



ZAIS Insights

August 2021

Bernhard Eschweiler, PhD
Senior Economic Advisor

Bernhard advises ZAIS on macroeconomic risks and prospects related to credit markets and is a regular contributor to ZAIS Insights.

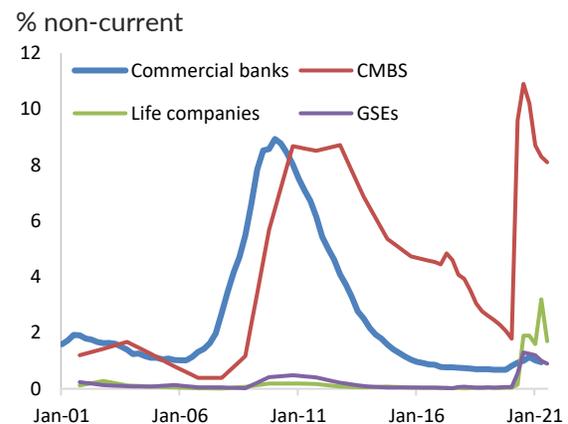
CRE – uneven road to recovery

CRE – uneven road to recovery

- Corona had a mixed impact on CRE
- We are positive on selected sectors of multi-family, industrial and lodging
- And negative on retail as well as lower-end offices

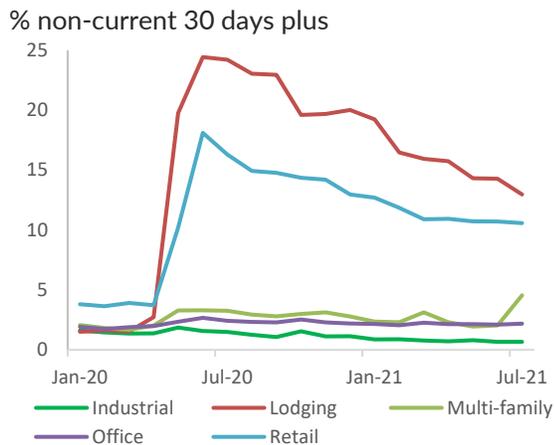
The impact of the Corona pandemic on the loan performance of commercial real estate (CRE) has been mixed for both lenders and borrowers. CMBS has been the most affected creditor type (see chart 1) as it is more exposed to the sectors hardest hit by the pandemic, notably lodging and retail (see chart 2 below).

Chart 1: CRE delinquency rate by lender



Source: Board of Governors of the Federal Reserve System and Mortgage Bankers Association ¹

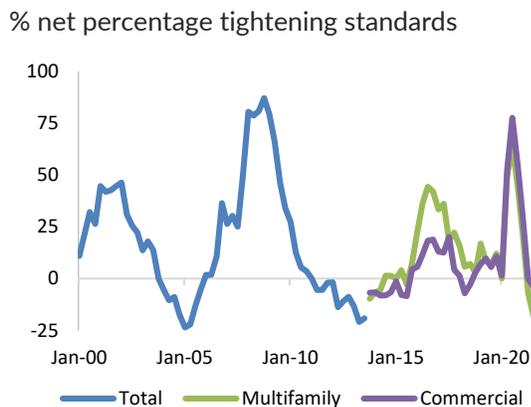
Chart 2: CRE delinquency rate by borrower



Source: Trepp²

However, while CRE delinquency rates are not yet back to pre-corona levels, stress in the sector has declined. Banks have eased their lending standards for CRE (see chart 3) and CMBS spreads have dropped significantly.³

Chart 3: Bank CRE lending standards



Source: Board of Governors of the Federal Reserve System⁴

While we think continued recovery will restore the health of CRE over time, we expect the recovery will be uneven across the market's various sub-sectors:

- **Multi-family** should remain well supported by high housing demand.

- We think the **office** sector has to adjust to more people working from home.
- We believe **industrial** CRE will continue to benefit from the rise of e-commerce and the demand for logistics space.
- But e-commerce also remains a problem for **retail** in our view.
- Finally, we expect that high-end **lodging** will have to adjust to less business travel and fewer conferences.

