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FEDERAL RESERVE BANK OF BOSTON™

"Trends in Commercial Real Estate"

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President & Chief Executive Officer
Federal Reserve Bank of Boston

Risk Management for Commercial Real Estate Financial Markets Conference,
New York University Stern School of Business

New York, New York
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Good afternoon. I would like to thank the Stern School of Business for inviting me to share my perspectives today. Before I begin, let me note as I always do that the views I express today are my own, not necessarily those of my colleagues at the Federal Reserve's Board of Governors or on the Federal Open Market Committee (the FOMC).

As with almost any market where prices have risen quickly, commercial real estate presents a variety of positive fundamentals. While my remarks today focus on commercial real estate, other asset classes have experienced increases in valuation, including the equity markets and certain fixed-income markets. I would like to begin my talk today by highlighting some of the positive fundamentals or strong "tailwinds."

First, macroeconomic conditions during this economic recovery have been favorable in some respects. Inflation has remained quite stable, fluctuating around 2 percent. Monetary policy has been quite accommodative, with the federal funds rate still quite low by historical standards, and the central bank maintaining an enlarged balance sheet that has held down longer-term rates.

A second favorable factor is the relative strength in the United States compared with the rest of the world. Many foreign economies' recoveries have lagged behind the U.S., where we have seen stable and solid, if unspectacular, economic growth. These relative international conditions have made real estate opportunities in the United States appear quite attractive to foreign investors.

A third favorable contributor has been a variety of demographic factors that I will only briefly discuss today. But suffice it to say, trends toward greater urbanization and a preference among the large cohort of millennials to seek multifamily accommodations have provided support for multifamily housing in particular.

Despite these favorable conditions for commercial real estate, it is probably useful to consider what *could* cause a reversal in commercial real estate prices. I will focus on just a few potential concerns.

The first involves potential changes to government-sponsored enterprises or GSEs. It is well known that the GSEs play a very important role in the single-family housing market.

However, it is somewhat less well known outside of the real estate industry how active the GSEs are in *multifamily* housing. Given that GSEs and their securitized vehicles currently hold or guarantee 44 percent of multifamily loans, any GSE reform proposal that caused them to alter their participation in this market would likely leave a significant imprint on the industry.

A second concern could be that an economic downturn might have a disproportionate impact on commercial real estate. Very significant declines in commercial real estate values were associated with both the 1990 and 2007 recessions. The occurrence of this type of event is actually part of the 2017 "stress tests" that the largest banks are now undergoing.

A third potential concern could arise if inflation and interest rates moved much higher, and at a faster pace. While that is certainly not my expectation, and is not in the projections of FOMC participants, some private-sector forecasters have been placing odds on such an outcome so that it is worth considering.

While I do not expect that a downturn in commercial real estate prices would by itself cause a significant problem for the economy, in some past recessions such an occurrence has propagated an initial adverse shock – and by constraining financial intermediaries, made the extent of the subsequent economic downturn more severe for a wide range of households and businesses that depend on intermediaries for credit.[1] Given the very low capitalization or "cap" rates[2] currently seen in the commercial real estate sector, it is important for holders of debt or equity related to commercial real estate (CRE) to carefully consider how their positions would be impacted if tailwinds were to give way to headwinds. And perhaps most importantly, in my view the regulatory community must also remain attuned to developments, understand how a reversal may propagate through the financial system, and consider whether the system is resilient enough to withstand such shocks, should they occur.

Domestic Macroeconomic Factors Supporting U.S. Commercial Real Estate

Figure 1 shows the strength of the rebound in commercial real estate prices following the financial crisis. While all four categories of commercial real estate have seen a substantial rebound in prices, the rebound in multifamily housing is particularly notable. The chart is indexed to the price peaks prior to the financial crisis, and it shows that multifamily commercial real estate has surpassed the peak from prior to the financial crisis. In fact, by this measure multifamily prices are now more than 25 percent higher than the pre-crisis peak.

There are a number of factors that have been particularly helpful for the commercial real estate recovery. **Figure 2** shows the federal funds rate – the short-term interbank rate targeted by central bank monetary policy – for the period since 2000. As a result of the severity of the financial crisis, policymakers brought short-term rates down to zero. As the economy has recovered from that very severe recession, the FOMC has raised the federal funds target to its current range of 75 to 100 basis points. However, the rate remains quite low by historical standards, as do other rates of both short and longer maturity. For interest-sensitive sectors, such as commercial real estate, this has no doubt contributed to the recovery.

