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"Observations on Financial Stability Concerns for Monetary Policymakers"

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Shanghai Advanced Institute of Finance

Beijing, China
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Good afternoon. I would like to thank our hosts, the Shanghai Advanced Institute of Finance, for inviting me to participate in this exchange of ideas and perspectives.

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).

It is a pleasure to be here in Beijing to share some observations. Let me begin with the obvious: growth in the global economy has continued to underwhelm. In response to these disappointing economic results, central banks in many developed countries have reduced short- and long-term rates to historic lows. Indeed, a number of countries now have negative rates on a significant proportion of their sovereign debt. In the financial sector, the low rate environment has continued to challenge the business models of many financial intermediaries, and troubles within some banking organizations continue to present downside risks in many parts of the world, particularly in Europe. And it is not only developed economies that are facing challenges; many emerging economies are still suffering from the decline in global commodity prices which has resulted, in part, from the slow growth across much of the world.

Weak global growth has hindered the United States expansion since the end of the so-called Great Recession. The most recent two quarters have been no exception, with GDP growth below 2 percent in both the first and second quarters of 2016.

Yet despite the weak growth in the U.S. economy, by historical standards U.S. labor markets are now at, or close to, the rate of unemployment that most economists consider full employment. And, while “core” inflation (using the Personal Consumption Expenditures price index or PCE[1]) remains below the Federal Reserve’s 2 percent target, there have been gradual increases in our core measure of PCE inflation – from readings of 1.3 to 1.4 percent last year to 1.6 percent currently.

With the U.S. economy closing in on full employment, and edging closer to the 2 percent inflation target, the Federal Reserve’s dual mandate – stable prices and maximum sustainable employment – is likely to be achieved relatively soon. But, considering the aforementioned challenges in the global economy, important questions confront monetary policymakers in the United States. When and how quickly should the Fed normalize interest rates? And what is the "normal" rate?

Given the persistently weak economic growth in the United States during the recovery from the Great Recession, it has been appropriate to be patient about normalizing rates. The FOMC raised short-term rates by one-quarter of a percentage point last December and has yet to raise rates again this year. I have often spoken about the appropriateness, and clear benefits, of a patient and gradual approach to increasing rates. One benefit is that gradual tightening allows further progress in labor markets, helping those who are still unemployed or temporarily out of the labor force. In turn, tighter labor markets should help the inflation rate return to the Federal Reserve's 2 percent inflation target, which is especially important as many countries around the world are contending with low inflation rates, which tends to depress our own inflation rate to some extent.

By slowly normalizing rates, we would hope to continue to support growth. However, keeping interest rates low for a long time is not without risks. Today I will focus my remarks on one of those risks.

Prolonged periods of very low rates pose challenges for some financial intermediaries and for households who derive significant income from savings. Because of their crucial role in facilitating economic activity, we must be attuned to the health of financial intermediaries. Many financial intermediaries derive income from spread lending – borrowing at low short-term rates and lending or investing at a higher return over longer periods of time. However, in an environment where both short and long rates are quite low, the profit margins of financial intermediaries can shrink.[2]

Meanwhile, households can also be challenged by low rates prevailing over long periods. Saving sufficient funds for retirement, for example, is much more challenging if low-risk investments generate very little return.

Firms and households faced with long periods of low returns may react by "reaching for yield" – that is, buying riskier assets than one would otherwise, in order to achieve a desired profit or savings goal. The challenge is that in a pervasive low-rate environment, the returns on risky assets are also reduced. A key risk to an environment characterized by reaching for yield is that, should a large negative shock occur, firms and households would be exposed to greater losses through their holdings of riskier assets than they would be if they were not reaching for yield. To the extent that reaching for yield is more likely in a low interest rate environment, policymakers may need to weigh this particular risk related to low rates against the benefits of supporting the economy.[3]

Today in my remarks I would like to explore the potential risks of the rapid increase in commercial real estate prices in the United States. As interest rates have remained low, commercial real estate prices have risen; capitalization or "cap" rates on real estate (representing the ratio of net operating income produced by a property to the price paid[4]) have fallen to historic lows; and foreign investment in U.S. commercial real estate has increased. This raises a possible concern that investors may be engaged in excessive risk-taking. Should the U.S. economy experience a large negative shock, this could pose a problem for the stability of the U.S. economy. Current cap rates the United States indicate that a long period of very low interest rates can add to potential downside risks, and in my view this suggests that financial stability concerns could be a consideration in how long policymakers wait before resuming the gradual removal of monetary accommodation.