Overall, we are constructive on CRE. We think CRE is expensive but not in a bubble. The top of the CMBS capital stack looks tight in our view, yet we see room for further recovery at the bottom of the stack.

Not in a bubble

Corona has not derailed the rise in CRE prices. In fact, CRE prices have even accelerated slightly since the start of the pandemic. All-property CRE prices rose an annualized 7.4% since the start of the pandemic versus 6.8% in 2019. Multifamily was the best performer (10.1% a.r.) followed closely by industrial (9.6% a.r.). Office prices rose modestly (4.2% a.r.) and even retail property prices inched higher (1.4% a.r.).⁵

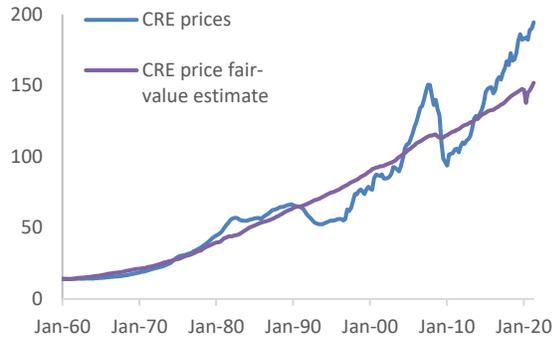
Overall CRE prices also exceed the peaks last seen prior to the financial crisis by more than 40%. However, there are clearly differences by property type. Multifamily is up more than 100% while retail is just about flat.⁶

The overall high level of CRE prices raises concerns that a bubble is building similar to the situation prior to the financial crisis. Indeed, our calculations suggest that overall CRE prices exceed their GDP-based fair-value estimate by roughly 25% (see chart 4 below). The overvaluation of CRE prices has

reached about the same extent as prior to the financial crisis.

Chart 4: CRE prices and fair-value

2010 = 100



Source: Board of Governors of the Federal Reserve System, U.S. Bureau of Economic Analysis and ZAIS estimates ⁷

However, we see overvaluation as a sign of a bubble only if it is coupled with excesses in leverage and construction investment (see also “No Housing Bubble Yet”, ZAIS Insight, April 2021⁸). We think this is currently not the case for CRE.

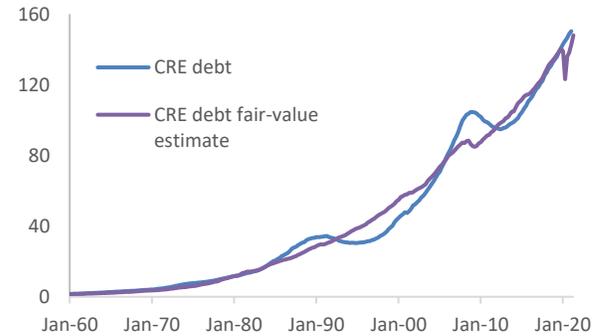
- First, CRE debt is not overextended as it was in the financial crisis: based on our calculations, CRE debt is in line with its fair-value estimate (see chart 5). In particular, banks have been more cautious lenders to CRE, which is reflected in the low delinquency rates (see chart 1, again).
- Second, CRE construction investment is also not excessive but, rather, is in line with our estimate of its fair-value level (see chart 6).

CRE is far from homogeneous and we are mindful of the differences by property type and location as well as the possibility of excesses in some areas. Still, we believe that high prices are more a reflection of the low interest rate environment and generally

favorable supply/demand dynamics, and not a sign of a bubble.

