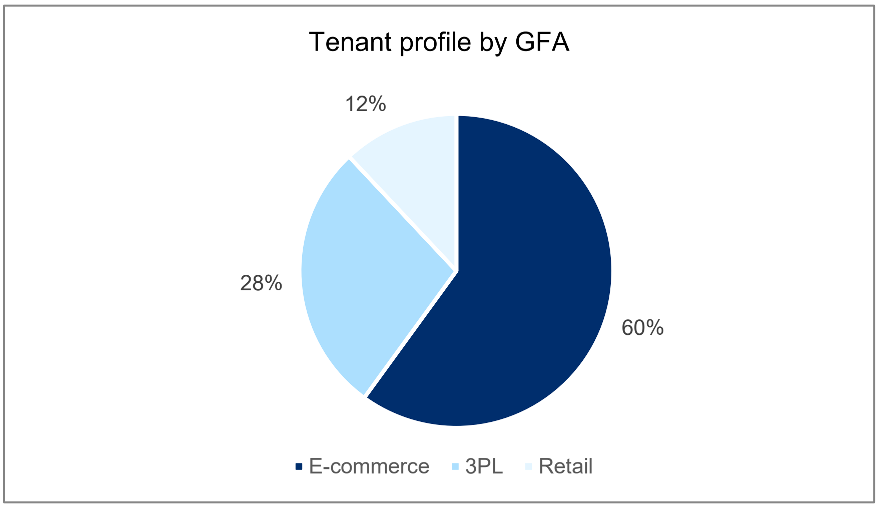
Institution	Stake (%)
ESR Kendall Square/ESR Group	10.26%
Canada Pension Plan Investment Board (CPPIB)	24.85%
IGIS AM	8.11%
Mirae AM	6.02%
BlackRock	3.78%

Source: Company report, Bloomberg, DZT Research

Tenant and leasing profile

ESKR has a diversified tenant profile stemming from the e-commerce, third-party logistics (3PL), and retail segments. With an 81.8% exposure towards e-commerce and 3PLs, the REIT is able to indirectly benefit from a growing demand for e-commerce and supply chain services domestically.

