



Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 18

MEETING DATE: September 19, 2018

SUBJECT: Quarterly Investment Performance Report
Real Estate

SUBMITTED FOR: ___ Consent ___ Deliberation and Action X Receive and File

RECOMMENDATION

Staff recommends the Board receive and file the Townsend Real Estate Portfolio Performance Measurement Report for the second quarter of 2018.

PURPOSE

This agenda item does not specifically support the 2018-2019 Strategic Management Plan but complies with SCERS' investment policy statement reporting requirements. This item contributes to the effective management and oversight of investment activities.

SCERS REAL ESTATE PORTFOLIO

This memorandum provides an overview of SCERS' Real Estate period returns as presented within Townsend's Quarterly Performance Review. This memorandum also highlights any recent real estate investments made by SCERS.

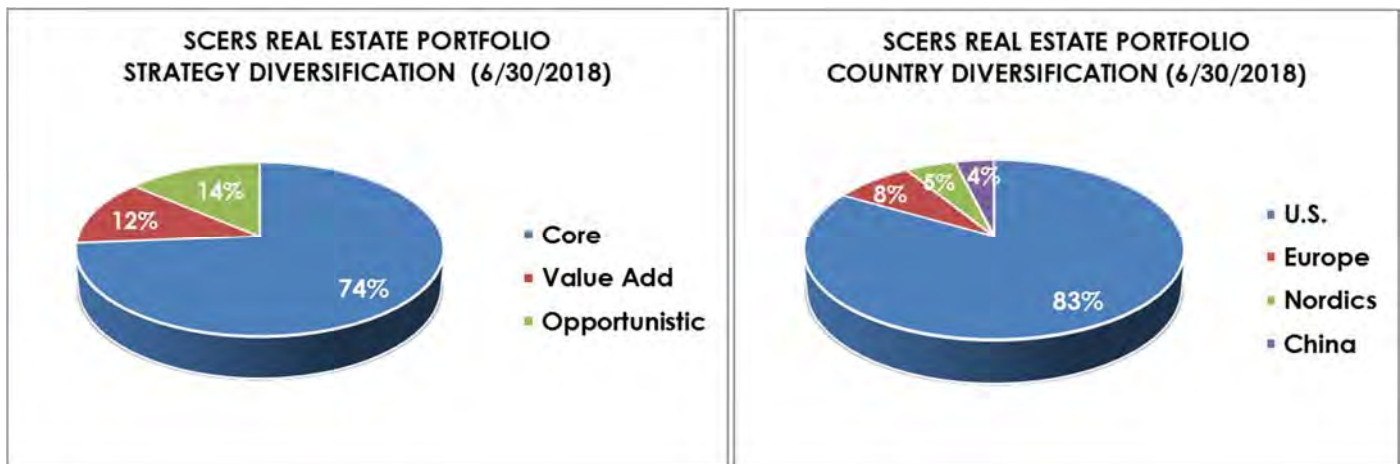
In 2017, the Board approved the winding down of the core separate accounts with BlackRock and Barings/Cornerstone in favor of open-end commingled funds. Staff and Townsend continue to implement the plan, with an expected closing of the separate account portfolio by October 1, 2018. Once the separate account assets have been sold, SCERS' Core Real Estate portfolio will consist of only closed and open-end core commingled funds. In the meantime, the performance of the core separate accounts will continue to be included in the Townsend quarterly report.

Due to valuation increases across the SCERS real estate portfolio during the quarter, the total real estate allocation has reached 9.5%, which exceeds the target of 7.0% and the top end of the permissible range of 5.0% - 9.0%. To date, SCERS has been comfortable holding a higher than target weight, while the SCERS real assets portfolio was being built out. Staff and Townsend are formulating a plan to rebalance the real estate portfolio back within the permissible range.

**SCERS REAL ESTATE PERFORMANCE SUMMARY
6/30/2018**

SUB-ASSET CLASS	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS Real Estate Portfolio	2.9%	13.3%	10.6%	11.2%	8.3%	Nov-86
(65%) NFI-ODCE + (35%) NFI-ODCE	1.9%	7.8%	8.7%	10.4%	6.7%	
Core Portfolio	3.6%	13.5%	10.0%	10.8%	6.6%	Nov-86
Separate Account	5.5%	14.5%	9.4%	10.4%	9.1%	Nov-86
Commingled Funds	2.3%	12.8%	11.3%	11.5%	7.1%	Sep-13
NFI-ODCE Index	1.8%	7.5%	8.4%	10.0%	6.3%	Jul-95
Non-Core Portfolio	1.0%	12.9%	12.6%	13.0%	5.6%	Jun-06
Value Add Portfolio	-0.1%	12.7%	13.0%	12.9%	4.6%	Jun-06
Opportunistic	2.2%	13.0%	12.1%	18.0%	7.8%	May-13
NFI-ODCE + 1% Index	2.1%	8.5%	9.4%	11.0%	7.3%	Jun-06

SCERS PORTFOLIO DIVERSIFICATION



SCERS TOTAL PORTFOLIO RETURNS

Second Quarter 2018:

- SCERS Total Portfolio generated a +2.9% net return, exceeding SCERS' blended benchmark net return of +1.9%, and up from last quarter's net return of +2.5%. Leading the outperformance was the Core portfolio, and specifically, the Core separate accounts, which returned +5.5% net for the quarter. The strong outperformance was due to asset write-ups resulting from leasing activity generating higher income during the period.
- SCERS' European investments generated a net return of -1.2% (+4.2% in Euros), while SCERS' China investments generated a net return of -9.0% (-4.0% in Yuan). The

strengthening U.S. dollar during the quarter negatively impacted Euro denominated investments, while SCERS' China investments are still early in the investment period.

- SCERS uses an alternative global benchmark that represents a blend of U.S. and Europe indexes based on SCERS' target U.S./Non-U.S. allocation. The benchmark is lagged one quarter due to the delayed timing in receiving return data from Europe. SCERS lagged one quarter total portfolio net return was +2.5%, in-line with SCERS' Global benchmark net return of +2.5%.

One-year ended June 30, 2018:

- SCERS' Total Portfolio generated a +13.3% net return, significantly exceeding SCERS' blended benchmark net return of +7.8%. Contributing to the strong outperformance was the exceptional performance of the Core portfolio, earning a +13.5% net return.
- SCERS' European investments generated a net return of +17.7% (+15.2% in Euros), while SCERS' China investments generated a net return of +1.1% (-0.9% in Yuan). Carlyle China and Project Rome are still early in their investment phase and are in the negative J-curve period.
- SCERS lagged one-year March 31, 2018 total portfolio net return was +13.9%, significantly outperforming against SCERS' Global benchmark net return of +9.9%.

NON-U.S. PERFORMANCE	Quarter 3/31/18	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS Real Estate Portfolio	2.5%	13.9%	10.8%	11.2%	8.3%	Nov-86
SCERS Global Index	2.5%	9.9%	9.6%	NA	NA	
Europe Portfolio (USD)	-1.2%	17.7%	13.1%	NA	11.2%	Mar-14
Europe Portfolio (Euro)	4.2%	15.2%	11.7%	NA	15.9%	
China Portfolio (USD)	-9.0%	1.1%	NA			Sep-17
China Portfolio (Yuan)	-4.0%	-0.9%	NA			

SCERS CORE PORTFOLIO RETURNS

Second Quarter 2018:

- A strong quarter, with SCERS Core portfolio earning a +3.6% net return, exceeding the NFI-ODCE Index net return of +1.8%. Contributing to the outperformance was the +5.5% net return of the Separate Account portfolio, resulting from new leases signed at 1811 Brittmooore and Lake Washington Park, and higher rents achieved in newly renovated apartment units at Crescent Park, leading to higher property values.
- Notable Core outperformers include:
 - Barings Separate Account: +7.2%
 - Prologis Targeted U.S. Logistics: +5.1%

- BlackRock Separate Account: +4.8%

One-year ended June 30, 2018:

- SCERS' Core portfolio generated a +13.5% net return for the one-year period, significantly exceeding the NFI-ODCE Index net return of +7.5%. Contributing to the outperformance was the +14.5% net return of the Separate Account portfolio.
- Notable Core outperformers include:
 - Barings Separate Account: +22.8%
 - Prologis Targeted U.S. Logistics Fund: +21.7%
 - Prologis European Logistics Fund: +20.8% in U.S. dollars (+18.2% in Euros)

SCERS NON-CORE PORTFOLIO RETURNS

Second Quarter 2018:

- SCERS' Non-Core portfolio generated a muted +1.0% net return, underperforming the NFI-ODCE plus 1% benchmark net return of +2.1%. The underperformance is due to currency effects as the U.S. dollar strengthened against the Euro (-5.2%), Sterling (-5.7%), and Yuan (-5.0%) during the quarter.
- Notable Non-Core outperformers include:
 - Och-Ziff Real Estate Fund III: +7.9%
 - Hammes Partners II: +5.5%
 - CIM Fund VIII: +4.1%

One-year ended June 30, 2018:

- SCERS' Non-Core portfolio generated a +12.9% net return, significantly exceeding the NFI-ODCE +100 bps benchmark net return of +8.5%.
- Notable outperformers include:
 - Och-Ziff Real Estate Fund III: +39.9%
 - NREP Nordic Strategies Fund II: +22.7% in U.S. dollars (+20.4% in Euros)
 - NREP Nordic Strategies Fund I: +15.7% in U.S. dollars (+13.3% in Euros)
 - Hammes Partners II: +15.1%

U.S. REAL ESTATE PERFORMANCE AND MARKET TRENDS

U.S. REAL ESTATE PERFORMANCE

The U.S. private real estate market (NCREIF) returns for Q2 2018 edged down, +2.1% versus +2.2% in the prior quarter.

- The NCREIF Fund Index-Open End Diversified Core Equity (NFI-ODCE) index was down slightly due to lower capital appreciation compared to last quarter (+1.0% versus +1.2%). The NFI-ODCE income return has been fairly flat over the past seven quarters, while capital appreciation has been up moderately, with the industrial sector’s outperformance offsetting the retail sector’s underperformance.
- The industrial sector continued its strong performance (+3.6%), with high investor demand contributing to the second quarter’s capital appreciation of +2.4%. The industrial sector has been the best performing sector for the last seven quarters, exceeding the NFI-ODCE index on average of 125 bps or more per quarter.
- Although headwinds from e-commerce weigh on the retail sector’s performance, the second quarter return of +1.3% was up considerably from last quarter’s return of +0.7%. Unlike last quarter, where the retail sector generated a negative capital appreciation of -0.4%, capital appreciation in the second quarter was a positive +0.2%.
- Weakening apartment fundamentals from new supply continue to mute returns in the sector, with the second quarter generating a +1.5% return, in-line with last quarter’s return of +1.5%, and slightly down from the Q4 2017 return of +1.6%.

NCREIF Investment Performance				
June 30, 2018				
Sector	Total Gross Return (%)			
	2016	2017	1Q2018	2Q2018
NFI - ODCE	8.8%	7.6%	2.2%	2.1%
Apartments	7.3%	6.2%	1.5%	1.5%
Industrial	12.3%	13.1%	3.3%	3.6%
Office	6.2%	6.0%	1.8%	1.5%
Retail	9.0%	5.7%	0.7%	1.3%

Source: NCREIF®.

U.S. REAL ESTATE MARKET TRENDS

According to RCLCO Real Estate Advisor’s Q2 2018 U.S. real estate market commentary:

“Two general stories have emerged in real estate property markets in recent years. The first, which can be applied to multifamily, industrial, and hospitality real estate, is one of significant and sustained demand across all markets, leading to rent growth and (eventually) new construction. Demand continues to sustain new deliveries, but construction pipelines are sizable nearly everywhere, and could create distress when an economic slowdown occurs.

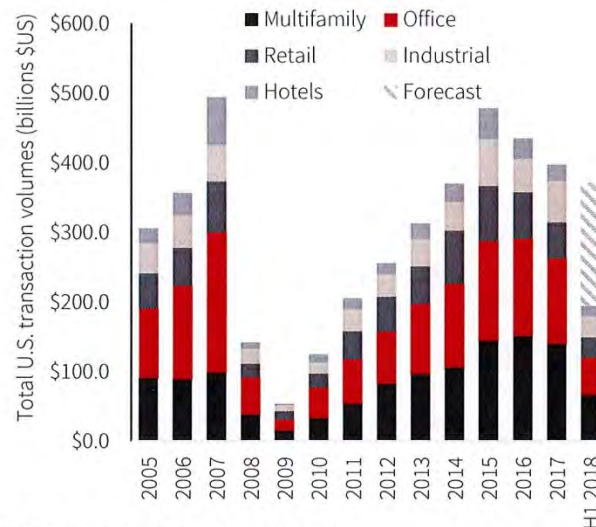
The second story, which can be applied to office and retail, features property types threatened to some degree with structural obsolescence thanks to changing demand characteristics. Performance of these property types varies significantly across markets, though generally positive fundamentals for both (office and retail) have resulted largely from very little

construction (outside of rapidly growing tech and other “boom” markets). This would likewise reverse when employment and consumer spending slow down.”

In their Q2 2018 U.S. Investment Outlook report, JLL commented about real estate transaction activity:

“Elevated new supply, rising interest rates, and the continued low-yield environment are weighing on investors. Yet an uptick in opportunities drove U.S. real estate transaction volumes to exceed expectations in the first half of 2018, increasing by 3.4%, to reach \$194.9 billion. Commercial real estate demand fundamentals are healthy and the U.S. economic outlook continues to be favorable. With financial markets relatively stable and macro-volatility largely in check, notwithstanding rising borrowing costs, the financing markets for U.S. commercial real estate remain competitive, with banks, life companies, debt funds and CMBS lenders active. The market is filled with lenders that are starved for quality loans, which is making it difficult to find the right opportunity and is pushing lenders in some cases to ease underwriting standards. The most sought-after transactions are generally comprised of industrial properties, with the asset class generally usurping multifamily properties.”

U.S. real estate transaction volume in H1 2018 marks 3.4 percent increase to reach \$194.9 billion



Source: JLL Research, Real Capital Analytics (Transactions larger than \$5.0 million, includes entity-level transactions)

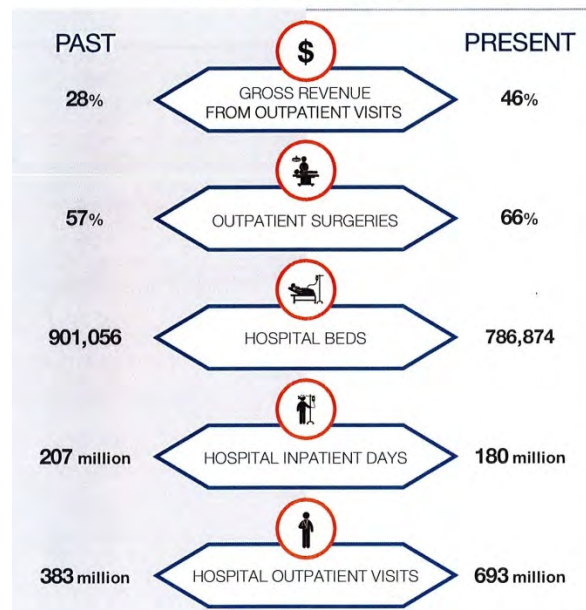
HEALTHCARE

Healthcare systems remain committed to extracting efficiencies to drive profits, with many hospitals reducing hospital bed counts and increasing outpatient services. The financial pressures felt throughout the healthcare system have generated a keen focus on preventative medical care and a greater use of technology to deliver care. This is translating into more outpatient facilities, surgery centers, and micro-hospitals.

According to Transwestern’s Medical Office report for the Q2 2018:

“Medical office space gets tight. The swelling demand for healthcare services is undebatable. As the senior age bracket grows, it will drive physician growth and subsequent need for medical office space. Current projections estimate that just over 150,000 healthcare practitioners will be added to the economy over the next two years. Therefore, the total demand for medical

Healthcare Dynamics Shift in Favor of Outpatient Care Over Last Two Decades



space across the U.S. could range from 150.5 million to 225.8 million square feet. There is an estimated 110 million square feet of currently available medical space, existing and under-construction in the U.S. as of Q2 2018. In the top 10 most populous metros and other select markets, the ability to handle the increased demand is unlikely, even at the low end of the projected demand, without a major shift in how people expect and receive healthcare.”