Chart 5: CRE debt and fair-value

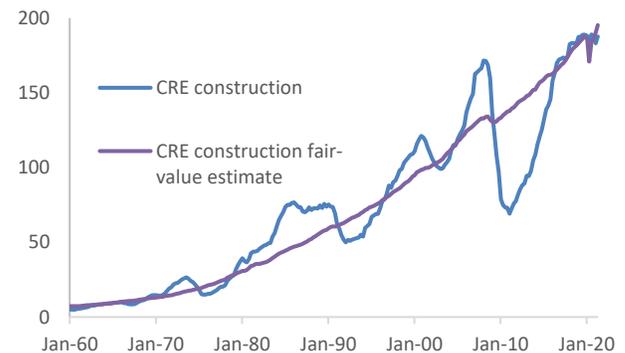
2010 = 100



Source: Board of Governors of the Federal Reserve System, U.S. Bureau of Economic Analysis and ZAIS estimates ⁹

Chart 6: CRE investment and fair-value

2010 = 100

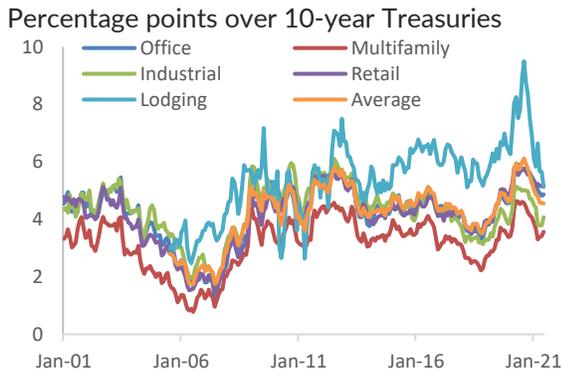


Source: U.S. Bureau of Economic Analysis and ZAIS estimates ¹⁰

Still healthy cap rates

The strong increase in CRE prices over the last decade has reduced capitalization rates, or cap rates (Net Operating Income / Prices). Still, cap rates have not fallen faster than interest rates. On balance, the spread of cap rates over 10-year US Treasury yields is currently at about the same level as its 10-year average and more than double the level in the bubble years before the financial crisis (see chart 7 below).

Chart 7: CRE cap rate spread



Source: Board of Governors of the Federal Reserve System and RCA ¹¹

The comfortable spread between cap rates and Treasury yields suggests not only that CRE remains an attractive asset class for investors, but also implies that CRE net operating incomes are sufficiently high to cover interest expenses.

We believe that further economic recovery will support CRE fundamentals and in particular provide a boost to net operating profits. At the same time, we are convinced that the Corona pandemic will result in some permanent changes (e.g., an increase in working from home and the advance of the digital economy) that will also impact CRE over the next decade.

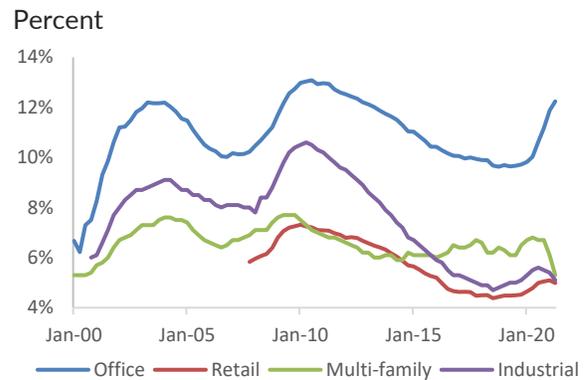
Multi-family to stay on uptrend

We are generally positive on multi-family CRE, as we have been positive on single-family housing.¹² We think the dominant forces in housing, whether single- or multiple-family, are strong fundamental demand and limited supply.

Corona has to some degree changed preferences between city and suburban living. We believe that working-from-home trends present challenges to certain urban centers, such as NYC, relative to their suburban peers.

Yet, the overall strong performance of multi-family prices and collection rates through the pandemic and the decline in vacancy rates (see chart 8) are proof to us that these changes will not derail the overall positive trend of multi-family CRE.

Chart 8: CRE vacancy rates



Source: CoStar ¹³

Older offices to struggle

We expect more people to return to their offices in the coming months, yet we also think a permanent shift to more flexible working arrangements has occurred. This should be an additional plus for residential properties, as people need more space at home, and a negative for office properties.

So far, we see most tenants paying their rents but the rise in office vacancy rates and subleases looks, to us, to be a clear sign that many tenants are reducing office space. We expect this trend will continue for some time as more leases expire and tenants get a better idea of how much office space they actually need.