Commercial Real Estate and Financial Stability

Looking at the data, **Figure 1** shows the percentage change in real commercial real estate prices and real GDP in the U.S. over the past 30 years. Over that period, we have had three recessions in the United States (shaded on the figure). The most severe one – the Great Recession – was clearly exacerbated by declines in real estate prices, both residential and commercial. Because these real estate assets were important collateral for loans, and because there were also significant holdings of derivative financial instruments tied to real estate, many financial institutions experienced large losses. These real estate related losses within financial intermediaries led to credit availability problems for households and businesses that contributed to the severity of the Great Recession. Weakened banks may constrain lending to maintain their capital ratios, significantly reducing access to credit for all but the most credit-worthy borrowers.[5]

The U.S. recession in the early 1990s also had a significant real estate component. Many of the initial problems in that recession began in the New England region, where large commercial real estate exposures created problems for financial institutions. As commercial real estate prices fell, we saw "fire sales" of commercial real estate properties as financial institutions unwound their positions. Eventually, the problems in commercial real estate extended to both coasts and the Southwest region of the U.S., and resulted in what then Federal Reserve Board Chairman Alan Greenspan referred to as "headwinds" in monetary policy.[6]

In contrast, the recession in 2001 did not have a large impact on financial institutions, largely because the financial upheaval centered on equities, an asset against which financial institutions were not highly leveraged. As a result, the financial sector was not suffering large losses and pulling back on lending, so credit availability was not particularly constrained. The recession was relatively mild by historical standards, and the recovery proceeded relatively quickly.

These differing experiences in U.S. economic downturns, as well as in other countries, show us that it is critically important to closely monitor and understand the assets held in highly leveraged financial institutions.

Figure 2 utilizes the Financial Accounts of the United States to show the distribution of exposures to commercial real estate among lenders. Out of the $3.6 trillion in total commercial mortgages and multifamily residential mortgages, about $1.9 trillion are held by the banking system. Among asset classes held by leveraged institutions, commercial real estate is large – although it is not particularly concentrated in larger institutions.

Such exposures, by themselves, are unlikely to trigger financial stability problems. But if the economy weakens, a large decline in commercial real estate collateral values could lead to payment defaults, and large losses to banks.[7] This would have downstream effects on credit availability to firms and households, as mentioned a moment ago. The precipitating conditions would conform well to the classic determinants of financial stability problems: collateral values fall, and payment streams are interrupted.

In sum, commercial real estate problems can increase the amplitude of distress during an economic downturn. And I would like to discuss today some data that highlight recent trends in commercial real estate.

Recent Trends in Commercial Real Estate

Several factors other than low interest rates have made commercial real estate an attractive asset class at this time. **Figure 3** shows the occupancy rate for apartments in the United States. The dark green shading, which reflects at least 96 percent occupancy, shows that many regions of the country are now close to full occupancy. This is particularly true on the two coasts, around some of the larger cities. It is also quite striking that some of the areas severely impacted by the decline in real estate prices during the Great Recession, such as Florida, now have relatively high occupancy rates – reflecting in part the movement into rental units of former financially distressed homeowners.

Given the high occupancy rates in many regions of the U.S., it is not surprising that rents have been increasing, as shown in **Figure 4**. The dark green shading represents an annual increase in rents of at least 6 percent. Again, the two coasts are among the areas experiencing high occupancy rates, and tend to have rents increasing more rapidly.

With high occupancy rates, rising rents, and very low interest rates on alternative assets, it is not surprising that commercial real estate prices have been on the rise. **Figure 5** shows that U.S. commercial real estate prices across the four property types have each experienced rapid appreciation in real terms, although only the apartment price index is above the 2007 peak.