SCERS’ commitment to Hammes Partners II and III (Hammes), an on-campus ambulatory and acute care manager, is capitalizing on the healthcare industry’s movement to outpatient healthcare delivery. Below are Hammes Partners II period returns versus the benchmark. Hammes Partners III has not funded yet:

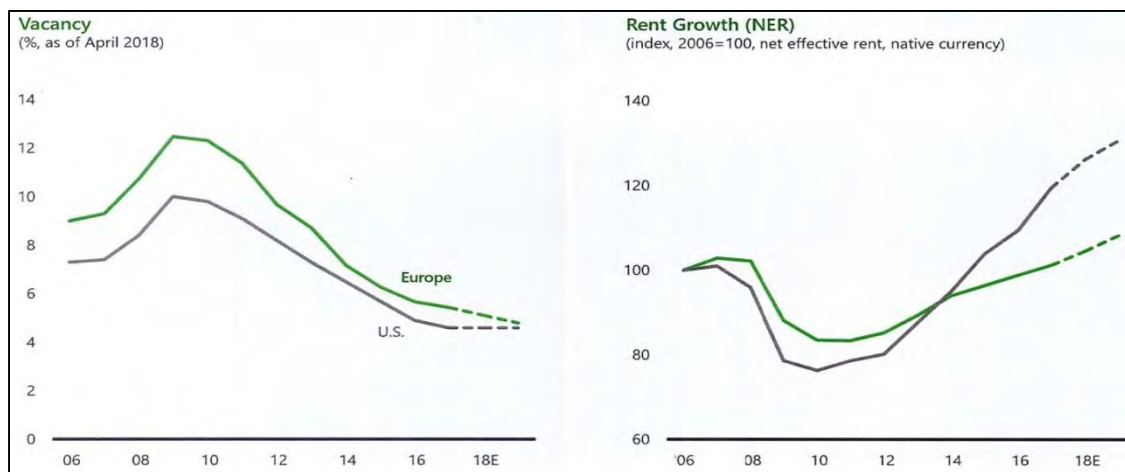
- Second Quarter 2018: +5.5% versus +2.1%
- One-year ended June 30, 2018: +13.5% versus +8.5%

GLOBAL REAL ESTATE PERFORMANCE AND MARKET TRENDS

EUROPE REAL ESTATE MARKET TRENDS

Prologis European Logistics Fund’s Q2 2018 investor report highlighted conditions in the European logistics market as such:

“The logistics market is shifting from a customer market to a landlord market. Positive customer sentiment has translated into demand and vacancy has dropped a further 10 bps over the quarter to a new low of 5.1%. Absorption is constrained by low availability. This is the result of several years of increased utilization of logistics buildings and strong net absorption. Vacancy levels have been low for an extended period of time; now a shift in both conditions and mentality has let owners to push rents. The combination of stronger customer sentiment and high market occupancy, along with declining cap rates and rising asset value, have led developers to increase activity. Development volume in H1 2018 was 40% above H1 2017. While completions are rising, the risk of oversupply remains limited as speculative development remains measured relative to incoming demand.”



SCERS' commitment to Prologis Europe Logistics Fund, LP (PELF) has been a strategic investment in European logistics and the growth in e-commerce. PELF is one of the world's largest specialist logistics managers targeting continental Europe and the U.K.

- Prologis European Logistics Fund period returns:
 - Second Quarter 2018: -1.3% in U.S. dollars (+4.1% in Euros) versus +1.8% U.S. benchmark return
 - Underperformance is due to the depreciation in the Euro/U.S. Dollar exchange rate (-5.2%)
 - One-year ended June 30, 2018: +20.8% in U.S. dollars (+18.2% in Euros) versus +7.5% U.S. benchmark return

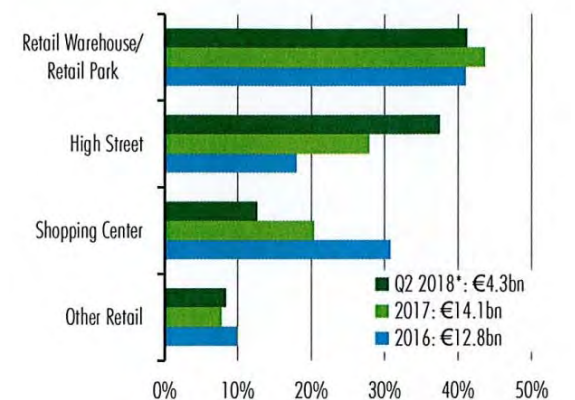
GERMANY REAL ESTATE MARKET TRENDS

ECE European Prime Shopping Center Q2 2018 investor report highlighted conditions in the German retail market as such:

“Due to strong underlying domestic fundamentals, supported by a continued tightening of the labour market and improved confidence forecast for H2 2018, economists predict the German economy will likely record another year of robust GDP growth in 2018 (2.3%) with no negative impact on the investment market for 2018. The positive economic sentiment is expected to be mirrored in retail sales in 2018, with growth forecast at 2% (y-o-y) totaling EUR 523bn, which is in line with the growth rates of between 1.2% and 4.2% over the last 5 years.

According to research from JLL, European retail investment volumes reached EUR 21.7bn in H1 2018, down 7% on H1 2017. Germany (EUR 4.5bn) remains Europe's largest market for retail investments, followed by the UK (EUR 4bn), Poland (EUR 1.8bn) and Spain (EUR 1.8bn). Broken down by usage type, trading in shopping centres saw a significant decline in the first half of 2018, in particular in Germany. According to market research from CBRE, in H1 2018 shopping centres merely accounted for 10% of total German retail investment volume, compared to 20% in 2017 and almost one third in 2016. With prime shopping centres continuing to be highly sought after investments, the key reasons for the declining transaction volumes are deemed to be lack of supply, delayed transaction processes due to more intense due diligence requirements and a gradual tightening of lending conditions, particularly for more risky assets. With a couple of sizeable retail transactions in the pipeline, market researchers remain confident of shopping centre transaction volumes bouncing back in H2 2018 / 2019 to some extent”

Figure 2: Investment volume by property type



Source: CBRE Research, Q2 2018.

* cumulated

SCERS' commitment to ECE European Prime Shopping Center Fund II (ECE) is a strategic investment in Europe. ECE targets prime shopping malls and retail centers primarily in Germany, Austria, and Central Eastern Europe.

- ECE European Prime Shopping Center period returns versus the U.S. benchmark:
 - Second Quarter 2018: -1.4% in U.S. dollars (+3.9% in Euros) versus +2.1% U.S. benchmark return
 - Underperformance is due to the depreciation in the Euro/U.S. Dollar exchange rate (-5.2%)
 - One-year ended June 30, 2018: +15.1% in U.S. dollars (+12.4% in Euros) versus +8.1% U.S. benchmark return

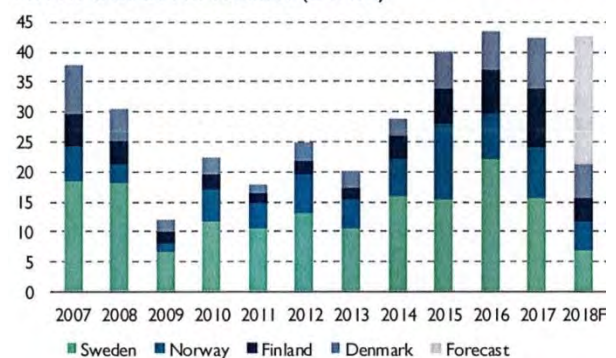
NORDICS REAL ESTATE MARKET TRENDS

Cushman and Wakefield in their Nordic Investor Confidence 2018 report found continued strong investor demand for Nordic real estate:

"This cycle continues to see an extraordinary level of capital targeting Nordic real estate. 63% of all investors, within and into the Nordics, have an objective to be net buyers during H1 2018, partly driven by expectations of a further increase in occupier demand and a consequent rise in asset values. However, there are huge differences between countries. In Sweden, where the rental cycle is expected to have matured more than the rest of the region, we have also started to see a slight fall in net buyers with a corresponding increase in profit takers. In Denmark, Norway and Finland roughly 70% – 80% are net buyers and net sellers are largely absent in these markets. While core real estate strategies remain attractive, demand outstrips supply. This continues to keep yields under pressure and challenges investors to deploy capital and achieve their desired returns. Unable to source core assets, many investors in and into Denmark, Finland and Norway are increasingly accepting additional risk, leading to converging yields, in terms of secondary locations or assets, letting risk, development risk and/or redevelopment projects that create core assets in top markets."

Transaction activity

Nordic transaction volumes (EURbn)



While core real estate strategies remain attractive, demand outstrips supply. This continues to keep yields under pressure and challenges investors to deploy capital and achieve their desired returns. Unable to source core assets, many investors in and into Denmark, Finland and Norway are increasingly accepting additional risk, leading to converging yields, in terms of secondary locations or assets, letting risk, development risk and/or redevelopment projects that create core assets in top markets."

SCERS' investment in NREP Nordic Strategies Fund (NREP I), NREP II, and NREP III is a strategic investment in the Nordic region. NREP targets residential, retail, and logistics properties across the Nordic region. NREP III has not funded yet.

- NREP I and NREP II period returns versus the U.S. benchmark:
 - Second Quarter 2018: -4.0% and +0.3%, respectively in U.S. dollars (+1.4% and +5.7% in Euros) versus +2.1% U.S. benchmark return

- Underperformance is due to the depreciation in the Euro/U.S. Dollar exchange rate (-5.2%)
 - One-year ended June 30, 2018: +15.7% and +22.7%, respectively in U.S. dollars (+13.3% and +20.4% in Euros) versus +8.5% U.S. benchmark return

CHINA REAL ESTATE MARKET TRENDS

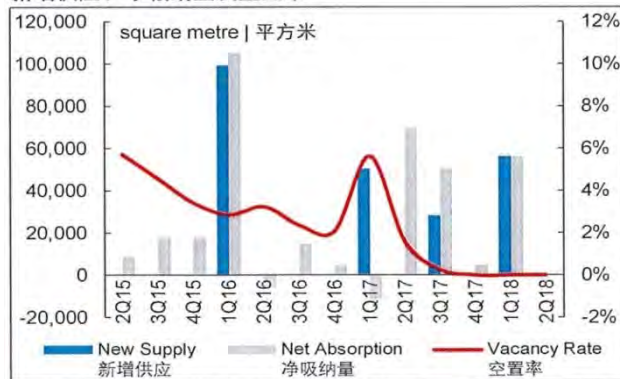
In their Q2 2018 China Logistics market report, Colliers China reported strong demand from e-commerce retailers and related 3PL providers continues to exceed the limited supply in the prime logistics markets of Beijing, Tianjin, and Langfang. Overall, the markets are virtually 100% occupied leading to rental rate growth over 6% in 2018, with expectations of 6% growth through 2022. As further reported by Colliers:

“Demand for prime logistics properties in the Beijing-Tianjin-Langfang region continued to be strong in Q2 2018. With no new supply and low to zero vacancy, leasing activity was limited. Vacancy in Beijing and Langfang remained at zero while Tianjin was a low 1.8%. The average rent continued to increase. In Q2, we noticed more new tenants from the 3PL sector with higher value-added services, i.e., intelligent or cold chain logistics, leased space in the market. The lack of leasable space in Beijing as well as the surging rental rates drove tenants to utilise their space more effectively and by services offering a higher profit.”

Beijing Logistics Market Q2 2018

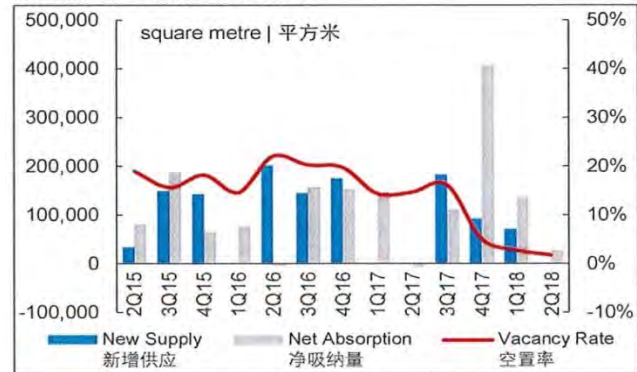
Tianjin Logistics Market Q2 2018

New Supply, Net Absorption & Vacancy Rate
新增供应、净吸纳量及空置率



Source: Research, Colliers International, North China
数据来源：高力国际华北区研究部

New Supply, Net Absorption & Vacancy Rate
新增供应、净吸纳量及空置率



Source: Research, Colliers International, North China
数据来源：高力国际华北区研究部

SCERS’ commitment with Carlyle China Realty (CCR) and Carlyle China Rome Logistics (Rome) is a strategic investment in China’s e-commerce and middle-class population growth. During the quarter, SCERS made an additional \$20 million commitment to Rome

- China Realty and China Rome Logistics versus the U.S. benchmark:
 - Second Quarter 2018: -4.5% and -10.7%, respectively versus +2.1% U.S. benchmark return

- Underperformance is due to the depreciation in the Yuan/U.S. Dollar exchange rate (-5.0%)
- One-year ended June 30, 2018: +3.7% and -0.1%, respectively versus +8.5% U.S. benchmark return
 - The funds are still early in the investment period (J-curve effect)

ATTACHMENT

Townsend's Real Estate Portfolio Performance Measurement Report for Second Quarter of 2018

Prepared by:

/S/

JR Pearce
Investment Officer

Reviewed by:

/S/

Steve Davis
Chief Investment Officer

/S/

Eric Stern
Chief Executive Officer



an Aon company

Real Estate Portfolio

Performance Measurement Report

SECOND QUARTER 2018



SCERS Real Estate Portfolio Overview

In July 2017, Sacramento County Employees' Retirement System ("SCERS") Board adopted a series of changes to its Real Estate Investment Policy Statement. Real Estate, housed within the Real Return asset category, now includes Core, Non-Core and Non-U.S. Private Real Estate; though there is no current exposure to Real Estate Investment Trusts ("REITs"), REITs are included within the Equity allocation. This report will focus on the SCERS Private Real Estate portfolio.

SCERS targets 7.0% to Real Estate with an allowable range of 5.0% to 9.0%. As of the end of the Second Quarter, 2018 (the "Quarter"), the Real Estate Portfolio is beyond the allowable range at 9.5%. Core Real Estate currently makes up 73.7% of the portfolio, with Non-Core Real Estate making up the remaining 26.3%.

SCERS' Real Estate Portfolio Construction:

	Minimum	Target	Maximum
Total Real Estate Program	5.0%	7.0%	9.0%
	Minimum	Target	Maximum
Core Real Estate	50%	65%	80%
Non-Core Real Estate	20%	35%	50%
Non-U.S. Real Estate	0%	0%	30%

Performance of the Core Portfolio is evaluated over rolling 10-year time periods relative to the NCREIF Fund Index of Open-End Diversified Core Equity funds ("NFI-ODCE"), net of fees. The NFI-ODCE represents the aggregation of twenty-four Core open-end commingled funds invested across the United States. The SCERS Core Portfolio outperformed the NFI-ODCE over all time periods. Rationale is detailed on slides 8 and 9.

In July of 2017, Staff and Townsend recommended revising the Real Estate IPS to reflect transition away from IMAs, including removal of the Core vehicle constraints of 0-60% (30% target) for funds and 40-100% (70% target) for IMAs, which was subsequently approved by the Board.

It is expected that the SCERS IMA Program will transition to a commingled fund manager before year-end 2018. Following an extensive bidding, selection and structuring process, Staff and Townsend have selected a recipient for the IMA Portfolio. Given the size of the IMA Portfolio, SCERS will also reduce concentration risk by allocating funds to an additional manager, in order to achieve greater diversification within the Core Portfolio. Additional due diligence and legal reviews are underway.

The loan-to-value ratio of the Private Real Estate Portfolio was 29.1% at the end of the Second Quarter of 2018. The loan-to-value ratio of the Core Portfolio was 27.0%, below the 40.0% leverage constraint for Core as approved by the Board. As a point of reference, the loan-to-value ratio of the NFI-ODCE was 21.1% as of the Second Quarter. The Non-Core Portfolio reported a loan-to-value ratio of 41.9%.

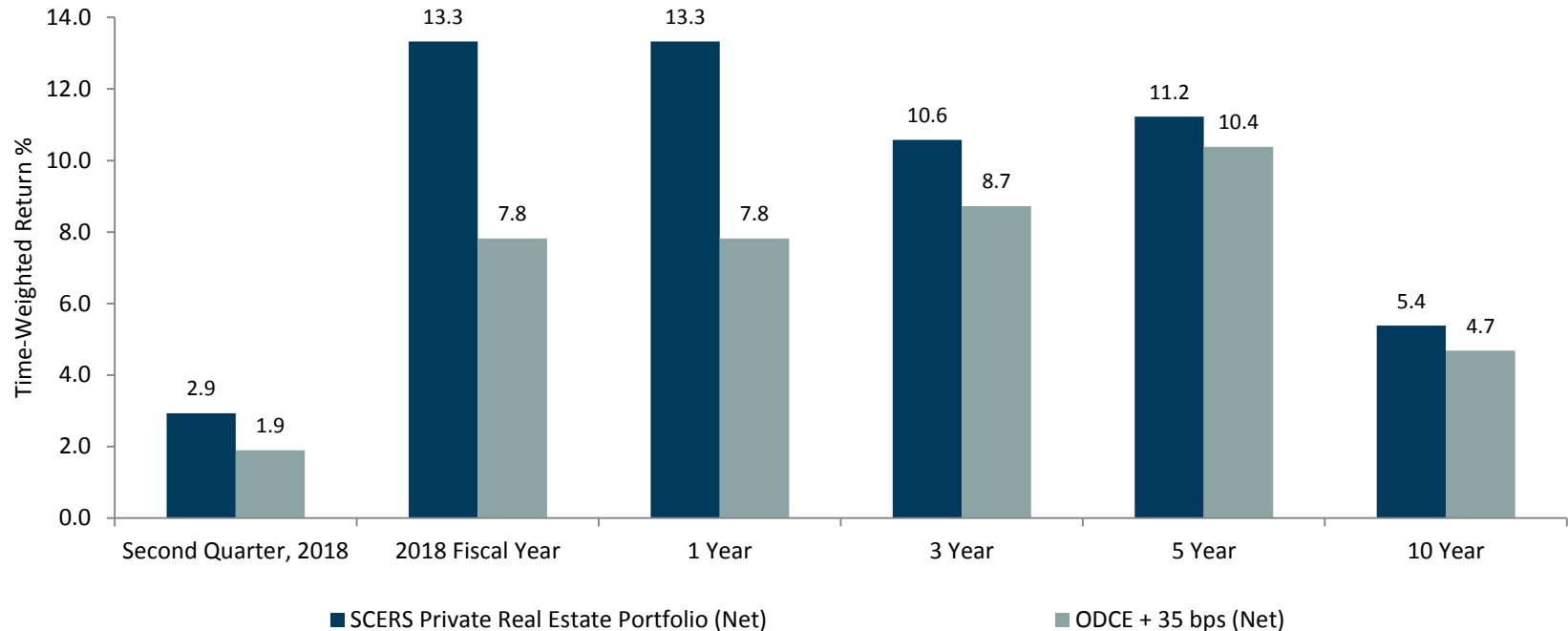
Portfolio Funding Status

- The following slides provide a review of key information of the SCERS Real Estate Portfolio (the “Portfolio”) through June 30, 2018.
- A detailed performance report is also provided in **Exhibit A**.
- Figures exclude commitments / redemptions / dispositions approved subsequent to Quarter-end.