The likely winners in this scenario are, in our view, new offices that comply with greener environmental standards and offer more amenities to compensate for the inconvenience of the commute to work.

We see upgrading of older offices to greener and modern standards as too expensive, which we anticipate resulting in higher vacancies and/or lower rents. We doubt this will lead to a debt crisis in office CRE, but expect that owners of older offices will have to live with lower returns.

E-commerce propels industrials ...

The Corona pandemic created some temporary dislocations for industrial CRE but industrial property prices kept rising through the crisis, net operating income accelerated and vacancies are already on the decline.¹⁴

The main support for industrials came from the surge of e-commerce during the pandemic. Warehouses and logistics facilities are in particularly high demand. We believe warehouse supply will rise further, as e-commerce should remain a powerful engine for industrial CRE for some years to come.

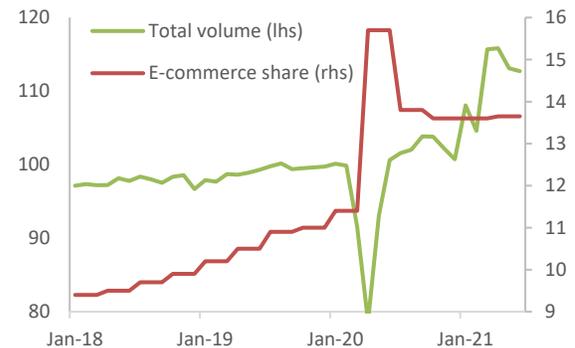
... but is a headwind for retail

Retail has gone through a roller coaster during the Corona pandemic. The initial lockdown has crushed in-store retail sales volumes by 20% and boosted the share of online shopping (see chart 9). The resulting stress was visible in retail CRE delinquency rates, which shot up to 15% in August 2020 and currently still stand around 10% (see chart 2, again).

The subsequent re-opening, however, caused a surge in in-store retail sales. During the second quarter of this year, retail sales volumes stood 15% above the pre-Corona level. As a result, vacancies in retail CRE rose only moderately to just above 5% and have recently stabilized (see chart 8, again).

Chart 9: Retail sales

Jan/Feb 2020 = 100 (lhs) & percent (rhs)



Source: Federal Reserve Bank of St. Louis, US Census Bureau ¹⁵

Continued economic recovery should be good news for retail CRE, but we remain cautious for three reasons:

- First, the currently high level of retail sales looks, in our view, to be largely a compensation for unrealized services consumption and so is unlikely to be sustained over time.
- Second, we expect e-commerce to continue taking market share from bricks & mortar retail shops.
- Third, we believe substantial capital will be needed to refurbish unviable retail properties and even that may not support a return to profitability.

We are particularly negative on the prospects of properties that rely heavily on apparel tenant bases (typically malls, outlets, lifestyle centers) and more constructive on the properties with more need-based tenant mixes (grocery-anchored centers, service-based businesses).

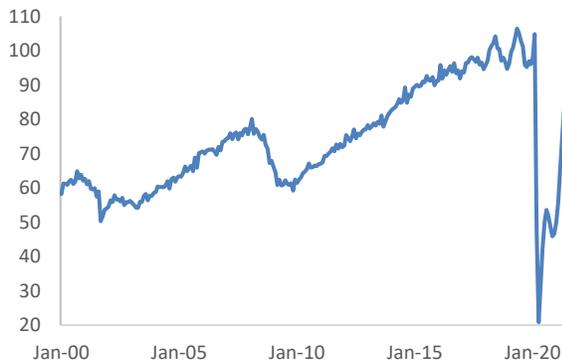
Given the longer struggle of in-store retail and deteriorating balance sheet health, we fear that retail CRE debt will experience more negative credit events as maturity dates approach.

Lodging rebounds

If the initial lockdown was bad for retail, it was a disaster for lodging. Revenue per available room (RevPAR, which is the product of occupancy and average room rate) plunged at the beginning of the Pandemic by 80% from the 2019 average (see chart 10). Not surprisingly, the lodging CRE delinquency rate surged to nearly 30% in June last year (see chart 2, again).