Interestingly, retail commercial real estate prices have continued to rise, despite some of the long-run changes affecting that property type such as the rise of online shopping. Particularly striking is how much multifamily property prices have risen.

It is also worth noting that commercial real estate properties exhibited very significant price declines during the Great Recession. Certainly much attention has been focused on the role played by residential real estate price declines, which were important factors contributing to the severity of the recession. But commercial property price declines also were significant.

Figure 6 shows real commercial real estate prices by region. Among the five regions shown, the U.S. Northeast/Mid-Atlantic, Southwest, and West have seen the most rapid price increases in recent years – and increases that are considerably more rapid than in other parts of the country.

Figure 7 shows that real multifamily property prices have been particularly robust in six major metro markets.[8,9] In Greater Boston, where I live and work, there have been rapid increases in multifamily prices; I am reminded of this when I pass by numerous construction sites each day to and from my office. On top of low interest rates and rapidly increasing rents, Boston in particular has a large number of universities and robust high tech industries that have been attractive to millennials and have helped boost the demand for apartments.

Figure 8 shows the capitalization or cap rates[10] for the various property types. Given that increases in the market prices of commercial properties have outpaced rent increases (and thus net operating income), cap rates have been declining and are quite low by historical standards.

Figure 9 shows the cap rate for apartments and the 10-year Treasury rate. As the 10-year Treasury rate has fallen, along with rates on sovereign debt in much of the world, households and firms have been turning to the relatively high returns possible in real estate. This should not be surprising; one of the ways that monetary policy works in a low-interest-rate environment is to encourage investors to move into somewhat riskier asset class categories, to stimulate economic activity. Of course, should macroeconomic conditions change, there is a potential for large losses to those who moved into riskier assets, as previously discussed.

Figure 10 shows the increase in foreign investment in U.S. commercial real estate. The United States is not alone in being in a low-interest-rate environment. Japan and parts of Europe have negative interest rates, and in some countries the negative rates extend well out on the yield curve. With the relatively strong U.S. economy, foreign investors have been attracted to an asset class that still provides a relatively high rate of return. As the chart shows, there have been significant inflows of funds from both Europe and Asia.

Potential Implications

Having explored some of the relevant data, it is useful to think through the potential implications. In my view, commercial real estate is, by itself, unlikely to trigger financial stability problems. But should prevailing economic conditions change in response to a large negative economic shock, commercial real estate prices could decline relatively quickly, leading to large losses at leveraged firms. Because commercial real estate debt is widely held by depository institutions, this could cause a contraction of credit – similar to the credit crunch experience in the United States in the early 1990s. While **Figure 2** showed that the holding of commercial real estate loans is relatively dispersed, it is an important asset class for most leveraged institutions.

Figure 11 shows the percentage of commercial real estate loans outstanding held by banks with commercial real estate loans in excess of 350 percent of their risk-based capital, for banks under $1 billion in assets, in each U.S. state. This includes owner-occupied as well as non-owner-occupied property. Owner-occupied commercial real estate is not used for purposes of the commercial real estate guidance in bank supervision, but can be an issue for the economy if falling real estate prices occur and make it difficult to roll over or expand credit. In some of the coastal states, a high percentage of commercial real estate loans made by banks with under $1 billion in assets are held in institutions that have a commercial real estate to risk-based capital ratio above 350 percent.

So the concern I put forward today is the scenario where widespread declines in commercial real estate prices could ripple through the financial sector and lead to a significant tightening of credit for many borrowers. And given that, I would pose the natural next question: if one agrees that there is building pressure in commercial real estate, should it have any bearing on the setting of monetary policy?

U.S. monetary policymakers should focus on achieving maximum employment consistent with stable prices *currently*, of course, but also *over time*. Very low interest rates may move the economy closer to the central bank's dual mandate goals more quickly than would higher interest rates, but it is important to evaluate "at what cost."

When the economy is far away from achieving the dual mandate goals, asset prices tend to be weak – providing an added rationale for accommodative policy. However, when the economy is close to achieving the dual mandate – as the U.S. economy is now – very low rates may cause the economy to attain and exceed sustainable employment, risking greater imbalances that could negatively impact the economy in the future. And this may be an unfavorable trade-off.