Figure 3 shows the assets on the Federal Reserve’s balance sheet. Prior to 2008, the Fed’s balance sheet was rarely discussed, since it increased only very gradually. During the financial crisis and its aftermath, the Federal Reserve provided vital liquidity programs and purchased long-term Treasury securities and agency mortgage-backed securities in order to create appropriately accommodative conditions. With short-term interest rates effectively at zero, it was difficult to further influence long-term rates using traditional monetary tools, so the Federal Reserve's large-scale asset purchase programs were implemented to further lower long-term rates. Again, this policy action was inherently supportive of interest-sensitive sectors like real estate.

Figure 4 shows the personal consumption expenditures (PCE) measure of *total* inflation, as well as the *core* PCE measure of inflation. Unlike the 1970s, inflation over the past two decades has been quite stable, fluctuating around 2 percent.[3] One reason for monetary policy to remain accommodative for so long has been that inflation has only gradually returned to the Federal Reserve's 2 percent target. And, of course, a low and stable inflation rate makes it much easier to make longer-term investments.

International Factors Supporting U.S. Commercial Real Estate

As mentioned in my opening summary, international conditions have made the United States an attractive place to invest in commercial real estate. **Figure 5** shows the unemployment rate in the U.S. compared to the Euro Area. While the U.S. recovery has exhibited only modest growth compared to previous recoveries, the unemployment rate – at 4.4 percent – is now below my own estimate (4.7 percent) of the so-called full employment level. In contrast, much of the developed world has yet to significantly recover, with Euro Area unemployment – which was about even with the U.S. in late 2009 – now approximately double that of the United States[4] and still well above pre-recession lows.

The rather weak recovery in many developed countries and the prevalence of very low inflation rates have caused central banks to continue to hold short-term interest rates near zero – and to expand their balance sheets. As **Figure 6** shows, these policies by central banks have contributed to low longer-term yields, with 10-year Treasury yields in the United States currently around 2.3 percent, while 10-year government rates in Japan, Germany, and France are much lower.

These very low short- and long-term interest rates have caused some international institutional investors to look abroad to generate higher returns. Given the relatively strong U.S. economy, some of these investors have come to view U.S. commercial real estate investments as attractive ways to generate higher returns.

Demographic Trends

Demographic trends have also provided a favorable tailwind for some commercial real estate, particularly multifamily projects. The increased movement to urbanize in the United States, due to the many amenities provided by cities for those families with rising incomes, has been supportive of commercial real estate. Certainly, my hometown of Boston has benefited from the trend of firms and households moving to increasingly attractive city environments.

Figure 7 shows two other favorable trends for multifamily commercial real estate. On the left is the median age of males and females when first married. Because a first home purchase is often related to marriage, a later marriage age results in more young adults living in multifamily rather than single-family homes. The figure on the right shows the number of 25- to 34-year-old head-of-households, over time. The demographic trends that have expanded this age group are a positive for multifamily real estate.

These charts suggest that it should not be surprising that trends have supported rising commercial real estate prices. These macroeconomic and demographic trends are qualitatively consistent with the strong commercial real estate markets we see in many parts of the country. However, it is harder to know if these conditions warrant the *extent* of price increase we have seen to date. We all know that for almost any asset category, positive trends can sometimes evolve into prices that increase more than fundamentals justify. It is very hard to distinguish how much of the price gain is the result of the favorable fundamentals, and how much reflects an abundance of optimism by investors. So the next section of my talk explores the possibility that low cap rates could experience a significant reversal.

GSE Reform and Multifamily Real Estate

One potential risk to multifamily commercial real estate prices could come from GSE reform. While the timing and nature of such reforms are quite uncertain, the GSEs have been expanding their role in the multifamily mortgage market. **Figure 8** illustrates that the GSEs, including their securitized vehicles, hold or guarantee approximately 44 percent of multifamily loans outstanding, and their role has increased notably over the past two decades. GSE holdings of multifamily loans outstanding now materially exceed those of the banking sector.

The multifamily segment is also a significant source of income for the GSEs. **Figure 9** provides the percentage of income that Fannie Mae and Freddie Mac derive from their activities in the multifamily commercial real estate mortgage market. Clearly, both GSEs earn a significant share of income from the multifamily segment of their business.[5]

A potential concern would be that with high and rising prices for multifamily commercial real estate, policymakers looking to reform the GSEs might look at the GSEs' large and growing footprint in the market and ask whether this level of government-sponsored exposure is safe, and whether that level of government support is appropriate. Whether, or how, future reform proposals will impact commercial real estate is unclear – but a potential and significant shock to this sector of the commercial real estate market could occur if proposals require the GSEs to reduce their holdings of multifamily loans.