SCERS Portfolio Snapshot <i>As of June 30, 2018</i>	Market Value (in millions of dollars)*	% of SCERS Plan
SCERS Total Plan Assets	9,237	100.0%
Private Portfolio Target	646	7.0%
Private Portfolio Permissible Range		5.0-9.0%
Private Real Estate		
Core Portfolio	645	7.0%
Non-Core Portfolio	230	2.5%
Total SCERS Private Real Estate Market Value	875	9.5%
Total SCERS Private Real Estate Unfunded Commitments	183	2.0%

* Figures may not add due to rounding.

Private Real Estate Portfolio Performance

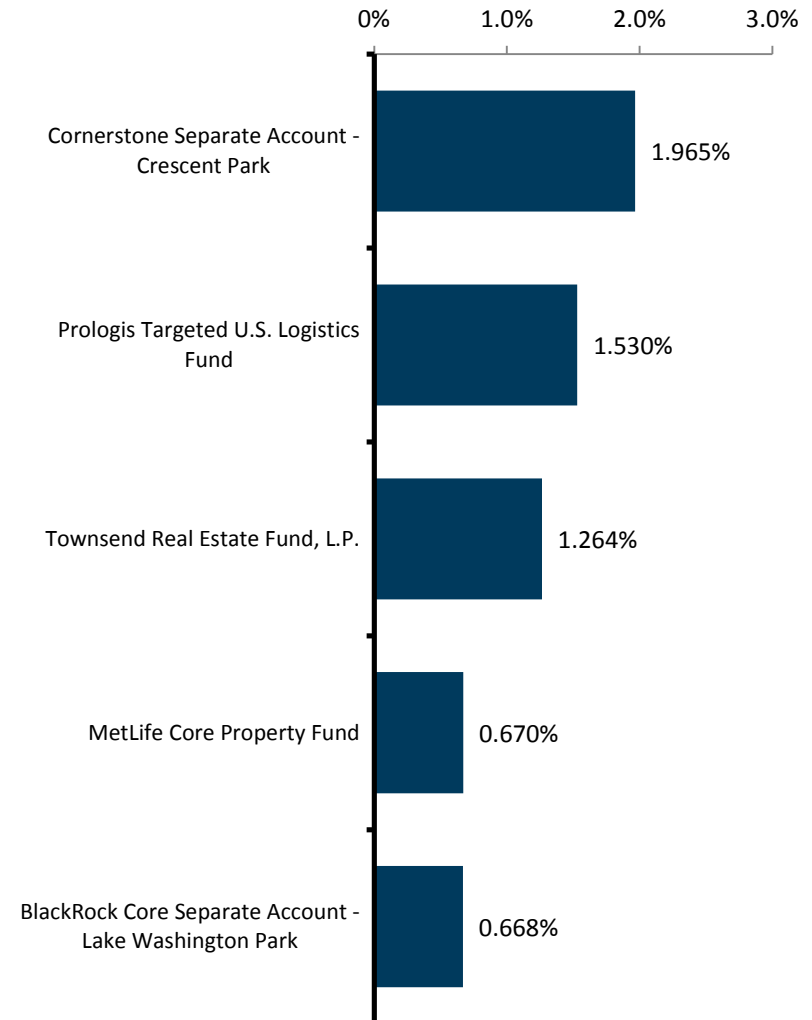


- The SCERS Private Real Estate Portfolio includes: (1) Core Real Estate and (2) Non-Core Real Estate.
- The SCERS Private Real Estate Benchmark is comprised of the NFI-ODCE (Core Benchmark, net) (65%) and the NFI-ODCE + 100bps (Non-Core Benchmark, net) (35%), resulting in an NFI-ODCE + 35bps (net) portfolio benchmark.
- On a net of fee basis, the SCERS Total Real Estate Portfolio performed above the blended benchmark for all time periods;
 - Strong near-term performance was driven by exposure to NREP's Nordics Fund II, Och-Ziff Real Estate Fund III, Crescent Park, and an overweight exposure to logistics in the Core Portfolio (US & Europe).

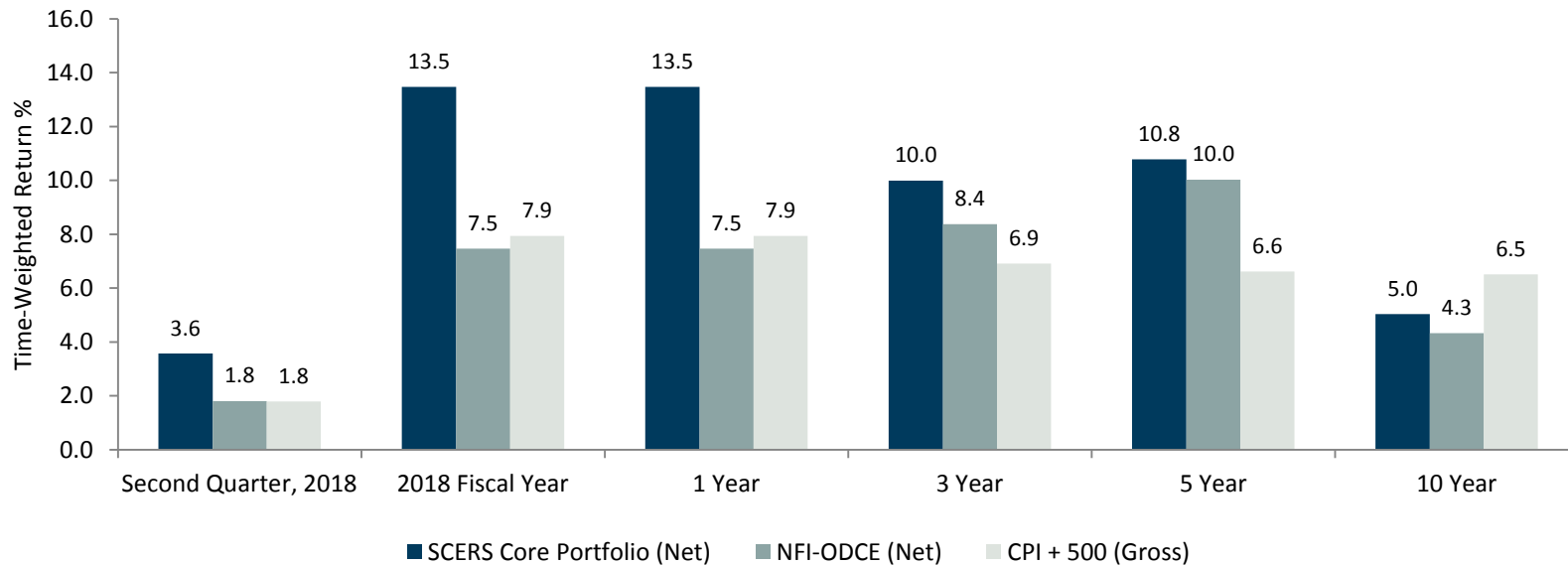
Real Estate Portfolio Performance Drivers

- The SCERS' Private Real Estate Portfolio was valued at \$645 million at the Quarter end, and the Portfolio has produced a 13.3% net return over the trailing 1-year period.
- Over this same time period, representing \$357 million or 41% of the plan, the top 5 performance contributors generated 6.1% of the 1-year return. Performance over the last year at each investment was driven by the following:
 - Crescent Park was written up as a result of rent growth and progress on the unit renovations.
 - Prologis USLF continues to benefit from strong global growth, a secular shift toward e-commerce, and excess demand for a modern logistics network. Furthermore, in the 3rd Quarter of 2018, Prologis USLF experienced a large write-up (6.1%) from the \$2.8 billion NAIF transaction.
 - Townsend Real Estate Fund's return was driven by a combination of new fund launches, including John Hancock, Kayne Anderson and Greystar, and accretive exposure to Jamestown's sale of Chelsea Market.
 - MetLife Core Property Fund has produced 3.4% same store NOI Growth over the last year, led by the fund's industrial assets generating 28.9% SS NOI growth (representing 14% of the fund)
 - Lake Washington, experienced an uplift as a result of improving leasing market conditions, with property leasing now expected to be ~9% higher than underwritten.

Top 5 Contributing Investments



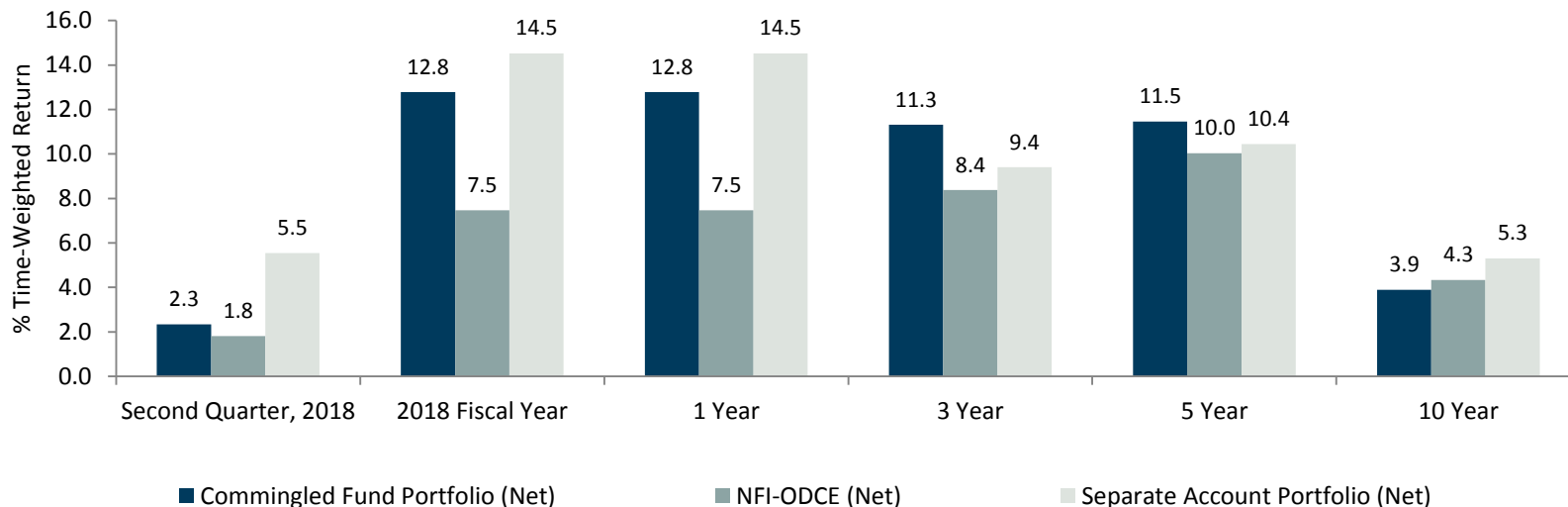
Core Portfolio Performance



- The SCERS Core Portfolio consists of two Core Separate Accounts, managed by BlackRock and Cornerstone, and seven open-end Core Commingled funds. The Core Commingled Fund exposure includes Morgan Stanley’s Prime Property Fund, MetLife Core Property Fund, Jamestown Premier Property Fund, Principal U.S. Property Account, Prologis Targeted U.S. Logistics Fund, Prologis European Logistics Fund, and Townsend Real Estate Fund. All recent investments in the commingled fund space have been accretive to outperforming the benchmark.
- Performance of the Core Portfolio is evaluated relative to the NCREIF Fund Index of Open-End Diversified Core Equity funds (“NFI-ODCE”), net of fees. In aggregate, the Core Portfolio outperforms the NFI-ODCE, net of fees, over all displayed time periods.
- The Core Portfolio has recently benefited from an overweight exposure to industrial, with both the Prologis U.S. and European fund generating a 1 year net return of 21.7% and 20.8%, respectively. In addition, the BlackRock Core Separate Account benefitted from the 7.7% write-up of Lake Washington, where market leasing was ~9% higher than underwritten.
- The SCERS Core Portfolio outperformed the CPI + 500 bps (the SCERS Real Asset benchmark), with the exception of the ten-year and since inception time period (since inception returns not displayed).

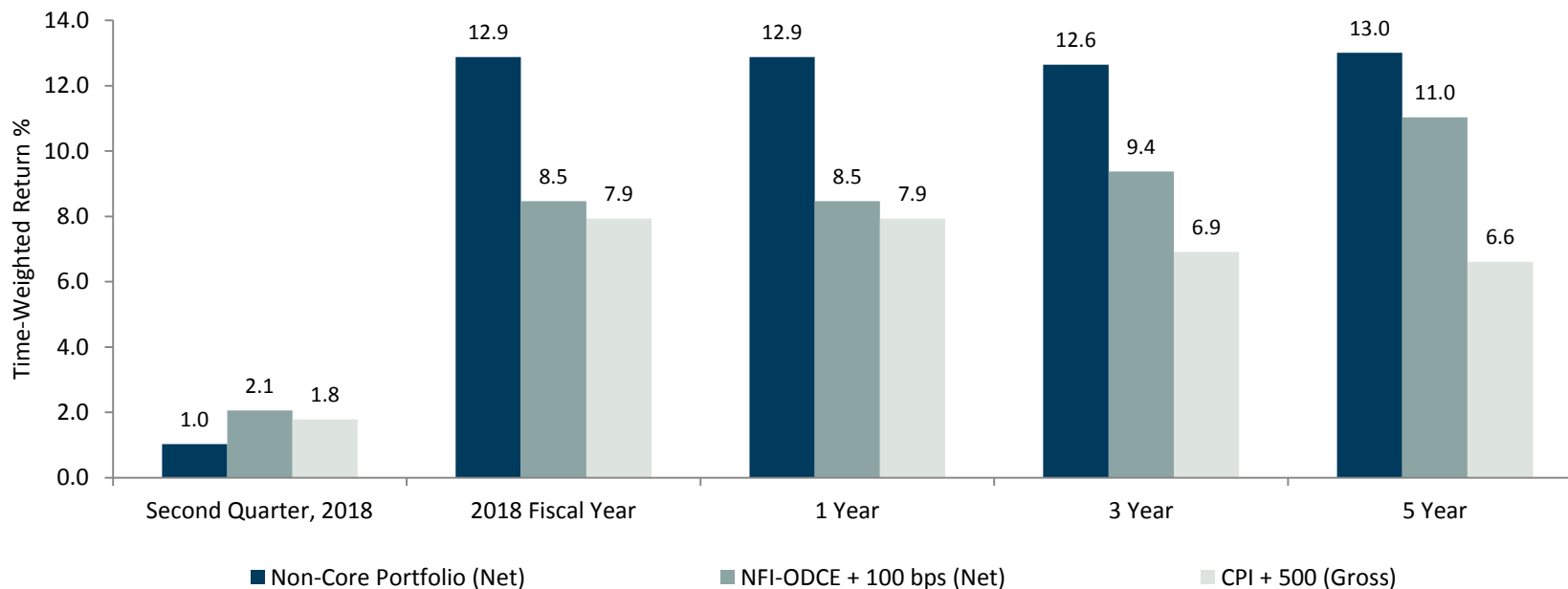
*EX-US funds produced the following 2Q18 net returns in local currency: Prologis Targeted Europe Logistics Fund (Euro) 4.1%

Core Portfolio Performance By Vehicle



- Commingled Funds outperformed the NFI-ODCE over the Quarter, Fiscal, one-year, three-year, five-year and since inception time periods (not displayed) but underperformed over the ten-year time period. Commingled Fund outperformance over the one-year time period is attributable to recent investments in Prologis Targeted U.S. Logistics Fund, Prologis Targeted Europe Logistics Fund, Prime Property Fund, MetLife Core Property Fund, Jamestown Premier Property Fund, Principal U.S. Property Account and Townsend Real Estate Fund.
- Longer term underperformance is primarily attributable to the inclusion of the BlackRock Granite Property Fund in historical returns (as a result, SCERS redeemed capital in the third Quarter of 2013). As a result, and also as part of the overall rebalancing plan for the Core Commingled Fund Portfolio, a partial redemption was made from Cornerstone Patriot Fund in 2014 followed by a full redemption in 2015.
- In the medium-term, Separate Account performance suffered as a result of recent sales activity, where sale prices trailed carrying value. The decision to liquidate was made in recognition of core pricing reaching a perceived cyclical peak and in tandem with efforts to rebalance the core portfolio with commingled funds. In July 2017, SCER's board approved a complete liquidation of the separate account assets, in favor of commingled fund investments going forward.