Chart 10: Lodging RevPAR

2019 = 100 s.a.



Source: CoStar ¹⁶

Even at the start of 2021, RevPAR was only 50% of the 2019 average. Since then, however, RevPAR has rebounded and stood at 92% of the 2019 average in June. In our judgment, the rebound appears mostly driven by resorts and interstate/small-metro hotels. We believe there is more upside for these lodging types as mobility rises and the economy opens up further.

We also think that hotels in the major city centers will see improvements. However, we doubt that business travel, especially from overseas visitors, as well as conference activities will recover to their pre-Corona levels in the coming years. High-end hotels that used to cater to these guests may have to shift their focus more to domestic tourists, which probably means lower profit margins.

Opportunities in selected areas

From a fundamental perspective, we are most positive on multi-family (although with some local differentiation) and industrial CRE. We still like the recovery potential in lodging, but are cautious toward high-end business and conference hotels. As previously outlined, retail and office CRE also face fundamental challenges, in our view.

Strong fundamentals, however, do not necessarily translate into strong investment returns. We believe pricing within the multi-family and industrial sectors tends already to reflect the favorable fundamentals, leaving spreads generally on the tighter side.

We prefer to search for value amongst CRE sectors that have lagged during the recovery and still offer significant upside potential. We are finding value in select seasoned, sub-investment grade conduit paper where we find current risk profiles are similar to pre-pandemic levels, but with spreads that are significantly wider.

While office properties are facing Corona-related headwinds, we still see value in some new “green” office space as well as within particular geographic areas. As another example, we are also seeing opportunity within various specialty CRE sectors, such as senior housing, particularly skilled nursing facilities (SNF). Corona has depressed occupancy in SNFs.¹⁷ However, the fundamentals in terms of aging baby-boomers as well as a recovery in elective procedures are favorable in our view.

More information

As always, we are available to discuss our views with you. Please contact your Client Relations representative at +1 732 978 9722 or zais.clientrelations@zaisgroup.com

¹ Board of Governors of the Federal Reserve System (US), Delinquency Rate on Commercial Real Estate Loans (Excluding Farmland), Booked in Domestic Offices, All Commercial Banks [DRCRELEXFACBS], retrieved from FRED, Federal Reserve Bank of St. Louis; July 28, 2021.

<https://fred.stlouisfed.org/series/DRCRELEXFACBS>

Commercial and Multifamily Mortgage Delinquencies Declined in July; Mortgage Bankers Association; August 5, 2021 and earlier monthly reports.

<https://www.mba.org/2021-press-releases/august/commercial-and-multifamily-mortgage-delinquencies-declined-in-july>

² Trepp (<https://apps.trepp.com/>), Loan Performance Report, retrieved 30+ days delinquency percentage for compendium deal list

³ AAA CMBS spreads over Treasuries jumped from 80bps at the end of 2019 to 320bps in late March 2020 and then fell quickly and now stand at 65bps even below the pre-corona level. BBB CMBS spreads over Treasuries surged from 250bps to over 1000bps in late march 2020 and then declined gradually, standing now around 360bps. Source: JPMorgan Markets, Data Query (<https://markets.jpmorgan.com/#dataquery>), retrieved New Issue CMBS Spreads 10yr On the Run AAA Spread to Swap and New Issue CMBS Spreads Pre-COVID Thick BBB- Spread to Swap.

⁴ Board of Governors of the Federal Reserve System (US), Net Percentage of Domestic Banks Tightening Standards for Commercial Real Estate Loans (DISCONTINUED) [DRTSCREL], retrieved from FRED, Federal Reserve Bank of St. Louis; August 9, 2021.

<https://fred.stlouisfed.org/series/DRTSCREL>

Board of Governors of the Federal Reserve System (US), Net Percentage of Domestic Banks Tightening Standards for Commercial Real Estate Loans Secured by Multifamily Residential Structures [SUBLPDRCSM], retrieved from FRED, Federal Reserve Bank of St. Louis; August 9, 2021.