Chart: ESKR's tenant profile by GFA

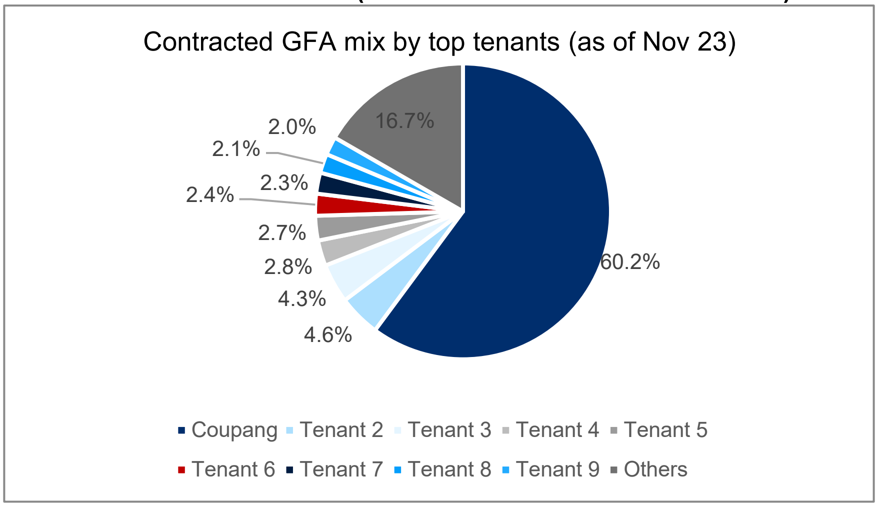


Source: Company report, DZT Research

ESKR's largest tenant is Coupang, which took up 60.2% of the REIT's contracted GFA, contributing a similar ratio to rental income, over FY8 (six-month period ending Nov 2023). Coupang, frequently touted as the Amazon of South Korea and listed in the US, is the largest online marketplace in South Korea. Aside from offering a product marketplace with its owned-inventory selection and merchant-sourced SKUs, the firm also provided grocery offerings, logistics food delivery, and digital financial services. Coupang has been a client of ESKR's since the latter's IPO and currently has a remaining lease term of 7-10 years. While the concentration from a singular tenant is high, Coupang recently broke even in 2H22 which minimizes its operational risk. According to the company, Coupang has high switching costs, were it to decide to switch to another logistics provider, given the high setup capital expenditure when locating into a new logistics space, thus diminishing the threat that ESKR could lose its anchor tenant.

Aside from Coupang, the rest of its tenant base is well diversified with the top second to ninth tenants occupying 23.1% of ESKR's contracted GFA combined. These tenants generally have a lease term of 1-3 years, which allows ESKR to capitalize on prevailing market rental rates.

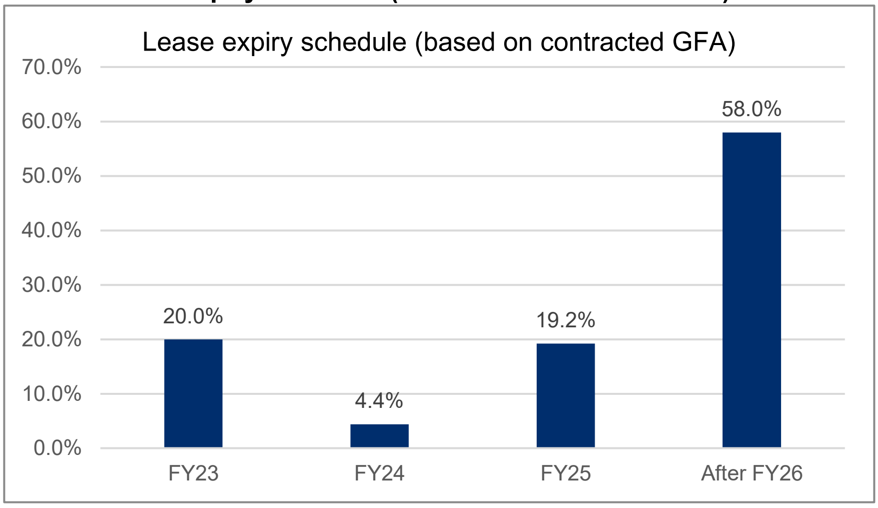
Chart: Tenant contribution (based on Nov 23 contracted GFA)



Source: Company report, DZT Research

All of the REIT's leases have an in-built rental escalation rate of 2% fixed per annum (applies to Coupang also), which is in line with South Korea's ten-year inflation record (excluding COVID-19 period), as per the World Bank. In addition, ESKR is able to get an additional reversion boost at the time of lease renewal. In 2023 alone, 20% of ESKR's total leasable area contracts had been fully renewed, with an +18% rental reversion.

Chart: Lease expiry schedule (based on contracted GFA)



Source: Company report (FY for the one-year period ending Nov), DZT Research

As of Dec 23, ESKR had an average lease expiry of 3.3 years, weighted by contracted GFA with minimal expiries in 2024 (4.4%). In 2025, 17% of leases will come off expiry, based on contracted GFA. ESKR generally begins renewal negotiations six to eight months prior to lease expiry and it expects positive rent reversions in 2025 owing to a lack of new supply in the domestic logistics market. As per JLL, one of the reasons for supply tightness in the medium/long term is attributed to funding difficulties for other property developers, causing developers to miss their target completion dates.

Valuation appears attractive

While there are 23 REITs listed domestically, ESKR is the only pure-play logistics REIT in Korea. Comparing ESKR to its regional logistics peers instead, the REIT appears to be trading at a wide discount to the group.