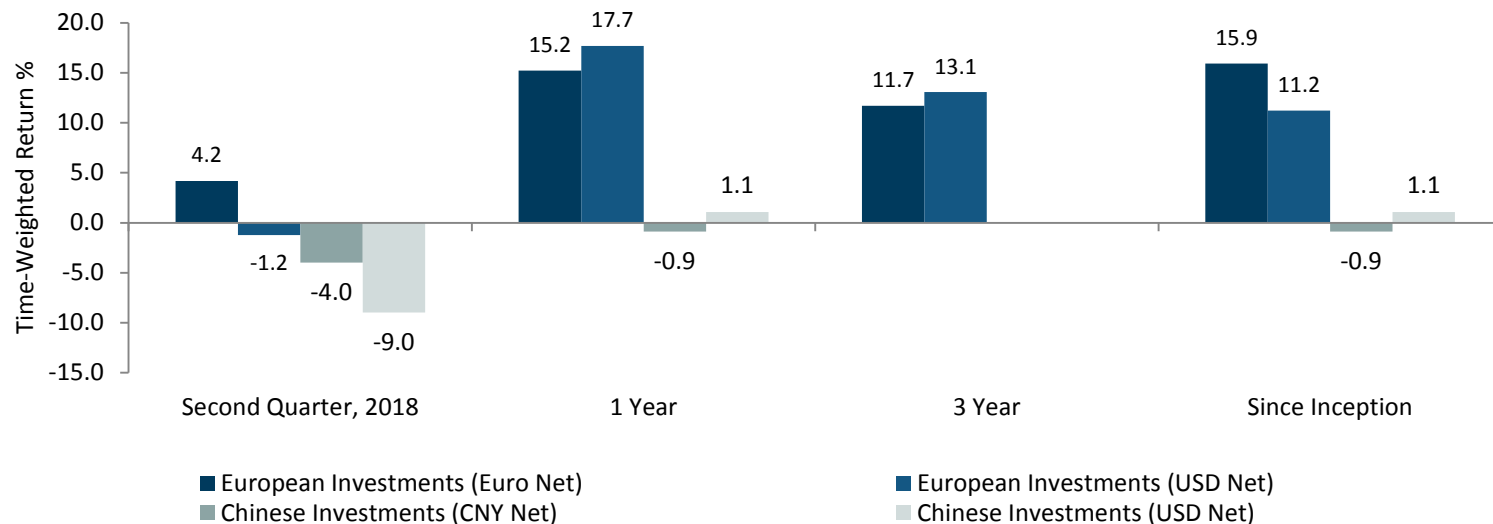
Non-Core Portfolio Performance



- The SCERS Non-Core Portfolio includes both Value Add and Opportunistic Real Estate strategies, which are defined in the Glossary of Terms. As displayed above, the SCERS Non-Core Portfolio outperformed the NFI-ODCE + 100 basis points over all periods displayed with exception of the most recent Quarter; short-term performance has suffered as a result of currency depreciation relative to the Dollar.
- Outperformance over the last year is attributable to Value Add and Opportunistic strategies.
 - The following Value Add investments were particularly accretive and have outperformed relative to the NFI-ODCE + 100bps (Net): ECE European Prime Shopping Centre Fund II (15.1%), Hammes Partners II (13.5%), NREP Nordic Strategies Fund (15.7%) and NREP Nordic Strategies Fund II (22.7%).
 - The following Opportunistic investments were particularly accretive and have outperformed relative to the NFI-ODCE + 100bps (Net): Block 295 (13.4%) and Och-Ziff Real Estate Fund III (39.9%).
- The five-year number also reflects a reset of market values for underperforming legacy investments following the global financial crisis.

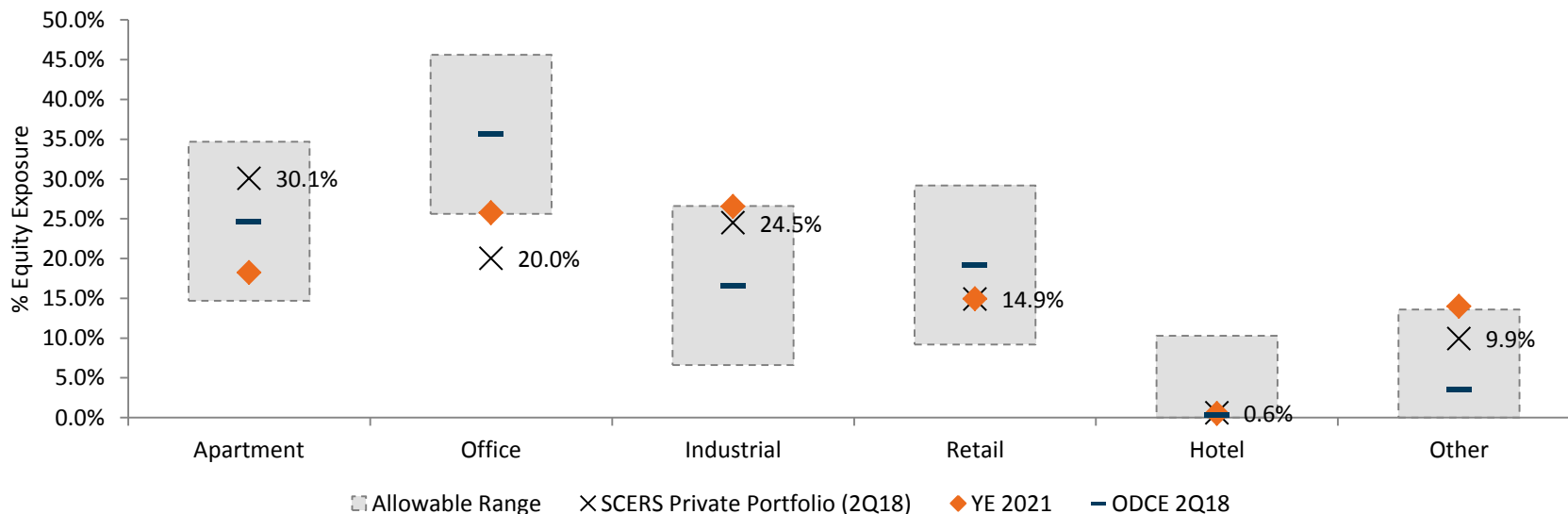
**EX-US funds produced the following 2Q18 net returns in local currency: Carlyle China Realty Fund (Chinese Yuan) 0.8%, Carlyle's Project Rome (Chinese Yuan) -5.9%, DRC European Real Estate Debt Fund II (Pound Sterling) 1.6%, ECE European Prime Shopping Center Fund II (Euro) 3.9%, NREP Nordic Strategies Fund (Euro) 1.4%, and NREP Nordic Strategies Fund II (Euro) 5.7%*

Ex-US Portfolio Performance



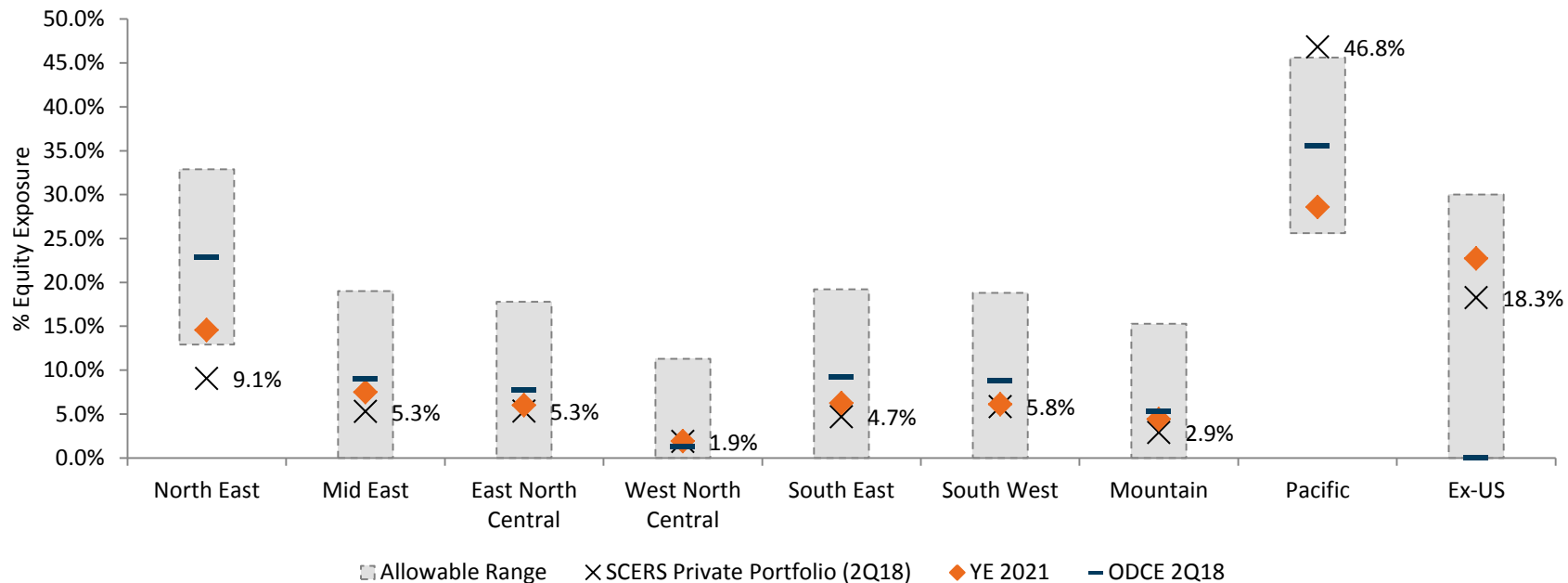
- Approximately 18% of the SCERS Portfolio is comprised of Ex-US investment. SCERS does not currently hedge its foreign currency exposures and pays liabilities in US Dollars. As such, FX movement will impact performance for Ex-US investments. The chart above isolates European and Asia investments and displays performance both before and after currency conversion.
- Currency movement has negatively impacted foreign investments over recent time periods. European performance in dominant local currencies has been positive and accretive to SCERS' primary benchmark. Chinese investments, solely made up of Carlyle investments, are experiencing a J-curve.
- The SCERS Euro Denominated Composite includes: DRC European Real Estate Debt Fund II (Pound Sterling) 1.6%, ECE European Prime Shopping Center Fund II (Euro) 3.9%, NREP Nordic Strategies Fund (Euro) 1.4%, and NREP Nordic Strategies Fund II (Euro) 5.7%
 - Since Inception period begins 1Q14.
 - For the purposes of this composite, DRC has been included as a Euro denominated fund.
- The SCERS Chinese Yuan Composite includes: Carlyle China Realty Fund (Chinese Yuan) 0.8% and Carlyle's Project Rome (Chinese Yuan) -5.9%.
 - Since Inception period begins 3Q17.
 - SCERS' Carlyle investments are USD denominated at the fund level, but property values are exposed to currency translation

Real Estate Private Portfolio Diversification – Property Type



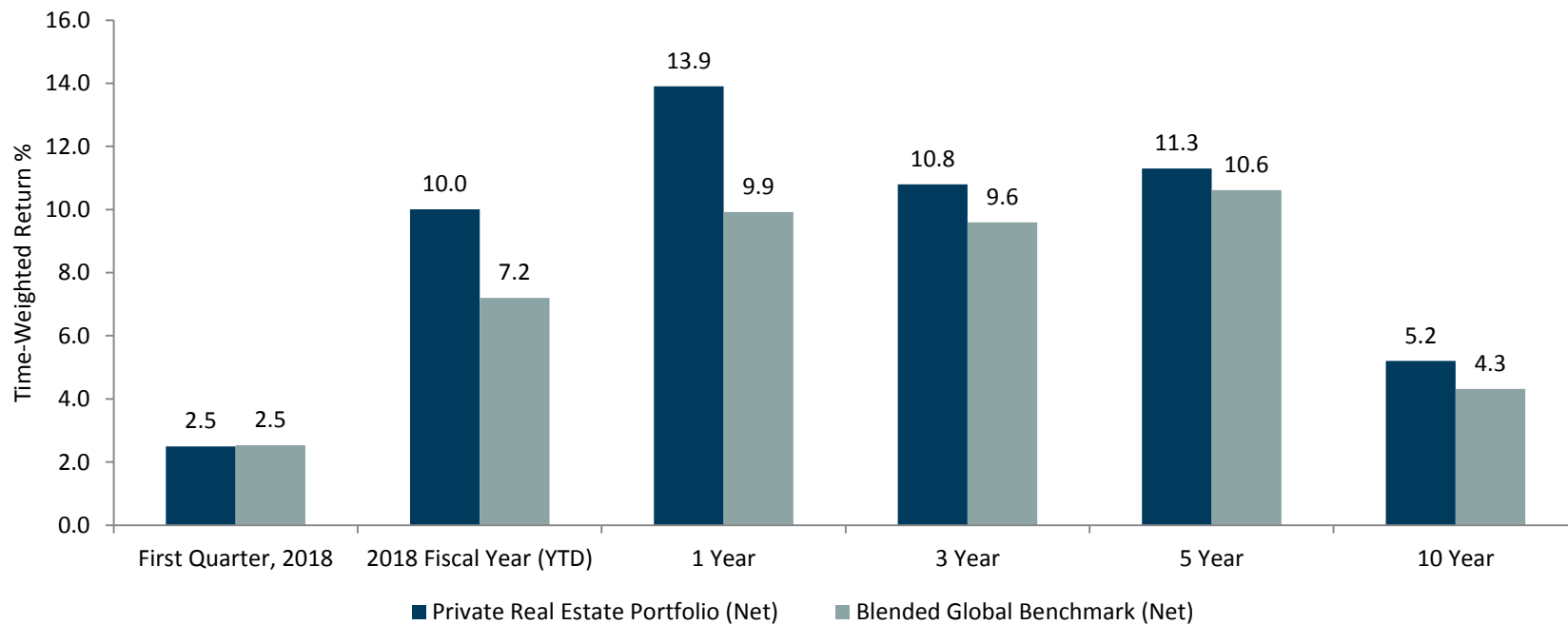
- The diversification of the Private Portfolio is compared to the diversification of the NFI-ODCE, with a permissible deviation of $\pm 10.0\%$ for each property type. The Real Estate Policy also allows for temporary deviations in order to provide SCERS with the flexibility required to overweight or underweight property types during certain parts of the market cycle.
- As of the Second Quarter, the Private Portfolio was in compliance across all property types with the exception of office.
- Favorable views on the industrial property type fundamentals support increasing exposure in today's environment. SCERS made a \$70 million commitment in 2014 to the industrial space (in both the US and Europe). SCERS made an additional contribution of \$15 million to Prologis USLF during the Quarter which further increased exposure. Going forward, exposure to logistics assets will increase as capital is called by Carlyle for the Project Rome co-invest and an additional \$15 million commitment to Prologis' European vehicle.
- Property exposure is expected to be within guidelines by YE-2021, with the transition of IMA assets to commingled funds driving change.
- The "Other" property type exposure represents Och-Ziff Real Estate Fund III (parking, senior housing and cell towers), KKR Real Estate Partners Americas (senior housing), CIM Fund VIII (condominiums), Hammes Partners II (medical office), Jamestown Premier Property Fund (signage – One Times Square), Townsend Real Estate Fund (senior and student housing) and Prime Property Fund (self storage).

Real Estate Private Portfolio Diversification – Geographic Region



- The diversification of the Private Portfolio is compared to the diversification of the NFI-ODCE, with a permissible deviation of $\pm 10.0\%$ for each region. Ex-US exposure is limited to 30% of the Total Private Portfolio.
- As of the Second Quarter, the Private Portfolio was in breach of the target compliance range with an overweight exposure to the Pacific region and underweight exposure to the North East. Near-term plans for terminating the separate account program is projected to dilute the Portfolio's exposure to the Pacific region, given the separate account program's current exposure of more than 90% to the Pacific region, as capital gets redeployed across regions.
- Tactical overweight/underweight positions may exist over time.
- The Private Portfolio's international exposure is 18.3%, well within its 30% constraint, but will increase as KKR Real Estate Partners Americas, Och-Ziff Real Estate Fund III, NREP Nordic Strategies Fund II & III, ECE European Prime Shopping Centre Fund II, and Prologis European Logistics Fund continue to call capital and purchase assets in Europe.
- In 2017, SCERS committed to Carlyle China Realty (\$10m) and Project Rome co-invest (\$20m initial; \$20m re-up April 2017) which will increase Ex-US exposure and diversify international exposure as both investments are 100% China. As of 2Q18, these investments provide \$33 million in equity exposure to China.

Private Real Estate Performance – Global Ancillary Benchmark (1Q18)



- The Global Ancillary Benchmark is made-up of a the NFI-ODCE (Core), NFI-ODCE + 100bps (Non-Core), GREFI Europe Core and GREFI Europe Non-Core to create a global blended benchmark based on weighted average invested capital for each strategy.
 - GREFI reports on a 12 week lag so the ancillary bench will be reported on a quarterly lag to SCERS.
- The Private Portfolio's international exposure is 16.7%, well within its 30% constraint. International exposure is mainly non-core in nature, with the exception of Prologis Targeted Europe Logistics Fund.
- The SCERS Private Real Estate program has outperformed its secondary benchmark over all time periods.