<https://fred.stlouisfed.org/series/SUBLPDRCSM>

Board of Governors of the Federal Reserve System (US), Net Percentage of Domestic Banks Tightening Standards for Commercial Real Estate

Loans Secured by Nonfarm Nonresidential Structures [SUBLPDRCSN], retrieved from FRED, Federal Reserve Bank of St. Louis; August, 2021.

<https://fred.stlouisfed.org/series/SUBLPDRCSN>

⁵ Real Capital Analytics Commercial Property Price Index, retrieved from Bloomberg for National All Properties ticker MOCICINP, National Office ticker MOCICIOE, National Apartment ticker MOCICIAP, National Industrial ticker MOCICIIN, National Retail ticker MOCICIRL, and National Hotel Price Per Room ticker RHOTPNAT

⁶ Real Capital Analytics Commercial Property Price Index, retrieved from Bloomberg for National All Properties ticker MOCICINP, National Office ticker MOCICIOE, National Apartment ticker MOCICIAP, National Industrial ticker MOCICIIN, National Retail ticker MOCICIRL, and National Hotel Price Per Room ticker RHOTPNAT

⁷ Fair-value estimates provide benchmarks whether prices, lending or construction investment are consistent with economic fundamentals. We believe the most important economic fundamental for CRE is the trend of nominal GDP. We use GDP data to derive the fair-value estimates for CRE prices, mortgage debt and construction investment in Charts 4 to 6.

Board of Governors of the Federal Reserve System (US), Interest Rates and Price Indexes; Commercial Real Estate Price Index, Level [BOGZ1FL075035503Q], retrieved from FRED, Federal Reserve Bank of St. Louis; July 28, 2021.

<https://fred.stlouisfed.org/series/BOGZ1FL075035503Q>

U.S. Bureau of Economic Analysis, Gross Domestic Product [GDP], retrieved from FRED, Federal Reserve Bank of St. Louis; July 25, 2021.

<https://fred.stlouisfed.org/series/GDP>

⁸ <https://www.zaisgroup.com/no-housing-bubble-yet.html>

⁹ Board of Governors of the Federal Reserve System (US), All Sectors; Commercial Mortgages; Asset, Level [ASCMA], retrieved from FRED, Federal Reserve Bank of St. Louis; July 28, 2021.

<https://fred.stlouisfed.org/series/ASCMA>

Board of Governors of the Federal Reserve System (US), All Sectors; Multifamily Residential Mortgages; Asset, Level [ASMRMA], retrieved from FRED, Federal Reserve Bank of St. Louis; July 27, 2021.

<https://fred.stlouisfed.org/series/ASMRMA>

U.S. Bureau of Economic Analysis, Gross Domestic Product [GDP], retrieved from FRED, Federal Reserve Bank of St. Louis; July 25, 2021.

<https://fred.stlouisfed.org/series/GDP>

¹⁰ U.S. Bureau of Economic Analysis, Private fixed investment: Nonresidential: Structures: Commercial and health care [W001RC1Q027SBEA], retrieved from FRED, Federal Reserve Bank of St. Louis; July 28, 2021.

<https://fred.stlouisfed.org/series/W001RC1Q027SBEA>

U.S. Bureau of Economic Analysis, Private fixed investment: Residential: Structures: Permanent site: Multifamily [C292RC1Q027SBEA], retrieved from FRED, Federal Reserve Bank of St. Louis; July 28, 2021.

<https://fred.stlouisfed.org/series/C292RC1Q027SBEA>

U.S. Bureau of Economic Analysis, Private fixed investment in structures: Nonresidential: Lodging [W045RC1A027NBEA], retrieved from FRED, Federal Reserve Bank of St. Louis; July 28, 2021.

<https://fred.stlouisfed.org/series/W045RC1A027NBEA>

U.S. Bureau of Economic Analysis, Gross Domestic Product [GDP], retrieved from FRED, Federal Reserve Bank of St. Louis; July 25, 2021.