Relative to its Singapore-listed logistics peer group, ESKR is trading 25-30% cheaper on PBR multiples, while its TTM dividend yield was towards the wider end of the peer group. Within this peer set, the only peers that offered a wider forward yield were ESR-LOGOS REIT and AIMS APAC REIT.

The Japan-listed REITs trade at a wider PBR multiple, averaging around 1.29x one/two-year forward PBRs, while offered at a tighter 4.3-4.5% yield. That being said, on the market capitalization and AUM fronts, they were a lot larger than ESKR, with the smallest peer, Daiwa House REIT, trading with a market capitalization 6x larger.

Domestically, while ESKR trades in line with Lotte REIT, the former's trailing yield at 7% had been wider than the latter's 6% yield. Shinhan Alpha REIT, a predominant office and commercial REIT, trades 16-29% above its own book value on the one/two-year forward PBR fronts.

Management has guided for a KRW274/share payout in 2024, implying a 7.02% dividend yield at the current share price.

Appendix 1 - Valuation Comparison

Company name	BBG Ticker	Price	MCap	Dividend yield		P/B		ROE
			(US$m)	23A	24E	23A	24E	24E
ESR Kendall Square REIT Co Ltd	365550 KS	3,905	625	7.02	7.02	0.73	0.76	3.23
Similar-sized domestic REITs (avg)				**5.73**	**8.61**	**0.94**	**0.99**	**6.53**
LOTTE Reit Co Ltd	330590 KS	3,170	579	5.99	5.99	0.73	0.75	2.20
Shinhan Alpha REIT Co Ltd	293940 KS	6,880	456	5.47	11.24	1.15	1.22	10.85
SG-listed logistics peers (avg)				**7.06**	**6.89**	**1.01**	**1.01**	**6.05**
Mapletree Logistics Trust	MLT SP	1.49	5,533	5.43	5.91	1.07	1.02	4.88
Mapletree Industrial Trust	MINT SP	2.31	4,895	5.38	5.67	1.18	1.25	7.15
Frasers Logistics & Commercial	FLT SP	1.05	2,932	7.46	6.67	0.90	0.91	5.07
ESR-LOGOS REIT	EREIT SP	0.31	1,748	9.60	8.52	0.95	0.95	4.93
AIMS APAC REIT	AAREIT SP	1.26	760	7.43	7.70	0.94	0.92	8.23
JP-listed logistics peers (avg)				**4.35**	**4.47**	**1.26**	**1.26**	**5.09**
Nippon Prologis REIT Inc	3283 JP	256,400	4,846	3.97	3.94	1.42	1.43	5.11
GLP J-Reit	3281 JP	120,200	3,942	4.50	4.87	1.25	1.27	5.90
Daiwa House REIT Investment Co	8984 JP	246,700	3,811	4.58	4.59	1.10	1.09	4.26

Source: Bloomberg (Data as of market close on 27th Feb 24), DZT Research

Appendix 2 - Financials

Income statement

KRWm

Six-month period ending	**May-21**	**Nov-21**	**May-22**	**Nov-22**	**May-23**	**Nov-23**
	FY3A	**FY4A**	**FY5A**	**FY6A**	**FY7A**	**FY8A**
Gross revenue	23,710	30,063	46,743	49,006	49,483	53,000
- Property operating expenses	-15,607	-15,332	-22,954	-26,457	-23,403	-28,800
NOI	8,104	14,730	23,790	22,549	26,079	24,200
- Financial income	762	96	242	628	1,002	900
- Other income	0	2	73	278	8	0
- Gains on valuation using equity method	2,630	4,335	21,768	5,043	16,853	5,600
- Financial expenses	-6,086	-8,944	-15,696	-15,649	-15,929	-18,800
- Other expenses	0	0	0	-87	0	0
- Losses on valuation using equity method	0	-734	0	0	0	0
PBT	5,409	9,485	30,175	12,762	28,014	11,900
- Income tax expense	0	0	0	0	0	0
PAT	5,409	9,485	30,175	12,762	28,014	11,900
DPU (KRW)	134	134	134	136	135	137