Exhibit A: Performance Flash Report



Portfolio Composition (\$)								
Total Plan Assets	Allocation		Market Value		Unfunded Commitments		Remaining Allocation	
9,236,785,830	Core	7.0%	644,904,619	7.0%	20,469,788	0.2%	-18,799,399	-0.2%
	Non-Core	0.00% - 5.00%	229,979,562	2.5%	162,430,727	1.8%	-184,582,608	-2.0%
	Total	7.0%	874,884,181	9.5%	182,900,515	2.0%	-203,382,007	-2.2%

Performance Summary	Quarter (%)		1 Year (%)		3 Year (%)		5 Year (%)	
	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
Core Portfolio (Commingled Funds & Separate Accounts)	4.1	3.6	15.1	13.5	11.3	10.0	12.3	10.8
Non-Core Portfolio (Value Added & Opportunistic, 1Q2007 Forward)	2.0	1.0	15.7	12.9	15.4	12.6	16.2	13.0
Private Real Estate Portfolio	3.6	2.9	15.3	13.3	12.2	10.6	13.0	11.2
NFI-ODCE (Core)	2.1	1.8	8.4	7.5	9.4	8.4	11.0	10.0
NFI-ODCE + 100 bps (Non-Core)	2.3	2.1	9.4	8.5	10.4	9.4	12.0	11.0
NFI-ODCE + 35 bps (Private Portfolio)	2.1	1.9	8.8	7.8	9.7	8.7	11.4	10.4

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Core Commingled Funds								
Jamestown Premier Property Fund	2014	15,000,000	19,412,389	5,279,323	11,205,454	17,591,782	2.0	2.2
MetLife Core Property Fund	2013	35,000,000	43,350,974	0	8,941,296	57,649,360	6.6	5.5
Prime Property Fund	2013	35,000,000	43,571,980	0	8,571,980	57,974,519	6.6	5.5
Principal U.S. Property Account	2015	35,000,000	35,000,000	0	0	44,145,919	5.0	4.2
Prologis European Logistics Fund	2015	49,670,458	34,479,993	15,190,465	1,003,984	37,826,172	4.3	5.0
Prologis Targeted U.S. Logistics Fund	2015	50,000,000	50,000,000	0	3,900,066	66,354,422	7.6	6.3
Townsend Real Estate Fund, L.P.	2016	90,000,000	96,662,058	0	6,662,058	107,795,149	12.3	10.2
Core Commingled Funds	1986	309,670,458	322,477,394	20,469,788	40,284,838	389,337,323	44.5	38.7
Core Separate Accounts								
BlackRock Core Separate Account	1995	0	842,323,284	0	1,045,504,449	172,966,193	19.8	16.4
Cornerstone Separate Account	2004	0	255,487,669	0	271,606,331	82,601,103	9.4	7.8
Core Separate Accounts	1996	0	1,097,810,953	0	1,317,110,780	255,567,296	29.2	24.2
<i>Total BlackRock Separate Account</i>	1996	0	860,579,204	0	1,045,504,449	196,771,746	22.5	18.6
Total Core Portfolio	1986	309,670,458	1,420,288,347	20,469,788	1,357,395,618	644,904,619	73.7	62.9
Value Added Portfolio								
AEW Value Investors Fund II ¹	2007	21,812,596	21,857,719	0	27,736,393	59,166	0.0	0.0
Allegis Value Trust	2006	25,000,000	25,550,296	0	25,659,296	7,213,661	0.8	0.7
Carlyle China Realty	2017	10,000,000	8,025,070	3,430,361	1,593,478	6,103,097	0.7	0.9
DRC European Real Estate Debt Fund II	2013	50,007,963	45,526,846	27,177,062	36,221,987	12,765,295	1.5	3.8
ECE European Prime Shopping Centre Fund II ¹	2015	33,611,623	15,550,500	20,256,403	1,593,422	18,052,571	2.1	3.6
Hammes Partners II	2015	25,000,000	23,874,172	2,521,366	5,542,793	22,055,073	2.5	2.3
Hines US Office Value Added Fund II	2007	25,000,000	24,382,964	846,154	16,970,755	549,645	0.1	0.1
NREP Nordic Strategies Fund	2014	16,859,260	21,924,715	575,485	20,796,139	17,980,588	2.1	1.8
NREP Nordic Strategies Fund II	2016	35,176,432	22,386,998	13,939,812	1,876,152	25,050,575	2.9	3.7
NREP Nordic Strategies Fund III	2018	37,391,914	0	37,391,914	0	393,542	0.0	3.6
Value Added Portfolio	1986	279,859,788	209,079,280	106,138,557	137,990,415	110,223,213	12.6	20.5

Funding Status

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Opportunistic Portfolio								
BlackRock High Return Separate Account	2016	0	18,255,920	0	0	23,805,553	2.7	2.3
Carlyle China Project Rome Co-Investment	2017	40,000,000	27,968,172	12,970,866	0	27,317,028	3.1	3.8
CIM Fund VIII	2015	35,000,000	27,704,010	10,036,645	2,585,328	30,948,597	3.5	3.9
KKR Real Estate Partners Americas ¹	2014	35,000,000	28,755,000	16,686,640	18,938,925	19,206,113	2.2	3.4
Och-Ziff Real Estate Fund III ¹	2014	35,000,000	21,144,034	16,598,019	11,517,567	18,479,058	2.1	3.3
Opportunistic Portfolio	1991	145,000,000	123,827,136	56,292,170	33,041,820	119,756,349	13.7	16.6
Total Non-Core Portfolio 1Q 2007 Forward	2007	424,859,788	332,906,416	162,430,727	171,032,235	229,979,562	26.3	37.1
Total Private Portfolio								
SCERS	1986	734,530,246	1,753,194,763	182,900,515	1,528,427,853	874,884,181	100.0	100.0

¹ Preliminary performance, subject to change.



Returns (%)	Market Value (\$)	Quarter				Fiscal Year 2018				1 Year				3 Year			
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET
Core Commingled Funds																	
Jamestown Premier Property Fund	17,591,782	0.9	1.2	2.1	1.8	4.3	15.2	20.0	15.3	4.3	15.2	20.0	15.3	4.5	8.6	13.4	10.5
MetLife Core Property Fund	57,649,360	1.2	1.6	2.8	2.7	4.9	5.6	10.7	10.1	4.9	5.6	10.7	10.1	5.0	5.5	10.7	10.2
Prime Property Fund	57,974,519	1.0	1.1	2.1	1.8	4.0	5.3	9.4	8.4	4.0	5.3	9.4	8.4	4.2	6.4	10.8	9.6
Principal U.S. Property Account	44,145,919	1.2	1.3	2.5	2.2	4.7	4.4	9.3	8.3	4.7	4.4	9.3	8.3				
Prologis European Logistics Fund ⁵	37,826,172	1.4	-2.2	-0.8	-1.3	6.4	16.4	23.5	20.8	6.4	16.4	23.5	20.8				
Prologis Targeted U.S. Logistics Fund	66,354,422	1.2	4.6	5.8	5.1	5.2	19.3	25.2	21.7	5.2	19.3	25.2	21.7	5.6	13.9	20.1	17.3
Townsend Real Estate Fund, L.P.	107,795,149	1.0	1.3	2.3	2.2	4.4	5.9	10.4	10.2	4.4	5.9	10.4	10.2				
Core Commingled Funds	389,337,323	1.1	1.5	2.6	2.3	4.8	9.2	14.3	12.8	4.8	9.2	14.3	12.8	4.7	7.6	12.6	11.3
Core Separate Accounts																	
BlackRock Core Separate Account	172,966,193	1.3	4.6	5.9	4.8	5.2	7.8	13.3	10.8	5.2	7.8	13.3	10.8	5.1	6.5	11.8	9.9
Cornerstone Separate Account	82,601,103	1.0	6.3	7.3	7.2	4.2	18.7	23.5	22.8	4.2	18.7	23.5	22.8	4.5	9.5	14.3	13.6
Core Separate Accounts	255,567,296	1.2	5.2	6.4	5.5	4.8	11.2	16.5	14.5	4.8	11.2	16.5	14.5	4.9	5.8	10.9	9.4
<i>Total BlackRock Separate Account</i>	<i>196,771,746</i>	<i>1.1</i>	<i>4.5</i>	<i>5.6</i>	<i>4.5</i>	<i>4.4</i>	<i>8.9</i>	<i>13.6</i>	<i>11.1</i>	<i>4.4</i>	<i>8.9</i>	<i>13.6</i>	<i>11.1</i>	<i>4.6</i>	<i>5.2</i>	<i>10.0</i>	<i>8.2</i>
Total Core Portfolio	644,904,619	1.2	2.9	4.1	3.6	4.8	10.0	15.1	13.5	4.8	10.0	15.1	13.5	4.8	6.3	11.3	10.0
Value Added Portfolio																	
AEW Value Investors Fund II ^{4,4}	59,166																
Allegis Value Trust ¹	7,213,661	1.1	-2.2	-1.2	-1.2	4.5	-3.8	0.6	0.2	4.5	-3.8	0.6	0.2	5.3	1.0	6.3	5.9
Carlyle China Realty	6,103,097	2.1	-5.0	-2.9	-4.5	1.7	6.0	8.0	3.7	1.7	6.0	8.0	3.7				
DRC European Real Estate Debt Fund II	12,765,295	1.8	-5.8	-4.0	-4.3	8.1	0.5	8.7	7.4	8.1	0.5	8.7	7.4	11.3	-7.1	3.6	2.3
ECE European Prime Shopping Centre Fund II C ²	18,052,571	1.2	-2.2	-0.9	-1.4	7.0	10.5	18.0	15.1	7.0	10.5	18.0	15.1				
Hammes Partners II	22,055,073	2.1	6.6	8.7	5.5	7.8	10.8	19.2	13.5	7.8	10.8	19.2	13.5	10.6	9.0	20.5	13.9
Hines US Office Value Added Fund II	549,645																
NREP Nordic Strategies Fund	17,980,588	1.0	-4.8	-3.8	-4.0	5.9	10.3	16.6	15.7	5.9	10.3	16.6	15.7	9.6	17.7	28.5	27.1
NREP Nordic Strategies Fund II	25,050,575	-2.1	3.4	1.3	0.3	-3.3	33.4	29.2	22.7	-3.3	33.4	29.2	22.7				
NREP Nordic Strategies Fund III	393,542																
Value Added Portfolio	110,223,214	0.6	0.6	1.2	-0.1	4.4	11.2	15.9	12.7	4.4	11.2	15.9	12.7	7.4	7.9	15.7	13.0
Opportunistic Portfolio																	
BlackRock High Return Separate Account	23,805,553	-0.3	3.4	3.0	2.7	-0.9	17.0	16.0	13.4	-0.9	17.0	16.0	13.4				
Carlyle China Project Rome Co-Investment	27,317,028	-2.5	-4.5	-6.9	-10.7	-2.8	8.4	5.2	-0.1	-2.8	8.4	5.2	-0.1				
CIM Fund VIII	30,948,597	0.0	4.5	4.5	4.1	-0.2	11.1	11.0	9.3	-0.2	11.1	11.0	9.3	-0.1	12.8	12.7	10.3
KKR Real Estate Partners Americas ⁴	19,206,113	2.4	-1.1	1.3	1.4	12.0	-4.1	7.6	7.1	12.0	-4.1	7.6	7.1	10.9	-1.0	10.1	8.0
Och-Ziff Real Estate Fund III ^{4,3}	18,479,058	2.5	6.2	8.7	7.9	12.1	29.8	44.5	39.9	12.1	29.8	44.5	39.9	11.4	21.5	34.6	27.3
Opportunistic Portfolio	119,756,349	0.5	2.4	2.9	2.2	3.8	11.3	15.4	13.0	3.8	11.3	15.4	13.0	4.7	10.1	15.2	12.1
Total Non-Core Portfolio 1Q 2007 Forward	229,979,563	0.5	1.5	2.0	1.0	4.1	11.3	15.7	12.9	4.1	11.3	15.7	12.9	6.4	8.6	15.4	12.6
Total Private Portfolio																	
SCERS	874,884,182	1.0	2.6	3.6	2.9	4.6	10.3	15.3	13.3	4.6	10.3	15.3	13.3	5.2	6.8	12.2	10.6
Ex-US Dollar Denominated Investments (In Local Currency)																	
Prologis Targeted Europe Logistics Fund (Euro)	€ 32,371,638	1.5	3.2	4.7	4.1	6.4	13.8	20.8	18.2	6.4	13.8	20.8	18.2				
DRC European Real Estate Debt Fund II (Pound Sterling)	£9,665,881	1.9	0.0	1.9	1.6	8.2	0.0	8.2	6.9	8.2	0.0	8.2	6.9	11.4	-1.5	9.7	8.3
ECE European Prime Shopping Centre Fund II (Euro)	€ 15,449,391	1.3	3.1	4.4	3.9	6.9	7.9	15.3	12.4	6.9	7.9	15.3	12.4				
NREP Nordic Strategies Fund (Euro)	€ 15,387,788	1.5	0.1	1.6	1.4	6.2	7.5	14.1	13.3	6.2	7.5	14.1	13.3	9.8	15.7	26.5	25.1
NREP Nordic Strategies Fund II (Euro)	€ 21,438,282	-2.2	9.0	6.8	5.7	-3.4	30.9	26.7	20.4	-3.4	30.9	26.7	20.4				
NREP Nordic Strategies Fund III (Euro)	€ 336,793																
Indices																	
NFI ODCE+ 35bps				2.1	1.9			8.8	7.8			8.8	7.8			9.7	8.7
NFI-ODCE		1.1	1.0	2.1	1.8	4.3	4.0	8.4	7.5	4.3	4.0	8.4	7.5	4.4	4.8	9.4	8.4
NFI-ODCE + 100bps				2.3	2.1			9.4	8.5			9.4	8.5			10.4	9.4
CPI + 500 bps				1.8				7.9				7.9				6.9	

Returns (%)	Market Value (\$)	5 Year				10 Year				Inception				TWR Calculation Inception	Net IRR	Equity Multiple
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET			
Core Commingled Funds																
Jamestown Premier Property Fund	17,591,782									4.6	10.1	15.1	11.9	1Q14	12.0	1.5
MetLife Core Property Fund	57,649,360									5.1	7.2	12.6	12.1	1Q14	12.1	1.5
Prime Property Fund	57,974,519									4.3	8.0	12.6	11.4	4Q13	11.4	1.5
Principal U.S. Property Account	44,145,919									4.8	4.8	9.8	8.8	4Q15	8.8	1.3
Prologis European Logistics Fund ⁵	37,826,172									4.9	9.2	14.3	12.6	4Q17	17.4	1.1
Prologis Targeted U.S. Logistics Fund	66,354,422									5.6	13.9	20.1	17.3	3Q15	18.4	1.4
Townsend Real Estate Fund, L.P.	107,795,149									4.4	6.3	11.0	10.7	2Q16	10.6	1.2
Core Commingled Funds	389,337,323	4.7	7.7	12.7	11.5	4.9	0.0	4.9	3.9	4.5	3.4	8.0	7.1	4Q86	6.7	1.3
Core Separate Accounts																
BlackRock Core Separate Account	172,966,193	5.2	7.8	13.4	11.2	5.4	1.1	6.5	5.2	7.0	3.4	10.5	8.9	1Q96	10.0	1.4
Cornerstone Separate Account	82,601,103	5.1	7.5	12.9	12.1	5.4	2.0	7.5	6.7	5.5	3.1	8.7	7.9	3Q04	5.8	1.4
Core Separate Accounts	255,567,296	5.1	6.7	12.1	10.4	5.4	1.0	6.4	5.3	7.1	3.2	10.5	9.1	1Q96	9.0	1.4
<i>Total BlackRock Separate Account</i>	<i>196,771,746</i>	<i>4.9</i>	<i>7.0</i>	<i>12.2</i>	<i>10.2</i>	<i>5.2</i>	<i>0.9</i>	<i>6.2</i>	<i>4.9</i>	<i>7.1</i>	<i>3.3</i>	<i>10.6</i>	<i>9.1</i>	<i>1Q96</i>	<i>9.8</i>	<i>1.4</i>
Total Core Portfolio	644,904,619	5.0	7.0	12.3	10.8	5.2	0.8	6.1	5.0	5.6	2.0	7.6	6.6	4Q86	8.4	1.4
Value Added Portfolio																
AEW Value Investors Fund II ^{4,4}	59,166													3Q07	5.6	1.3
Allegis Value Trust ¹	7,213,661	5.6	1.3	7.0	6.5	5.4	-8.6	-3.6	-4.4	4.8	-4.5	0.1	-1.4	1Q07	3.0	1.3
Carlyle China Realty	6,103,097									1.7	6.0	8.0	3.7	3Q17	-8.1	1.0
DRC European Real Estate Debt Fund II	12,765,295									10.7	-5.8	4.5	2.6	1Q14	3.2	1.1
ECE European Prime Shopping Centre Fund II C ⁴	18,052,571									0.6	21.7	22.7	20.0	4Q15	19.8	1.3
Hammes Partners II	22,055,073									10.6	9.0	20.5	13.9	3Q15	11.5	1.2
Hines US Office Value Added Fund II	549,645													4Q07	-4.8	0.7
NREP Nordic Strategies Fund	17,980,588									10.9	20.0	32.5	30.6	1Q15	31.9	1.8
NREP Nordic Strategies Fund II	25,050,575									2.4	26.3	29.2	16.0	3Q16	18.2	1.2
NREP Nordic Strategies Fund III	393,542													3Q18	0.0	
Value Added Portfolio	110,223,214	7.5	7.6	15.5	12.9	6.7	-5.2	1.1	-1.1	1.9	3.7	5.7	4.6	4Q86	4.8	1.2
Opportunistic Portfolio																
BlackRock High Return Separate Account	23,805,553									4.5	7.4	12.2	10.8	1Q16	11.0	1.1
Carlyle China Project Rome Co-Investment	27,317,028									-2.8	8.4	5.2	-0.1	3Q17	-5.9	1.0
CIM Fund VIII	30,948,597									0.1	11.6	11.7	9.2	2Q15	8.4	1.2
KKR Real Estate Partners Americas ⁴	19,206,113									9.9	2.1	12.3	8.9	2Q14	13.8	1.3
Och-Ziff Real Estate Fund III ^{4,3}	18,479,058									16.5	17.7	36.5	11.5	4Q14	26.9	1.4
Opportunistic Portfolio	119,756,349	4.8	17.9	23.4	18.0	3.6	17.0	21.1	15.4	1.3	8.4	9.8	7.8	1Q91	24.2	1.3
Total Non-Core Portfolio 1Q 2007 Forward	229,979,563	6.8	8.9	16.2	13.0	5.6	4.0	9.6	6.1	4.4	5.3	9.8	5.6	1Q07	7.2	1.2
Total Private Portfolio																
SCERS	874,884,182	5.3	7.4	13.0	11.2	5.3	1.4	6.8	5.4	4.4	4.8	9.4	8.3	4Q86	8.4	1.4
Ex-US Dollar Denominated Investments (In Local Currency)																
Prologis Targeted Europe Logistics Fund (Euro)	€ 32,371,638									4.4	6.8	11.4	10.1	1Q16	10.3	1.1
DRC European Real Estate Debt Fund II (Pound Sterling)	£9,665,881									10.7	-0.9	9.8	7.8	1Q14	7.9	1.2
ECE European Prime Shopping Centre Fund II (Euro)	€ 15,449,391									0.4	19.9	21.0	18.3	4Q15	17.5	1.2
NREP Nordic Strategies Fund (Euro)	€ 15,387,788									11.2	20.9	33.7	31.8	1Q15	33.0	1.8
NREP Nordic Strategies Fund II (Euro)	€ 21,438,282									2.4	22.9	25.6	12.8	3Q16	15.7	1.2
NREP Nordic Strategies Fund III (Euro)	€ 336,793													4Q18		
Indices																
NFI ODCE+ 35bps				11.4	10.4			5.6	4.7			7.7	6.7	4Q86		
NFI-ODCE		4.7	6.1	11.0	10.0	5.2	0.1	5.3	4.3	6.8	0.5	7.3	6.3	4Q86		
NFI-ODCE + 100bps				12.0	11.0			6.3	5.3			8.3	7.3	4Q86		
CPI + 500 bps				6.6				6.5				7.8		4Q86		