<https://fred.stlouisfed.org/series/GDP>

¹¹ Real Capital Analytics Average Capitalization Rate, retrieved from Bloomberg for National Office ticker OFCRANAT, National Apartment ticker APRTCAP, National Industrial ticker RINDANAT, National Retail ticker RETRANAT, and National Hotel ticker RHOTANAT

Board of Governors of the Federal Reserve System (US), 10-Year Treasury Constant Maturity

Rate [GS10], retrieved from FRED, Federal Reserve Bank of St. Louis; July 28, 2021.

<https://fred.stlouisfed.org/series/GS10>

¹² ZAIS Insight: Housing to stay on positive growth track; November 2020.

<https://www.zaisgroup.com/housing-to-stay-on-positive-growth-track.html>

ZAIS Insight: No housing bubble yet; April 2021.
<https://www.zaisgroup.com/no-housing-bubble-yet.html>

¹³ CoStar Realty Information Inc., Analytics Data Export (<https://product.costar.com/analyticsexport/>), retrieved Vacancy Rate for Office, Retail, Multifamily, and Industrial

¹⁴ CoStar Realty Information Inc., Analytics Data Export (<https://product.costar.com/analyticsexport/>), retrieved NOI Index and Vacancy Rate for Office, Retail, Multifamily, Industrial as well as RevPar and Occupancy Rate for Hospitality

¹⁵ Federal Reserve Bank of St. Louis, Advance Real Retail and Food Services Sales [RRSFS], retrieved from FRED, Federal Reserve Bank of St. Louis; July 29, 2021.

<https://fred.stlouisfed.org/series/RRSFS>

U.S. Census Bureau, E-Commerce Retail Sales as a Percent of Total Sales [ECOMPCTSA], retrieved from FRED, Federal Reserve Bank of St. Louis; July 28, 2021.

<https://fred.stlouisfed.org/series/ECOMPCTSA>

¹⁶ CoStar and seasonal adjustment by ZAIS with U.S. Census Bureau X-12-ARIMA Seasonal Adjustment Program. CoStar Realty Information Inc., Analytics Data Export (<https://product.costar.com/analyticsexport/>), retrieved RevPar for Hospitality

¹⁷ February NIC MAP[®] data tick upward

<https://www.nic.org/news-press/occupancy-at-u-s-skilled-nursing-facilities-shows-signs-of-stabilization/>

Important Information

Confidentiality

The information presented herein has been prepared and provided by and is confidential and proprietary to ZAIS Group, LLC, ZAIS Group (UK) Limited and their affiliates and subsidiaries (collectively, "ZAIS"). Accordingly, this material is not to be reproduced in whole or in part or used for any purpose except as authorized by ZAIS, is to be treated as strictly confidential and is not to be disclosed directly or indirectly to any party other than the recipient. By accepting receipt of this document, the recipient agrees to comply with this restriction and confirms its understanding of the limitations set forth in these disclaimers.

Source of Information

Unless otherwise noted, the source of information for the charts, graphs, and other materials contained herein is ZAIS. The charts, tables, and graphs contained in this document are not intended to be used to assist the reader in determining which securities to buy or sell or when to buy or sell securities. Additional information is available upon request.

Nature of Information Provided

This information has been prepared solely for informational purposes and is not an offer to buy or sell or a solicitation of an offer to buy or sell any security or instrument or to participate in any trading strategy which may or may not be made available. Any such offer of securities would, if made, be made pursuant to definitive final private offering documents, which would contain material information not contained herein (including certain risks) or material that differs from the information contained herein and to which current and prospective investors are referred. Any decision to invest should be made solely in reliance upon such private offering documents. In the event of any such offering, this information shall be deemed superseded, amended and supplemented in its entirety by such private offering documents. Information contained herein does not purport to be complete and is subject to the same qualifications and assumptions, and should be considered by investors only in the light of the same warnings, lack of assurances and representations and other precautionary matters,

as disclosed in an applicable private offering memorandum and subscription agreement. No representation or warranty can be given with respect to the terms of any offer of securities conforming to the terms hereof. There is no guarantee that the strategies set forth herein will be successful. The information should only be considered current as at the date specified herein and is subject to change at any time and without notice. Statements made herein that are not attributed to a third party source reflect the views and opinions of ZAIS.