Balance Sheet

KRWm

Six-month period ending	**May-21**	**Nov-21**	**May-22**	**Nov-22**	**May-23**	**Nov-23**
	FY3	**FY4**	**FY5**	**FY6**	**FY7**	**FY8**
Cash and cash equivalents	26,894	23,519	33,921	31,103	25,522	50,608
Long-term financial instruments	21,373	26,716	42,219	42,219	39,158	41,706
Investments in associates	156,561	182,610	204,689	205,770	218,315	169,378
Investment properties	975,742	1,199,425	1,960,978	1,947,771	2,067,223	2,052,483
Others	7,052	10,876	26,237	27,019	27,435	29,744
Total assets	**1,187,621**	**1,443,146**	**2,268,044**	**2,253,882**	**2,377,653**	**2,343,918**
Current portion of long-term borrowings	0	28,144	0	0	254,544	254,970
Long-term borrowings	446,570	668,142	1,060,285	1,062,285	919,986	912,070
Others	30,369	42,503	57,173	56,804	69,296	59,966
Total liabilities	**476,939**	**738,789**	**1,117,459**	**1,119,089**	**1,243,826**	**1,227,006**
Total equity	**710,682**	**704,357**	**1,150,585**	**1,134,793**	**1,133,827**	**1,116,913**
Total liabilities and equity	**1,187,621**	**1,443,146**	**2,268,044**	**2,253,882**	**2,377,653**	**2,343,918**

Cashflow statement

KRWm

Six-month period ending	May-21 FY3A	Nov-21 FY4A	May-22 FY5A	Nov-22 FY6A	May-23 FY7A	Nov-23 FY8A
PBT	5,409	9,485	30,175	12,762	28,014	11,852
NCC Adjustments	8,372	12,619	6,218	23,052	11,390	26,590
Change in NWC	818	35	1,687	-306	-1,480	-2,687
Interest/tax received/paid	-5,740	-11,565	-17,842	-13,853	-14,607	-17,925
Dividends received	0	7,650	1,057	4,298	3,963	18,674
Net CFO	8,858	18,225	21,295	25,954	27,279	36,505
Net CFI	-1,161,903	-261,895	-811,295	-218	-118,720	27,166
Net CFF	821,660	240,296	800,401	-28,554	85,860	-38,584
Net change in cash flow	-331,385	-3,375	10,402	-2,818	-5,581	25,086
Cash (beginning)	358,278	26,894	23,519	33,921	31,103	25,522
Cash (end)	26,894	23,519	33,921	31,103	25,522	50,608

Key Ratios

Six-month period ending	May-21 FY3A	Nov-21 FY4A	May-22 FY5A	Nov-22 FY6A	May-23 FY7A	Nov-23 FY8A
Profitability (%)						
NOI margin	34.18	49.00	50.89	46.01	52.70	45.66
Net margin	22.81	31.55	64.56	26.04	56.61	22.45
Growth (YoY %)						
Gross revenue		26.79	55.49	4.84	0.97	7.11
NOI		81.78	61.50	-5.21	15.65	-7.21
PAT		75.36	218.12	-57.71	119.50	-57.52
DPU		0.00	0.00	1.49	-0.74	1.48
Leverage (%)						
LTV	45.80	55.70	54.10	54.50	56.80	52.10

Disclaimer

This report is produced by subsidiaries and affiliates of DZT Research Pte Ltd (hereafter DZT) under collaboration with ICA Research (Asia) Limited (hereafter ICA Research). Corporate access to the company(ies) covered in this report has been facilitated by ICA Research. DZT or ICA Research do or may seek to do business with the company(ies) covered in this report. ICA Research may from time to time act as external investor relations consultant for the company(ies) covered in this report. DZT does or may seek to do business with ICA Research.