Returns (%)	Market Value (\$)	Quarter				Fiscal Year 2018				1 Year				3 Year			
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET
BlackRock Core Separate Account																	
1811 Brittmooore	13,174,904	1.9	7.2	9.1	1.5	5.2	8.0	13.5	5.2	5.2	8.0	13.5	5.2	6.3	1.9	8.3	6.5
Forest Pointe ¹	7,517																
Harbour Pointe	41,609,981	1.4	5.2	6.6	5.5	5.5	8.0	13.7	11.2	5.5	8.0	13.7	11.2	5.5	7.1	12.8	10.4
Hillside Village	58,036,890	1.0	2.8	3.8	3.1	4.4	6.0	10.6	8.4	4.4	6.0	10.6	8.4	4.3	8.5	13.1	10.5
Lake Washington Park	42,429,805	1.4	7.7	9.1	9.0	5.0	9.7	15.1	14.5	5.0	9.7	15.1	14.5	4.9	4.7	9.7	9.2
SCERS - Portfolio Master Acct. ²	80,380																
The Tower at Hollywood Hills	17,626,717	1.3	0.2	1.5	1.1	6.1	8.8	15.4	12.2	6.1	8.8	15.4	12.2	5.7	9.0	15.2	11.6
Investment Total	172,966,194	1.3	4.6	5.9	4.8	5.2	7.8	13.3	10.8	5.2	7.8	13.3	10.8	5.1	6.5	11.8	9.9
Cornerstone Separate Account																	
Crescent Park	82,588,539	1.0	6.3	7.3	7.2	4.3	18.7	23.6	22.9	4.3	18.7	23.6	22.9	4.8	11.8	17.0	16.3
Flying Cloud ¹	2,687																
Gateway Corporate ¹	1,529																
Salt Pond ¹	8,349																
Investment Total	78,147,508	1.0	6.3	7.3	7.2	4.2	18.7	23.5	22.8	4.2	18.7	23.5	22.8	4.5	9.5	14.3	13.6
BlackRock High Return Separate Account																	
Block 295	23,805,553	-0.3	3.4	3.0	2.7	-0.9	17.0	16.0	13.4	-0.9	17.0	16.0	13.4				
Investment Total	23,805,553	-0.3	3.4	3.0	2.7	-0.9	17.0	16.0	13.4	-0.9	17.0	16.0	13.4				
Total																	
Total Separate Accounts	274,919,255	1.1	5.0	6.1	5.3	4.3	11.7	16.4	14.4	4.3	11.7	16.4	14.4	4.6	6.3	11.1	9.6
Index																	
NFI-ODCE		1.1	1.0	2.1	1.8	4.3	4.0	8.4	7.5	4.3	4.0	8.4	7.5	4.4	4.8	9.4	8.4

¹ This asset has been sold and the market value represents a remaining cash balance.

² SCERS - Cash account that holds leftover cash from previous sales and used for various expenses.

Returns (%)	Market Value (\$)	5 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
		INC	APP	TGRS	TNET	TGRS	TNET			
BlackRock Core Separate Account										
1811 Brittmooore	13,174,904	6.3	3.3	9.8	7.8	10.8	8.9	4Q12	9.0	1.5
Forest Pointe ¹	7,517							4Q05	5.2	1.3
Harbour Pointe	41,609,981	5.8	6.7	12.9	10.4	8.9	7.3	4Q05	7.7	1.7
Hillside Village	58,036,890	4.3	12.4	17.0	14.2	8.4	6.9	4Q07	4.8	1.3
Lake Washington Park	42,429,805	4.5	9.0	13.8	13.2	4.2	3.5	3Q07	4.3	1.4
SCERS - Portfolio Master Acct. ²	80,380							2Q01	4.5	1.7
The Tower at Hollywood Hills	17,626,717	5.4	8.8	14.5	11.5	9.2	7.3	1Q08	6.2	1.6
Investment Total	172,966,194	5.2	7.8	13.4	11.2	10.5	8.9	1Q96	10.0	1.4
Cornerstone Separate Account										
Crescent Park	82,588,539	4.8	10.6	15.8	15.0	8.5	7.4	1Q06	7.1	2.0
Flying Cloud ¹	2,687							4Q06	0.1	1.0
Gateway Corporate ¹	1,529							1Q08	-1.4	0.9
Salt Pond ¹	8,349							3Q04	7.2	1.6
Investment Total	78,147,508	5.1	7.5	12.9	12.1	8.7	7.9	3Q04	5.8	1.4
BlackRock High Return Separate Account										
Block 295	23,805,553					18.2	16.9	3Q16	16.7	1.3
Investment Total	23,805,553					18.2	16.9	3Q16	16.7	1.3
Total										
Total Separate Accounts	274,919,255	5.0	7.0	12.2	10.6	10.5	9.1	1Q96	9.0	1.4
Index										
NFI-ODCE		4.7	6.1	11.0	10.0	7.3	6.3	4Q86		

¹ This asset has been sold and the market value represents a remaining cash

² SCERS - Cash account that holds leftover cash from previous sales and used

Returns (%)	Market Value (\$)	Quarter				Fiscal Year 2018				1 Year				3 Year			
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET
Core Separate Accounts																	
BlackRock Core Separate Account	172,966,193	1.3	4.6	5.9	4.8	5.2	7.8	13.3	10.8	5.2	7.8	13.3	10.8	5.1	6.5	11.8	9.9
Cornerstone Separate Account	82,601,103	1.0	6.3	7.3	7.2	4.2	18.7	23.5	22.8	4.2	18.7	23.5	22.8	4.5	9.5	14.3	13.6
Core Separate Accounts	255,567,296	1.2	5.2	6.4	5.5	4.8	11.2	16.5	14.5	4.8	11.2	16.5	14.5	4.9	5.8	10.9	9.4
<i>Total BlackRock Separate Account</i>	<i>196,771,746</i>	<i>1.1</i>	<i>4.5</i>	<i>5.6</i>	<i>4.5</i>	<i>4.4</i>	<i>8.9</i>	<i>13.6</i>	<i>11.1</i>	<i>4.4</i>	<i>8.9</i>	<i>13.6</i>	<i>11.1</i>	<i>4.6</i>	<i>5.2</i>	<i>10.0</i>	<i>8.2</i>
Separate Account Returns by Property Type																	
Apartment	158,259,662	1.0	4.3	5.4	5.0	4.5	13.1	18.0	16.4	4.5	13.1	18.0	16.4	4.7	7.0	11.9	10.4
Industrial	13,174,904	1.9	7.2	9.1	1.5	5.2	8.0	13.5	5.2	5.2	8.0	13.5	5.2	6.1	1.9	8.1	6.4
Office	66,239,574	0.8	6.1	6.8	6.6	2.9	12.2	15.3	14.0	2.9	12.2	15.3	14.0	3.1	5.3	8.6	7.8
Retail	41,618,330	1.4	5.2	6.6	5.5	5.5	8.0	13.7	11.1	5.5	8.0	13.7	11.1	5.6	7.1	12.9	10.5
Total Private Portfolio																	
SCERS	874,884,182	1.0	2.6	3.6	2.9	4.6	10.3	15.3	13.3	4.6	10.3	15.3	13.3	5.2	6.8	12.2	10.6
NPI Property Level Returns																	
NPI- Apartment		1.1	0.5	1.5		4.3	2.1	6.5		4.3	2.1	6.5		4.5	2.9	7.5	
NPI- Industrial		1.2	2.4	3.6		5.0	8.8	14.1		5.0	8.8	14.1		5.2	7.8	13.3	
NPI-Office		1.1	0.4	1.5		4.6	1.9	6.6		4.6	1.9	6.6		4.6	2.5	7.1	
NPI-Retail		1.1	0.2	1.3		4.7	-0.1	4.6		4.7	-0.1	4.6		4.8	2.9	7.8	
Indices																	
NFI-ODCE		1.1	1.0	2.1	1.8	4.3	4.0	8.4	7.5	4.3	4.0	8.4	7.5	4.4	4.8	9.4	8.4

Returns (%)	Market Value (\$)	5 Year				10 Year				Inception				TWR Calculation Inception	Net IRR	
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET			
Core Separate Accounts																
BlackRock Core Separate Account	172,966,193	5.2	7.8	13.4	11.2	5.4	1.1	6.5	5.2	7.0	3.4	10.5	8.9	1Q96	10.0	
Cornerstone Separate Account	82,601,103	5.1	7.5	12.9	12.1	5.4	2.0	7.5	6.7	5.5	3.1	8.7	7.9	3Q04	5.8	
Core Separate Accounts	255,567,296	5.1	6.7	12.1	10.4	5.4	1.0	6.4	5.3	7.1	3.2	10.5	9.1	1Q96	9.0	
<i>Total BlackRock Separate Account</i>	<i>196,771,746</i>	<i>4.9</i>	<i>7.0</i>	<i>12.2</i>	<i>10.2</i>	<i>5.2</i>	<i>0.9</i>	<i>6.2</i>	<i>4.9</i>	<i>7.1</i>	<i>3.3</i>	<i>10.6</i>	<i>9.1</i>	<i>1Q96</i>	<i>9.8</i>	
Separate Account Returns by Property Type																
Apartment	158,259,662	4.8	7.8	12.9	11.4	4.7	3.6	8.5	7.3	5.8	2.6	8.5	7.5	1Q96	6.5	
Industrial	13,174,904	5.4	5.6	11.2	9.5	5.2	-1.6	3.6	2.6	7.5	3.4	11.1	9.4	3Q96	13.3	
Office	66,239,574	4.3	5.3	9.7	8.4	5.2	-2.2	2.9	2.0	7.4	2.6	10.2	8.7	1Q96	8.7	
Retail	41,618,330	5.9	7.8	14.0	11.8	6.4	0.4	6.8	5.5	7.5	3.3	11.0	9.3	4Q99	9.9	
Total Private Portfolio																
SCERS	874,884,182	5.3	7.4	13.0	11.2	5.3	1.4	6.8	5.4	4.4	4.8	9.4	8.3	4Q86	8.4	
NPI Property Level Returns																
NPI- Apartment		4.7	4.0	8.8		5.0	1.2	6.2		6.2	3.2	9.5		1Q96		
NPI- Industrial		5.4	7.7	13.4		6.0	1.5	7.6		7.2	3.1	10.5		3Q96		
NPI-Office		4.8	3.9	8.9		5.4	-0.4	5.0		6.8	2.5	9.4		1Q96		
NPI-Retail		5.1	4.8	10.1		5.8	1.7	7.5		6.6	3.5	10.3		4Q99		
Indices																
NFI-ODCE		4.7	6.1	11.0	10.0	5.2	0.1	5.3	4.3	6.8	0.5	7.3	6.3	4Q86		

Returns (%)	Market Value (\$)	2018 YTD		Fiscal Year 2018		2017		2016		2015		2014		2013		2012	
		TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
Core Commingled Funds																	
Jamestown Premier Property Fund	17,591,782	6.7	4.9	20.0	15.3	18.0	14.2	6.6	5.3	22.4	17.3	14.7	11.9				
MetLife Core Property Fund	57,649,360	5.0	4.7	10.7	10.1	8.4	7.9	9.3	8.8	16.9	16.3	17.4	16.9				
Prime Property Fund	57,974,519	4.4	3.9	9.4	8.4	9.9	8.7	10.4	9.2	15.9	14.6	15.5	14.1	3.8	3.6		
Principal U.S. Property Account	44,145,919	4.7	4.2	9.3	8.3	9.1	8.1	10.0	9.0	3.0	2.8						
Prologis European Logistics Fund	37,826,172	7.1	5.7	23.5	20.8	30.5	28.0	2.8	2.4								
Prologis Targeted U.S. Logistics Fund	66,354,422	10.0	8.7	25.2	21.7	24.2	20.3	16.1	14.2	9.1	7.9						
Townsend Real Estate Fund, L.P.	107,795,149	5.0	4.9	10.4	10.2	11.1	10.8	8.4	8.2								
Core Commingled Funds	389,337,323	6.0	5.4	14.3	12.8	14.2	12.8	9.8	8.9	15.7	14.1	13.5	12.4	10.2	9.3	11.1	10.1
Core Separate Accounts																	
BlackRock Core Separate Account	172,966,193	8.2	6.6	13.3	10.8	9.1	7.5	11.3	9.3	15.3	13.9	16.3	12.5	11.8	9.6	13.5	13.0
Cornerstone Separate Account	82,601,103	8.4	8.2	23.5	22.8	21.5	20.8	14.0	13.3	2.4	1.6	14.0	13.2	11.3	10.5	16.2	15.4
Core Separate Accounts	255,567,296	8.3	7.1	16.5	14.5	12.8	11.6	10.0	8.6	7.7	6.6	16.0	13.5	11.0	9.5	14.1	13.5
<i>Total BlackRock Separate Account</i>	<i>196,771,746</i>	<i>7.9</i>	<i>6.5</i>	<i>13.6</i>	<i>11.1</i>	<i>10.6</i>	<i>9.0</i>	<i>8.6</i>	<i>7.0</i>	<i>10.7</i>	<i>9.4</i>	<i>17.0</i>	<i>13.6</i>	<i>10.9</i>	<i>9.0</i>	<i>13.1</i>	<i>12.5</i>
Total Core Portfolio	644,904,619	6.9	6.0	15.1	13.5	13.6	12.3	9.8	8.5	10.4	9.2	15.3	13.2	10.8	9.5	13.3	12.6
Value Added Portfolio																	
AEW Value Investors Fund II ^{1,2}	59,166					-8.7	-8.7										
Allegis Value Trust	7,213,661	-3.9	-4.1	0.6	0.2	8.2	7.8	9.9	9.4	8.6	8.0	10.8	10.2	4.7	4.0	21.8	20.9
Carlyle China Realty	6,103,097	5.2	3.4	8.0	3.7	2.7	0.2										
DRC European Real Estate Debt Fund II	12,765,295	0.4	-0.2	8.7	7.4	23.8	22.3	-7.8	-8.9	5.0	3.0	1.4	-2.1				
ECE European Prime Shopping Centre Fund II ¹	18,052,571	2.9	2.2	18.0	15.1	24.7	21.5	27.0	25.9	12.1	11.0						
Hammes Partners II	22,055,073	11.8	7.8	19.2	13.5	12.7	10.0	14.8	8.9	19.4	12.9						
Hines US Office Value Added Fund II ²	549,645																
NREP Nordic Strategies Fund	17,980,588	-0.7	-1.1	16.6	15.7	41.2	40.1	23.1	21.7	55.1	50.8						
NREP Nordic Strategies Fund II	25,050,575	6.1	4.0	29.2	22.7	44.9	34.4	10.7	-1.9								
NREP Nordic Strategies Fund III																	
Value Added Portfolio	110,223,214	4.2	2.4	15.9	12.7	24.2	21.4	9.5	7.0	19.1	17.0	15.7	13.7	13.3	10.8	19.6	18.1

Returns (%)	Market Value (\$)	2018 YTD		Fiscal Year 2018		2017		2016		2015		2014		2013		2012	
		TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
Opportunistic Portfolio																	
BlackRock High Return Separate Account	23,805,553	6.1	5.7	16.0	13.4	24.0	21.7	6.3	6.3								
Carlyle China Project Rome Co-Investment	27,317,028	0.5	-3.5	5.2	-0.1	4.7	3.6										
CIM Fund VIII	30,948,597	6.2	5.5	11.0	9.3	8.4	6.7	5.8	3.4	16.9	13.8						
KKR Real Estate Partners Americas ¹	19,206,113	3.1	3.2	7.6	7.1	13.0	10.0	6.5	5.4	17.1	12.5	12.7	6.5				
Och-Ziff Real Estate Fund III ¹	18,479,058	18.0	16.2	44.5	39.9	43.3	38.2	30.0	22.2	33.7	6.9	9.4	-28.3				
Opportunistic Portfolio	119,756,349	6.8	5.7	15.4	13.0	17.5	14.6	10.0	7.5	23.8	13.1	77.7	62.7	11.7	9.4	54.2	38.5
Total Non-Core Portfolio 1Q 2007 Forward	229,979,563	5.4	4.0	15.7	12.9	21.0	18.2	9.8	7.4	20.0	15.6	19.7	16.3	16.7	13.5	34.6	26.9
Total Private Portfolio																	
SCERS	874,884,182	6.5	5.5	15.3	13.3	15.0	13.5	9.7	8.2	12.3	10.5	15.9	13.6	11.4	9.9	16.4	14.7
Indices																	
NFI-ODCE + 35 bps		4.5	4.0	8.8	7.8	8.0	7.0	9.1	8.1	15.4	14.3	12.8	11.8	14.3	13.3	11.3	10.1
NFI-ODCE		4.3	3.8	8.4	7.5	7.6	6.7	8.8	7.8	15.0	14.0	12.5	11.5	13.9	12.9	10.9	9.8
NFI-ODCE + 100 bps		4.8	4.3	9.4	8.5	8.6	7.7	9.8	8.8	16.0	15.0	13.5	12.5	14.9	13.9	11.9	10.8
CPI + 500 bps		3.7		7.9		7.2		7.2		5.7		5.7		6.6		6.9	

¹ Preliminary performance, subject to change.