Opinions

Certain information contained herein represents ZAIS's current reasonable opinion and is based on unaudited and forecast figures which have been derived from multiple sources and have not been subject to specific due diligence. The information has been provided in good faith but is not guaranteed and is subject to uncertainties beyond ZAIS's control and should not be relied upon for the purposes of any investment decision. ZAIS makes no representations or warranties and accepts no liability whether in contract, tort or otherwise for (1) the information not being full and complete, (2) the accuracy of any opinion, (3) the basis on which any comparison has been drawn or the facts selected to make such comparison and (4) the assumptions underlying any opinions. ZAIS does not undertake to update its opinions. No opinion of this nature can be, and this information does not purport to be, full, complete, comprehensive or to contain all relevant information. Statements made herein that are not attributed to a third party source reflect the views and opinions of ZAIS.

Forward-Looking Statements

These materials may contain statements that are not purely historical in nature but are "forward-looking statements". In some cases, you can identify forward-looking statements by terms such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "potential," "should" and "would" or the negative of these terms or other comparable terminology. These forward-looking statements include, among other things, projections, forecasts, estimates or hypothetical calculations with respect to income, yield or return, future

performance targets, sample or pro forma portfolio structures or portfolio composition, scenario analysis, specific investment strategies or proposed or pro forma levels of diversification or sector investment. These forward-looking statements are based upon certain assumptions, some of which are described herein. Prospective investors are cautioned not to place undue reliance on such statements. No representation is made by ZAIS as to the accuracy, validity or relevance of any such forward-looking statement and the recipient agrees it is solely responsible for gathering its own information and undertaking its own projections, forecasts, estimates and hypothetical calculations. Actual events are difficult to predict, are beyond ZAIS's control, and may substantially differ from those assumed. All forward-looking statements included herein are based on information available on the date hereof or such date specified and ZAIS does not assume any duty to update any forward-looking statement contained herein. Some important factors which could cause actual results to differ materially from those in any forward-looking statements include, among others, the actual composition of the investment portfolio, any defaults to the investments, the timing of any defaults and subsequent recoveries, changes in interest rates, changes in currency rates and any weakening of the specific obligations included in the portfolio. Accordingly, there can be no assurance that estimated returns or projections can be realized, that forward-looking statements will materialize or that actual returns or results will not be materially lower or higher than those presented. The value of any investment, and the income from it, may fall as well as rise. Accordingly, there can be no assurances that an investor will

receive back all or any of the original capital invested. Further, the eligible investments may be leveraged and the portfolio of eligible investments may lack diversification thereby increasing the risk of loss.

ZAIS Group (UK) Limited. ZAIS Group (UK) Limited is a company registered in England with number 08908933 and whose registered office is c/o Dixon Wilson, 22 Chancery Lane, London WC2A 1LS, United Kingdom. ZAIS Group (UK) Limited is an appointed representative of Infinity Asset Management LLP, which is authorized and regulated by the Financial Conduct Authority in the United Kingdom. ZAIS Group (UK) Limited's status as an appointed representative of Infinity Asset Management LLP does not imply a certain level of skill or training. Investors will not benefit from the rules and regulations made under the Financial Services and Markets Act 2000 for the protection of investors, nor from the Financial Services Compensation Scheme in the United Kingdom. Nothing herein excludes any liability which ZAIS is not permitted to exclude by applicable law.

Regulatory Registrations and Authorizations. ZAIS Group, LLC's registrations with the Securities and Exchange Commission (the "SEC") and the Commodity Futures Trading Commission (the "CFTC"), and ZAIS Group (UK) Limited's status as an appointed representative of Infinity Asset Management LLP (which is authorized by the United Kingdom's Financial Conduct Authority ("FCA"), does not imply a certain level of skill or training.

Copyright © 2021 by ZAIS Group, LLC