This report may contain material that is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject DZT or ICA Research to any registration or licensing requirement within such jurisdiction. All material presented in this report, unless specifically indicated otherwise, is under copyright to DZT. None of the material, nor its content, nor any copy of it, may be altered in any way, transmitted to, copied or distributed to any other party, without the prior express written permission of DZT. All trademarks, service marks and logos used in this report are trademarks or service marks or registered trademarks or service marks of DZT, its affiliates or ICA Research.

The information, tools and material presented in this report are provided to you for information purposes only and are not to be used or considered as an offer or the solicitation of an offer to sell or to buy or subscribe for securities or other financial instruments. DZT may not have taken any steps to ensure that the securities referred to in this report are suitable for any particular investor. DZT will not treat recipients of this report as its customers by virtue of their receiving this report. The investments and services contained or referred to in this report may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about such investments or investment services. Nothing in this report constitutes investment, legal, accounting or tax advice, or a representation that any investment or strategy is suitable or appropriate to your individual circumstances, or otherwise constitutes a personal recommendation to you. DZT does not advise on the tax consequences of investments and you are advised to contact an independent tax adviser. Please note in particular that the bases and levels of taxation may change. Information and opinions presented in this report have been obtained or derived from sources believed by DZT to be reliable, but DZT makes no representation as to their accuracy or completeness. DZT accepts no liability for loss arising from the use of the material presented in this report, except that this exclusion of liability does not apply to the extent that such liability arises under specific statutes or regulations applicable to DZT. This report is not to be relied upon in substitution for the exercise of independent judgment.

The information contained in this report has been compiled by the Research Department of DZT from sources that it believes to be reliable but no representation, warranty or guarantee is made or given by DZT or any other person as to its accuracy or completeness. All opinions and estimates expressed in this report are (unless otherwise indicated) entirely those of DZT as of the date of this report only and are subject to change without notice. DZT may have issued, and may in the future issue, other communications that are inconsistent with, and reach different conclusions from, the information presented in this report. Those communications reflect the different assumptions, views and analytical methods of the analysts who prepared them and DZT is under no obligation to ensure that such other communications are brought to the attention of any recipient of this report. Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is made regarding future performance. Information, opinions and estimates contained in this report reflect a judgment at its original date of publication by DZT and are subject to change without notice.

The price, value of and income from any of the securities or financial instruments mentioned in this report can fall as well as rise. The value of securities and financial instruments is subject to exchange rate fluctuation that may have a positive or adverse effect on the price or income of such securities or financial instruments. Investors in securities such as ADR's, the values of which are influenced by currency volatility, effectively assume this risk. Some investments discussed in this report may have a high level of volatility. High volatility investments may experience sudden and large falls in their value causing losses when that investment is realised. Those losses may equal your original investment. Indeed, in the case of some investments the potential losses may exceed the amount of initial investment and, in such circumstances, you may be required to pay more money to support those losses. Income yields from investments may fluctuate and, in consequence, initial capital paid to make the investment may be used as part of that income yield. Some investments may not be readily realisable and it may be difficult to sell or realise those investments, similarly, it may prove difficult for you to obtain reliable information about the value, or risks, to which such an investment is exposed.

This report may provide the addresses of, or contain hyperlinks to websites. Except to the extent to which the report refers to website material of DZT, DZT has not reviewed any such site and takes no responsibility for the content contained therein. Such addresses or hyperlinks (including addresses or hyperlinks to DZT's own website material) is provided solely for your convenience and information and the content of any such website does not in any way form part of this document. Accessing such website or following such link through this report or AR's website shall be at your own risk.

DZT, ICA Research, and their respective officers, directors and employees, including persons involved in the preparation or issuance of this report, may from time to time (1) have positions in, and buy or sell, the securities of companies referred to in this report (or related investments); (2) have a consulting, investment banking or broking relationship with any company referred to in this report; and (3) to the extent permitted under applicable law, have acted upon or used the information contained or referred to in this report including effecting transactions for their own account in an investment (or related investment) in respect of any company referred to in this report, prior to or immediately following its publication.