² This fund is liquidating and the market value represents a remaining cash balance.

Returns (%)	Market Value (\$)	2011		2010		2009		2008		2007		2006		2005		2004	
		TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
Core Commingled Funds																	
Jamestown Premier Property Fund	17,591,782																
MetLife Core Property Fund	57,649,360																
Prime Property Fund	57,974,519																
Principal U.S. Property Account	44,145,919																
Prologis European Logistics Fund	37,826,172																
Prologis Targeted U.S. Logistics Fund	66,354,422																
Townsend Real Estate Fund, L.P.	107,795,149																
Core Commingled Funds	389,337,323	16.4	15.5	14.1	13.3	-33.0	-33.6	-13.8	-14.6	15.5	14.5	16.9	15.8	23.5	22.3	36.7	35.2
Core Separate Accounts																	
BlackRock Core Separate Account	172,966,193	17.8	17.4	20.7	19.6	-29.5	-29.1	-13.9	-14.3	21.2	16.8	17.7	13.3	27.1	21.6	9.3	5.1
Cornerstone Separate Account	82,601,103	24.9	23.9	21.2	20.2	-31.7	-32.4	-9.4	-10.1	11.9	11.1	11.1	10.2	18.7	17.6	2.9	2.4
Core Separate Accounts	255,567,296	18.7	18.2	18.6	17.6	-28.5	-28.7	-10.5	-11.1	16.3	13.6	15.2	12.1	31.7	26.6	9.8	6.3
<i>Total BlackRock Separate Account</i>	<i>196,771,746</i>	<i>16.1</i>	<i>15.7</i>	<i>17.3</i>	<i>16.4</i>	<i>-26.8</i>	<i>-26.7</i>	<i>-11.1</i>	<i>-11.6</i>	<i>18.5</i>	<i>15.0</i>	<i>16.8</i>	<i>13.1</i>	<i>34.0</i>	<i>28.2</i>	<i>9.9</i>	<i>6.6</i>
Total Core Portfolio	644,904,619	18.2	17.6	17.6	16.7	-29.5	-29.8	-11.3	-12.0	16.1	13.8	15.5	12.7	30.3	25.8	10.6	7.1
Value Added Portfolio																	
AEW Value Investors Fund II ^{1,2}	59,166																
Allegis Value Trust	7,213,661	15.7	14.7	21.6	20.4	-62.2	-62.8	-21.2	-23.9	38.6	28.4						
Carlyle China Realty	6,103,097																
DRC European Real Estate Debt Fund II	12,765,295																
ECE European Prime Shopping Centre Fund II ¹	18,052,571																
Hammes Partners II	22,055,073																
Hines US Office Value Added Fund II ²	549,645																
NREP Nordic Strategies Fund	17,980,588																
NREP Nordic Strategies Fund II	25,050,575																
NREP Nordic Strategies Fund III																	
Value Added Portfolio	110,223,214	16.7	14.7	23.2	20.3	-56.4	-57.6	-31.2	-33.5	18.2	5.6	0.8	0.5				

Returns (%)	Market Value (\$)	2011		2010		2009		2008		2007		2006		2005		2004	
		TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
Opportunistic Portfolio																	
BlackRock High Return Separate Account	23,805,553																
Carlyle China Project Rome Co-Investment	27,317,028																
CIM Fund VIII	30,948,597																
KKR Real Estate Partners Americas ¹	19,206,113																
Och-Ziff Real Estate Fund III ¹	18,479,058																
Opportunistic Portfolio	119,756,349	-10.1	-8.0	42.4	34.2	54.0	43.5	-44.5	-45.4	3.4	2.6						
Total Non-Core Portfolio 1Q 2007 Forward	229,979,563	-0.3	0.4	37.0	30.4	-13.5	-17.8	-33.7	-35.7	18.2	5.6						
Total Private Portfolio																	
SCERS	874,884,182	14.9	14.5	20.6	18.8	-28.1	-28.8	-12.8	-13.5	15.8	13.4	15.5	12.7	30.3	25.8	10.6	7.1
Indices																	
NFI-ODCE + 35 bps		16.3	15.3	16.7	15.6	-29.4	-30.0	-9.7	-10.3	16.3	15.2	16.7	15.6	21.7	20.5	13.4	12.4
NFI-ODCE		16.0	15.0	16.4	15.3	-29.8	-30.4	-10.0	-10.7	16.0	14.8	16.3	15.3	21.4	20.2	13.1	12.0
NFI-ODCE + 100 bps		17.0	16.0	17.4	16.3	-28.8	-29.4	-9.0	-9.7	17.0	15.8	17.3	16.3	22.4	21.2	14.1	13.0
CPI + 500 bps		8.2		6.5		8.0		5.0		9.3		7.7		8.5		8.5	

¹ Preliminary performance, subject to change.

² This fund is liquidating and the market value represents a remaining cash balance.

Returns (%)	Market Value (\$)	2018 YTD		Fiscal Year 2018		2017		2016		2015		2014		2013		2012	
		TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
Core Separate Accounts																	
BlackRock Core Separate Account	172,966,193	8.2	6.6	13.3	10.8	9.1	7.5	11.3	9.3	15.3	13.9	16.3	12.5	11.8	9.6	13.5	13.0
Cornerstone Separate Account	82,601,103	8.4	8.2	23.5	22.8	21.5	20.8	14.0	13.3	2.4	1.6	14.0	13.2	11.3	10.5	16.2	15.4
Core Separate Accounts	255,567,296	8.3	7.1	16.5	14.5	12.8	11.6	10.0	8.6	7.7	6.6	16.0	13.5	11.0	9.5	14.1	13.5
<i>Total BlackRock Separate Account</i>	<i>196,771,746</i>	<i>7.9</i>	<i>6.5</i>	<i>13.6</i>	<i>11.1</i>	<i>10.6</i>	<i>9.0</i>	<i>8.6</i>	<i>7.0</i>	<i>10.7</i>	<i>9.4</i>	<i>17.0</i>	<i>13.6</i>	<i>10.9</i>	<i>9.0</i>	<i>13.1</i>	<i>12.5</i>
Separate Account Returns by Property Type																	
Apartment	158,259,662	6.8	6.1	18.0	16.4	15.9	14.5	12.3	10.6	9.2	7.7	14.7	13.0	13.3	12.0	18.2	17.5
Industrial	13,174,904	11.0	3.1	13.5	5.2	4.8	4.4	8.4	7.7	3.5	6.5	25.9	24.5	9.9	8.4	-0.3	-0.7
Office	66,239,574	9.4	9.1	15.3	14.0	12.4	11.3	4.4	3.9	4.8	4.1	12.7	9.3	9.4	8.6	15.0	14.2
Retail	41,618,330	9.8	8.1	13.7	11.1	11.2	9.2	8.5	6.7	12.2	9.8	22.2	20.1	10.3	6.5	12.4	12.0
Total																	
Total Separate Accounts	279,372,849	8.1	7.0	15.3	13.3	11.6	10.5	10.0	8.5	7.7	6.6	16.0	13.5	11.0	9.5	14.1	13.5
Indices																	
NFI-ODCE + 35 bps		4.5	4.0	8.8	7.8	8.0	7.0	9.1	8.1	15.4	14.3	12.8	11.8	14.3	13.3	11.3	10.1
NFI-ODCE		4.3	3.8	8.4	7.5	7.6	6.7	8.8	7.8	15.0	14.0	12.5	11.5	13.9	12.9	10.9	9.8
NFI-ODCE + 100 bps		4.8	4.3	9.4	8.5	8.6	7.7	9.8	8.8	16.0	15.0	13.5	12.5	14.9	13.9	11.9	10.8
CPI + 500 bps		3.7		7.9		7.2		7.2		5.7		5.7		6.6		6.9	

Returns (%)	Market Value (\$)	2011		2010		2009		2008		2007		2006		2005		2004	
		TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
Core Separate Accounts																	
BlackRock Core Separate Account	172,966,193	17.8	17.4	20.7	19.6	-29.5	-29.1	-13.9	-14.3	21.2	16.8	17.7	13.3	27.1	21.6	9.3	5.1
Cornerstone Separate Account	82,601,103	24.9	23.9	21.2	20.2	-31.7	-32.4	-9.4	-10.1	11.9	11.1	11.1	10.2	18.7	17.6	2.9	2.4
Core Separate Accounts	255,567,296	18.7	18.2	18.6	17.6	-28.5	-28.7	-10.5	-11.1	16.3	13.6	15.2	12.1	31.7	26.6	9.8	6.3
<i>Total BlackRock Separate Account</i>	<i>196,771,746</i>	<i>16.1</i>	<i>15.7</i>	<i>17.3</i>	<i>16.4</i>	<i>-26.8</i>	<i>-26.7</i>	<i>-11.1</i>	<i>-11.6</i>	<i>18.5</i>	<i>15.0</i>	<i>16.8</i>	<i>13.1</i>	<i>34.0</i>	<i>28.2</i>	<i>9.9</i>	<i>6.6</i>
Separate Account Returns by Property Type																	
Apartment	158,259,662	15.5	14.8	26.6	25.8	-22.2	-22.8	-13.5	-14.0	11.1	9.9	2.6	1.7	22.9	21.3	2.9	1.0
Industrial	13,174,904	17.2	16.8	2.0	1.6	-25.3	-25.7	-8.3	-9.4	28.9	23.3	20.8	17.6	48.5	39.3	13.1	6.8
Office	66,239,574	20.7	20.0	19.1	17.9	-43.6	-43.7	-11.0	-11.3	13.3	11.7	36.1	24.7	39.4	34.1	8.7	4.7
Retail	41,618,330	13.5	13.6	13.4	12.0	-24.5	-23.1	-10.8	-11.7	10.3	7.7	14.2	12.2	20.1	14.9	28.9	23.3
Total																	
Total Separate Accounts	279,372,849	18.7	18.2	18.6	17.6	-28.5	-28.7	-10.5	-11.1	16.3	13.6	15.2	12.1	31.7	26.6	9.8	6.3
Indices																	
NFI-ODCE + 35 bps		16.3	15.3	16.7	15.6	-29.4	-30.0	-9.7	-10.3	16.3	15.2	16.7	15.6	21.7	20.5	13.4	12.4
NFI-ODCE		16.0	15.0	16.4	15.3	-29.8	-30.4	-10.0	-10.7	16.0	14.8	16.3	15.3	21.4	20.2	13.1	12.0
NFI-ODCE + 100 bps		17.0	16.0	17.4	16.3	-28.8	-29.4	-9.0	-9.7	17.0	15.8	17.3	16.3	22.4	21.2	14.1	13.0
CPI + 500 bps		8.2		6.5		8.0		5.0		9.3		7.7		8.5		8.5	

Quarterly Cash Flow Activity (\$)	Beginning Market Value	Contributions	Distributions	Withdrawals	Gross Income	Manager Fees	Appreciation	Ending Market Value	LTV (%)
Core Commingled Funds									
Jamestown Premier Property Fund	17,283,962	207,963	207,963	0	155,320	49,761	202,261	17,591,782	37.4
MetLife Core Property Fund	56,141,376	590,464	590,322	0	674,337	68,512	902,017	57,649,360	23.8
Prime Property Fund	56,940,419	562,026	562,026	0	551,219	137,652	620,534	57,974,519	16.4
Principal U.S. Property Account	43,184,916	0	0	0	509,382	103,468	555,088	44,145,919	21.0
Prologis European Logistics Fund	38,711,711	0	400,206	0	539,770	185,935	-839,168	37,826,172	21.3
Prologis Targeted U.S. Logistics Fund	63,574,107	0	438,980	0	790,038	496,043	2,925,299	66,354,422	20.7
Townsend Real Estate Fund, L.P.	105,428,436	1,055,609	1,055,609	0	1,105,285	60,178	1,321,606	107,795,149	37.6
Core Commingled Funds	381,264,927	2,416,062	3,255,106	0	4,325,351	1,101,549	5,687,637	389,337,323	27.0
Core Separate Accounts									
BlackRock Core Separate Account	153,159,709	13,997,638	1,874,002	0	2,083,196	1,901,951	7,501,603	172,966,193	5.4
Cornerstone Separate Account	78,147,508	214,500	1,300,000	0	769,928	107,250	4,876,417	82,601,103	32.1
Core Separate Accounts	231,307,217	14,212,138	3,174,002	0	2,853,124	2,009,201	12,378,020	255,567,296	16.1
<i>Total BlackRock Separate Account</i>	<i>176,344,259</i>	<i>13,997,638</i>	<i>1,874,002</i>	<i>0</i>	<i>2,006,903</i>	<i>1,982,321</i>	<i>8,279,269</i>	<i>196,771,746</i>	<i>4.8</i>
Total Core Portfolio	612,572,144	16,628,200	6,429,108	0	7,178,475	3,110,750	18,065,657	644,904,619	23.0
Value Added Portfolio									
AEW Value Investors Fund II	45,482	0	0	0	13,984	0	-300	59,166	0.0
Allegis Value Trust	15,129,523	0	0	7,750,000	141,994	8,943	-298,913	7,213,661	0.0
Carlyle China Realty	3,821,589	4,083,284	1,593,478	0	96,168	74,384	-230,082	6,103,097	0.0
DRC European Real Estate Debt Fund II	13,340,997	0	0	0	235,854	38,262	-773,294	12,765,295	0.0
ECE European Prime Shopping Centre Fund II	10,657,555	7,684,051	85,346	48,495	137,733	53,097	-239,831	18,052,571	55.5
Hammes Partners II	19,345,615	2,096,391	440,934	45,447	410,997	626,662	1,315,113	22,055,073	65.2
Hines US Office Value Added Fund II	545,685	0	0	0	3,960	0	0	549,645	71.0
NREP Nordic Strategies Fund	19,993,107	0	1,224,853	0	199,658	32,627	-954,696	17,980,588	52.3
NREP Nordic Strategies Fund II	23,494,549	1,949,574	455,645	0	-509,881	257,713	829,690	25,050,575	47.0
NREP Nordic Strategies Fund III	-238,707	0	0	0	-119,405	245,253	996,907	393,542	43.0
Value Added Portfolio	106,135,395	15,813,300	3,800,256	7,843,942	611,062	1,336,941	644,594	110,223,213	49.4
Opportunistic Portfolio									
BlackRock High Return Separate Account	23,184,550	0	0	0	-76,293	80,370	777,666	23,805,553	0.0
Carlyle China Project Rome Co-Investment	11,557,740	17,016,717	0	0	-292,095	441,525	-523,809	27,317,028	0.0
CIM Fund VIII	29,688,692	1,764,957	624,536	1,103,028	-13,805	109,375	1,345,692	30,948,597	5.8
KKR Real Estate Partners Americas	20,174,586	58,300	464,477	827,087	471,809	-13,223	-220,241	19,206,113	61.0
Och-Ziff Real Estate Fund III	18,557,525	878,556	2,338,785	0	429,808	131,250	1,083,204	18,479,058	58.9
Opportunistic Portfolio	103,163,093	19,718,530	3,427,798	1,930,115	519,424	749,297	2,462,512	119,756,349	32.8
Total Non-Core Portfolio 1Q 2007 Forward	209,298,488	35,531,830	7,228,054	9,774,057	1,130,486	2,086,238	3,107,106	229,979,562	41.9
Total Private Portfolio									
SCERS	821,870,632	52,160,030	13,657,162	9,774,057	8,308,961	5,196,988	21,172,763	874,884,181	29.1