Figure 12 shows the U.S. unemployment rate for the past 10 years, along with the Congressional Budget Office estimate of full employment. After the Great Recession, the unemployment rate was very high, and the potential negative effects of low interest rates on asset prices were quite low given the depressed market for most assets. However, over time the unemployment rate has fallen, and is now within many estimates of full employment – and some asset prices, such as for commercial real estate, have risen quite dramatically.

Should the macroeconomic environment change, one could envision a scenario where commercial real estate prices could decline significantly if underlying rents, occupancy rates, and market interest rates become less favorable. The probability of such a reassessment is, of course, each market participant's to judge, and I am not making a prediction of this outcome, to be sure. But I have emphasized that such a revaluation, in conjunction with an economic downturn, could make a recession worse than it would have been had policymakers normalized interest rates more rapidly.

In other words, a somewhat faster move to rate normalization may defer somewhat how quickly we achieve the dual mandate goals of full employment and price stability, but could reduce the risk of a larger divergence from the dual mandate in the next downturn. This is one of the challenges of monetary policymaking that requires empirical analysis, historical perspective, and judgment.

Concluding Observations

Low or even negative interest rates have been the policy response of central banks grappling with difficulties in reaching legislated mandates in many countries. However, it is important that central banks think about attainment of their mandates not only at the current time, but also *through* time. Policymakers must weigh the benefits of low interest rates now against the potential costs in the future of possibly spurring financial instability that will ultimately have downstream adverse effects on firms and households.

In the United States, a potential collateral impact of very low interest rates has been rapid price appreciation in the commercial real estate sector. While there are certainly fundamental features that make commercial real estate an attractive asset class, I think it is fair to say that part of the attraction has been the low interest rate environment. The financial stability concerns that could arise from a low interest rate policy continuing for an extended period of time should be considered in conjunction with how best to achieve the dual mandate goals, now and over time.

Thank you.

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[1] "The core PCE price index is defined as personal consumption expenditures (PCE) prices excluding food and energy prices. The core PCE price index measures the prices paid by consumers for goods and services without the volatility caused by movements in food and energy prices to reveal underlying inflation trends." Source: Bureau of Economic Analysis. See http://www.bea.gov/faq/index.cfm?faq_id=518

[2] Other financial firms can be similarly stressed in a low interest-rate environment, such as life insurance companies and pension funds, which need to generate revenue streams from their investments that are sufficient to support their insurance and pension obligations.

[3] Prices in a variety of asset classes have risen markedly over the past few years, as investors seek higher returning instruments. For example, three major U.S. stock indices recently set records on the same day, an event last seen in

1999. Also, net assets in high-yield mutual funds have more than doubled since the financial crisis, and high-yield spreads — which hit post-crisis lows in 2014, then widened due to the oil shock — are again narrowing.

[4] Calculated at the time of a transaction. Aggregate cap rate statistics only include cap rates from recent sales.

[5] To maintain key capital-to-assets ratios amid losses, financial institutions may restrict the growth of, or shrink, lending (as loans are assets for financial institutions).

[6] See "Identifying the Macroeconomic Effect of Loan Supply Shocks," with Joe Peek and Geoffrey M.B. Tootell. *Journal of Money, Credit, and Banking*. vol. 35, no. 6, part 1 (December 2003): 931-946; "The Capital Crunch: Neither a Borrower Nor a Lender Be," with Joe Peek. *Journal of Money, Credit and Banking*. vol. 27, no. 3 (August 1995): 625-638;

[7] It is worth noting that underwriting standards frequently deteriorate when asset markets get hot.

[8] Boston, Chicago, D.C. Metro, L.A. Metro, New York City Metro, and San Francisco Metro.

[9] The Boston metro area includes the following counties: Bristol, Essex, Hillsborough, Merrimack, Middlesex, Norfolk, Plymouth, Rockingham, Strafford, Suffolk, Worcester, and York.

[10] As noted earlier, 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. Thus aggregate cap rate statistics only include cap rates from recent sales.