Example from Bank Stress Tests

The largest banks in the United States undergo stress tests annually to see if they have sufficient capital to weather a severe economic shock. The 2017 stress test includes, among other things, a scenario of a significant decline in commercial real estate prices – as shown in **Figure 10**. The severely adverse stress-test scenario includes more than a doubling of the current unemployment rate, and declines in aggregate commercial real estate prices of 35 percent through the first quarter of 2019.[6] Consistent with my comments earlier, the stress tests also suggest that in their own calculations, banks take into account that these losses could be concentrated in areas that have experienced rapid price gains – specifically noting multifamily properties.[7]

While this is only a hypothetical scenario, it is designed to be consistent with economic relationships that have occurred historically. Both the 1990 and the 2007 recessions exhibited very significant declines in commercial real estate prices that aggravated significant negative shocks to the economy. The potential exists for commercial real estate price declines to significantly weaken the economy – particularly by weakening institutions that are critical to the credit extension vital to the economy, and that have large and leveraged exposure to CRE. As a result, many regulators have increased their focus on commercial real estate as valuations have risen substantially.

How likely is a recession as severe as in the stress test scenario? And what are the conditions that might lead to a large shock to commercial real estate? It is indeed worth considering what type of economic conditions might lead to an eventual negative shock of the sort that is being modeled in the stress test. While the severely adverse stress-test scenario does not have a probability attached to it, it is possible to look at private sector forecasts that provide probability assessments of some "tail events" and related conditions, as well as their most likely outcome.

Figure 11 provides the information from the Survey of Professional Forecasters – roughly 50 private sector forecasters – about their assessment of the probability of core PCE inflation rising above 2.5 percent. The forecasters assess a probability of over 10 percent for this year and over 20 percent for 2018.

Figure 12 provides one reason for this elevated risk. The private forecasters see a roughly 10 percent probability of unemployment declining below 4 percent. Such an overheated economy would likely be accompanied by higher inflation, which in turn would likely elicit higher interest rates.

While the downward trend in **Figure 13** of long-term Treasury yields and multifamily cap rates has been quite favorable, an overheated economy could risk a significant reversal. This would cause investors to demand much higher 10-year Treasury rates to compensate for the potential of higher inflation. Since multifamily rents would likely be slow to respond, significant declines in commercial real estate prices could result.[8]

Concluding Observations

Figure 14 shows capitalization rates by commercial real estate sectors. A very low cap rate reflects a high valuation of real estate relative to net operating income. Valuations have risen substantially by historical standards. Certainly a number of positive factors account for some of the elevated valuations, but at such times it is worth asking what could go wrong.

While an overheated economy followed by a recession is only one possible scenario, and certainly not my prediction, it helps to illustrate one way in which low cap rates might be of concern in the event of such a reversal. While all market participants should consider how their positions would be impacted by adverse scenarios, **Figure 15** shows that leveraged institutions and government-sponsored entities have significant exposures to commercial real estate. In the event of an adverse scenario such as a recession, these exposures could pose significant risks to these institutions.

While I am certainly not expecting such a scenario to occur, central bankers are charged with thinking about adverse risks to the economy. So current valuations in real estate are one such risk that I will continue to watch carefully.

Thank you.

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[1] See "Financial Stability: The Role of Real Estate," remarks by Eric Rosengren at the Asia-Pacific High Level Meeting on Banking Supervision, March 22, 2017.

[2] Capitalization or "cap" rates on real estate represent the ratio of net operating income produced by a property to the price paid, calculated at the time of a transaction.

[3] Measured by the core Personal Consumption Expenditures Price Index or PCE, inflation is at 1.6 percent, and measured by total PCE, inflation is 1.8 percent.

[4] The unemployment rates for the U.S. and Euro Area are defined somewhat differently. One difference is based on age; the U.S. civilian unemployment rate tallies the unemployed share of the labor force age 16 years and older, whereas the Euro Area's harmonized unemployment rate calculates the unemployed share of the labor force age 15 to 74. For both definitions, unemployed persons must be actively seeking work. Other differences between the definitions have to do with the definition of "actively" seeking work and whether individuals waiting to start a new job or awaiting recall after a layoff are counted as unemployed.

[5] GSEs earn a significant share of income from the multifamily segment of their business, despite the fact that the multifamily lending is a much smaller piece of their business than residential real estate.

[6] See page 6 of 2017 Supervisory Scenarios for Annual Street Tests Required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule.

[7] See page 5 of 2017 Supervisory Scenarios for Annual Street Tests Required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule.

[8] As described, the cap rates for multifamily are currently very low, having been driven by both demand for the product and rental growth rates. It is important to note, however, that in addition to the general overheated economy scenario, slowing or declining rental rates for multifamily units will place upward pressure on cap rates. That is, if investors are no longer able to count rental growth in their return assumptions, they will turn to demanding a higher cap rate on current cash flows. Additionally, increases in interest rates that provide investors with other investment opportunities will serve to place upward pressure on the cap rates demanded for the multifamily product.

Therefore, a combination of both slowing rental growth and higher interest rates could move the cap rates higher more rapidly than either single factor alone.