Property Type Diversification (%)	Apartment	Office	Industrial	Retail	Hotel	Other
Core Commingled Funds						
Jamestown Premier Property Fund	-	62.6	-	28.3	-	9.1
MetLife Core Property Fund	29.2	38.2	17.1	15.4	-	-
Prime Property Fund	24.3	32.3	19.3	15.6	-	8.5
Principal U.S. Property Account	14.5	40.1	23.3	16.1	1.0	5.0
Prologis European Logistics Fund	-	-	100.0	-	-	-
Prologis Targeted U.S. Logistics Fund	-	-	100.0	-	-	-
Townsend Real Estate Fund, L.P.	41.2	13.5	13.8	13.0	-	18.5
Core Commingled Funds	20.6	20.6	40.7	10.9	0.1	7.1
Core Separate Accounts						
BlackRock Core Separate Account	44.3	23.1	7.7	24.9	-	-
Cornerstone Separate Account	100.0	-	-	-	-	-
Core Separate Accounts	61.6	15.9	5.3	17.1	-	-
<i>Total BlackRock Separate Account</i>	<i>39.1</i>	<i>32.2</i>	<i>6.8</i>	<i>22.0</i>	-	-
Total Core Portfolio	36.6	18.8	26.8	13.3	0.1	4.3
Value Added Portfolio						
AEW Value Investors Fund II	-	-	-	-	-	-
Allegis Value Trust	-	89.7	10.3	-	-	-
Carlyle China Realty	-	-	100.0	-	-	-
DRC European Real Estate Debt Fund II	-	40.0	-	60.0	-	-
ECE European Prime Shopping Centre Fund II	-	-	-	100.0	-	-
Hammes Partners II	-	-	-	-	-	100.0
Hines US Office Value Added Fund II	-	100.0	-	-	-	-
NREP Nordic Strategies Fund	70.6	1.1	-	28.3	-	-
NREP Nordic Strategies Fund II	20.3	7.5	51.8	11.8	-	8.6
NREP Nordic Strategies Fund III	49.3	6.2	22.3	-	-	22.3
Value Added Portfolio	14.8	15.2	12.3	34.7	0.0	22.9
Opportunistic Portfolio						
BlackRock High Return Separate Account	-	100.0	-	-	-	-
Carlyle China Project Rome Co-Investment	-	-	100.0	-	-	-
CIM Fund VIII	-	28.1	-	9.5	0.0	62.4
KKR Real Estate Partners Americas	17.6	21.2	-	31.3	17.5	12.4
Och-Ziff Real Estate Fund III	3.6	2.0	17.6	3.7	7.5	65.7
Opportunistic Portfolio	3.4	36.1	14.8	8.5	4.1	33.2
Total Non-Core Portfolio	9.4	25.2	13.5	22.2	1.9	27.8
Total Private Portfolio						
SCERS	30.1	20.3	23.6	15.5	0.5	10.0
Indices						
NFI-ODCE	24.7	35.6	16.6	19.2	0.3	3.6

Geographic Diversification (%)	North East	Mid East	East North Central	West North Central	South East	South West	Mountain	Pacific	Ex-US
Core Commingled Funds									
Jamestown Premier Property Fund	33.8	33.8	-	-	2.9	-	-	29.5	-
MetLife Core Property Fund	2.2	12.8	10.5	-	17.7	11.3	8.1	37.4	-
Prime Property Fund	23.3	7.7	8.7	1.9	11.6	8.5	4.6	33.7	-
Principal U.S. Property Account	17.1	8.7	4.0	2.1	8.2	14.1	11.9	34.0	-
Prologis European Logistics Fund	-	-	-	-	-	-	-	-	100.0
Prologis Targeted U.S. Logistics Fund	10.4	6.6	10.7	-	9.2	13.9	2.5	46.6	-
Townsend Real Estate Fund, L.P.	18.3	12.3	16.7	12.6	8.4	1.2	5.6	25.0	-
Core Commingled Funds	13.7	9.7	9.7	3.9	9.2	7.2	5.1	30.3	11.2
Core Separate Accounts									
BlackRock Core Separate Account	-	-	-	-	-	7.7	-	92.3	-
Cornerstone Separate Account	-	-	-	-	-	-	-	100.0	-
Core Separate Accounts	-	-	-	-	-	5.3	-	94.7	-
<i>Total BlackRock Separate Account</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>6.8</i>	<i>-</i>	<i>93.2</i>	<i>-</i>
Total Core Portfolio	8.3	5.9	5.9	2.4	5.6	6.5	3.1	55.5	6.8
Value Added Portfolio									
AEW Value Investors Fund II	-	-	-	-	-	-	-	-	-
Allegis Value Trust	38.5	47.8	-	-	-	-	-	13.7	-
Carlyle China Realty	-	-	-	-	-	-	-	-	100.0
DRC European Real Estate Debt Fund II	-	-	-	-	-	-	-	-	100.0
ECE European Prime Shopping Centre Fund II	-	-	-	-	-	-	-	-	100.0
Hammes Partners II	26.0	10.4	18.8	1.5	6.0	19.5	8.9	8.9	-
Hines US Office Value Added Fund II	-	-	-	-	-	-	-	100.0	-
NREP Nordic Strategies Fund	-	-	-	-	-	-	-	-	100.0
NREP Nordic Strategies Fund II	-	-	-	-	-	-	-	-	100.0
NREP Nordic Strategies Fund III	-	-	-	-	-	-	-	-	100.0
Value Added Portfolio	7.8	5.1	4.0	0.3	1.3	4.1	1.9	3.1	72.4
Opportunistic Portfolio									
BlackRock High Return Separate Account	-	-	-	-	-	-	-	100.0	-
Carlyle China Project Rome Co-Investment	-	-	-	-	-	-	-	-	100.0
CIM Fund VIII	33.9	1.2	11.9	-	1.0	1.7	6.1	41.0	3.2
KKR Real Estate Partners Americas	14.0	2.7	1.5	2.2	11.3	21.3	-	15.6	31.3
Och-Ziff Real Estate Fund III	14.3	1.3	3.0	0.5	5.0	2.6	6.3	27.9	39.1
Opportunistic Portfolio	15.3	1.0	4.5	0.4	3.0	4.3	3.0	43.9	24.5
Total Non-Core Portfolio	11.4	3.2	4.2	0.4	2.1	4.2	2.4	22.6	49.6
Total Private Portfolio									
SCERS	9.1	5.2	5.5	1.9	4.8	5.9	2.9	47.6	17.1
Indices									
NFI-ODCE	22.9	9.0	7.8	1.3	9.2	8.8	5.3	35.6	-

Advisory Disclosures and Definitions

Disclosure

Trade Secret and Confidential.

Past performance is not indicative of future results.

Investing involves risk, including the possible loss of principal.

Returns are presented on a time weighted basis and shown both gross and net of underlying third party fees and expenses and may include income, appreciation and/or other earnings. In addition, investment level Net IRR's and equity multiples are reported.

The Townsend Group, on behalf of its client base, collects quarterly limited partner/client level performance data based upon inputs from the underlying investment managers. Data collection is for purposes of calculating investment level performance as well as aggregating and reporting client level total portfolio performance. Quarterly limited partner/client level performance data is collected directly from the investment managers via a secure data collection site.

¹In select instances where underlying investment managers have ceased reporting limited partner/client level performance data directly to The Townsend Group via a secure data collection site, The Townsend Group may choose to input performance data on behalf of its client based upon the investment managers quarterly capital account statements which are supplied to The Townsend Group and the client alike.

Benchmarks

The potential universe of available real asset benchmarks are infinite. Any one benchmark, or combination thereof, may be utilized on a gross or net of fees basis with or without basis point premiums attached. These benchmarks may also utilize a blended composition with varying weighting methodologies, including market weighted and static weighted approaches.

Exhibit B: Real Estate Market Update 2Q18



United States Real Estate Market Update (2Q18)

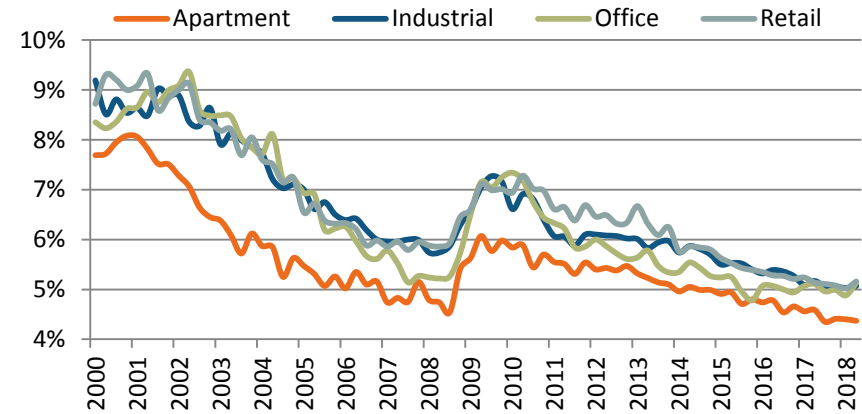
General

- The S&P 500 produced a gross total return of 3.4% during the Quarter, as markets rebounded from tightening monetary policy and trade war rhetoric on the back of strong economic data. The MSCI US REIT index produced a return of -10.1%. REITs outperformed the broader equities market for the Quarter, but continue to lag by 10.8% over the TTM period. Consumer Sentiment declined slightly during the Quarter to 98.2.
- Macro indicators for U.S. real estate continue to be positive; GDP grew at an annualized rate of 2.8% in the Second Quarter and headline CPI rose by 2.7% YoY, above the Fed's 2% target. As of Quarter-end, the economy has now experienced 93 consecutive months of job growth. The Federal Reserve has continued to tighten their policy, and, in June 2018, raised base rates to 1.75-2.0%. In 2018, consensus expectations have increased to four rate hikes.

Commercial Real Estate

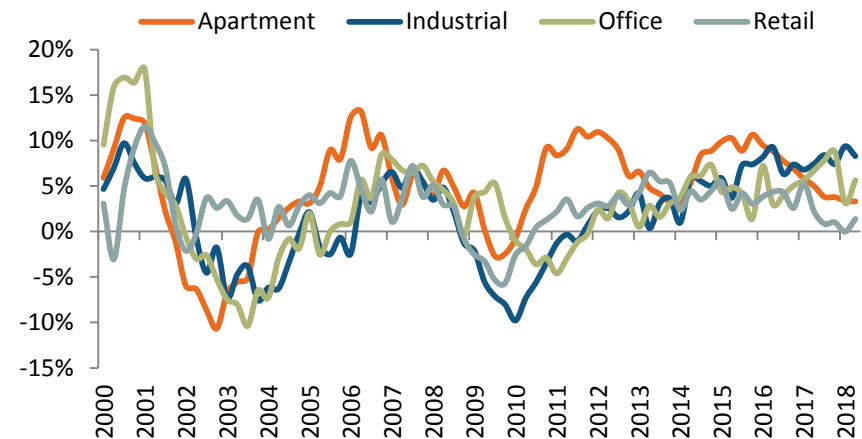
- Private Real Estate Market values have remained flat for another quarter. Transaction cap rates (5.49%) contracted 16 bps on average during the Second Quarter of 2018. At the same time, current valuation cap rates were primarily flat across property sectors, with the exception of office and retail cap rates expanding 25 bps and 14 bps, respectively.
- NOI growth by sector continued to deviate during the Quarter, with retail NOI growth continuing to lag other sectors. Positive momentum continued in the industrial sector, benefiting from e-commerce and global trade growth. The sector experienced 8.3% NOI Growth over the last year.
- In the First Quarter of 2018, \$32bn of aggregate capital was raised by US Real Estate Funds. To date in 2018, Private Equity Real Estate Funds have raised \$78.5bn.
- 10 year treasury bond yields expanded 12 bps to 2.86% during the quarter and, subsequent to quarter end have essentially remained flat. A combination of expansionary fiscal policy and tightening monetary policy have led to increasing short-term interest rates and a flattening yield curve.

Current Value Cap Rates by Property Type



Source: NCREIF

4 Qtr Rolling NOI Growth



Source: NCREIF

United States Property Matrix (2Q18)

INDUSTRIAL

- As of 2Q18, industrial properties returned 3.6% and outperformed the NPI by 179 bps.
- Net absorption increased to 64.1 million sqft in 2Q18, up 4.9% from the second quarter of 2017. Net absorption as a % of inventory was 1.9%
- Transaction volumes reached \$30.5 billion, marking a 20% year-over-year increase. Large-scale portfolio sales are expected make 2018 the largest overall historic year in terms of total activity.
- New deliveries were 48.9 million sqft for the quarter, with the active pipeline increasing by 3.0% quarter-over-quarter to 239.1 million sqft.
- Vacancy remained stable quarter-over-quarter at 4.8% continuing to be at an all-time historic low. Strong demand has pushed asking rents up 6.2% year-over-year.

MULTIFAMILY

- The apartment sector delivered a 1.5% return during the Quarter, underperforming the NPI by 27 bps.
- Sales volumes decreased 4.8% compared to the second quarter of 2017, totaling \$32.6 billion. The drop in volume was due to a 52.2% reduction in portfolio transactions. Transaction volume is 10.2% higher on an annualized basis.
- Primary market transaction activity represented 42.5% of activity, down from 43.0% in 2017. The decrease is a result of the continued growth of capital flows into secondary and tertiary markets with a combined share increasing from 43.3% to 57.5%.
- Private investors continue to dominate the investment activity accounting for 62.5% of transactions whereas REITs have seen their proportion of transaction activity fall to 6%, less than half of their share four years ago.
- Annual rent growth rose to 2.4% percent during the second quarter of 2018, a 10 bps increase after three quarters of no change. Vacancy increased a modest 7 bps over the 12-month period ending 2Q18.

OFFICE

- The office sector returned 1.5% in 2Q18, 27bps below the NPI return over the period.
- Occupancy growth increased with net absorption totaling 12.9 million sqft. Although net absorption improved in the second quarter, it is expected to be one-third lower in 2018 than in 2017.
- Total vacancy rose by 10 bps to 14.9% quarter-over-quarter due to the rising deliveries. Class A CBD vacancy declined by 30 bps to 11.6%, while vacancy in Class A suburban office increased 30 bps to 16.9%.
- Construction activity has remained strong with 27.4 million square feet delivered in the first two quarters and 36 million square feet to be delivered by year's end. In 2019, the office market will continue to see top-quality space delivered as 57.4 million square feet of deliveries is scheduled for completion.
- Asking rents increased 2.3% to \$33.82/sqft. This was driven by suburban rent growth of 3.7%, while CBD remained virtually unchanged. Concession packages continue to increase leading to an overall decline in effective rents.

RETAIL

- As of 1Q18, the retail sector delivered a quarterly return of 1.3%, performing 49 bps below the NPI.
- Transaction volumes for the first half of 2018 declined 3.6% year-over-year to \$28.7 billion. REIT acquisition activity declined 17.9% year-over-year, remaining net sellers and divesting both non-strategic and underperforming assets.
- Despite the continued announcement of store closures, 12-month rental growth was 5.4%, largely driven by grocery-anchored centers.
- Average cap rates remain at 4.3%. Premier assets continue to trade aggressively, driven by foreign demand, while mall and lifestyle centers struggle to agree on terms.
- Vacancy declined to 4.5%, a compression of 10 bps compared to the first quarter of 2018. Investors are starting to apply more stringent underwriting standards and evaluating shopping center tenants more cautiously.

Global Real Estate Market Update (2Q18)

GLOBAL

- Global investment activity during 2Q 2018 totaled \$173 billion, representing a 10% increase as compared to 2Q 2017 levels. Total first half 2018 activity was \$341 billion, a 13% increase from first half 2017 and the highest first half volume since 2007. Investors' demand for real estate has remained strong, with a growing number increasing their real estate allocations due to its defensive nature and steady income returns. Further, shifting demographics and technological trends are driving an increased demand for the logistics and alternatives sectors. 2018 global investment commercial real estate volumes are projected to approximately match 2017 volumes of \$715 billion. London held the top global investment position for the quarter, followed by New York and Hong Kong in second and third place, respectively.

EUROPE

- European investment totaled \$67.5 billion in 2Q 2018, an 11% increase from the prior quarter. First half 2018 volumes totaled \$128.1 billion, marking the highest half-year volumes recorded in the current cycle. 2Q 2018 volumes were up from 2017 volumes in the UK, Germany, and France by 21%, 30%, and 114%, respectively. The Benelux countries saw mixed performance during the quarter, with the Nordics' volume down 17% and Southern Europe volumes down 28%. While Central and Eastern Europe's 2Q 2018 volumes declined by 22%, the region's strong first quarter enabled it to still show positive investment growth for the first half 2018. Exchange rates continued to affect European investment volumes as relative dollar weaknesses have driven up the level of investing.

ASIA

- Asia Pacific saw strong y/y performance, with volumes increasing 26% and reaching \$41.7 billion during 2Q 2018. First half 2018 activity totaled \$81.0 billion, a 29% increase y/y and the highest level on record. The growth was largely driven by the following: a 17% y/y increase in Australia, a 234% y/y increase in Hong Kong, a 155% y/y increase in New Zealand, a 108% y/y increase in South Korea, and a 231% y/y increase in Taiwan. However, China and Japan overall saw a decrease in total first half 2018 volumes, with 47% and 14% decreases, respectively. Specifically, Tokyo accounted for only 46% of Japanese transaction volumes this quarter, with most of the activity coming from smaller surrounding cities. Australian investment volumes totaled \$5.7 billion in 2Q 2018, a 17% y/y increase. Cross-border investment activity accounted for 27% of total transaction volumes.

Direct Commercial Real Estate Investment - Regional Volumes, 2017 - 2018

\$ US Billions	% Change			% Change			% Change	
	Q1 2018	Q2 2018	Q1 18 - Q2 18	Q2 2017	Q2 17 - Q2 18	H1 2017	H1 2018	H1 17 - H1 18
Americas	69	63	-9%	64	-2%	122	132	8%
EMEA	61	67	10%	61	10%	117	128	9%
Asia Pacific	39	42	8%	33	27%	63	81	29%
Total	169	172	2%	158	9%	302	341	13%

Source: Jones Lang LaSalle, July 2018

Global Outlook - GDP (Real) Growth % pa, 2017-2019

	2017	2018	2019
Global	3.7	3.8	3.6
Asia Pacific	5.5	5.5	5.2
Australia	2.2	2.8	2.5
China	6.9	6.4	6.1
India	6.2	7.5	7.1
Japan	1.7	1.2	1.1
North America	2.0	2.5	2.4
US	2.3	3.0	2.3
MENA*	1.8	2.9	3.2
European Union	3.1	2.4	2.0
France	2.3	1.7	1.6
Germany	2.5	2.0	1.8
UK	1.7	1.3	1.4

*Middle East North Africa

Source: Jones Lang LaSalle (Oxford Economics), July 2018