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The following is an excerpt from the Spring 2019 edition of The Linneman Letter.

Consumption is the sole end and purpose of all production; and the interest of the producer ought to be attended to, only so far as it may be necessary for promoting the consumer.

Consumers Fuel the Economy

The recovery remains strong and has now lasted 39 quarters through the first quarter of 2019. In the past two years, the U.S. economy has achieved what most economists said was impossible (though we never did): U.S. growth in excess of 2.2%. But the 3.1% growth in 2018 is simply a return to the historical norm, all due to closer-to-market interest rates, lower taxes, and reduced regulatory intrusions.

In the fourth quarter of 2018, the economy grew by an annualized 2.6%. And this growth (or higher) will also occur in 2019 and into 2020. Per capita real GDP grew by nearly 2.4% in 2018. This growth is causing state tax revenues to surge to all-time highs. State spending is unfortunately rising commensurately, guaranteeing state budgetary shortfalls during the next downturn. States should be reducing outlays, cutting taxes, and replenishing "rainy day" funds instead of raising spending. But they never learn.

Runaway federal spending is crowding out more productive private borrowing. Artificially low short-

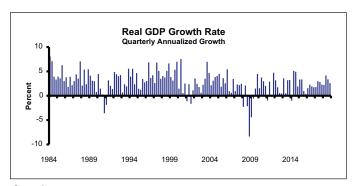


figure 1

term interest rates continue to suppress single-family housing starts, though rising rates have also caused home buyers to temporarily pause. But rates at current and notably higher levels have supported healthy housing markets in the past.

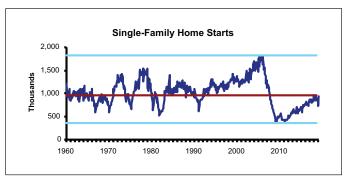


figure 2

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Real Estate Capital Markets

We are frequently asked where the real estate investment opportunities will be during the next down cycle. Our advice is to watch for opportunities in public markets rather than in the private markets which defined the down cycles in the early 1990s and 2000s. A prevalence of public market opportunities characterized the 2008-2010 downturn, and we believe this will again be the case. Our reasoning is that greed swings more rapidly to fear (and back again) in public markets. In addition, the more than \$325 billion of global private equity dry powder, as reported by Prequin in February 2019, will create fairly competitive bidding for private assets even in the face of fear. So we suggest that those hoping to prosper from deeply discounted pricing during the next down cycle should start educating themselves on REITs today so they are ready to jump in when the time is right.

As we look forward, with the large excess reserves of money center banks and the more than \$325 billion in real estate private equity dry powder, we expect cap rates to hold, even as rates rise. About 15-20% of this unspent committed equity capital for real estate is targeted for the U.S. As the main providers of commercial

real estate debt, banks continue to expand their mortgage book by 4-5% year-over-year. In addition, CMBS issuance is a net positive source of real estate capital, while life companies and government-sponsored entities also (GSEs) continue to actively lend. All told, despite negative flows to real estate mutual funds, we expect that both the flow of funds to real estate and cap rates will remain solid in 2019. In short, due to continued capital flows and solid NOI growth, we expect commercial real estate to perform well in 2019-2020, even as interest rates increase.

We have said for several years that cap rates are determined by the flow of funds rather than interest rates. This has proven to be true over the past three years, with interest rates rising and falling with no identifiable impact on cap rates. A simple way to see why this is the case is to realize that due to new developments over the next three years, the total stock of commercial real estate will be about 6% higher than today. If this 6% greater real estate stock competes for the same amount of capital deployed today, values will fall (i.e., cap rates will rise). This will be true irrespective of interest rates. In contrast, if there is 25% more capital chasing just 6% more real estate, values will rise (cap

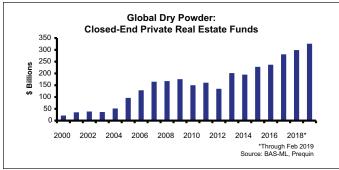


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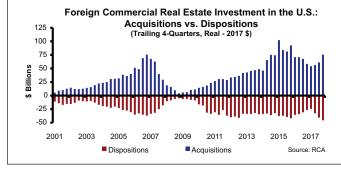


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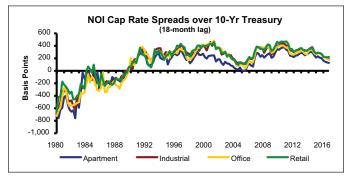


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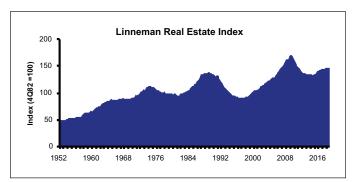


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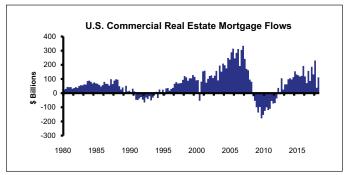


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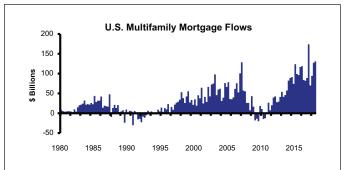


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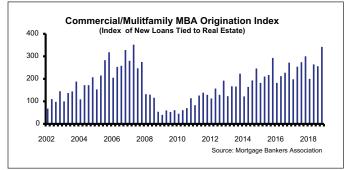


figure 10

rates fall), again irrespective of interest rates. And contrary to mythology, real estate equity returns have historically been better during periods of rising interest rates, partly because owners had locked in low longterm fixed-rate debt, while enjoying increased incomes from improved occupancies and higher rents.

The Linneman Real Estate Index (LREI) monitors the supply of real estate capital, as proxied by the aggregate flow of commercial real estate debt (the numerator), with the fundamental demand for space, as measured by nominal GDP (the denominator). Excluding the net real estate equity flows from the numerator

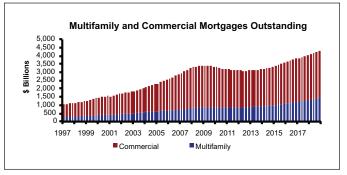


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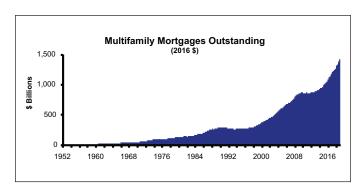


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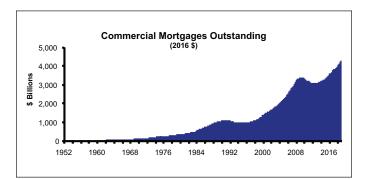


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modestly understates capital oversupply situations and overstates an undersupplied market. The LREI captures whether debt for commercial real estate is growing more quickly or slowly than the economy. When the index is rising ("easy money"), it means that mortgage debt available for commercial real estate is rising more rapidly than the economy, and it declines when money is tight relative to economic growth. The index is set to 100 in the base year of 1982. We remind readers that our research indicates that this metric is the key determinant of cap rates, with a 1,000-bp increase decreasing cap rates by 106 bps (a 15-25% value increase).

The LREI proxies the availability of capital to a very capital-intensive asset class. The LREI peaked at

170 in 2009 and bottomed at 134 in 2014 (a 21% decline) as the Financial Crisis drove substantial deleveraging of commercial real estate. But after five years of increased lending, the index rose to 147 through year-end 2018. This is a 10.2% rise since the 2014 low. But it is noteworthy that it was up 2.1% in 2016, 1.4% in 2017, and remained in 2018, indicating remarkable lender discipline. That is, capital is flowing but not flooding. This is a relatively rare condition, particularly during a strong economy. This discipline is partially due to heightened regulatory scrutiny of banks and partially due to high construction costs limiting development.

About Dr. Peter Linneman

Dr. Linneman, who holds both Masters and Doctorate degrees in economics from the University of Chicago, is the Principal of Linneman Associates. For nearly four decades, he has provided strategic and financial advice to leading corporations. Through Linneman Associates, he provides strategic and M&A analysis, market studies, and feasibility analysis to a number of leading U.S. and international companies. In addition, he serves as an advisor to and a board member of several public and private firms.

Dr. Linneman is the author of the leading real estate finance textbook, *Real Estate Finance and Investments: Risks and Opportunities*, now in its fifth edition. His teaching and research focuses on real estate and investment strategies, mergers and acquisitions, and international markets. He has published over 100 articles during his career. He is widely recognized as one of the leading strategic thinkers in the real estate industry.

He also served as the Albert Sussman Professor of Real Estate, Finance, and Business and Public Policy at the Wharton School of Business at the University of Pennsylvania until his retirement in 2011. A member of Wharton's faculty since 1979, he served as the founding chairman of Wharton's Real Estate Department and the Director of Wharton's Zell-Lurie Real Estate Center for 13 years. He is the founding co-editor of *The Wharton Real Estate Review*.

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